Agenda Item: ID18-0129 (4:30 P.M.#1)
Date: 1/25/18

FRESNO CITY COUNCIL

City of FRESNO

Supplemental Information Packet

Agenda Related Item(s) – ID18-0129 (4:30 P.M.#1)

Contents of Supplement: Letter and Attachment from Leadership Counsel

Item(s)

CONTINUED HEARING to consider Development Permit Application No. D-16-109, located on the north side of East Central Avenue between South Orange and South Cedar Avenues (Council District 3) – Development and Resource Management Department.

1. ADOPT the Mitigated Negative Declaration prepared for Environmental Assessment No. D-16-109, dated September 18, 2017;
2. DENY the appeal and UPHOLD the Director's approval of Development Permit Application No. D-16-109 authorizing the development of an industrial business park for industrial uses with up to seven reinforced concrete buildings ranging in size from 124,200 square feet to 1,000,000 square feet, with a total building square footage not to exceed ±2,145,420.

Supplemental Information:

Any agenda related public documents received and distributed to a majority of the City Council after the Agenda Packet is printed are included in Supplemental Packets. Supplemental Packets are produced as needed. The Supplemental Packet is available for public inspection in the City Clerk's Office, 2600 Fresno Street, during normal business hours (main location pursuant to the Brown Act, G.C. 54957.5(2). In addition, Supplemental Packets are available for public review at the City Council meeting in the City Council Chambers, 2600 Fresno Street. Supplemental Packets are also available on-line on the City Clerk's website.

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LEADERSHIP COUNSEL
FOR
JUSTICE & ACCOUNTABILITY

REC'D JAN 24 '18 AM8:33
FRESNO CITY CLERK

January 23, 2018

Fresno City Council President Esmeralda Soria
Fresno City Councilmembers
2600 Fresno Street
Fresno, CA 93721

Sent via Email

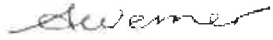
RE: Development Permit & Environmental Assessment No. D-16-109
January 25, 2018 Fresno City Council Agenda Item IDs 18-0104 & 18-0129

Dear Council President Soria and Councilmembers:

Please find attached comments with attachments A through F regarding Development Permit and Environmental Assessment No. D-16-109. We submit the attached comments on behalf of South Central Neighbors United and its members. We will submit further comments prior to and at the public hearing on this matter regarding the proposed Project's impacts with respect to water supply, hazardous materials, soil, transportation, and noise, among other issue areas; procedural defects with preparation and consideration of Development Permit and Environmental Assessment; and the Project's fair housing and civil rights implications.

Please feel free to contact me at (559) 369-2786 or awerner@leadershipcounsel.org if you would like to discuss these comments.

Sincerely,



Ashley Werner
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cc: Mayor Lee Brand
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January 23, 2018

Via E-mail Only

Ms. Ashley Werner
Attorney
Leadership Counsel for Justice and
Accountability
2115 Kern Street, Suite 320
Fresno, CA 93721

Re: Mitigated Negative Declaration for Development Permit and Tentative Parcel Map 2012-06 at the 3751 South Cedar Avenue (EA No. D-16-109)

Ms. Werner:

As requested, Shute Mihaly & Weinberger LLP has completed a review of the Mitigated Negative Declaration's ("MND") for Development Permit No. D-16-109 of an industrial project located at 3751 South Cedar Avenue ("Project"). We focused our review on the MND's analyses of air quality, public health, and greenhouse gases impacts. Our review of the MND reveals serious violations of the California Environmental Quality Act ("CEQA") (Public Resources Code section 21000 *et seq.*) and CEQA Guidelines (California Code of Regulations, title 14 section 15000 *et seq.*).

As detailed below, numerous inadequacies and omissions in the MND render it insufficient as an environmental review document. First, the MND fails to provide an adequate description of the project. What information is provided is cursory and vague. The skeletal single paragraph description in the MND fails to describe key components of the proposed Project. These components have the potential to result in significant environmental impacts not analyzed in the MND.

Second, the MND fails to analyze potentially significant impacts and fails to propose mitigation for significant environmental impacts related to air quality, public health, and climate change among others. The MND relies on tiering from the Master Environmental Impact Report ("MEIR") for the City's General Plan. However, the

MEIR did not include project level analysis for developments. Moreover, the MND acknowledges that the Project is not fully within the scope of the MEIR. MND at 1. Thus, the City has an obligation to evaluate site-specific impacts of the proposed Project.

What analysis the MND does present is fraught with errors. For example, the MND's analysis of the Project's air emissions defers analysis of impacts and improperly relies on compliance with existing regulations to conclude that impacts would be less than significant. This approach in turn implicates the MND's public health and cumulative impacts analyses. With regard to greenhouse gas emissions, the MND fails to provide *any* analysis of Project impacts and instead makes unsupported conclusory statements. In addition, the MND entirely ignores the Project's contribution to cumulative impacts.

For all the reasons set forth in this letter, it is our opinion that the MND does not comply with the requirements of CEQA. The MND's failings will impact Fresno residents, and will most directly and significantly impact low-income, disadvantaged residents and communities, especially communities of color in south Fresno. These communities are the most vulnerable to the impacts of the Project, but the MND fails to adequately analyze or effectively mitigate these impacts. To ensure that the public, as well as the City decision makers, have adequate information to consider the effects of the proposed Project—as well as to comply with the law—the City must prepare and circulate an EIR that properly describes the Project, analyzes its impacts, and considers meaningful alternatives and mitigation measures that would help ameliorate those impacts.

This letter, along with the air quality letter report prepared by Tamura Environmental (Attachment A) constitute our comments on the MND. Please refer to this report for further detail and discussion of the MND's inadequacies with regard to impacts to air quality.

I. CEQA's Low Threshold Requiring Preparation of an EIR.

It is well settled that CEQA establishes a "low threshold" for initial preparation of an EIR, especially in the face of conflicting assertions concerning the possible effects of a proposed project. *The Pocket Protectors v. City of Sacramento*, (2005) 124 Cal.App.4th 903, 928. An EIR is required whenever substantial evidence in the administrative record supports a "fair argument" that significant impacts may occur, even if other substantial evidence supports the opposite conclusion. (Guidelines §§ 15064(a)(1), (f)(1) [emphasis added]). An impact need not be momentous or of a long enduring nature; the word "significant" "covers a spectrum ranging from 'not trivial' through 'appreciable' to

'important' and even 'momentous.'" *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83 n. 16. The fair argument test expresses "a preference for resolving doubts in favor of environmental review." *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 151.

Here, the MND is subject to the fair argument standard and it is clear that substantial evidence in the record supports a fair argument that the proposed Project will result in significant impacts not evaluated in the MEIR. The MND states that the proposed Project is not fully within the scope of the General Plan MEIR. MND at 1. However, the basis on which the City has made this determination is not supported by substantial evidence in the record. Moreover, even if it were within the scope of the General Plan MEIR, it is clear that the Project will have significant environmental impacts not previously analyzed and mitigated in that MEIR. As such, the City is required to prepare an EIR even if it intends to rely on the streamlining provisions of the CEQA Guidelines. CEQA Guidelines § 15178 (c) (EIR required to address impacts where a project may have significant impacts not previously disclosed and mitigated by MEIR.)

Further, where the agency fails to study an entire area of environmental impacts, deficiencies in the record "enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311. In marginal cases, where it is not clear whether there is substantial evidence that a project may have a significant impact and there is a disagreement among experts over the significance of the effect on the environment, the agency "must treat the effect as significant" and prepare an EIR. Guidelines § 15064(g); *City of Carmel-By-The-Sea v. Board of Supervisors* (1986) 183 Cal.App.3d 229, 245. In this case, the Project's deficiencies support one conclusion: An environmental impact report ("EIR") must be prepared for this Project before the City legally can consider whether to approve it.

II. The MND Fails to Adequately Describe the Project.

In order for an environmental document to adequately evaluate the environmental ramifications of a project, it must first provide a comprehensive description of the project itself. "An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR." San *Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 730, quoting *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193. "The negative declaration is inappropriate where the agency has failed either to provide an accurate project description or to gather information and undertake an adequate environmental analysis." *City of Redlands v.*

County of San Bernardino (2002) 96 Cal.App.4th 398, 406, 410. As a result, courts have found that even if an EIR is adequate in all other respects, the use of a "truncated project concept" violates CEQA and mandates the conclusion that the lead agency did not proceed in a manner required by law. *San Joaquin Raptor*, 27 Cal.App.4th at 729-30. Furthermore, "[a]n accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity." Id. at 730 [citation omitted]. Thus, an inaccurate or incomplete project description renders the analysis of significant environmental impacts inherently unreliable.

Here, the description of the Project is thoroughly inadequate. The MND fails to identify the uses that will take place at the Project site or to even include a discussion of the reasonably foreseeable uses of the proposed parcels. Indeed, the Project is so thinly described that it appears to be essentially unplanned, and certainly is not ready for the approvals that the applicant is requesting. It is not enough to defer a more specific description and analysis to later project approvals. The Project site is zoned for heavy industrial uses (HI), which allows a broad range of manufacturing, assembly, wholesaling, distribution, and storage activities. Fresno Municipal Code § 15-1301. Once these project approvals are in place, a range of activities will be permitted at the project site. These uses include, but are not limited to, concrete batch plants, chemical storage facilities, auto repair facilities, freight terminals, and warehousing facilities. *Id.* at Table 15-1302. Each of these uses have the potential to result in significant impacts of varying degree. The City cannot avoid analysis of project impacts by segmenting each phase into separate approvals. Because approval of this development permit will allow the construction of over two million square feet of development now and those buildings will be used for heavy industrial use in the future, the City must analyze the reasonably foreseeable impacts of its project approvals and future uses now.

Any reasonably complete description of the Project must give the public and decision-makers a sense of what this Project would look like, how it would operate, and how it would mesh with the surrounding uses. The purported project description does none of this. It is effectively no description at all; it is merely a suggestion of the applicant's general conceptual scheme that fails to even acknowledge the statement in the Project Application that the proposed building are intended for warehouse uses. In addition, the MND fails to describe construction-related activities including number of construction employees, the location of construction staging areas, and the location of spoils sites and haul routes. It is important to describe these project activities because they will result in traffic, noise, and air quality impacts.

The inadequate project description implicates all of the other sections of the MND. For example, the MND defers analysis of criteria pollutant emissions and related health

risks to nearby sensitive receptors because uses at the Project site are not yet specified. MND at 15. In short, because it fails to adequately describe the Project, the MND fails to identify, analyze and mitigate its potential impacts.

III. The MND's Analyses of and Mitigation for the Projects Significant Impacts Are Legally Inadequate.

As the courts have explained, the environmental review document serves as "an environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Laurel Heights Improvement Ass'n v. Regents of University of California* (1988) 47 Cal. 3d 392 ("Laurel Heights I"). "The EIR is also intended 'to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." *Id.*

As described above, the MND never considers the full impacts of the Project. This alone renders all of its analyses inadequate. For example, the MND admits that the Project is likely to result in pollutants and contaminants that will exceed thresholds of significance, but fails to analyze these impacts claiming that it would be speculative to estimate specific project emissions. MND at 15. This approach violates CEQA's requirement that environmental review encompass all of the activity allowed by the Project. In the absence of a proposed specific project use, the City must, at a minimum, analyze the impacts of the most likely future uses. Without this analysis, the environmental review will remain incomplete and the Project cannot lawfully be approved.

Below, we discuss several areas with particular deficiencies. To ensure that both decision-makers and the public have adequate information to consider the effects of the proposed Project, and to comply with CEQA's requirements, the County must prepare an EIR that properly describes the Project, analyzes its impacts, and considers meaningful mitigation measures that would help ameliorate those impacts.

A. The MND's Analysis of and Mitigation for the Project's Air Quality Impacts Is Legally Deficient.

The City of Fresno, and the surrounding San Joaquin Valley Air Basin, suffer from some of the nation's worst air quality. Therefore, it is imperative that the MND provide an accurate assessment of the Plan's potential to further degrade air quality. By its own admission, implementation of the Project would result in criteria pollutant emissions and air contaminants that would exceed air district thresholds. MND at 15. Despite this disclosure, the MND's analysis of air quality impacts is grossly inadequate.

In fact, the MND fails to analyze the Project's effects at all. Moreover, the MND fails to analyze the health effects on nearby residents that would occur as a result of exposure to these pollutants. Thus the MND's analysis of air quality impacts does not comply with CEQA.

The fact is that this Project will result in significant impacts on local air quality. Disadvantaged communities and people of color living near the Project site and who already suffer from health impacts of poor air quality, will feel these impacts even more acutely than other City residents. Unfortunately, the details remain unknown because the MND does not provide anything close to a complete analysis of these impacts. The most egregious flaws in the air quality analysis are described below. In addition, we incorporate by reference the letter dated January 18, 2018 from Tamura Environmental, Inc. ("Tamura Report"). Attached as Attachment A.

1. The MND Ignores Comments on the Project Submitted by the San Joaquin Valley Air Pollution Control District.

The MND claims that the analysis of the Project reflects applicable comments of responsible and trustee agencies. However, this is not the case. The MND dismisses comments from the San Joaquin Valley Air Pollution Control District (hereafter "Air District"), a responsible agency on the Project. In a letter dated April 24, 2017, the Air District indicated that the agency recommended preparation of an EIR should project emissions exceed Air District thresholds for criteria pollutants. Letter from A. Marjollet, Director of Permit Services, San Joaquin Valley Air Pollution Control District to Phillip Siegrist, Planner, City of Fresno at 1. The Air District also recommended evaluation of health impacts to nearby residents from toxic air contaminants ("TACs"). *Id.* at 2. Rather than performing these analyses, the MND ignores the Air District's comments and fails to implement the agency's recommendations without adequate justification.

In addition, the Air District indicates that the Project is subject to District Rule 9510 (Indirect Source Review). *Id.* at 3. The MND makes a passing reference to District Rule 9510, but fails to describe how the Project will comply with the Rule. Moreover, the Air District indicates that the applicant has not filed an Air Impact Assessment ("AIA") application as required. *Id.* The AIA is required prior to applying for final discretionary approvals from the City. *Id.* Therefore, the City cannot move forward with this Project approval until the applicant completes his obligations to comply with District Rule 9510.

2. Criteria Air Pollutant Emissions

There are numerous flaws in the MND's criteria air pollutant analysis. As an initial matter, the MND's reliance on the General Plan MEIR is unwarranted. The MEIR estimates of future emissions were not representative of the changes in emissions that would result from the proposed land uses changes in the General Plan Update. To forecast air quality emissions from build-out under the General Plan, the MEIR failed to consider the land uses proposed in the General Plan, but rather relied on population growth estimates that are independent of the General Plan Update (i.e., the population growth estimates would be the same without the General Plan Update). MEIR at 3-25.

Moreover, the assumptions employed in the air emissions model were not presented in the MEIR. Thus, the MEIR failed to provide evidence to support its conclusions, which prevents it from being used as an effective MEIR for this and other future projects.

The MND fails to provide the supplemental analysis needed to evaluate project-specific impacts. First, the MND fails to quantify estimates of Project-related criteria pollutant emissions for both construction and operational phases. As discussed above, the environmental assessment should have included pre- and post-project emissions. As shown in the attached Tamura letter report, for an "Industrial Park" land use with two million square feet of building area, the CalEEMod® model shows that operational emissions associated with Project-generated vehicular traffic would greatly exceed the significance threshold of 10 tons per year (TPY) of oxides of nitrogen (NOx). Specifically, if the proposed Project implements industrial park uses as indicated on the development permit application, the Project would result in unmitigated operational emissions of 52 TPY of NOx, of which 51 TPY are from mobile sources, which is far in excess of the 10 TPY significance threshold identified by the air district. Despite this fivefold exceedance of emission thresholds, the MND erroneously concludes that related impacts would not be significant.

As the Tamura letter report points out, Project emissions estimates can (and should be) refined with more specific project information so that a more accurate model can be prepared. This information should form the basis for an analysis of impacts in a EIR for the Project.

3. The MND Fails to Adequately Analyze the Project's Potential to Impact Public Health.

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. *See* California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, attached as Attachment B. Measurements of traffic-related pollutants show that concentrations within 300 meters (approximately 1,000 feet) downwind of roadways are higher than regional values. *Id.* at 8. In addition to respiratory health effects, proximity to high traffic areas increases potential cancer risk. *Id.*

The MND acknowledges that the Project would result in emissions from industrial uses that will exceed Air District thresholds for toxic air contaminants. MND at 15. The MND also discloses that the Project would generate more than 6,000 average daily trips.

However, the MND fails to adequately analyze the Project's potential to expose nearby sensitive receptors to emissions of toxic air contaminants ("TACs") and particulate matter resulting from future increased traffic and stationary sources. The closest homes to the Project site are located less than 300 feet from the Project site. Area residents report experiencing construction and traffic-related particulate matter from current construction (i.e., Amazon and Ulta Beauty) that coats their homes and cars on a daily basis. This exposure to particulate matters triggers and exacerbates allergies and asthma. Trucks on area roadways from nearby industrial uses also generate dust as they pass by homes and the school. These effects will be multiplied with this project. Yet, the MND impermissibly defers analysis and mitigation of these emissions on these receptors. *Id.* These serious omissions are discussed further below.

(a) The MND Fails to Provide an Adequate Description of the Existing Setting.

The MND provides no information about existing exposure to TACs in the project area, the starting point for any adequate analysis of a project's potential to impact public health. Unless the MND adequately describes the public's existing exposure to TACs, decision-makers cannot: (1) understand the scope of the existing TAC problem; (2) measure the Project's new TAC impacts against a baseline of current TAC emissions; (3) evaluate mitigation of those impacts; or (4) intelligently decide whether the Project's approval is worth the risk. The MND cannot rely on the MEIR's setting description because the MEIR too failed to provide such a description, particularly in areas designated for industrial uses.

Although not disclosed in the MND, the neighborhoods and sensitive uses adjacent to and near the Project site, including in particular the homes along East Central Avenue between Orange and Cedar Avenues; the disadvantaged unincorporated community of Daleville; the Flamingo Mobile Home Park; and Orange Center Elementary School, are already subject to emissions from existing industrial uses in the area and freeway traffic emissions. In fact, under the California Environmental Protection Agency's CalEnviroScreen 3.0, a screening methodology that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution, neighborhoods in South Fresno rank among the most burdened by multiple sources of pollution in the State of California.[1] Most of the households located near the Project site have had cancer-related deaths that likely are due at least in part to pollutant exposure. Given the fact that the surrounding community is already disproportionally impacted by the number of industrial and refinery projects in the area, one would expect the MND to comprehensively describe each of the sensitive receptors that could be potentially impacted by the Project. Unfortunately, this is not the case.

An adequate impact analysis would necessarily begin with a thorough description of existing sensitive receptors (*i.e.*, those segments of the population most susceptible to poor air quality (*i.e.*, children, the elderly, and those with pre-existing serious health problems affected by air quality). These receptor locations include residential communities, schools, and playgrounds. The MND includes none of this information. It is imperative that the MND disclose this information because a Project's potential to result in significant environmental impacts varies by setting. CEQA Guidelines § 15064(b). CalEnviroScreen data indicates that census tract number 6019001800, which includes the homes on East Central Ave between Orange & Cedar Avenue; Orange Center Elementary; and the Flamingo Mobile Home Park are in the 100th percentile for pollution burden and census tract number 6019001000, which includes Daleville is in the 98th percentile for pollution burden.Thus, individuals in these neighborhoods who already suffer from high rates of asthma and other respiratory disease may experience greater-than-average sensitivity to Project-generated TAC emissions.

The environmental assessment preparers could easily have obtained current TAC data from any of the following sources: EPA's AirData reports, or the TAC predictions in the National Air Toxic Assessment Model, which are available for every U.S. census

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[1] See Microsoft Excel spreadsheet: A spreadsheet showing raw data and calculated percentiles for individual indicators and CalEnviroScreen scores for individual census tracts with additional demographic information: CalEnviroScreen_v.3.0.xls, available at http://oehha.ca.gov/ej/ces2.html.

tract. http://www.epa.gov/nata2002/methods.html , or CalEnviroScreen_v.3.0.xls, available at https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30.

(b) **The MND's Analysis Fails to Correlate the Project's Emissions to Related Impacts on Human Health.**

The MND's deficient analysis of the Project's health risks extends beyond its failure to describe the existing environmental setting. The MND fails to include a health risk assessment ("HRA"). Given the Project's sizeable increase in daily trips and in industrial uses – more than two million square feet, there is a strong likelihood that the increase in TAC emissions would also be significant. *See* MND at 44.

The increased traffic will in turn result in greater exposure to fine particulate matter ("$PM_{2.5}$"). The serious health risks associated with $PM_{2.5}$ exposure are well-documented. In its final rule designating attainment and non-attainment of $PM_{2.5}$ standards, the U.S. EPA noted the "significant relationship between $PM_{2.5}$ levels and premature mortality, aggravation of respiratory and cardiovascular disease . . . , lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and cardiac arrhythmia," particularly among "older adults, people with heart and lung disease, and children." *See* generally Air Quality Designations and Classifications for the Fine Particles ($PM_{2.5}$) National Ambient Air Quality Standards, 70 Fed. Reg. 944, 945 (Jan. 5, 2005) [Vol. 2, Ex. 28-e]; see also Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review, attached as Attachment C. This latter document elaborates on the health effects of particulate matter exposure, the epidemiology of roadway proximity health effects, and provides guidance for assessing these effects.

With regard to exposure to TACs from stationary sources, the MND is equally deficient. The MND acknowledges that "it is likely that the total concentrations of pollutants and contaminants generated ... will exceed the thresholds". MND at 15. But, the MND stops short of analyzing those impacts. The MND fails to map the location of existing TAC sources (e.g., freeways and gasoline dispensing facilities) and fails to analyze whether the proposed land uses would increase exposure of sensitive receptors to TACs. Rather than conduct the necessary analysis to disclose the extent and severity of resulting health impacts on existing residents and proposed future residents from toxic air contaminants, the MND defers the analysis to the future when individual projects are proposed. This approach violates CEQA.

The MND attempts to justify its approach by stating that the MEIR for the City's General Plan update concludes that, with the effects of adopted regulations, there would

be a net decrease in emissions at Plan buildout. MND at 15. The MND reasons that since future development will have to comply with new regulations, emissions will necessarily decrease so that related impacts would not be significant. *Id.*

This rationale does not hold. First, the MEIR acknowledged that "risk to individuals at specific locations has not been determined…" MEIR at 5.3-59. Thus, the MEIR analysis did not evaluate the impacts of TAC emissions from individual projects and cannot be relied upon to forego analysis now. Second, the MEIR specified that development of new TAC sources "should undergo an assessment to determine if sensitive receptors would be exposed to elevated levels of TAC emissions…." *Id.* In addition, MEIR mitigation measure MM AQ-2 specifies that projects that exceed the cancer risk threshold shall implement site-specific measures that reduce TAC exposure to reduce risks. MEIR at 5.3-60. The MND, in turn, includes a mitigation measure requiring the project to implement the MEIR's mitigation measures, but fails to conduct the necessary screening analysis as mandated. MND at 16.

As discussed above, the City cannot defer its assessment of important environmental impacts until after the project is approved. *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 306-07. In addition, an agency is not relieved from its obligation to provide environmental analysis simply because the task may be difficult. As explained by the Court, "[w]e find no authority that exempts an agency from complying with the law, environmental or otherwise, merely because the agency's task may be difficult." *Id.* at 399.

Moreover, courts have made clear that the EIR must not just identify that a project will result in health impacts from pollutants, but must analyze the impact of those emissions on the health of affected residents; in other words, the analysis must include a health risk assessment. *See Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20. Here, as explained above, health impacts to disadvantaged, pollution-burdened neighborhoods are likely to be even more severe than other areas of the City. The revised EIR must "correlate the identified adverse air quality impacts to resultant adverse health effects." *Id.* at 1219.

Health risk assessment procedures for mobile source toxics are well established. *See* Land Use Guidance for Roadway Proximity Health Effects, attached as Attachment C. Relying upon available guidance, the revised MND must include a health risk assessment that evaluates the Project's potential to result in cancer and respiratory health risks for nearby sensitive receptors.

(c) **The MND Impermissibly Defers Analysis of the Project's Significant Impacts on Public Health.**

The Air Resources Board Land Use Handbook (2005) provides recommendations to avoid or lessen impacts to public health. For example, the Air Resources Board specifies that, because truck travel in and out of distribution centers are the largest onsite diesel PM emission sources, sensitive receptors should be located at least 1,000 feet away from such uses. Air Resources Board Land Use Handbook at Table 1-1 and Table 1-2. But once again, the MND fails to apply those recommendations to the Project. In fact, the MND entirely ignores analysis of public health impacts resulting from the Project.

As explained above, the City is obliged to identify feasible, enforceable measures to reduce significant impacts. Pub. Res. Code § 21081.6(b); CEQA Guidelines § 15126.4(a)(2). The California Attorney General recently weighed in on the importance and feasibility of measures to protect public health from the risks posed by transportation sources of pollution. In February 2013, the Attorney General settled a case in connection with the 1.1 million square-foot Mira Loma Commerce Center in Jurupa Valley. *See* Consent Judgment, Case No. RIC1112063, attached as Attachment D. The settlement requires the City of Mira Loma and/or the developer to implement specific measures to reduce health risks from additional traffic. For example, they must provide air-filtration systems to nearby homes, monitor air quality, install solar panels and charging stations for e-vehicles, and ban heavy trucks on a major road near impacted residents. *Id.*

The City must consider and adopt measures to protect sensitive receptors from the health impacts caused by the increase in air pollutants that will accompany implementation of the Project. These should include the measures identified in the Consent Decree referenced above. The MND's deferral of the analysis and mitigation of these health impacts violates CEQA. The MND must be revised to include a health risk assessment of all of these Project-related emissions and must identify feasible, enforceable mitigation to eliminate or reduce significant impacts to public health.

(d) The MND Fails to Evaluate Significant Public Health Impacts Related to Valley Fever

The MND further fails to acknowledge, let alone analyze, the potential for the Project to expose sensitive receptors to Valley Fever, or coccidioidomycosis. As described on the Mayo Clinic website, Valley Fever is an infectious disease caused by the fungus *Coccidioides immitis*. *See* https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Coccidioidomycosis.aspx (accessed 1/16/18). It is caused by inhalation of *Coccidioides immitis* spores that have

become airborne when dry, dusty soil or dirt is disturbed by wind, construction, farming, or other activities. *Id.* The Valley Fever fungus tends to be found in undisturbed soil and grows down to 12-inch depths. *Id.* The City should have evaluated whether the proposed Project has the potential to result in significant Valley Fever impacts. Inasmuch as the proposed Project would involve disturbance of the top soil of undeveloped land, dry, alkaline, sandy soils, in a location within a windy area, the potential exists for significant Valley Fever impacts. The City must conduct this analysis in an EIR.

4. The MND Fails to Adequately Analyze the Potential for Development Under the General Plan to Create Objectionable Odors.

Industrial uses have the potential to generate odors and to impact nearby sensitive receptors. As CARB makes clear "the types of facilities that can cause odor complaints are varied and can range from small commercial facilities to large industrial facilities…". California Environmental Protection Agency and California Air Resources Board Air Quality and Land Use Handbook: A Community Health Perspective, 2005 at 29 and 30; excerpts attached as Attachment B. Odors can cause health symptoms such as nausea and headache. *Id.* Facilities with odors may also be sources of toxic air pollutants. *Id.*

Despite these facts, the MND fails to include *any* analysis of this important issue. Instead, the MND defers this important analysis to the future, when specific projects are proposed and concludes, absent any evidence, that impacts relating to odorous emissions would be less than significant. MND at 13 and MMR Checklist at 7. Nor does the MEIR provide this analysis. MEIR at 5.3-62-64. The MND can hardly conclude that no sensitive receptors will be affected by manufacturing and industrial odors if there is no screening analysis to determine the extent and severity of the impact and no plan to ensure that odor sources will be prohibited or minimized.

The San Joaquin Valley Air Pollution Control District ("SJVAPCD") provides guidance for conducting this analysis. Attachment E at 102 (SJVAPCD Guide For Assessing And Mitigating Air Quality Impacts). Should the analysis determine that the Project's odor impacts are significant, an EIR must disclose these impacts and identify feasible mitigation measures to avoid and minimize impacts on sensitive receptors.

5. The MND Lacks Adequate Mitigation for Disclosed Significant Impacts.

An environmental document is inadequate if it fails to suggest mitigation measures, or if its suggested mitigation measures are so undefined that it is impossible to

evaluate their effectiveness. *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1984) 151 Cal.App.3d 61 at 79. The City may not use the inadequacy of its impacts review to avoid mitigation: "The agency should not be allowed to hide behind its own failure to collect data." *Sundstrom*, 202 Cal.App.3d at 306. The formulation of mitigation measures may not properly be deferred until after Project approval; rather, "[m]itigation measures must be fully enforceable through permit conditions, agreements, or legally binding instruments." CEQA Guidelines § 15126.4(a). As explained below, the MND's identification and analysis of mitigation measures, like its analysis of air quality impacts, are legally inadequate.

This MND inappropriately defers mitigation. As discussed throughout this letter, the MND concedes that the Project could result in significant impacts to air quality due to criteria air pollutants and toxic air contaminant emissions that will exceed established thresholds of significance. MND at 15. Given the existing air pollution in the Project study area, and the Project's potential to significantly contribute to that pollution, one would expect the MND to provide a comprehensive program to mitigate these impacts. Instead, in violation of CEQA, the MND proposes a narrow range of ineffectual mitigation measures that will not adequately mitigate the Project's air quality impacts.

For example, the MND's primary air quality mitigation measures (Project Specific Mitigation Measures III.1-III.4) simply require the applicant to obtain necessary permits from the SJVAPCD and comply with existing regulations. Project Specific Mitigation Monitoring Checklist at 1 and 2. This "mitigation," which adds nothing to the existing regulatory scheme, cannot satisfy CEQA. As the courts explain, merely requiring compliance with existing agency regulations does not conclusively indicate that a proposed project would not have a significant and adverse impact. *See Kings County Farm Bureau*, 221 Cal.App.3d at 716.

The other Project Specific Mitigation Measure addressing air quality impacts requires that the applicant prepare an odor assessment to determine if the project would impact sensitive receptors. Project Specific Mitigation Monitoring Checklist at 2.[2] However, the MND never explains the contents of this assessment and the mitigation measure does not commit to specific performance standards.

The MND's other air quality mitigation measures stem from mitigation required in the General Plan MEIR. But rather than complying with the measures, which require

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[2] MEIR mitigation measure MM AIR-5 also requires project applicants to prepare odor impact assessments.

screening analyses to determine health and cancer risks to sensitive receptors (MEIR mitigation measure MM AIR-1 and MEIR mitigation measure MM-2) and a cumulative health risk assessment, the MND defers implementation of these mitigations until an uncertain future date.

At the same time, the MND fails to include additional concrete measures that could effectively reduce the Project's air quality impacts. For example, a broad array of feasible measures, including but not limited to, requiring Tier 4 Final for construction equipment, providing electrical hookups for use of hand tools and other equipment, and limiting the amount of cut and fill per day are available and have been implemented by other projects in the surrounding region. Nor is there evidence that such measures would not be feasible.

Despite the patent deficiency of the MND's proposed mitigation, the document concludes that after mitigation there will be no significant air quality impacts from the Project. An EIR for the Project should include a detailed analysis of pre- and post-Project emissions and identification of additional specific mitigation measures and alternatives to reduce or avoid the Project's significant air quality impacts.

B. The MND Fails to Adequately Analyze and Mitigate for the Project's Greenhouse Gas Emissions.

Analysis of greenhouse gas emissions is particularly important with regard to climate change because existing conditions are such that we have already exceeded the capacity of the atmosphere to absorb additional greenhouse ("GHG") emissions without risking catastrophic and irreversible consequences. Therefore, even seemingly small additions of GHG emissions into the atmosphere must be considered cumulatively considerable. *See Communities for Better Env't v. California Resources Agency* (2002) 103 Cal. App. 4th 98, 120 ("the greater the existing environmental problems are, the lower the threshold for treating a project's contribution to cumulative impacts as significant."); *see also Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508, 550 (9th Cir. 2007) ("we cannot afford to ignore even modest contributions to global warming."). Here, the MND completely fails to estimate the Project's GHG emissions, presents an incomplete analysis, and fails to identify feasible mitigation measures.

1. The MND's Analysis of GHG Emissions is Deficient.

Under CEQA, a Project will have significant GHG-related impacts if it will generate GHG emissions that may have a significant impact. CEQA Guidelines, Appendix G § VII. The MND makes no attempt to quantify or otherwise analyze Project-related GHG impacts. MND at 22. Instead, the MND states only that "[T]he proposed project will not occur at a scale or scope with potential to contribute substantially or cumulatively to the generation of greenhouse gas emissions, either directly or indirectly." MND at 22. The MND fails to provide evidentiary support for this conclusory statement.

To the contrary, the Tamura report shows that modeled emissions for the proposed Project are likely to result in significant GHG. According to the model presented in the Tamura report, an "Industrial Park" of this type is likely to result in more than 30,000 metric tons of carbon dioxide emissions. See Attachment A, Tamura Report, Exhibit 2 at 4. This level of GHG emission is significant by any measure. A revised environmental document must disclose this significant impact and identify feasible measures to mitigate the effects.

Meaningful analysis of impacts effectuates one of CEQA's fundamental purposes: to "inform the public and responsible officials of the environmental consequences of their decisions before they are made." *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1993) 6 Cal.4th 1112, 1123 ("*Laurel Heights II*"). To accomplish this purpose, an EIR must contain facts and analysis, not just an agency's bare conclusions. *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 568. Nor may an agency defer its assessment of important environmental impacts until after the project is approved. *Sundstrom*, 202 Cal.App.3d at 306-07. An EIR's conclusions must be supported by substantial evidence. *Laurel Heights I*, 47 Cal.3d 376 at 409. The MND's lack of analysis fails to fulfill this mandate.

Similarly, the MND fails to provide any analysis regarding whether the Project conflicts with applicable plans and policies. Instead, the MND relies on the General Plan MEIR to conclude that Project impacts will be less than significant. The MND quotes the MEIR and states that "even though there is increased growth, the City would still be reducing greenhouse gas emissions through 2020 and per capita emission rates drop substantially." MND at 22. However, this statement, even it were accurate, does not excuse the MND from evaluating project-generated GHG emissions and their effects on climate change. As discussed throughout this letter, the MEIR's analysis—based on population growth—did not analyze project-specific impacts, such as GHG emission impacts from this proposed development.

Moreover, the General Plan MEIR failed to provide evidence that General Plan policies will result in emissions reductions at build-out sufficient to comply with all applicable plans and laws, including Executive Order S-3-05. See Pub. Res. Code § 21082.2(c) ("[a]rgument, speculation, unsubstantiated opinion or narrative, [and] evidence which is clearly inaccurate or erroneous" does not constitute substantial evidence); see also *Californians for Alternatives to Toxics v. Dept. of Food & Agric.* (2005) 136 Cal. App. 4th 1, 17 ("[C]onclusory statements do not fit the CEQA bill."). The MEIR relies on vague and unenforceable General Plan objectives and policies to mitigate Project-related GHG emissions. See MEIR at 5.7-52. Therefore, the MND cannot rely on the MEIR's analysis of program-level impacts without providing supplemental analysis on project-related emissions and site-specific mitigation measures. Without such analysis, the MND lacks substantial evidence to support its conclusion.

2. The MND Fails to Include Mitigation Measures for the Project's Significant GHG Emissions.

Because the MND fails to analyze the project's GHG impacts, it fails to propose feasible mitigation measures to reduce the Project's significant impacts on climate change. However, because the Project's GHG emissions have the potential to result in significant impacts, the MND must analyze, and the City must adopt, all feasible mitigation to reduce those impacts.

As discussed above, the MND estimates the Project will more than six thousand daily vehicle trips. MND at 44. In addition, cumulative projects in the area, including the approved Amazon and Ulta Beauty projects, will also add thousands of additional daily trips. This increase in vehicle traffic translates directly to an increase in greenhouse gases. Yet, despite this increase in traffic, the MND fails to identify *any* feasible measures to reduce GHG.

There are numerous feasible mitigation measures the City could adopt to reduce the Project's GHG, air quality and other impacts. Other agencies routinely require mitigation for development projects that include requirements to use renewable energy or install on-site solar power. For instance, Riverside County has previously required large development projects to meet the following standard: "80 percent of residential units shall meet 60 percent of their baseline demand power energy needs with renewable energy; and 80 percent of commercial building square footage shall meet 40 percent of their baseline demand power energy needs with renewable energy." Travertine Point Specific Plan Conditions of Approval, attached as Attachment F, p. 91. If the developer cannot show that the local electricity provider is meeting these standards, than renewable energy must be provided from on-site sources. *Id.* Likewise, Riverside County also

required this project to install cool pavement and cool roofs. *Id.* (see p. 90, measure 30. Planning 111); see also *id.*, pp. 88-94 (requiring other energy and water efficiency measures).

There are feasible measures that would reduce impacts. The MND has certainly offered no evidence to the contrary. Therefore, the City must quantify Project-related GHG emissions and identify feasible measures to mitigate the impacts from those emissions.

II. The MND Fails to Provide Any Analysis of the Project's Potentially Significant Cumulative Impacts.

CEQA requires lead agencies to disclose and analyze a project's "cumulative impacts," defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Guidelines § 15355. Cumulative impacts may result from a number of separate projects, and occur when "results from the incremental impact of the project [are] added to other closely related past, present, and reasonably foreseeable probable future projects," even if each project contributes only "individually minor" environmental effects. Guidelines §§ 15355(a)-(b). A lead agency must prepare an EIR if a project's possible impacts, though "individually limited," prove "cumulatively considerable." Pub. Res. Code § 21083(b); Guidelines § 15064(i).

Extensive case authority highlights the importance of a thorough cumulative impacts analysis. In *San Bernardino Valley Audubon Society v. Metropolitan Water Dist. of Southern Cal.* (1999) 71 Cal.App.4th 382, 386, 399, for example, the court invalidated a negative declaration and required an EIR be prepared for the adoption of a habitat conservation plan and natural community conservation plan. The court specifically held that the negative declaration's "summary discussion of cumulative impacts is inadequate," and that "it is at least potentially possible that there will be incremental impacts. . . that will have a cumulative effect." See also *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d at 728-729 [EIR's treatment of cumulative impacts on water resources was inadequate where the document contained "no list of the projects considered, no information regarding their expected impacts on groundwater resources and no analysis of the cumulative impacts"].

In contravention of the above authorities, the MND provides no discussion of the Project's cumulative impacts, but simply concludes that they are less than significant. MND at 50. The MND thus completely ignores the cumulative effects of all the proposed projects in the area. For example, the City recently approved two similar projects in the

immediate vicinity of the proposed Project: the Amazon warehouse project and the Ulta Beauty distribution center . These two projects alone are constructing 1,525,000 square feet of warehouse space. These projects are located at the junction of Orange & Central Avenue at the western boundary of the Project site, and at East and Central Avenue and at the junction of Orange and Central Avenues just a half mile from the Project site, respectively. the proposed Project.These projects, together with the proposed project, have the potential to result in significant increases in traffic, which would result in a cumulatively significant impact on circulation. These impacts would in turn result in significant impacts to air quality, public health, and greenhouse gas emissions. Notwithstanding such obvious evidence, the MND fails to provide any analysis of these potentially significant cumulative impacts. Moreover, California courts have long established that an environmental analysis must take the existing setting into consideration where an area is already burdened by significant impacts. *Kings County Farm Bureau v.* City *of Hanford* (1990) 221 Cal.App.3d 692, 718 [270 Cal.Rptr. 650].) ["The relevant question to be addressed in the EIR is not the relative amount of precursors emitted by the project when compared with preexisting emissions, but whether any additional amount of precursor emissions should be considered significant in light of the serious nature of the ozone problems in this air basin."] Likewise, here, the City may not minimize the Project's cumulative air quality and public health impacts to neighboring communities by avoiding the analysis. Indeed, existing adverse conditions weigh in favor of a finding of significance. Kings County Farm Bureau, 221 Cal.App.3d at 718.

The City must prepare an EIR to examine the combined effects of both the proposed Project and the other related projects in the area. There are two parts to this question: (a) is there a significant impact to the environment that is the result of the effects of the Project combined with the effects of other projects, and (b) is the Project's contribution to this impact cumulatively considerable? CEQA Guidelines § 15064(h)(1), 15355(b). The MND must then identify feasible alternatives and mitigation measures to ameliorate those effects.

III. Conclusion

As set forth above, the MND does not come close to satisfying CEQA's requirements. It fails to adequately describe the Project and its setting, and fails to provide a complete analysis of Project impacts and feasible mitigation measures. At the same time, ample evidence demonstrates that a fair argument exists that the Project may have significant environmental impacts. In light of this evidence, CEQA requires that an EIR be prepared. For these reasons, the Project should be denied at this time. The Project should not be reconsidered until a legally adequate EIR is prepared and certified.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Yesenia Franco for Ellison Folk

Ellison Folk

Carmen J. Borg

Carmen Borg, AICP, Urban Planner

Attachments:

Attachment A:	Letter from Tamura Environmental to C. Borg, January 18, 2018.
Attachment B:	Air Quality and Land Use Handbook: A Community Health Perspective, April 2005, California Environmental Protection Agency California Air Resources Board
Attachment C:	Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review, May 6, 2008, Rajiv Bhatia and Thomas Rivard
Attachment D:	Consent Judgment, Case No. RIC1112063, *CNFF v. SANDAG*
Attachment E:	Guide for Assessing and Mitigating Air Quality Impacts, March 19, 2015, Mobile Source /CEQA Section of the Planning Division of the San Joaquin Valley Air Pollution Control District
Attachment F:	Travertine Point Specific Plan Conditions of Approval

TAMURA ENVIRONMENTAL

January 18, 2018 Ref 1282

Carmen J. Borg, AICP
Urban Planner
Shute, Mihaly & Weinberger LLP
396 Hayes Street
San Francisco, CA 94102

Re: Evaluation of Caglia project (Development Permit D-16-109) with respect to air emissions

Dear Carmen:

Per your request, Tamura Environmental, Inc. has conducted an evaluation of the air emissions associated with the proposed Caglia project at 3751 South Cedar Avenue S/A, Fresno (City of Fresno Environmental Assessment Number D-16-109) with respect to CEQA significance thresholds in the San Joaquin Valley. Tamura Environmental is a consultancy specializing in air pollution and greenhouse gas technical and regulatory issues, and my personal curriculum vitae is included in Exhibit 1 to this letter.

The latest version of the CalEEMod® software tool (developed for the California Air Pollution Control Officers Association for the purpose of conducting these types of analyses) shows that operational emissions associated with vehicular traffic are expected to greatly exceed the significance threshold of 10 tons per year (TPY) of oxides of nitrogen (NO_x).

Project Description

The permit application you provided to us describes the project as "an industrial business park with up to 7 reinforced concrete buildings…proposed for heavy industrial use…with the total building square footage at ±2,069,820" and the drawings in the application refer to the presence of a warehouse.

CEQA Significance Thresholds

The City's Mitigated Negative Declaration (MND) for this project states that because the Master EIR for the Fresno General Plan projects a net decrease in emissions over time and the project development would need to comply with SJVAPCD and state rules and regulations, this "provides additional support for the conclusion that [this project] will not interfere or obstruct with the application of the attainment plans". However, the fact that (a) a General Plan (which does not incorporate this specific project) shows emissions decreasing over time and (b) projects comply with applicable rules and regulations does not mean that none of them have impacts that are "significant" under CEQA. The San

19 4th Street, Ste 200, Petaluma, CA 94952 ~ Tel: 707.773.3737 ~ Fax: 888.874.2788

Joaquin Valley is designated as an "extreme" nonattainment area for ozone (formed by emissions of NOx and VOC) and SJVAPCD has quantitative significance thresholds. A letter from the San Joaquin Valley APCD to the City (dated April 24, 2017) regarding this project stated that:

> "Permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. Preparation of an Environmental Impact Report (EIR) is recommend *[sic]* should emissions from either source exceed the following amounts: 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM10)."

(The District's CEQA significance thresholds for NO_x and ROG are identical to the 10 TPY Federal emissions thresholds triggering General Conformity analyses for projects requiring Federal approvals.[1])

Emissions Evaluation

The City's Mitigated Negative Declaration for this project does not include any quantitative analysis of air emissions; instead, it acknowledges that "it is likely that the total concentrations of pollutants and contaminants generated by the individual development projects will exceed the thresholds during project construction and operation" but identifies less than significant impacts and supports this argument with the statement that

> "...given the broad range of uses listed as permissible within the existing IH (Heavy Industrial) zone district and the prospective amount of time that may be required to achieve build out...estimates of specific project contributions to SJVAPCD thresholds and localized impacts associated with construction activity is considered speculative at this time."

The latest version of the California Air Pollution Control Officers Association's CalEEMod® software (version 2016.3.2, released November 2017) allows for the estimation of air emissions based only on project characteristics and land use. While emissions estimates can definitely be refined with more specific project information, the model provides an approximate estimate of emissions associated with projects of varying types and scale. <u>As shown in Exhibit 2, for an "Industrial Park" land use subtype[2] with 2 million square feet of building area, the model predicts unmitigated operational emissions of 52 TPY of NO_x, of which 51 TPY are from mobile sources, which is far in excess of the 10 TPY significance threshold identified by the District.</u>

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[1] 40 CFR 93, Subpart B.

[2] The CalEEMod® User's Guide describes "Industrial Park" as follows: "Industrial parks contain a number of industrial or related facilities. They are characterized by a mix of manufacturing, service and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities."

The MND then states that

> "subsequent individual development projects within the project area will be subject to the project level thresholds at the time they are proposed and are required to comply with all SJVAPCD standards, rules and regulations as identified within the MEIR and attached project specific mitigation monitoring checklist as necessary to assure emission levels do not exceed the amounts required for attainment by the years mandated by state and federal regulations."

However, the specific mitigation monitoring checklist only applies to construction-related emissions, stationary sources, and mobile source emissions that are either (1) subject to SJVAPCD Rule 9510 (which requires 33.3% NOx emissions reductions and exempts projects on facilities whose primary functions are subject to stationary source permit requirements) or (2) subject to SJVAPCD Rule 9410 (employee trip reduction requirements for employers with over 100 Eligible Employees). Neither of these mobile source rules, even if applicable to the future tenants of the buildings, is likely to mitigate the 51 TPY of NO_x emissions from mobile sources to be lower 10 TPY.

Please contact me at (707) 773-3737 if you have any comments or questions regarding this letter report.

Sincerely,

TAMURA ENVIRONMENTAL, INC.

Todd Tamura, QEP
Principal

Exhibit 1

TAMURA ENVIRONMENTAL

CURRICULUM VITAE

TODD M. TAMURA, QEP

19 4th Street, Suite 200
Petaluma, CA 94952
(707) 773-3737

EXPERIENCE SUMMARY

Todd Tamura, QEP has been a professional air pollution consultant for 24 years, during which time he has focused on air pollutant quantification (direct measurement and estimation techniques) and regulatory issues (including compliance assistance/audits, technical evaluations, and training).

RECENT EMPLOYMENT HISTORY

2005-present	Air pollution/GHG consultant, Tamura Environmental, Inc., Petaluma, CA (President)
2005-2015	Air pollution/GHG consultant, Tetra Tech, Inc., Pasadena, CA (Supervising Seller-Doer)
2002-2005	Air pollution/GHG consultant, Sonoma Technology, Inc., Petaluma, CA (Project Manager and Senior Scientist)
1993-2002	Air pollution/GHG consultant, Tech Environmental, Inc., Waltham, MA (started as Junior Scientist, finished as Senior Project Manager and Partner)
1992-1993	Researcher, U.S. Department of Transportation, Research and Special Programs Administration (Volpe National Transportation Systems Center) and MIT Sloan Automotive Laboratory, Cambridge, MA

EDUCATION

Massachusetts Institute of Technology, M.S. Technology and Policy, 1993
University of California, Los Angeles, M.S. Chemistry, 1990
Harvey Mudd College, B.S. Chemistry with Distinction and Departmental Honors, 1988

AFFILIATIONS AND CERTIFICATIONS

Air & Waste Management Association: Vice Chair, Editorial Advisory Committee, *EM* magazine, 2004-2007; Golden West (Northern California) Section Executive Board member, 2005-2006; New England Section Executive Board member, 1996-2002;

technical peer reviewer for the *Journal of the Air & Waste Management Association*; member, 1993-present
American Chemical Society, member, 1991-present
American Association for the Advancement of Science, member, 1997-present
Association of Environmental Professionals, member, 2005-present
Atmospheric Environment journal peer reviewer
CARB-accredited greenhouse gas inventory Lead Verifier and Refineries Specialist (Executive Order H-15-140), 2009-present
Institute of Professional Environmental Practice, Qualified Environmental Professional (QEP) #10990058, 1999-present
Sonoma County Planning Commissioner, 2016-present
Source Evaluation Society, 2001-present
Society of Automotive Engineers, 1993-2008
Transportation Research Board of the National Academies, Affiliate Member of (and Peer Reviewer for) Transportation and Air Quality Committee (ADC20), 2003-2016
US Department of Energy "Q" security clearance, 1987-1990

PROJECT EXPERIENCE

Examples shown below have been chosen to identify a few relevant projects; additional examples of can be provided upon request.

CEQA Analyses. Completed the air quality and greenhouse gas (GHG) portions of Initial Studies for numerous negative declarations (including mitigated negative declarations) for various California jurisdictions. Projects have included both industrial sources and commercial/residential developments.

Critical Review of CEQA Documentation – Bay Area AQMD. Conducted critical reviews of CEQA documentation (EIRs and neg decs) prepared by the Bay Area AQMD for regulatory development purposes; drafted comment letters.

Critical Review of EIR – Nevada City. Conducted a critical review of an EIR for a proposed gold mine on behalf of a community organization. (Project did not proceed.)

Environmental Impact Statements - FERC. Prepared the air quality and greenhouse gas (GHG) portions of Environmental Impact Statements for a variety of liquefied natural gas/gas pipeline projects for the Federal Energy Regulatory Commission (FERC). This included detailed multiyear evaluations of the Jordan Cove Energy LNG terminal and pipeline (originally proposed as an LNG import terminal and then subsequently as an LNG export terminal); responded to hundreds of public comments.

Stationary Source Regulatory Compliance and Permitting. Prepared air permit applications and compliance documentation (emissions inventories, etc.) for facilities across the United States; conducted comprehensive air audits for numerous industrial sources of air pollution in a variety of sectors; tracked proposed air regulations and drafted technical comments for industry trade organizations.

Research Workplan for Transportation and Particulate Matter. Project manager and lead author for a comprehensive literature assessment regarding transportation and particulate matter, used to develop the Federal Highway Administration's Strategic

Workplan on this topic. The report provided an assessment of recent literature and ongoing research in the areas of ambient monitoring, PM characterization, mobile source emissions measurements, emissions models and hot-spot models, and control strategies, for purposes of developing FHWA's strategic research plan for particulate matter. Mr. Tamura was the primary author for sections associated with emissions quantification (including exhaust emissions and fugitive dust), dispersion modeling, and control strategies. Work addressed both tailpipe emissions and fugitive dust.

Transportation Conformity. Project manager and lead author of a revision of the Minneapolis-St. Paul Carbon Monoxide Maintenance Plan. Plan was developed in accordance with US EPA transportation conformity regulatory requirements (40 CFR 93) and involved development of emissions budgets (using models for vehicle emissions, and obtaining the requisite input information) and interagency consultation with the Metropolitan Council, Minnesota Pollution Control Agency, Minnesota Department of Transportation, US EPA, and US DOT. EPA Region V issued a direct final approval of this revision one month after receiving it from MPCA.

EIS Evaluation of Mobile Source Air Toxics. Lead author of a white paper prepared as a result of Sierra Club comments on an Environmental Impact Statement (EIS) for proposed roadway widening and improvements along US Route 95 (US 95) and associated roadways in the greater Las Vegas area of Clark County, Nevada. Paper was cited in *Sierra Club v. U.S. DOT et al.*

Critical Review of Emissions Inventory for Nonroad Engines. Developed an emissions inventory methods document for the San Joaquin Valley Unified Air Pollution Control District, which included a critical look at available information. (Technical paper subsequently presented at EPA's 13th International Emissions Inventory Conference.)

Fugitive Emissions from Asphalt. Estimated fugitive emissions associated with an asphalt plant; defended estimates (on behalf of client's counsel, and Massachusetts Department of Environmental Protection) in an administrative law hearing; critiqued plaintiff's alternate estimates.

SELECTED REPORTS AND PUBLICATIONS

Tamura, T.M. (2013) Gap Analysis for Particulate Matter Emission Factors for Gas-Fired Combustion Sources and Large Compression-Ignition Engines. Prepared for the Petroleum Technology Alliance of Canada (PTAC). GL 13-AU-ARPC-05. December. Available from http://www.ptac.org/projects/150

Tamura T.M. (2006) "Key Questions for Analysts of Energy Balances and Other Policy Analyses." *EM – The Magazine for Environmental Managers*, May 2006: 14-20.

Tamura, T.M. (2001) "Devils in the Details: Air Emissions of Volatile Organic Compounds." *EM – The Magazine for Environmental Managers*, **51**: 26-31.

Tamura, T.M. (2001) "Innovative Emission Control Technology Under the Clean Air Act." *EM – The Magazine for Environmental Managers*, **50**: 14-19.

Robbins, R., K. Deshais, T. Tamura, and S. Cecil (1997) "Evaluating Alternative Fuels for Fleets: A Vehicle Assessment Project for the United States Postal Service", Society of Automotive Engineers Technical Paper No. 971727. Society of Automotive Engineers, Warrendale, PA.

Tamura T.M. et al. (1996) 40 CFR 85.1403 Program 2 evaluation and cost of compliance analysis of biodiesel fuel for MBTA buses. Report prepared for Massachusetts Bay Transportation Authority, Boston, MA by Rizzo Associates, Natick, MA, Tech Environmental, Inc., and others, November.

Tamura, T.M. and P.H. Guldberg (1994) "The Use of Hourly Meteorological Data in CAL3QHC2 to Improve 8-Hour CO Predictions." Paper 94-RA107A.03 presented at the Air & Waste Management Association 87th Annual Meeting & Exhibition (Cincinnati, OH), June 19-24.

Tamura, T.M. (1993) Improving Policies to Reduce Automobile Emissions. Thesis (M.S., Technology and Policy), Massachusetts Institute of Technology, May.

Tamura, T. and S. Hochgreb (1992) "Chemical Kinetic Modeling of the Oxidation of Unburned Hydrocarbons." SAE Technical Paper 922235. Society of Automotive Engineers, Warrendale, PA.

Exhibit 2

Caglia

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	2,000.00	1000sqft	45.91	2,000,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2020
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.7851	7.4704	4.9636	0.0132	1.0385	0.2794	1.3179	0.4038	0.2597	0.6635	0.0000	1,214.2654	1,214.2654	0.2007	0.0000	1,219.2839
2019	1.0231	8.8783	6.6421	0.0244	1.1600	0.2161	1.3762	0.3149	0.2038	0.5186	0.0000	2,254.0050	2,254.0050	0.2460	0.0000	2,260.1549
2020	0.9133	8.1388	6.1158	0.0241	1.1645	0.1802	1.3447	0.3161	0.1698	0.4859	0.0000	2,223.6042	2,223.6042	0.2376	0.0000	2,229.5453
2021	14.3401	3.7935	3.1828	0.0120	0.5736	0.0875	0.6610	0.1555	0.0820	0.2375	0.0000	1,097.2271	1,097.2271	0.1244	0.0000	1,100.3372
Maximum	**14.3401**	**8.8783**	**6.6421**	**0.0244**	**1.1645**	**0.2794**	**1.3762**	**0.4038**	**0.2597**	**0.6635**	**0.0000**	**2,254.0050**	**2,254.0050**	**0.2460**	**0.0000**	**2,260.1549**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.7851	7.4704	4.9636	0.0132	1.0385	0.2794	1.3179	0.4038	0.2597	0.6635	0.0000	1,214.2648	1,214.2648	0.2007	0.0000	1,219.2833
2019	1.0231	8.8783	6.6421	0.0244	1.1600	0.2161	1.3762	0.3149	0.2038	0.5186	0.0000	2,254.0047	2,254.0047	0.2460	0.0000	2,260.1545
2020	0.9133	8.1388	6.1158	0.0241	1.1645	0.1802	1.3447	0.3161	0.1698	0.4859	0.0000	2,223.6038	2,223.6038	0.2376	0.0000	2,229.5449
2021	14.3401	3.7935	3.1828	0.0120	0.5736	0.0875	0.6610	0.1555	0.0820	0.2375	0.0000	1,097.2269	1,097.2269	0.1244	0.0000	1,100.3370
Maximum	**14.3401**	**8.8783**	**6.6421**	**0.0244**	**1.1645**	**0.2794**	**1.3762**	**0.4038**	**0.2597**	**0.6635**	**0.0000**	**2,254.0047**	**2,254.0047**	**0.2460**	**0.0000**	**2,260.1545**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-12-2018	4-11-2018	1.4326	1.4326
2	4-12-2018	7-11-2018	2.0127	2.0127
3	7-12-2018	10-11-2018	2.4692	2.4692
4	10-12-2018	1-11-2019	2.6878	2.6878
5	1-12-2019	4-11-2019	2.4500	2.4500
6	4-12-2019	7-11-2019	2.4550	2.4550
7	7-12-2019	10-11-2019	2.4850	2.4850
8	10-12-2019	1-11-2020	2.4807	2.4807

9	1-12-2020	4-11-2020	2.2552	2.2552
10	4-12-2020	7-11-2020	2.2382	2.2382
11	7-12-2020	10-11-2020	2.2652	2.2652
12	10-12-2020	1-11-2021	2.2567	2.2567
13	1-12-2021	4-11-2021	2.0213	2.0213
14	4-12-2021	7-11-2021	1.6183	1.6183
15	7-12-2021	9-30-2021	5.3555	5.3555
		Highest	5.3555	5.3555

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2032	1.7000e-004	0.0185	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0357	0.0357	1.0000e-004	0.0000	0.0381
Energy	0.1407	1.2794	1.0747	7.6800e-003		0.0972	0.0972		0.0972	0.0972	0.0000	9,679.3097	9,679.3097	0.2666	0.0752	9,708.3777
Mobile	4.2910	50.7108	40.8908	0.1931	10.7318	0.2264	10.9581	2.8934	0.2147	3.1082	0.0000	17,966.0541	17,966.0541	1.9043	0.0000	18,013.6622
Waste						0.0000	0.0000		0.0000	0.0000	503.4176	0.0000	503.4176	29.7511	0.0000	1,247.1958
Water						0.0000	0.0000		0.0000	0.0000	146.7299	1,136.9368	1,283.6667	15.1035	0.3627	1,769.3265
Total	**13.6350**	**51.9904**	**41.9840**	**0.2007**	**10.7318**	**0.3237**	**11.0554**	**2.8934**	**0.3121**	**3.2055**	**650.1475**	**28,782.3363**	**29,432.4838**	**47.0257**	**0.4378**	**30,738.6004**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2032	1.7000e-004	0.0185	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0357	0.0357	1.0000e-004	0.0000	0.0381
Energy	0.1407	1.2794	1.0747	7.6800e-003		0.0972	0.0972		0.0972	0.0972	0.0000	9,679.3097	9,679.3097	0.2666	0.0752	9,708.3777
Mobile	4.2910	50.7108	40.8908	0.1931	10.7318	0.2264	10.9581	2.8934	0.2147	3.1082	0.0000	17,966.0541	17,966.0541	1.9043	0.0000	18,013.6622
Waste						0.0000	0.0000		0.0000	0.0000	503.4176	0.0000	503.4176	29.7511	0.0000	1,247.1958
Water						0.0000	0.0000		0.0000	0.0000	146.7299	1,136.9368	1,283.6667	15.1035	0.3627	1,769.3265
Total	**13.6350**	**51.9904**	**41.9840**	**0.2007**	**10.7318**	**0.3237**	**11.0554**	**2.8934**	**0.3121**	**3.2055**	**650.1475**	**28,782.3363**	**29,432.4838**	**47.0257**	**0.4378**	**30,738.6004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/12/2018	3/22/2018	5	50	
2	Site Preparation	Site Preparation	3/23/2018	5/3/2018	5	30	
3	Grading	Grading	5/4/2018	8/16/2018	5	75	
4	Building Construction	Building Construction	8/17/2018	6/17/2021	5	740	
5	Paving	Paving	6/18/2021	9/2/2021	5	55	
6	Architectural Coating	Architectural Coating	9/3/2021	11/18/2021	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,000,000; Non-Residential Outdoor: 1,000,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	840.00	328.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	168.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0930	0.9581	0.5576	9.7000e-004		0.0485	0.0485		0.0451	0.0451	0.0000	87.8102	87.8102	0.0242	0.0000	88.4150
Total	**0.0930**	**0.9581**	**0.5576**	**9.7000e-004**		**0.0485**	**0.0485**		**0.0451**	**0.0451**	**0.0000**	**87.8102**	**87.8102**	**0.0242**	**0.0000**	**88.4150**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9600e-003	1.3400e-003	0.0133	3.0000e-005	3.0000e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.7596	2.7596	9.0000e-005	0.0000	2.7619
Total	**1.9600e-003**	**1.3400e-003**	**0.0133**	**3.0000e-005**	**3.0000e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**	**0.0000**	**2.7596**	**2.7596**	**9.0000e-005**	**0.0000**	**2.7619**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0930	0.9581	0.5576	9.7000e-004		0.0485	0.0485		0.0451	0.0451	0.0000	87.8101	87.8101	0.0242	0.0000	88.4149
Total	**0.0930**	**0.9581**	**0.5576**	**9.7000e-004**		**0.0485**	**0.0485**		**0.0451**	**0.0451**	**0.0000**	**87.8101**	**87.8101**	**0.0242**	**0.0000**	**88.4149**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9600e-003	1.3400e-003	0.0133	3.0000e-005	3.0000e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.7596	2.7596	9.0000e-005	0.0000	2.7619
Total	**1.9600e-003**	**1.3400e-003**	**0.0133**	**3.0000e-005**	**3.0000e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**	**0.0000**	**2.7596**	**2.7596**	**9.0000e-005**	**0.0000**	**2.7619**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0684	0.7230	0.3371	5.7000e-004		0.0387	0.0387		0.0356	0.0356	0.0000	52.1399	52.1399	0.0162	0.0000	52.5457
Total	**0.0684**	**0.7230**	**0.3371**	**5.7000e-004**	**0.2710**	**0.0387**	**0.3096**	**0.1490**	**0.0356**	**0.1845**	**0.0000**	**52.1399**	**52.1399**	**0.0162**	**0.0000**	**52.5457**

3.3 Site Preparation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	9.6000e-004	9.5400e-003	2.0000e-005	2.1600e-003	1.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.9869	1.9869	7.0000e-005	0.0000	1.9885
Total	**1.4100e-003**	**9.6000e-004**	**9.5400e-003**	**2.0000e-005**	**2.1600e-003**	**1.0000e-005**	**2.1700e-003**	**5.7000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.9869**	**1.9869**	**7.0000e-005**	**0.0000**	**1.9885**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0684	0.7230	0.3371	5.7000e-004		0.0387	0.0387		0.0356	0.0356	0.0000	52.1398	52.1398	0.0162	0.0000	52.5456
Total	**0.0684**	**0.7230**	**0.3371**	**5.7000e-004**	**0.2710**	**0.0387**	**0.3096**	**0.1490**	**0.0356**	**0.1845**	**0.0000**	**52.1398**	**52.1398**	**0.0162**	**0.0000**	**52.5456**

3.3 Site Preparation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	9.6000e-004	9.5400e-003	2.0000e-005	2.1600e-003	1.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.9869	1.9869	7.0000e-005	0.0000	1.9885
Total	**1.4100e-003**	**9.6000e-004**	**9.5400e-003**	**2.0000e-005**	**2.1600e-003**	**1.0000e-005**	**2.1700e-003**	**5.7000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.9869**	**1.9869**	**7.0000e-005**	**0.0000**	**1.9885**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3253	0.0000	0.3253	0.1349	0.0000	0.1349	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1909	2.2321	1.3159	2.3300e-003		0.0988	0.0988		0.0909	0.0909	0.0000	212.4319	212.4319	0.0661	0.0000	214.0852
Total	**0.1909**	**2.2321**	**1.3159**	**2.3300e-003**	**0.3253**	**0.0988**	**0.4240**	**0.1349**	**0.0909**	**0.2257**	**0.0000**	**212.4319**	**212.4319**	**0.0661**	**0.0000**	**214.0852**

3.4 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9300e-003	2.6700e-003	0.0265	6.0000e-005	6.0000e-003	4.0000e-005	6.0400e-003	1.5900e-003	4.0000e-005	1.6300e-003	0.0000	5.5192	5.5192	1.8000e-004	0.0000	5.5237
Total	**3.9300e-003**	**2.6700e-003**	**0.0265**	**6.0000e-005**	**6.0000e-003**	**4.0000e-005**	**6.0400e-003**	**1.5900e-003**	**4.0000e-005**	**1.6300e-003**	**0.0000**	**5.5192**	**5.5192**	**1.8000e-004**	**0.0000**	**5.5237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3253	0.0000	0.3253	0.1349	0.0000	0.1349	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1909	2.2321	1.3159	2.3300e-003		0.0988	0.0988		0.0909	0.0909	0.0000	212.4316	212.4316	0.0661	0.0000	214.0850
Total	**0.1909**	**2.2321**	**1.3159**	**2.3300e-003**	**0.3253**	**0.0988**	**0.4240**	**0.1349**	**0.0909**	**0.2257**	**0.0000**	**212.4316**	**212.4316**	**0.0661**	**0.0000**	**214.0850**

3.4 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9300e-003	2.6700e-003	0.0265	6.0000e-005	6.0000e-003	4.0000e-005	6.0400e-003	1.5900e-003	4.0000e-005	1.6300e-003	0.0000	5.5192	5.5192	1.8000e-004	0.0000	5.5237
Total	**3.9300e-003**	**2.6700e-003**	**0.0265**	**6.0000e-005**	**6.0000e-003**	**4.0000e-005**	**6.0400e-003**	**1.5900e-003**	**4.0000e-005**	**1.6300e-003**	**0.0000**	**5.5192**	**5.5192**	**1.8000e-004**	**0.0000**	**5.5237**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1300	1.1344	0.8527	1.3100e-003		0.0727	0.0727		0.0684	0.0684	0.0000	115.3171	115.3171	0.0283	0.0000	116.0234
Total	**0.1300**	**1.1344**	**0.8527**	**1.3100e-003**		**0.0727**	**0.0727**		**0.0684**	**0.0684**	**0.0000**	**115.3171**	**115.3171**	**0.0283**	**0.0000**	**116.0234**

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0823	2.2728	0.4111	4.5900e-003	0.1054	0.0185	0.1239	0.0305	0.0177	0.0481	0.0000	436.4998	436.4998	0.0557	0.0000	437.8927
Worker	0.2133	0.1451	1.4399	3.3200e-003	0.3257	2.2200e-003	0.3279	0.0866	2.0500e-003	0.0886	0.0000	299.8009	299.8009	9.8700e-003	0.0000	300.0478
Total	**0.2956**	**2.4179**	**1.8510**	**7.9100e-003**	**0.4311**	**0.0207**	**0.4518**	**0.1170**	**0.0197**	**0.1367**	**0.0000**	**736.3007**	**736.3007**	**0.0656**	**0.0000**	**737.9405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1300	1.1344	0.8527	1.3100e-003		0.0727	0.0727		0.0684	0.0684	0.0000	115.3170	115.3170	0.0283	0.0000	116.0233
Total	**0.1300**	**1.1344**	**0.8527**	**1.3100e-003**		**0.0727**	**0.0727**		**0.0684**	**0.0684**	**0.0000**	**115.3170**	**115.3170**	**0.0283**	**0.0000**	**116.0233**

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0823	2.2728	0.4111	4.5900e-003	0.1054	0.0185	0.1239	0.0305	0.0177	0.0481	0.0000	436.4998	436.4998	0.0557	0.0000	437.8927
Worker	0.2133	0.1451	1.4399	3.3200e-003	0.3257	2.2200e-003	0.3279	0.0866	2.0500e-003	0.0886	0.0000	299.8009	299.8009	9.8700e-003	0.0000	300.0478
Total	**0.2956**	**2.4179**	**1.8510**	**7.9100e-003**	**0.4311**	**0.0207**	**0.4518**	**0.1170**	**0.0197**	**0.1367**	**0.0000**	**736.3007**	**736.3007**	**0.0656**	**0.0000**	**737.9405**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3081	2.7508	2.2399	3.5100e-003		0.1683	0.1683		0.1583	0.1583	0.0000	306.8110	306.8110	0.0747	0.0000	308.6795
Total	**0.3081**	**2.7508**	**2.2399**	**3.5100e-003**		**0.1683**	**0.1683**		**0.1583**	**0.1583**	**0.0000**	**306.8110**	**306.8110**	**0.0747**	**0.0000**	**308.6795**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1971	5.7867	0.9865	0.0123	0.2837	0.0420	0.3256	0.0819	0.0402	0.1221	0.0000	1,164.3634	1,164.3634	0.1479	0.0000	1,168.0618
Worker	0.5180	0.3408	3.4157	8.6700e-003	0.8764	5.8100e-003	0.8822	0.2329	5.3500e-003	0.2383	0.0000	782.8307	782.8307	0.0233	0.0000	783.4136
Total	**0.7150**	**6.1275**	**4.4022**	**0.0209**	**1.1600**	**0.0478**	**1.2078**	**0.3149**	**0.0455**	**0.3604**	**0.0000**	**1,947.1940**	**1,947.1940**	**0.1713**	**0.0000**	**1,951.4753**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3081	2.7508	2.2399	3.5100e-003		0.1683	0.1683		0.1583	0.1583	0.0000	306.8106	306.8106	0.0747	0.0000	308.6792
Total	**0.3081**	**2.7508**	**2.2399**	**3.5100e-003**		**0.1683**	**0.1683**		**0.1583**	**0.1583**	**0.0000**	**306.8106**	**306.8106**	**0.0747**	**0.0000**	**308.6792**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1971	5.7867	0.9865	0.0123	0.2837	0.0420	0.3256	0.0819	0.0402	0.1221	0.0000	1,164.3634	1,164.3634	0.1479	0.0000	1,168.0618
Worker	0.5180	0.3408	3.4157	8.6700e-003	0.8764	5.8100e-003	0.8822	0.2329	5.3500e-003	0.2383	0.0000	782.8307	782.8307	0.0233	0.0000	783.4136
Total	**0.7150**	**6.1275**	**4.4022**	**0.0209**	**1.1600**	**0.0478**	**1.2078**	**0.3149**	**0.0455**	**0.3604**	**0.0000**	**1,947.1940**	**1,947.1940**	**0.1713**	**0.0000**	**1,951.4753**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4091**	**303.4091**	**0.0740**	**0.0000**	**305.2596**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1606	5.3241	0.8502	0.0122	0.2848	0.0283	0.3130	0.0823	0.0270	0.1093	0.0000	1,158.7857	1,158.7857	0.1432	0.0000	1,162.3663
Worker	0.4750	0.3013	3.0584	8.4300e-003	0.8797	5.6600e-003	0.8854	0.2338	5.2100e-003	0.2390	0.0000	761.4093	761.4093	0.0204	0.0000	761.9194
Total	**0.6356**	**5.6254**	**3.9086**	**0.0206**	**1.1645**	**0.0339**	**1.1984**	**0.3161**	**0.0322**	**0.3483**	**0.0000**	**1,920.1951**	**1,920.1951**	**0.1636**	**0.0000**	**1,924.2857**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	**0.2777**	**2.5134**	**2.2072**	**3.5300e-003**		**0.1463**	**0.1463**		**0.1376**	**0.1376**	**0.0000**	**303.4087**	**303.4087**	**0.0740**	**0.0000**	**305.2592**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1606	5.3241	0.8502	0.0122	0.2848	0.0283	0.3130	0.0823	0.0270	0.1093	0.0000	1,158.7857	1,158.7857	0.1432	0.0000	1,162.3663
Worker	0.4750	0.3013	3.0584	8.4300e-003	0.8797	5.6600e-003	0.8854	0.2338	5.2100e-003	0.2390	0.0000	761.4093	761.4093	0.0204	0.0000	761.9194
Total	**0.6356**	**5.6254**	**3.9086**	**0.0206**	**1.1645**	**0.0339**	**1.1984**	**0.3161**	**0.0322**	**0.3483**	**0.0000**	**1,920.1951**	**1,920.1951**	**0.1636**	**0.0000**	**1,924.2857**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1141	1.0459	0.9945	1.6200e-003		0.0575	0.0575		0.0541	0.0541	0.0000	138.9824	138.9824	0.0335	0.0000	139.8206
Total	**0.1141**	**1.0459**	**0.9945**	**1.6200e-003**		**0.0575**	**0.0575**		**0.0541**	**0.0541**	**0.0000**	**138.9824**	**138.9824**	**0.0335**	**0.0000**	**139.8206**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0595	2.2153	0.3375	5.5300e-003	0.1304	5.9500e-003	0.1364	0.0377	5.6900e-003	0.0434	0.0000	525.7437	525.7437	0.0634	0.0000	527.3296
Worker	0.2010	0.1228	1.2710	3.7300e-003	0.4029	2.5100e-003	0.4054	0.1071	2.3100e-003	0.1094	0.0000	336.7865	336.7865	8.3200e-003	0.0000	336.9944
Total	**0.2605**	**2.3380**	**1.6085**	**9.2600e-003**	**0.5334**	**8.4600e-003**	**0.5418**	**0.1448**	**8.0000e-003**	**0.1528**	**0.0000**	**862.5302**	**862.5302**	**0.0718**	**0.0000**	**864.3240**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1141	1.0459	0.9945	1.6200e-003		0.0575	0.0575		0.0541	0.0541	0.0000	138.9822	138.9822	0.0335	0.0000	139.8205
Total	**0.1141**	**1.0459**	**0.9945**	**1.6200e-003**		**0.0575**	**0.0575**		**0.0541**	**0.0541**	**0.0000**	**138.9822**	**138.9822**	**0.0335**	**0.0000**	**139.8205**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0595	2.2153	0.3375	5.5300e-003	0.1304	5.9500e-003	0.1364	0.0377	5.6900e-003	0.0434	0.0000	525.7437	525.7437	0.0634	0.0000	527.3296
Worker	0.2010	0.1228	1.2710	3.7300e-003	0.4029	2.5100e-003	0.4054	0.1071	2.3100e-003	0.1094	0.0000	336.7865	336.7865	8.3200e-003	0.0000	336.9944
Total	**0.2605**	**2.3380**	**1.6085**	**9.2600e-003**	**0.5334**	**8.4600e-003**	**0.5418**	**0.1448**	**8.0000e-003**	**0.1528**	**0.0000**	**862.5302**	**862.5302**	**0.0718**	**0.0000**	**864.3240**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0345	0.3553	0.4030	6.3000e-004		0.0186	0.0186		0.0172	0.0172	0.0000	55.0646	55.0646	0.0178	0.0000	55.5098
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0345**	**0.3553**	**0.4030**	**6.3000e-004**		**0.0186**	**0.0186**		**0.0172**	**0.0172**	**0.0000**	**55.0646**	**55.0646**	**0.0178**	**0.0000**	**55.5098**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6500e-003	1.0000e-003	0.0104	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.7564	2.7564	7.0000e-005	0.0000	2.7581
Total	**1.6500e-003**	**1.0000e-003**	**0.0104**	**3.0000e-005**	**3.3000e-003**	**2.0000e-005**	**3.3200e-003**	**8.8000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.7564**	**2.7564**	**7.0000e-005**	**0.0000**	**2.7581**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0345	0.3553	0.4030	6.3000e-004		0.0186	0.0186		0.0172	0.0172	0.0000	55.0645	55.0645	0.0178	0.0000	55.5097
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0345**	**0.3553**	**0.4030**	**6.3000e-004**		**0.0186**	**0.0186**		**0.0172**	**0.0172**	**0.0000**	**55.0645**	**55.0645**	**0.0178**	**0.0000**	**55.5097**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6500e-003	1.0000e-003	0.0104	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.7564	2.7564	7.0000e-005	0.0000	2.7581
Total	**1.6500e-003**	**1.0000e-003**	**0.0104**	**3.0000e-005**	**3.3000e-003**	**2.0000e-005**	**3.3200e-003**	**8.8000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.7564**	**2.7564**	**7.0000e-005**	**0.0000**	**2.7581**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	13.9050					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0200e-003	0.0420	0.0500	8.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	7.0215	7.0215	4.8000e-004	0.0000	7.0335
Total	**13.9110**	**0.0420**	**0.0500**	**8.0000e-005**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**7.0215**	**7.0215**	**4.8000e-004**	**0.0000**	**7.0335**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0184	0.0113	0.1165	3.4000e-004	0.0369	2.3000e-004	0.0372	9.8200e-003	2.1000e-004	0.0100	0.0000	30.8721	30.8721	7.6000e-004	0.0000	30.8912
Total	**0.0184**	**0.0113**	**0.1165**	**3.4000e-004**	**0.0369**	**2.3000e-004**	**0.0372**	**9.8200e-003**	**2.1000e-004**	**0.0100**	**0.0000**	**30.8721**	**30.8721**	**7.6000e-004**	**0.0000**	**30.8912**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	13.9050					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0200e-003	0.0420	0.0500	8.0000e-005		2.5900e-003	2.5900e-003		2.5900e-003	2.5900e-003	0.0000	7.0214	7.0214	4.8000e-004	0.0000	7.0335
Total	**13.9110**	**0.0420**	**0.0500**	**8.0000e-005**		**2.5900e-003**	**2.5900e-003**		**2.5900e-003**	**2.5900e-003**	**0.0000**	**7.0214**	**7.0214**	**4.8000e-004**	**0.0000**	**7.0335**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0184	0.0113	0.1165	3.4000e-004	0.0369	2.3000e-004	0.0372	9.8200e-003	2.1000e-004	0.0100	0.0000	30.8721	30.8721	7.6000e-004	0.0000	30.8912
Total	**0.0184**	**0.0113**	**0.1165**	**3.4000e-004**	**0.0369**	**2.3000e-004**	**0.0372**	**9.8200e-003**	**2.1000e-004**	**0.0100**	**0.0000**	**30.8721**	**30.8721**	**7.6000e-004**	**0.0000**	**30.8912**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.2910	50.7108	40.8908	0.1931	10.7318	0.2264	10.9581	2.8934	0.2147	3.1082	0.0000	17,966.0541	17,966.0541	1.9043	0.0000	18,013.6622
Unmitigated	4.2910	50.7108	40.8908	0.1931	10.7318	0.2264	10.9581	2.8934	0.2147	3.1082	0.0000	17,966.0541	17,966.0541	1.9043	0.0000	18,013.6622

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	13,660.00	4,980.00	1460.00	27,993,635	27,993,635
Total	13,660.00	4,980.00	1,460.00	27,993,635	27,993,635

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.481390	0.032808	0.168621	0.127212	0.018382	0.004997	0.032622	0.122881	0.002369	0.001675	0.005261	0.001115	0.000667

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,286.5143	8,286.5143	0.2399	0.0496	8,307.3056
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,286.5143	8,286.5143	0.2399	0.0496	8,307.3056
NaturalGas Mitigated	0.1407	1.2794	1.0747	7.6800e-003		0.0972	0.0972		0.0972	0.0972	0.0000	1,392.7954	1,392.7954	0.0267	0.0255	1,401.0721
NaturalGas Unmitigated	0.1407	1.2794	1.0747	7.6800e-003		0.0972	0.0972		0.0972	0.0972	0.0000	1,392.7954	1,392.7954	0.0267	0.0255	1,401.0721

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	2.61e+007	0.1407	1.2794	1.0747	7.6800e-003		0.0972	0.0972		0.0972	0.0972	0.0000	1,392.7954	1,392.7954	0.0267	0.0255	1,401.0721
Total		**0.1407**	**1.2794**	**1.0747**	**7.6800e-003**		**0.0972**	**0.0972**		**0.0972**	**0.0972**	**0.0000**	**1,392.7954**	**1,392.7954**	**0.0267**	**0.0255**	**1,401.0721**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	2.61e+007	0.1407	1.2794	1.0747	7.6800e-003		0.0972	0.0972		0.0972	0.0972	0.0000	1,392.7954	1,392.7954	0.0267	0.0255	1,401.0721
Total		**0.1407**	**1.2794**	**1.0747**	**7.6800e-003**		**0.0972**	**0.0972**		**0.0972**	**0.0972**	**0.0000**	**1,392.7954**	**1,392.7954**	**0.0267**	**0.0255**	**1,401.0721**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.824e+007	8,286.5143	0.2399	0.0496	8,307.3056
Total		**8,286.5143**	**0.2399**	**0.0496**	**8,307.3056**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.824e+007	8,286.5143	0.2399	0.0496	8,307.3056
Total		**8,286.5143**	**0.2399**	**0.0496**	**8,307.3056**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.2032	1.7000e-004	0.0185	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0357	0.0357	1.0000e-004	0.0000	0.0381
Unmitigated	9.2032	1.7000e-004	0.0185	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0357	0.0357	1.0000e-004	0.0000	0.0381

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.3905					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.8110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7400e-003	1.7000e-004	0.0185	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0357	0.0357	1.0000e-004	0.0000	0.0381
Total	**9.2032**	**1.7000e-004**	**0.0185**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0357**	**0.0357**	**1.0000e-004**	**0.0000**	**0.0381**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.3905					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.8110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7400e-003	1.7000e-004	0.0185	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0357	0.0357	1.0000e-004	0.0000	0.0381
Total	**9.2032**	**1.7000e-004**	**0.0185**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0357**	**0.0357**	**1.0000e-004**	**0.0000**	**0.0381**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,283.6667	15.1035	0.3627	1,769.3265
Unmitigated	1,283.6667	15.1035	0.3627	1,769.3265

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	462.5 / 0	1,283.6667	15.1035	0.3627	1,769.3265
Total		**1,283.6667**	**15.1035**	**0.3627**	**1,769.3265**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	462.5 / 0	1,283.6667	15.1035	0.3627	1,769.3265
Total		**1,283.6667**	**15.1035**	**0.3627**	**1,769.3265**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	503.4176	29.7511	0.0000	1,247.1958
Unmitigated	503.4176	29.7511	0.0000	1,247.1958

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2480	503.4176	29.7511	0.0000	1,247.1958
Total		**503.4176**	**29.7511**	**0.0000**	**1,247.1958**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2480	503.4176	29.7511	0.0000	1,247.1958
Total		**503.4176**	**29.7511**	**0.0000**	**1,247.1958**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE

April 2005

California Environmental Protection Agency
California Air Resources Board

Air Agency Contacts

Federal-

U.S. EPA, Region 9
Phone: (866)-EPA-WEST
Website: www.epa.gov/region09
Email: r9.info@epa.gov

-State-

California Air Resources Board
Phone: (916) 322-2990 (public info)
(800) 363-7664 (public info)
(800) 952-5588 (complaints)
(866)-397-5462 (env. justice)
Website: www.arb.ca.gov
Email: helpline@arb.ca.gov

-Local-

Amador County APCD
Phone: (209) 257-0112
Website: www.amadorapcd.org
E-Mail: jharris@amadorapcd.org

Antelope Valley AQMD
Phone: (661) 723-8070
Complaint Line: (888) 732-8070
Website: www.avaqmd.ca.gov
E-Mail: bbanks@avaqmd.ca.gov

Bay Area AQMD
Phone: (415) 749-5000
Complaint Line: (800) 334-6367
Website: www.baaqmd.gov
E-Mail: webmaster@baaqmd.gov

Butte County AQMD
Phone: (530) 891-2882
Website: www.bcaqmd.org
E-Mail: air@bcaqmd.org

Calaveras County APCD
Phone: (209) 754-6504
E-Mail: lgrewal@co.calaveras.ca.us

Colusa County APCD
Phone: (530) 458-0590
Website: www.colusanet.com/apcd
E-Mail: ccair@colusanet.com

El Dorado County AQMD
Phone: (530) 621-6662
Website:
www.co.el-dorado.ca.us/emd/apcd
E-Mail: mcctaggart@co.el-dorado.ca.us

Feather River AQMD
Phone: (530) 634-7659
Website: www.fraqmd.org
E-Mail: fraqmd@fraqmd.org

Glenn County APCD
Phone: (530) 934-6500
http://www.countyofglenn.net/air_pollution_control
E-Mail: ktokunaga@countyofglenn.net

Great Basin Unified APCD
Phone: (760) 872-8211
Website: www.gbuapcd.org
E-Mail: gb1@greatbasinapcd.org

Imperial County APCD
Phone: (760) 482-4606
E-Mail: reyesromero@imperialcounty.net

Kern County APCD
Phone: (661) 862-5250
Website: www.kernair.org
E-Mail: kcapcd@co.kern.ca.us

Lake County AQMD
Phone: (707) 263-7000
Website: www.lcaqmd.net
E-Mail: bobr@pacific.net

Lassen County APCD
Phone: (530) 251-8110
E-Mail: lassenag@psln.com

Mariposa County APCD
Phone: (209) 966-2220
E-Mail: air@mariposacounty.org

Mendocino County AQMD
Phone: (707) 463-4354
Website:
www.co.mendocino.ca.us/aqmd
E-Mail:
mcaqmd@co.mendocino.ca.us

Modoc County APCD
Phone: (530) 233-6419
E-Mail: modapcd@hdo.net

Mojave Desert AQMD
Phone: (760) 245-1661
(800) 635-4617
Website: www.mdaqmd.ca.gov

Monterey Bay Unified APCD
Phone: (831) 647-9411
(800) 253-6028 (Complaints)
Website: www.mbuapcd.org
E-Mail: dquetin@mbuapcd.org

North Coast Unified AQMD
Phone: (707) 443-3093
Website: www.ncuaqmd.org
E-Mail: lawrence@ncuaqmd.org

Northern Sierra AQMD
Phone: (530) 274-9360
Website: www.myairdistrict.com
E-Mail: office@myairdistrict.com

Northern Sonoma County APCD
Phone: (707) 433-5911
E-Mail: nsc@sonic.net

Placer County APCD
Phone: (530) 889-7130
Website:
http://www.placer.ca.gov/airpollution/airpolut.htm
E-Mail: pcapcd@placer.ca.gov

Sacramento Metro AQMD
Phone: (916) 874-4800
Website: www.airquality.org
E-Mail: kshearer@airquality.org

San Diego County APCD
Phone: (858) 650-4700
Website: www.sdapcd.org

San Joaquin Valley APCD
Phone: (559) 230-6000 (General)
(800) 281-7003
(San Joaquin, Stanislaus, Merced)
(800) 870-1037
(Madera, Fresno, Kings)
(800) 926-5550
(Tulare and Valley portion of Kern)
Website: www.valleyair.org
E-Mail: sjvapcd@valleyair.org

San Luis Obispo County APCD
Phone: (805) 781-5912
Website: www.slocleanair.org
E-Mail: info@slocleanair.org

Santa Barbara County APCD
Phone (805) 961-8800
Website: www.sbcapcd.org
Email us: apcd@sbcapcd.org

Shasta County AQMD
Phone: (530) 225-5789
Website:
www.co.shasta.ca.us/Departments/Resourcemgmt/drm/aqmain.htm
E-Mail: scdrm@snowcrest.net

Siskiyou County APCD
Phone: (530) 841-4029
E-Mail: ebeck@siskiyou.ca.us

South Coast AQMD
Phone: (909) 396-2000
Complaint Line: 1-800-CUT-SMOG
Website: www.aqmd.gov
Email: bwallerstein@aqmd.gov

Tehama County APCD
Phone: (530) 527-3717
Website: www.tehcoapcd.net
Email: general@tehcoapcd.net

Tuolumne County APCD
Phone: (209) 533-5693
E-Mail:
bsandman@co.tuolumne.ca.us

Ventura County APCD
Phone: (805) 645-1400
Complaint Line: (805) 654-2797
Website: www.vcapcd.org
E-Mail: info@vcapcd.org

Yolo-Solano AQMD
Phone: (530) 757-3650
Website: www.ysaqmd.org
Email: administration@ysaqmd.org

To My Local Government Colleagues....

I am pleased to introduce this informational guide to air quality and land use issues focused on community health. As a former county supervisor, I know from experience the complexity of local land use decisions. There are multiple factors to consider and balance. This document provides important public health information that we hope will be considered along with housing needs, economic development priorities, and other quality of life issues.

An important focus of this document is prevention. We hope the air quality information provided will help inform decision-makers about the benefits of avoiding certain siting situations. The overarching goal is to avoid placing people in harm's way. Recent studies have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities. What is encouraging is that the health risk is greatly reduced with distance. For that reason, we have provided some general recommendations aimed at keeping appropriate distances between sources of air pollution and land uses such as residences.

Land use decisions are a local government responsibility. The Air Resources Board's role is advisory and these recommendations do not establish regulatory standards of any kind. However, we hope that the information in this document will be seriously considered by local elected officials and land use agencies. We also hope that this document will promote enhanced communication between land use agencies and local air pollution control agencies. We developed this document in close coordination with the California Air Pollution Control Officers Association with that goal in mind.

I hope you find this document both informative and useful.

Barbara Riordan

Mrs. Barbara Riordan
Interim Chairman
California Air Resources Board

TABLE OF CONTENTS

APPENDICES

Acknowledgments

The ARB staff would like to acknowledge the exceptional contributions made to this document by members of the ARB Environmental Justice Stakeholders Group. Since 2001, ARB staff has consistently relied on this group to provide critical and constructive input on implementing the specifics of ARB's environmental justice policies and actions. The Stakeholders Group is convened by the ARB, and comprised of representatives from local land use and air agencies, community interest groups, environmental justice organizations, academia, and business. Their assistance and suggestions throughout the development of this Handbook have been invaluable.

Executive Summary

The Air Resources Board's (ARB) primary goal in developing this document is to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. Recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. Also, ARB community health risk assessments and regulatory programs have produced important air quality information about certain types of facilities that should be considered when siting new residences, schools, day care centers, playgrounds, and medical facilities (i.e., sensitive land uses). Sensitive land uses deserve special attention because children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the non-cancer effects of air pollution. There is also substantial evidence that children are more sensitive to cancer-causing chemicals.

Focusing attention on these siting situations is an important preventative action. ARB and local air districts have comprehensive efforts underway to address new and existing air pollution sources under their respective jurisdictions. The issue of siting is a local government function. As more data on the connection between proximity and health risk from air pollution become available, it is essential that air agencies share what we know with land use agencies. We hope this document will serve that purpose.

The first section provides ARB recommendations regarding the siting of new sensitive land uses near freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities. This list consists of the air pollution sources that we have evaluated from the standpoint of the proximity issue. It is based on available information and reflects ARB's primary areas of jurisdiction – mobile sources and toxic air contaminants. A key air pollutant common to many of these sources is particulate matter from diesel engines. Diesel particulate matter (diesel PM) is a carcinogen identified by ARB as a toxic air contaminant and contributes to particulate pollution statewide.

Reducing diesel particulate emissions is one of ARB's highest public health priorities and the focus of a comprehensive statewide control program that is reducing diesel PM emissions each year. ARB's long-term goal is to reduce diesel PM emissions 85% by 2020. However, cleaning up diesel engines will take time as new engine standards phase in and programs to accelerate fleet turnover or retrofit existing engines are implemented. Also, these efforts are reducing diesel particulate emissions on a statewide basis, but do not yet capture every site where diesel vehicles and engines may congregate. Because living or going to school too close to such air pollution sources may increase both cancer and non-cancer health risks, we are recommending that proximity be considered in the siting of new sensitive land uses.

There are also other key toxic air contaminants associated with specific types of facilities. Most of these are subject to stringent state and local air district regulations. However, what we know today indicates that keeping new homes and other sensitive land uses from siting too close to such facilities would provide additional health protection. Chrome platers are a prime example of facilities that should not be located near vulnerable communities because of the cancer health risks from exposure to the toxic material used during their operations.

In addition to source specific recommendations, we also encourage land use agencies to use their planning processes to ensure the appropriate separation of industrial facilities and sensitive land uses. While we provide some suggestions, how to best achieve that goal is a local issue. In the development of these guidelines, we received valuable input from local government about the spectrum of issues that must be considered in the land use planning process. This includes addressing housing and transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. All of these factors are important considerations. The recommendations in the Handbook need to be balanced with other State and local policies.

Our purpose with this document is to highlight the potential health impacts associated with proximity to air pollution sources so planners explicitly consider this issue in planning processes. We believe that with careful evaluation, infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level. One suggestion for achieving this goal is more communication between air agencies and land use planners. Local air districts are an important resource that should be consulted regarding sources of air pollution in their jurisdictions. ARB staff will also continue to provide updated technical information as it becomes available.

Our recommendations are as specific as possible given the nature of the available data. In some cases, like refineries, we suggest that the siting of new sensitive land uses should be avoided immediately downwind. However, we leave definition of the size of this area to local agencies based on facility specific considerations. Also, project design that would reduce air pollution exposure may be part of the picture and we encourage consultation with air agencies on this subject.

In developing the recommendations, our first consideration was the adequacy of the data available for an air pollution source category. Using that data, we assessed whether we could reasonably characterize the relative exposure and health risk from a proximity standpoint. That screening provided the list of air pollution sources that we were able to address with specific recommendations. We also considered the practical implications of making hard and fast recommendations where the potential impact area is large, emissions will be reduced with time, and air agencies are in the process of looking at options for additional emission control. In the end, we tailored our recommendations to minimize the highest exposures for each source category independently. Due to the large variability in relative risk in the source categories, we chose not to apply

a uniform, quantified risk threshold as is typically done in air quality permitting programs. Instead, because these guidelines are not regulatory or binding on local agencies, we took a more qualitative approach in developing the distance-based recommendations.

Where possible, we recommend a minimum separation between a new sensitive land use and known air pollution risks. In other cases, we acknowledge that the existing health risk is too high in a relatively large area, that air agencies are working to reduce that risk, and that in the meantime, we recommend keeping new sensitive land uses out of the highest exposure areas. However, it is critical to note that our implied identification of the high exposure areas for these sources does not mean that the risk in the remaining impact area is insignificant. Rather, we hope this document will bring further attention to the potential health risk throughout the impact area and help garner support for our ongoing efforts to reduce health risk associated with air pollution sources. Areas downwind of major ports, rail yards, and other inter-modal transportation facilities are prime examples.

We developed these recommendations as a means to share important public health information. The underlying data are publicly available and referenced in this document. We also describe our rationale and the factors considered in developing each recommendation, including data limitations and uncertainties. These recommendations are advisory and should not be interpreted as defined "buffer zones." We recognize the opportunity for more detailed site-specific analyses always exists, and that there is no "one size fits all" solution to land use planning.

As California continues to grow, we collectively have the opportunity to use all the information at hand to avoid siting scenarios that may pose a health risk. As part of ARB's focus on communities and children's health, we encourage land use agencies to apply these recommendations and work more closely with air agencies. We also hope that this document will help educate a wider audience about the value of preventative action to reduce environmental exposures to air pollution.

1. ARB Recommendations on Siting New Sensitive Land Uses

Protecting California's communities and our children from the health effects of air pollution is one of the most fundamental goals of state and local air pollution control programs. Our focus on children reflects their special vulnerability to the health impacts of air pollution. Other vulnerable populations include the elderly, pregnant women, and those with serious health problems affected by air pollution. With this document, we hope to more effectively engage local land use agencies as partners in our efforts to reduce health risk from air pollution in all California communities.

Later sections emphasize the need to strengthen the connection between air quality and land use in both planning and permitting processes. Because the siting process for many, but not all air pollution sources involves permitting by local air districts, there is an opportunity for interagency coordination where the proposed location might pose a problem. To enhance the evaluation process from a land use perspective, section 4 includes recommended project related questions to help screen for potential proximity related issues.

Unlike industrial and other stationary sources of air pollution, the siting of new homes or day care centers does not require an air quality permit. Because these situations fall outside the air quality permitting process, it is especially important that land use agencies be aware of potential air pollution impacts.

The following recommendations address the issue of siting "sensitive land uses" near specific sources of air pollution; namely:

- High traffic freeways and roads
- Distribution centers
- Rail yards
- Ports
- Refineries
- Chrome plating facilities
- Dry cleaners
- Large gas dispensing facilities

The recommendations for each category include a summary of key information and guidance on what to avoid from a public health perspective.

Sensitive individuals refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses).

We are characterizing sensitive land uses as simply as we can by using the example of residences, schools, day care centers, playgrounds, and medical facilities. However, a variety of facilities are encompassed. For example, residences can include houses, apartments, and senior living complexes. Medical facilities can include hospitals, convalescent homes, and health clinics. Playgrounds could be play areas associated with parks or community centers.

In developing these recommendations, ARB first considered the adequacy of the data available for each air pollution source category. We assessed whether we could generally characterize the relative exposure and health risk from a proximity standpoint. The documented non-cancer health risks include triggering of asthma attacks, heart attacks, and increases in daily mortality and hospitalization for heart and respiratory diseases. These health impacts are well documented in epidemiological studies, but less easy to quantify from a particular air pollution source. Therefore, the cancer health impacts are used in this document to provide a picture of relative risk. This screening process provided the list of source categories we were able to address with specific recommendations. In evaluating the available information, we also considered the practical implications of making hard and fast recommendations where the potential impact area is large, emissions will be reduced with time, and air agencies are in the process of looking at options for additional emission control. Due to the large variability in relative risk between the source categories, we chose not to apply a uniform, quantified risk threshold as is typically done in regulatory programs. Therefore, in the end, we tailored our recommendations to minimize the highest exposures for each source category independently. Additionally, because this guidance is not regulatory or binding on local agencies, we took a more qualitative approach to developing distance based recommendations.

Where possible, we recommend a minimum separation between new sensitive land uses and existing sources. However, this is not always possible, particularly where there is an elevated health risk over large geographical areas. Areas downwind of ports and rail yards are prime examples. In such cases, we recommend doing everything possible to avoid locating sensitive receptors within the highest risk zones. Concurrently, air agencies and others will be working to reduce the overall risk through controls and measures within their scope of authority.

The recommendations were developed from the standpoint of siting new sensitive land uses. Project-specific data for new and existing air pollution sources are available as part of the air quality permitting process. Where such information is available, it should be used. Our recommendations are designed to fill a gap where information about existing facilities may not be readily available. These recommendations are only guidelines and are not designed to substitute for more specific information if it exists.

A summary of our recommendations is shown in Table 1-1. The basis and references[1] supporting each of these recommendations, including health studies, air quality modeling and monitoring studies is discussed below beginning with freeways and summarized in Table 1-2. As new information becomes available, it will be included on ARB's community health web page.

[1]Detailed information on these references are available on ARB's website at: http://www.ARB.ca.gov/ch/landuse.htm.

Table 1-1

Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	• 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.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

*Notes:

- These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

- Recommendations are based primarily on data showing that the air pollution exposures addressed here (i.e., localized) can be reduced as much as 80% with the recommended separation.
- The relative risk for these categories varies greatly (see Table 1-2). To determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in.
- These recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists. The recommended distances take into account other factors in addition to available health risk data (see individual category descriptions).
- Site-specific project design improvements may help reduce air pollution exposures and should also be considered when siting new sensitive land uses.
- This table does not imply that mixed residential and commercial development in general is incompatible. Rather it focuses on known problems like dry cleaners using perchloroethylene that can be addressed with reasonable preventative actions.
- A summary of the basis for the distance recommendations can be found in Table 1-2.

Table 1-2

Summary of Basis for Advisory Recommendations

Source Category	Range of Relative Cancer Risk[1,2]	Summary of Basis for Advisory Recommendations
Freeways and High-Traffic Roads	300 – 1,700	• In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70% drop off in particulate pollution levels at 500 feet.
Distribution Centers[3]	Up to 500	• Because ARB regulations will restrict truck idling at distribution centers, transport refrigeration unit (TRU) operations are the largest onsite diesel PM emission source followed by truck travel in and out of distribution centers. • Based on ARB and South Coast District emissions and modeling analyses, we estimate an 80 percent drop-off in pollutant concentrations at approximately 1,000 feet from a distribution center.
Rail Yards	Up to 500	• The air quality modeling conducted for the Roseville Rail Yard Study predicted the highest impact is within 1,000 feet of the Yard, and is associated with service and maintenance activities. The next highest impact is between a half to one mile of the Yard, depending on wind direction and intensity.
Ports	Studies underway	• ARB will evaluate the impacts of ports and develop a new comprehensive plan that will describe the steps needed to reduce public health impacts from port and rail activities in California. In the interim, a general advisory is appropriate based on the magnitude of diesel PM emissions associated with ports.
Refineries	Under 10	• Risk assessments conducted at California refineries show risks from air toxics to be under 10 chances of cancer per million.[4] • Distance recommendations were based on the amount and potentially hazardous nature of many of the pollutants released as part of the refinery process, particularly during non-routine emissions releases.
Chrome Platers	10-100	• ARB modeling and monitoring studies show localized risk of hexavalent chromium diminishing significantly at 300 feet. There are data limitations in both the modeling and monitoring studies. These include variability of plating activities and uncertainty of emissions such as fugitive dust. Hexavalent chromium is one of the most potent toxic air contaminants. Considering these factors, a distance of 1,000 feet was used as a precautionary measure.
Dry Cleaners Using Perchloro-ethylene (perc)	15-150	• Local air district studies indicate that individual cancer risk can be reduced by as much as 75 percent by establishing a 300 foot separation between a sensitive land use and a one-machine perc dry cleaning operation. For larger operations (2 machines or more), a separation of 500 feet can reduce risk by over 85 percent.

Source Category	Range of Relative Cancer Risk[1,2]	Summary of Basis for Advisory Recommendations
Gasoline Dispensing Facilities (GDF)[5]	Typical GDF: Less than 10 Large GDF: Between Less than 10 and 120	• Based on the CAPCOA Gasoline Service Station Industry-wide Risk Assessment Guidelines, most typical GDFs (less than 3.6 million gallons per year) have a risk of less than 10 at 50 feet under urban air dispersion conditions. Over the last few years, there has been a growing number of extremely large GDFs with sales over 3.6 and as high as 19 million gallons per year. Under rural air dispersion conditions, these large GDFs can pose a larger risk at a greater distance.

[1]For cancer health effects, risk is expressed as an estimate of the increased chances of getting cancer due to facility emissions over a 70-year lifetime. This increase in risk is expressed as chances in a million (e.g., 10 chances in a million).

[2]The estimated cancer risks are a function of the proximity to the specific category and were calculated independent of the regional health risk from air pollution. For example, the estimated regional cancer risk from air toxics in the Los Angeles region (South Coast Air Basin) is approximately 1,000 in a million.

[3]Analysis based on refrigerator trucks.

[4]Although risk assessments performed by refineries indicate they represent a low cancer risk, there is limited data on non-cancer effects of pollutants that are emitted from these facilities. Refineries are also a source of non-routine emissions and odors.

[5]A typical GDF in California dispenses under 3.6 million gallons of gasoline per year. The cancer risk for this size facility is likely to be less than 10 in a million at the fence line under urban air dispersion conditions.

A large GDF has fuel throughputs that can range from 3.6 to 19 million gallons of gasoline per year. The upper end of the risk range (i.e., 120 in a million) represents a hypothetical worst case scenario for an extremely large GDF under rural air dispersion conditions.

Freeways and High Traffic Roads

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. Many of these epidemiological studies have focused on children. A number of studies identify an association between adverse non-cancer health effects and living or attending school near heavily traveled roadways (see findings below). These studies have reported associations between residential proximity to high traffic roadways and a variety of respiratory symptoms, asthma exacerbations, and decreases in lung function in children.

One such study that found an association between traffic and respiratory symptoms in children was conducted in the San Francisco Bay Area. Measurements of traffic-related pollutants showed concentrations within 300 meters (approximately 1,000 feet) downwind of freeways were higher than regional values. Most other studies have assessed exposure based on proximity factors such as distance to freeways or traffic density.

These studies linking traffic emissions with health impacts build on a wealth of data on the adverse health effects of ambient air pollution. The data on the effects of proximity to traffic-related emissions provides additional information that can be used in land use siting and regulatory actions by air agencies. The key observation in these studies is that close proximity increases both exposure and the potential for adverse health effects. Other effects associated with traffic emissions include premature death in elderly individuals with heart disease.

Key Health Findings

- Reduced lung function in children was associated with traffic density, especially trucks, within 1,000 feet and the association was strongest within 300 feet. (Brunekreef, 1997)
- Increased asthma hospitalizations were associated with living within 650 feet of heavy traffic and heavy truck volume. (Lin, 2000)
- Asthma symptoms increased with proximity to roadways and the risk was greatest within 300 feet. (Venn, 2001)
- Asthma and bronchitis symptoms in children were associated with proximity to high traffic in a San Francisco Bay Area community with good overall regional air quality. (Kim, 2004)
- A San Diego study found increased medical visits in children living within 550 feet of heavy traffic. (English, 1999)

In these and other proximity studies, the distance from the roadway and truck traffic densities were key factors affecting the strength of the association with adverse health effects. In the above health studies, the association of traffic-related emissions with adverse health effects was seen within 1,000 feet and was

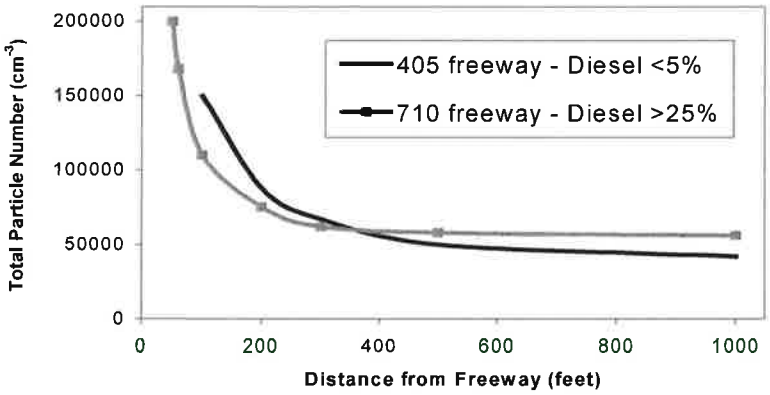
strongest within 300 feet. This demonstrates that the adverse effects diminished with distance.

In addition to the respiratory health effects in children, proximity to freeways increases potential cancer risk and contributes to total particulate matter exposure. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risk from motor vehicle traffic – diesel particulate matter (diesel PM) from trucks, and benzene and 1,3-butadiene from passenger vehicles. On a typical urban freeway (truck traffic of 10,000-20,000/day), diesel PM represents about 70 percent of the potential cancer risk from the vehicle traffic. Diesel particulate emissions are also of special concern because health studies show an association between particulate matter and premature mortality in those with existing cardiovascular disease.

Distance Related Findings

A southern California study (Zhu, 2002) showed measured concentrations of vehicle-related pollutants, including ultra-fine particles, decreased dramatically within approximately 300 feet of the 710 and 405 freeways. Another study looked at the validity of using distance from a roadway as a measure of exposure

Figure 1-1
Decrease In Concentration of Freeway Diesel PM Emissions With Distance



to traffic related air pollution (Knape, 1999). This study showed that concentrations of traffic related pollutants declined with distance from the road, primarily in the first 500 feet.

These findings are consistent with air quality modeling and risk analyses done by ARB staff that show an estimated range of potential cancer risk that decreases with distance from freeways. The estimated risk varies with the local meteorology, including wind pattern. As an example, at 300 feet downwind from a freeway (Interstate 80) with truck traffic of 10,000 trucks per day, the potential cancer risk was as high as 100 in one million (ARB Roseville Rail Yard Study). The cancer health risk at 300 feet on the upwind side of the freeway was much

less. The risk at that distance for other freeways will vary based on local conditions – it may be higher or lower. However, in all these analyses the relative exposure and health risk dropped substantially within the first 300 feet. This phenomenon is illustrated in Figure 1-1.

State law restricts the siting of new schools within 500 feet of a freeway, urban roadways with 100,000 vehicles/day, or rural roadways with 50,000 vehicles with some exceptions.[2] However, no such requirements apply to the siting of residences, day care centers, playgrounds, or medical facilities. The available data show that exposure is greatly reduced at approximately 300 feet. In the traffic-related studies the additional health risk attributable to the proximity effect was strongest within 1,000 feet.

The combination of the children's health studies and the distance related findings suggests that it is important to avoid exposing children to elevated air pollution levels immediately downwind of freeways and high traffic roadways. These studies suggest a substantial benefit to a 500-foot separation.

The impact of traffic emissions is on a gradient that at some point becomes indistinguishable from the regional air pollution problem. As air agencies work to reduce the underlying regional health risk from diesel PM and other pollutants, the impact of proximity will also be reduced. In the meantime, as a preventative measure, we hope to avoid exposing more children and other vulnerable individuals to the highest concentrations of traffic-related emissions.

Recommendation

- 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.

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- Lin, S. et al. *"Childhood asthma hospitalization and residential exposure to state route traffic."* Environ Res. 2002;88:73-81
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- Kim, J. et al. *"Traffic-related air pollution and respiratory health: East Bay Children's Respiratory Health Study."* American Journal of Respiratory and Critical Care Medicine 2004; Vol. 170. pp. 520-526

[2] Section 17213 of the California Education Code and section 21151.8 of the California Public Resources Code. See also Appendix E for a description of special processes that apply to school siting.

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- English P., Neutra R., Scalf R. Sullivan M. Waller L. Zhu L. *"Examining Associations Between Childhood Asthma and Traffic Flow Using a Geographic Information System."* (1999) Environmental Health Perspectives 107(9): 761-767

Distribution Centers

Distribution centers or warehouses are facilities that serve as a distribution point for the transfer of goods. Such facilities include cold storage warehouses, goods transfer facilities, and inter-modal facilities such as ports. These operations involve trucks, trailers, shipping containers, and other equipment with diesel engines. A distribution center can be comprised of multiple centers or warehouses within an area. The size can range from several to hundreds of acres, involving a number of different transfer operations and long waiting periods. A distribution center can accommodate hundreds of diesel trucks a day that deliver, load, and/or unload goods up to seven days a week. To the extent that these trucks are transporting perishable goods, they are equipped with diesel-powered transport refrigeration units (TRUs) or TRU generator sets.

The activities associated with delivering, storing, and loading freight produces diesel PM emissions. Although TRUs have relatively small diesel-powered engines, in the normal course of business, their emissions can pose a significant health risk to those nearby. In addition to onsite emissions, truck travel in and out of distribution centers contributes to the local pollution impact.

ARB is working to reduce diesel PM emissions through regulations, financial incentives, and enforcement programs. In 2004, ARB adopted two airborne toxic control measures that will reduce diesel PM emissions associated with distribution centers. The first will limit nonessential (or unnecessary) idling of diesel-fueled commercial vehicles, including those entering from other states or countries. This statewide measure, effective in 2005, prohibits idling of a vehicle more than five minutes at any one location.[3] The elimination of unnecessary idling will reduce the localized impacts caused by diesel PM and other air toxics

[3] For further information on the Anti-Idling ATCM, please click on: http://www.arb.ca.gov/toxics/idling/outreach/factsheet.pdf

in diesel vehicle exhaust. This should be a very effective new strategy for reducing diesel PM emissions at distribution centers as well as other locations.

The second measure requires that TRUs operating in California become cleaner over time. The measure establishes in-use performance standards for existing TRU engines that operate in California, including out-of-state TRUs. The requirements are phased-in beginning in 2008, and extend to 2019.[4]

ARB also operates a smoke inspection program for heavy-duty diesel trucks that focuses on reducing truck emissions in California communities. Areas with large numbers of distribution centers are a high priority.

Key Health Findings

Diesel PM has been identified by ARB as a toxic air contaminant and represents 70 percent of the known potential cancer risk from air toxics in California. Diesel PM is an important contributor to particulate matter air pollution. Particulate matter exposure is associated with premature mortality and health effects such as asthma exacerbation and hospitalization due to aggravating heart and lung disease.

Distance Related Findings

Although distribution centers are located throughout the state, they are usually clustered near transportation corridors, and are often located in or near population centers. Diesel PM emissions from associated delivery truck traffic and TRUs at these facilities may result in elevated diesel PM concentrations in neighborhoods surrounding those sites. Because ARB regulations will restrict truck idling at distribution centers, the largest continuing onsite diesel PM emission source is the operation of TRUs. Truck travel in and out of distribution centers also contributes to localized exposures, but specific travel patterns and truck volumes would be needed to identify the exact locations of the highest concentrations.

As part of the development of ARB's regulation for TRUs, ARB staff performed air quality modeling to estimate exposure and the associated potential cancer risk of onsite TRUs for a typical distribution center. For an individual person, cancer risk estimates for air pollution are commonly expressed as a probability of developing cancer from a lifetime (i.e., 70 years) of exposure. These risks were calculated independent of regional risk. For example, the estimated regional cancer risk from air toxics in the Los Angeles region (South Coast Air Basin) is approximately 1,000 additional cancer cases per one million population.

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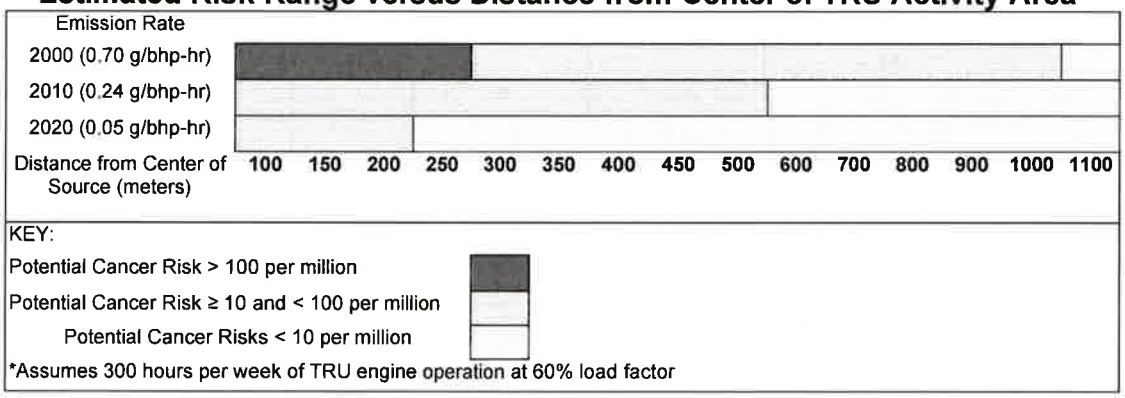
[4] For further information on the Transport Refrigeration Unit ATCM, please click on: http://www.arb.ca.gov/diesel/documents/trufaq.pdf

The diesel PM emissions from a facility are dependent on the size (horsepower), age, and number of engines, emission rates, the number of hours the truck engines and/or TRUs operate, distance, and meteorological conditions at the site. This assessment assumes a total on-site operating time for all TRUs of 300 hours per week. This would be the equivalent of 40 TRU-equipped trucks a day, each loading or unloading on-site for one hour, 12 hours a day and seven days a week.

As shown in Figure 1-2 below, at this estimated level of activity and assuming a current fleet diesel PM emission rate, the potential cancer risk would be over 100 in a million at 800 feet from the center of the TRU activity. The estimated potential cancer risk would be in the 10 to 100 per million range between 800 to 3,300 feet and fall off to less than 10 per million at approximately 3,600 feet. However with the implementation of ARB's regulation on TRUs, the risk will be significantly reduced.[5] We have not conducted a risk assessment for distribution centers based on truck traffic alone, but on an emissions basis, we would expect similar risks for a facility with truck volumes in the range of 100 per day.

Figure 1-2

Estimated Risk Range versus Distance from Center of TRU Activity Area*

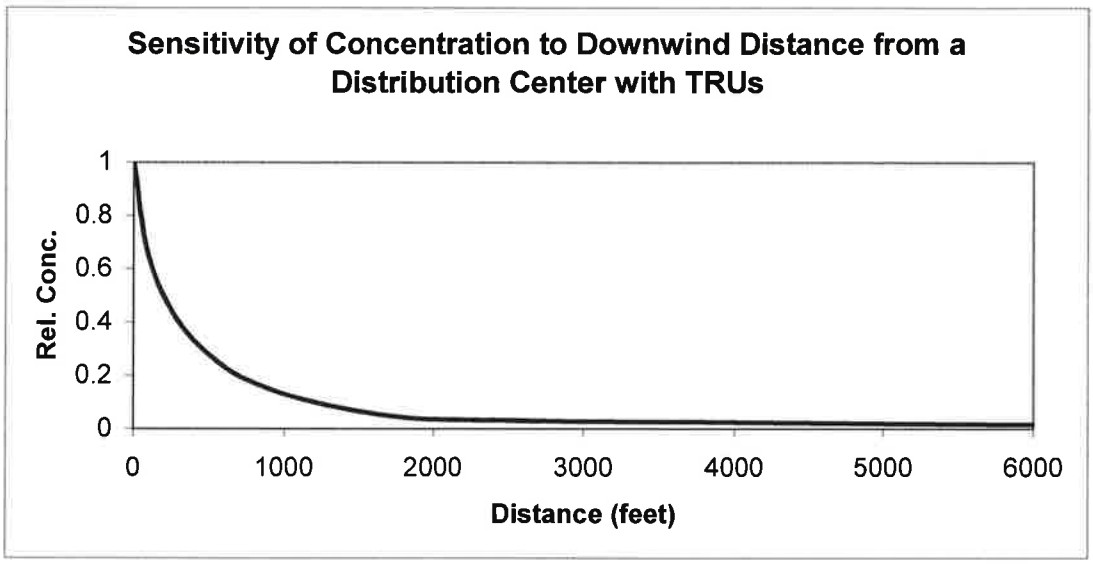


The estimated potential cancer risk level in Figure 1-2 is based on a number of assumptions that may not reflect actual conditions for a specific site. For example, increasing or decreasing the hours of diesel engine operations would change the potential risk levels. Meteorological and other facility specific parameters can also impact the results. Therefore, the results presented here are not directly applicable to any particular facility or operation. Rather, this information is intended to provide an indication as to the potential relative levels of risk that may be observed from operations at distribution centers. As shown in Figure 1-2, the estimated risk levels will decrease over time as lower-emitting diesel engines are used.

[5] These risk values assume an exposure duration of 70 years for a nearby resident and uses the methodology specified in the 2003 OEHHA health risk assessment guidelines.

Another air modeling analysis, performed by the South Coast Air Quality Management District (South Coast AQMD), evaluated the impact of diesel PM emissions from distribution center operations in the community of Mira Loma in southern California. Based on dispersion of diesel PM emissions from a large distribution center, Figure 1-3 shows the relative pollution concentrations at varying distances downwind. As Figure 1-3 shows, there is about an 80 percent drop off in concentration at approximately 1,000 feet.

Figure 1-3
Decrease In Relative Concentration of Risk With Distance



Both the ARB and the South Coast AQMD analyses indicate that providing a separation of 1,000 feet would substantially reduce diesel PM concentrations and public exposure downwind of a distribution center. While these analyses do not provide specific risk estimates for distribution centers, they provide an indication of the range of risk and the benefits of providing a separation. ARB recommends a separation of 1,000 feet based on the combination of risk analysis done for TRUs and the decrease in exposure predicted with the South Coast AQMD modeling. However, ARB staff plans to provide further information on distribution centers as we collect more data and implement the TRU control measure.

Taking into account the configuration of distribution centers can also reduce population exposure and risk. For example, locating new sensitive land uses away from the main entry and exit points helps to reduce cancer risk and other health impacts.

Recommendations

- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU unit operations exceed 300 hours per week).

- Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.

References

- *Airborne Toxic Control Measure To Limit Diesel-Fueled Commercial Motor Vehicle Idling.* ARB (August 20, 2004). Rule effectiveness date awaiting submittal of regulation to the Office of Administration Law. http://www.arb.ca.gov/regact/idling/idling.htm

- *Revised Staff Report: Initial Statement of Reasons for Proposed Rulemaking. Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate.* ARB (October 28, 2003). http://www.arb.ca.gov/regact/trude03/revisor.doc

- *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis.* SCAQMD (August 2003) http://www.aqmd.gov/ceqa/handbook/diesel_analysis.doc

- *"Mira Loma Study: Analysis of the Impact of Diesel Particulate Emissions from Warehouse/Distribution Center Operations",* PowerPoint presentation. SCAQMD (July 31, 2002)

Rail Yards

Rail yards are a major source of diesel particulate air pollution. They are usually located near inter-modal facilities, which attract heavy truck traffic, and are often sited in mixed industrial and residential areas. ARB, working with the Placer County air district and Union Pacific Railroad, recently completed a study[6] of the Roseville Rail Yard (Yard) in northern California that focused on the health risk from diesel particulate. A comprehensive emissions analysis and air quality modeling were conducted to characterize the estimated potential cancer risk associated with the facility.

[6] To review the study, please click on: http://www.arb.ca.gov/diesel/documents/rrstudy.htm

The Yard encompasses about 950 acres on a one-quarter mile wide by four-mile long strip of land that parallels Interstate 80. It is surrounded by commercial, industrial, and residential properties. The Yard is one of the largest service and maintenance rail yards in the West with over 30,000 locomotives visiting annually.

Using data provided by Union Pacific Railroad, the ARB determined the number and type of locomotives visiting the Yard annually and what those locomotives were doing - moving, idling, or undergoing maintenance testing. Union Pacific provided the annual, monthly, daily, and hourly locomotive activity in the yard including locomotive movements; routes for arrival, departure, and through trains; and locomotive service and testing. This information was used to estimate the emissions of particulate matter from the locomotives, which was then used to model the potential impacts on the surrounding community.

The key findings of the study are:

- Diesel PM emissions in 2000 from locomotive operations at the Roseville Yard were estimated at about 25 tons per year.

- Of the total diesel PM in the Yard, moving locomotives accounted for about 50 percent, idling locomotives about 45 percent, and locomotive testing about five percent.

- Air quality modeling predicts potential cancer risks greater than 500 in a million (based on 70 years of exposure) in a 10-40 acre area immediately adjacent to the Yard's maintenance operations.

- The risk assessment also showed elevated cancer risk impacting a larger area covering about a 10 by 10 mile area around the Yard.

The elevated concentrations of diesel PM found in the study contribute to an increased risk of cancer and premature death due to cardiovascular disease, and non-cancer health effects such as asthma and other respiratory illnesses. The magnitude of the risk, the general location, and the size of the impacted area depended on the meteorological data used to characterize conditions at the Yard, the dispersion characteristics, and exposure assumptions. In addition to these variables, the nature of locomotive activity will influence a risk characterization at a particular rail yard. For these reasons, the quantified risk estimates in the Roseville Rail Yard Study cannot be directly applied to other rail yards. However, the study does indicate the health risk due to diesel PM from rail yards needs to be addressed. ARB, in conjunction with the U.S. Environmental Protection Agency (U.S. EPA), and local air districts, is working with the rail industry to identify and implement short term, mid-term and long-term mitigation strategies. ARB also intends to conduct a second rail study in southern California to increase its understanding of rail yard operations and the associated public health impacts.

Key Health Findings

Diesel PM has been identified by ARB as a toxic air contaminant and represents 70 percent of the known potential cancer risk from air toxics in California. Diesel PM is an important contributor to particulate matter air pollution. Particulate matter exposure is associated with premature mortality and health effects such as asthma exacerbation and hospitalization due to aggravating heart and lung disease.

Distance Related Findings

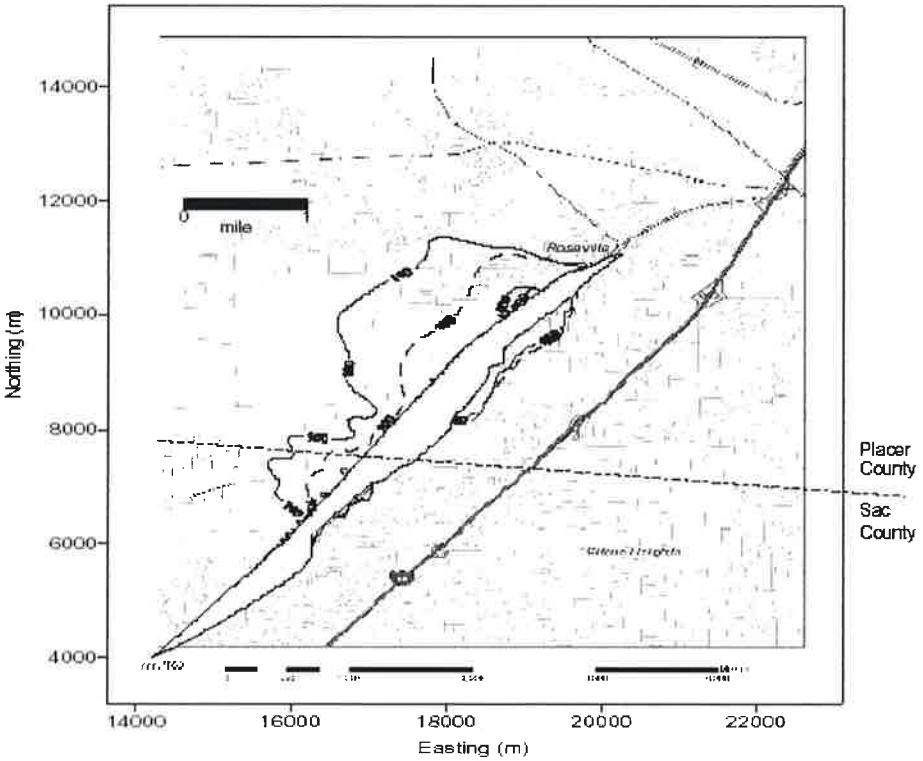
Two sets of meteorological data were used in the Roseville study because of technical limitations in the data. The size of the impact area was highly dependent on the meteorological data set used. The predicted highest impact area ranged from 10 - 40 acres with the two different meteorological data sets. This area, with risks estimated above 500 in a million, is adjacent to an area that includes a maintenance shop (see Figure 1-4). The high concentration of diesel PM emissions is due to the number of locomotives and nature of activities in this area, particularly idling locomotives.

The area of highest impact is within 1,000 feet of the Yard. The next highest impact zone as defined in the report had a predicted risk between 500 and 100 in one million and extends out between a half to one mile in some spots, depending on which meteorological conditions were assumed. The impact areas are irregular in shape making it difficult to generalize about the impact of distance at a particular location. However, the Roseville Rail Yard Study clearly indicates that the localized health risk is high, the impact area is large, and mitigation of the locomotive diesel PM emissions is needed.

For facilities like rail yards and ports, the potential impact area is so large that the real solution is to substantially reduce facility emissions. However, land use planners can avoid encroaching upon existing rail facilities and those scheduled for expansion. We also recommend that while air agencies tackle this problem, land use planners try not to add new sensitive individuals into the highest exposure areas. Finally, we recommend that land use agencies consider the potential health impacts of rail yards in their planning and permitting processes. Additional limitations and mitigation may be feasible to further reduce exposure on a site-specific basis.

Figure 1-4

Estimated Cancer Risk from the Yard
(100 and 500 in a million risk isopleths)



Notes: 100/Million Contours: Solid Line – Roseville Met Data; Dashed Line-McClellan Met Data, Urban Dispersion Coefficients, 80th Percentile Breathing Rate, All Locomotives' Activities (23 TPY), 70-Year Exposure

Recommendation

- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard[7].
- Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.

References

- *Roseville Rail Yard Study.* ARB (2004)

[7] The rail yard risk analysis was conducted for the Union Pacific rail yard in Roseville, California. This rail yard is one of the largest in the state. There are other rail yards in California with comparable levels of activity that should be considered "major" for purposes of this Handbook.

Ports

Air pollution from maritime port activities is a growing concern for regional air quality as well as air quality in nearby communities. The primary air pollutant associated with port operations is directly emitted diesel particulate. Port-related activities also result in emissions that form ozone and secondary particulate in the atmosphere. The emission sources associated with ports include diesel engine-powered ocean-going ships, harbor craft, cargo handling equipment, trucks, and locomotives. The size and concentration of these diesel engines makes ports one of the biggest sources of diesel PM in the state. For that reason, ARB has made it a top priority to reduce diesel PM emissions at the ports, in surrounding communities, and throughout California.

International, national, state, and local government collaboration is critical to reducing port emissions based on both legal and practical considerations. For example, the International Maritime Organization (IMO) and the U.S. EPA establish emission standards for ocean-going vessels and U.S.-flagged harbor craft, respectively. ARB is pursuing further federal actions to tighten these standards. In addition, ARB and local air districts are reducing emissions from ports through a variety of approaches. These include: incentive programs to fund cleaner engines, enhanced enforcement of smoke emissions from ships and trucks, use of dockside electricity instead of diesel engines, cleaner fuels for ships, harbor craft, locomotives, and reduced engine idling. The two ATCMs that limit truck idling and reduce emissions from TRUs (discussed under "Distribution Centers") also apply to ports.

ARB is also developing several other regulations that will reduce port-related emissions. One rule would require ocean-going ships to use a cleaner marine diesel fuel to power auxiliary engines while in California coastal waters and at dock. Ships that frequently visit California ports would also be required to further reduce their emissions. ARB has adopted a rule that would require harbor craft to use the same cleaner diesel fuel used by on-road trucks in California. In 2005, ARB will consider a rule that would require additional controls for in-use harbor craft, such as the use of add-on emission controls and accelerated turnover of older engines.

Key Health Findings

Port activities are a major source of diesel PM. Diesel PM has been identified by ARB as a toxic air contaminant and represents 70 percent of the known potential cancer risk from air toxics in California. Diesel PM is an important contributor to particulate matter air pollution. Particulate matter exposure is associated with premature mortality and health effects such as asthma exacerbation and hospitalization due to aggravating heart and lung disease.

Distance Related Findings

The Ports of Los Angeles and Long Beach provide an example of the emissions impact of port operations. A comprehensive emissions inventory was completed in June 2004. These ports combined are one of the world's largest and busiest seaports. Located in San Pedro Bay, about 20 miles south of downtown Los Angeles, the port complex occupies approximately 16 square miles of land and water. Port activities include five source categories that produce diesel emissions. These are ocean-going vessels, harbor craft, cargo handling equipment, railroad locomotives, and heavy-duty trucks.

The baseline emission inventory provides emission estimates for all major air pollutants. This analysis focuses on diesel PM from in-port activity because these emissions have the most potential health impact on the areas adjacent to the port. Ocean vessels are the largest overall source of diesel PM related to the ports, but these emissions occur primarily outside of the port in coastal waters, making the impact more regional in nature.

The overall in-port emission inventory for diesel particulate for the ports of Los Angeles and Long Beach is estimated to be 550 tons per year. The emissions fall in the following major categories: ocean-going vessels (17%), harbor craft (25%), cargo handling (47%), railroad locomotive (3%), and heavy duty vehicles (8%). In addition to in-port emissions, ship, rail, and trucking activities also contribute to regional emissions and increase emissions in nearby neighborhoods. Off-port emissions associated with related ship, rail, and trucking activities contribute an additional 680 tons per year of diesel particulate at the Port of Los Angeles alone.

To put this in perspective, the diesel PM emissions estimated for the Roseville Yard in ARB's 2004 study are 25 tons per year. The potential cancer risk associated with these emissions is 100 in one million at a distance of one mile, or one half mile, depending on the data set used. This rail yard covers one and a half square miles. The Los Angeles and Long Beach ports have combined diesel PM emissions of 550 tons per year emitted from a facility that covers a much larger area - 16 miles. The ports have about twice the emission density of the rail yard - 34 tons per year per square mile compared to 16 tons per year per square mile. However, while this general comparison is illustrative of the overall size of the complex, a detailed air quality modeling analysis would be needed to assess the potential health impact on specific downwind areas near the ports.

ARB is in the process of evaluating the various port-related emission sources from the standpoint of existing emissions, growth forecasts, new control options, regional air quality impacts, and localized health risk. A number of public processes - both state and local - are underway to address various aspects of these issues. Until more of these analyses are complete, there is little basis for recommending a specific separation between new sensitive land uses and ports.

For example, the type of data we have showing the relationship between air pollutant concentrations and distance from freeways is not yet available.

Also, the complexity of the port facilities makes a site-specific analysis critical. Ports are a concentration of multiple emission sources with differing dispersion and other characteristics. In the case of the Roseville rail yard, we found a high, very localized impact associated with a particular activity, service and maintenance. By contrast, the location, size, and nature of impact areas can be expected to vary substantially for different port activities. For instance, ground level emissions from dockside activities would behave differently from ship stack level emissions.

Nonetheless, on an emissions basis alone, we expect locations downwind of ports to be substantially impacted. For that reason, we recommend that land use agencies track the current assessment efforts, and consider limitations on the siting of new sensitive land uses in areas immediately downwind of ports.

Recommendations

Avoid siting new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.

References

- *Roseville Rail Yard Study.* ARB (2004)
- Final Draft, "*Port-Wide Baseline Air Emissions Inventory.*" Port of Los Angeles (June 2004)
- Final Draft, "*2002 Baseline Air Emissions Inventory.*" Port of Long Beach (February 2004)

Petroleum Refineries

A petroleum refinery is a complex facility where crude oil is converted into petroleum products (primarily gasoline, diesel fuel, and jet fuel), which are then transported through a system of pipelines and storage tanks for final distribution by delivery truck to fueling facilities throughout the state. In California, most crude oil is delivered either by ship from Alaska or foreign sources, or is delivered via pipeline from oil production fields within the state. The crude oil then undergoes many complex chemical and physical reactions, which include distillation, catalytic cracking, reforming, and finishing. These refining processes have the potential to emit air contaminants, and are subject to extensive emission controls by district regulations.

As a result of these regulations covering the production, marketing, and use of gasoline and other oil by-products, California has seen significant regional air quality benefits both in terms of cleaner fuels and cleaner operating facilities. In

the 1990s, California refineries underwent significant modifications and modernization to produce cleaner fuels in response to changes in state law. Nevertheless, while residual emissions are small when compared to the total emissions controlled from these major sources, refineries are so large that even small amounts of fugitive, uncontrollable emissions and associated odors from the operations, can be significant. This is particularly the case for communities that may be directly downwind of the refinery. Odors can cause health symptoms such as nausea and headache. Also, because of the size, complexity, and vast numbers of refinery processes onsite, the occasional refinery upset or malfunction can potentially result in acute or short-term health effects to exposed individuals.

Key Health Findings

Petroleum refineries are large single sources of emissions. For volatile organic compounds (VOCs), eight of the ten largest stationary sources in California are petroleum refineries. For oxides of nitrogen (NOx), four of the ten largest stationary sources in California are petroleum refineries. Both of these compounds react in the presence of sunlight to form ozone. Ozone impacts lung function by irritating and damaging the respiratory system. Petroleum refineries are also large stationary sources of both particulate matter under 10 microns in size (PM_{10}) and particulate matter under 2.5 microns in size ($PM_{2.5}$). Exposure to particulate matter aggravates a number of respiratory illnesses, including asthma, and is associated with premature mortality in people with existing cardiac and respiratory disease. Both long-term and short-term exposure can have adverse health impacts. Finer particles pose an increased health risk because they can deposit deep in the lung and contain substances that are particularly harmful to human health. NOx are also significant contributors to the secondary formation of $PM_{2.5}$.

Petroleum refineries also emit a variety of toxic air pollutants. These air toxics vary by facility and process operation but may include: acetaldehyde, arsenic, antimony, benzene, beryllium, 1,3-butadiene, cadmium compounds, carbonyl sulfide, carbon disulfide, chlorine, dibenzofurans, diesel particulate matter, formaldehyde, hexane, hydrogen chloride, lead compounds, mercury compounds, nickel compounds, phenol, 2,3,7,8 tetrachlorodibenzo-p-dioxin, toluene, and xylenes (mixed) among others. The potential health effects associated with these air toxics can include cancer, respiratory irritation, and damage to the central nervous system, depending on exposure levels.

Distance Related Findings

Health risk assessments for petroleum refineries have shown risks from toxic air pollutants that have quantifiable health risk values to be around 10 potential cancer cases per million. Routine air monitoring and several air monitoring studies conducted in the San Francisco Bay Area (Crockett) and the South Coast Air Basin (Wilmington) have not identified significant health risks specifically

associated with refineries. However, these studies did not measure diesel PM as no accepted method currently exists, and there are many toxic air pollutants that do not have quantifiable health risk values.

In 2002, ARB published a report on the results of the state and local air district air monitoring done near oil refineries. The purpose of this evaluation was to try to determine how refinery-related emissions might impact nearby communities. This inventory of air monitoring activities included 10 ambient air monitoring stations located near refineries in Crockett and four stations near refineries in Wilmington. These monitoring results did not identify significant increased health risks associated with the petroleum refineries. In 2002-2003, ARB conducted additional monitoring studies in communities downwind of refineries in Crockett and Wilmington. These monitoring results also did not indicate significant increased health risks from the petroleum refineries.

Consequently, there are no air quality modeling or air monitoring data that provides a quantifiable basis for recommending a specific separation between refineries and new sensitive land uses. However, in view of the amount and potentially hazardous nature of many of the pollutants released as part of the refinery process, we believe the siting of new sensitive land uses immediately downwind should be avoided. Land use agencies should consult with the local air district when considering how to define an appropriate separation for refineries within their jurisdiction.

Recommendations

- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.

References

- *Review of Current Ambient Air Monitoring Activities Related to California Bay Area and South Coast Refineries. ARB (March 2002)* http://www.arb.ca.gov/aaqm/qmosqual/special/mldrefinery.pdf
- *Community Air Quality Monitoring: Special Studies – Crockett. ARB (September 2004)* http://www.arb.ca.gov/ch/communities/studies/crockett/crockett.htm
- *Wilmington Study - Air Monitoring Results. ARB (2003)* http://www.arb.ca.gov/ch/communities/studies/wilmington/wilmington.htm

Chrome Plating Operations

Chrome plating operations rely on the use of the toxic metal hexavalent chromium, and have been subject to ARB and local air district control programs for many years. Regulation of chrome plating operations has reduced statewide emissions substantially. However, due to the nature of chrome plating

operations and the highly toxic nature of hexavalent chromium, the remaining health risk to nearby residents is a continuing concern.

Chrome plating operations convert hexavalent chromium in solution to a chromium metal layer by electroplating, and are categorized based upon the thickness of the chromium metal layer applied. In "decorative plating", a layer of nickel is first plated over a metal substrate. Following this step, a thin layer of chromium is deposited over the nickel layer to provide a decorative and protective finish, for example, on faucets and automotive wheels. "Hard chrome plating" is a process in which a thicker layer of chromium metal is deposited directly on metal substrates such as engine parts, industrial machinery, and tools to provide greater protection against corrosion and wear.

Hexavalent chromium is emitted into the air when an electric current is applied to the plating bath. Emissions are dependent upon the amount of electroplating done per year and the control requirements. A unit of production referred to as an ampere-hour represents the amount of electroplating produced. Small facilities have an annual production rate of 100,000 – 500,000 ampere-hours, while medium-size facilities may have a production rate of 500,000 to about 3 million ampere-hours. The remaining larger facilities have a range of production rates that can be as high as 80 million ampere-hours.

The control requirements, which reduce emissions from the plating tanks, vary according to the size and type of the operation. Facilities either install add-on pollution control equipment, such as filters and scrubbers, or in-tank controls, such as fume suppressants and polyballs. With this combination of controls, the overall hexavalent chromium emissions have been reduced by over 90 percent. Larger facilities typically have better controls that can achieve efficiencies greater than 99 percent. However, even with stringent controls, the lack of maintenance and good housekeeping practices can lead to problems. And, since the material itself is inherently dangerous, any lapse in compliance poses a significant risk to nearby residents.

A 2002 ARB study in the San Diego community of Barrio Logan measured unexpectedly high concentrations of hexavalent chromium near chrome platers. The facilities were located in a mixed-use area with residences nearby. The study found that fugitive dust laden with hexavalent chromium was an important source of emissions that likely contributed to the elevated cancer risk. Largely as a result of this study, ARB is in the process of updating the current requirements to further reduce the emissions from these facilities.

In December 2004, the ARB adopted an ATCM to reduce emissions of hexavalent chromium and nickel from thermal spraying operations through the installation of best available control technology. The ATCM requires all existing facilities to comply with its requirements by January 1, 2006. New and modified thermal spraying operations must comply upon initial startup. An existing thermal spraying facility may be exempt from the minimum control efficiency

requirements of the ATCM if it is located at least 1,640 feet from the nearest sensitive receptor and emits no more than 0.5 pound per year of hexavalent chromium.[8]

Key Health Findings

Hexavalent chromium is one of the most toxic air pollutants regulated by the State of California. Hexavalent chromium is a carcinogen and has been identified in worker health studies as causing lung cancer. Exposure to even very low levels of hexavalent chromium should be avoided.

The California Office of Environmental Health Hazard Assessment has found that: 1) many epidemiological studies show a strong association between hexavalent chromium exposure in the work place and respiratory cancer; and 2) all short-term assays reported show that hexavalent chromium compounds can cause damage to human DNA.

Hexavalent chromium when inhaled over a period of many years can cause a variety of non-cancer health effects. These health effects include damage to the nose, blood disorders, lung disease, and kidney damage. The non-cancer health impacts occur with exposures considerably higher than exposures causing significant cancer risks. It is less likely that the public would be exposed to hexavalent chromium at levels high enough to cause these non-cancer health effects. Non-cancer health effects, unlike cancer health effects, have a threshold or exposure level below which non-cancer health effects would not be expected.

Distance Related Findings

ARB's 2002 Barrio Logan Study measured concentrations of hexavalent chromium in the air near two chrome plating facilities. The study was conducted from December 2001 to May 2002. There were two chrome platers on the street - one decorative and one hard plater. The purpose of the study was to better understand the near source impact of hexavalent chromium emissions. Air monitors were placed at residences next to the platers and at varying distances down the street. The monitors were moved periodically to look at the spatial distribution of the impact. Source testing and facility inspections identified one of the facilities as the likely source.

The first two weeks of monitoring results showed unexpectedly high levels of hexavalent chromium at a number of the monitoring sites. The high concentrations were intermittent. The concentrations ranged from 1 to 22 ng/m3 compared to the statewide average of 0.1 ng/m3. If these levels were to continue for 70 years, the potential cancer risk would be 150 in one million. The highest value was found at an air monitor behind a house adjacent to one of the

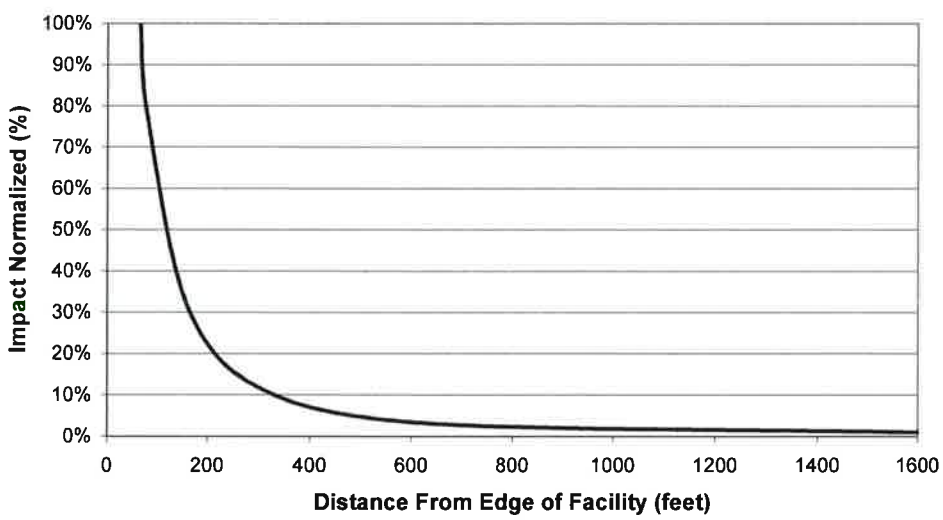
[8] For further information on the ATCM, please refer to: http://www.arb.ca.gov/regact/thermspr/thermalspr.htm

plating facilities–approximately 30 feet from the back entrance. Lower, but significant concentrations were found at an ambient air monitor 250 feet away.

The monitoring covered a period when the facility was not operating its plating tank. During this period, one of the highest concentrations was measured at an adjacent house. It appears that chromium-laden dust was responsible for high concentrations at this location since there was no plating activity at the time. Dust samples from the facility were tested and found to contain high levels of hexavalent chromium. On the day the highest concentration was measured at the house next door, a monitor 350 feet away from the plater's entrance showed very little impact. Similar proximity effects are shown in ARB modeling studies.

Figure 1-5 shows how the relative health risk varies as a function of distance from a chrome plater. This analysis is based on a medium-sized chrome plater with an annual production rate of 3 million ampere-hours. As shown in Figure 1- 5, the potential health risk drops off rapidly, with over 90 percent reduction in risk within 300 feet. This modeling was done in 2003 as part of a review of ARB's current air toxic control measure for chrome platers and is based on data from a recent ARB survey of chrome platers in California. The emission

Figure 1-5
Risk vs. Distance From Chrome Plater
(Based on plating tank emissions)



rates are only for plating operations. Because there are insufficient data available to directly quantify the impacts, the analysis does not include fugitive emissions, which the Barrio Logan analysis indicated could be significant.

Both the ARB Barrio Logan monitoring results and ARB's 2003 modeling analysis suggests that the localized emissions impact of a chrome plater diminishes significantly at 300 feet. However, in developing our recommendation, we also considered the following factors:

- some chrome platers will have higher volumes of plating activity,
- potential dust impacts were not modeled,
- we have only one monitoring study looking at the impact of distance, and,
- hexavalent chromium is one of the most potent toxic air contaminants ARB has identified.

Given these limitations in the analysis, we recommend a separation of 1,000 feet as a precautionary measure. For large chrome platers, site specific information should be obtained from the local air district.

Recommendation

- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.

References

- *Ambient Air Monitoring for Hexavalent Chromium and Metals in Barrio Logan: May 2001 through May 2002.* ARB, Monitoring and Laboratory Division (October 14, 2003)
- *Draft Barrio Logan Report.* ARB, Planning and Technical Support Division (November 2004)
- *Proposed Amendments to the Hexavalent Chromium Control Measure for Decorative and Hard Chrome Plating and Chromic Acid Anodizing Facilities.* ARB (April 1998)
- Murchison, Linda; Suer, Carolyn; Cook, Jeff. *"Neighborhood Scale Monitoring in Barrio Logan,"* (AWMA Annual Conference Proceedings, June 2003)

Dry Cleaners Using Perchloroethylene (Perc Dry Cleaners)

Perchloroethylene (perc) is the solvent most commonly used by the dry cleaning industry to clean clothes or other materials. The ARB and other public health agencies have identified perc as a potential cancer-causing compound. Perc persists in the atmosphere long enough to contribute to both regional air pollution and localized exposures. Perc dry cleaners are the major source of perc emissions in California.

Since 1990, the statewide concentrations and health risk from exposure to perc has dropped over 70 percent. This is due to a number of regulatory requirements on perc dry cleaners and other sources, including degreasing operations, brake cleaners, and adhesives. ARB adopted an Airborne Toxic Control Measure (ATCM) for Perc Emissions from Dry Cleaning Operations in 1993. ARB has also prohibited the use of perc in aerosol adhesives and automotive brake cleaners.

Perc dry cleaners statewide are required to comply with ARB and local air district regulations to reduce emissions. However, even with these controls, some emissions continue to occur. Air quality studies indicate that there is still the potential for significant risks even near well-controlled dry cleaners. The South Coast AQMD has adopted a rule requiring that all new dry cleaners use alternatives to perc and that existing dry cleaners phase out the use of perc by December 2020. Over time, transition to non-toxic alternatives should occur. However, while perc continues to be used, a preventative approach should be taken to siting of new sensitive land uses.

Key Health Findings

Inhalation of perc may result in both cancer and non-cancer health effects. An assessment by California's Office of Environmental Health Hazard Assessment (OEHHA) concluded that perc is a potential human carcinogen and can cause non-cancer health effects. In addition to the potential cancer risk, the effects of long-term exposure include dizziness, impaired judgment and perception, and damage to the liver and kidneys. Workers have shown signs of liver toxicity following chronic exposure to perc, as well as kidney dysfunction and neurological effects. Non-cancer health effects occur with higher exposure levels than those associated with significant cancer risks. The public is more likely to be exposed to perchloroethylene at levels causing significant cancer risks than to levels causing non-cancer health effects. Non-cancer health effects, unlike cancer health effects, have a threshold or exposure level below which non-cancer health effects would not be expected. The ARB formally identified perc as a toxic air contaminant in October 1991.

One study has determined that inhalation of perc is the predominant route of exposure to infants living in apartments co-located in the same building with a business operating perc dry cleaning equipment. Results of air sampling within co-residential buildings indicate that dry cleaners can cause a wide range of exposures depending on the type and maintenance of the equipment. For example, a well-maintained state-of-the-art system may have risks in the range of 10 in one million, whereas a badly maintained machine with major leaks can have potential cancer risks of thousands in one million.

The California Air Pollution Control Officers Association (CAPCOA) is developing Industry-wide Risk Assessment Guidelines for Perchloroethylene Dry Cleaners which, when published, will provide detailed information on public health risk from exposure to emissions from this source.

Distance Related Findings

Risk created by perc dry cleaning is dependent on the amount of perc emissions, the type of dry cleaning equipment, proximity to the source, and how the emissions are released and dispersed (e.g., type of ventilation system, stack parameters, and local meteorology). Dry cleaners are often located near

residential areas, and near shopping centers, schools, day-care centers, and restaurants.

The vast majority of dry cleaners in California have one dry cleaning machine per facility. The South Coast AQMD estimates that an average well-controlled dry cleaner uses about 30 to 160 gallons of cleaning solvent per year, with an average of about 100 gallons. Based on these estimates, the South Coast AQMD estimates a potential cancer risk between 25 to 140 in one million at residential locations 75 feet or less from the dry cleaner, with an average of about 80 in one million. The estimate could be as high as 270 in one million for older machines.

CAPCOA's draft industry-wide risk assessment of perc dry cleaning operations indicates that the potential cancer risk for many dry cleaners may be in excess of potential cancer risk levels adopted by the local air districts. The draft document also indicates that, in general, the public's exposure can be reduced by at least 75 percent, by providing a separation distance of about 300 feet from the operation. This assessment is based on a single machine with perc use of about 100 gallons per year. At these distances, the potential cancer risk would be less than 10 potential cases per million for most scenarios.

The risk would be proportionately higher for large, industrial size, dry cleaners. These facilities typically have two or more machines and use 200 gallons or more per year of perc. Therefore, separation distances need to be greater for large dry cleaners. At a distance of 500 feet, the remaining risk for a large plant can be reduced by over 85 percent.

In California, a small number of dry cleaners that are co-located (sharing a common wall, floor, or ceiling) with a residence have the potential to expose the inhabitants of the residence to high levels of perc. However, while special requirements have been imposed on these existing facilities, the potential for exposure still exists. Avoiding these siting situations in the future is an important preventative measure.

Local air districts are a source of information regarding specific dry cleaning operations—particularly for large industrial operations with multiple machines. The 300 foot separation recommended below reflects the most common situation – a dry cleaner with only one machine. While we recommend 500 feet when there are two or more machines, site specific information should be obtained from the local air district for some very large industrial operations. Factors that can impact the risk include the number and type of machines, controls used, source configuration, building dimensions, terrain, and meteorological data.

Recommendation

- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines provide 500 feet. For operations with 3 or more machines, consult with the local air district.

- Do not site new sensitive land uses in the same building with perc dry cleaning operations.

References

- *Proposed Amended Rule 1421 – Control of Perchloroethylene Emissions from Dry Cleaning Systems,* Final Staff Report. South Coast AQMD. (October 2002)
- *Air Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations.* ARB (1994) (http://www.arb.ca.gov/toxics/atcm/percatcm.htm)
- *"An Assessment of Tetrachloroethylene in Human Breast Milk"*, Judith Schreiber, New York State Department of Health – Bureau of Toxic Substance Assessment, Journal of Exposure Analysis and Environmental Epidemiology, Vol.2, Suppl.2, pp. 15-26, 1992.
- Draft *Air Toxics "Hot Spots" Program Perchloroethylene Dry Cleaner Industry-wide Risk Assessment Guidelines.* (CAPCOA (November 2002)
- *Final Environmental Assessment for Proposed Amended Rule 1421 – Control of Perchloroethylene Emissions from Dry Cleaning Systems.* South Coast AQMD. (October 18, 2002)

Gasoline Dispensing Facilities

Refueling at gasoline dispensing facilities releases benzene into the air. Benzene is a potent carcinogen and is one of the highest risk air pollutants regulated by ARB. Motor vehicles and motor vehicle-related activity account for over 90 percent of benzene emissions in California. While gasoline-dispensing facilities account for a small part of total benzene emissions, near source exposures for large facilities can be significant.

Since 1990, benzene in the air has been reduced by over 75 percent statewide, primarily due to the implementation of emissions controls on motor vehicle vapor recovery equipment at gas stations, and a reduction in benzene levels in gasoline. However, benzene levels are still significant. In urban areas, average benzene exposure is equivalent to about 50 in one million.

Gasoline dispensing facilities tend to be located in areas close to residential and shopping areas. Benzene emissions from the largest gas stations may result in near source health risk beyond the regional background and district health risk thresholds. The emergence of very high gasoline throughput at large retail or

wholesale outlets makes this a concern as these types of outlets are projected to account for an increasing market share in the next few years.

Key Health Findings

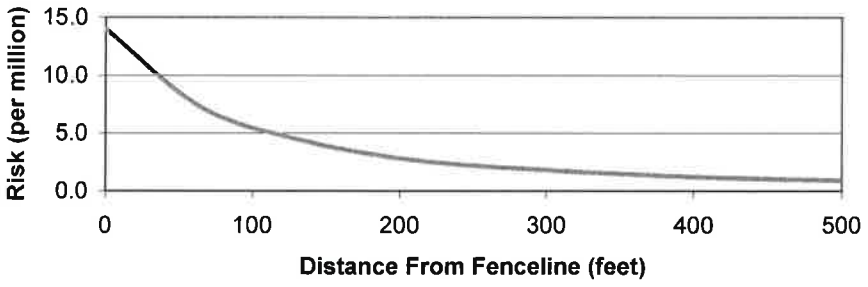
Benzene is a human carcinogen identified by ARB as a toxic air contaminant. Benzene also can cause non-cancer health effects above a certain level of exposure. Brief inhalation exposure to high concentrations can cause central nervous system depression. Acute effects include central nervous system symptoms of nausea, tremors, drowsiness, dizziness, headache, intoxication, and unconsciousness. It is unlikely that the public would be exposed to levels of benzene from gasoline dispensing facilities high enough to cause these non-cancer health effects.

Distance Related Findings

A well-maintained vapor recovery system can decrease emissions of benzene by more than 90% compared with an uncontrolled facility. Almost all facilities have emission control systems. Air quality modeling of the health risks from gasoline dispensing facilities indicate that the impact from the facilities decreases rapidly as the distance from the facility increases.

Statistics reported in the ARB's staff reports on Enhanced Vapor Recovery released in 2000 and 2002, indicated that almost 96 percent of the gasoline dispensing facilities had a throughput less than 2.4 million gallons per year. The remaining four percent, or approximately 450 facilities, had throughputs exceeding 2.4 million gallons per year. For these stations, the average gasoline throughput was 3.6 million gallons per year.

Figure 1-6
Gasoline Dispensing Facility Health Risk
for 3,600,000 gal/yr throughput



As shown in Figure 1-6, the risk levels for a gasoline dispensing facility with a throughput of 3.6 million gallons per year is about 10 in one million at a distance of 50 feet from the fenceline. However, as the throughput increases, the potential risk increases.

As mentioned above, air pollution levels in the immediate vicinity of large gasoline dispensing facilities may be higher than the surrounding area (although tailpipe emissions from motor vehicles dominates the health impacts). Very large gasoline dispensing facilities located at large wholesale and discount centers may dispense nine million gallons of gasoline per year or more. At nine million gallons, the potential risk could be around 25 in one million at 50 feet, dropping to about five in one million at 300 feet. Some facilities have throughputs as high as 19 million gallons.

Recommendation

- Avoid siting new sensitive land uses within 300 feet of a large gasoline dispensing facility (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

References

- *Gasoline Service Station Industry-wide Risk Assessment Guidelines.* California Air Pollution Control Officers Association (December 1997 and revised November 1, 2001)
- *Staff Report on Enhanced Vapor Recovery.* ARB (February 4, 2000)
- *The California Almanac of Emissions and Air Quality.* ARB (2004)
- *Staff Report on Enhanced Vapor Recovery Technology Review.* ARB (October 2002)

Other Facility Types that Emit Air Pollutants of Concern

In addition to source specific recommendations, Table 1-3 includes a list of other industrial sources that could pose a significant health risk to nearby sensitive individuals depending on a number of factors. These factors include the amount of pollutant emitted and its toxicity, the distance to nearby individuals, and the type of emission controls in place. Since these types of facilities are subject to air permits from local air districts, facility specific information should be obtained where there are questions about siting a sensitive land use close to an industrial facility.

Potential Sources of Odor and Dust Complaints

Odors and dust from commercial activities are the most common sources of air pollution complaints and concerns from the public. Land use planning and permitting processes should consider the potential impacts of odor and dust on surrounding land uses, and provide for adequate separation between odor and dust sources. As with other types of air pollution, a number of factors need to be considered when determining an adequate distance or mitigation to avoid odor or

Table 1-3 – Examples of Other Facility Types That Emit[1] Air Pollutants of Concern

Categories	Facility Type	Air Pollutants of Concern
Commercial		
	Autobody Shops	Metals, Solvents
	Furniture Repair	Solvents[2], Methylene Chloride
	Film Processing Services	Solvents, Perchloroethylene
	Distribution Centers	Diesel Particulate Matter
	Printing Shops	Solvents
	Diesel Engines	Diesel Particulate Matter
Industrial		
	Construction	Particulate Matter, Asbestos
	Manufacturers	Solvents, Metals
	Metal Platers, Welders, Metal Spray (flame spray) Operations	Hexavalent Chromium, Nickel, Metals
	Chemical Producers	Solvents, Metals
	Furniture Manufacturers	Solvents
	Shipbuilding and Repair	Hexavalent chromium and other metals, Solvents
	Rock Quarries and Cement Manufacturers	Particulate Matter, Asbestos
	Hazardous Waste Incinerators	Dioxin, Solvents, Metals
	Power Plants	Benzene, Formaldehyde, Particulate Matter
	Research and Development Facilities	Solvents, Metals, etc.
Public		
	Landfills	Benzene, Vinyl Chloride, Diesel Particulate Matter
	Waste Water Treatment Plants	Hydrogen Sulfide
	Medical Waste Incinerators	Dioxin, Benzene, PAH, PCBs, 1,3-Butadiene
	Recycling, Garbage Transfer Stations	Diesel Particulate Matter
	Municipal Incinerators	Dioxin, Benzene, PAH, PCBs, 1,3-Butadiene
Transportation		
	Truck Stops	Diesel Particulate Matter
Agricultural Operations		
	Farming Operations	Diesel Particulate Matter, VOCs, NOx, PM10, CO, SOx, Pesticides
	Livestock and Dairy Operations	Ammonia, VOCs, PM10

[1]Not all facilities will emit pollutants of concern due to process changes or chemical substitution. Consult the local air district regarding specific facilities.
[2]Some solvents may emit toxic air pollutants, but not all solvents are toxic air contaminants.

dust complaints in a specific situation. Local air districts should be consulted for advice when these siting situations arise.

Table 1-4 lists some of the most common sources of odor complaints received by local air districts. Complaints about odors are the responsibility of local air districts and are covered under state law. The types of facilities that can cause odor complaints are varied and can range from small commercial facilities to large industrial facilities, and may include waste disposal and recycling operations. Odors can cause health symptoms such as nausea and headache. Facilities with odors may also be sources of toxic air pollutants (See Table 1-3). Some common sources of odors emitted by facilities are sulfur compounds, organic solvents, and the decomposition/digestion of biological materials. Because of the subjective nature of an individual's sensitivity to a particular type of odor, there is no specific rule for assigning appropriate separations from odor sources. Under the right meteorological conditions, some odors may still be offensive several miles from the source.

Table 1-4
Sources of Odor Complaints

- Sewage Treatment Plants
- Landfills
- Recycling Facilities
- Waste Transfer Stations
- Petroleum Refineries
- Biomass Operations
- Autobody Shops
- Coating Operations
- Fiberglass Manufacturing
- Foundries
- Rendering Plants
- Livestock Operations

Sources of dust are also common sources of air pollution-related complaints. Operations that can result in dust problems are rock crushing, gravel production, stone quarrying, and mining operations. A common source of complaints is the dust and noise associated with blasting that may be part of these operations. Besides the health impacts of dust as particulate matter, thick dust also impairs visibility, aesthetic values, and can soil homes and automobiles. Local air districts typically have rules for regulating dust sources in their jurisdictions, but dust sources can still be a concern. Therefore, separation of these facilities from residential and other new sensitive land uses should be considered.

In some areas of California, asbestos occurs naturally in stone deposits. Asbestos is a potent carcinogenic substance when inhaled. Asbestos-containing dust may be a public health concern in areas where asbestos-containing rock is mined, crushed, processed, or used. Situations where asbestos-containing gravel has been used in road paving materials are also a source of asbestos exposure to the general public. Planners are advised to consult with local air pollution agencies in areas where asbestos-containing gravel or stone products are produced or used.

2. Handbook Development

ARB and local air districts share responsibility for improving statewide air quality. As a result of California's air pollution control programs, air quality has improved and health risk has been reduced statewide. However, state and federal air quality standards are still exceeded in many areas of California and the statewide health risk posed by toxic air contaminants (air toxics) remains too high. Also, some communities experience higher pollution exposures than others - making localized impacts, as well regional or statewide impacts, an important consideration. It is for this reason that this Handbook has been produced - to promote better, more informed decision-making by local land use agencies that will improve air quality and public health in their communities.

Land use policies and practices, including planning, zoning, and siting activities, can play a critical role in air quality and public health at the local level. For instance, even with the best available control technology, some projects that are sited very close to homes, schools, and other public places can result in elevated air pollution exposures. The reverse is also true – siting a new school or home too close to an existing source of air pollution can pose a public health risk. The ARB recommendations in section 1 address this issue.

> *This Handbook is an informational document that we hope will strengthen the relationship between air quality and land use agencies. It highlights the need for land use agencies to address the potential for new projects to result in localized health risk or contribute to cumulative impacts where air pollution sources are concentrated.*

Avoiding these incompatible land uses is a key to reducing localized air pollution exposures that can result in adverse health impacts, especially to sensitive individuals.

Individual siting decisions that result in incompatible land uses are often the result of locating "sensitive" land uses next to polluting sources. These decisions can be of even greater concern when existing air pollution exposures in a community are considered. In general terms, this is often referred to as the issue of "cumulative impacts." ARB is working with local air districts to better define these situations and to make information about existing air pollution levels (e.g., from local businesses, motor vehicles, and other areawide sources) more readily available to land use agencies.

In December 2001, the ARB adopted "Policies and Actions for Environmental Justice" (Policies). These Policies were developed in coordination with a group of stakeholders, representing local government agencies, community interest

groups, environmental justice organizations, academia, and business (Environmental Justice Stakeholders Group).

The Policies included a commitment to work with land use planners, transportation agencies, and local air districts to develop ways to identify, consider, and reduce cumulative air pollution emissions, exposure, and health risks associated with land use planning and decision-making. Developed under the auspices of the ARB's Environmental Justice Stakeholders Group, this Handbook is a first step in meeting that commitment.

ARB has produced this Handbook to help achieve several objectives:

- Provide recommendations on situations to avoid when siting new residences, schools, day care centers, playgrounds, and medical-related facilities (sensitive sites or sensitive land uses);

- Identify approaches that land use agencies can use to prevent or reduce potential air pollution impacts associated with general plan policies, new land use development, siting, and permitting decisions;

- Improve and facilitate access to air quality data and evaluation tools for use in the land use decision-making process;

- Encourage stronger collaboration between land use agencies and local air districts to reduce community exposure to source-specific and cumulative air pollution impacts; and

- Emphasize community outreach approaches that promote active public involvement in the air quality/land use decision-making process.

This Handbook builds upon California's 2003 General Plan Guidelines. These Guidelines, developed by the Governor's Office of Planning and Research (OPR), explain the land use planning process and applicable legal requirements. This Handbook also builds upon a 1997 ARB report, "The Land Use-Air Quality Linkage" ("Linkage Report").[9] The Linkage Report was an outgrowth of the California Clean Air Act which, among other things, called upon local air districts to focus particular attention on reducing emissions from sources that indirectly cause air pollution by attracting vehicle trips. Such indirect sources include, but are not limited to, shopping centers, schools and universities, employment centers, warehousing, airport hubs, medical offices, and sports arenas. The Linkage Report summarizes data as of 1997 on the relationships between land use, transportation, and air quality, and highlights strategies that can help to reduce the use of single occupancy automobile use. Such strategies

[9] To access this report, please refer to ARB's website or click on: http://www.arb.ca.gov/ch/programs/link97.pdf

complement ARB regulatory programs that continue to reduce motor vehicle emissions.

In this Handbook, we identify types of air quality-related information that we recommend land use agencies consider in the land use decision-making processes such as the development of regional, general, and community plans; zoning ordinances; environmental reviews; project siting; and permit issuance. The Handbook provides recommendations on the siting of new sensitive land uses based on current analyses. It also contains information on approaches and methodologies for evaluating new projects from an air pollution perspective.

The Handbook looks at air quality issues associated with emissions from industrial, commercial, and mobile sources of air pollution. Mobile sources continue to be the largest overall contributors to the state's air pollution problems, representing the greatest air pollution health risk to most Californians. Based on current health risk information for air toxics, the most serious pollutants on a statewide basis are diesel PM, benzene, and 1,3-butadiene, all of which are primarily emitted by motor vehicles. From a state perspective, ARB continues to pursue new strategies to further reduce motor vehicle-related emissions in order to meet air quality standards and reduce air toxics risk.

While mobile sources are the largest overall contributors to the state's air pollution problems, industrial and commercial sources can also pose a health risk, particularly to people near the source. For this reason, the issue of incompatible land uses is an important focus of this document.

Handbook Audience

Even though the primary users of the Handbook will likely be agencies responsible for air quality and land use planning, we hope the ideas and technical issues presented in this Handbook will also be useful for:

- public and community organizations and community residents;
- federal, state and regional agencies that fund, review, regulate, oversee, or otherwise influence environmental policies and programs affected by land use policies; and
- private developers.

3. Key Community Focused Issues Land Use Agencies Should Consider

Two key air quality issues that land use agencies should consider in their planning, zoning, and permitting processes are:

1) **Incompatible Land Uses.** Localized air pollution impacts from incompatible land use can occur when polluting sources, such as a heavily trafficked roadway, warehousing facilities, or industrial or commercial facilities, are located near a land use where sensitive individuals are found such as a school, hospital, or homes.

2) **Cumulative Impacts.** Cumulative air pollution impacts can occur from a concentration of multiple sources that individually comply with air pollution control requirements or fall below risk thresholds, but in the aggregate may pose a public health risk to exposed individuals. These sources can be heavy or light-industrial operations, commercial facilities such as autobody shops, large gas dispensing facilities, dry cleaners, and chrome platers, and freeways or other nearby busy transportation corridors.

Incompatible Land Uses

Land use policies and practices can worsen air pollution exposure and adversely affect public health by mixing incompatible land uses. Examples include locating new sensitive land uses, such as housing or schools, next to small metal plating facilities that use a highly toxic form of chromium, or very near large industrial facilities or freeways. Based on recent monitoring and health-based studies, we now know that air quality impacts from incompatible land uses can contribute to increased risk of illness, missed work and school, a lower quality of life, and higher costs for public health and pollution control.[10]

Avoiding incompatible land uses can be a challenge in the context of mixed-use industrial and residential zoning. For a variety of reasons, government agencies and housing advocates have encouraged the proximity of affordable housing to employment centers, shopping areas, and transportation corridors, partially as a means to reduce vehicle trips and their associated emissions. Generally speaking, typical distances in mixed-use communities between businesses and industries and other land uses such as homes and schools, should be adequate to avoid health risks. However, generalizations do not always hold as we addressed in section 1 of this Handbook.

In terms of siting air pollution sources, the proposed location of a project is a major factor in determining whether it will result in localized air quality impacts. Often, the problem can be avoided by providing an adequate distance or setback

[10] For more information, the reader should refer to ARB's website on community health: http://www.arb.ca.gov/ch/ch.htm

between a source of emissions and nearby sensitive land uses. Sometimes, suggesting project design changes or mitigation measures in the project review phase can also reduce or avoid potential impacts. This underscores the importance of addressing potential incompatible land uses as early as possible in the project review process, ideally in the general plan itself.

Cumulative Air Pollution Impacts

The broad concept of cumulative air pollution impacts reflects the combination of regional air pollution levels and any localized impacts. Many factors contribute to air pollution levels experienced in any location. These include urban background air pollution, historic land use patterns, the prevalence of freeways and other transportation corridors, the concentration of industrial and commercial businesses, and local meteorology and terrain.

When considering the potential air quality impacts of polluting sources on individuals, project location and the concentration of emissions from air pollution sources need to be considered in the land use decision-making process. In section 4, the Handbook offers a series of questions that helps land use agencies determine if a project should undergo a more careful analysis. This holds true regardless of whether the project being sited is a polluting source or a sensitive land use project.

Large industrial areas are not the only land uses that may result in public health concerns in mixed-use communities. Cumulative air pollution impacts can also occur if land uses do not adequately provide setbacks or otherwise protect sensitive individuals from potential air pollution impacts associated with nearby light industrial sources. This can occur with activities such as truck idling and traffic congestion, or from indirect sources such as warehousing facilities that are located in a community or neighborhood.

In October 2004, Cal/EPA published its Environmental Justice Action Plan. In February 2005, the Cal/EPA Interagency Working Group approved a working definition of "cumulative impacts" for purposes of initially guiding the pilot projects that are being conducted pursuant to that plan. Cal/EPA is now in the process of developing a Cumulative Impacts Assessment Guidance document. Cal/EPA will revisit the working definition of "cumulative impacts" as the Agency develops that guidance. The following is the working definition:

> *"Cumulative impacts means exposures, public health or environmental effects from the combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socio-economic factors, where applicable, and to the extent data are available."*

4. Mechanisms for Integrating Localized Air Quality Concerns Into Land Use Processes

Land use agencies should use each of their existing planning, zoning, and permitting authorities to address the potential health risk associated with new projects. Land use-specific mechanisms can go a long way toward addressing both localized and cumulative impacts from new air pollution sources that are not otherwise addressed by environmental regulations. Likewise, close collaboration and communication between land use agencies and local air districts in both the planning and project approval stages can further reduce these impacts. Local agency partnerships can also result in early identification of potential impacts from proposed activities that might otherwise escape environmental review. When this happens, pollution problems can be prevented or reduced before projects are approved, when it is less complex and expensive to mitigate.

The land use entitlement process requires a series of planning decisions. At the highest level, the General Plan sets the policies and direction for the jurisdiction, and includes a number of mandatory elements dealing with issues such as housing, circulation, and health hazards. Zoning is the primary tool for implementing land use policies. Specific or community plans created in conjunction with a specific project also perform many of the same functions as a zoning ordinance. Zoning can be modified by means of variances and conditional use permits. The latter are frequently used to insure compatibility between otherwise conflicting land uses. Finally, new development usually requires the approval of a parcel or tract map before grading and building permits can be issued. These parcel or tract maps must be consistent with the applicable General Plan, zoning and other standards.

Land use agencies can use their planning authority to separate industrial and residential land uses, or to require mitigation where separation is not feasible. By separating incompatible land uses, land use agencies can prevent or reduce both localized and cumulative air pollution impacts without denying what might otherwise be a desirable project.[11] For instance:

- a dry cleaner could open a storefront operation in a community with actual cleaning operations performed at a remote location away from residential areas;
- gas dispensing facilities with lower fuel throughput could be sited in mixed-use areas;
- enhanced building ventilation or filtering systems in schools or senior care centers can reduce ambient air from nearby busy arterials; or
- landscaping and regular watering can be used to reduce fugitive dust at a building construction site near a school yard.

[11] It should be noted that such actions should also be considered as part of the General Plan or Plan element process.

The following general and specific land use approaches can help to reduce potential adverse air pollution impacts that projects may have on public health.

General Plans

The primary purpose of planning, and the source of government authority to engage in planning, is to protect public health, safety, and welfare. In its most basic sense, a local government General Plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, forming the basis for most land use decisions. Therefore, the most effective mechanism for dealing with the central land use concept of compatibility and its relationship to cumulative air pollution impacts is the General Plan. Well before projects are proposed within a jurisdiction, the General Plan sets the stage for where projects can be sited, and their compatibility with comprehensive community goals, objectives, and policies.

In 2003, OPR revised its General Plan Guidelines, highlighting the importance of incorporating sustainable development and environmental justice policies in the planning process. The OPR General Plan Guidelines provides an effective and long-term approach to reduce cumulative air pollution impacts at the earliest planning stages. In light of these important additions to the Guidelines, land use agencies should consider updating their General Plans or Plan elements to address these revisions.

The General Plan and related Plan elements can be used to avoid incompatible land uses by incorporating air quality considerations into these documents. For instance, a General Plan safety element with an air quality component could be used to incorporate policies or objectives that are intended to protect the public from the potential for facility breakdowns that may result in a dangerous release of air toxics. Likewise, an air quality component to the transportation circulation element of the General Plan could include policies or standards to prevent or reduce local exposure to diesel exhaust from trucks and other vehicles. For instance, the transportation circulation element could encourage the construction of alternative routes away from residential areas for heavy-duty diesel trucks. By considering the relationship between air quality and transportation, the circulation element could also include air quality policies to prevent or reduce trips and travel, and thus vehicle emissions. Policies in the land use element of the General Plan could identify areas appropriate for future industrial, commercial, and residential uses. Such policies could also introduce design and distance parameters that reduce emissions, exposure, and risk from industrial and some commercial land uses (e.g., dry cleaners) that are in close proximity to residential areas or schools.

Land use agencies should also consider updating or creating an air quality element in the jurisdiction's General Plan. In the air quality element, local decision-makers could develop long-term, effective plans and policies to address

air quality issues, including cumulative impacts. The air quality element can also provide a general reference guide that informs local land use planners about regional and community level air quality, regulatory air pollution control requirements and guidelines, and references emissions and pollution source data bases and assessment and modeling tools. As is further described in Appendix C of the Handbook, new assessment tools that ARB is developing can be included into the air quality element by reference. For instance, ARB's statewide risk maps could be referenced in the air quality element as a resource that could be consulted by developers or land use agencies

Zoning

The purpose of "zoning" is to separate different land uses. Zoning ordinances establish development controls to ensure that private development takes place within a given area in a manner in which:

- All uses are compatible (e.g., an industrial plant is not permitted in a residential area);
- Common development standards are used (e.g., all homes in a given area are set back the same minimum distance from the street); and,
- Each development does not unreasonably impose a burden upon its neighbors (e.g., parking is required on site so as not to create neighborhood parking problems).

To do this, use districts called "zones" are established and standards are developed for these zones. The four basic zones are residential, commercial, industrial and institutional.

Land use agencies may wish to consider how zoning ordinances, particularly those for mixed-use areas, can be used to avoid exacerbating poor land use practices of the past or contributing to localized and cumulative air pollution impacts in the community.

Sometimes, especially in mixed-use zones, there is a potential for certain categories of existing businesses or industrial operations to result in cumulative air pollution impacts to new development projects. For example:

- An assisted living project is proposed for a mixed-use zone adjacent to an existing chrome plating facility, or several dry cleaners;
- Multiple industrial sources regulated by a local air district are located directly upwind of a new apartment complex;
- A new housing development is sited in a mixed-use zone that is downwind or adjacent to a distribution center that attracts diesel-fueled delivery trucks and TRUs; or
- A new housing development or sensitive land use is sited without adequate setbacks from an existing major transportation corridor or rail yard.

As part of the public process for making zoning changes, local land use agencies could work with community planning groups, local businesses, and community residents to determine how best to address existing incompatible land uses.

Land Use Permitting Processes

- **Questions to Consider When Reviewing New Projects**

Very often, just knowing what questions to ask can yield critical information about the potential air pollution impacts of proposed projects – both from the perspective of a specific project as well as in the nature of existing air pollution sources in the same impact area. Available land use information can reveal the proximity of air pollution sources to sensitive individuals, the potential for incompatible land uses, and the location and nature of nearby air pollution sources. Air quality data, available from the ARB and local air districts, can provide information about the types and amounts of air pollution emitted in an area, regional air quality concentrations, and health risk estimates for specific sources.

General Plans and zoning maps are an excellent starting point in reviewing project proposals for their potential air pollution impacts. These documents contain information about existing or proposed land uses for a specific location as well as the surrounding area. Often, just looking at a map of the proposed location for a facility and its surrounding area will help to identify a potential adjacent incompatible land use.

The following pages are a "pull-out" list of questions to consider along with cross-references to pertinent information in the Handbook. These questions are intended to assist land use agencies in evaluating potential air quality-related concerns associated with new project proposals.

The first group of questions contains project-related queries designed to help identify the potential for localized project impacts, particularly associated with incompatible land uses. The second group of questions focuses on the issue of potential cumulative impacts by including questions about existing emissions and air quality in the community, and community feedback. Depending on the answers to these questions, a land use agency may decide a more detailed review of the proposal is warranted.

The California Department of Education has already developed a detailed process for school siting which is outlined in Appendix E. However, school districts may also find this section helpful when evaluating the most appropriate site for new schools in their area. At a minimum, using these questions may encourage school districts to engage throughout their siting process with land use agencies and local air districts. The combined expertise of these entities can be useful in devising relevant design standards and mitigation measures that can

reduce exposure to cumulative emissions, exposure, and health risk to students and school workers.

As indicated throughout the Handbook, we strongly encourage land use agencies to consult early and often with local air districts. Local air districts have the expertise, many of the analytical tools, and a working knowledge of the sources they regulate. It is also critical to fully involve the public and businesses that could be affected by the siting decision. The questions provided in the chart below do not imply any particular action should be taken by land use agencies. Rather the questions are intended to improve the assessment process and facilitate informed decision-making.

- **Project-Related Questions**

This section includes project-related questions that, in conjunction with the questions in the next section, can be used to tailor the project evaluation. These questions are designed to help identify the potential for incompatible land uses from localized project impacts.

Questions to Consider When Reviewing New Projects

Project-Related Questions	Cross-Reference to Relevant Handbook Sections
1. Is the proposed project: ▲ A business or commercial license renewal ▲ A new or modified commercial project ▲ A new or modified industrial project ▲ A new or modified public facility project ▲ A new or modified transportation project ▲ A housing or other development in which sensitive individuals may live or play	See Appendix A for typical land use classifications and associated project categories that could emit air pollutants.
2. Does the proposed project: ▲ Conform to the zoning designation? ▲ Require a variance to the zoning designation? ▲ Include plans to expand operations over the life of the business such that additional emissions may increase the pollution burden in the community (e.g., from additional truck operations, new industrial operations or process lines, increased hours of operation, build-out to the property line, etc.)?	See Appendix F for a general explanation of land use processes. In addition, Section 3 contains a discussion of how land use planning, zoning, and permitting practices can result in incompatible land uses or cumulative air pollution impacts.
3. Has the local air district provided comments or information to assist in the analysis?	See Section 5 and Appendix C for a description of air quality-related tools that the ARB and local air districts use to provide information on potential air pollution impacts.
4. Have public meetings been scheduled with the affected community to solicit their involvement in the decision-making process for the proposed project?	See Section 7 for a discussion of public participation, information and outreach tools.
5. If the proposed project will be subject to local air district regulations: ▲ Has the project received a permit from the local air district? ▲ Would it comply with applicable local air district requirements? ▲ Is the local air district contemplating new regulations that would reduce emissions from the source over time? ▲ Will potential emissions from the project	See Appendix C for a description of local air district programs.

Project-Related Questions	Cross-Reference to Relevant Handbook Sections
trigger the local air district's new source review for criteria pollutants or air toxics emissions? ▲ Is the local air district expected to ask the proposed project to perform a risk assessment? ▲ Is there sufficient new information or public concern to call for a more thorough environmental analysis of the proposed project? ▲ Are there plans to expand operations over time? ▲ Are there land-use based air quality significance thresholds or design standards that could be applied to this project in addition to applicable air district requirements?	
6. If the proposed project will release air pollution emissions, either directly or indirectly, but is not regulated by the local air district: ▲ Is the local air district informed of the project? ▲ Does the local air district believe that there could be potential air pollution impacts associated with this project category because of the proximity of the project to sensitive individuals? ▲ If the project is one in which individuals live or play (e.g., a home, playground, convalescent home, etc.), does the local air district believe that the project's proximity to nearby sources could pose potential air pollution impacts? ▲ Are there indirect emissions that could be associated with the project (e.g., truck traffic or idling, transport refrigeration unit operations, stationary diesel engine operations, etc.) that will be in close proximity to sensitive individuals? ▲ Will the proposed project increase or serve as a magnet for diesel traffic? ▲ Are there land-use based air quality significance thresholds or design standards that could be applied to this project in addition to applicable air district requirements? ▲ Is there sufficient new information or public concern to call for a more thorough environmental analysis of the proposed project? ▲ Should the site approval process include identification and mitigation of potential	See Section 1 for recommendations on situations to avoid when siting projects where sensitive individuals would be located (sensitive sites).

Project-Related Questions	Cross-Reference to Relevant Handbook Sections
direct or indirect emissions associated with the potential project?	
7. Does the local air district or land use agency have pertinent information on the source, such as: ▲ Available permit and enforcement data, including for the owner or operator of the proposed source that may have other sources in the State. ▲ Proximity of the proposed project to sensitive individuals. ▲ Number of potentially exposed individuals from the proposed project. ▲ Potential for the proposed project to expose sensitive individuals to odor or other air pollution nuisances. ▲ Meteorology or the prevailing wind patterns between the proposed project and the nearest receptor, or between the proposed sensitive receptor project and sources that could pose a localized or cumulative air pollution impact.	See Appendix C for a description of local air district programs. See Appendix B for a listing of useful information that land use agencies should have on hand or have accessible when reviewing proposed projects for potential air pollution impacts. Also, do not hesitate to contact your local air district regarding answers to any of these questions that might not be available at the land use agency. See Section 1 for recommendations on situations to avoid when siting projects where sensitive individuals would be located (sensitive sites).
8. Based upon the project application, its location, and the nature of the source, could the proposed project: ▲ Be a polluting source that is located in proximity to, or otherwise upwind, of a location where sensitive individuals live or play? ▲ Attract sensitive individuals and be located in proximity to or otherwise downwind, of a source or multiple sources of pollution, including polluting facilities or transportation-related sources that contribute emissions either directly or indirectly? ▲ Result in health risk to the surrounding community?	See Section 3 for a discussion of what is an incompatible land use and the potential cumulative air pollution impacts. See Section 1 for recommendations on situations to avoid when siting projects where sensitive individuals would be located (sensitive sites).
9. If a CEQA categorical exemption is proposed, were the following questions considered: ▲ Is the project site environmentally sensitive as defined by the project's location? (A project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant.) ▲ Would the project and successive future projects of the same type in the approximate location potentially result in cumulative impacts? ▲ Are there "unusual circumstances" creating the possibility of significant effects?	See CEQA Guidelines section 15300, and Public Resources Code, section 21084. See Section 1 for recommendations on situations to avoid when siting projects where sensitive individuals would be located (sensitive sites). See also Section 5 and Appendix C for a description of air quality-related tools that the ARB and local air districts use to provide information on potential air pollution impacts.

- **Questions Related to Cumulative Impact Assessment**

The following questions can be used to provide the decision-maker with a better understanding of the potential for cumulative air pollution impacts to an affected community. Answers to these questions will help to determine if new projects or activities warrant a more detailed review. It may also help to see potential environmental concerns from the perspective of the affected community. Additionally, responses can provide local decision-makers with information with which to assess the best policy options for addressing neighborhood-scale air pollution concerns.

The questions below can be used to identify whether existing tools and procedures are adequate to address land use-related air pollution issues. This process can also be used to pinpoint project characteristics that may have the greatest impact on community-level emissions, exposure, and risk. Such elements can include: the compliance record of existing sources including those owned or operated by the project proponent; the concentration of emissions from polluting sources within the approximate area of sensitive sites; transportation circulation in proximity to the proposed project; compatibility with the General Plan and General Plan elements; etc.

The local air district can provide useful assistance in the collection and evaluation of air quality-related information for some of the questions and should be consulted early in the process.

Questions Related to Cumulative Impact Assessment

Technical Questions	Cross-Reference to Relevant Handbook Sections
1. Is the community home to industrial facilities?	See Appendix A for typical land use classifications and associated project categories that could emit air pollutants.
2. Do one or more major freeways or high-traffic volume surface streets cut through the community?	See transportation circulation element of your general plan. See also Appendix B for useful information that land use agencies should have on hand or have accessible when reviewing proposed projects for potential air pollution impacts. See Section 1 for recommendations on situations to avoid when siting projects where sensitive individuals would be located (sensitive sites).
3. Is the area classified for mixed-use zoning?	See your general plan and zoning ordinances.
4. Is there an available list of air pollution sources in the community?	Contact your local air district.
5. Has a walk-through of the community been conducted to gather the following information:	See Appendix B for a listing of useful information that land use agencies

Technical Questions	Cross-Reference to Relevant Handbook Sections
▲ Corroborate available information on land use activities in the area (e.g., businesses, housing developments, sensitive individuals, etc.)? ▲ Determine the proximity of existing and anticipated future projects to residential areas or sensitive individuals? ▲ Determine the concentration of emission sources (including anticipated future projects) to residential areas or sensitive individuals?	should have on hand or have accessible when reviewing proposed projects for potential air pollution impacts. Also contact your local air district.
6. Has the local air district been contacted to obtain information on sources in the community?	See Section 7 for a discussion of public participation, information and outreach tools.
7. What categories of commercial establishments are currently located in the area and does the local air district have these sources on file as being regulated or permitted?	See Appendix A for typical land use classifications and associated project categories that could emit air pollutants. Also contact your local air district.
8. What categories of indirect sources such as distribution centers or warehouses are currently located in the area?	See Appendix A for typical land use classifications and associated project categories that emit air pollutants.
9. What air quality monitoring data are available?	Contact your local air district.
10. Have any risk assessments been performed on emission sources in the area?	Contact your local air district.
11. Does the land use agency have the capability of applying a GIS spatial mapping tool that can overlay zoning, sub-development information, and other neighborhood characteristics, with air pollution and transportation data?	See Appendix B for a listing of useful information that land use agencies should have on hand or have accessible when reviewing proposed projects for potential air pollution impacts. Also contact your local air district for tools that can be used to supplement available land use agency tools.
12. Based on available information, is it possible to determine if the affected community or neighborhood experiences elevated health risk due to a concentration of air pollution sources in close proximity, and if not, can the necessary information be obtained?	Contact your local air district. Also see Section 1 for recommendations on situations to avoid when siting projects where sensitive individuals would be located (sensitive sites).
13. Does the community have a history of chronic complaints about air quality?	See Section 7 for a discussion of public participation, information and outreach tools. Also contact your local air district.
14. Is the affected community included in the public participation process for the agency's decision?	See Section 7 for a discussion of public participation, information and outreach tools.
15. Have community leaders or groups been contacted about any pre-existing or chronic community air quality concerns?	See Section 7 for a discussion of public participation, information and outreach tools. Also contact your local air district.

- **Mitigation Approaches**

In addition to considering the suitability of the project location, opportunities for mitigation of air pollution impacts should be considered. Sometimes, a land use agency may find that selection of a different project location to avoid a health risk is not feasible. When that happens, land use agencies should consider design improvements or other strategies that would reduce the risk. Such strategies could include performance or design standards, consultation with local air districts and other agencies on appropriate actions that these agencies should, or plan to, undertake, and consultation and outreach in the affected community. Potential mitigation measures should be feasible, cost-effective solutions within the available resources and authority of implementing agencies to enforce.[12]

- **Conditional Use Permits and Performance Standards**

Some types of land uses are only allowed upon approval of a conditional use permit (also called a CUP or special use permit). A conditional use permit does not re-zone the land but specifies conditions under which a particular land use will be permitted. Such land uses could be those with potentially significant environmental impacts. Local zoning ordinances specify the uses for which a conditional use permit is required, the zones they may be allowed in, and public hearing procedures. The conditional use permit imposes special requirements to ensure that the use will not be detrimental to its surroundings.

In the context of land use planning, performance standards are requirements imposed on projects or project categories through conditional use permits to ensure compliance with general plan policies and local ordinances. These standards could apply to such project categories as distribution centers, very large gas dispensing facilities, autobody shops, dry cleaners, and metal platers. Land use agencies may wish to consider adding land use-based performance standards to zoning ordinances in existing mixed-use communities for certain air pollution project categories. Such standards would provide certainty and equitable treatment to all projects of a similar nature, and reserve the more resource intensive conditional or special use permits to projects that require a more detailed analysis. In developing project design or performance standards, land use agencies should consult with the local air district. Early and regular consultation can avoid duplication or inconsistency with local air district control requirements when considering the site-specific design and operation of a project.

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[12] A land use agency has the authority to condition or deny a project based upon information collected and evaluated through the land use decision-making process. However, any denial would need to be based upon identifiable, generally applicable, articulated standards set forth in the local government's General Plan and zoning codes. One way of averting this is to conduct early and regular outreach to the community and the local air district so that community and environmental concerns can be addressed and accommodated into the project proposal.

Examples of land use-based air quality-specific performance standards include the following:

- Placing a process vent away from the direction of the local playground that is nearby or increasing the stack height so that emissions are dispersed to reduce the emissions impact on surrounding homes or schools.
- Setbacks between the project fence line and the population center.
- Limiting the hours of operation of a facility to avoid excess emissions exposure or foul odors to nearby individuals.
- An ordinance that requires fleet operators to use cleaner vehicles before project approval (if a new business), or when expanding the fleet (if an existing business); and
- Providing alternate routes for truck operations that discourage detours into residential neighborhoods.

Outreach to Other Agencies

When questions arise regarding the air quality impacts of projects, including potential cumulative impacts, land use agencies should consult the local air district. Land use agencies should also consider the following suggestions to avoid creating new incompatible land uses:

- Consult with the local air district to help determine if emissions from a particular project will adversely impact sensitive individuals in the area, if existing or future effective regulations or permit requirements will affect the proposed project or other sources in the vicinity of the proposed project, or if additional inspections should be required.
- Check with ARB for new information and modeling tools that can help evaluate projects seeking to site within your jurisdiction.
- Become familiar with ARB's Land Use-Air Quality Linkage Report to determine whether approaches and evaluation tools contained in the Report can be used to reduce transportation-related impacts on communities.
- Contact and collaborate with other state agencies that play a role in the land use decision-making process, e.g., the State Department of Education, the California Energy Commission, and Caltrans. These agencies have information on mitigation measures and mapping tools that could be useful in addressing local problems.

- **Information Clearinghouse**

  - Land use agencies can refer to the ARB statewide electronic information clearinghouse for information on what measures other jurisdictions are using to address comparable issues or sources.[13]

[13] This information can be accessed from ARB's website by going to: http://www.arb.ca.gov/ch/clearinghouse.htm

The next section addresses available air quality assessment tools that land use agencies can use to evaluate the potential for localized or cumulative impacts in their communities.

5. Available Tools to Evaluate Cumulative Air Pollution Emissions and Risk

Until recently, California has traditionally approached air pollution control from the perspective of assessing whether the pollution was regional, category-specific, or from new or existing sources. This methodology has been generally effective in reducing statewide and regional air pollution impacts and risk levels. However, such an incremental, category-by-category, source-by-source approach may not always address community health impacts from multiple sources - including mobile, industrial, and commercial facilities.

As a result of air toxics and children's health concerns over the past several years, ARB and local air districts have begun to develop new tools to evaluate and inform the public about cumulative air pollution impacts at the community level. One aspect of ARB's programs now underway is to consolidate and make accessible air toxics emissions and monitoring data by region, using modeling tools and other analytical techniques to take a preliminary look at emissions, exposure, and health risk in communities.

ARB has developed multiple tools to assist local air districts perform assessments of cumulative emissions, exposure, and risk on a neighborhood scale. These tools include:

- Regional risk maps that show trends in potential cancer risk from toxic air pollutants in southern and central California between 1990 and 2010. These maps are based on the U.S. EPA's ASPEN model. These maps provide an estimate of background levels of toxic air pollutant risk but are not detailed enough to assess individual neighborhoods or facilities.[14]

- The Community Health Air Pollution Information System (CHAPIS) is a user-friendly, Internet-based system for displaying information on emissions from sources of air pollution in an easy to use mapping format. CHAPIS contains information on air pollution emissions from selected large facilities and small businesses that emit criteria and toxic air pollutants. It also contains information on air pollution emissions from motor vehicles. When released in 2004, CHAPIS did not contain information on every source of air pollution or every air pollutant. However, ARB continues to work with local air districts to include all of the largest air pollution sources and those with the highest documented air pollution risk. Additional facilities will be added to CHAPIS as more data become available.[15]

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[14] For further information on these maps, please visit ARB's website at: http://www.arb.ca.gov/toxics/cti/hlthrisk/hlthrisk.htm

[15] For further information on CHAPIS, please click on: http://www.arb.ca.gov/ch/chapis1/chapis1.htm

- The Hot Spots Analysis and Reporting Program (HARP) is a software database package that evaluates emissions from one or more facilities to determine the overall health risk posed by the facility(-ies) on the surrounding community. Proper use of HARP ensures that the risk assessment meets the latest risk assessment guidelines published by the State Office of Environmental Health Hazard Assessment (OEHHA). HARP is designed with air quality professionals in mind and is available from the ARB.

- The Urban Emissions Model (URBEMIS) is a computer program that can be used to estimate emissions associated with land development projects in California such as residential neighborhoods, shopping centers, office buildings, and construction projects. URBEMIS uses emission factors available from the ARB to estimate vehicle emissions associated with new land uses.

Local air districts, and others can use these tools to assess a new project, or plan revision. For example, these tools can be used to:

- Identify if there are multiple sources of air pollution in the community;
- Identify the major sources of air pollution in the area under consideration;
- Identify the background potential cancer risk from toxic air pollution in the area under consideration;
- Estimate the risk from a new facility and how it adds to the overall risk from other nearby facilities; and
- Provide information to decision-makers and key stakeholders on whether there may be significant issues related to cumulative emissions, exposure, and health risk due to a permitting or land use decision.

If an air agency wishes to perform a cumulative air pollution impact analysis using any of these tools, it should consult with the ARB and/or the local air district to obtain information or assistance on the data inputs and procedures necessary to operate the program. In addition, land use agencies could consult with local air districts to determine the availability of land use and air pollution data for entry into an electronic Geographical Information System (GIS) format. GIS is an easier mapping tool than the more sophisticated models described in Appendix C. GIS mapping makes it possible to superimpose land use with air pollution information so that the spatial relationship between air pollution sources, sensitive receptors, and air quality can be visually represented. Appendix C provides a general description of the impact assessment process and micro-scale, or community level modeling tools that are available to evaluate potential cumulative air pollution impacts. Modeling protocols will be accessible on ARB's website as they become available. The ARB will also provide land use agencies and local air districts with statewide regional modeling results and information regarding micro-scale modeling.

6. ARB Programs to Reduce Air Pollution in Communities

ARB's regulatory programs reduce air pollutant emissions through statewide strategies that improve public health in all California communities. ARB's overall program addresses motor vehicles, consumer products, air toxics, air-quality planning, research, education, enforcement, and air monitoring. Community health and environmental justice concerns are a consideration in all these programs. ARB's programs are statewide but recognize that extra efforts may be needed in some communities due to historical mixed land-use patterns, limited participation in public processes in the past, and a greater concentration of air pollution sources in some communities.

ARB's strategies are intended to result in better air quality and reduced health risk to residents throughout California. The ARB's priority is to prevent or reduce the public's exposure to air pollution, including from toxic air contaminants that pose the greatest risk, particularly to infants and children who are more vulnerable to air pollution.

In October 2003, ARB updated its statewide control strategy to reduce emissions from source categories within its regulatory authority. A primary focus of the strategy is to achieve federal and state air quality standards for ozone and particulate matter throughout California, and to reduce health risk from diesel PM. Along with local air districts, ARB will continue to address air toxics emissions from regulated sources (see Table 6-1 for a summary of ARB activities). As indicated earlier, ARB will also provide analytical tools and information to land use agencies and local air districts to help assess and mitigate cumulative air pollution impacts.

The ARB will continue to consider the adoption of or revisions to needed air toxics control measures as part of the state's ongoing air toxics assessment program.[16]

As part of its effort to reduce particulate matter and air toxics emissions from diesel PM, the ARB has developed a Diesel Risk Reduction Program[17] that lays out several strategies in a three-pronged approach to reduce emissions and their associated risk:

- Stringent emission standards for all new diesel-fueled engines;
- Aggressive reductions from in-use engines; and
- Low sulfur fuel that will reduce PM and still provide the quality of diesel fuel needed to control diesel PM.

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[16] For continuing information and updates on state measures, the reader can refer to ARB's website at http://www.arb.ca.gov/toxics/toxics.htm.

[17] For a comprehensive description of the program, please refer to ARB's website at http://www.arbB.ca.gov/diesel/dieselrrp.htm.

Table 6-1
ARB ACTIONS TO ADDRESS
CUMULATIVE AIR POLLUTION IMPACTS IN COMMUNITIES

Information Collection

- Improve emission inventories, air monitoring data, and analysis tools that can help to identify areas with high cumulative air pollution impacts
- Conduct studies in coordination with OEHHA on the potential for cancer and non-cancer health effects from air pollutants emitted by specific source categories
- Establish web-based clearinghouse for local land use strategies

Emission Reduction Approaches (2004-2006)*

- Through a public process, consider development and/or amendment of regulations and related guidance to reduce emissions, exposure, and health risk at a statewide and local level for the following sources:
  - Diesel PM sources such as stationary diesel engines, transport refrigeration units, portable diesel engines, on-road public fleets, off-road public fleets, heavy-duty diesel truck idling, harbor craft vessels, waste haulers
  - Other air toxics sources, such as formaldehyde in composite wood products, hexavalent chromium for chrome plating and chromic acid anodizing, thermal spraying, and perchloroethylene dry cleaning
- Develop technical information for the following:*
  - Distribution centers
  - Modeling tools such as HARP and CHAPIS
- Adopt rules and pollution prevention initiatives within legal authority to reduce emissions from mobile sources and fuels, and consumer products
- Develop and maintain Air Quality Handbook as a tool for use by land use agencies and local air districts to address cumulative air pollution impacts

Other Approaches

- Establish guidelines for use of statewide incentive funding for high priority mobile source emission reduction projects

*Because ARB will continue to review the need to adopt or revise statewide measures, the information contained in this chart will be updated on an ongoing basis.

A number of ARB's diesel risk reduction strategies have been adopted. These include measures to reduce emissions from refuse haulers, urban buses, transport refrigeration units, stationary and portable diesel engines, and idling trucks and school buses. These sources are all important from a community perspective.[18]

[18] The reader can refer to ARB's website for information on its mobile source-related programs at: http://www.arb.ca.gov/msprog/msprog.htm, as well as regulations adopted and under consideration as part of the Diesel Risk Reduction Program at: http://www.arb.ca.gov/diesel/dieselrrp.htm

The ARB will continue to evaluate the health effects of air pollutants while implementing programs with local air districts to reduce air pollution in all California communities.

Local air districts also have ambitious programs to reduce criteria pollutants and air toxics from regulated sources in their region. Many of these programs also benefit air quality in local communities as well as in the broader region. For more information on what is being done in your area to reduce cumulative air pollution impacts through air pollution control programs, you should contact your local air district.[19]

[19] Local air district contacts can be found on the inside cover to this Handbook.

7. Ways to Enhance Meaningful Public Participation

Community involvement is an important part of the land use process. The public is entitled to the best possible information about the air they breathe and what is being done to prevent or reduce unhealthful air pollution in their communities. In particular, information on how land use decisions can affect air pollution and public health should be made accessible to all communities, including low-income and minority communities.

Effective community participation consistently relies on a two-way flow of information – from public agencies to community members about opportunities, constraints, and impacts, and from community members back to public officials about needs, priorities, and preferences. The outreach process needed to build understanding and local neighborhood involvement requires data, methodologies, and formats tailored to the needs of the specific community. More importantly, it requires the strong collaboration of local government agencies that review and approve projects and land uses to improve the physical and environmental surroundings of the local community.

Many land use agencies, especially those in major metropolitan areas, are familiar with, and have a long-established public review process. Nevertheless, public outreach can often be improved. Active public involvement requires engaging the public in ways that do not require their previous interest in or knowledge of the land use or air pollution control requirements, and a commitment to taking action where appropriate to address the concerns that are raised.

▪ Direct Community Outreach

In conjunction with local air districts, land use agencies should consider designing an outreach program for community groups, other stakeholders, and local government agency staffs that address the problem of cumulative air pollution impacts, and the public and government role in reducing them. Such a program could consider analytical tools that assist in the preparation and presentation of information in a way that supports sensible decision-making and public involvement. Table 7-1 contains some general outreach approaches that might be considered.

Table 7-1
Public Participation Approaches

- Staff and community leadership awareness training on environmental justice programs and community-based issues
- Surveys to identify the website information needs of interested community-based organizations and other stakeholders
- Information materials on local land use and air district authorities
- Community-based councils to facilitate and invite resident participation in the planning process
- Neighborhood CEQA scoping sessions that allows for community input prior to technical analysis
- Public information materials on siting issues are under review including materials written for the affected community, and in different media that widens accessibility
- Public meetings
- Identify other opportunities to include community-based organizations in the process

To improve outreach, local land use agencies should consider the following activities:

- Hold meetings in communities affected by agency programs, policies, and projects at times and in places that encourage public participation, such as evenings and weekends at centrally located community meeting rooms, libraries, and schools.
- Assess the need for and provide translation services at public meetings.
- Hold community meetings to update residents on the results of any special air monitoring programs conducted in their neighborhood.
- Hold community meetings to discuss and evaluate the various options to address cumulative impacts in their community.
- In coordination with local air districts, make staff available to attend meetings of community organizations and neighborhood groups to listen to and, where appropriate, act upon community concerns.
- Establish a specific contact person for environmental justice issues.
- Increase student and community awareness of local government land use activities and policies through outreach opportunities.
- Make air quality and land use information available to communities in an easily understood and useful format, including fact sheets, mailings, brochures, public service announcements, and web pages, in English and other languages.
- On the local government web-site, dedicate a page or section to what the land use program is doing regarding environmental justice and cumulative environmental impacts, and, as applicable, activities conducted with local air districts such as neighborhood air monitoring studies, pollution prevention, air pollution sources in neighborhoods, and risk reduction.

- Allow, encourage, and promote community access to land use activities, including public meetings, General Plan or Community Plan updates, zoning changes, special studies, CEQA reviews, variances, etc.
- Distribute information in multiple languages, as needed, on how to contact the land use agency or local air district to obtain information and assistance regarding environmental justice programs, including how to participate in public processes.
- Create and distribute a simple, easy-to-read, and understandable public participation handbook, which may be based on the "Public Participation Guidebook" developed by ARB.

- **Other Opportunities for Meaningful Public Outreach**

  - Community-Based Planning Committees

Neighborhood-based or community planning advisory councils could be established to invite and facilitate direct resident participation into the planning process. With the right training and technical assistance, such councils can provide valuable input and a forum for the review of proposed amendments to plans, zone changes, land use permits, and suggestions as to how best to prevent or reduce cumulative air pollution impacts in their community.

  - Regional Partnerships

Consider creating regional coalitions of key growth-related organizations from both the private and public sectors, with corporations, communities, other jurisdictions, and government agencies. Such partnerships could facilitate agreement on common goals and win-win solutions tailored specifically for the region. With this kind of dialogue, shared vision, and collaboration, barriers can be overcome and locally acceptable sustainable solutions implemented. Over the long term, such strategies will help to bring about clean air in communities as well as regionally.

LAND USE CLASSIFICATIONS AND ASSOCIATED FACILITY CATEGORIES THAT COULD EMIT AIR POLLUTANTS

(1) Land Use Classifications – by Activity[i]	(2) Facility or Project Examples	(3) Key Pollutants[ii,iii]	(4) Air Pollution Permits[iv]
COMMERCIAL/ LIGHT INDUSTRIAL: SHOPPING, BUSINESS, AND COMMERCIAL			
▲ Primarily retail shops and stores, office, commercial activities, and light industrial or small business	Dry cleaners; drive-through restaurants; gas dispensing facilities; auto body shops; metal plating shops; photographic processing shops; textiles; apparel and furniture upholstery; leather and leather products; appliance repair shops; mechanical assembly cleaning; printing shops	VOCs, air toxics, including diesel PM, NOx, CO, SOx	Limited; Rules for applicable equipment
▲ Goods storage or handling activities, characterized by loading and unloading goods at warehouses, large storage structures, movement of goods, shipping, and trucking.	Warehousing; freight-forwarding centers; drop-off and loading areas; distribution centers	VOCs, air toxics, including diesel PM, NOx, CO, SOx	No[v]
LIGHT INDUSTRIAL: RESEARCH AND DEVELOPMENT			
▲ Medical waste at research hospitals and labs	Incineration; surgical and medical instrument manufacturers, pharmaceutical manufacturing, biotech research facilities	Air toxics, NOx, CO, SOx	Yes
▲ Electronics, electrical apparatus, components, and accessories	Computer manufacturer; integrated circuit board manufacturer; semi-conductor production	Air toxics, VOCs	Yes
▲ College or university lab or research center	Medical waste incinerators; lab chemicals handling, storage and disposal	Air toxics, NOx, CO, SOx, PM10	Yes
▲ Research and development labs	Satellite manufacturer; fiber-optics manufacturer; defense contractors; space research and technology; new vehicle and fuel testing labs	Air toxics, VOCs	Yes
▲ Commercial testing labs	Consumer products; chemical handling, storage and disposal	Air toxics, VOCs	Yes

(1) Land Use Classifications – by Activity[i]	(2) Facility or Project Examples	(3) Key Pollutants[ii,iii]	(4) Air Pollution Permits[iv]
INDUSTRIAL: NON-ENERGY-RELATED			
▲ Assembly plants, manufacturing facilities, industrial machinery	Adhesives; chemical; textiles; apparel and furniture upholstery; clay, glass, and stone products production; asphalt materials; cement manufacturers, wood products; paperboard containers and boxes; metal plating; metal and canned food product fabrication; auto manufacturing; food processing; printing and publishing; drug, vitamins, and pharmaceuticals; dyes; paints; pesticides; photographic chemicals; polish and wax; consumer products; metal and mineral smelters and foundries; fiberboard; floor tile and cover; wood and metal furniture and fixtures; leather and leather products; general industrial and metalworking machinery; musical instruments; office supplies; rubber products and plastics production; saw mills; solvent recycling; shingle and siding; surface coatings	VOCs, air toxics, including diesel PM, NOx, PM, CO, SOx	Yes
INDUSTRIAL: ENERGY AND UTILITIES			
▲ Water and sewer operations	Pumping stations; air vents; treatment	VOCs, air toxics, NOx, CO, SOx, PM10	Yes
▲ Power generation and distribution	Power plant boilers and heaters; portable diesel engines; gas turbine engines	NOx, diesel PM, NOx, CO, SOx, PM10, VOCs	Yes
▲ Refinery operations	Refinery boilers and heaters; coke cracking units; valves and flanges; flares	VOCs, air toxics, including diesel PM, NOx, CO, SOx, PM10	Yes
▲ Oil and gas extraction	Oil recovery systems; uncovered wells	NOx, diesel PM, VOCs, CO, SOx, PM10	Yes
▲ Gasoline storage, transmission, and marketing	Above and below ground storage tanks; floating roof tanks; tank farms; pipelines	VOCs, air toxics, including diesel PM, NOx, CO, SOx, PM10	Yes
▲ Solid and hazardous waste treatment, storage, and disposal activities.	Landfills; methane digester systems; process recycling facility for concrete and asphalt materials	VOCs, air toxics, NOx, CO, SOx, PM10	Yes
CONSTRUCTION (NON-TRANSPORTATION)			
	Building construction; demolition sites	PM (re-entrained road dust), asbestos, diesel PM, NOx, CO, SOx, PM10, VOCs	Limited; state and federal off-road equipment standards

(1) Land Use Classifications – by Activity[i]	(2) Facility or Project Examples	(3) Key Pollutants[ii,iii]	(4) Air Pollution Permits[iv]
DEFENSE			
	Ordnance and explosives demolition; range and testing activities; chemical production; degreasing; surface coatings; vehicle refueling; vehicle and engine operations and maintenance	VOCs, air toxics, including diesel PM, NOx, CO, SOx, PM10	Limited; prescribed burning; equipment and solvent rules
TRANSPORTATION			
▲ Vehicular movement	Residential area circulation systems; parking and idling at parking structures; drive-through establishments; car washes; special events; schools; shopping malls, etc.	VOCs, NOx, PM (re-entrained road dust) air toxics e.g., benzene, diesel PM, formaldehyde, acetaldehyde, 1,3 butadiene, CO, SOx, PM10	No
▲ Road construction and surfacing	Street paving and repair; new highway construction and expansion	VOCs, air toxics, including diesel PM, NOx, CO, SOx, PM10	No
▲ Trains	Railroads; switch yards; maintenance yards	VOCs, NOx, CO, SOx, PM10, air toxics, including diesel PM	Limited; Applicable state and federal MV standards, and possible equipment rules
▲ Marine and port activities	Recreational sailing; commercial marine operations; hotelling operations; loading and un-loading; servicing; shipping operations; port or marina expansion; truck idling		
▲ Aircraft	Takeoff, landing, and taxiing; aircraft maintenance; ground support activities		
▲ Mass transit and school buses	Bus repair and maintenance		
NATURAL RESOURCES			
▲ Farming operations	Agricultural burning; diesel operated engines and heaters; small food processors; pesticide application; agricultural off-road equipment	Diesel PM, VOCs, NOx, PM10, CO, SOx, pesticides	Limited[vi]; Agricultural burning requirements, applicable state and federal mobile source standards; pesticide rules
▲ Livestock and dairy operations	Dairies and feed lots	Ammonia, VOCs, PM10	Yes[vii]
▲ Logging	Off-road equipment e.g., diesel fueled chippers, brush hackers, etc.	Diesel PM, NOx, CO, SOx, PM10, VOCs	Limited; Applicable state/federal mobile source standards
▲ Mining operations	Quarrying or stone cutting; mining; drilling or dredging	PM10, CO, SOx, VOCs, NOx, and asbestos in some geographical areas	Applicable equipment rules and dust controls

(1) Land Use Classifications – by Activity[i]	(2) Facility or Project Examples	(3) Key Pollutants[ii,iii]	(4) Air Pollution Permits[iv]
RESIDENTIAL			
Housing	Housing developments; retirement developments; affordable housing	Fireplace emissions (PM10, NOx, VOCs, CO, air toxics); Water heater combustion (NOx, VOCs, CO)	No[vii]
ACADEMIC AND INSTITUTIONAL			
▲ Schools, including school-related recreational activities	Schools; school yards; vocational training labs/classrooms such as auto repair/painting and aviation mechanics	Air toxics	Yes/No[viii]
▲ Medical waste	Incineration	Air toxics, NOx, CO, PM10	Yes
▲ Clinics, hospitals, convalescent homes		Air toxics	Yes

[i] These classifications were adapted from the American Planning Association's "Land Based Classification Standards." The Standards provide a consistent model for classifying land uses based on their characteristics. The model classifies land uses by refining traditional categories into multiple dimensions, such as activities, functions, building types, site development character, and ownership constraints. Each dimension has its own set of categories and subcategories. These multiple dimensions allow users to have precise control over land-use classifications. For more information, the reader should refer to the Association's website at http://www.planning.org/LBCS/GeneralInfo/.

[ii] This column includes key criteria pollutants and air toxic contaminants that are most typically associated with the identified source categories.

Additional information on specific air toxics that are attributed to facility categories can be found in ARB's Emission Inventory Criteria and Guidelines Report for the Air Toxics Hot Spots Program (May 15, 1997). This information can be viewed at ARB's web site at http://www.arb.ca.gov/ab2588/final96/guide96.pdf.

Criteria air pollutants are those air pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Criteria pollutants include ozone (formed by the reaction of volatile organic compounds and nitrogen oxides in the presence of sunlight), particulate matter, nitrogen dioxide, sulfur dioxide, carbon monoxide, and lead.

Volatile organic compounds (VOCs) combine with nitrogen oxides to form ozone, as well as particulate matter. VOC emissions result primarily from incomplete fuel combustion and the evaporation of chemical solvents and fuels. On-road mobile sources are the largest contributors to statewide VOC emissions. Stationary sources of VOC emissions include processes that use solvents (such as dry-cleaning, degreasing, and coating operations) and petroleum-related processes (such as petroleum refining, gasoline marketing and dispensing, and oil and gas extraction). Areawide VOC sources include consumer products, pesticides, aerosols and paints, asphalt paving and roofing, and other evaporative emissions.

Nitrogen oxides (NOx) are a group of gaseous compounds of nitrogen and oxygen, many of which contribute to the formation of ozone and particulate matter. Most NOx emissions are produced by the combustion of fuels. Mobile sources make up about 80 percent of the total statewide NOx emissions. Mobile sources include on-road vehicles and trucks, aircraft, trains, ships, recreational boats, industrial and construction equipment, farm

equipment, off-road recreational vehicles, and other equipment. Stationary sources of NOx include both internal and external combustion processes in industries such as manufacturing, food processing, electric utilities, and petroleum refining. Areawide source, which include residential fuel combustion, waste burning, and fires, contribute only a small portion of the total statewide NOx emissions, but depending on the community, may contribute to a cumulative air pollution impact.

Particulate matter (PM) refers to particles small enough to be breathed into the lungs (under 10 microns in size). It is not a single substance, but a mixture of a number of highly diverse types of particles and liquid droplets. It can be formed directly, primarily as dust from vehicle travel on paved and unpaved roads, agricultural operations, construction and demolition.

Carbon monoxide (CO) is a colorless and odorless gas that is directly emitted as a by-product of combustion. The highest concentrations are generally associated with cold stagnant weather conditions that occur during winter. CO problems tend to be localized.

An Air Toxic Contaminant (air toxic) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serous illness, or which may pose a present or potential hazard to human health. Similar to criteria pollutants, air toxics are emitted from stationary, areawide, and mobile sources. They contribute to elevated regional and localized risks near industrial and commercial facilities and busy roadways. The ten compounds that pose the greatest statewide risk are: acetaldehyde; benzene; 1,3-butadiene; carbon tetrachloride; diesel particulate matter (diesel PM); formaldehyde; hexavalent chromium; methylene chloride; para-dichlorobenzene; and perchloroethylene. The risk from diesel PM is by far the largest, representing about 70 percent of the known statewide cancer risk from outdoor air toxics. The exhaust from diesel-fueled engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. Diesel PM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute about 26 percent of statewide diesel PM emissions, with an additional 72 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and other equipment. Stationary engines in shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations contribute about two percent of statewide emissions. However, when this number is disaggregated to a sub-regional scale such as neighborhoods, the risk factor can be far greater.

[iii] The level of pollution emitted is a major determinant of the significance of the impact.

[iv] Indicates whether facility activities listed in column 4 are generally subject to local air district permits to operate. This does not include regulated products such as solvents and degreasers that may be used by sources that may not require an operating permit per se, e.g., a gas station or dry cleaner.

[v] Generally speaking, warehousing or distribution centers are not subject to local air district permits. However, depending on the district, motor vehicle fleet rules may apply to trucks or off-road vehicles operated and maintained by the facility operator. Additionally, emergency generators or internal combustion engines operated on the site may require an operating permit.

[vi] Authorized by recent legislation SB700.

[vii] Local air districts do not require permits for woodburning fireplaces inside private homes. However, some local air districts and land use agencies do have rules or ordinances that require new housing developments or home re-sales to install U.S. EPA –certified stoves. Some local air districts also ban residential woodburning during weather inversions that concentrate smoke in residential areas. Likewise, home water heaters are not subject to permits; however, new heaters could be subject to emission limits that are imposed by federal or local agency regulations.

[viii] Technical training schools that conduct activities normally permitted by a local air district could be subject to an air permit.

LAND USE-BASED REFERENCE TOOLS TO EVALUATE NEW PROJECTS FOR POTENTIAL AIR POLLUTION IMPACTS

Land use agencies generally have a variety of tools and approaches at hand, or accessible from local air districts that can be useful in performing an analysis of potential air pollution impacts associated with new projects. These tools and approaches include:

- Base map of the city or county planning area and terrain elevations.
- General Plan designations of land use (existing and proposed).
- Zoning maps.
- Land use maps that identify existing land uses, including the location of facilities that are permitted or otherwise regulated by the local air district. Land use agencies should consult with their local air district for information on regulated facilities.
- Demographic data, e.g., population location and density, distribution of population by income, distribution of population by ethnicity, and distribution of population by age. The use of population data is a normal part of the planning process. However, from an air quality perspective, socioeconomic data is useful to identify potential community health and environmental justice issues.
- Emissions, monitoring, and risk-based maps created by the ARB or local air districts that show air pollution-related health risk by community across the state.
- Location of public facilities that enhance community quality of life, including parks, community centers, and open space.
- Location of industrial and commercial facilities and other land uses that use hazardous materials, or emit air pollutants. These include chemical storage facilities, hazardous waste disposal sites, dry cleaners, large gas dispensing facilities, auto body shops, and metal plating and finishing shops.
- Location of sources or facility types that result in diesel on-road and off-road emissions, e.g., stationary diesel power generators, forklifts, cranes, construction equipment, on-road vehicle idling, and operation of transportation refrigeration units. Distribution centers, marine terminals and ports, rail yards, large industrial facilities, and facilities that handle bulk goods are all examples of complex facilities where these types of emission sources are frequently concentrated.[1] Very large facilities, such as ports, marine terminals, and airports, could be analyzed regardless of proximity to a receptor if they are within the modeling area.
- Location and zoning designations for existing and proposed schools, buildings, or outdoor areas where sensitive individuals may live or play.
- Location and density of existing and proposed residential development.
- Zoning requirements, property setbacks, traffic flow requirements, and idling restrictions for trucks, trains, yard hostlers[2], construction equipment, or school buses.
- Traffic counts (including diesel truck traffic counts), within a community to validate or augment existing regional motor vehicle trip and speed data.

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[1] The ARB is currently evaluating the types of facilities that may act as complex point sources and developing methods to identify them.

[2] Yard hostler means a tractor less than 300 horsepower that is used to transfer semi-truck or tractor-trailer containers in and around storage, transfer, or distribution yards or areas and is often equipped with a hydraulic lifting fifth wheel for connection to trailer containers.

ARB AND LOCAL AIR DISTRICT INFORMATION AND TOOLS CONCERNING CUMULATIVE AIR POLLUTION IMPACTS

It is the ARB's policy to support research and data collection activities toward the goal of reducing cumulative air pollution impacts. These efforts include updating and improving the air toxics emissions inventory, performing special air monitoring studies in specific communities, and conducting a more complete assessment of non-cancer health effects associated with air toxics and criteria pollutants.[1] This information is important because it helps us better understand links between air pollution and the health of sensitive individuals -- children, the elderly, and those with pre-existing serious health problems affected by air quality.

ARB is working with CAPCOA and OEHHA to improve air pollutant data and evaluation tools to determine when and where cumulative air pollution impacts may be a problem. The following provides additional information on this effort.

How are emissions assessed?

Detailed information about the sources of air pollution in an area is collected and maintained by local air districts and the ARB in what is called an emission inventory. Emission inventories contain information about the nature of the business, the location, type and amount of air pollution emitted, the air pollution-producing processes, the type of air pollution control equipment, operating hours, and seasonal variations in activity. Local districts collect emission inventory data for most stationary source categories.

Local air districts collect air pollution emission information directly from facilities and businesses that are required to obtain an air pollution operating permit. Local air districts use this information to compile an emission inventory for areas within their jurisdiction. The ARB compiles a statewide emission inventory based on the information collected by the ARB and local air districts. Local air districts provide most of the stationary source emission data, and ARB provides mobile source emissions as well as some areawide emission sources such as consumer products and paints. ARB is also developing map-based tools that will display information on air pollution sources.

Criteria pollutant data have been collected since the early 1970's, and toxic pollutant inventories began to be developed in the mid-1980's.

[1] A criteria pollutant is any air pollutant for which EPA has established a National Ambient Air Quality Standard or for which California has established a State Ambient Air Quality Standard, including: carbon monoxide, lead, nitrogen oxides, ozone, particulates and sulfur oxides. Criteria pollutants are measured in each of California's air basins to determine whether the area meets or does not meet specific federal or state air quality standards. Air toxics or air toxic contaminants are listed pollutants recognized by California or EPA as posing a potential risk to health.

How is the toxic emission inventory developed?

Emissions data for toxic air pollutants is a high priority for communities because of concerns about potential health effects. Most of ARB's air toxics data is collected through the toxic "Hot Spots" program. Local air districts collect emissions data from industrial and commercial facilities. Facilities that exceed health-based thresholds are required to report their air toxics emissions as part of the toxic "Hot Spots" program and update their emissions data every four years. Facilities are required to report their air toxics emissions data if there is an increase that would trigger the reporting threshold of the hotspots program. Air toxics emissions from motor vehicles and consumer products are estimated by the ARB. These estimates are generally regional in nature, reflecting traffic and population.

The ARB also maintains chemical speciation profiles that can be used to estimate toxics emissions when no toxic emissions data is available.

What additional toxic emissions information is needed?

In order to assess cumulative air pollution impacts, updated information from individual facilities is needed. Even for sources where emissions data are available, additional information such as the location of emissions release points is often needed to better model cumulative impacts. In terms of motor vehicles, emissions data are currently based on traffic models that only contain major roads and freeways. Local traffic data are needed so that traffic emissions can be more accurately assigned to specific streets and roads. Local information is also needed for off-road emission sources, such as ships, trains, and construction equipment. In addition, hourly maximum emissions data are needed for assessing acute air pollution impacts.

What work is underway?

ARB is working with CAPCOA to improve toxic emissions data, developing a community health air pollution information system to improve access to emission information, conducting neighborhood assessment studies to better understand toxic emission sources, and conducting surveys of sources of toxic pollutants.

How is air pollution monitored?

While emissions data identify how much air pollution is going into the air, the state's air quality monitoring network measures air pollutant levels in outdoor air. The statewide air monitoring network is primarily designed to measure regional exposure to air pollutants, and consists of more than 250 air monitoring sites.

The air toxics monitoring network consists of approximately 20 permanent sites. These sites are supplemented by special monitoring studies conducted by ARB and local air districts. These sites measure approximately sixty toxic air pollutants. Diesel PM, which is the major driver of urban air toxic risk, is not monitored directly. Ten of the

60 toxic pollutants, not including diesel, account for most of the remaining potential cancer risk in California urban areas.

What additional monitoring has been done?

Recently, additional monitoring has been done to look at air quality at the community level. ARB's community monitoring was conducted in six communities located throughout the state. Most sites were in low-income, minority communities located near major sources of air pollution, such as refineries or freeways. The monitoring took place for a year or more in each community, and included measurements of both criteria and toxic pollutants.

What is being learned from community monitoring?

In some cases, the ARB or local air districts have performed air quality monitoring or modeling studies covering a particular region of the state. When available, these studies can give information about regional air pollution exposures.

The preliminary results of ARB's community monitoring are providing insights into air pollution at the community level. Urban background levels are a major contributor to the overall risk from air toxics in urban areas, and this urban background tends to mask the differences between communities. When localized elevated air pollutant levels were measured, they were usually associated with local ground-level sources of toxic pollutants. The most common source of this type was busy streets and freeways. The impact these ground-level sources had on local air quality decreased rapidly with distance from the source. Pollutant levels usually returned to urban background levels within a few hundred meters of the source.

These results indicate that tools to assess cumulative impacts must be able to account for both localized, near-source impacts, as well as regional background air pollution. The tools that ARB is developing for this purpose are air quality models.

How can air quality modeling be used?

While air monitoring can directly measure cumulative exposure to air pollution, it is limited because all locations cannot be monitored. To address this, air quality modeling provides the capability to estimate exposure when air monitoring is not feasible. Air quality modeling can be refined to assess local exposure, identify locations of potential hot spots, and identify the relative contribution of emission sources to exposure at specific locations. The ARB has used this type of information to develop regional cumulative risk maps that estimate the cumulative cancer air pollution risk for most of California. While these maps only show one air pollution-related health risk, it does provide a useful starting point.

What is needed for community modeling?

Air quality models have been developed to assess near-source impacts, but they have very exacting data requirements. These near-source models estimate the impact of local sources, but do not routinely include the contribution from regional air pollution background. To estimate cumulative air pollution exposure at a neighborhood scale, a modeling approach needs to combine features of both micro-scale and regional models.

In addition, improved methods are needed to assess near-source impacts under light and variable wind conditions, when high local concentrations are more likely to occur. A method for modeling long-term exposure to air pollutants near freeways and other high traffic areas is also needed.

What modeling work has ARB developed?

A key component of ARB's Community Health Program is the Neighborhood Assessment Program (NAP). As described later in this section, the NAP studies are being conducted to better understand pollution impacts at the community level. Through two such studies conducted in Barrio Logan (San Diego) and Wilmington (Los Angeles), ARB is refining community-level modeling methodologies. Regional air toxics modeling is also being performed to better understand regional air pollution background levels.

In a parallel effort, ARB is developing modeling protocols for estimating cumulative emissions, exposure, and risk from air pollution. The protocols will cover modeling approaches and uncertainties, procedures for running the models, the development of statewide risk maps, and methods for estimating health risks. The protocols are subject to an extensive peer review process prior to release.

How are air pollution impacts on community health assessed?

On a statewide basis, ARB's toxic air contaminant program identifies and reduces public exposure to air toxics. The focus of the program has been on reducing potential cancer risk, because monitoring results show potential urban cancer risk levels are too high. ARB has also looked for potential non-cancer risks based on health reference levels provided by OEHHA. On a regional basis, the pollutants measured in ARB's toxic monitoring network are generally below the OEHHA non-cancer reference exposure levels.

As part of its community health program, the ARB is looking at potential cancer and non-cancer risk. This could include chronic or acute health effects. If the assessment work shows elevated exposures on a localized basis, ARB will work with OEHHA to assess the health impacts.

What tools has ARB developed to assess cumulative air pollution impacts?

ARB has developed the following tools and reports to assist land use agencies and local air districts assess and reduce cumulative emissions, exposure, and risk on a neighborhood scale.

Statewide Risk Maps

ARB has produced regional risk maps that show the statewide trends for Southern and Central California in estimated potential cancer risk from air toxics between 1990 and 2010.[2] These maps will supplement U.S. EPA's ASPEN model and are available on the ARB's Internet site. These maps are best used to obtain an estimate of the regional background air pollution health risk and are not detailed enough to estimate the exact risk at a specific location.

ARB also has maps that focus in more detail on smaller areas that fall within the Southern and Central California regions for these same modeled years. The finest visual resolution available in the maps on this web site is two by two kilometers. These maps are not detailed enough to assess individual neighborhoods or facilities.

Community Health Air Pollution Information System (CHAPIS)

CHAPIS is an Internet-based procedure for displaying information on emissions from sources of air pollution in an easy to use mapping format. CHAPIS uses Geographical Information System (GIS) software to deliver interactive maps over the Internet. CHAPIS relies on emission estimates reported to the ARB's emission inventory database - California Emissions Inventory Development and Reporting System, or CEIDARS.

Through CHAPIS, air district staff can quickly and easily identify pollutant sources and emissions within a specified area. CHAPIS contains information on air pollution emissions from selected large facilities and small businesses that emit criteria and toxic air pollutants. It also contains information on air pollution emissions from motor vehicle and areawide emissions. CHAPIS does not contain information on every source of air pollution or every air pollutant. It is a major long-term objective of CHAPIS to include all of the largest air pollution sources and those with the highest documented air pollution risk. CHAPIS will be updated on a periodic basis and additional facilities will be added to CHAPIS as more data becomes available.

CHAPIS is being developed in stages to assure data quality. The initial release of CHAPIS will include facilities emitting 10 or more tons per year of nitrogen oxides, sulfur dioxide, carbon monoxide, PM10, or reactive organic gases; air toxics from refineries and power plants of 50 megawatts or more; and facilities that conducted health risk

[2]ARB maintains state trends and local potential cancer risk maps that show statewide trends in potential inhalable cancer risk from air toxics between 1990 and 2010. This information can be viewed at ARB's web site at http://www.arb.ca.gov/toxics/cti/hlthrisk/hlthrisk.htm)

assessments under the California Air Toxics "Hot Spots" Information and Assessment Program.[3]

CHAPIS can be used to identify the emission contributions from mobile, area, and point sources on that community.

"Hot Spots" Analysis and Reporting Program (HARP)

HARP[4] is a software package available from the ARB and is designed with air quality professionals in mind. It models emissions and release data from one or more facilities to estimate the potential health risk posed by the selected facilities on the neighboring community. HARP uses the latest risk assessment guidelines published by OEHHA.

With HARP, a user can perform the following tasks:

- Create and manage facility databases;
- Perform air dispersion modeling;
- Conduct health risk analyses;
- Output data reports; and
- Output results to GIS mapping software.

HARP can model downwind concentrations of air toxics based on the calculated emissions dispersion at a single facility. HARP also has the capability of assessing the risk from multiple facilities, and for multiple locations of concern near those facilities. While HARP has the capability to assess multiple source impacts, there had been limited application of the multiple facility assessment function in the field at the time of HARP's debut in 2003. HARP can also evaluate multi-pathway, non-inhalation health risk resulting from air pollution exposure, including skin and soil exposure, and ingestion of meat and vegetables contaminated with air toxics, and other toxics that have accumulated in a mother's breast milk.

Neighborhood Assessment Program (NAP)

The NAP[5] has been a key component of ARB's Community Health Program. It includes the development of tools that can be used to perform assessments of cumulative air pollution impacts on a neighborhood scale. The NAP studies have been done to better understand how air pollution affects individuals at the neighborhood level. Thus far, ARB has conducted neighborhood scale assessments in Barrio Logan and Wilmington.

As part of these studies, ARB is collecting data and developing a modeling protocol that can be used to conduct cumulative air pollution impact assessments. Initially these

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[3] California Health & Safety Code section 44300, et seq.
[4] More detailed information can be found on ARB's website at: http://www.arb.ca.gov/toxics/harp/harp.htm
[5] For more information on the Program, please refer to: http://www.arb.ca.gov/ch/programs/nap/nap.htm

assessments will focus on cumulative inhalation cancer health risk and chronic non-cancer impacts. The major challenge is developing modeling methods that can combine both regional and localized air pollution impacts, and identifying the critical data necessary to support these models. The objective is to develop methods and tools from these studies that can ultimately be applied to other areas of the state. In addition, the ARB plans to use these methods to replace the ASPEN regional risk maps currently posted on the ARB Internet site.

Urban Emissions Model (URBEMIS)

URBEMIS[6] is a computer program that can be used to estimate emissions associated with land development projects in California such as residential neighborhoods, shopping centers, office buildings, and construction projects. URBEMIS uses emission factors available from the ARB to estimate vehicle emissions associated with new land uses. URBEMIS estimates sulfur dioxide emissions from motor vehicles in addition to reactive organic gases, nitrogen oxides, carbon monoxide, and PM10.

Land-Use Air Quality Linkage Report[7]

This report summarizes data currently available on the relationships between land use, transportation and air quality. It also highlights strategies that can help to reduce the use of the private automobile. It also briefly summarizes two ARB-funded research projects. The first project analyzes the travel patterns of residents living in five higher density, mixed use neighborhoods in California, and compares them to travel in more auto-oriented areas. The second study correlates the relationship between travel behavior and community characteristics, such as density, mixed land uses, transit service, and accessibility for pedestrians.

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[6] For more information on this model, please refer to ARB's website at http://www.arb.ca.gov/html/soft.htm.

[7] To access this report, please refer to ARB's website or click on: http://www.arb.ca.gov/ch/programs/link97.pdf

LAND USE AND AIR QUALITY AGENCY ROLES IN THE LAND USE PROCESS

A wide variety of federal, state, and local government agencies are responsible for regulatory, planning, and siting decisions that can have an impact on air pollution. They include local land use agencies, regional councils of government, school districts, local air districts, ARB, the California Department of Transportation (Caltrans), and the Governor's Office of Planning and Research (OPR) to name a few. This Section will focus on the roles and responsibilities of local and state agencies. The role of school districts will be discussed in Appendix E.

Local Land Use Agencies

Under the State Constitution, land use agencies have the primary authority to plan and control land use.[1] Each of California's incorporated cities and counties are required to adopt a comprehensive, long-term General Plan.[2]

The General Plan's long-term goals are implemented through zoning ordinances. These are local laws adopted by counties and cities that describe for specific areas the kinds of development that will be allowed within their boundaries.

Land use agencies are also the lead for doing environmental assessments under CEQA for new projects that may pose a significant environmental impact, or for new or revised General Plans.

Local Agency Formation Commissions (LAFCOs)

Operating in each of California's 58 counties, LAFCOs are composed of local elected officials and public members who are responsible for coordinating changes in local governmental boundaries, conducting special studies that review ways to reorganize, simplify, and streamline governmental structures, and preparing a sphere of influence for each city and special district within each county. Each Commission's efforts are directed toward seeing that local government services are provided efficiently and economically while agricultural and open-space lands are protected. LAFCO decisions strive to balance the competing needs in California for efficient services, affordable housing, economic opportunity, and conservation of natural resources.

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[1] The legal basis for planning and land use regulation is the "police power" of the city or county to protect the public's health, safety and welfare. The California Constitution gives cities and counties the power to make and enforce all local police, sanitary and other ordinances and regulations not in conflict with general laws. State law reference: California Constitution, Article XI §7.

[2] OPR General Plan Guidelines, 2003: http://www.opr.ca.gov/planning/PDFs/General_Plan_Guidelines_2003.pdf

Councils of Government (COG)

COGs are organizations composed of local counties and cities that serve as a focus for the development of sound regional planning, including plans for transportation, growth management, hazardous waste management, and air quality. They can also function as the metropolitan planning organization for coordinating the region's transportation programs. COGs also prepare regional housing need allocations for updates of General Plan housing elements.

Local Air Districts

Under state law, air pollution control districts or air quality management districts (local air districts) are the local government agencies responsible for improving air quality and are generally the first point of contact for resolving local air pollution issues or complaints. There are 35 local air districts in California[3] that have authority and primary responsibility for regional clean air planning. Local air districts regulate stationary sources of air pollutants within their jurisdiction including but not limited to industrial and commercial facilities, power plants, construction activities, outdoor burning, and other non-mobile sources of air pollution. Some local air districts also regulate public and private motor vehicle fleet operators such as public bus systems, private shuttle and taxi services, and commercial truck depots.

- **Regional Clean Air Plans**

Local air districts are responsible for the development and adoption of clean air plans that protect the public from the harmful effects of air pollution. These plans incorporate strategies that are necessary to attain ambient air quality standards. Also included in these regional air plans are ARB and local district measures to reduce statewide emissions from mobile sources, consumer products, and industrial sources.

- **Facility-Specific Considerations**

Permitting. In addition to the planning function, local air districts adopt and enforce regulations, issue permits, and evaluate the potential environmental impacts of projects.

Pollution is regulated through permits and technology-based rules that limit emissions from operating units within a facility or set standards that vehicle fleet operators must meet. Permits to construct and permits to operate contain very specific requirements and conditions that tell each regulated source what it must do to limit its air pollution in compliance with local air district rules, regulations, and state law. Prior to receiving a permit, new facilities must go through a New Source Review (NSR) process that establishes air pollution control requirements for the facility. Permit conditions are typically contained in the permit to operate and specify requirements that businesses must follow; these may include limits on the amount of pollution that can be emitted, the

[3] Contact information for local air districts in California is listed in the front of this Handbook.

type of pollution control equipment that must be installed and maintained, and various record-keeping requirements.

Local air districts also notify the public about new permit applications for major new facilities, or major modifications to existing facilities that seek to locate within 1,000 feet of a school.

Local air districts can also regulate other types of sources to reduce emissions. These include regulations to reduce emissions from the following sources:

- hazardous materials in products used by industry such as paints, solvents, and de-greasers;
- agricultural and residential burning;
- leaking gasoline nozzles at service stations;
- public fleet vehicles such as sanitation trucks and school buses; and
- fugitive or uncontrolled dust at construction sites.

However, while emissions from industrial and commercial sources are typically subject to the permit authority of the local air district, sensitive sites such as a day care center, convalescent home, or playground are not ordinarily subject to an air permit. Local air district permits address the air pollutant emissions of a project but not its location.

Under the state's air toxics program, local air districts regulate air toxic emissions by adopting ARB air toxic control measures, or more stringent district-specific requirements, and by requiring individual facilities to perform a health risk assessment if emissions at the source exceed district-specific health risk thresholds[4], [5] (See the section on ARB programs for a more detailed summary of this program).

One approach by which local air districts regulate air toxics emissions is through the "Hot Spots" program.[6] The risk assessments submitted by the facilities under this

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[4] Cal/EPA's Office of Environmental Health Hazard Assessment has published "A Guide to Health Risk Assessment" for lay people involved in environmental health issues, including policymakers, businesspeople, members of community groups, and others with an interest in the potential health effects of toxic chemicals. To access this information, please refer to http://www.oehha.ca.gov/pdf/HRSguide2001.pdf

[5] Section 44306 of the California Health & Safety Code defines a health risk assessment as a detailed comprehensive analysis that a polluting facility uses to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations, and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure.

[6] AB-2588 (the Air Toxics "Hot Spots" Information and Assessment Act) requires local air districts to prioritize facilities by high, intermediate, and low priority categories to determine which must perform a health risk assessment. Each district is responsible for establishing the prioritization score threshold at which facilities are required to prepare a health risk assessment. In establishing priorities for each facility, local air districts must consider the potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to potential receptors, and any other factors that the district determines may indicate that the facility may pose a significant risk. All facilities within the highest category must prepare a health risk assessment. In addition, each district may require facilities in the intermediate and low priority categories to also submit a health risk assessment.

Table D-1
Local Sources of Air Pollution, Responsible Agencies, and Associated Regulatory Programs

Source	Examples	Primary Agency	Applicable Regulations
Large Stationary	Refineries, power plants, chemical facilities, certain manufacturing plants	Local air districts	Operating permit rules Air Toxics "Hot Spots" Law (AB 2588) Local district rules Air Toxic Control Measures (ATCMs)* New Source Review rules Title V permit rules
Small Stationary	Dry cleaners, auto body shops, welders, chrome plating facilities, service stations, certain manufacturing plants	Local air districts	Operating permit conditions, Air Toxics "Hot Spots" Law (AB 2588) Local district rules ATCMs* New Source Review rules
Mobile (non-fleet)	Cars, trucks, buses	ARB	Emission standards Cleaner-burning fuels (e.g., unleaded gasoline, low-sulfur diesel) Inspection and repair programs (e.g., Smog Check)
Mobile Equipment	Construction equipment	ARB, U.S. EPA	ARB rules U.S. EPA rules
Mobile (fleet)	Truck depots, school buses, taxi services	Local air districts, ARB	Local air district rules ARB urban bus fleet rule
Areawide	Paints and consumer products such as hair spray and spray paint	Local air district, ARB	ARB rules Local air district rules

*ARB adopts ATCMs, but local air districts have the responsibility to implement and enforce these measures or more stringent ones.

program are reviewed by OEHHA and approved by the local air district. Risk assessments are available by contacting the local air district.

Enforcement. Local air districts also take enforcement action to ensure compliance with air quality requirements. They enforce air toxic control measures, agricultural and residential burning programs, gasoline vapor control regulations, laws that prohibit air pollution nuisances, visible emission limits, and many other requirements designed to

clean the air. Local districts use a variety of enforcement tools to ensure compliance. These include notices of violation, monetary penalties, and abatement orders. Under some circumstances, a permit may be revoked.

- **Environmental Review**

As required by the California Environmental Quality Act (CEQA), local air districts also review and comment on proposed land use plans and development projects that can have a significant effect on the environment or public health.[7]

California Air Resources Board

The ARB is the air pollution control agency at the state level that is responsible for the preparation of air plans required by state and federal law. In this regard, it coordinates the activities of all local air districts to ensure all statutory requirements are met and to reduce air pollution emissions for sources under its jurisdiction.

Motor vehicles are the single largest emissions source category under ARB's jurisdiction as well as the largest overall emissions source statewide. ARB also regulates emissions from other mobile equipment and engines as well as emissions from consumer products such as hair sprays, perfumes, cleaners, and aerosol paints.

Air Toxics Program

Under state law, the ARB has a critical role to play in the identification, prioritization, and control of air toxic emissions. The ARB statewide comprehensive air toxics program was established in the early 1980's. The Toxic Air Contaminant Identification and Control Act of 1983 (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics.[8] The Air Toxics "Hot Spots" Information and Assessment Act (Hot Spots program) supplements the AB 1807 program, by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, the ARB is required to use certain criteria to prioritize the identification and control of air toxics. In selecting substances for review, the ARB must consider criteria relating to emissions, exposure, and health risk, as well as persistence in the atmosphere, and ambient concentrations in the community. AB 1807 also requires the ARB to use available information gathered from the Hot Spots program when prioritizing compounds.

The ARB identifies pollutants as toxic air contaminants and adopts statewide air toxic control measures (ATCMs). Once ARB adopts an ATCM, local air districts must

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[7] Section 4 of this Handbook contains more information on the CEQA process.
[8] For a general background on California's air toxics program, the reader should refer to ARB's website at http://www.arb.ca.gov/toxics/tac/appendxb.htm.

implement the measure, or adopt and implement district-specific measures that are at least as stringent as the state standard. Taken in the aggregate, these ARB programs will continue to further reduce emissions, exposure, and health risk statewide.

With regard to the land use decision-making process, ARB, in conjunction with local air districts, plays an advisory role by providing technical information on land use-related air issues.

Other Agencies

Governor's Office of Planning and Research (OPR)

In addition to serving as the Governor's advisor on land use planning, research, and liaison with local government, OPR develops and implements the state's policy on land use planning and coordinates the state's environmental justice programs. OPR updated its General Plan Guidelines in 2003 to highlight the importance of sustainable development and environmental justice policies in the planning process. OPR also advises project proponents and government agencies on CEQA provisions and operates the State Clearinghouse for environmental and federal grant documents.

California Department of Housing and Community Development

The Department of Housing and Community Development (HCD) administers a variety of state laws, programs and policies to preserve and expand housing opportunities, including the development of affordable housing. All local jurisdictions must update their housing elements according to a staggered statutory schedule, and are subject to certification by HCD. In their housing elements, cities and counties are required to include a land inventory which identifies and zones sites for future residential development to accommodate a mix of housing types, and to remove barriers to the development of housing.

An objective of state housing element law is to increase the overall supply and affordability of housing. Other fundamental goals include conserving existing affordable housing, improving the condition of the existing housing stock, removing regulatory barriers to housing production, expanding equal housing opportunities, and addressing the special housing needs of the state's most vulnerable residents (frail elderly, disabled, large families with children, farmworkers, and the homeless).

Transportation Agencies

Transportation agencies can also influence mobile source-related emissions in the land use decision-making process. Local transportation agencies work with land use agencies to develop a transportation (circulation) element for the General Plan. These local government agencies then work with other transportation-related agencies, such as the Congestion Management Agency (CMA), Metropolitan Planning Organization

(MPO), Regional Transportation Planning Agency (RTPA), and Caltrans to develop long and short range transportation plans and projects.

Caltrans is the agency responsible for setting state transportation goals and for state transportation planning, design, construction, operations and maintenance activities. Caltrans is also responsible for delivering California's multibillion-dollar state Transportation Improvement Program, a list of transportation projects that are approved for funding by the California Transportation Commission in a 4-year cycle.

When safety hazards or traffic circulation problems are identified in the existing road system, or when land use changes are proposed such as a new residential subdivision, shopping mall or manufacturing center, Caltrans and/or the local transportation agency ensure the projects meet applicable state, regional, and local goals and objectives.

Caltrans also evaluates transportation-related projects for regional air quality impacts, from the perspective of travel-related emissions as well as road congestion and increases in road capacity (new lanes).

California Energy Commission (CEC)

The CEC is the state's CEQA lead agency for permitting large thermal power plants (50 megawatts or greater). The CEC works closely with local air districts and other federal, state and local agencies to ensure compliance with applicable laws, ordinances, regulations and standards in the permitting, construction, operation and closure of such plants. The CEC uses an open and public review process that provides communities with outreach and multiple opportunities to participate and be heard. In addition to its comprehensive environmental impact and engineering design assessment process, the CEC also conducts an environmental justice evaluation. This evaluation involves an initial demographic screening to determine if a qualifying minority or low-income population exists in the vicinity of the proposed project. If such a population is present, staff considers possible environmental justice impacts including from associated project emissions in its technical assessments.[9]

Department of Pesticides Regulation (DPR)

Pesticides are industrial chemicals produced specifically for their toxicity to a target pest. They must be released into the environment to do their job. Therefore, regulation of pesticides focuses on using toxicity and other information to ensure that when pesticides are used according to their label directions, potential for harm to people and the environment is minimized. DPR imposes strict controls on use, beginning before pesticide products can be sold in California, with an extensive scientific program to ensure they can be used safely. DPR and county enforcement staff tracks the use of pesticides to ensure that pesticides are used properly. DPR collects periodic

[9] See California Energy Commission, "Environmental Performance Report," July 2001 at http://www.energy.ca.gov/reports/2001-11-20_700-01-001.PDF

measurements of any remaining amounts of pesticides in water, air, and on fresh produce. If unsafe levels are found, DPR requires changes in how pesticides are used, to reduce the possibility of harm. If this cannot be done - that is, if a pesticide cannot be used safely - use of the pesticide will be banned in California.[10]

Federal Agencies

Federal agencies have permit authority over activities on federal lands and certain resources, which have been the subject of congressional legislation, such as air, water quality, wildlife, and navigable waters. The U.S. Environmental Protection Agency generally oversees implementation of the federal Clean Air Act, and has broad authority for regulating certain activities such as mobile sources, air toxics sources, the disposal of toxic wastes, and the use of pesticides. The responsibility for implementing some federal regulatory programs such as those for air and water quality and toxics is delegated by management to specific state and local agencies. Although federal agencies are not subject to CEQA they must follow their own environmental process established under the National Environmental Policy Act (NEPA).

[10] For more information, the reader is encouraged to visit the Department of Pesticide Regulation web site at www.cdpr.ca.gov/docs/empm/pubs/tacmenu.htm.

SPECIAL PROCESSES THAT APPLY TO SCHOOL SITING

The California Education Code and the California Public Resources Code place primary authority for siting public schools with the local school district, which is the 'lead agency' for purposes of CEQA. The California Education Code requires public school districts to notify the local planning agency about siting a new public school or expanding an existing school. The planning agency then reports back to the school district regarding a project's conformity with the adopted General Plan. However, school districts can overrule local zoning and land use designations for schools if they follow specified procedures. In addition, all school districts must evaluate new school sites using site selection standards established in Section 14010 of Title 5 of the California Code of Regulations. Districts seeking state funding for school site acquisition must also obtain site approval from the California Department of Education.

Before making a final decision on a school site acquisition, a school district must comply with CEQA and evaluate the proposed site acquisition/new school project for air emissions and health risks by preparing and certifying an environmental impact report or negative declaration. Both the California Education Code section 17213 and the California Public Resources Code section 21151.8 require school districts to consult with administering agencies and local air districts when preparing the environmental assessment. Such consultation is required to identify both permitted and non-permitted "facilities" that might significantly affect health at the new site. These facilities include, but are not limited to, freeways and other busy traffic corridors, large agricultural operations, and rail yards that are within one-quarter mile of the proposed school site, and that might emit hazardous air emissions, or handle hazardous or acutely hazardous materials, substances, or waste.

As part of the CEQA process and before approving a school site, the school district must make a finding that either it found none of the facilities or significant air pollution sources, or alternatively, if the school district finds that there are such facilities or sources, it must determine either that they pose no significant health risks, or that corrective actions by another governmental entity would be taken so that there would be no actual or potential endangerment to students or school workers.

In addition, if the proposed school site boundary is within 500 feet of the edge of the closest traffic lane of a freeway or traffic corridor that has specified minimum average daily traffic counts, the school district is required to determine through specified risk assessment and air dispersion modeling that neither short-term nor long term exposure poses significant heath risks to pupils.

State law changes effective January 1, 2004 (SB352, Escutia 2003, amending Education Code section 17213 and Public Resources Code section 21151.8) also provides for cases in which the school district cannot make either of those two findings and cannot find a suitable alternative site. When this occurs, the school district must adopt a statement of over-riding considerations, as part of an environmental impact

report, that the project should be approved based on the ultimate balancing of the merits.

Some school districts use a standardized assessment process to determine the environmental impacts of a proposed school site. In the assessment process, school districts can use maps and other available information to evaluate risk, including a local air district's database of permitted source emissions. School districts can also perform field surveys and record searches to identify and calculate emissions from non-permitted sources within one-quarter mile radius of a proposed site. Traffic count data and vehicular emissions data can also be obtained from Caltrans for major roadways and freeways in proximity to the proposed site to model potential emissions impacts to students and school employees. This information is available from the local COG, Caltrans, or local cities and counties for non-state maintained roads.

GENERAL PROCESSES USED BY LAND USE AGENCIES TO ADDRESS AIR POLLUTION IMPACTS

There are several separate but related processes for addressing the air pollution impacts of land use projects. One takes place as part of the planning and zoning function. This consists of preparing and implementing goals and policies contained in county or city General Plans, community or area plans, and specific plans governing land uses such as residential, educational, commercial, industrial, and recreational activities. It also includes recommending locations for thoroughfares, parks and other public improvements.

Land use agencies also have a permitting function that includes performing environmental reviews and mitigation when projects may pose a significant environmental impact. They conduct inspections for zoning permits issued, enforce the zoning regulations and issue violations as necessary, issue zoning certificates of compliance, and check compliance when approving certificates of occupancy.

Planning

▪ General Plan[1]

The General Plan is a local government "blueprint" of existing and future anticipated land uses for long-term future development. It is composed of the goals, policies, and general elements upon which land use decisions are based. Because the General Plan is the foundation for all local planning and development, it is an important tool for implementing policies and programs beneficial to air quality. Local governments may choose to adopt a separate air quality element into their General Plan or to integrate air quality-beneficial objectives, policies, and strategies in other elements of the Plan, such as the land use, circulation, conservation, and community design elements.

More information on General Plan elements is contained in Appendix D.

▪ Community Plans

Community or area plans are terms for plans that focus on a particular region or community within the overall general plan area. It refines the policies of the general plan as they apply to a smaller geographic area and is implemented by ordinances and other discretionary actions, such as zoning.

[1] In October 2003, OPR revised its General Plan Guidelines. An entire chapter is now devoted to a discussion of how sustainable development and environmental justice goals can be incorporated into the land use planning process. For further information, the reader is encouraged to obtain a copy of OPR's General Plan Guidelines, or refer to their website at: http://www.opr.ca.gov/planning/PDFs/General_Plan_Guidelines_2003.pdf

- **Specific Plan**

A specific plan is a hybrid that can combine policies with development regulations or zoning requirements. It is often used to address the development requirements for a single project such as urban infill or a planned community. As a result, its emphasis is on concrete standards and development criteria.

- **Zoning**

Zoning is the public regulation of the use of land. It involves the adoption of ordinances that divide a community into various districts or zones. For instance, zoning ordinances designate what projects and activities can be sited in particular locations. Each zone designates allowable uses of land within that zone, such as residential, commercial, or industrial. Zoning ordinances can address building development standards, e.g., minimum lot size, maximum building height, minimum building setback, parking, signage, density, and other allowable uses.

Land Use Permitting

In addition to the planning and zoning function, land use agencies issue building and business permits, and evaluate the potential environmental impacts of projects. To be approved, projects must be located in a designated zone and comply with applicable ordinances and zoning requirements.

Even if a project is sited properly in a designated zone, a land use agency may require a new source to mitigate potential localized environmental impacts to the surrounding community below what would be required by the local air district. In this case, the land use agency could condition the permit by limiting or prescribing allowable uses including operating hour restrictions, building standards and codes, property setbacks between the business property and the street or other structures, vehicle idling restrictions, or traffic diversion.

Land use agencies also evaluate the environmental impacts of proposed land use projects or activities. If a project or activity falls under CEQA, the land use agency requires an environmental review before issuing a permit to determine if there is the potential for a significant impact, and if so, to mitigate the impact or possibly deny the project.

- **Land Use Permitting Process**

In California, the authority to regulate land use is delegated to city and county governments. The local land use planning agency is the local government administrative body that typically provides information and coordinates the review of development project applications. Conditional Use Permits (CUP) typically fall within a land use agency's discretionary authority and therefore are subject to CEQA. CUPs are

intended to provide an opportunity to review the location, design, and manner of development of land uses prior to project approval. A traditional purpose of the CUP is to enable a municipality to control certain uses that could have detrimental environmental effects on the community.

The process for permitting new discretionary projects is quite elaborate, but can be broken down into five fundamental components:

- Project application
- Environmental assessment
- Consultation
- Public comment
- Public hearing and decision

Project Application

The permit process begins when the land use agency receives a project application, with a detailed project description, and support documentation. During this phase, the agency reviews the submitted application for completeness. When the agency deems the application to be complete, the permit process moves into the environmental review phase.

Environmental Assessment

If the project is discretionary and the application is accepted as complete, the project proposal or activity must undergo an environmental clearance process under CEQA and the CEQA Guidelines adopted by the California Resources Agency.[2] The purpose of the CEQA process is to inform decision-makers and the public of the potential significant environmental impacts of a project or activity, to identify measures to minimize or eliminate those impacts to the point they are no longer significant, and to discuss alternatives that will accomplish the project goals and objectives in a less environmentally harmful manner.

What is a "Lead Agency"?

A lead agency is the public agency that has the principal responsibility for carrying out or approving a project that is subject to CEQA. In general, the land use agency is the preferred public agency serving as lead agency because it has jurisdiction over general land uses. The lead agency is responsible for determining the appropriate environmental document, as well as its preparation.

What is a "Responsible Agency"?

A responsible agency is a public agency with discretionary approval authority over a portion of a CEQA project (e.g., projects requiring a permit). As a responsible agency, the agency is available to the lead agency and project proponent for early consultation on a project to apprise them of applicable rules and regulations, potential adverse impacts, alternatives, and mitigation measures, and provide guidance as needed on applicable methodologies or other related issues.

What is a "Commenting Agency"?

A commenting agency is any public agency that comments on a CEQA document, but is neither a lead agency nor a responsible agency. For example, a local air district, as the agency with the responsibility for comprehensive air pollution control, could review and comment on an air quality analysis in a CEQA document for a proposed distribution center, even though the project was not subject to a permit or other pollution control requirements.

[2] Projects and activities that may have a significant adverse impact on the environment are evaluated under CEQA Guidelines set forth in title 14 of the California Code of Regulations, sections 15000 et seq.

To assist the lead agency in determining whether the project or activity may have a significant effect that would require the preparation of an EIR, the land use agency may consider criteria, or thresholds of significance, to assess the potential impacts of the project, including its air quality impacts. The land use agency must consider any credible evidence in addition to the thresholds, however, in determining whether the project or activity may have a significant effect that would trigger the preparation of an EIR.

The screening criteria to determine significance is based on a variety of factors, including local, state, and federal regulations, administrative practices of other public agencies, and commonly accepted professional standards. However, the final determination of significance for individual projects is the responsibility of the lead agency. In the case of land use projects, the lead agency would be the City Council or County Board of Supervisors.

A new land use plan or project can also trigger an environmental assessment under CEQA if, among other things, it will expose sensitive sites such as schools, day care centers, hospitals, retirement homes, convalescence facilities, and residences to substantial pollutant concentrations.[3]

CEQA only applies to "discretionary projects." Discretionary means the public agency must exercise judgment and deliberation when deciding to approve or disapprove a particular project or activity, and may append specific conditions to its approval. Examples of discretionary projects include the issuance of a CUP, re-zoning a property, or widening of a public road. Projects that are not subject to the exercise of agency discretion, and can therefore be approved administratively through the application of set standards are referred to as ministerial projects. CEQA does not apply to ministerial projects.[4] Examples of typical ministerial projects include the issuance of most building permits or a business license.

Once a potential environmental impact associated with a project is identified through an environmental assessment, mitigation must be considered. A land use agency should incorporate mitigation measures that are suggested by the local air district as part of the project review process.

Consultation

Application materials are provided to various departments and agencies that may have an interest in the project (e.g., air pollution, building, police, fire, water agency, Fish and Game, etc.) for consultation and input.

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[3] Readers interested in learning more about CEQA should contact OPR or visit their website at http://www.opr.ca.gov/.

[4] See California Public Resources Code section 21080(b)(1).

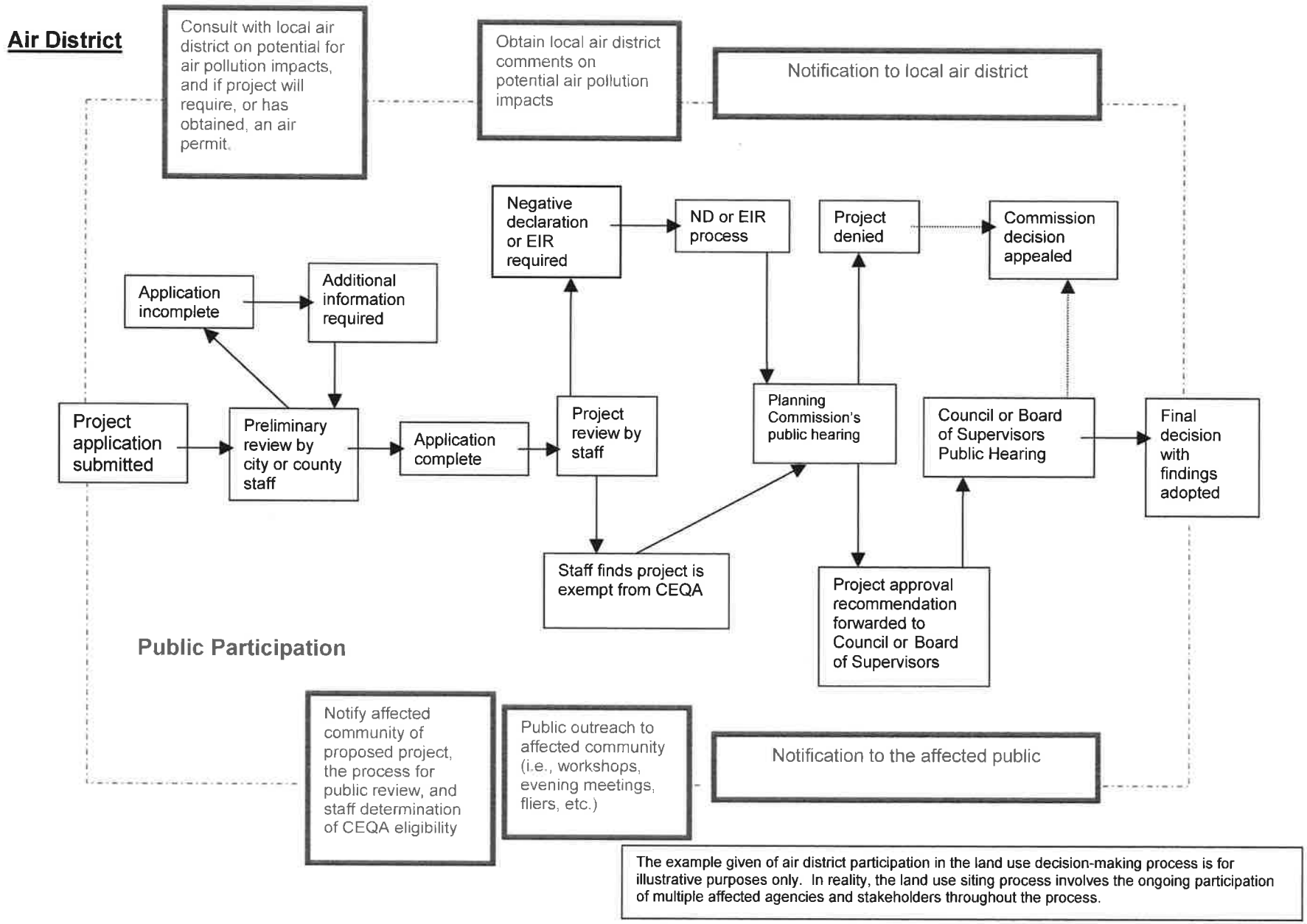
Public Comment

Following the environmental review process, the Planning Commission reviews application along with the staff's report on the project assessment and a public comment period is set and input is solicited.

Public Hearing and Decision

Permit rules vary depending on the particular permit authority in question, but the process generally involves comparing the proposed project with the land use agency standards or policies. The procedure usually leads to a public hearing, which is followed by a written decision by the agency or its designated officer. Typically, a project is approved, denied, or approved subject to specified conditions.

USE PERMIT (DISCRETIONARY ACTION) REVIEW PROCESS*



The example given of air district participation in the land use decision-making process is for illustrative purposes only. In reality, the land use siting process involves the ongoing participation of multiple affected agencies and stakeholders throughout the process.

GLOSSARY OF KEY AIR POLLUTION TERMS

Air Pollution Control Board or Air Quality Management Board: Serves as the governing board for local air districts. It consists of appointed or elected members from the public or private sector. It conducts public hearings to adopt local air pollution regulations.

Air Pollution Control Districts or Air Quality Management Districts (local air district): A county or regional agency with authority to regulate stationary and area sources of air pollution within a given county or region. Governed by a district air pollution control board.

Air Pollution Control Officer (APCO): Head of a local air pollution control or air quality management district.

Air Toxic Control Measures (ATCM): A control measure adopted by the ARB (Health and Safety Code section 39666 et seq.), which reduces emissions of toxic air contaminants.

Ambient Air Quality Standards: An air quality standard defines the maximum amount of a pollutant that can be present in the outdoor air during a specific time period without harming the public's health. Only U.S. EPA and the ARB may establish air quality standards. No other state has this authority. Air quality standards are a measure of clean air. More specifically, an air quality standard establishes the concentration at which a pollutant is known to cause adverse health effects to sensitive groups within the population, such as children and the elderly. Federal standards are referred to as National Ambient Air Quality Standards (NAAQS); state standards are referred to as California ambient air quality standards (CAAQS).

Area-wide Sources: Sources of air pollution that individually emit small amounts of pollution, but together add up to significant quantities of pollution. Examples include consumer products, fireplaces, road dust, and farming operations.

Attainment vs. Nonattainment Area: An attainment area is a geographic area that meets the National Ambient Air Quality Standards for the criteria pollutants and a non-attainment area is a geographic area that doesn't meet the NAAQS for criteria pollutants.

Attainment Plan: Attainment plans lay out measures and strategies to attain one or more air quality standards by a specified date.

California Clean Air Act (CCAA): A California law passed in 1988, which provides the basis for air quality planning and regulation independent of federal regulations. A major element of the Act is the requirement that local air districts in violation of the CAAQS

must prepare attainment plans which identify air quality problems, causes, trends, and actions to be taken to attain and maintain California's air quality standards by the earliest practicable date.

California Environmental Quality Act (CEQA): A California law that sets forth a process for public agencies to make informed decisions on discretionary project approvals. The process helps decision-makers determine whether any potential, significant, adverse environmental impacts are associated with a proposed project and to identify alternatives and mitigation measures that will eliminate or reduce such adverse impacts.[1]

California Health and Safety Code: A compilation of California laws, including state air pollution laws, enacted by the Legislature to protect the health and safety of people in California. Government agencies adopt regulations to implement specific provisions of the California Health and Safety Code.

Clean Air Act (CAA): The federal Clean Air Act was adopted by the United States Congress and sets forth standards, procedures, and requirements to be implemented by the U.S. Environmental Protection Agency (U.S. EPA) to protect air quality in the United States.

Councils of Government (COGs): There are 25 COGs in California made up of city and county elected officials. COGs are regional agencies concerned primarily with transportation planning and housing; they do not directly regulate land use.

Criteria Air Pollutant: An air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM10 and PM2.5. The term "criteria air pollutants" derives from the requirement that the U.S. EPA and ARB must describe the characteristics and potential health and welfare effects of these pollutants. The U.S. EPA and ARB periodically review new scientific data and may propose revisions to the standards as a result.

District Hearing Board: Hears local air district permit appeals and issues variances and abatement orders. The local air district board appoints the members of the hearing board.

Emission Inventory: An estimate of the amount of pollutants emitted into the atmosphere from mobile, stationary, area-wide, and natural source categories over a specific period of time such as a day or a year.

Environmental Impact Report (EIR): The public document used by a governmental agency to analyze the significant environmental effects of a proposed project, to identify

[1] To track the submittal of CEQA documents to the State Clearinghouse within the Office of Planning and Research, the reader can refer to CEQAnet at http://www.ceqanet.ca.gov.

alternatives, and to disclose possible ways to reduce or avoid the possible negative environmental impacts.

Environmental Justice: California law defines environmental justice as the fair treatment of people of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies (California Government Code sec.65040.12(c)).

General Plans: A statement of policies developed by local governments, including text and diagrams setting forth objectives, principles, standards, and plan proposals for the future physical development of the city or county.

Hazardous Air Pollutants (HAPs): An air pollutant listed under section 112 (b) of the federal Clean Air Act as particularly hazardous to health. U.S. EPA identifies emission sources of hazardous air pollutants, and emission standards are set accordingly. In California, HAPs are referred to as toxic air contaminants.

Land Use Agency: Local government agency that performs functions associated with the review, approval, and enforcement of general plans and plan elements, zoning, and land use permitting. For purposes of this Handbook, a land use agency is typically a local planning department.

Mobile Source: Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes.

National Ambient Air Quality Standard (NAAQS): A limit on the level of an outdoor air pollutant established by the US EPA pursuant to the Clean Air Act. There are two types of NAAQS. Primary standards set limits to protect public health and secondary standards set limits to protect public welfare.

Negative Declaration (ND): When the lead agency (the agency responsible for preparing the EIR or ND) under CEQA, finds that there is no substantial evidence that a project may have a significant environmental effect, the agency will prepare a "negative declaration" instead of an EIR.

New Source Review (NSR): A federal Clean Air Act requirement that state implementation plans must include a permit review process, which applies to the construction and operation of new or modified stationary sources in nonattainment areas. Two major elements of NSR to reduce emissions are best available control technology requirements and emission offsets.

Office of Planning and Research (OPR): OPR is part of the Governor's office. OPR has a variety of functions related to local land-use planning and environmental programs. It provides General Plan Guidelines for city and county planners, and coordinates the state clearinghouse for Environmental Impact Reports.

Ordinance: A law adopted by a City Council or County Board of Supervisors. Ordinances usually amend, repeal or supplement the municipal code; provide zoning specifications; or appropriate money for specific purposes.

Overriding Considerations: A ruling made by the lead agency in the CEQA process when the lead agency finds the importance of the project to the community outweighs potential adverse environmental impacts.

Public Comment: An opportunity for the general public to comment on regulations and other proposals made by government agencies. You can submit written or oral comments at the public meeting or send your written comments to the agency.

Public Hearing: A public hearing is an opportunity to testify on a proposed action by a governing board at a public meeting. The public and the media are welcome to attend the hearing and listen to, or participate in, the proceedings.

Public Notice: A public notice identifies the person, business, or local government seeking approval of a specific course of action (such as a regulation). It describes the activity for which approval is being sought, and describes the location where the proposed activity or public meeting will take place.

Public Nuisance: A public nuisance, for the purposes of air pollution regulations, is defined as a discharge from any source whatsoever of such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. (Health and Safety Code section 41700).

Property Setback: In zoning parlance, a setback is the minimum amount of space required between a lot line and a building line.

Risk: For cancer health effects, risk is expressed as an estimate of the increased chances of getting cancer due to facility emissions over a 70-year lifetime. This increase in risk is expressed as chances in a million (e.g.,10 chances in a million).

Sensitive Individuals: Refers to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality).

Sensitive Sites or Sensitive Land Uses: Land uses where sensitive individuals are most likely to spend time, including schools and schoolyards, parks and playgrounds, day care centers, nursing homes, hospitals, and residential communities.

Setback: An area of land separating one parcel of land from another that acts to soften or mitigate the effects of one land use on the other.

State Implementation Plan (SIP): A plan prepared by state and local agencies and submitted to U.S. EPA describing how each area will attain and maintain national ambient air quality standards. SIPs include the technical information about emission inventories, air quality monitoring, control measures and strategies, and enforcement mechanisms. A SIP is composed of local air quality management plans and state air quality regulations.

Stationary Sources: Non-mobile sources such as power plants, refineries, and manufacturing facilities.

Toxic Air Contaminant (TAC): An air pollutant, identified in regulation by the ARB, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. TACs are considered under a different regulatory process (California Health and Safety Code section 39650 et seq.) than pollutants subject to State Ambient Air Quality Standards. Health effects associated with TACs may occur at extremely low levels. It is often difficult to identify safe levels of exposure, which produce no adverse health effects.

Urban Background: The term is used in this Handbook to represent the ubiquitous, elevated, regional air pollution levels observed in large urban areas in California.

Zoning ordinances: City councils and county boards of supervisors adopts zoning ordinances that set forth land use classifications, divides the county or city into land use zones as delineated on the official zoning, maps, and set enforceable standards for future develop

Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review

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May 6, 2008

Program on Health, Equity, & Sustainability
Occupational & Environmental Health Section
Department of Public Health
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CONTENTS

I OVERVIEW – PREVENTING ROADWAY AIR QUALITY HAZARDS

Motor vehicles have been and will remain a major source of air pollution in the United States. While air pollutant emissions from motor vehicles are monitored and regulated on a regional basis, roadway air pollutant emissions vary significantly within a place or city meaning exposure is higher for those living near freeways and busy roadways.

Health research has consistently demonstrated that children living within 100-200 meters of freeways or busy roadways have poorer lung function and more asthma and respiratory symptoms than those living further away. Health effects, both chronic and acute, may result from exposure to both criteria air pollutants and mobile source air toxic. Health effects of air pollutant exposures may also involve synergistic effects among air pollutants, traffic noise and other traffic-related stressors.

In California, significant residential development is now occurring near freeways or busy arterial roadways. While infill development can reduce regional and global air pollution burdens, trends will increase exposure to air pollutants and their associated health burden for residents living in such developments.

In 2005, the California Air Resources Board issued guidance on preventing roadway related air quality conflicts, suggesting localities avoid placing new sensitive uses within 500 ft of many freeways. This guidance is advisory, and no existing federal and state regulations protect sensitive residential land uses from air pollution "hot spots" that occur near busy roadways. Federal and state agencies control air pollutants by regulating vehicle engine emissions on a "per mile" basis, generally ignoring impacts due to localized traffic intensity.

Good practice in planning and public health requires examining environmental hazards and potential health effects on a project-level basis and appropriate avoidance or mitigation. Furthermore, the California Environmental Quality Act (CEQA) requires the examination of potentially significant human health effects associated with environmental change. Preventative steps to avoid future land use air quality conflicts from busy roadways could include:

- Screening projects for exposure to high traffic volumes
- Examination of air quality exposure on a project-level basis
- Comprehensive health effects analysis involving identifying sensitive (receptors) populations, estimating exposure, and calculating health risks.
- Requirements to either avoid residential development or other sensitive uses at a site with relative high levels of vehicle air pollutants or building ventilation design improvements to filter outside air and locate air intakes away from pollution sources.
- Disclosure of exposure, health risks and included mitigations to future residents.

Guidance and regulations are needed to prevent health impacts associated with locating new residential uses near roadway air pollution hot spots. This document outlines a rationale and approach for the assessment and mitigation of air pollution health effects on sensitive uses from proximate roadway sources. Prevention of adverse air quality health effects requires a close coordination between public health, land use and transportation agencies. The table below outlines the key elements of a suggested program to evaluate and prevent roadway related effects at the project-level.

Programmatic Element	Description
Hazard Identification	Assess the cumulative vehicle volume on roadways within a 200 meter buffer of the sensitive site. The following sources may provide traffic data: • Caltrans Traffic Data (http://traffic-counts.dot.ca.gov/) • Local Public Works Departments • California Environmental Health Tracking Program's (CEHTP) spatial linkage web service to. (http://www.ehib.org/traffic_tool.jsp) • Environmental Impact Reports on projects in the area (Typically available from Departments of Planning) ***A potential hazard exists if average daily traffic volume exceeds the following thresholds*:*** 1. 100,000 vehicles / day within a 150 meter radius 2. 50,000 vehicles / day within a 100 meter radius 3. 10,000 vehicles /day within a 50 meter radius. **Note that the threshold of 100,000 vehicles with a 150 meter radius roughly corresponds to the CARB guidance avoiding sensitive uses. Thresholds for 100 meters and 50 meters are equivalent with regards to area traffic volume density.*
Exposure Assessment	Estimate concentration of PM 2.5 contributed by proximate roadway sources within a 150 meter radius of the project using physical based dispersion models using local data on vehicle volumes, vehicle types, emissions characteristics, meteorology. SFDPH recommends CAL3QHCR Line Source Dispersion Model with best available local meteorology. Other dispersion models may be appropriate as well.
Health Effects Assessment	If indicated quantify potential effects of roadway-related exposures to criteria and non-criteria pollutants on health outcomes using established risk assessment principles.
Action Threshold for Mitigation	Compare roadway contribution to annual average PM 2.5 concentration to an action threshold of 0.2 ug /m3 of PM 2.5.
Mitigation	***For sites with roadway contributions to PM 2.5 above the threshold concentration, prevent exposure or apply mitigations using the following hierarchy:*** 1. Relocate project outside hazardous zones around roadway of concern 2. Reroute or reduce traffic through circulation changes or traffic demand reduction. 3. Provide mechanical ventilation systems with best available supply intake air location; with fresh air filtration and building designs; and with reduced infiltration to mitigate particulate exposure.
Disclosure	For residents purchasing or renting property in proximity to hazardous roadway air pollution sources, provide information on exposure, hazards, and mitigations.

II BACKGROUND

The following sections provide the rationale for preventing air quality impacts from roadway sources though planning and the regulation of land uses. The section reviews vehicle pollutants, the epidemiology of roadway related health effects, intra-urban pollution variation, and sensitive populations.

Vehicle Related Air Pollutants

*E*ngine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics. Vehicle tailpipe emissions includes criteria air pollutants such as particulate matter and carbon monoxide, ozone precursor compounds such as nitrogen oxides (NO_x) and other hazardous air pollutants (e.g., air toxics) not regulated by EPA as criteria pollutants. Air pollutants associated with vehicle emissions are described in the table below.

Particulate matter (PM) represents a heterogeneous group of pollutants associated with vehicle emissions (WHO 2003). Collectively exposure fine particles are strongly associated with mortality, respiratory diseases and lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease. Based on toxicological and epidemiological research, smaller particles and those associated with traffic appear more closely related to health effects (Schlesinger 2006). PM characteristics that may contribute to toxicity include: metal content; presence of polycyclic aromatic hydrocarbons and other toxic organic components. Other particulate matter characteristics that may be important to human health effects include: mass concentration; number concentration; acidity; particle surface chemistry; metals; carbon composition; and origin.

Motor vehicles aslo emit air toxics. EPA has identified six priority mobile source air toxics, including benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, and diesel exhaust. Similarly, the California Air Resources Board (CARB) has identified 10 air toxics of concern, five of which are emitted by on-road mobile sources: benzene, 1,3-butadiene, formaldehyde, acetaldehyde, and diesel PM (California Air Resources Board, 2001).

Mobile source air toxics are known or suspected to cause cancer or other serious health or environmental effects. Benzene is of particular concern because it is a known carcinogen and most of the nation's benzene emissions come from mobile sources. Diesel exhaust particulate matter (DPM) is a toxic air contaminant and known lung carcinogen resulting from combustion of diesel fuel in heavy duty trucks and heavy equipment.

Air Pollutants and Pollutant Mixtures with Important Motor Vehicle Sources

	Air Pollutant	Source	Health Effects
Criteria Pollutants	**Ozone**	Tropospheric ozone is formed in the atmosphere from chemical transformation of certain air pollutants in the presence of sunlight. Ozone precursors include vehicles, other combustion processes and the evaporation of solvents, paints, and fuels	Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.
	Carbon Monoxide (CO)	Produced due to the incomplete combustion of fuels, particularly by motor vehicles	Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood resulting in fatigue, impaired central nervous system function, and induced angina.
	Particulate Matter (PM_{10} and $PM_{2.5}$)	Diverse sources including motor vehicles (tailpipe emissions as well as brake pad and tire wear, wood burning fireplaces and stoves, industrial facilities, and ground-disturbing activities	Impaired lung function, exacerbation of acute and chronic respiratory ailments, including bronchitis and asthma, excess emergency room visits and hospital admissions, pre-mature arteriosclerosis, and premature death.
	Nitrogen Dioxide (NO_2)	Combustion processes in vehicles and industrial operations	Increase the risk of acute and chronic respiratory disease and reduce visibility
	Sulfur Dioxide (SO_2)	Combustion of sulfur-containing fuels such as oil, coal, and diesel	Increased risk of acute and chronic respiratory
Non-criteria Pollutants	***Diesel exhaust***	Diesel engines	Probable human carcinogen (IARC Group 2A) Diesel engines also emit particulate matter criteria pollutants produced through combustion.
	Benzene	Gasoline engines	Known human carcinogen (IARC Group 1A)
	1,3 butadiene	Motor vehicle engines	Probable human carcinogen (IARC Group 2A)
	Benzo(a) pyrene	Motor vehicle engines	Probable human carcinogen (IARC Group 2A)

Epidemiology of Roadway Proximity Health Effects

Proximity to air pollution sources increases both exposure and hazards. With regards to roadway proximity effects, epidemiologic studies have consistently demonstrated that children living in proximity to freeways or busy roadways have poorer respiratory health outcomes (Delfino 2002). More recent research has found that health effects of roadway proximity may extend to coronary artery disease in adults. Several specific studies of roadway proximity health effects are briefly described below:

- A study of children in the Netherlands found that lung function declined with increasing truck traffic density especially for children living within 300 meters of motorways (Brunekreef 1997).
- Children in Erie County, New York hospitalized for asthma were more likely to live within 200 meters of heavily trafficked roads (Lin 2002).
- Among children living within 150 m of a main road in Nottingham, United Kingdom, the risk of wheeze increased with increasing proximity to the road (Venn 2001).
- In Oakland California, school children at schools in proximity to high volume roadways experienced more asthma and bronchitis symptoms (Kim 2004).
- In a low income population of children in San Diego, children with asthma living within 168 meters of high traffic flows were more likely than those residing near lower traffic flows to have more medical care visits for asthma (English 1999).
- In a study of Southern California School Children, living within 75 m of a major road was associated with an increased risk of lifetime asthma, prevalent asthma, and wheeze (McConnell 2006).
- In a study conducted in 12 southern California communities, children who lived with 500 meters of a freeway had reduced growth in lung capacity relate to those living greater than 1500 meters from the freeway (Guaderman 2004)
- In a study in Cincinnati, residence within 100 meters of stop and go bus and truck traffic predicted infant wheezing (Ryan 2005).
- In a study of German adults, residence within 200 meters of a major road predicted coronary artery calcification (Hoffman 2007). In the same population, residence within 150 meters of a major road predicted manifest coronary heart disease (Hoffmann 2007).

It is important to make clear distinction between specific roadway related health effects due to specific effects of particular air contaminants (e.g., diesel exhaust, benzene), health effects related to hot spots of criteria pollutants (e.g., fine particulate matter, carbon monoxide), and health effects due to the cumulative burden of roadway proximity. Unlike the epidemiological relationship between diesel exhaust and lung cancer hazard, at present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects described above to one or more specific vehicle types or vehicle pollutants.

Intra-Urban Variation in Air Pollution Exposure due to Traffic

Within an area or place, exposure typically varies spatially with higher levels of exposure in proximity to sources of pollution. Roadways are important sources of intra-area variation for several air pollutants.

Several techniques have been employed to help estimate intra-urban variation in air pollutant concentrations dues to roadway sources; these techniques include pollutant monitoring, interpolation, land use regression, and dispersion analysis (Jerrett 2005).

Regional monitoring data conducted for NAAQS standards does not provide monitoring sufficient to adequately define for intra-urban exposure variation or hot spots due to traffic generated air pollutants. However, research in some locations based on measurements of shows that a significant share of spatial intra-urban air pollution variation in ambient levels of $PM_{2.5}$ is due to local traffic sources. For example, measurement of particulate matter along roads in different regions in the Netherlands has found that particle count is 40% higher 100 meters downwind of major traffic sources (Weijers 2004).

Land use regression techniques have been used to create a city-wide or region wide model of exposure based on land use and transportation characteristics (Ryan 2007). Researchers have created land use regression models for nitrogen dioxide validated in Alameda, San Diego, and Los Angeles have all found proximity to traffic to be key predictor of ambient nitrogen dioxide concentrations. A recent analysis in the New York City region found that traffic within 300-500 meters explained 37-44% of the variance of PM 2.5 (Ross 2007). Another analysis in the Los Angeles region found that traffic density within 300 meters along with industrial uses and government land predicted 69% of the variation in regional concentrations of $PM_{2.5}$ (Moore 2007).

Line source dispersion models are another available tool to predict variation of ambient concentrations of pollutants from traffic sources near roadways taking into account meteorological conditions, pollutant type, and other parameters (Jerrett 2005). One published study compared PM2.5 emissions predicted using the CALINE model against actual measures, finding an acceptable correspondence between measured and modeled levels for a suburban setting in Sacramento, California (Yura 2007).

A recent meta-analysis, based on 33 exposure studies, found significant spatial difference exist in multiple traffic related pollutants relative to proximity to busy roadways (Zhou 2007). The meta-analysis focused upon four pollutants; carbon dioxide, nitrogen oxides, particulates and ultrafine particulates. A variety of factors significantly influenced the spatial extent or the area of significant health impact associated with proximity to high traffic roadways. Such factors as background pollutant concentration, chemical reactivity (NO conversion NO2 and ultrafine coalescence to larger particulates), chemical inertness, meteorology, and health significance threshold all served to define the size of the spatial extent. The authors concluded that a 500 meter buffer around a high traffic roadway would be protective under most circumstances.

Roadway Air Pollutants in Infiltration into Indoor environments

Research shows consistent strong correlations between outdoor and indoor concentrations of traffic related air pollutants including constituents of particulate matter, such as benzene and PAHs, and volatile organic compounds, VOC's (Fishcer 2000). In one study, exposure in indoor environments to particulates, measured via light absorption, was 19-26% higher even when accounting for indoor sources such as appliances for cooking and heating (Wichmann 2005).

Sensitive Uses

The CARB Handbook puts the focus of its guidance on "land uses where sensitive individuals are most likely to spend time [including] schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities." It is important to note, however, that air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, population subgroups with higher rates of respiratory disease such as asthma and COPD, populations with other environmental or occupational health exposures that impact cardiovascular or respiratory diseases. Still, the focus on sensitive uses is appropriate because it not possible, within the context of planning, to distinguish sensitive uses with regards to population vulnerabilities

Environmental Justice Issues

Poverty confers a general susceptibility to the health effects of environmental stressors. For example, poorer residents may be more likely to live in crowded substandard housing and be more likely to live near industrial or roadway sources of air pollution. In California, the proportion of children of color living in high traffic density block is inversely related to median family income, and children of color are three times more likely to live in high-traffic areas than white children (Gunier 2003).

II APPLICABLE POLICIES, REGULATIONS, LAWS, AND GUIDANCE

Federal and State Regulation of Criteria Air Pollutants

The USEPA identifies 6 criteria air pollutants that have important human health impacts; these include Ozone (O_3), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. The Clean Air Act requires the EPA to develop specific public health and welfare-based exposure standards for the six criteria air pollutants and directing States to develop plans to achieve theses standards. Nationally, a network of air quality monitors provides information on ambient concentrations of criteria air pollutants. California has state standards for the six criteria pollutants that are more stringent than the federal standards.

Despite promulgation of National Ambient Air Quality Standards for criteria pollutants and implementation of air quality control plans, air pollutants continue to have significant impacts on human health. In part, these ongoing effects are due to non-attainment of air quality standards; however, exposure to air pollutants also results in health impacts even when levels are below existing standards (Johnson and Graham 2005).

Particulate matter is an example of a criteria air pollutant with documented health effects below the NAAQS criteria standards and even$PM_{2.5}$ levels measured below State AAQS are not optimally protective of public health. In fact, there is no scientifically known no-effects threshold for $PM_{2.5}$ suggesting the health benefits from incremental improvements. According to a cost-benefit analysis recently done by the USEPA, reducing the NAAQS for $PM_{2.5}$ by 1 ug per cubic meter from 15 to 14 would result in 1900 fewer premature deaths, 3700 fewer non-fatal heart attacks, and 2000 fewer emergency room visits for asthma each year (USEPA 2006).

Similarly, the 2002 State of California Air Resources Board Air Quality Standards Staff Report for Particulate Matter estimated that significant health effects benefits would accrue from reducing ambient $PM_{2.5}$ from current levels to natural background concentrations for every county in California (CARB 2002). The results of that health benefits analysis conducted for the California Standards is detailed in the table below.

Health Benefits of Reducing Ambient $PM_{2.5}$ to Natural Background Levels for California

Health Outcome	Estimated Benefits of Exposure Reduction
Mortality from Long Term Exposures in people over	9391premature deaths /year
Mortality from Short Term Exposures in all ages	4014premature deaths /year
Chronic Bronchitis	11,414 cases /year
COPD Hospitalizations	1241 hospitalizations /year
Pneumonia Hospitalizations	1791 hospitalizations /year
Cardiovascular Hospitalizations	3180 hospitalizations /year
Asthma Hospitalizations	950 hospitalizations /year
Acute Bronchitis in ages 8-12	32,923 cases/year
Asthma Attacks	344,532 cases/year
Work Loss Days	2,923,535

Federal and State Regulation of Mobile Source Air Toxics

Toxic air contaminants (TACs), including benzene and diesel exhaust, are a category of air pollutants not regulated under Federal Criteria air pollution rules but known to have adverse human health effects, ranging from birth defects to cancer. Toxic air contaminants from mobile Sources are primarily regulated by the Federal government. For example, in February 2007, EPA finalized a rule to reduce hazardous air pollutants from mobile sources (Control of Hazardous Air Pollutants from Mobile Sources, February 9, 2007). The rule will limit the benzene content of gasoline and reduce toxic emissions from passenger vehicles and gas cans and will be fully implemented by 2030.

The Clean Air Act of 1967 also allowed California to regulate vehicles sold within the State and to require those vehicles to meet more stringent emission standards. The California Air Resources Board is responsible for establishing emission standards for vehicles sold in California and has a variety of new programs directed at improving air quality through vehicle emission reduction.

- Amendments to California low emission vehicle regulations will extend passenger car emission standards to sport utility vehicles and pickup trucks.
- New on board diagnostic system regulations requires monitoring of all vehicle functions that may affect vehicle emissions.
- New heavy duty trucks and busses are being required to significantly reduce emissions of diesel particulates and nitrogen dioxide.
- Idling restriction for these large diesel vehicles are also being implemented to reduce exposure to school children and residents.
- The Air Resources Board has created a variety of incentive and grant programs to either upgrade vehicle emissions or remove vehicles from the statewide inventory.

US EPA Rules on Hot Spot Analysis for Transportation Projects

The US Environmental Protection Agency (EPA) currently requires qualitative hot spot analysis for particulate matter (PM) for new transportation projects in Federal nonattainment or maintenance areas for PM10 or PM2.5 (USEPA 2006). Requirements for quantitative hot spot analysis e.g., using dispersion modeling to determine concentrations at receptor locations) are pending EPA speciification of procedures for analysis. This rule does not apply to locating new sensitive uses adjacent to existing roadway pollution sources.

California Air Resources Board Guidance on Land Use-Air Quality Conflicts

The California Air Resources Board does not regulate local land use planning but rather air pollutant emissions from vehicles. However, because of the robust evidence relating proximity to roadways and a range of non-cancer and cancer health effects, the California Air Resource Board created guidance for avoiding air quality conflicts in land use planning in their *Air Quality and Land Use Handbook: A Community Health Perspective* (2005). In the guidance, CARB recommends not locating sensitive land uses, including residential developments, within 500 feet of a highway with more than 100,000 vehicles per day. CARB recommendations relevant to transportation-related land use-air quality conflicts are listed in the table below.

California Air Resource Board Guidance on Land Use-Air Quality Conflicts

Pollutions Source	Recommendations
Freeways and High Volume Roadways	*Avoid siting sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.*
Distribution Centers	*Avoid siting sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where T unit operations exceed 300 hours per week).* *Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.*
Rail Yards	*Avoid siting sensitive land uses within 1,000 feet of a major service and maintenance rail yar* *Within one mile of a rail yard, consider possible siting limitations and mitigation approaches*
Ports	*Consider limitations on the siting of sensitive land uses immediately downwind of ports in the most heavily impacted zones.* *Consult with local air districts for the latest available data on health risks associated with po emissions.*

California Environmental Quality Act

The California Environmental Quality Act CEQA requires an environmental impact report (EIR) where discretionary public agency decision have potentially adverse impacts on the environment (California Public Resources Code. § 21000). The regulations for CEQA specifically require that the EIR discuss "health and safety problems caused by the physical changes" (California Code of Regulations. §15126.2). CEQA standards also require an EIS whenever environmental effects of a project have the potential to cause substantial adverse effects on human beings, either directly or indirectly (California Code of Regulations. §15065). In evaluating significant impacts, CEQA explicitly requires consideration of potential environmental effects resulting from bring people in proximity to environmental hazards. (CCR §15126.2)

The Bay Area Air Quality Management District (BAAQMD) last updated guidance for project level environmental review in December 1999 and current guidance does not address the air quality issues presented in the CARB Air Quality and Land Use Handbook with respect to sensitive receivers.

Most cities do not have do not have specific guidance for the analysis of project-level land use air quality conflicts. However, many jurisidictions including San Francisco do have significance thresholds relevant to potential air quality and heath conflicts from roadways sources. The typical wording of San Francisco's significance threshold relevant to roadway proximity health effects is as follows:

> ***Implementation of the proposed project would have a significant effect on air quality if it would:... Expose Sensitive Receptors to Substantial Pollution Concentrations***

The recent environmental review of the Eastern Neighborhoods Community Plans in San Francisco concluded that rezoning in these areas would likely result significant environmental impacts to new residential uses because of the respiratory health effects of living near busy roadways SFDCP 2007. In this case, the Draft EIR also included innovative mitigations to require residential projects to analyze roadway pollution and mitigate effects on new residential uses through ventilation systems and building design.

General Plan Policies

Most cities in California have General Plans that include an Element developed to protect air quality. For example, the San Francisco's General Plan Air Quality Element establishes a goal of clean air planning to *reduce the level of pollutants in the air, to protect and improve public health, welfare and quality of life of the citizens of San Francisco and the residents of the metropolitan region.* The General Plan also recognized that the majority of air pollutants are generated on roadways from vehicle emissions. Policy 3.7 calls for calls for assessment of air quality hazards through modeling and prevention of new air quality hazards through building design

> **POLICY 3.7 Exercise air quality modeling in building design for sensitive land uses such as residential developments that are located near the sources of pollution such as freeways and industries.** *Project review and approval in the City should consider air quality implications. Certain land uses such as some types of industrial uses and freeways generally emit air pollutants that could be hazardous to human health, particularly that of sensitive receptors such as children, elderly and people with respiratory diseases. When reviewing new housing projects or other land uses to be used by sensitive receptors, location of industrial sites or other sources of air pollution should be considered in the design of the building to orient the air intake of the building away from the sources of pollution. Conversely, future industrial and other air polluting development should consider the existence of sensitive receptors in the vicinity.*

III ASSESSMENT OF AIR POLLUTION EXPOSURE AND HEALTH EFFECTS

In general, urban infill land use development can affect population health effects of air quality in two related ways.

- First, growth and development may result in new local area sources of air pollution through new transportation facilities, greater personal vehicle use, or increased demand for energy.
- Second, growth and development can bring a population in proximity to a pre-existing source of air pollution, like busy roadways, increasing exposure and hazard.

In general, pre-development assessment in areas potentially near hazardous air pollutions sources, such as busy roadways, should include at a minimum: (1) air quality modeling or direct measurement air pollutants under existing conditions; (2) modeling or estimation of future air quality conditions including changes associated with new or proposed uses; (3) identification of sensitive uses and exposed populations; and (4) where necessary, a health effects assessment as described above (BAAQMD 1999). Prevention of adverse air quality health effects requires a close coordination between land use and transportation systems planning. Specific mitigations include circulation changes or traffic demand reduction and filtration of ambient air.

The following assessment steps are designed to evaluate the increase in exposure associated with the specific change in traffic volume and type. Examples of air pollutant modeling and health risk assessment based on this approach are described in Appendix I.

Step 1: Hazard Identification

Prior to development approval, the developer should verify the intensity of area traffic in a 200 meter buffer using available sources of traffic data. The following sources may provide traffic data:

- Caltrans Traffic Data (http://traffic-counts.dot.ca.gov/)
- Local Public Works Departments
- California Environmental Health Tracking Program's (CEHTP) spatial linkage web service to. (http://www.ehib.org/traffic_tool.jsp) Within tool follow the following steps: (1) Select geocode address. (2) Enter address. (3) Select extract traffic metrics. (4) Enter radius in meters of buffer (150, 100, and 50 meters, as below. (5) Submit query. (6) Determine if sum of all unadjusted traffic volumes within buffer exceed potential hazard level.
- Environmental Impact Reports on projects in the area (Typically available from Departments of Planning)

A potential hazard exists if average daily traffic volume exceeds the following thresholds:

- 100,000 vehicles / day within a 150 meter radius
- 50,000 vehicles / day within a 100 meter radius
- 10,000 vehicles /day within a 50 meter radius.
- When heavy diesel bus and truck counts are available they shall be counted as equivalent to 22 vehicles when determining potential hazards (EMFAC, 2007).

The threshold of 100,000 vehicles with a 150 meter radius roughly corresponds to the CARB guidance avoiding sensitive uses. Thresholds for 100 meters and 50 meters are equivalent with regards to area traffic volume density.

Infill development is permissible in areas where the average daily traffic volumes are below these thresholds. Further analysis of hazards is generally not indicated if vehicle volumes fall below the above criteria.

Step 2: Exposure Estimation

Exposure modeling should occur for all sites a potential air quality hazard. As discussed above, assessment of air pollution using community wide monitoring data does not provide estimates of actual population exposure within a city and specifically within-area variation in air pollution hazards due to roadways. Exposure to roadway related air pollutants can be roughly estimated using distance or proximity to a pollution source as a proxy for exposure, however, this approach does not account for traffic characteristics, facility characteristics and meteorology. Exposure can be estimated using repeated measurements over representative traffic volume and meteorological conditions, but reliable exposure monitoring and evaluation requires multiple measurements over a period of multiple seasons.

For planning purposes, exposure can be more rapidly and efficiently estimated using Gaussian dispersion models based on physical characteristics of emissions, meteorology, link type (bridge, elevated, level, or canyon) and receptor horizontal and vertical location. A particular advantage of this technique is that line source regression models have also been used in health effects research relating roadways to adverse health outcomes and there is an established relationship between modeled exposures and health effects (Jerrett 2005).

The CAL3QHCR Line Source Dispersion Model Version 2.0, an enhanced version of CALINE3, is an example of a line source dispersion model that can be used to calculate exposure to an air pollutant at a development site due to roadway vehicle traffic (USEPA 2008). The USEPA recognizes CAL3CHCR as a preferred model for air quality modeling. The model further allows for the use of up to three years of hourly meteorological data in the calculation of receptor exposure. The Sacramento Metropolitan Air Quality District's (SMAQMD) in their recently upgraded CEQA guidance recommends CAL3QHCR should be used in assessment of roadway proximity health risks as the dispersion model to estimate PM_{10} concentrations at defined receptor locations by processing hourly meteorological data over a year, hourly emissions, and traffic volume (SMAQMD 2007).

This guidance suggest that prior to approval of a sensitive use in proximity to a busy roadway, development should model PM 2.5 concentrations attributable to existing and future area traffic for receptors at project site using the CAL3QHCR or anther equivalent methodology. Modeling should estimate both annual average and worst day (24-hour) exposure levels. Receptors may be located in a grid around a proposed development. Discrete receptors must be placed at a minimum at 6 receptors per acre and in the case of multiple storied buildings at ground, middle and rooftop locations which reflect potential worst case exposures. In addition receptors should be placed at the locations of all fresh air intakes. Discrete and grid receptors should encompass the perimeter of the project to include sensitive receiver locations closest to traffic. Suggested Data Sources for Model Parameters are listed below. A variety of graphic user interface programs exist for the CAL3QHCR model which simplify its use and implementation. One such modeling interface is the CAL-Roads View Interface Program produced by Lake Environmental (Lake Environmental 2006).

Model Parameter	Data Source and Typical Assumptions
Traffic data	Average hourly traffic volume (AADT/24hours).
Vehicle Emissions rates	California Air Resources Board EMFAC 2007. Emission in grams/mile is calculated by weighting known automobile, truck, and other type percentages.
Traffic speed	25mph local, 30 mph arterial, 55mph freeway
Temperature and Humidity	Area Annual Average (e.g., 50% relative humidity, and 50 degrees F)
Surface meteorology	Best available 3 year meteorology from BAAQMD
Number of Receptors	Minimum six receptors per acre. Grid receptor in Calroad. Receptors set at expected exposure heights.

Step 3: Threshold Evaluation for Action and Mitigation

In this protocol, PM 2.5 serves as a proxy for pollutant exposures from vehicles, and PM 2.5 is not the only pollutant of concern associated with vehicles or vehicle proximity. No federal, state, or local agency has adopted a health-based standard for evaluating roadway related pollution hot spots related to particulate matter. Based on available research, SFDPH therefore provides the following threshold to trigger action or mitigation.

0.2 ug /m3 of PM 2.5 annual average exposure from roadway vehicles within a 150 meter buffer of a sensitive receptor

The rationale for this threshold is enumerated below:

- A threshold of 0.2 ug / m3 represents about 8-10% of the intra-urban range of PM 2.5 ambient concentration based on available and reliable monitoring data in San Francisco.
- A change in ambient concentration of PM 2.5 by 0.2 ug /m3, independent of other vehicle pollutants would result in significant forecasted health impacts.
    - Based on a recent study of intra-urban pollution in Los Angeles, a 0.2 ug /m3 increase in PM 2.5 would result in a 0.28% increase in non-injury mortality or an increase of about twenty-one excess death per 1,000,000 population per year from non-injury causes in San Francisco (Jerrett 2005). This effect is well above the one-in-a-million lifetime *de minimus* risk threshold for premature death considered insignificant by most regulatory agencies (Asante-Duah 2002).
    - Applying the health effects assessment methodology and Concentration Response Functions in the CARB Staff Report on AAQS for PM published in 2002. A 0.2 ug /m3 increase in PM2.5 affecting a population of 100,000 adults would result in about 20 extra premature deaths per year (CARB 2002). This effect is well above the one-in-a-million lifetime *de minimus* risk threshold for premature death considered insignificant by most regulatory agencies (Asante-Duah 2002).

- A 0.2 ug /m3 increase in PM2.5 would also result in ~160 days per year with respiratory symptoms, 108 days with work limitations, and 577 days with minor activity limitations in the same adult population.

Step 4: Health Effects Analysis

If estimated exposure from near traffic sources is below the 0.2 ug/m3 Pm 2.5 action level for mitigation or if traffic exposures are fully mitigated, this guidance considers development permissible and completion of *Step 4: Health Effects Analysis* is not needed. Health effects analysis may still be desirable even where exposure levels are below the above action threshold to inform stakeholders or decision-makers. Health effects analysis may also be important to inform or motivate additional mitigations.

Forecasting heath effects associated with changes in exposure requires a concentration-response function, estimates of exposure, and baseline incidences of health effects. Concentration-response functions are equations that relate a change in the incidence of an adverse health outcome to the change in an ambient concentration of a pollutant and are typically based on regression analyses from epidemiological studies (WHO 2001). This approach has been used by the US Environmental Protection Agency and the State of California Air Resources Board for Particulate Matter in standard setting for particulate matter (CARB 2002).

Estimating Health Effects from Roadway PM 2.5 Concentrations

This guidance suggests predicting traffic-related PM 2.5 exposure effects on excess mortality from all non-injury causes based on a recent intra-urban air pollution and health study in Los Angeles. Simply stated, estimating excess mortality from a roadway source involves multiplying an estimate of PM2.5 exposure from existing and new traffic sources expressed in ug/m^3 (using CAL3QHCR as described above or an equivalent exposure model) times the crude incidence of mortality from non-injury causes times an effect measure for PM2.5 and mortality.

$$\textbf{Excess Mortality}_{\text{Traffic Attributable PM 2.5}} = (\textbf{Concentration}_{\text{Traffic Attributable PM 2.5}})\ (\textbf{Incidence}_{\text{Non Injury Mortality}})\ (\textbf{Relative Risk}_{\text{PM2.5}})$$

The relative risk (effect measure) in this formula, 0.014, is derived from the study by Jerrett et al. (2005) showed that every 1.0 ug /m3 increase in PM 2.5 results in a 1.4% increase in annual mortality incidence from all non-injury causes. The dose response relationship is consistent with other epidemiologic studies and can be extrapolated to other urban settings to provide a rapid estimate of health effects associated with intra-urban variation in PM 2.5 exposures. California Vital Statistics data or local county public health departments are sources of baseline crude mortality rates for specific categories of causes. The case study in the appendix provides an example of the application of this method.

Estimating Health Effects from Mobile Source Air Toxics

Estimating health effects, including cancer risks, from mobile source air toxics can be complimentary to the estimation of health effects from PM 2.5 described above. A common means of assessing cancer risk is to multiply an estimate of exposure to each carcinogenic substance by a Unit Risk Factor (URF) for that substance. This produces an estimate of excess risk of cancer over a lifetime of exposure. For example, to estimate excess cancer risk from diesel particulate matter exposure from a roadway source on a sensitive use, one would use PM 10 as a conservative estimate of diesel vehicle exhaust emissions. Using EMFAC 2007 to estimate PM 10 emissions and modeling those emissions in CAL3QHCR an annual diesel exposure can be approximated. Multiplying this exposure by the an inhalation cancer risk unit risk factor (URF) diesel exhaust $(3.0 \times 10^{-4} \cdot ug/m^3)^{-1}$ in order to produce an estimate additional lifetime cancer probability.

Excess Lifetime Cancer Risk $_{\text{Traffic Attributable DPM}}$ **= (Traffic** $_{\text{DPM}}$**) (Unit Risk Factor** $_{\text{DPM}}$**)(1 million population)**

Using this method, a roadway contribution of DPM of 1 ug/m^3 translates into risk of 300 excess cancers per one million people exposed over a lifetime ($300 = 1 \times 3.0 \times 10^{-4} \times 10^6$). Examples of the application of Unit Risk Factors are provided in the modeling examples in the Appendix on page 27.

A similar approach may be taken for other air toxics using an appropriate modeling tool for exposure from a roadway source. The table below enumerates unit risk factors for human cancer risk for several priority mobile sources assigned by the California Office of Environmental Health Hazard Assessment (OEHHA).

If health effects on cancer incidence are estimated, analytic protocols should follow the State of California guidance documented in OEHHA's Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessment (2003). If cancer risks are estimated, a risk of one in a million as stipulated in the Hot Spots Program (AB 2588) may be used as a thresholds for significant hazards and effects should be estimated for each USEPA priority Mobile Source Air Toxics

OEHHA Unit Risk Factors (expressed in $(mg/m^3)^{-1}$) for USEPA priority Mobile Source Air Toxics

Pollutant	**OEHHA URF**
Acetaldehyde	2.7×10^{-6}
Acrolein	N/A
Benzene	2.9×10^{-5}
1,3-Butadiene	1.7×10^{-4}
Formaldehyde	6.0×10^{-6}
DPM	3.0×10^{-4}

IV MITIGATION OF ROADWAY—SENSITIVE USE AIR QUALITY CONFLICTS

The California Air Resource Board, Air Quality and Land Use Handbook: A Community Health Perspective (2005) made recommendations to avoid locating sensitive land uses, including residential developments, within specific distances of certain known sources of toxic air contaminants (CARB 2005). Specific CARB recommendations for the location of residential uses relative to air pollution sources are listed in the table above. This guidance anticipates that some cases sensitive uses will be proposed or considered within the exclusion zone recommended by CARB and thus provides an approach to air quality assessment and mitigation within recommended zones of exclusion.

Mitigations to prevent impacts on air pollution exposures from roadway sources should follow comprehensive air quality assessment. This guidance recommends that the approach to mitigation should follow the following hierarchy:

1. **Changing Vehicle Circulation or Reducing Traffic**
2. **Locating Sensitive Uses To Minimize Exposure**
3. **Providing Ventilation Systems To Mitigate Roadway Exposures**

Tier 1: Changing Circulation or Reducing Traffic Volumes

Reducing the volume of traffic on streets programmed for residential or mixed-use residential use could significantly decrease the impacts of roadways on air pollution exposure. Circulation changes that would re-route through traffic around proposed new residential and mixed-use residential areas would reduce or displace the location of air pollution hot spots. Re-routing heavy duty truck and freight routes away from residential and mixed use residential areas could have a similar air quality benefit with regards to diesel emissions exposure. In considering circulation changes, it is important to prevent re-routing traffic or heavy duty truck and freight routes to other areas with existing or proposed sensitive uses.

Lowering traffic volumes via a comprehensive area wide traffic demand reduction program could also reduce exposure. The Metropolitan Transportation Agency, the Bay Area Air Quality District, and the South Coast Association of Governments are resources for the identification and evaluation of TDM measures. Vehicle emissions programs such as URBEMIS also allow a planner to estimate the effectiveness of a package of TDM measures on trip generation (URBEMIS 2008).

Tier 2: Locating Sensitive Uses To Minimize Exposure

Exposure analysis may suggest that pollutant concentrations vary across a project site. In this case, results from the exposure analysis can be used to situate sensitive uses within the lowest exposed areas available. If concentrations are below action levels or other levels of concern, further mitigation may not be indicated.

Tier 3: Providing mechanical ventilation systems with fresh air filtration.

When reducing traffic or locating residential uses in the areas of the project not impacted by roadway air pollutants is not feasible, residential uses should incorporate mechanical ventilation systems with ambient air filtration to mitigate exposure particulates and other pollutants of concern. The design of ventilation mitigations to protect sensitive uses from higher levels of pollution from mobile roadway sources should follow hazard and exposure assessment.

If the project anticipates operable windows or other sources of infiltration of ambient air, this guidance recommends that the development install a central HVAC (heating, ventilation and air conditioning) that includes high efficiency filters for particulates (MERV-13 or higher). If required, based on exposure measures, the system could also include a carbon filter to remove other chemical matter. The system should operate to maintain positive pressure within the building interior to prevent entrainment of outdoor air indoors.

Alternatively, if the development limits infiltration though non-operable windows and other techniques, it may reduce the need (and energy requirements) for maintaining building at positive pressure. Minimum design standards for a ventilation conditioned on low-infiltration would include the following: (1) ASHRAE MERV-13 supply air filters; (2) >= 1 air exchanges per hour of fresh outside filtered air ; (3) >= 4 air exchanges / hour recirculation; and (4) <= 0.25 air exchanges per hour in unfiltered infiltration. Systems with the above parameters should remove 80% of fine particulate matter mitigating all expected additional roadway effects of particulates and having added health benefits in terms of reducing allergen loads (Fisk 2001).

In either case, air intake systems for HVAC should be placed based on exposure modeling to minimize roadway air pollution sources. A licensed mechanical engineer should certify that the designed HVAC system offers the best available technology to minimize outdoor to indoor transmission of air pollution.

The developer should also ensure an ongoing maintenance plan for the HVAC and filtration systems. Residential project developers should disclose to buyers the findings of air quality evaluations. Developer should inform occupant's regarding the proper use of any installed air filtration.

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APPENDIX I-- EXPOSURE MODELING AND HEALTH RISK ASSESSMENT EXAMPLES FROM SAN FRANCISCO

Several examples below illustrate the use of CAL3QHCR by the San Francisco Health Department to model $PM_{2.5}$ concentration from high volume roadways at potential sensitive receptors for several locations in San Francisco. For some sites in the examples, the examples include estimates of human health hazards attributed to roadway pollutants. The reader should note that modeled pollutant concentrations do not take into account background concentrations or non-roadway sources and health risk assessments do not address all roadway pollutants. Model Parameters, sources, and assumptions for this case study are listed in the table below.

Model Parameter	**Data Sources and Assumptions**
Traffic data	California Department of Transportation Traffic Data (Peak hour traffic volume. Annual average traffic volume. Percentage of Truck Traffic)
Vehicle Emissions rates	California Air Resources Board EMFAC 2007
Traffic speed	25mph local, 30 mph arterial, 55mph freeway
Temperature and Humidity	Area Annual Average (e.g., 50% relative humidity, and 50 degrees F)
Surface meteorology	San Francisco International Airport (Available at the Meteorological Resource Center, http://www.webmet.com/State_pages/met_ca.htm)
Number of Receptors	Minimum six receptors per acre
PM 2.5 Concentration Response Function	Jerrett et al. 2005 (1.4% Increase in Rate of Non-Injury Mortality per unit ug /m^3 increase in PM 2.5)
Cancer Unit Risk Factors for	Office of Environmental Health Hazard Assessment 2002
Crude Non-Injury Mortality Rate	California DPH County Health Status Profiles 2006 (733 /100,000)

Example 1: Executive Park

Example 1 is an air quality analysis of Executive Park, a proposed mixed use residential community adjacent to and to the east of US 101 at the southern border of San Francisco. Figure 1 illustrates modeled annual average PM 2.5 concentrations and modeled DPM concentrations attributable to roadway emissions. The subsequent table provides findings including estimates of exposure from vehicle sources along with associated health effects. The modeled roadway attributable concentrations of PM 2.5 range from <0.10 to 0.5 at the project site. This concentration translates into a 0.7% excess annual risk of mortality for those exposed or 51 excess premature deaths per million people exposed at the location of highest exposure. The maximum modeled level of diesel particulate matter in the Executive Park Project was 0.2. The excess lifetime Cancer Risk attributable to traffic diesel particulate matter (DPM) would be 0.2 ug/m^3 times the unit risk factor for DPM of 3.0 x 10^{-4} times 10^6 population for an addition lifetime risk of 60 cancers in one million exposed people.

Figure 1 Spatial Extent of Roadway Emissions of PM 2.5 at the Executive Park Project Site from US 101 at Alana Street (Annual Average ugs/ m^3**).**

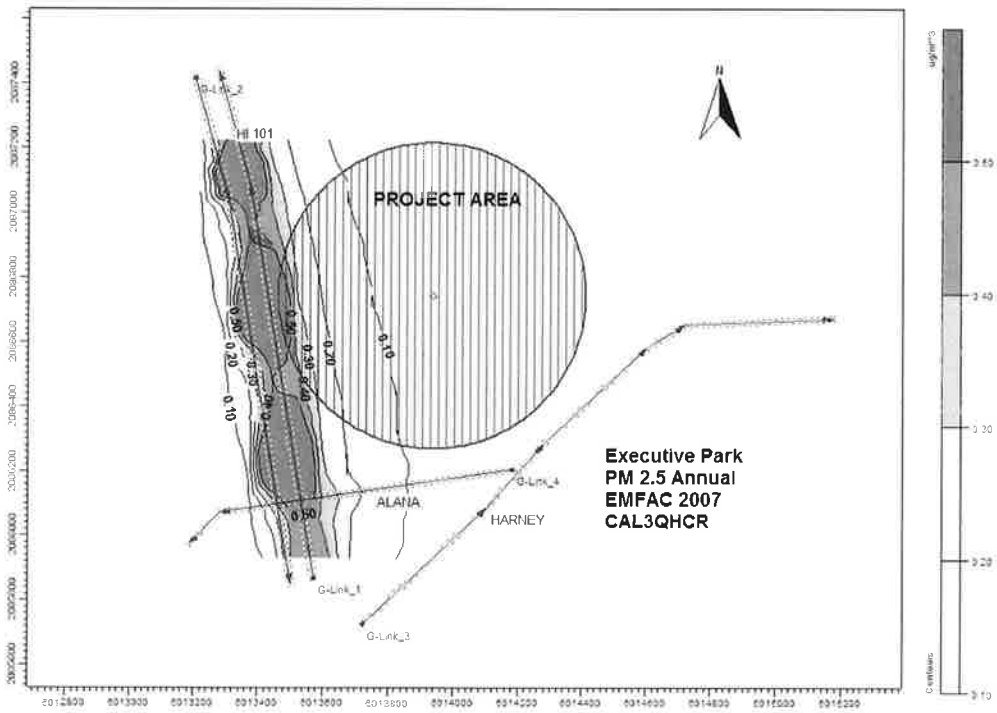
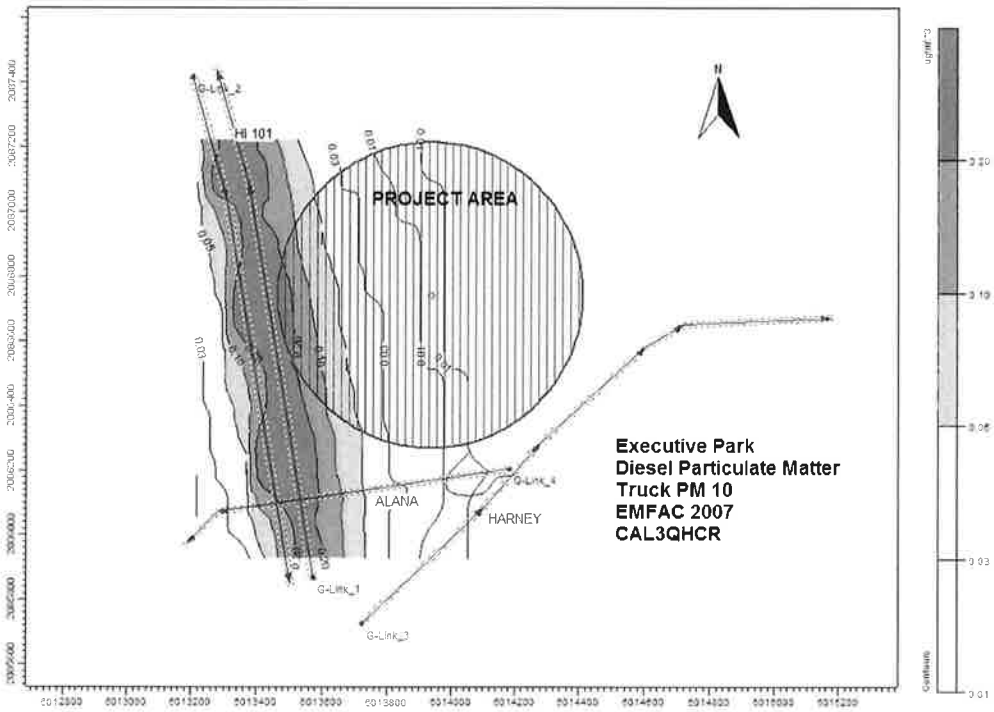


Figure 2. Spatial Extent of Diesel Particulate Matter (DPM) at the Executive Park Project Site from US 101 at Alana Street (Annual Average ugs/ m^3).



Modeled $PM_{2.5}$ and Diesel PM Concentrations from Roadway Sources and their Associated Mortality Hazards for the Project Site for the Executive Park Sub Area Plan in San Francisco

Roadway Location & AADT	Roadway PM 2.5 Concentration at Project Site (ugs/ m3)	Mortality Hazard Attributable to Roadway PM 2.5 based on highest site concentration	Roadway DPM Concentration at Project Site	Cancer Hazard Attributable to Roadway Diesel PM based on highest site concentration
US 101 @ Alana 216,000 vehicles/day	0.10 – 0.5 ugs/ m^3	10-51 excess deaths per million population per year	0.01 – 0.2 ugs/ m^3	60 excess cancers per million population

Example 2: 129 Girard Street Project, San Francisco

This example looks at a single family residential development on the upwind side of the Highway 101, Highway 280, Silver Avenue, and Bayshore Boulevard interchange. The impact of prevailing wind from the West disperses much of the particulate matter away from the development site and toward the downwind side of the freeway. Exposures above the action threshold can be seen to impact much of the Silver Terrace neighborhood including a significant portion of the Silver Terrace Playground shown below in green. The development site, however, is exposed below the action threshold. A similar analysis of the diesel particulate matter threshold is seen in Figure 4. Again the downwind dispersion of prevailing westerly wind results in low exposures at the development site.

Figure 3 Spatial Extent of Particulate Matter 2.5 at US 101 I-280 Interchange at Silver Avenue.

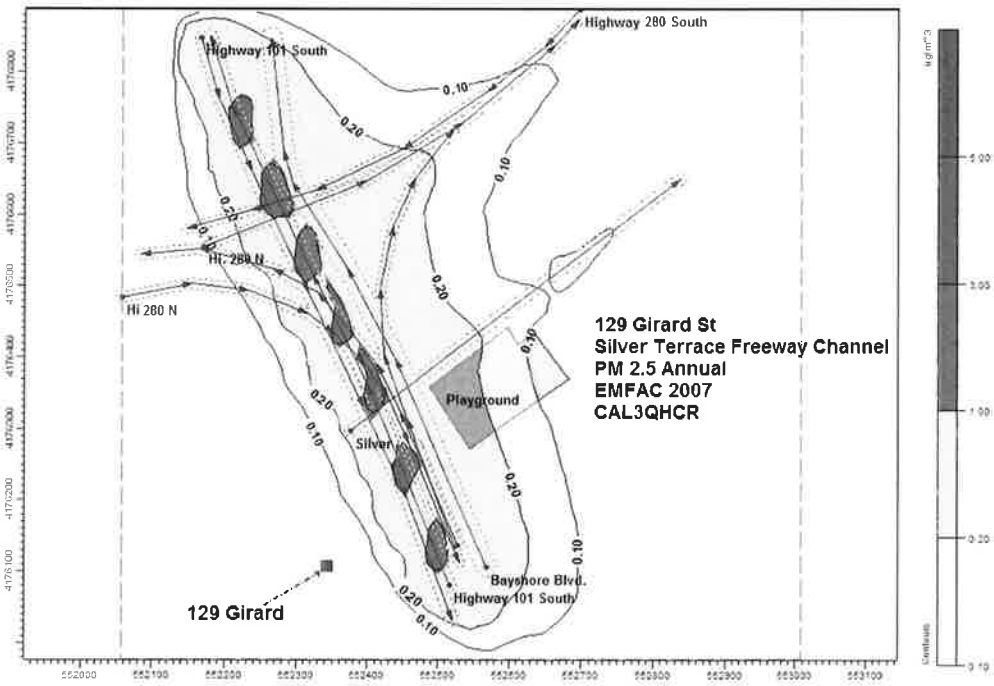
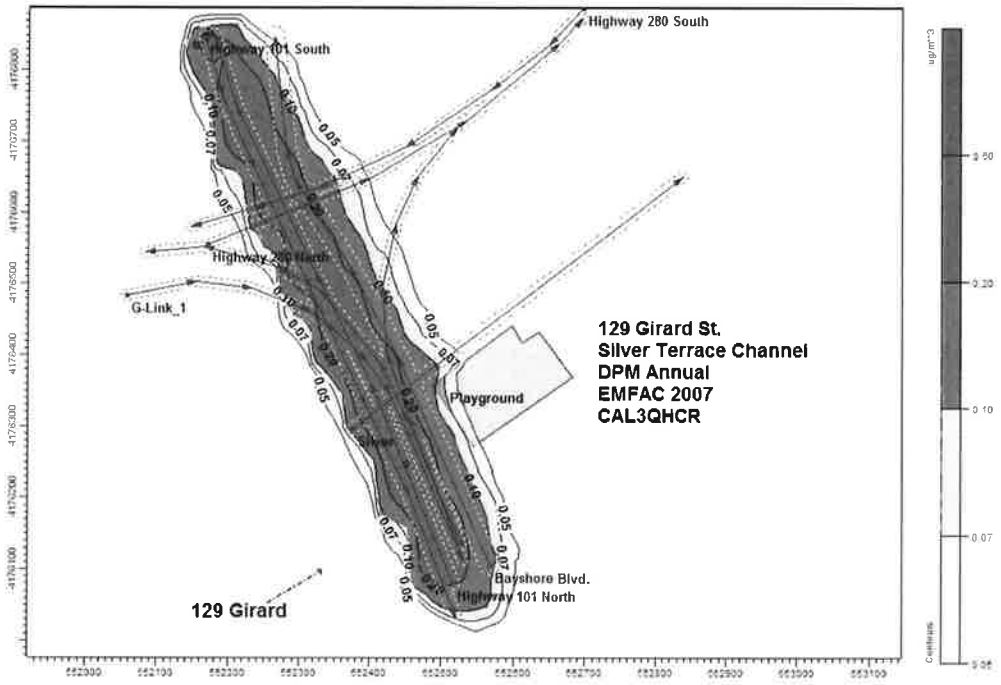


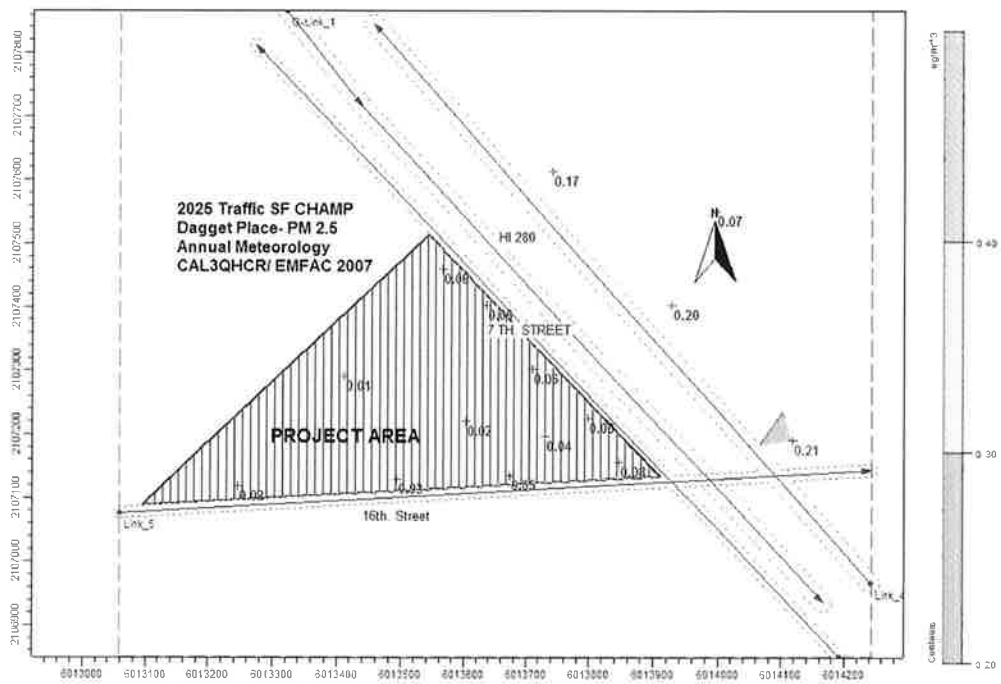
Figure 4 Spatial Extent of Diesel Particulate Matter at US 101 I-280 Interchange at Silver Avenue.



Example 3: Dagget Place Project, San Francisco

Example 3 demonstrates the use of the San Francisco County Transportation Authority traffic model, SF CHAMP, and the model's ability to predict future traffic volumes to the year 2025. In addition, EMFAC 2007, the California Air Resources Board's emission model produces traffic emissions for 2025 by including anticipated improvements in vehicle traffic emissions over time. In this development the effect of prevailing westerly wind, future emissions, and future traffic volumes results in exposure levels at the site beneath the action level of 0.2 ug/m^3. On the other hand, exposures at a similar development on the downwind side of Highway 280 would exceed the action level of 0.2 ugs/m^3.

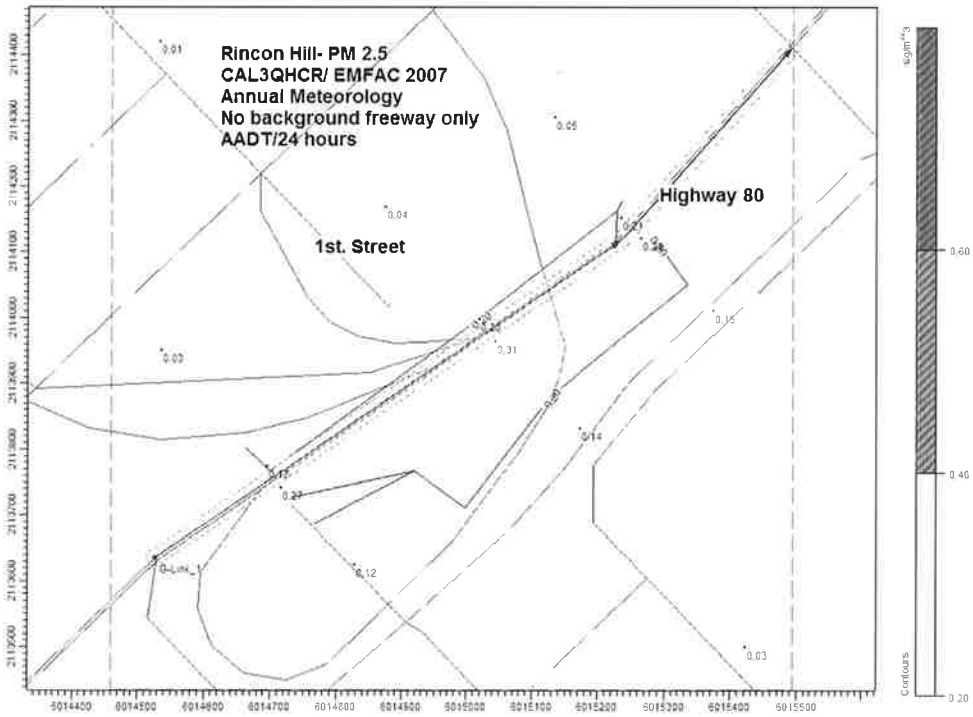
Figure 5 Spatial Extent of Particulate Matter 2.5 from Roadway Emissions at I-280 at 16th Street, San Francisco (Modeled as Annual Average).



Example 4: Rincon Hill, San Francisco

Example 4 represents the modeling of the Rincon Hill Tower on First St. near Highway 280. Again the effect of prevailing westerly wind can be seen with much of the particulate dispersion downwind of the development site. If this same development was located on the downwind side of the freeway it would have exceeded the action level and been subject to health risk assessment similar to Example 1, Executive Park, and would have required mitigations including strategic location of supply air inlets as well as possible filtration.

Figure 6 Spatial Extent of Particulate Matter 2.5 from Roadway Emissions at I-80 at 1st Street, San Francisco (Modeled as Annual Average).



APPENDIX II—AIR QUALITY MONITORING DATA FOR SAN FRANCISCO

In San Francisco, the Bay Air Quality Management District maintains one station for routine collection of monitoring data on criteria air pollutants on Arkansas Street. Criteria air pollutant monitoring data from that station is available at the URL: http://gate1.baaqmd.gov/aqmet/aq.aspx.

Some finer grained long term monitoring for Particulate Matter has recently been conducted in San Francisco for PM_{10} and $PM_{2.5}$ from several community stations contemporaneous with the BAAQMD measures. Sierra Research conducted the monitoring which started in early July 2005 and continued through late March 2006. Monitoring took place at two locations in Bayview/Hunters Point and two locations in Potrero at sites were chosen to be representative of community exposures. The study also monitored at the BAAQMD Arkansas Street monitoring station so that we could directly compare the BAAQMD measurements with those from our program.

Monitoring demonstrated that particulate matter measures (as an annual average) ranged from 16.9 to 20 ugs/m^3 fro PM_{10} and from 7.6 to 9.3 ug/m3 for $PM_{2.5}$. The results of the study are described in the tables below.

PM10 (ug/m3) Monitoring Results from San Francisco Electric Reliability Project

	Monitor Location	BAAQMD Arkansas St	Arkansas St	Southeast Community Center	Muni Maintenance Yard	Potrero Recreation Center	Malcolm X Academy	California Ambient AQ Std
PM 10	Average	19.0	18.6	18.3	20.0	16.9	17.5	20
	Maximum	46.8	45.3	41.5	45.0	36.7	35.2	50
PM 2.5	Average	9.1	8.9	9.3	8.9	7.6	7.9	12
	Maximum	27.7	22.8	22.2	22.7	16.1	18.4	None

Exempt from Filing Fees pursuant to Government Code section 6103

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SUPERIOR COURT OF CALIFORNIA
COUNTY OF RIVERSIDE

FEB 14 2013

G. Reyes

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE, a not-for-profit corporation, Petitioner, v. **COUNTY OF RIVERSIDE; CITY OF JURUPA VALLEY; and DOES 1 through 10, inclusive,** Respondents, **INVESTMENT BUILDING GROUP, a corporation; OBAYASHI CORPORATION, a corporation; DENNIS ROY ARCHITECT, INC., doing business as RGA OFFICE OF ARCHITECTURAL DESIGN, a corporation; O C REAL ESTATE MANAGEMENT, LLC, a limited liability corporation; SP4 DULLES LP, a limited partnership; and DOES 11 through 20, inclusive,** Real Parties in Interest,	Case No. RIC1112063 **[redacted] CONSENT JUDGMENT** **(Code Civ. Proc., § 664.6)** **Judge: Honorable Sharon Waters** **Dept: 1** **Action Filed: July 19, 2011**
PEOPLE OF THE STATE OF CALIFORNIA, ex rel. Kamala D. Harris, Attorney General, Intervenor/Petitioner.	

This Consent Judgment and Stipulation for Entry of Final Judgment ("Consent Judgment") is hereby stipulated and agreed to by, between, and among the County of Riverside ("County"), the City of Jurupa Valley ("City"), Obayashi Corporation, SP4 Dulles LP, and Investment Building Group as the general partner for the property owner 54 DeForest Partnership L.P. (collectively, "the Real Parties," or "RPIs"), the Center for Community Action and Environmental Justice ("CCAEJ"), and the People of the State of California ex rel. Kamala D. Harris, Attorney General, ("People") (each of whom shall be referred to individually as a "Party" or collectively as the "Parties") to resolve all claims and actions raised in the above-captioned litigation, *Center for Community Action and Environmental Justice at el. v. County of Riverside et al.*, Riverside County Superior Court Case No. RIC1112063 (the "Litigation"), as follows:

I. RECITALS

A. On or about June 14, 2011, the County approved the Real Parties' proposed development of Plot Plan Nos. 16979, 17788, 18875, 18876, 18877, and 18879 on 65.05 gross (60.37 net) acres with a total building area of 1,134,268 square feet ("The Project"). The County's Project approvals included the adoption of Resolution Nos. 2011-170 and 2011-171, the certification of Environmental Impact Report ("EIR") No. 450, and the adoption of the Mitigation Monitoring and Reporting Plan.

B. On or about July 19, 2011, CCAEJ filed a Petition for Writ of Mandate and Petition for Injunctive Relief against the County, City, and Real Parties asserting alleged violations of California Environmental Quality Act ("CEQA") and Government Code section 11135 related to the County's approvals of the Project and certification of the EIR.

C. On or about October 5, 2011, the People filed a Complaint in Intervention and Petition for Writ of Mandate against the County, City, and Real Parties asserting alleged violations of CEQA related to the Project.

D. The Parties agree that this Consent Judgment is a full and complete resolution of all claims that have been asserted in the Litigation, and further that the Parties covenant not to sue on certain other claims set out in paragraphs 4, 8, 11, and 12 of this Consent Judgment.

E. The Parties agree that this Consent Judgment is entered into with the goal of achieving global settlement of any and all claims in the Litigation.

II. JURISDICTION

The Parties agree that the Superior Court of California, County of Riverside has subject matter jurisdiction over the matters alleged in this Litigation and personal jurisdiction over the Parties to this Consent Judgment.

III. TERMS

NOW THEREFORE, in consideration of the mutual covenants, agreements, representations, and warranties contained in this Consent Judgment, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby stipulate and agree to entry of this Consent Judgment, and agree to the terms as set forth below.

A. Exhibit "A".

1. All Parties agree to comply with the terms set forth in Exhibit "A" and accompanying Attachments, attached hereto and incorporated herein by reference.

B. The City's Obligations.

2. The City's execution of this Consent Judgment shall constitute final approval of any and all additional Project mitigation measures or Project features described in Exhibit "A" and accompanying attachments of this Consent Judgment. The Project approvals previously issued on or about June 14, 2011, shall be fully and finally effective on the date the Consent Judgment is entered by the Court, subject to the conditions of approval and mitigation measures set forth in this Consent Judgment or previously required.

3. The City further agrees that, in calculating the expiration date for any and all Project approvals under the Project Condition of Approvals, the Subdivision Map Act, or other laws, the expiration date for those Project approvals shall not include the period of time during which this Litigation was pending. All applicable time periods associated with the Project approvals shall be stayed and extended for a time period commencing with the date the Petition in this Litigation was filed in the Superior Court for Riverside County and ending on the date the Consent Judgment is entered by the Court.

4. City's Covenant Not to Sue. The City covenants not to pursue any civil or administrative claims against the People or against any agency of the State of California arising out of or related to the Litigation.

C. Real Parties' Obligations.

5. Without admitting any liability, and in consideration of the terms of the Consent Judgment, as a compromise and settlement only, and as full and final settlement of all outstanding claims for attorneys' and consultants' fees and costs of suit related to the Litigation, Real Parties agree to make three payments, as described in the following paragraphs.

6. Real Parties agree to pay the sum of $103,000 to CCAEJ (the "Settlement Payment 1"). The Settlement Payment 1 will be in the form of a check made payable to "Johnson & Sedlack Client Trust Account" to be delivered to CCAEJ's counsel, Ray Johnson, within five (5) business days after the entry of this Consent Judgment. Except as set forth in this Paragraph, CCAEJ and their legal counsel specifically waive any right and/or claim to any additional attorneys' fees, costs, and/or consultant fees related to this Litigation and/or the Project.

7. Real Parties shall pay to the City the actual attorney fees and litigation expenses incurred by the City in this Litigation, not to exceed Fifty Thousand Dollars ($50,000). Upon the execution of this Consent Judgment by the Parties, the City shall notify the Real Parties of the total amount of its attorney fees and litigation expenses and the Real Parties shall pay said amount to the City within thirty (30) days of the date of entry of this Consent Judgment via check made out to City of Jurupa Valley.

8. Real Parties' Covenant Not to Sue. The Real Parties, and each of them, covenant not to pursue any civil or administrative claims against the People or against any agency of the State of California arising out of or related to the Litigation.

9. Timing of Payments Required by Exhibit "A". Within thirty (30) days of the entry of this Consent Judgment, Real Parties shall establish an escrow account with First American, the purpose of which shall be to hold in escrow the monetary sums set forth in Exhibit "A" that require Real Parties to make a monetary payment to the City. City shall maintain, including all administrative costs, the escrow account once established. These monetary sums shall be

deposited by the Real Parties in such a manner as to ensure release of those sums to the City as follows:

a. $30,000 shall be released to the City in satisfaction of the Real Parties' obligation under the "Anti-Idling Enforcement" term within thirty (30) days of the entry of this Consent Judgment.

b. $20,000 shall be released to the City in satisfaction of the Real Parties' obligation under the "Restricted Truck Route" term following the City's execution of a contract with a consultant retained to study and prepare environmental documentation of the restricted truck route and within ten (10) days of the city provision of written notice to the Real Parties of same.

c. $20,000 shall be released to the City in satisfaction of the Real Parties' obligation under the "EJ Element in General Plan" term within twelve (12) months of the entry of this Consent Judgment or within two (2) weeks of the City's issuance of its Notice of Preparation or Notice of Intent prepare a CEQA document for its General Plan or an amendment to its General Plan that includes an EJ Element, whichever is sooner.

D. CCAEJ's and People's Obligations.

10. Duty Not to Object or Disrupt Process for Project Approval. CCAEJ, and each of their individual members have represented to all other Parties that they support this Consent Judgment and the Project with the conditions imposed by this Consent Judgment. CCAEJ, on behalf of itself, its current and future members, agents, successors, assigns, designees, affiliates, and officers, will not directly or indirectly object, oppose, delay, frustrate, or disrupt the full and complete approval of the Project – including the issuance of any grading permit, building permits, certificates of occupancy, or any other permits necessary for the implementation of the Project – subject to the terms and conditions of this Consent Judgment, nor will they directly or indirectly encourage or fund others to undertake those actions. CCAEJ, on behalf of itself, its current and future members, agents, successors, assigns, designees, affiliates, and officers, further agree that

they will not submit or provide verbal or written comments to any decision-making body or public agency, or any other public agency that must issue a Project approval, that are critical of the Project or are intended to object to or oppose the full and complete approval of the Project, subject to the terms and conditions of this Consent Judgment. Further, CCAEJ, on behalf of itself, its current and future members, agents, successors, assigns, designees, affiliates, and officers, further agree that they will not directly or indirectly encourage or fund others to undertake the aforementioned actions.

11. CCAEJ's Covenant Not to Sue. CCAEJ, for itself and its current and future members, agents, successors, assigns, designees, affiliates, and officers, agree not to initiate, commence, or participate in any administrative appeal or lawsuit against the County, the City, the Real Parties, or any other public or private entity or the members, affiliates, partners, employees, or officers thereof relating to the Project's environmental review or approval – whether under CEQA, land use, or any other laws – except to enforce the terms of this Consent Judgment. CCAEJ, for itself and its current and future members, employees, agents, successors, assigns, designees, affiliates, and officers, shall not sue (i.e., initiate, commence, or participate in any administrative appeal or lawsuit) to invalidate the Project and the use or modification of the Project including, but not limited to, any approvals needed for the development of any phase of the Project, as long as the development or use is consistent with the terms of this Consent Judgment. CCAEJ, for itself and its current and future members, employees, agents, successors, assigns, designees, affiliates, and officers, further agree not to directly or indirectly encourage or fund others to undertake any of the actions described in this paragraph. The CCAEJ specifically retains, however, the right to assert a claim, demand or cause of action challenging any failure by the County, the City, or Real Parties to comply with this Consent Judgment.

12. People's Covenant Not to Sue. The People agree not to initiate, commence, or participate in any administrative appeal or lawsuit against the City, the Real Parties, or the members, affiliates, partners, employees, or officers thereof for: (a) the claims that were raised in the Litigation; and (b) other CEQA claims that could have been asserted by the People based upon the acts, omissions, and/or events that are alleged in the People's Complaint in Intervention

or that relate to the County's Project approvals issued on or about June 14, 2011. The People specifically retain, however, the right to assert a claim, demand or cause of action challenging any failure by the County, the City, or Real Parties to comply with this Consent Judgment. Except as expressly provided herein, nothing in this Consent Judgment is intended nor shall be construed to limit the People from taking appropriate enforcement actions or otherwise exercising their authority under any law. Further, nothing in this Consent Judgment is intended nor shall be construed to limit the People from taking any action related to any future proposed project, including any future project that may be related to this Project.

13. CCAEJ will not publish or cause to be published any press release or other written public disclosure ("Release") concerning this Consent Judgment or the settlement of the Litigation without first providing the proposed Release to the Real Parties for review and comment. Real Parties shall be provided 48-hours in which to review and provide any comments or requested edits to CCAEJ concerning the Release. CCAEJ agrees to consider any comments or requested edits in good faith prior to finalizing and/or issuing the Release.

E. General Terms.

14. Entry of Judgment. The Parties jointly request that the Court enter this Consent Judgment as a final judgment in the above-captioned action.

15. Retention of Jurisdiction. Pursuant to section 664.6 of the Code of Civil Procedure, the Parties request that the Court shall retain continuing jurisdiction over this matter and the Parties for the purpose of interpreting and enforcing the terms of this Consent Judgment.

16. Limits. This Consent Judgment shall not be construed as creating any right or benefit, substantive or procedural, enforceable at law or in equity, by any Party against the City, the County, or any of their governmental agencies, departments, political subdivisions or any other public entities other than those set forth herein.

17. Notices. Any notice, request, or communication required to be given to the Parties under this Consent Judgment shall be given in writing and shall be personally delivered or mailed by prepaid registered or certified mail to the addresses below:

County of Riverside	Pamela J. Walls Michelle Clack Office of Riverside County Counsel 3960 Orange Street, Suite 500 Riverside, CA 92501 (951) 955-6300/Telephone (951) 955-6363/Facsimile
City of Jurupa Valley	Peter M. Thorson Ginetta L. Giovinco Richards, Watson & Gershon PC 355 South Grand Avenue, 40th Floor Los Angeles, California 90071-3101 (213) 626-8484/Telephone (213) 626-0078/Facsimile
Obayashi Corporation, SP4 Dulles LP, and Investment Building Group (as the general partner for the property owner 54 DeForest Partnership L.P.)	Michelle Ouellette Best Best & Krieger LLP P. O. Box 1028 Riverside, CA 92502 (951) 686-1450 Telephone (951) 686-3083/Facsimile and SP4 Dulles LP c/o Brent Steele, Director CBRE Global Investors, LLC 515 S. Flower Street, Ste. 3100 Los Angeles, CA 90071
Center for Community Action and Environmental Justice	Raymond W. Johnson Abigail A. Broedling Kimberley Foy Johnson & Sedlack 26785 Camino Seco Temecula, CA 92590 (951) 506-9925/Telephone (951) 506-9725/Facsimile
	Sarah E. Morrison Deputy Attorney General Office of the California Attorney General

Office of the California Attorney General	300 S. Spring Street, Suite 1702 Los Angeles, CA 90013 (213) 897-2640/Telephone (213) 897-2802/Facsimile

18. Entire Agreement. The Parties acknowledge that this Consent Judgment is signed and executed without reliance upon any actual or implied promises, warranties or representations made by any of the Parties or by any representative of any of the Parties, other than those which are expressly contained within this Consent Judgment. This Consent Judgment, including the true and correct Recitals above, inclusive of all definitions contained therein, that are incorporated by reference herein as operative covenants and specifically relied upon by the Parties in executing this Consent Judgment, constitutes the entire agreement and understanding among and between the Parties and supersedes any and all other agreements whether oral or written between the Parties.

19. California Civil Code Section 1542. Upon the Effective Date of this Consent Judgment, as that term is defined below, each of the Parties has read and has otherwise been informed of the meaning of Section 1542 of the California Civil Code, and has consulted with its respective counsel, to the extent that any was desired, and understands the provisions of Section 1542. Each of the Parties, except for the People, hereby expressly waives the rights and benefits conferred upon it by the provisions of Section 1542 of the California Civil Code, which provides:

> "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR."

County's Initials	City's Initials
Real Parties' Initials	CCAEJ Initials

Office of the California Attorney General	300 S. Spring Street, Suite 1702 Los Angeles, CA 90013 (213) 897-2640/Telephone (213) 897-2802/Facsimile

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Real Parties' Initials	CCAEJ Initials

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County's Initials	City's Initials
JML 1/3/13 Real Parties' Initials	CCAEJ Initials

Office of the California Attorney General	300 S. Spring Street, Suite 1702 Los Angeles, CA 90013 (213) 897-2640/Telephone (213) 897-2802/Facsimile

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_____	PMT SGK
County's Initials	City's Initials
_____	_____
Real Parties' Initials	CCAEJ Initials

Office of the California Attorney General	300 S. Spring Street, Suite 1702 Los Angeles, CA 90013 (213) 897-2640/Telephone (213) 897-2802/Facsimile

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County's Initials	City's Initials
Real Parties' Initials	CCAEJ Initials

20. Amendments and Modifications. This Consent Judgment may only be amended or modified on a noticed motion by one of the Parties with subsequent approval by the Court, or upon written consent by all of the Parties and the subsequent approval of the Court.

21. Settlement, No Admissions by Parties. Each of the Parties acknowledges that this Consent Judgment relates to the avoidance of litigation and the preclusion of actions described above. The Parties, therefore, agree that this Consent Judgment is not to be treated or construed, at any time or in any manner whatsoever, as an admission by any Party that any of the allegations in the Litigation has merit.

22. Choice of Law and Choice of Forum. This Consent Judgment shall be deemed to have been executed and delivered within the State of California; the rights and obligations of the Parties hereunder shall be governed, construed and enforced in accordance with the laws of the State of California. The venue for any dispute arising from or related to this Consent Judgment, its performance, and its interpretation shall be the Superior Court of California, County of Riverside.

23. Joint Preparation. This Consent Judgment has been jointly drafted. No presumptions or rules of interpretation based upon the identity of the party preparing or drafting the Consent Judgment, or any part thereof, shall be applicable or invoked.

24. Damages. The Parties agree that the sole and exclusive remedy for breach of this Consent Judgment shall be an action for specific performance or injunction. In no event shall any Party be entitled to monetary damages for breach of this Consent Judgment.

25. Enforcement of Consent Judgment. No action for breach of this Consent Judgment shall be brought or maintained until: (a) the non-breaching Party provides written notice to the breaching Party which explains with particularity the nature of the claimed breach, and (b) within thirty (30) days after receipt of said notice, the breaching Party fails to cure the claimed breach or, in the case of a claimed breach which cannot be reasonably remedied within a thirty (30) day period, the breaching Party fails to commence to cure the claimed breach within such thirty (30) day period, and thereafter diligently complete the activities reasonably necessary to remedy the claimed breach.

26. City Attorneys' Fees. Separate and apart from the Parties' obligations as described herein, the Real Parties and their successors in interest separately agree to indemnify the City of Jurupa Valley and hold it harmless for any damages it may incur or attorney fees and litigation expenses it may incur arising from any action brought by the Petitioners, the People or persons other than the Real Parties to enforce the terms of this Consent Judgment or to otherwise challenge the Project. In the event such litigation is filed and served on the City, the City shall promptly notify the Real Parties and their successors in interest and Real Parties and their successors in interest shall deposit with the City an amount for attorneys fees as litigation expenses as estimated by the City Attorney for the City of Jurupa Valley, which deposit shall be replenished as necessary.

27. Authorized Signatory. Each Party represents and warrants to each other Party that its signature to this Consent Judgment has the authority to legally bind the Party, and this Consent Judgment does in fact bind the Party.

28. Parties Bound. This Consent Judgment shall apply to and be binding upon the Parties and each of them, and their officers, directors, agents, trustees, successors, and assigns.

29. People Not Liable. The People or any agency of the State of California shall not be liable for any injury or damage to persons or property resulting from acts or omissions by the County, City, or Real Parties, or their directors, officers, employees, agents, representatives or contractors, in carrying out activities pursuant to this Consent Judgment, nor shall the People or any agency of the State of California be held as a party to or guarantor of any contract entered into by the County, City or Real Parties in carrying out the requirements of this Consent Judgment.

30. Effective Date. This Consent Judgment is effective as of the date on which the Court enters this Consent Judgment on the Court's docket.

31. Counterparts. This Consent Judgment may be executed in counterparts and when so executed by the Parties, shall become binding upon them and each such counterpart will be an original document.

32. Costs and Attorneys' Fees. Except to the extent provided above, no party shall

claim costs or attorneys' fees from any other Party related to the Litigation. Further, each Party agrees that the terms of this Consent Judgment do not establish any Party as a "prevailing party" for purposes of claiming either costs or attorneys fees, and each Party specifically waives any other right that Party may have to seek costs or attorneys fees related to the Litigation.

IT IS SO STIPULATED AND AGREED.

RESPONDENT COUNTY OF RIVERSIDE

Dated: 1/31/13

ATTEST:
KECIA HARPER-IHEM, Clerk
By _____ DEPUTY

_____
for County of Riverside

by_____

RESPONDENT CITY OF JURUPA VALLEY

Dated: _____

_____
Laura Roughton, Mayor, for City of Jurupa Valley

REAL PARTIES IN INTEREST

Dated: _____

_____
for Obayashi Corporation

by_____

Dated: _____

_____
for Investment Building Group, as the general partner for 54 DeForest Partnership L.P.

by_____

Dated: _____

_____
for SP4 Dulles LP

by_____

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IT IS SO STIPULATED AND AGREED.

RESPONDENT COUNTY OF RIVERSIDE

Dated: _____

_____
for County of Riverside

by_____

RESPONDENT CITY OF JURUPA VALLEY

Dated: _____

_____
Verne Lauritzen, Mayor, for City of Jurupa Valley

REAL PARTIES IN INTEREST

Dated: _____

_____
for Obayashi Corporation

by_____

Dated: _____

_____
for Investment Building Group, as the general partner for 54 DeForest Partnership L.P.

by_____

Dated: _____

_____
for SP4 Dulles LP

by_____

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IT IS SO STIPULATED AND AGREED.

RESPONDENT COUNTY OF RIVERSIDE

Dated: _____

_____
for County of Riverside

by_____

RESPONDENT CITY OF JURUPA VALLEY

Dated: _____

_____
Laura Roughton, Mayor, for City of Jurupa Valley

REAL PARTIES IN INTEREST

Dated: Jan. 16, 2013

_____
for Obayashi Corporation

by Yoshiharu Nakamura, Executive Officer

Dated: _____

_____
for Investment Building Group, as the general partner for 54 DeForest Partnership L.P.

by_____

Dated: _____

_____
for SP4 Dulles LP

by_____

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IT IS SO STIPULATED AND AGREED.

RESPONDENT COUNTY OF RIVERSIDE

Dated: _____

_____
for County of Riverside

by_____

RESPONDENT CITY OF JURUPA VALLEY

Dated: _____

_____
Laura Roughton, Mayor, for City of Jurupa Valley

REAL PARTIES IN INTEREST

Dated: _____

_____
for Obayashi Corporation

by_____

Dated: 1/3/13

_____
for Investment Building Group, as the general partner for 54 DeForest Partnership L.P.

by JACK M. LANGSON, PRESIDENT

Dated: _____

_____
for SP4 Dulles LP

by_____

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IT IS SO STIPULATED AND AGREED.

RESPONDENT COUNTY OF RIVERSIDE

Dated: _____

_____
for County of Riverside

by_____

RESPONDENT CITY OF JURUPA VALLEY

Dated: _____

_____
Laura Roughton, Mayor, for City of Jurupa Valley

REAL PARTIES IN INTEREST

Dated: _____

_____
for Obayashi Corporation

by_____

Dated: _____

_____
for Investment Building Group, as the general partner for 54 DeForest Partnership L.P.

by_____

Dated: 1/9/13

_____
for SP4 Dulles LP

by_____
Philip G. Hemb
Vice President

John M. Gilb
Vice President

PETITIONER CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE

Dated: Jan. 10, 2013

Penny J. Newman
for Center for Community Action and Environmental Justice
by Penny J. Newman, Ex. Dir.

INTERVENOR PEOPLE OF STATE OF CALIFORNIA

KAMALA D. HARRIS
Attorney General of California

Dated: _____

SARAH E. MORRISON
Deputy Attorney General

Attorneys for Intervenor People of the State of California, ex rel. Kamala D. Harris, Attorney General

Approved as to form by:

Dated: _____

Pamela J. Walls, County Counsel
for the County of Riverside

Dated: _____

Peter M. Thorson, City Attorney
for the City of Jurupa Valley

Dated: _____

Michelle Ouellette, for Obayashi Corporation, SP4 Dulles LP, and Investment Building Group (as the general partner for the property owner 54 DeForest Partnership L.P.)

Dated: Jan 10, 2013

Raymond W. Johnson, for Center for Community Action and Environmental Justice

PETITIONER CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE

Dated: _____

_____
for Center for Community Action and Environmental Justice
by_____

INTERVENOR PEOPLE OF STATE OF CALIFORNIA

KAMALA D. HARRIS
Attorney General of California

Dated: 1/2/13

Sarah E. Morrison
SARAH E. MORRISON
Deputy Attorney General

Attorneys for Intervenor People of the State of California, ex rel. Kamala D. Harris, Attorney General

Approved as to form by:

Dated: _____

_____
Pamela J. Walls, County Counsel
for the County of Riverside

Dated: _____

_____
Peter M. Thorson, City Attorney
for the City of Jurupa Valley

Dated: _____

_____
Michelle Ouellette, for Obayashi Corporation, SP4 Dulles LP, and Investment Building Group (as the general partner for the property owner 54 DeForest Partnership L.P.)

Dated: _____

_____
Raymond W. Johnson, for Center for Community Action and Environmental Justice

PETITIONER CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE

Dated: _____

_____
for Center for Community Action and Environmental Justice
by_____

INTERVENOR PEOPLE OF STATE OF CALIFORNIA

KAMALA D. HARRIS
Attorney General of California

Dated: _____

_____
SARAH E. MORRISON
Deputy Attorney General

Attorneys for Intervenor People of the State of California, ex rel. Kamala D. Harris, Attorney General

Approved as to form by:

Dated: 1/30/13

Pamela J. Walls, County Counsel
for the County of Riverside
Michelle Clack Deputy County Counsel

Dated: _____

_____
Peter M. Thorson, City Attorney
for the City of Jurupa Valley

Dated: _____

_____
Michelle Ouellette, for Obayashi Corporation, SP4 Dulles LP, and Investment Building Group (as the general partner for the property owner 54 DeForest Partnership L.P.)

Dated: _____

_____
Raymond W. Johnson, for Center for Community Action and Environmental Justice

PETITIONER CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE

Dated: _____

_____
for Center for Community Action and Environmental Justice
by_____

INTERVENOR PEOPLE OF STATE OF CALIFORNIA

KAMALA D. HARRIS
Attorney General of California

Dated: _____

_____
SARAH E. MORRISON
Deputy Attorney General

Attorneys for Intervenor People of the State of California, ex rel. Kamala D. Harris, Attorney General

Approved as to form by:

Dated: _____

_____
Pamela J. Walls, County Counsel
for the County of Riverside

Dated: January 17, 2013

_____
Peter M. Thorson, City Attorney
for the City of Jurupa Valley

Dated: _____

_____
Michelle Ouellette, for Obayashi Corporation, SP4 Dulles LP, and Investment Building Group (as the general partner for the property owner 54 DeForest Partnership L.P.)

Dated: _____

_____
Raymond W. Johnson, for Center for Community Action and Environmental Justice

PETITIONER CENTER FOR COMMUNITY ACTION AND ENVIRONMENTAL JUSTICE

Dated: _____

_____
for Center for Community Action and Environmental Justice
by_____

INTERVENOR PEOPLE OF STATE OF CALIFORNIA

KAMALA D. HARRIS
Attorney General of California

Dated: _____

_____
SARAH E. MORRISON
Deputy Attorney General

Attorneys for Intervenor People of the State of California, ex rel. Kamala D. Harris, Attorney General

Approved as to form by:

Dated: _____

_____
Pamela J. Walls, County Counsel
for the County of Riverside

Dated: _____

_____
Peter M. Thorson, City Attorney
for the City of Jurupa Valley

Dated: January 17, 2013

Michelle Ouellette
Michelle Ouellette, for Obayashi Corporation, SP4 Dulles LP, and Investment Building Group (as the general partner for the property owner 54 DeForest Partnership L.P.)

Dated: _____

_____
Raymond W. Johnson, for Center for Community Action and Environmental Justice

IT IS SO ORDERED, ADJUDGED AND DECREED.

Dated: FEB 14 2013

Daniel A. Ottolia

Honorable Judge [redacted]
Judge of the Superior Court

EXHIBIT A

1. EJ Element in General Plan: Within the timeframes for adopting or updating general plans as required by law, as part of the proceedings of the City of Jurupa Valley (City) to adopt or update its General Plan, City agrees to use its best efforts to prepare an environmental justice element that includes specific policies, analyze any impacts of that element in any CEQA document prepared for the General Plan, and hold hearings or conduct other proceedings to consider the adoption of that environmental justice element. The environmental justice element prepared by the City shall be consistent with the California Office of Planning & Research ("OPR") General Plan Guidelines concerning environmental justice as they now exist or may hereafter be amended, and the Office of the Attorney General's guidance entitled, Environmental Justice at the Local and Regional Level – Legal Background (dated July 10, 2012), a copy of which is attached to the Consent Judgment as Exhibit B. The Real Parties in Interest (RPIs) shall contribute a total of $20,000 toward the preparation and consideration of the general plan element by the City.

The Parties understand and agree that, in the context of the City's processing its General Plan, including any Environmental Justice element, the City cannot guarantee the ultimate outcome of any public hearings before the City's Planning Commission or City Council, nor prevent any opposition thereto by members of the public affected by or interested in the General Plan. The Parties recognize that the adoption or amendment of the General Plan is a discretionary act and that nothing in this Consent Judgment limits, in any manner, the City's exercise of its police power under the California Constitution. Nothing in this Consent Judgment limits the City's discretion to determine what policies and provisions should be included in the environmental justice element. Subject to the foregoing, the City, to the extent allowed by law, shall facilitate and promote the proceedings necessary to complete processing of its General Plan and consideration of an Environmental Justice Element in the General Plan.

2. CEQA Analysis for Particular Future Projects to Address Impacts to Overburdened and Sensitive Communities: To further environmental justice, as defined to include the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, the City agrees to use its best efforts to analyze, as part of CEQA review, whether projects may impact certain overburdened communities and sensitive populations, including low income communities and communities of color. This analysis shall incorporate outreach to, and encourage the participation of, overburdened communities and sensitive populations, and shall be consistent with specific standards, including CEQA and the CEQA Guidelines, (Cal. Code Regs., tit. 14, § 15000 *et seq.*), and the Office of the Attorney General's guidance entitled, Environmental Justice at the Local and Regional Level – Legal Background (dated July 10, 2012), a copy of which is attached to the Consent Judgment as Exhibit B. The requirement to analyze impacts to overburdened and sensitive communities as part of CEQA review shall be included as a policy/action in any EJ element that the City may adopt for its General Plan.

3. **Restricted Truck Route:** Within fifteen (15) months of the entry of the Consent Judgment, the City agrees to use its best efforts to conduct proceedings for the adoption of an ordinance restricting trucks with gross vehicle weight rating ("GVWR") over 16,000 lbs. from accessing the portion of Etiwanda Avenue adjacent to Mira Loma Village (between the 60 Freeway and Hopkins Street). The restricted truck route ordinance proceedings shall comply with the California Environmental Quality Act (CEQA), and may include a study to determine if there are potential alternate routes for trucks with GVWR over 16,000 lbs on roadways other than Etiwanda Avenue described above. In the event that the City does not adopt a restricted truck route ordinance within two years of the entry of the Consent Judgment, then the RPIs agree that a new condition of approval will apply to the Project. That new condition shall require that the developers/owners of the Project request of all initial tenants, in writing, that any trucks accessing the Project site with GVWR over 16,000 lbs. owned or operated by tenants of the Project buildings avoid traveling on the portion of Etiwanda Avenue adjacent to Mira Loma Village (between the 60 Freeway and Hopkins Street).

The Parties understand and agree that, in the context of the City's processing an ordinance designating a restricted truck route, the City cannot guarantee the ultimate outcome of any public hearings before the City's Planning Commissions or City Council, nor prevent any opposition thereto by members of the public affected by or interested in the proposed truck route. The Parties recognize that the adoption of a restricted truck route ordinance is a discretionary act and that nothing in this Consent Judgment limits, in any manner, the City's exercise of its police power under the California Constitution. Subject to the foregoing, the City, to the extent allowed by law, shall facilitate and promote the proceedings necessary to complete processing of an restricted truck route.

As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit and the City agrees to honor RPIs' request. RPIs agree to contribute a total of $20,000 to the City for the cost of the study and environmental review associated with the restricted truck route payable to the City within the time period set forth in the Consent Judgment. The City shall not be obligated to expend any funding beyond this sum for the study. If additional funding for the study associated with the restricted truck route proceedings is needed, the City may apply to the Center for Community Action and Environmental Justice (CCAEJ) for additional funding from the Mira Loma Mitigation Trust Account ("Trust Account") described in Paragraph 12 of this Exhibit.

4. **Air Filtration Systems:** RPIs agree to fund the purchase, installation and maintenance of in-home air filtration systems for each residential parcel within Mira Loma Village, at a total cost of $1,700 per parcel, plus an additional $43,000 sum to cover administration costs. RPIs' provision of funding shall constitute its sole obligation with regard to this term. The air filtration systems shall be selected by the owners of each parcel, although recommendations as to the filtration systems selected may be provided to the parcel owners by the CCAEJ in consultation with South Coast Air Quality Management District ("SCAQMD"). A map of the Mira Loma Village and the 103 eligible residential parcels is attached hereto as Attachment 2. The air filtration funds provided by the RPIs will be deposited into the Trust Account described in Paragraph 12 of this Exhibit. In the event that CCAEJ, in consultation with SCAQMD,

determines that the air filtration systems will not be effective or necessary, the funds designated for air filtration systems in the Trust Account will be available to fund other mitigation to reduce the Project's air quality impacts, as determined by CCAEJ in consultation with the Attorney General's Office and SCAQMD. If the air filtration systems are determined by CCAEJ to be effective, then the designated funds in the Trust Account shall be distributed to Mira Loma Village residents upon presentation to the trust administrator of evidence showing that the resident is a parcel owner and receipts documenting air filtration system purchase, installation, and/or maintenance costs and/or expenditures on other air quality mitigation expenditures. Similarly, designated funds in the Trust Account may also be distributed directly to air filtration contractors or installers upon presentation to the trust administrator of an invoice or other evidence documenting that the contractor or installer has – on behalf of a parcel owner – purchased, installed, or maintained an air filtration system or made other air quality mitigation expenditures. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request.

5. **Anti-Idling Enforcement:** Within seven (7) months from the entry of the Consent Judgment, the City agrees to use its best efforts to implement a program to enforce the Air Resources Board's ("ARB") anti-idling regulation (Cal. Code Regs., tit. 13, § 2485) either through its enforcement of the ARB Regulations or through its adoption of a City truck anti-idling ordinance.

The City further agrees to the hiring/assigning of a code enforcement officer, whose duties shall include the enforcement of ARB's anti-idling regulation on a City-wide basis, including the vicinity of the Project. The extent of enforcement activity and the hiring or assigning of a code enforcement officer for the truck anti-idling enforcement program shall be subject to the City Council's discretion in establishing budget priorities for the City and the consequent budgeting of funds for enforcement of the truck anti-idling program. The Parties recognize that the enforcement of anti-idling regulations is a discretionary act and that nothing in this Consent Judgment limits, in any manner, the City's exercise of its police power under the California Constitution. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request. The City recognizes that this measure applies on a City-wide basis and is not solely applicable to the Project.

The RPIs agree to pay the City a total of $30,000 toward the costs associated with the City's code enforcement program.

6. **Clean Trucks:** In place of Plot Plan 17788 Condition of Approval 10.Planning.52 (which applies *only* to Plot Plan 17788), RPIs agree that the developers/owners of *all* Project plot plans shall establish a diesel minimization plan requiring that at least 90 percent of the trucks with GVWR greater than 16,000 lbs. that both visit the Project site and are owned or operated by a tenant of one of the Plot Plan buildings, shall meet or exceed 2007 model year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1,

Article 4.5, Section 2025. From the date the Consent Judgment is entered and for ten years thereafter, Project tenants who own or operate the trucks described above shall maintain evidence of compliance with the diesel minimization plan, including license plates, engine model year, retrofit technology if applicable, and engine family name. Evidence of compliance shall be available for inspection upon reasonable notice provided to the owner/operator of a request to inspect such documentation. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request.

7. **Buffers:** RPIs agree that Plot Plan 18876 shall include a partially landscaped setback between the Mira Loma Village houses and the buildings within Plot Plan 18876 along the northern boundary of Mira Loma Village. The setback shall be as determined by the property owner but in no event shall be less than sixty-six (66) feet wide as measured from the edge of the buildings within Plot Plan 18876 to the existing wall separating Mira Loma Village from Plot Plan 18876. Concurrent with the construction of Plot Plan buildings adjacent to the Mira Loma Village, RPIs agree to enhance the vegetative portions of the setback and buffer zones along the northern and eastern boundaries of Mira Loma Village within the Project site. Specifically, RPIs will plant and maintain a vegetative buffer zone along the northern boundary of the Mira Loma Village (in Plot Plan 18876) in a manner determined by the property owner, but including not less than twenty 24" box California Pepper Trees and ten 24" box Bottlebrush Trees (these trees having been selected by CCAEJ in order to reduce diesel particulate matter.) Additionally, Plot Plan 18876 shall include not fewer than eight 24" box Sycamore Trees in its parking lot adjacent to the northern boundary of Mira Loma Village. The RPIs further agree to, concurrent with the construction of Plot Plan buildings adjacent to the Mira Loma Village, landscape the areas being dedicated by the Project as public parks near the Mira Loma Village's eastern boundary (a total of approximately 52,000 square feet) with drought tolerant plants, including not less than 50% Buffalo Grass turf by area, and, further, to provide a vegetative buffer in those park areas and along the remainder of the Mira Loma Village's eastern edge, including not less than eight 24" box American Sycamore trees, twenty 24" box California Pepper Trees, and not fewer than fifteen 24" box Bottlebrush trees (each tree type having been selected by CCAEJ in order to reduce diesel particulate matter). Additionally, Plot Plans 18877 and 18879 shall include a combined total of not less than eight 24" box American Sycamore trees in their parking lots adjacent to the eastern boundary of Mira Loma Village. Additionally, RPIs agree to modify the Project buildings immediately adjacent to the Mira Loma Village's northern boundary by reducing the elevated building parapets in order to reduce visual impacts. Finally, RPIs shall offer not less than two 24" box shade trees to each of the ten property owners who own a home immediately adjacent to the southern boundary of Plot Plan 18876. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request.

8. **Photovoltaic Installation:** RPIs agree that all Project buildings in excess of 100,000 square feet will be constructed as solar-ready buildings (including the upgrade of building structural, electrical and roofing systems in a manner sufficient to support the

installations of photovoltaic solar systems). RPIs also agree to apply to Southern California Edison's ("SCE") solar program and to other programs that may provide financing for the installation of solar photovoltaic systems ("PV Systems") on the Project site. To the extent that RPIs obtain a grant or rebate providing a financial offset for the cost of PV Systems, RPIs shall install PV solar capacity up to the amount of the grant or rebate but in no event would the PV Systems be less than 100 kW. To the extent that RPIs do not obtain a grant or rebate, RPIs shall install one or more PV Systems on the Project site providing a Project-wide total of 100 kW capacity. In the event that there are alternatives to PV Systems deemed reasonably equivalent in reducing/offsetting global greenhouse affects, if the alternatives are approved by the Attorney General's Office and CCAEJ, the RPIs may at their election implement those in place of the PV Systems. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request.

9. **Air Monitoring:** RPIs agree to provide a total of $85,000 in order to fund activities related to measuring black carbon levels and/or other indicators of diesel particulate matter in the Mira Loma Village vicinity, including the installation and maintenance of an air monitoring station. RPIs' provision of funding shall constitute its sole obligation with regard to this term. Any air monitoring data from the air monitoring station shall be made available to CCAEJ and SCAQMD in a manner to be determined by CCAEJ and SCAQMD during the design and installation of the air monitoring station. The air monitoring funds will be deposited by RPIs into the Trust Account described in Paragraph 12 of this Exhibit. In the event that CCAEJ, in consultation with SCAQMD, determines that the air monitoring activities will not be effective or necessary, or that the use of the funds for other mitigation, such as the donation of the funds to the City of Jurupa Valley for the completion of the Restricted Truck Route term is preferable, the funds designated for air monitoring in the Trust Account will be available to fund such other mitigation to reduce the Project's air quality impacts, as determined by CCAEJ in consultation with the Attorney General's Office and SCAQMD. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request.

10. **Electrification:** RPIs agree to install and maintain a minimum of two Level 2 Electric Vehicle Supply Equipment ("EVSE') at each Plot Plan with buildings in excess of 100,000 square feet, placed in a manner that allows charging of trucks or vehicles at each loading dock of the building or at a separate parking area on each Plot Plan. RPIs agree that each Project building in excess of 100,000 square feet will be constructed with necessary infrastructure (conduit and electrical capacity) to support the installation of one Level 3 EVSE (DC Fast Charging) per building. Additionally, the owners/developers of Plot Plan 17788 agree to pay for one Level 3 charging station, at an approximate cost of $75,000, to be installed by the owners/developers of that Plot Plan concurrent with the Plot Plan's construction. However, within thirty (30) days of the execution of this Settlement by the Parties, the CCAEJ may elect to have the owners/developers of Plot Plan 17788 deposit an additional sum of $75,000 into the Trust Account to be put towards additional air quality mitigation, with the deposit of the

funds being required at the time that Plot Plan 17788 receives a building permit. Such election shall be made in writing, and the notice of any such election shall be provided in the manner identified in the "Notices" term of the Consent Judgment. To the extent that no written election is made, then the owners/developers of Plot Plan 17788 shall install one Level 3 charging station as specified above. To the extent that a written election is made, the deposit of the $75,000 into the Trust Account would absolve Plot Plan 17788 from the requirement identified herein to pay for one Level 3 charging station. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request.

11. Green Building: RPIs agree to construct Project buildings in excess of 100,000 square feet at a LEED Silver or higher level. As part of its settlement of the Litigation, RPIs have specifically requested the City to include this term as a mitigation measure for the Project as set forth in Attachment 1 to this Exhibit, and the City agrees to honor RPIs' request.

12. Mira Loma Mitigation Trust Account: Within thirty (30) days of the entry of the Consent Judgment, the RPIs and CCAEJ shall execute a written trust agreement establishing the Mira Loma Mitigation Trust Account ("Trust Account") to be administered by CCAEJ. Thereafter, upon 1) the issuance of the first building permit for any of the Project's Plot Plans or 2) four (4) weeks prior to the commencement of grading within Plot Plans 18876 or 18877, whichever occurs first, the RPIs shall deposit a total of $303,100 into the Trust Account, which includes $175,100 for Air Filtration Systems and $43,000 for Trust Account administration costs as identified in Paragraph 4 of this Exhibit A, and $85,000 for Air Monitoring activities as defined in Paragraph 9 of this Exhibit A. The governing purpose of the Trust Account shall be to fund mitigation to evaluate and/or reduce the localized air quality impacts of the Project, and to cover any administrative costs incurred by the CCAEJ in managing the trust account. Specifically, the monies in the Trust Account shall be allocated in a manner to fund the measures described in Paragraphs 4 and 9 of this Exhibit. In the event that CCAEJ, in consultation with SCAQMD, determines that there are insufficient funds for certain mitigation, that the mitigation is unnecessary, or that other mitigation is preferable, the funds in the Trust Account will be available to fund other mitigation to reduce the Project's air quality impacts, such as the Restricted Truck Route ordinance described in Paragraph 3 above, as determined by CCAEJ in consultation with the Attorney General's Office and SCAQMD. The administration of the Trust Account shall be consistent with applicable laws and regulations governing trust regulations. The Trust Account shall be maintained for four years following the entry of the Consent Judgment. To the extent that funds within the Trust Account are not exhausted by the end of that four year period, the funds shall be distributed to CCAEJ to be used at CCAEJ's discretion, in consultation with the Attorney General's Office and SCAQMD, to evaluate and/or reduce the Project's localized air quality impacts.

13. Parties' Support for City's Efforts to Implement Settlement: Each of the Parties hereto, except the People, agrees to publically express their support in written or oral communications to the City Council for the City's efforts to fulfill its obligations to implement the requirements of this Consent Judgment; provided, however, that the

Parties shall retain their rights to object to an action or proposed action of the City Council or the City Staff that the Party does not believe fulfills the City's obligation under this Consent Judgment.

Attachment 1

(Revised Mitigation Monitoring and Reporting Program)

Consent Judgment Mitigation Monitoring and Reporting Program

Consent Judgment – Mitigation Measures

The following Mitigation Monitoring and Reporting Program reflects mitigation measures that have been added and imposed through the Riverside County Superior Court's entry of a Consent Judgment in the matter styled *Center for Community Action and Environmental Justice (CCAEJ) et al. v. County of Riverside et al.* (Riverside County Superior Court Case Number 1112063), which challenged the approval of Plot Plans 16979, 17788, 18875, 18876, 18877, and 18879 on California Environmental Quality Act and other grounds. These mitigation measures are mandatory and binding on each of the Project Plot Plans, unless specified otherwise herein. In the event of a conflict between this MMRP and the Consent Judgment, the Consent Judgment shall control. This Consent Judgment Mitigation Monitoring and Reporting Program applies in addition to – not in place of – the MMRP that was previously adopted for the Project by the County of Riverside on June 14, 2011.

Impact Category	Mitigation Measure	Implementation Timing	Monitoring/ Reporting Method	Responsible Monitoring Party
Air Quality and Greenhouse Gases	**Restricted Truck Route Ordinance**. The City shall use its best efforts to conduct proceedings for the adoption of an ordinance restricting trucks with gross vehicle weight rating (GVWR) over 16,000 lbs. from accessing the portion of Etiwanda Avenue adjacent to Mira Loma Village (between the 60 Freeway and Hopkins Street). The restricted truck route ordinance proceedings shall comply with the California Environmental Quality Act (CEQA), and may include a study to determine if there are potential alternate routes for trucks with GVWR over 16,000 lbs on roadways other than Etiwanda Avenue described above.	Within fifteen (15) months of the entry of the Consent Judgment.	Any proceeding to adopt such an ordinance shall be publicly noticed.	City of Jurupa Valley
	Restricted Truck Route Ordinance Alternative. In the event that the City does not adopt a restricted truck route ordinance within two years of the entry of the Consent Judgment, the Project Applicants shall request of all initial tenants, in writing, that any trucks accessing the Project site with	Two years following the entry of the Consent Judgment.	The Project Applicants shall copy the City on their written request.	City of Jurupa Valley

	GVWR over 16,000 lbs. owned or operated by tenants of the Project buildings avoid traveling on the portion of Etiwanda Avenue adjacent to Mira Loma Village (between the 60 Freeway and Hopkins Street).			
	Restricted Truck Route Payment. The Project Applicants shall deposit $20,000 into an escrow account opened pursuant to the Consent Judgment for the cost of the study and environmental review associated with the consideration of a restricted truck route ordinance.	Following the City's execution of a contract with a consultant retained to study and prepare environmental documentation of the restricted truck route and within ten (10) days of the City's provision of written notice to the Project Applicants of the same.	The City shall notify Project Applicants in writing of the City's execution of a contract with a consultant.	City of Jurupa Valley
Air Quality and Greenhouse Gases	**Air Filtration Systems**. The Project Applicants shall fund the purchase, installation and maintenance of in-home air filtration systems for each qualifying residential parcel within Mira Loma Village at a cost of $1,700 per parcel, plus an additional $43,000 sum to cover administration costs. "Qualifying residential parcels" are the 103 eligible residential parcels reflected in the map attached to the Consent Judgment as Attachment 2. The air filtration systems shall be selected by the owners of each parcel, although recommendations as to the filtration systems selected may be provided to the parcel owners by the CCAEJ in consultation with the South Coast Air Quality Management District (SCAQMD). In the event that CCAEJ, in consultation with SCAQMD, determines that the air filtration systems will not be effective or necessary, the funds designated for air filtration systems in the Trust Account will be available to fund other mitigation to reduce the Project's air quality impacts, as determined by CCAEJ in consultation with the Attorney General's Office and SCAQMD. If the air filtration systems are determined by CCAEJ to be effective, then, the designated funds in the Trust Account shall be distributed to Mira	Within thirty (30) days of the entry of the Consent Judgment, the Project Applicants and CCAEJ shall execute a written trust agreement establishing the Mira Loma Mitigation Trust Account ("Trust Account") to be administered by CCAEJ. Thereafter, upon 1) the issuance of the first building permit for any of the Project's Plot Plans or 2) four (4) weeks prior to the commencement of grading within Plot Plans 18876 or 18877, whichever occurs first, the Project Applicants shall deposit into the Trust Account $175,100 for Air Filtration Systems and $43,000 for Trust Account administration costs.	Trustee shall provide written confirmation of deposit to CCAEJ in the manner required in the written trust agreement.	CCAEJ

	Loma Village residents upon presentation to the trust administrator of evidence showing that the resident is a parcel owner and receipts documenting air filtration system purchase, installation, and/or maintenance costs and/or expenditures on other air quality mitigation expenditures. Similarly, designated funds in the Trust Account may also be distributed directly to air filtration contractors or installers upon presentation to the trust administrator of an invoice or other evidence documenting that the contractor or installer has – on behalf of the parcel owner – purchased, installed, or maintained an air filtration system or made other air quality mitigation expenditures.			
Air Quality and Greenhouse Gases	**Anti-Idling Enforcement**. Within seven (7) months from the entry of the Consent Judgment, the City agrees to use its best efforts to implement a program to enforce the Air Resources Board's ("ARB") anti-idling regulation (Cal. Code Regs., tit. 13, § 2485) either through its enforcement of the ARB Regulations or through its adoption of a City truck anti-idling ordinance. The City further agrees to the hiring/assigning of a code enforcement officer, whose duties shall include the enforcement of ARB's anti-idling regulation on a City-wide basis, including the vicinity of the Project. The extent of enforcement activity and the hiring or assigning of a code enforcement officer for the truck anti-idling enforcement program shall be subject to the City Council's discretion in establishing budget priorities for the City and the consequent budgeting of funds for enforcement of the truck anti-idling program. Such measure shall apply on a City-wide basis and is not solely applicable to the Project.	Within thirty (30) days of the entry of the Consent Judgment, the Project Applicants shall deposit $30,000 into an escrow account opened pursuant to the Consent Judgment. Within seven (7) months from the entry of the Consent Judgment, the City agrees to use its best efforts to implement the program called for by this measure.	Escrow Company shall provide written confirmation of deposit to City and Project Applicants.	City of Jurupa Valley
Air Quality and Greenhouse Gases	**Clean Trucks**. In place of Plot Plan 17788 Condition of Approval 10.PLANNING.52 (which applies *only* to Plot Plan 17788), the	The diesel minimization plan shall be put in place for each Plot Plan prior to the commencement of the operation of diesel	The Project tenants shall maintain evidence of	City of Jurupa Valley

	Project Applicants shall establish a diesel minimization plan requiring that at least ninety percent (90%) of the trucks with GVWR greater than 16,000 lbs. that both visit the Project site and are owned or operated by a tenant of one of the Plot Plan buildings, shall meet or exceed 2007 model year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. The diesel minimization plan shall include a provision that requires Project tenants who own or operate trucks of the size described above to maintain evidence of compliance with the diesel minimization plan, including license plates, engine model year, retrofit technology if applicable, and engine family name. Evidence of compliance shall be available for inspection upon reasonable notice provided to the owner/operator of a request to inspect such documentation.	trucks with GVWR greater than 16,000 lbs. that both visit the Project site and are owned or operated by a tenant of one of the Plot Plan buildings From the date that the Consent Judgment is entered and for ten (10) years thereafter, Project tenants shall maintain the requisite evidence of compliance called for in the Clean Trucks Mitigation Measures.	compliance.	
Air Quality, Greenhouse Gases, and Aesthetic Impacts	**Buffers for Plot Plan 18876**. The owner/developer of Plot Plan 18876 shall include a partially landscaped setback between the Mira Loma Village houses and the buildings within Plot Plan 18876 along the northern boundary of Mira Loma Village. The setback shall be as determined by the property owner but in no event shall be less than sixty-six (66) feet wide as measured from the edge of the buildings within Plot Plan 18876 to the existing wall separating Mira Loma Village from Plot Plan 18876. Concurrent with the construction of Plot Plan buildings adjacent to the Mira Loma Village, the Project Applicants shall enhance the vegetative portions of the setback and buffer zones along the northern and eastern boundaries of Mira Loma Village within the Project site. Specifically, the Project Applicants shall plant and maintain a	Prior to issuance of first certificate of occupancy on Plot Plan 18876.	Confirmation prior to issuance of first certificate of occupancy on Plot Plan 18876.	City of Jurupa Valley

	vegetative buffer zone along the northern boundary of the Mira Loma Village (in Plot Plan 18876) in a manner determined by the property owner, but including not less than twenty 24" box California Pepper Trees and ten 24" box Bottlebrush trees. Additionally, Plot Plan 18876 shall include not fewer than eight 24" box Sycamore Trees in its parking lot adjacent to the northern boundary of Mira Loma Village. Furthermore, the Project Applicants shall, concurrent with the construction of Plot Plan buildings adjacent to the Mira Loma Village, landscape areas being dedicated by the Project as public parks near the Mira Loma Village's eastern boundary (a total of approximately 52,000 square feet) with drought tolerant plants, including not less than 50% Buffalo Grass turf by area, and, further, to provide a vegetative buffer in those park areas and along the remainder of the Mira Loma Village's eastern edge, including not less than eight 24" box American Sycamore trees, twenty 24" box California Pepper Trees, and not fewer than fifteen 24" box Bottlebrush trees. Finally, the Project Applicants shall offer not less than two 24" box shade trees to each of the ten property owners who own a home immediately adjacent to the southern boundary of Plot Plan 18876			
	Buffers for Plot Plans 18877 and 18879. Additionally, Plot Plans 18877 and 18879 shall include a combined total of not less than eight 24" box American Sycamore trees in their parking lots adjacent to the eastern boundary of Mira Loma Village.	Prior to issuance of first certificate of occupancy on Plot Plans 18877 and 18879.	Confirmation prior to issuance of first certificate of occupancy on Plot Plans 18877 and 18879.	City of Jurupa Valley
	Additional Buffer. Additionally, the Project Applicants shall modify the Project buildings immediately adjacent to the Mira Loma Village's northern boundary by reducing the	Prior to issuance of first certificate of occupancy for Plot Plan 18876.	Confirmation prior to issuance of first certificate of occupancy.	City of Jurupa Valley

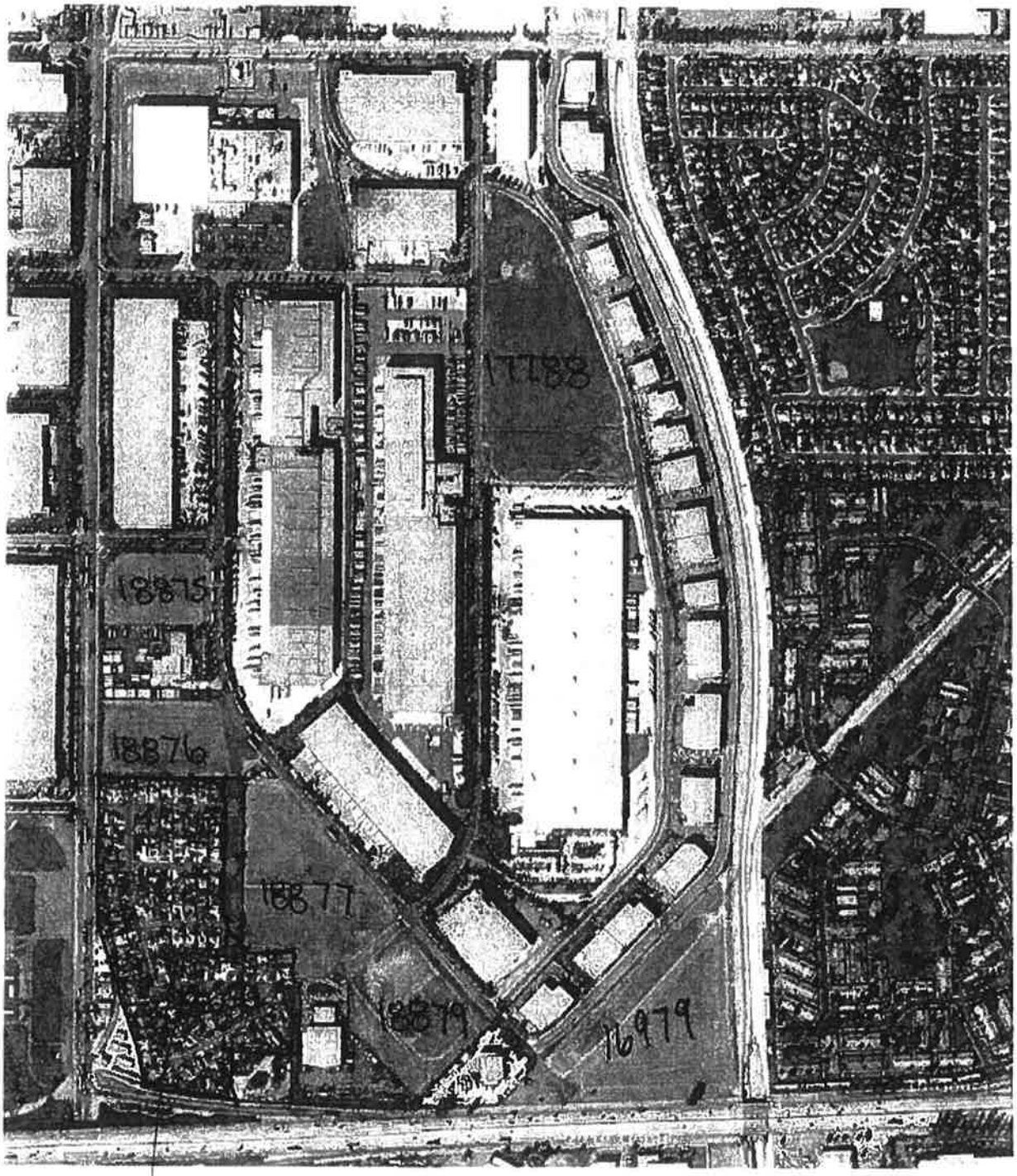
	elevated building parapets in order to reduce visual impacts.			
Air Quality and Greenhouse Gases	**Photovoltaic Installation**. All Project building in excess of 100,000 square feet shall be constructed as solar ready buildings (including the upgrade of building structural, electrical and roofing systems in a manner sufficient to support the installations of photovoltaic solar systems).	Prior to the issuance of the certificate of occupancy for each building over 100,000 square feet.	Confirmation prior to issuance of first certificate of occupancy for each building over 100,000 square feet.	City of Jurupa Valley
	The Project Applicants shall apply to Southern California Edison's ("SCE") solar program and to other programs that may provide financing for the installation of solar photovoltaic systems ("PV Systems") on the Project site. To the extent that the Project Applicants obtain a grant or rebate providing a financial offset for the cost of the PV Systems, the Project Applicants shall install PV solar capacity up to the amount of the grant or rebate but in no event would the PV Systems be less than 100 kW. To the extent that the Project Applicants do not obtain a grant or rebate, the Project Applicants shall install one or more PV Systems on the Project site providing a Project-wide total of 100 kW capacity. In the event that there are alternatives to the PV Systems deemed reasonably equivalent in reducing/offsetting global greenhouse affects, if the alternatives are approved by the Attorney General's Office and CCAEJ, the Project Applicants may at their election implement those in place of the PV Systems.	The Project Applicants shall submit an application to SCE prior to the issuance of the first certificate of occupancy for any building in excess of 100,000 square feet. Installation of the system shall occur prior to the issuance of the last certificate of occupancy for any Project building.	The Project Applicants shall submit to the City copies of the Project Applicants' completed SCE applications.	City of Jurupa Valley
Air Quality and Greenhouse Gases	**Air Monitoring**. The Project Applicants shall contribute $85,000 in order to (1) fund activities related to measuring black carbon levels and/or other indicators of diesel particulate matter in the Mira Loma Village vicinity, including the installation and maintenance of an air monitoring station; and/or (2) provide additional funds which	Within thirty (30) days of the entry of the Consent Judgment, the Project Applicants and CCAEJ shall execute a written trust agreement establishing the Mira Loma Mitigation Trust Account ("Trust Account") to be administered by CCAEJ. Thereafter, upon 1) the issuance of the first building permit for any of the Project's Plot Plans or	Air monitoring data from the air monitoring station shall be made available to the CCAEJ and SCAQMD in a manner to be determined by CCAEJ and SCAQMD during the	CCAEJ/SCAQMD

	may be made available to the City of Jurupa Valley in order to complete the Restricted Truck Route term. In the event that the CCAEJ, in consultation with SCAQMD, determines that the air monitoring activities will not be effective or necessary, or that the donation of the funds to the City of Jurupa Valley for the completion of the Restricted Truck Route term is preferable, the funds designated for air monitoring in the Trust Account will be available to fund such other mitigation to reduce the Project's air quality impacts, as determined by CCAEJ in consultation with the Attorney General's Office and SCAQMD.	2) four (4) weeks prior to the commencement of grading within Plot Plans 18876 or 18877, whichever occurs first, the Project Applicants shall deposit into the Trust Account $85,000 for Air Monitoring activities.	design and installation of the air monitoring station.	
Air Quality and Greenhouse Gases	**Electrification**. Project Applicants agree to install and maintain a minimum of two Level 2 Electric Vehicle Supply Equipment ("EVSE') at each Plot Plan with buildings in excess of 100,000 square feet, placed in a manner that allows charging of trucks or vehicles at each loading dock of the building or at a separate parking area on each Plot Plan. Project Applicants agree that each Project building in excess of 100,000 square feet will be constructed with necessary infrastructure (conduit and electrical capacity) to support the installation of one Level 3 EVSE (DC Fast Charging) per building.	Prior to the issuance of the first certificate of occupancy for each building over 100,000 square feet.	Confirm prior to issuance of first certificate of occupancy for each building over 100,000 square feet.	City of Jurupa Valley
	Electrification for Plot Plan 17788. The owners/developers of Plot Plan 17788 agree to pay for one Level 3 charging station, at an approximate cost of $75,000, to be installed by the owners/developers of that Plot Plan concurrent with the Plot Plan's construction. However, within thirty (30) days of the execution of this Settlement by the Parties, the CCAEJ may elect to have the	Prior to the issuance of any certificate of occupancy for Plot Plan 17788.	Confirm prior to issuance of certificate of occupancy for Plot Plan 17788.	City of Jurupa Valley

	owners/developers of Plot Plan 17788 deposit an additional sum of $75,000 into the Trust Account to be put towards additional air quality mitigation, with the deposit of the funds being required at the time that Plot Plan 17788 receives a building permit. Such election shall be made in writing, and the notice of any such election shall be provided in the manner identified in the "Notices" term of the Consent Judgment. To the extent that no written election is made, then the owners/developers of Plot Plan 17788 shall install one Level 3 charging station as specified above. To the extent that a written election is made, the deposit of the $75,000 into the Trust Account would absolve Plot Plan 17788 from the requirement identified herein to pay for one Level 3 charging station.			
Air Quality and Greenhouse Gases	**Green Building**. The Project Applicants shall construct Project buildings in excess of 100,000 square feet at a LEED Silver or higher level.	Prior to the issuance of a certificate of occupancy for any building over 100,000 square feet.	Confirm prior to issuance of a certificate of occupancy for any building over 100,000 square feet.	City of Jurupa Valley

Attachment 2

(Map of the Mira Loma Village's 103 Residential Parcels)



Mira Loma Village

EXHIBIT B

(Environmental Justice at the Local and Regional Level – Legal Background (Office of the Attorney General - July 10, 2012)

KAMALA D. HARRIS
Attorney General

State of California
DEPARTMENT OF JUSTICE

Environmental Justice at the Local and Regional Level
Legal Background

Cities, counties, and other local governmental entities have an important role to play in ensuring environmental justice for all of California's residents. Under state law:

> "[E]nvironmental justice" means the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

(Gov. Code, § 65040.12, subd. (e).) Fairness in this context means that the *benefits* of a healthy environment should be available to everyone, and the *burdens* of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects.

Many local governments recognize the advantages of environmental justice; these include healthier children, fewer school days lost to illness and asthma, a more productive workforce, and a cleaner and more sustainable environment. Environmental justice cannot be achieved, however, simply by adopting generalized policies and goals. Instead, environmental justice requires an ongoing commitment to identifying existing and potential problems, and to finding and applying solutions, both in approving specific projects and planning for future development.

There are a number of state laws and programs relating to environmental justice. This document explains two sources of environmental justice-related responsibilities for local governments, which are contained in the Government Code and in the California Environmental Quality Act (CEQA).

Government Code

Government Code section 11135, subdivision (a) provides in relevant part:

> No person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state....

While this provision does not include the words "environmental justice," in certain circumstances, it can require local agencies to undertake the same consideration of fairness in the distribution of environmental benefits and burdens discussed above. Where, for example, a general plan update is funded by or receives financial assistance from the state or a state agency, the local government should take special care to ensure that the plan's goals, objectives, policies

and implementation measures (a) foster equal access to a clean environment and public health benefits (such as parks, sidewalks, and public transportation); and (b) do not result in the unmitigated concentration of polluting activities near communities that fall into the categories defined in Government Code section 11135.[1] In addition, in formulating its public outreach for the general plan update, the local agency should evaluate whether regulations governing equal "opportunity to participate" and requiring "alternative communication services" (*e.g.*, translations) apply. (See Cal. Code Regs., tit. 22, §§ 98101, 98211.)

Government Code section 11136 provides for an administrative hearing by a state agency to decide whether a violation of Government Code section 11135 has occurred. If the state agency determines that the local government has violated the statute, it is required to take action to "curtail" state funding in whole or in part to the local agency. (Gov. Code, § 11137.) In addition, a civil action may be brought in state court to enforce section 11135. (Gov. Code, § 11139.)

California Environmental Quality Act (CEQA)

Under CEQA, "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects ...." (Pub. Res. Code, § 21002.) Human beings are an integral part of the "environment." An agency is required to find that a "project may have a 'significant effect on the environment'" if, among other things, "[t]he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly[.]" (Pub. Res. Code, § 21083, subd. (b)(3); see also CEQA Guidelines,[2] § 15126.2 [noting that a project may cause a significant effect by bringing people to hazards].)

CEQA does not use the terms "fair treatment" or "environmental justice." Rather, CEQA centers on whether a project may have a significant effect on the physical environment. Still, as set out below, by following well-established CEQA principles, local governments can further environmental justice.

CEQA's Purposes

The importance of a healthy environment for all of California's residents is reflected in CEQA's purposes. In passing CEQA, the Legislature determined:

- "The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern." (Pub. Res. Code, § 21000, subd. (a).)

- We must "identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds from being reached." (*Id.* at subd. (d).)

---

[1] To support a finding that such concentration will not occur, the local government likely will need to identity candidate communities and assess their current burdens.
[2] The CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15000, et seq.) are available at http://ceres.ca.gov/ceqa/.

- "[M]ajor consideration [must be] given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian." (*Id.* at subd. (g).)

- We must "[t]ake all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise." (Pub. Res. Code, § 21001, subd. (b).)

Specific provisions of CEQA and its Guidelines require that local lead agencies consider how the environmental and public health burdens of a project might specially affect certain communities. Several examples follow.

Environmental Setting and Cumulative Impacts

There are a number of different types of projects that have the potential to cause physical impacts to low-income communities and communities of color. One example is a project that will emit pollution. Where a project will cause pollution, the relevant question under CEQA is whether the environmental effect of the pollution is significant. In making this determination, two long-standing CEQA considerations that may relate to environmental justice are relevant – setting and cumulative impacts.

It is well established that "[t]he significance of an activity depends upon the setting." (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 718 [citing CEQA Guidelines, § 15064, subd. (b)]; see also *id.* at 721; CEQA Guidelines, § 15300.2, subd. (a) [noting that availability of listed CEQA exceptions "are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant."]) For example, a proposed project's particulate emissions might not be significant if the project will be located far from populated areas, but may be significant if the project will be located in the air shed of a community whose residents may be particularly sensitive to this type of pollution, or already are experiencing higher-than-average asthma rates. A lead agency therefore should take special care to determine whether the project will expose "sensitive receptors" to pollution (see, e.g., CEQA Guidelines, App. G); if it will, the impacts of that pollution are more likely to be significant.[3]

In addition, CEQA requires a lead agency to consider whether a project's effects, while they might appear limited on their own, are "cumulatively considerable" and therefore significant. (Pub. Res. Code, § 21083, subd. (b)(3).) "'[C]umulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future

[3] "[A] number of studies have reported increased sensitivity to pollution, for communities with low income levels, low education levels, and other biological and social factors. This combination of multiple pollutants and increased sensitivity in these communities can result in a higher cumulative pollution impact." Office of Environmental Health Hazard Assessment, *Cumulative Impacts: Building a Scientific Foundation* (Dec. 2010), Exec. Summary, p. ix, available at http://oehha.ca.gov/ej/cipa123110.html.

projects." (*Id.*) This requires a local lead agency to determine whether pollution from a proposed project will have significant effects on any nearby communities, when considered together with any pollution burdens those communities already are bearing, or may bear from probable future projects. Accordingly, the fact that an area already is polluted makes it *more likely* that any additional, unmitigated pollution will be significant. Where there already is a high pollution burden on a community, the "relevant question" is "whether any additional amount" of pollution "should be considered significant in light of the serious nature" of the existing problem. (*Hanford, supra*, 221 Cal.App.3d at 661; see also *Los Angeles Unified School Dist. v. City of Los Angeles* (1997) 58 Cal.App.4th 1019, 1025 [holding that "the relevant issue ... is not the relative amount of traffic noise resulting from the project when compared to existing traffic noise, but whether any additional amount of traffic noise should be considered significant in light of the serious nature of the traffic noise problem already existing around the schools."])

The Role of Social and Economic Impacts Under CEQA

Although CEQA focuses on impacts to the physical environment, economic and social effects may be relevant in determining significance under CEQA in two ways. (See CEQA Guidelines, §§ 15064, subd. (e), 15131.) First, as the CEQA Guidelines note, social or economic impacts may lead to physical changes to the environment that are significant. (*Id.* at §§ 15064, subd. (e), 15131, subd. (a).) To illustrate, if a proposed development project may cause economic harm to a community's existing businesses, and if that could in turn "result in business closures and physical deterioration" of that community, then the agency "should consider these problems to the extent that potential is demonstrated to be an indirect environmental effect of the proposed project." (See *Citizens for Quality Growth v. City of Mt. Shasta* (1988) 198 Cal.App.3d 433, 446.)

Second, the economic and social effects of a physical change to the environment may be considered in determining whether that physical change is significant. (*Id.* at §§ 15064, subd. (e), 15131, subd. (b).) The CEQA Guidelines illustrate: "For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant." (*Id.* at § 15131, subd. (b); see also *id.* at § 15382 ["A social or economic change related to a physical change may be considered in determining whether the physical change is significant."])

Alternatives and Mitigation

CEQA's "substantive mandate" prohibits agencies from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that would substantially lessen or avoid those effects. (*Mountain Lion Foundation v. Fish and Game Commission* (1997) 16 Cal.4th 105, 134.) Where a local agency has determined that a project may cause significant impacts to a particular community or sensitive subgroup, the alternative and mitigation analyses should address ways to reduce or eliminate the project's impacts to that community or subgroup. (See CEQA Guidelines, § 15041, subd. (a) [noting need for "nexus" between required changes and project's impacts].)

Depending on the circumstances of the project, the local agency may be required to consider alternative project locations (see *Laurel Heights Improvement Assn. v. Regents of University of*

California (1988) 47 Cal.3d 376, 404) or alternative project designs (see *Citizens of Goleta Valley v. Board of Supervisors* (1988) 197 Cal.App.3d 1167, 1183) that could reduce or eliminate the effects of the project on the affected community.

The lead agency should discuss and develop mitigation in a process that is accessible to the public and the affected community. "Fundamentally, the development of mitigation measures, as envisioned by CEQA, is not meant to be a bilateral negotiation between a project proponent and the lead agency after project approval; but rather, an open process that also involves other interested agencies and the public." (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 93.) Further, "[m]itigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments." (CEQA Guidelines, § 15126.4, subd. (a)(2).)

As part of the enforcement process, "[i]n order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented," the local agency must also adopt a program for mitigation monitoring or reporting. (CEQA Guidelines, § 15097, subd. (a).) "The purpose of these [monitoring and reporting] requirements is to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded." (*Federation of Hillside and Canyon Assns. v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261.) Where a local agency adopts a monitoring or reporting program related to the mitigation of impacts to a particular community or sensitive subgroup, its monitoring and reporting necessarily should focus on data from that community or subgroup.

Transparency in Statements of Overriding Consideration

Under CEQA, a local government is charged with the important task of "determining whether and how a project should be approved," and must exercise its own best judgment to "balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian." (CEQA Guidelines, § 15021, subd. (d).) A local agency has discretion to approve a project even where, after application of all feasible mitigation, the project will have unavoidable adverse environmental impacts. (*Id.* at § 15093.) When the agency does so, however, it must be clear and transparent about the balance it has struck.

To satisfy CEQA's public information and informed decision making purposes, in making a statement of overriding considerations, the agency should clearly state not only the "specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits" that, in its view, warrant approval of the project, but also the project's "unavoidable adverse environmental effects[.]" (*Id.* at subd. (a).) If, for example, the benefits of the project will be enjoyed widely, but the environmental burdens of a project will be felt particularly by the neighboring communities, this should be set out plainly in the statement of overriding considerations.

* * * *

The Attorney General's Office appreciates the leadership role that local governments have played, and will continue to play, in ensuring that environmental justice is achieved for all of California's residents. Additional information about environmental justice may be found on the Attorney General's website at http://oag.ca.gov/environment.

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PROOF OF SERVICE

At the time of service I was over 18 years of age and not a party to this action. My business address is 3390 University Avenue, 5th Floor, P.O. Box 1028, Riverside, California 92502. On February 8, 2013,0 I served the following document(s):

[PROPOSED] CONSENT JUDGMENT

☐ **By fax transmission.** Based on an agreement of the parties to accept service by fax transmission, I faxed the documents to the persons at the fax numbers listed below. No error was reported by the fax machine that I used. A copy of the record of the fax transmission, which I printed out, is attached.

☒ **By United States mail.** I enclosed the documents in a sealed envelope or package addressed to the persons at the addresses listed below (specify one):

☒ Placed the envelope for collection and mailing, following our ordinary business practices. I am readily familiar with this business's practice for collecting and processing correspondence for mailing. On the same day that correspondence is placed for collection and mailing, it is deposited in the ordinary course of business with the United States Postal Service, in a sealed envelope with postage fully prepaid.

☐ **By messenger service.** I served the documents by placing them in an envelope or package addressed to the persons at the addresses listed below and providing them to a professional messenger service for service. A Declaration of Messenger is attached.

☐ **By overnight delivery.** I enclosed the documents in an envelope or package provided by an overnight delivery carrier and addressed to the persons at the addresses listed below. I placed the envelope or package for collection and overnight delivery at an office or a regularly utilized drop box of the overnight delivery carrier.

SEE ATTACHED SERVICE LIST

I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

Executed on February 8, 2013, at Riverside, California.

Lynda Byrd

Lynda A. Byrd

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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

Guidance for Assessing and Mitigating Air Quality Impacts

March 19, 2015

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
ADT	Average Daily Trips
APCD	San Joaquin Valley Air Pollution Control District
APS	Auxiliary Power System
ARB	California Air Resources Board
ATCM	Air Toxics Control Measure
BACT	Best Available Control Technology for Construction Equipment
CAAA	1990 Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CAMP	Construction Activity Management Plan
CAP	Clean Air Plan for San Luis Obispo County
CAPCOA	California Air Pollution Control officers Associations
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO2	Carbon Dioxide
DEIR	Draft Environmental Impact Report
DOC	Diesel Oxidation Catalyst
DPM	Diesel Particulate Matter
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GHG	Greenhouse Gases
HRA	Health Risk Assessment
ISR	Indirect Source Review
ITE	Institute of Transportation Engineers
LNG	Liquid Natural Gas
µ/m3	Micrograms per Cubic Meter
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NO	Nitrogen Oxide
NOA	Naturally Occurring Asbestos
NOP	Notice of Preparation
NOx	Oxides of Nitrogen
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter (2.5µm and smaller)
PM_{10}	Particulate Matter (10µm in size and smaller)
ROG	Reactive Organic Gases
SJVAPCD	San Joaquin Valley Air Pollution Control District
tpy	Tons per Year
TAC	Toxic Air Contaminant
Mm	Micrometer [micron]
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

GLOSSARY

Area Sources: A collection of similar emission units within a geographic area (i.e., a County) that are small and numerous and may not have been inventoried as specific point, mobile, or biogenic sources. The California Air Resources Board (CARB) has grouped these individual sources with other like sources into area source categories. These source categories are grouped in such a way that they can be estimated collectively using one methodology.

Area-Wide Sources: Sources of pollution where the emissions are spread over a wide area, such as consumer products, fireplaces, road dust and farming operations. Area-wide sources do not include mobile sources or stationary sources.

Climate Change: Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gases (GHGs), particularly those generated from the human production and use of fossil fuels.

Commenting Agency: See "Trustee Agency".

Criteria Pollutant: The EPA has identified ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur oxides, and lead as criteria pollutants. The EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based guidelines (criteria) for setting permissible levels.

Cumulative Impacts: Refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. (a) The individual effects may be changes resulting from a single project or a number of separate projects. (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Development Project: Refers generally to a land use development project such as a residential project, a commercial project, an industrial project, or a transportation project.

Discretionary Approval: A governmental decision in which an agency can use its judgment in deciding whether and how to carry out or approve a project.

Discretionary Project: A project which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

Effects: Direct or primary environmental changes that are caused by the project and occur at the same time and place, and indirect or secondary environmental changes that are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable.

Fugitive Dust: Small particles which are entrained and suspended into the air by the wind or external disturbances. Fugitive dust typically originates over an area and not a specific point. Typical sources include unpaved or paved roads, construction sites, mining operations, disturbed soil and tilled agricultural areas.

Hazardous Air Pollutants (HAPs): HAPs are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects, or birth defects, or adverse environmental effects. The EPA, in the Clean Air Act lists 189 HAPs.

Impacts: See "Effects".

Lead Agency: The public agency with the principal responsibility for carrying out or approving a project subject to CEQA.

Ministerial Approval: A governmental decision involving little or no personal judgment by the public official as to the wisdom or manner of carrying out the project. The public official merely applies the law to the facts as presented but uses no special discretion or judgment in reaching a decision.

Mitigation: Feasible alternatives or measures that would substantially lessen any significant effects that the project would have on the environment. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments [CCR §15126.4(a)(2)]. Mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- Compensating for the impact by replacing or providing substitute resources or environments.

Mobile Sources: Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes. (See also stationary sources).

Offsets: Emission reductions recognized by the District in the form of Emission Reduction Credits that are used in accordance with the provisions of District Rule 2301 (Emission

Reduction Credit Banking), or other actual emission reductions that may be used to mitigate an emission increase.

See District Rule 2301 at www.valleyair.org/rules/1ruleslist.htm

Ozone Precursors: Gaseous compounds needed to form ozone by the process of photochemistry. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances, such as reactive organic gases (ROG) and nitrogen dioxide (NO2) under the influence of sunlight.

$$NO_2 + ROG + Sunlight \rightarrow O_3$$

During the summer, in areas with high emissions and high ozone concentrations, ozone concentrations are very dependent on the amount of solar radiation. Ozone levels typically peak in the late afternoon, at the end of the longest period of daily solar radiation. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate and ozone usually decreases.

$$O_3 + NO \rightarrow NO_2 + O_2$$

In some remote rural locations away from emission sources, ozone concentrations can remain high overnight because there are no nitrogen oxide (NO) sources to react with the existing ozone. Ozone precursors are typically considered to be the combination of ROG and NOx.

Particulate Matter: Small particles that become airborne and have the potential to cause adverse health impacts. There are three general size components: 1) PM or Total Suspended Particulate (TSP) which includes all airborne particles regardless of size or source; 2) PM_{10} which includes airborne particles 10µm [micrometers] in size and smaller; and 3) $PM_{2.5}$ or fine airborne particles 2.5µm [micrometers] and smaller.

Project: The whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following:

(1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700.
(2) An activity undertaken by a person which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
(3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Responsible Agency: A public agency, other than the Lead Agency, that has responsibility for carrying out or approving a project subject to CEQA.

Sensitive Receptors: People that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s). The location of sensitive receptors is needed to assess toxic impacts on public health.

Significant effect on the environment: means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Stationary Sources: Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants. (See also Mobile Sources).

Threshold of Significance: An identifiable quantitative, qualitative or performance level of a particular environmental effect. Non-compliance with a threshold of significance means the effect will normally be determined to be significant by the Lead Agency. Compliance with a threshold of significance means the effect normally will be determined to be less than significant (CCR §15064.7).

Toxic Air Contaminants (TACs): Toxic pollutants in California are identified as toxic air contaminates (TACs) and are listed in the AB2588 Air Toxic "Hot Spots" and Assessment Act's "Emissions Inventory Criteria and Guideline Regulation". A subset of these pollutants has been listed by the Office of Environmental Health Hazard Assessment (OEHHA) as having acute, chronic, and/or carcinogenic effects, as defined by California Health and Safety Code (CH&SC) §39655. Toxic pollutants used for modeling should not be confused with the 189 Hazardous Air Pollutants (HAP) listed by EPA in the Clean Air Act. The California TAC list has ~700 plus pollutants listed.

Trustee Agency: An agency that has "jurisdiction by law" over a particular natural resource, but does not have discretionary approval power over a project subject to CEQA.

CHAPTER 1

INTRODUCTION

1.1 Purpose of this Guide

The California Environmental Quality Act (CEQA) requires environmental impacts of a proposed project be identified, assessed, and avoided or mitigated as feasible, if these impacts are significant. This document, *Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI)*, provides technical guidance for the review of air quality impacts from proposed projects within the boundaries of the San Joaquin Valley Unified Air Pollution Control District (District). The guide provides District staff uniform procedures for assessing potential air quality impacts of proposed projects and for preparing the air quality section of environmental documents. The guide is intended to be a user friendly advisory document for use by other agencies, consultants, and project proponents.

1.2 Using This Guide

One purpose of CEQA is to publicly disclose all environmental effects of a project, so the public is informed, and decision-makers make decisions based on a thorough understanding of a project's impacts. Information such as environmental setting, existing air quality conditions, regulatory setting, etc. is important in fulfilling this "spirit" of CEQA. The public deserves to understand the air quality implications of all projects approved in this air basin. This guide presents information which is not subject to frequent revision, such as general guidance for assessing and mitigating project-related impacts on air quality, information on air quality conditions within the San Joaquin Valley Air Basin, District attainment status, and District recommended procedures relating to CEQA.

The structure of this document has been established according to the logical process steps to be addressed when preparing a project-specific environmental document and the information provided in this document can be used as narrative by a third party when preparing an environmental review document.

Information which is subject to more frequent revision, such as methodologies and models to assess project-related impacts on air quality, is contained in separate technical guidance documents available on the District's website at www.valleyair.org/transportation/ceqa_guidance_documents.htm

The District will prepare additional technical guidance and update existing documents as approaches and methodologies for characterizing project-related impacts on air quality become available. Users of this Guide are responsible for ensuring that they are using the most current technical guides when preparing environmental assessments. Technical guides and resources are available on the District's website at www.valleyair.org/ceqa or can be obtained by contacting the District's Central Region office at:

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CHAPTER 2

SAN JOAQUIN VALLEY AIR BASIN

2.1 Introduction

The San Joaquin Valley Air Basin (SJVAB) consists of eight counties: Fresno, Kern (western and central), Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare (*Figure 1 – San Joaquin Valley Air Pollution Control District Boundaries*). Cumulatively, these counties represent approximately 16 percent of California's geographic area, making the SJVAB the second largest air quality basin (based on area) as delineated by the California Air Resources Board (ARB). Air pollution in the SJVAB can be attributed to both human-related (anthropogenic) and natural (non-anthropogenic) activities that produce emissions. Air pollution from significant anthropogenic activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. Activities that tend to increase mobile activity include increases in population, increases in general traffic activity (including automobiles, trucks, aircraft, and rail), urban sprawl (which will increase commuter driving distances), and general local land management practices as they pertain to modes of commuter transportation. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

Figure 1: San Joaquin Valley Air Pollution Control District Boundaries

The San Joaquin Valley's (SJV) topography and meteorology provide ideal conditions for trapping air pollution for long periods of time and producing harmful levels of air pollutants, including ozone and particulate matter. Low precipitation levels, cloudless days, high temperatures, and light winds during the summer in the SJV are conducive to high ozone levels resulting from the photochemical reaction of nitrogen oxides (NOx) and volatile organic compounds (VOC). Inversion layers in the atmosphere during the winter can trap emissions of directly emitted $PM_{2.5}$ (particulate matter that is 2.5 microns or less in diameter) and $PM_{2.5}$ precursors (such as NOx and sulfur dioxide (SO2)) within the SJV for several days, accumulating to unhealthy levels.

The region also houses the State's major arteries for goods and people movement, I-5 to the west and CA Highway 99 through the Central Valley (Valley), thereby attracting a large volume of vehicular traffic. Another compounding factor is the region's historically high rate of population growth compared to other regions of California. Increased population

typically results in an even greater increase in vehicle activity and more consumer product use, leading to increased emissions of air pollution, including NOx. In fact, mobile sources account for about 80% of the Valley's total NOx emissions inventory. Since NOx is a significant precursor for both ozone and $PM_{2.5}$, reducing NOx from mobile sources is critical for progressing the Valley towards attainment of ozone and $PM_{2.5}$ standards.

The geography of mountainous areas to the east, west and south, in combination with long summers and relatively short winters, contributes to local climate episodes that prevent the dispersion of pollutants. Transport, as affected by wind flows and inversions, also plays a role in the creation of air pollution.

2.2 Topography

The climate of the SJV is modified by topography. This creates climatic conditions that are particularly conducive to air pollution formation. Figure 2 (*Aerial View of the San Joaquin Valley Air Basin*) provides an aerial view of the SJV illustrating its bowl shape. As shown, the SJV is surrounded by mountains on three sides and open to the Sacramento Valley and the San Francisco Bay Area to the north.

Figure 2: Aerial View of the San Joaquin Valley Air Basin

The SJVAB is the southern half of California's Central Valley and is approximately 250 miles long and averages 35 miles wide. The SJV is bordered by the Sierra Nevada Mountains in the east (8,000 to 14,491 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 7,981 feet in elevation). There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl shaped topography inhibits movement of pollutants out of the valley.

2.3 Climate

The SJV is in a Mediterranean Climate Zone. Mediterranean Climates Zones occur on the west coast of continents at 30 to 40 degrees latitude and are influenced by a subtropical high-pressure cell most of the year. Mediterranean Climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100 degrees F in the Valley.

The subtropical high-pressure cell is strongest during spring, summer and fall and produces subsiding air, which can result in temperature inversions in the Valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500-3,000 feet).

Winter-time high pressure events can often last many weeks with surface temperatures often lowering into the thirties degree Fahrenheit. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet.

2.4 Wind Patterns

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and by transporting the pollution to other locations.

Especially in summer, winds in the Valley most frequently blow from the northwesterly direction. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the Valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley, over the Tehachapi pass, into the Southeast Desert Air Basin. The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach

almost halfway through the Earth's atmosphere). Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary but significant summer wind pattern is from the southeasterly direction and can be associated with nighttime drainage winds, prefrontal conditions and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the Valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can re-circulate a polluted air mass for an extended period. Such an eddy occurs in the Fresno area during both winter and summer.

2.5 Temperature, Sunlight and Ozone Production

Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer doesn't lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction.

2.6 Temperature Inversions

The vertical dispersion of air pollutants in the SJV can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the "mixing height". This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually encountered 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor.

2.7 Precipitation, Humidity and Fog

Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation.
Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. This ammonium nitrate is part of the Valleys $PM_{2.5}$ and PM_{10} problem.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJV floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to Tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10}.

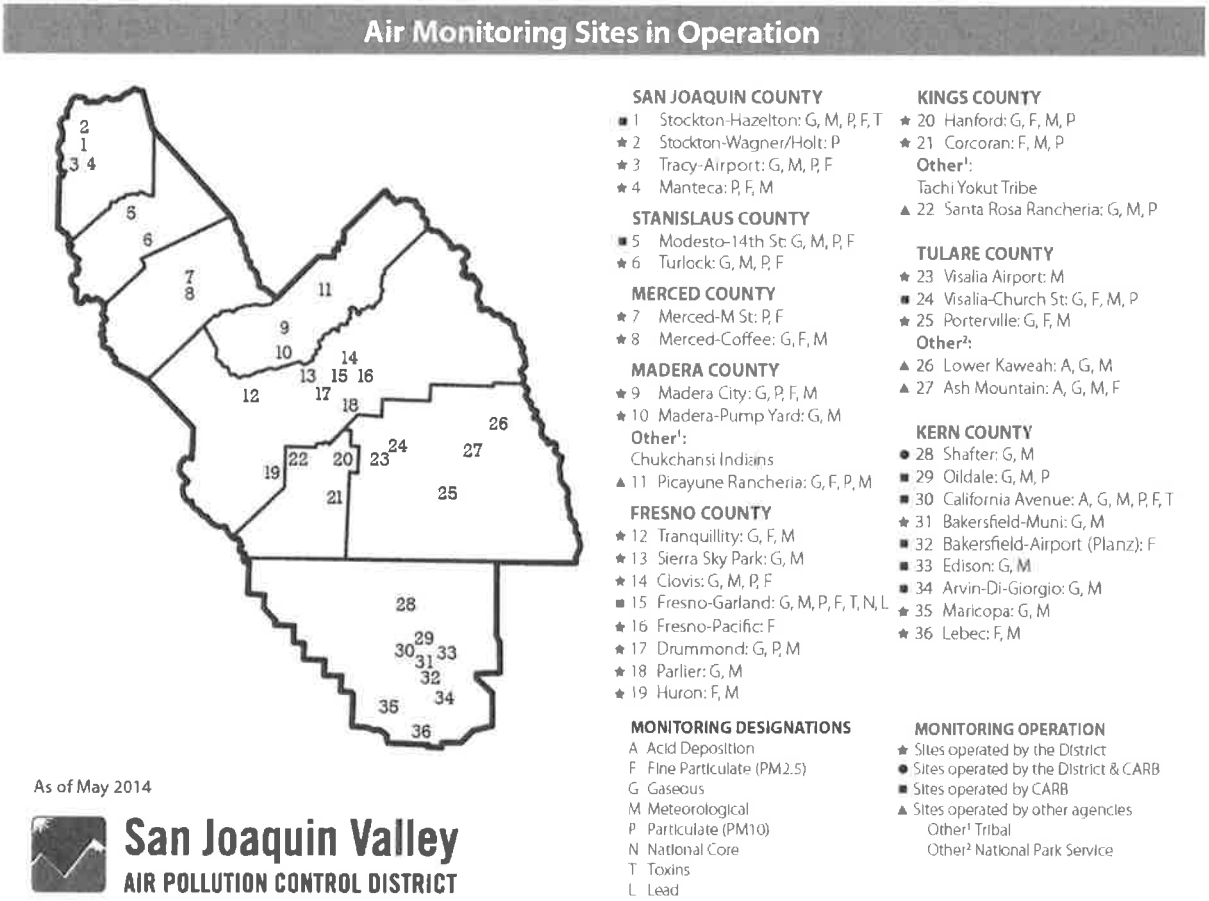
2.8 Ambient Air Quality Monitoring Sites

The District, the ARB, the U.S. National Park Service, and the Santa Rosa Rancheria in Lemoore operate an extensive air monitoring network to measure progress toward attainment of the NAAQS. Air quality monitoring networks are designed to monitor areas

with: high population densities, areas with high pollutant concentrations, areas impacted by major pollutant sources, and areas representative of background concentrations. Some monitors are operated specifically for use in determining attainment status, while others are operated for other purposes, such as for generating daily air quality forecasts. In total, the District utilizes ozone and PM data from over 60 monitors operated at 29 sites in the Valley. All monitors must comply with the pollutant standard for the San Joaquin Valley to be considered as attainment for that standard. Figure 3 (*District Ambient Air Quality Monitoring Sites*) identifies District air monitoring sites and the pollutants monitored at each site, as of this writing.

The District periodically updates this map at www.valleyair.org/aqinfo/MonitoringSites.htm

Figure 3: *District Ambient Air Quality Monitoring Sites*



An Environmental Impact Report prepared for projects with the potential to have a significant impact on air quality within the San Joaquin Valley should include a discussion of local air quality conditions. To assist Lead Agencies, the District has developed the technical guide (*Emissions Inventory Data Guide)*, which provides a step-by-step process for identifying and compiling relevant ambient air monitoring data.

The Emissions Inventory Data Guide is available on the District's website at http://www.valleyair.org/transportation/Guidelines_for_General_Plans.htm

CHAPTER 3

AIR POLLUTANTS AND ATTAINMENT STATUS

3.1 Introduction

A substance in the air that can cause harm to humans and the environment is known as an air pollutant. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made. Pollutants can be classified as primary or secondary. Usually, primary pollutants are directly emitted from a process, such as ash from a volcanic eruption, carbon monoxide gas from a motor vehicle exhaust, or sulfur dioxide released from factories. Secondary pollutants are not emitted directly. Rather, they form in the air when primary pollutants react or interact. An important example of a secondary pollutant is ground level ozone — one of the many secondary pollutants that make up photochemical smog. Some pollutants may be both primary and secondary: that is, they are both emitted directly and formed from other primary pollutants.

3.2 Federal and State Ambient Air Quality Standards

The Clean Air Act (CAA) requires the Federal Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six (6) air pollutants commonly found all over the United States. These pollutants can be detrimental to human health and the environment.

The EPA designates areas with air quality not meeting Federal standards as "nonattainment". The Federal CAA further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious.

The Federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states will use to attain the NAAQS. The Federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the Federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and impose additional control measures.

States may also establish their own ambient air quality standards, provided the State standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to Health and Safety Code Section 39606(b) and its predecessor statutes. The ARB is the agency responsible for

coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The CCAA classifies ozone nonattainment areas as moderate, serious, severe, and extreme based on severity of violations of State ambient air quality standards. For each class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. Air Districts with air quality that is in violation of CAAQS are required to prepare an air quality attainment plan that lays out a program to attain the CCAA mandates.

3.3 Criteria Pollutants

The Clean Air Act requires EPA to set National Ambient Air Quality Standards for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are found all over the United States. They are particle pollution (often referred to as particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. These pollutants can harm individual health and the environment, and cause property damage. Of the six pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards.

The following section summarizes the pollutants of greatest importance in the San Joaquin Valley. For each air pollutant it provides a description of the physical properties, health and other effects, sources, and the extent of the problems. These pollutants are identified in District Rule 1020 (Definitions) and District Rule 2201 (New and Modified Stationary Source Review Rule) as "Affected Pollutants".

In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere. Air pollution in the Valley results from emissions generated in the Valley as well as from emissions and secondary pollutants transported into the Valley. It is thought that the bulk of the Valley's summer and winter air pollution is caused by locally generated emissions. Due to the Valley's meteorology, topography, and the chemical composition of the air pollutants, oxides of nitrogen (NOx) is the primary culprit in the formation of both ozone and $PM_{2.5}$.

Ozone: (O_3), a reactive gas consisting of three atoms of oxygen. In the troposphere, it is a product of the photochemical process involving the sun's energy. It is a secondary pollutant that is formed when nitrogen oxides (NO_x) and volatile organic compounds (VOC) react in the presence of sunlight. Ozone at the earth's surface causes numerous adverse health effects and is a criteria pollutant. It is a major component of smog. In the

stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation.

High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. Ozone also damages natural ecosystems such as forests and foothill communities, agricultural crops, and some man-made materials, such as rubber, paint, and plastics.

Reactive Organic Gas: (ROG) is a reactive chemical gas, composed of hydrocarbon compounds that may contribute to the formation of smog by their involvement in atmospheric chemical reactions. No separate health standards exist for ROG as a group. Because some compounds that make up ROG are also toxic, like the carcinogen benzene, they are often evaluated as part of a toxic risk assessment.

Total Organic Gases: (TOG) includes all of the ROGs, in addition to low reactivity organic compounds like methane and acetone. ROGs and volatile organic compounds (VOC) are subsets of TOG.

Volatile Organic Compounds: (VOC) are hydrocarbon compounds that exist in the ambient air. VOCs contribute to the formation of smog and/or may themselves be toxic. VOC emissions are a major precursor to the formation of ozone. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints.

Oxides of Nitrogen: (NOx) is a family of gaseous nitrogen compounds and is a precursor to the formation of ozone and particulate matter. The major component of NOx, nitrogen dioxide (NO2), is a reddish-brown gas that is toxic at high concentrations. NOx results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant.

Particulate Matter: (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. EPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles ($PM_{2.5-10}$)," such as those found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5-10}$ is deposited in the thoracic region of the lungs.
- "Fine particles ($PM_{2.5}$)," such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from

sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.

- "Ultrafine particles (UFP)," are very small particles less than 0.1 micrometers in diameter largely resulting from the combustion of fossils fuels, meat, wood and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, its high surface area, deep lung penetration, and transfer into the bloodstream can result in disproportionate health impacts relative to their mass.

PM_{10}, $PM_{2.5}$, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM_{10} sources include these same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust in the Valley.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis, and respiratory illnesses in children.

Carbon Monoxide: (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). The main source of CO in the San Joaquin Valley is on-road motor vehicles. Other CO sources in the Valley include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources.

Because of the local nature of CO problems, ARB and EPA designate urban areas as CO nonattainment areas instead of the entire basin as with ozone and PM_{10}. Motor vehicles are by far the largest source of CO emissions. Emissions from motor vehicles have been declining since 1985, despite increases in vehicle miles traveled (VMT), with the introduction of new automotive emission controls and fleet turnover.

Sulfur Dioxide: (SO_2) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. The SJVAB is in attainment of both the Federal and California standards for SO_2. However, like airborne NOx, suspended SOx particles contribute to the poor visibility that sometimes occurs in the Valley. These SOx particles can also combine with other pollutants to form $PM_{2.5}$. The prevalence of low-sulfur fuel use in the Valley has minimized problems from this pollutant.

Lead: (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. The health effects of lead poisoning include loss of appetite, weakness, apathy, and miscarriage; it can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract.

Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. Lead concentrations were last systematically measured in the SJVAB in 1989, when the average concentrations were approximately five percent of the State lead standard. Lead levels remain well below applicable standards, and the SJVAB is designated in attainment for lead.

3.4 Other Pollutants

The State of California has established air quality standards for some pollutants not addressed by Federal standards. The California Air Resources Board (ARB) has established State standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particles. The following section summarizes these pollutants and provides a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Hydrogen Sulfide: (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations; especially in enclosed spaces (800 ppm can cause death). OSHA regulates workplace exposure to H_2S.

Sulfates: (SO_4^{2-}) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO_2) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The ARB sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property. Data collected in the SJVAB demonstrate levels of sulfates significantly less than the health standards.

Visibility Reducing Particles: Are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Vinyl Chloride: (C_2H_3Cl, also known as VCM) is a colorless gas that does not occur naturally. It is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

3.5 Attainment Status

The California Air Resources Board (ARB) and the Federal Environmental Protection Agency (EPA) have established Ambient Air Quality Standards in an effort to protect human health and welfare. Geographic areas are deemed "attainment" if these standards are met or nonattainment if they are not met. Nonattainment status is classified by the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from moderate to serious.

Current Federal and State Ambient Air Quality Standards can be found on ARB's website at www.arb.ca.gov/research/aaqs/aaqs2.pdf or www.arb.ca.gov/desig/desig.htm

At the Federal level, the District is designated as extreme nonattainment for the 8-hour ozone standard, attainment for PM_{10} and CO, and nonattainment for $PM_{2.5}$. At the State level, the District is designated as nonattainment for the 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards. Although the Federal 1-hour ozone standard was revoked in 2005, areas must still attain this standard, and the District recently requested an EPA finding that the Valley has attained the standard based on 2011-2013 data. The District's attainment status, at the time of this writing, is presented in Table 1 (*San Joaquin Valley Attainment Status*). Although infrequent, the District's attainment status does change.

The District's current attainment status can be found on the District's website at www.valleyair.org/aqinfo/attainment.htm

Table 1: San Joaquin Valley Attainment Status

Pollutant	Designation/Classification	
	Federal Standards	**State Standards**
Ozone - One hour	Revoked in 2005	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Extreme	Nonattainment
PM 10	Attainment	Nonattainment
PM 2.5	Nonattainment/Moderate	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

3.6 Air Quality Plans

The District has developed plans to attain State and Federal standards for ozone and particulate matter. The District's air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how air pollution will be reduced. The plans also use computer modeling to estimate future levels of pollution and make sure that the Valley will meet air quality goals. The District's attainment plans are subject to approval by the District's Governing Board.

More information about Federal and State air quality standards and the District's current attainment status can be found at www.valleyair.org/aqinfo/attainment.htm

At the time of this writing, the following attainment plans are in effect:

1-Hour Ozone

Although EPA revoked its 1979 1-hour ozone standard in June 2005, many planning requirements remain in place, and the Valley must still attain this standard before it can rescind CAA Section 185 fees. The District's most recent 1-hour ozone plan, the *2013 Plan for the Revoked 1-hour Ozone Standard*, demonstrated attainment of the 1-hour ozone standard by 2017. However, the District is in the process of requesting an EPA finding of attainment based on 2011-2013 ozone data. The District will continue working closely with ARB and EPA on this issue.

8-Hour Ozone

The District's far-reaching *2007 Ozone Plan* demonstrates attainment of EPA's 1997 8-hour ozone standard by 2023. EPA approved the *2007 Ozone Plan* effective April 30, 2012. The District is now in the process of developing the *2016 Ozone Plan* to address EPA's 2008 8-hour ozone standard, which the Valley must attain by 2032. This is a very tough standard that is nearing the Valley's naturally-occurring background concentrations. Attainment may not be possible without the virtual elimination of fossil fuel combustion.

PM_{10}

Based on PM_{10} measurements from 2003-2006, EPA found that the SJVAB has reached Federal PM_{10} standards. On September 21, 2007, the District's Governing Board adopted the *2007 PM_{10} Maintenance Plan and Request for Redesignation*. This plan demonstrates that the Valley will continue to meet the PM_{10} standard. EPA approved the document and on September 25, 2008, the SJVAB was redesignated to attainment/maintenance.

$PM_{2.5}$

The District's *2008 $PM_{2.5}$ Plan* demonstrated 2014 attainment of EPA's first $PM_{2.5}$ standard, set in 1997. EPA lowered the $PM_{2.5}$ standard in 2006, and the District's *2012 $PM_{2.5}$ Plan* showed attainment of this standard by 2019, with the majority of the Valley seeing attainment much sooner. The District continues to work with EPA on issues surrounding these plans, including EPA implementation updates. EPA lowered the $PM_{2.5}$ standard again in 2012 and is in the process of completing attainment designations.

CHAPTER 4

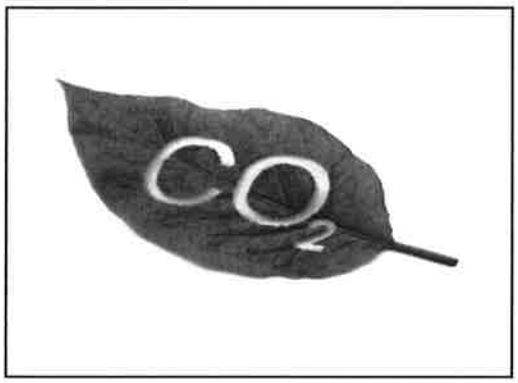
GREENHOUSE GASES

4.1 Introduction

Greenhouse gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. There are no "attainment" concentration standards established by the Federal or State government for greenhouse gases. In fact, GHGs are not generally thought of as traditional air pollutants because greenhouse gases, and their impacts, are global in nature, while air pollutants affect the health of people and other living things at ground level, in the general region of their release to the atmosphere. Some greenhouse gases occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated carbons.

4.2 Common Greenhouse Gases

Water Vapor: Although not considered a pollutant, water vapor is the most important, abundant, and variable GHG. In the atmosphere, it maintains a climate necessary for life. The main source of water vapor is evaporation from the ocean (approximately 85 percent). Other sources include sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves.



Ozone: Unlike other GHG, ozone is relatively short-lived and therefore is not global in nature. It is difficult to make an accurate determination of the contribution of ozone precursors (nitrogen oxides and volatile organic compounds) to global climate change (AEP 2007).

Aerosols: Are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel-containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning or incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

Chlorofluorocarbons: (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane (CH_4) or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nonflammable, nontoxic, insoluble, and chemically uncreative in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as cleaning solvents, refrigerants, and aerosol propellants. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987 (AEP 2007).

Carbon dioxide: (CO_2) is an odorless, colorless gas, which has both natural and anthropogenic sources. Natural sources include the following: respiration of bacteria, plants, animals, and fungus, evaporation from oceans, volcanic out gassing, and decomposition of dead organic matter. Anthropogenic sources of carbon dioxide are from burning coal, oil, natural gas, and wood. Concentrations of CO_2 were 379 parts per million (ppm) in 2005, which is an increase of 1.4 ppm per year since 1960 (AEP 2007).

Methane: (CH_4) is a flammable gas and is the main component of natural gas. When one molecule of CH_4 is burned in the presence of oxygen, one molecule of carbon dioxide and two molecules of water are released. There are no direct ill health effects from CH_4. A natural source of CH_4 is from the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH_4, which is extracted for fuel. Other sources are from cattle, fermentation of manure, and landfills.

Nitrous oxide: (N_2O), also known as laughing gas, is a colorless greenhouse gas. Higher concentrations of N_2O can cause euphoria, dizziness, and slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (nitric acid production, nylon production, fossil fuel-fired power plants, and vehicle emissions) also contribute to its atmospheric load. It is used in racecars, rocket engines, and as an aerosol spray propellant.

Fluorinated Gases: Are gases that are synthetic, powerful GHG that are emitted from a variety of industrial processes.

Hydrofluorocarbons: (HFCs) are synthetic man-made chemicals that are used as a substitute for CFCs (Chlorofluorocarbons) for automobile air conditioners and refrigerants.

Perfluorocarbons: (PFCs) have stable molecular structures and do not break down though the chemical processes in the lower atmosphere. High-energy ultraviolet rays, roughly 60 kilometers above the earth's surface are able to destroy the compounds. PFCs have long lifetimes, ranging between 10,000 and 50,000 years. Two common PFCs are

tetrafluoromethane and hexafluoroethane. Concentrations of tetrafluoromethane in the atmosphere are over 70 parts per trillion (ppt) (AEP 2007). The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

Sulfur hexafluoride: (SF_6) is an inorganic, colorless, odorless, nontoxic, nonflammable gas. Concentrations in the 1990s were roughly 4 ppt (AEP 2007). SF_6 is used for insulation in electric power transmission and distribution equipment, in semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.

Additional information on GHG and global climate change can be found in the staff report titled "Addressing GHG Emissions Impacts under CEQA" at www.valleyair.org/Programs/CCAP/CCAP_idx.htm

CHAPTER 5

AIR POLLUTANT EMISSION SOURCES

5.1 Introduction

In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere. Air pollution in the Valley results from emissions generated in the Valley as well as from emissions and secondary pollutants transported into the Valley. It is thought that the bulk of the Valley's summer and winter air pollution is caused by locally generated emissions.

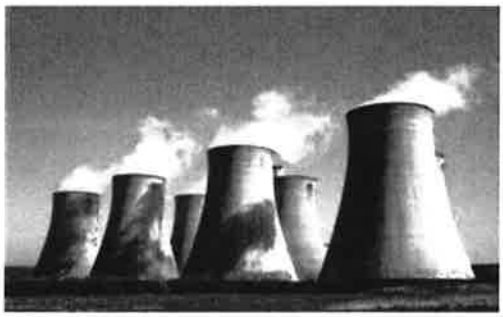
The types of air pollutant emission sources are commonly characterized as either point or area sources. A point source is a single, identifiable source of air pollutant emissions (for example, the emissions from a combustion furnace flue gas stack). An area source is a source of diffuse air pollutant emissions (for example, the emissions from a forest fire, a landfill or the evaporated vapors from a large spill of volatile liquid).

Sources may be further characterized as either stationary or mobile. Industrial boilers are examples of stationary sources and buses are examples of mobile sources. Sources may also be characterized as either urban or rural because urban areas constitute a so-called heat island and the heat rising from an urban area causes the atmosphere above an urban area to be more turbulent than the atmosphere above a rural area. Sources may be characterized by their elevation relative to the ground as either surface or ground-level, near surface or elevated sources. Sources may also be characterized by their time duration. Short-term sources (for example, accidental emission releases or construction emissions) constitute intermittent emissions. Long- term sources (Stationary Sources and development projects) constitute continuous emissions.

The District uses comprehensive emissions inventories to develop control strategies, determine the effectiveness of permitting and control programs, provide input into ambient dispersion models, fulfill reasonable further progress requirements, and screen sources for compliance investigations. Emissions inventory data, like ambient monitoring data, are also used as indicators for trends in air pollution. Typically, an emissions inventory is also organized by emission source category. Source categories consist of several broad groups:

5.2 Point Sources (Stationary Sources)

Facilities that have valid District permits for specific emissions units are called point sources. Refineries, gas stations, dry cleaners and industrial plants are examples of point sources in the District. Aggregated point sources are sources that are not inventoried individually but are estimated as a group and reported as a single source category.



5.3 Area Sources

Area source emissions are from sources that are not permitted by the District, or are individually so small that they may not be included in the District's emissions survey system. These small sources may not individually emit significant amounts of pollutants, but when aggregated can make an appreciable contribution to the emission inventory. Examples of these area sources are residential water heating and use of paints, varnishes, and consumer products. Emissions from these sources are grouped into categories and calculated based on surrogate variables.

5.4 Mobile Sources

Mobile sources consist of motor vehicles and other portable sources. Mobile sources are classified as being on-road or off-road. On-road motor vehicles consist of passenger cars, trucks, buses and motorcycles. Emissions from on-road motor vehicles are a major portion of the emission inventory, and are estimated by ARB using computer models. Off-road mobile sources generally consist of vehicles in which the primary function is not transportation. Examples of off-road vehicles include construction and farm equipment.

Other mobile sources include boats and ships, trains, and aircraft. The District estimates emissions for ships and aircraft in our area source inventory. The remaining sources are estimated by ARB as part of their off-road inventory

5.5 Natural Sources

Natural Sources are non-anthropogenic, naturally occurring emissions. In addition to man-made air pollution, there are significant quantities of pollutants from natural sources. Natural sources include biological and geological sources, wildfires, windblown dust, and biogenic emissions from plants and trees. Emissions from natural sources are estimated by ARB.

CHAPTER 6

LAND USE AND AIR QUALITY

6.1 Introduction

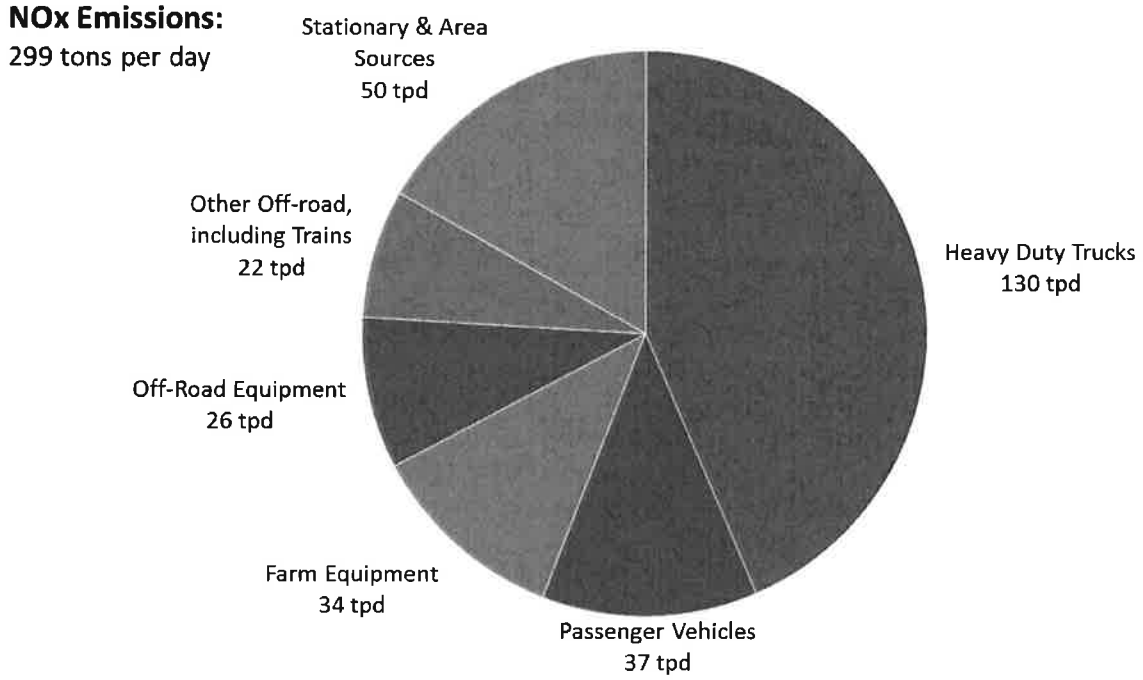
Nearly all development projects within the San Joaquin Valley Air Basin, from general plans to individual development projects have the potential to generate air pollutants, making it more difficult to attain State and Federal ambient air quality standards. Therefore, it is necessary to evaluate air quality impacts to comply with CEQA. Land use decisions are critical to improving air quality within the San Joaquin Valley Air Basin because land use patterns greatly influence transportation needs and motor vehicle emissions are the largest source of air pollution. Land use decisions and project design elements such as preventing urban sprawl, encouraging mix-use development, and project designs that reduce vehicle miles traveled (VMT) have proven benefit for air quality.

The air quality considerations that warrant particular attention during early consultation between Lead Agencies and project proponents include consistency with applicable District rules and permit requirements; land use and design measures to encourage alternatives to the automobile and to promote energy conservation; and land use conflicts and exposure of sensitive receptors to odors, toxics and criteria pollutants. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors.

Addressing land use and site design issues while a proposed project is still in the conceptual stage increases opportunities to incorporate project design features to minimize land use compatibility issues and air quality impacts. By the time a project enters the CEQA process, it is usually more costly and time-consuming to redesign the project to incorporate mitigation measures.

The District is continuously improving processes to be more efficient and more effective, in addition to working closely with land use agencies to ensure their needs are met.

Figure 4: Sources of NOx Emissions within the San Joaquin Valley Air Basin



Source: California Emissions Projection Analysis Model – NorCal v1.04 – 2013 Annual Average

6.2 Land Use Planning

Land use decisions are critical to air quality planning because land use patterns greatly influence transportation needs, and motor vehicles are the largest source of air pollution in the San Joaquin Valley Air Basin. The design of development projects significantly influences how people travel.

Since its inception, the District has been active in promoting land use strategies that reduce the amount and distance people drive to accomplish their daily activities. Air districts with severe air pollution were required by the California Clean Air Act to develop "indirect source" control programs in their attainment plans. Indirect sources are defined as any building, facility, activity center, etc. that attracts motor vehicle trips. Land use strategies reduce trips by designing development to be more convenient for walking, bicycling, and transit, thereby allowing people to drive less.

The District's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary indirect source programs. The general plan is the primary long range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions.

The District's *Air Quality Guidelines for General Plans* (AQGGP), adopted by the District in 1994 and amended in 2005, is a guidance document containing goals and policy examples that cities and counties can directly incorporate into their General Plans to satisfy Section 65302.1. The document provides policies that directly and indirectly benefit air quality. Its emphasis is on cities and counties developing a comprehensive approach to air quality that targets new growth areas, redevelopment areas, and programs that reach the entire community. The general plan is the "constitution" for local development and, as such, provides a framework for deciding the way development will occur. When adopted in a general plan and implemented, the suggestions in the AQGGP can reduce vehicle trips and miles traveled and improve air quality. The specific suggestions in the AQGGP are voluntary. The District strongly encourages cities and counties to use their land use and transportation planning authority to help achieve air quality goals by incorporating as many air quality policies from the AQGGP as possible into their general plans, community plans, and specific plans to ensure that development occurs in ways that produce fewer air quality impacts. To the extent that cities and counties can implement policies that make their communities more transit-, bicycle-, and pedestrian-friendly, and avoid land use conflicts that lead to toxics and nuisance problems, they can minimize the need to mitigate air quality impacts of individual development proposals. The strategies recommended by the AQGGP are summarized as follows:

- A commitment to determine and mitigate project level and cumulative air quality impacts under the California Environmental Quality Act (CEQA);
- A commitment to integrate land use plans, transportation plans, and air quality plans;
- A commitment to plan land uses in ways that support a multi-modal transportation system;
- A commitment to take local action to support programs that reduce congestion and vehicle trips;
- A commitment to plan land uses to minimize exposure to toxic air pollutant emissions from industrial and other sources;
- A commitment to reduce particulate emissions from sources under local jurisdiction;

- A commitment of support for Air District and public utility programs to reduce emissions from energy consumption and area sources (water heaters, woodstoves, fireplaces, barbecues, etc.).

Policies promoting land use and design measures are most effective if implemented communitywide, or even at the subregional level. Issues such as allowable land use densities, mixing of land uses, street standards, parking requirements, etc. are most appropriately addressed throughout the entire community or sub-region. Implementing mechanisms such as zoning ordinances, parking standards, and design guidelines, may need to be revised to address these issues. Implementation of these strategies on an individual project basis can still be beneficial, even absent a community-wide strategy, but the benefits will be greater if implemented broadly.

Some examples of policies are:

- All City/County submittals of transportation improvement projects to be included in regional transportation plans shall be consistent with the air quality goals and policies of the General Plan.
- City/County fleet vehicle operators shall replace or convert operational fuel vehicles with clean fuel vehicles as rapidly as feasible.
- The City/County shall encourage the development of pedestrian-oriented shopping areas within walking distance of high-density residential neighborhoods.

The Air Quality Guidelines for General Plans is available on the District's website at www.valleyair.org/transportation/Guidelines_for_General_Plans.htm

6.3 Assembly Bill 170, Reyes (AB 170)

Assembly Bill 170, Reyes (AB 170), was adopted by State lawmakers in 2003 creating Government Code §65302.1 which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies and feasible implementation strategies designed to improve air quality. These amendments are due no later than one year from the due date specified for the next revisions of a jurisdiction's housing element. As required in §65302.1.b, cities and counties within the San Joaquin Valley must amend their general plan to include a discussion of the status of air quality and strategies to improve air quality. The elements to be amended include, but are not limited to, those elements dealing with land use, circulation, housing, conservation, and open space. Section 65302.1.c identifies four (4) areas of air quality discussion required in these amendments.

These areas include:

(1) A report describing local air quality conditions, attainment status, and State and Federal air quality and transportation plans;
(2) A summary of local, district, State, and Federal policies, programs, and regulations to improve air quality;
(3) A comprehensive set of goals, policies, and objectives to improve air quality; and
(4) Feasible implementation measures designed to achieve these goals.

To aid agencies in amending their general plans consistent with AB 170, the District has prepared various guidance documents for addressing air quality issues within general plans. These documents also provide links to websites that may provide additional information and detail.

These documents are available on the District's website at www.valleyair.org/transportation/Guidelines_for_General_Plans.htm

6.4 District Rule 9510 (Indirect Source Review)

The Indirect Source Review (ISR) rule, which went into effect March 1, 2006, requires developers of new residential, commercial and industrial projects to reduce smog-forming and particulate emissions generated by their projects. The ISR rule also applies to transportation and transit projects whose construction exhaust emissions will result in a total of two tons per year of NOx or PM_{10}. The ISR rule seeks to reduce the growth in NOx and PM_{10} emissions associated with construction and operation of new development, transportation and transit projects in the San Joaquin Valley.

The ISR rule requires developers to reduce construction NOx and PM_{10} exhaust emissions by 20% and 45%, respectively, and reduce operational NOx and PM_{10} emissions by 33.3% and 50%, respectively, as compared to the unmitigated baseline. Developers can achieve the required reductions through any combination of District approved on-site emission reduction measures. When a developer cannot achieve the required reductions through on-site measures, off-site mitigation fees are imposed to mitigate the difference between the required emission reductions and the mitigations achieved on-site. Monies collected from this fee are used by the District to fund emission reduction projects in the San Joaquin Valley on behalf of the project.

Technical resources for District Rule 9510, including a list of approved on-site emission reduction measures and tools for calculating project specific emissions are available at www.valleyair.org/ISR/ISRHome.htm

6.5 Potential Land Use Conflicts and Exposure of Sensitive Receptors

The location of a development project is a major factor in determining whether the project will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and receptors decreases. Receptors include sensitive receptors and worker receptors. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (these sensitive land uses may also be referred to as sensitive receptors). Worker receptors refer to employees and locations where people work. Impacts on sensitive receptors are of particular concern, because they are the people most vulnerable to the effects of air pollution.

From a health risk perspective there are basically two types of land use projects that have the potential to cause long-term public health risk impacts:

- Type A Projects: Land use projects that will place new toxic sources in the vicinity of existing receptors, and
- Type B Projects: Land use projects that will place new receptors in the vicinity of existing toxics sources.

Examples of Type A projects (New project impacts existing receptors):

This category includes sources of air toxic emissions such as:

- Gasoline dispensing facilities,
- Asphalt batch plants,
- Warehouse distribution centers,
- New freeways or high traffic roads, and
- Other stationary sources that emit toxic substances.

Examples of Type B projects (New project impacted by existing toxic sources):

This category includes residential, commercial, and institutional developments proposed to be located in the vicinity of existing toxic emission sources such as:

- Stationary sources,
- Freeways or high traffic roads
- Rail yards, and
- Warehouse distribution centers.

Various tools already exist to perform a screening analysis from stationary sources impacting receptors (Type A projects) as developed for the AB2588 Hot Spots and air district permitting programs. Screening tools may include prioritization charts, AERSCREEN and various spreadsheets. For projects being impacted by existing sources (Type B projects), one screening tool is contained in the ARB Handbook: *Air Quality and Land Use Handbook: A Community Health Perspective.* The document includes a table entitled "*Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*" with recommended buffer distances associated with various types of common sources. If a proposed project is located within an established buffer distance to any of the listed sources, a health risk screening and/or assessment should be performed to assess risk to potential sensitive receptors. These guidelines are intended only for projects that are impacted by a single source.

Another useful tool is the CAPCOA Guidance Document: Health Risk Assessments for Proposed Land Use Projects. CAPCOA prepared the guidance to assist Lead Agencies in complying with CEQA requirements. The guidance document describes when and how a health risk assessment should be prepared and what to do with the results.

The CAPCOA Guidance document, Health Risk Assessment for Proposed Land use Projects, can be found at http://www.capcoa.org/documents and the ARB Handbook, Air Quality and Land Use Handbook: A Community Health Perspective, can be found at www.arb.ca.gov/ch/landuse.htm

CHAPTER 7

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA

7.1 Introduction

The California Environmental Quality Act (CEQA) is a state statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. The impetus for CEQA can be traced to the passage of the first federal environmental protection statute in 1969, the National Environmental Policy Act (NEPA). In response to this federal law, the California State Assembly created the Assembly Select Committee on Environmental Quality to study the possibility of supplementing NEPA through state law. This legislative committee, in 1970, issued a report entitled The Environmental Bill of Rights, which called for a California counterpart to NEPA. Later that same year, acting on the recommendations of the select committee, the legislature passed, and Governor Reagan signed, the CEQA statute.

CEQA applies to certain activities of state and local public agencies. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a "project". A project is an activity undertaken by a public agency or a private activity which must receive some discretionary approval (meaning that the agency has the authority to deny the requested permit or approval) from a government agency which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.

Most proposals for physical projects in California are subject to the provisions of CEQA, as are many governmental decisions which do not immediately result in physical development (such as adoption of a general or community plan). Every project which requires a discretionary governmental approval will require an environmental review pursuant to CEQA, unless an exemption applies.

The CEQA Guidelines are the regulations that explain and interpret the law for both the public agencies required to administer CEQA and for the public generally. They are found in the California Code of Regulations (CCR), in Chapter 3 of Title 14. The Guidelines provide objectives, criteria and procedures for the orderly evaluation of projects and the preparation of environmental impact reports, negative declarations, and mitigated negative declarations by public agencies. The fundamental purpose of the Guidelines is to make the CEQA process comprehensible to those who administer it, to those subject to it, and to those for whose benefit it exists. To that end, the Guidelines are more than mere regulations which implement CEQA as they incorporate and interpret both the statutory mandates of CEQA and the principles advanced by judicial decisions.

The Governor's Office of Planning and Research (OPR) prepares and develops proposed amendments to the Guidelines and transmits them to the Secretary for Resources. The

Secretary for Resources is responsible for certification and adoption of the Guidelines and amendments thereto.

CEQA is intended to address a broad range of environmental issues, including water quality, noise, land use, natural resources, transportation, energy, human health, biological species, and air quality. CEQA has four primary objectives:

1. Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
2. Identify the ways that environmental damage can be avoided or significantly reduced.
3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

7.2 Roles in the CEQA Process

As a public agency, the District takes an active part in the intergovernmental review process under CEQA. The District is available to assist governmental agencies and project proponents in understanding how to characterize project-related impacts on air quality and how to reduce or mitigate those impacts. As part of this ongoing effort, the District develops and publishes technical guidance relevant to assessing project specific emissions of criteria pollutants and assessing potential health risks to sensitive receptors.

In carrying out its duties under CEQA, the District may act as a Lead Agency, a Responsible Agency, or a Trustee/"Commenting" Agency. As discussed below, the role the District serves under CEQA is dependent upon the extent of the District's discretionary approval power over the project.

CEQA applies to discretionary projects. A discretionary project is one that requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity. Ministerial projects are statutorily exempt from the requirements of CEQA [PRC §21080(b)(1)]. Ministerial projects involve little or no personal judgment by the public official as to the wisdom or manner of carrying out the project. The official merely applies the law to the facts presented but uses no special discretion or judgment in reaching a decision.

"The determination of what is ministerial can most appropriately be made by the particular agency involved based on its analysis of its own laws, and each public agency should make such determinations either as part of its implementing regulations or on a case-by-case basis." [CCR §15268(a)].

The District has determined that it exercises discretionary judgment when issuing air permits for stationary sources with sufficient emission increases to be subject to Best Available Control Technology (BACT) requirements. For such projects, the District conducts a top-down BACT analysis to determine whether the proposed control technology meets BACT requirements. In making a BACT determination, California Courts (*see, e.g.*, *Security Environmental Systems, Inc. v. South Coast Air Quality Management Dist.*, 229 Cal.App.3d 110, 117-118; 120 (1991)) have found that District staff exercises discretionary judgment in considering the proposed Achieved in Practice control technology, evaluating the feasibility of alternative control technology, and determining whether the alternatives are cost effective. If there is no approved BACT, District staff exercises discretionary judgment in establishing BACT for the particular source category and comparing the newly approved BACT to the proposed control technology.

7.3 Lead Agency

A Lead Agency is the public agency with the principal responsibility for carrying out or approving a project subject to CEQA. Lead Agencies are responsible for complying with CEQA by ensuring that all potential environmental impacts of proposed projects are adequately assessed and environmental damage is avoided or minimized where feasible. When determining whether a project will have a significant environmental effect, the Lead Agency must consider the whole of an action and not simply its constituent parts. The Lead Agency must consult with and solicit comments from Responsible and Trustee agencies. In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.

Under CEQA the Lead Agency is required to:

1. Conduct preliminary reviews to determine if applications are subject to CEQA [CCR §15060];
2. Conduct review to determine if projects are exempt from CEQA [CCR §15061;
3. Prepare Initial Studies for projects that may have adverse environmental impacts [CCR §15063];
4. Determine the significance of the environmental effects caused by the project [CCR §15064];
5. Prepare Negative Declarations or Mitigated Negative Declarations for projects with no significant environmental impacts [CCR §15070];
6. Prepare, or contract to prepare, EIRs for projects with significant environmental impacts [CCR §15081];
7. Adopt reporting or monitoring programs for the changes made to projects or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment [PRC §21081.6 & CCR §15097];
8. Comply with CEQA noticing and filing requirements.

District Role

The District is always the Lead Agency for projects such as the development of District rules and regulations. The District may be Lead Agency for projects subject to District permit requirements. As discussed above, for projects triggering BACT, the District has discretionary approval in deciding how to permit the project. For projects subject to BACT, the District serves as Lead Agency when no other agency has principal responsibility for approving the project. This commonly occurs when the proposed project is a modification to an existing facility and the project does not require discretionary land use approval, such as issuance of a zone change or conditional use permit.

The District is seldom Lead Agency for projects consisting of construction and operation of a new facility, such as a dairy, glass manufacturing operation, or other stationary sources of pollution. For such projects, the local government agency with jurisdiction over land use, such as a city or county, typically has principal responsibility for approving the project and serves as Lead Agency. An exception is when the land use agency determines that the project is an allowed use and has only ministerial approval power over the project, such as issuance of building permits. This can occur, for example, when the District issues permits for certain oil field projects involving installation of steam generators.

The District is frequently Lead Agency for projects consisting of modifications to existing stationary sources, such as changes in existing procession operations, modifications to existing equipment, or installation of new stationary source equipment. Such projects typically are consistent with existing land uses and are not subject to a discretionary approval by the local land use agency.

7.4 Responsible Agency

A Responsible Agency is a public agency, other than the Lead Agency, that has responsibility for carrying out or approving a project subject to CEQA. The discretionary authority of a Responsible Agency is more limited than a Lead Agency; having responsibility for mitigating or avoiding only the environmental effects of those parts of the project which it decides to approve, carry out, or finance.

Under CEQA a Responsible Agency is required to:

1. Decide on the adequacy of the EIR or Negative Declaration for use by the District [CCR §15096(e)];
2. Consider the environmental effects of the project as shown in the EIR or Negative Declaration [CCR §15096(f)];

3. Adopt feasible alternative or mitigations for the direct or indirect environmental effects of those parts of the project, which it decides to carry out, finance, or approve [CCR §15096(g)];
4. Prepare and submit mitigation monitoring and reporting programs where appropriate [PRC §21081.6 & CCR §15097];
5. Make appropriate findings [CCR §15096(h)]; and
6. File appropriate notices [CCR §15096(i)].

District Role

As a Responsible Agency, the District assists Lead Agencies by providing technical expertise in characterizing project-related impacts on air quality and is available to provide technical assistance in addressing air quality issues in environmental documents. When commenting on a Lead Agency's environmental analysis, the District reviews the air quality section of the analysis and other sections relevant to assessing potential impacts on air quality, i.e. sections assessing public health impacts. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures.

As discussed above, for projects triggering BACT, the District has discretionary approval in deciding how to permit the project. As such, District staff reviews the Lead Agency's environmental document and considers the environmental effects of the project. When issuing permits for a project that would have a significant environmental effect, the District prepares written findings and files a Notice of Determination, as required under CEQA.

7.5 Trustee/Commenting Agency

Under CEQA, an agency that has "jurisdiction by law" over a particular natural resource but does not have discretionary approval power over the project is a "Trustee Agency", otherwise known as a "Commenting Agency". CEQA Guidelines §15004(b)(2) require a Lead Agency to consult with *"Any other State, Federal, and local agencies which have jurisdiction by law with respect to the project or which exercise authority over resources which may be affected by the project…."*

District Role

The District has jurisdiction over most air quality matters in the San Joaquin Valley Air Basin and is tasked with implementing certain programs and regulations required by the Federal Clean Air Act and the California Clean Air Act. Although the District has no statutory authority over land-use, nearly all development projects in the District, from general plans to individual development applications, have the potential to generate pollutants that could adversely impact air quality or make it more difficult for the District to achieve national and State air quality attainment standards. Therefore, for most

development projects, it is necessary for the land-use agency to consult with the District in matters related to air quality impacts.

As a Trustee Agency, the District assists Lead Agencies by providing technical expertise or tools in characterizing project-related impacts on air quality and identifying potential mitigation measures, and is available to provide technical assistance in addressing air quality issues in environmental documents. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures. The process is subject to change due to the District's continuous improvements efforts.

7.6 Environmental Review Process

The environmental review process imposes both procedural and substantive requirements. At a minimum, an initial review of the project and its environmental effects must be conducted. Depending on the potential effects, a further, and more substantial, review may be conducted in the form of an environmental impact report (EIR). A project may not be approved as submitted if feasible alternatives or mitigation measures are able to substantially lessen the significant environmental effects of the project.

"Project" under CEQA

The CEQA Statutes (PRC §21065) define "project" as the whole of an activity, which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

1. An activity directly undertaken by a public agency;
2. An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies;
3. An activity that involves the issuance to a person of a lease, permit, license, certificate;
4. Or other entitlement for use by one or more public agencies.

7.7 CEQA "*Steps*"

The CEQA procedure involves a number of steps which produce an environmental document examining the Lead Agency's as well as the responsible and/or trustee agencies' permit decisions. An agency will normally take up to three separate steps in deciding which document to prepare for a project subject to CEQA.

7.7.1 CEQA Step 1: CEQA Exemptions

In the first step the Lead Agency examines the project to determine whether the project is subject to CEQA at all. An activity is not subject to CEQA if:

1. The activity does not involve the exercise of discretionary powers by a public agency;
2. The activity will not result in a direct or reasonably foreseeable indirect physical change in the environment; or
3. The activity is not a project as defined in PRC §21065.

Once a Lead Agency has determined that an activity is a project subject to CEQA, a Lead Agency shall determine whether the project is exempt from CEQA. A project is exempt from CEQA if:

1. The project is exempt by statute (See CCR §15260).
2. The project is exempt pursuant to a categorical exemption (See CCR §15300) and the application of that categorical exemption is not barred by one of the exceptions set forth in CCR §15300.2.
3. The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA (see CCR §15061 (b)(3))
4. The project will be rejected or disapproved by a public agency (see CCR §15270(b))
5. The project is exempt pursuant to the provisions of Article 12.5 (Exemptions for Agricultural Housing, Affordable Housing, and Residential Infill Projects) of Chapter 3 "Guidelines for Implementation of the California Environmental Quality Act".

It should be noted that a public agency can also, in the course of establishing its own procedures, list those specific activities which fall within each of the categorical exempt classes (see CCR §15300.4). If the project is exempt, the process does not need to proceed any further. The agency may prepare a Notice of Exemption. [See: CCR §15061 and §15062].

7.7.2 CEQA Step 2: Initial Study

If the project is not exempt, the Lead Agency takes the second step and conducts an Initial Study (See: CCR §15063) to determine whether the project may have a significant effect on the environment. The air quality impact of a project is determined by examining the types and levels of emissions generated by the project, the existing air quality conditions, and neighboring land uses.

The purposes of an Initial Study are to:

1. Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration;
2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;
3. Assist in the preparation of an EIR, if one is required, by:
   a. Focusing the EIR on the effects determined to be significant,
   b. Identifying the effects determined not to be significant,
   c. Explaining the reasons for determining that potentially significant effects would not be significant, and
   d. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects;
4. Facilitate environmental assessment early in the design of a project;
5. Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;
6. Eliminate unnecessary EIRs; and
7. Determine whether a previously prepared EIR could be used with the project.

Project Analysis

The Initial Study should analyze all phases of project planning, construction and operation, as well as cumulative impacts. When considering a project's impact on air quality, a Lead Agency should provide substantial evidence that supports its conclusions in an explicit, quantitative analysis whenever possible. An initial study may rely upon expert opinion supported by facts, technical studies or other substantial evidence to document its findings. However, an initial study is neither intended nor required to include the level of detail included in a Negative Declaration (ND), a Mitigated Negative Declaration (MND), or an EIR (CCR §15063(a)(3).

If it is not obvious that a project's air quality impacts are less than significant, Lead Agencies should prepare an analysis report that includes a quantitative air quality assessment to determine the project's impact on air quality. The analysis report should also contain the information described below.

- **Climate and Topography**. Provide a description of the influence of climate and topography on a project's impacts on local and regional air quality.

- **Regulatory Environment**. Describe the regulatory requirements in the District.

- **Prevention of Significant Deterioration (PSD) Consideration.** The analysis should place special emphasis on air quality resources that are rare or unique to the region and would be affected by the project. Regulatory requirements identify areas that are pristine and classified as Class I airsheds. These airsheds are subject to specific standards, e.g. Prevention of Significant Deterioration requirements. Within the District, the Kings Canyon and Sequoia National Parks and Ansel Adams, Kaiser, John Muir, and Domeland Wilderness Areas are Class I areas. Any project proposed in the vicinity of one of these areas should note its proximity to a Class I area in the description of the project setting.

- **Air Quality Standards.** Identify state and federal AAQS for all criteria pollutants. Provide the air quality attainment status for the criteria pollutants.

- **Ambient Air Quality.** Summarize ambient air quality, including data for at least the last three years from the air quality monitoring station(s) closest to the project site. The setting should also include basin-wide data for ozone given its regional characteristics.

- **Existing Emissions.** Describe any existing emissions from the project site, if applicable. Include any District permitted stationary sources of emissions that are being eliminated.

- **Sensitive Receptors.** Identify any sensitive receptors located near the project site. For CEQA purposes, a sensitive receptor is generically defined as a location where human populations, especially children, seniors, and sick persons are found, and there is reasonable expectation of continuous human exposure according to the averaging period for the AAQS (e.g., 24-hour, 8-hour, 1-hour). These typically include residences, hospitals, and schools. Locations of sensitive receptors may or may not correspond with the location of the maximum off-site concentration. The location of sensitive receptors should be explained in terms that demonstrate the relationship between the project site and potential air quality impacts (e.g., proximity, topography, or upwind or downwind location). The analysis should also identify reasonably foreseeable sensitive receptors. This would include future receptors if development is pending, as well as potential receptors that could reasonably be sited nearby based on permitted zoning or land use designations. Land uses in the vicinity of the project site should be extensively described in the

Land Use Section of an EIR. If no sensitive receptors are in the project vicinity, the Land Use Section may be referenced with an appropriate reference to the lack of sensitive receptors. If sensitive receptors are in the project vicinity, the Land Use Section may also be referenced, but the description of any sensitive receptors should be expanded upon as necessary for air quality impact analysis purposes.

- **Sources of Air Pollutants in Project Vicinity.** Identify sources of air pollutants on or near the project site. The description of existing air pollution sources should include criteria pollutants, toxic air contaminants, and nuisance emissions such as odors and dust. More detailed information regarding existing emissions, including emissions of odors and toxic air contaminants, may be obtained by contacting the District.

- **Transportation System.** Describe the transportation system serving the project site. Discuss traffic conditions, including traffic volumes and levels of service; transit service; and other relevant transportation facilities such as bicycle facilities, shuttle services, telecommuting centers, etc. The discussion of the existing transportation system should describe both current conditions and future conditions with the project. Much of this information may be located in the Traffic and Circulation section of the EIR (or Initial Study). Many EIR traffic and circulation sections, however, do not adequately describe bicycle facilities, telecommuting centers, and other alternative transportation forms. The traffic and circulation information may be referenced and/or summarized, but any additional information relative to non-motorized trip reduction alternatives not discussed should be described as necessary and appropriate for the project in the air quality setting.

Project Air Impact Assessment – District Approved Model

When quantifying project emissions, the latest approved models by the District should always be used for air quality analysis. Models are subject to change. At the time of writing, the model available is the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The model is available at www.caleemod.com and at
http://www.valleyair.org/transportation/air_quality_models.htm
Assistance with operating the model is available by contacting the District at (559) 230-6000, or hramodeler@valleyair.org

Initial Study Conclusion

If the Initial Study shows that there is no substantial evidence that the project may have a significant effect or identifies potentially significant effects but the project is revised to avoid or mitigate those significant effects, the Lead Agency prepares a Negative Declaration (ND) or a Mitigated Negative Declaration (MND) (See: CCR §15070 et seq.). If the Initial Study shows that the project may have a significant effect, the Lead Agency takes the third step and prepares an EIR [See: CCR §15080 et seq.].

7.7.3 CEQA Step 3: Environmental Impact Report

This third step consists of preparing the Environmental Impact Report (EIR). (See: CCR §15080 et seq.). This report provides State and local agencies and the general public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to list ways which the significant environmental effects may be minimized and indicate alternatives to the project.

Information Needed for District Review

In order for the District to properly review a project for which an Initial Study has been conducted, Lead Agencies should send a complete project description and location (preferably including a map), site plans, and tentative tract or parcel maps, if applicable; and data relative to number of vehicles or trips associated with the project. At minimum, Lead Agencies should allow ten working days for the District to respond.

> *Environmental Impact Report*: For all EIRs prepared for projects in the District, the District requests that it be sent the Notice of Preparation (NOP). The CEQA Guidelines require that the NOP include, at minimum, a description of the project, project location, and the probable environmental effects of the project. The CEQA Guidelines provides for a 30-day consultation period for NOPs.
>
> Where an air quality study is prepared for a project, it should be summarized and the results reported in the Draft EIR and the entire air quality study should be included as an appendix or as a separate report. The air quality report should include a brief air quality setting, the

emissions analysis results, results of other air analyses, and a description of mitigation measures used to reduce the project's emissions. Provide either full documentation of calculations with justification of mitigation measures used when using manual method of quantification or using a model approved by the District. All assumptions used in the modeling analysis for any project should be clearly stated. When the Draft EIR includes air quality mitigation measures, the required mitigation monitoring and reporting should be included in or with the Draft EIR. The District recommends that the modeling outputs be provided as appendices to the EIR. The District further recommends that the District be provided with an electronic copy of all input and output files for all modeling.

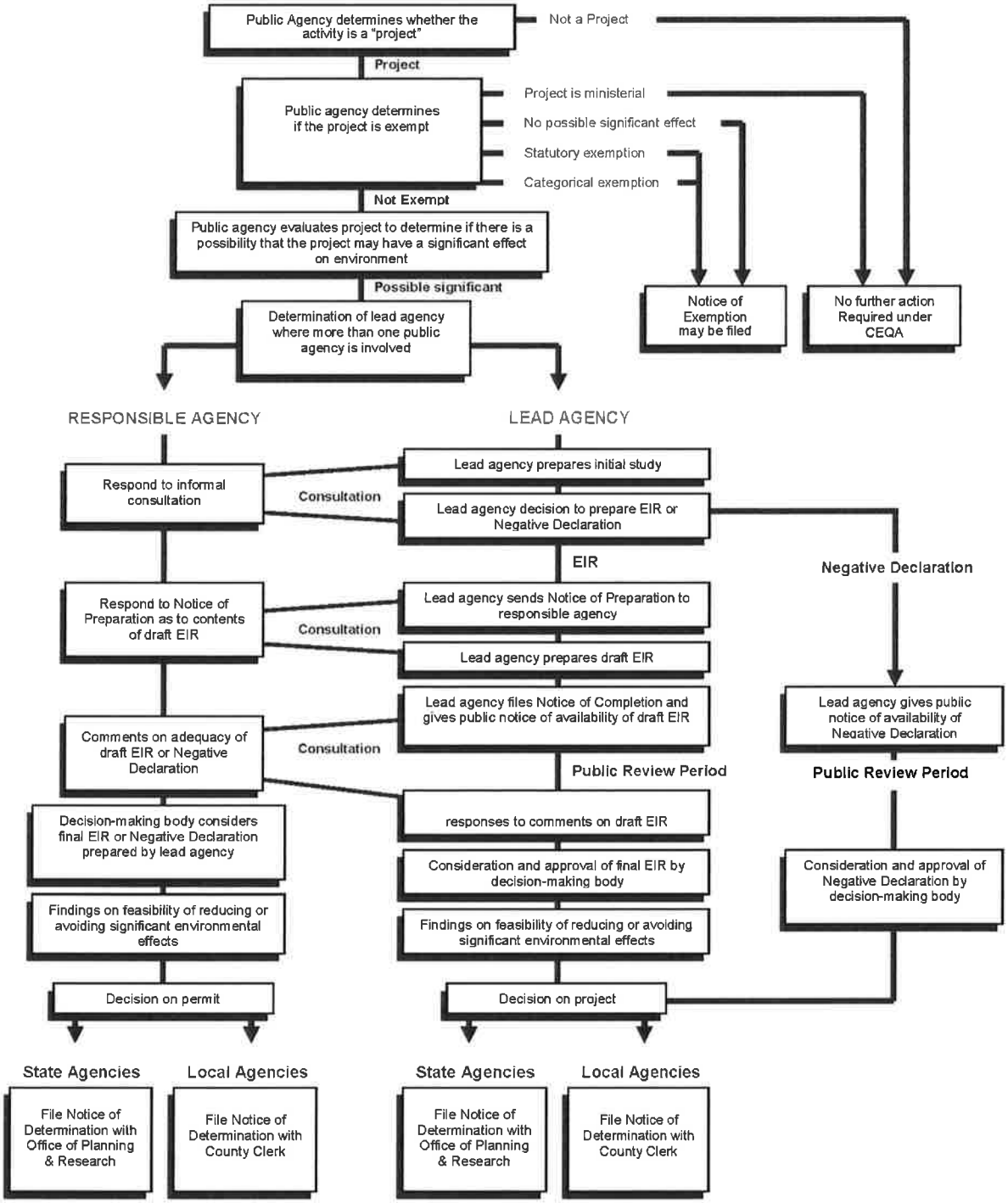
Negative Declaration/Mitigated Negative Declaration: The District needs all of the basic information required by CEQA Guidelines in order to provide a thorough review. This includes a brief description of the project, including a commonly used name for the project, if any; the location of the project, preferably shown on a map; and the name of the project proponent. To help the District identify previously reviewed projects, this information should correspond to, or reference, the same information provided during the Initial Study consultation process. The Lead Agency should include a copy of the Initial Study that documents reasons to support the Negative Declaration. Finally, any mitigation measures included in the project to avoid potentially significant effects should be in the consultation packet. If an air quality study is prepared for a project at the Initial Study level, it should be summarized and the results reported in the Initial Study and the entire air quality study should be provided to the District. All assumptions used in the modeling analysis for any project should be clearly stated.

Where an air quality study is prepared for a project, it should be summarized and the results reported in the Draft Negative Declaration/Mitigated Negative Declaration and the entire air quality study should be included as an appendix or as a separate report. The air quality report should include a brief air quality setting, the emissions analysis results, results of other air analyses, and a description of mitigation measures used to reduce the project's emissions. Provide either full documentation of calculations with justification of mitigation measures used when using manual method of quantification or using a model approved by the District. All assumptions used in the modeling analysis for any project should be clearly stated. When the Draft Negative Declaration/Mitigated includes air quality mitigation measures, the required mitigation monitoring and reporting should be included in or with the Draft Negative Declaration/Mitigated. The District recommends that the modeling outputs be provided as appendices to the Draft Negative Declaration/Mitigated. The District further recommends that the District be

provided with an electronic copy of all input and output files for all modeling.

Response to Comments: A Lead Agency's response to the District's comments on a Draft EIR may be in the form of the final EIR or may be a separate letter. The response should include the date, time, and location for when the Lead Agency proposes to certify the EIR.

Figure 5: CEQA Process Flowchart



7.8 Consultation with the District

CEQA provides that if a project may have a significant environmental effect the Lead Agency shall either prepare an Initial Study or proceed directly with preparation of an EIR [CCR §15063(a)]. As soon as a Lead Agency has determined that an Initial Study will be required, the Lead Agency shall consult informally with all Responsible Agencies and all Trustee Agencies responsible for resources affected by the project to obtain recommendations as to whether an EIR or a Negative Declaration should be prepared [CCR §15063(g)]. The District is available for consultation at any time in the project review process, but there are certain times when consultation is required. When the District has discretionary approval authority over a project for which another public agency is serving as Lead Agency, it is to be consulted as a Responsible Agency. When the District does not have any approval authority over a project, the District may be consulted as a commenting agency. CEQA requires or provides opportunities for consultation at various times during the environmental review process. These include opportunities for review prior to the preparation of the environmental document and during public review of the completed document. CEQA guidelines do not specify a time period for the informal consultation period; however, the District recommends Lead Agencies allow a minimum of ten working days.

In addition to satisfying CEQA requirements, identifying significant air quality impacts and mitigation measures early in the development of a project will allow fundamental design changes for the benefit of air quality at the lowest possible cost. The District invites project proponents, Lead Agencies, and interested parties to contact District staff or visit the District's Central Region office for consultation on the use of this guidance document or project review.

In addition to total annual emissions of criteria pollutants, the significance of project specific impacts on air quality is influenced by proximity of emission sources to sensitive receptors, frequency and duration of exposure, and the type of pollutant being emitted. Thus, not all projects require the same level of air quality assessment. When consulting with the District, it is imperative that all relevant emission sources be disclosed; permitted sources (e.g.: stationary sources) and non-permitted sources (e.g., construction related activities sources, and mobile sources), as well as proximity to sensitive receptors.

When provided sufficient project details, District staff's review of potential environmental impacts on air quality include the following determinations:

- Accuracy of the air quality setting data;
- Appropriate modeling assumptions;
- Whether air quality impacts are adequately described;
- Whether feasible mitigation measures are identified; and
- Whether the District agrees with the overall conclusions regarding impacts on air quality.

To facilitate District review of the proposed project, the District recommends that a Lead Agency's consultation request includes the following information:

- Complete and accurate project description, including project proponent contact information
- Identification of potential emission sources and potential magnitude including air pollutant emissions resulting from:
  - Construction related activities;
  - Operational activities; and
  - Mobile source activities
- Land use designation
- Project size
- Proximity to sensitive receptors
- Conformance with ARB's *Recommendations on Siting New Sensitive Land Uses*
- A copy of the Lead Agency's Initial Study, if prepared
- Identification of project design elements or potential mitigation measures that would reduce project-related impacts on air quality

The consultation process can be further expedited when the Lead Agency or project proponent has conducted a screening level analysis to identify potential impacts on air quality. Lead Agencies are encouraged to use the screening tool presented in section 6.5 (Potential Land Use Conflicts and Exposure of Sensitive Receptors) to identify potential conflicts between land use and sensitive receptors and include the result of their analysis in the referral document.

The most current screening tools are available on the District's website: www.valleyair.org/ceqa

7.9 Determining Significance

The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting (See:

CCR §15064 et seq.). When evaluating environmental impacts of a project, all project phases must be considered: planning, acquisition, development, and operation.

The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in the record. Substantial evidence shall include facts, reasonable assumptions predicated upon facts and expert opinion supported by facts. Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence (CCR §15064(f)(5)). In determining whether a project would have an adverse environmental impact both direct physical changes in the environment and reasonably foreseeable indirect physical changes in the environment, which may be caused by the project shall be considered (CCR §15064(d)).

CEQA Guidelines establish the required content in environmental review documents. However, standards of adequacy for environmental assessments are not precise. Readers should be aware that the adequacy of an assessing significance is influenced by changes in statutes, guidelines, and case law.

"Substantial evidence", as used in the CEQA guidelines, means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the Lead Agency. Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts, which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.

7.10 Thresholds of Significance

A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect. Non-compliance with a threshold of significance means the effect will normally be determined to be significant. Compliance with a threshold of significance means the effect normally will be determined to be less than significant (CCR §15064.7).

Under CEQA, each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. Thresholds of significance to be adopted for general use as part of the Lead Agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence. When adopting thresholds of significance, a Lead Agency may consider thresholds of significance previously adopted or recommended by other public

agencies or recommended by experts, provided the decision of the Lead Agency to adopt such thresholds is supported by substantial evidence (CCR §15064.7).

As discussed further in Chapter 8 of this document, the District has established thresholds of significance for assessing potential air quality impacts.

Specific information for assessing significance of project specific impacts on air quality, including screening tools and modeling guidance is available online at www.valleyair.org/ceqa

Furthermore, the District maintains a staff of air quality specialists, highly trained in assessing air quality impacts. For large, unusual, or complex projects, the District recommends that Lead Agencies and project proponents contact the District to discuss project specific details.

The District recommends that other agencies apply the adopted air quality significance thresholds when evaluating project specific impacts on air quality within the San Joaquin Valley. However, it is recognized that the final determination of whether a project would have a significant effect on air quality is ultimately within the purview of the Lead Agency (CCR §15064(c)).

7.11 Environmental Checklist – Air Quality Impacts

The Environmental Checklist Form (Appendix G) of the CEQA Guidelines provides that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to determine if a project would:

a. Conflict with or obstruct implementation of the applicable air quality plan,
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation,
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),
d. Expose sensitive receptors to substantial pollutant concentrations, or
e. Create objectionable odors affecting a substantial number of people.

7.12 Conflict With or Obstruct Implementation of the Applicable Air Quality Plan?

The District is tasked with implementing programs and regulations required by the Federal Clean Air Act and the California Clean Air Act. In that capacity, the District has prepared plans to attain Federal and State ambient air quality standards.

As presented in Chapter 8, the District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District's air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan".

7.13 Violate any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation?

Determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project's property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The need to perform an air quality dispersion modeling analysis for any project (urban development, commercial, or industrial projects) is determined on a case-by-case basis depending on the level of emissions associated with the proposed project. If such modeling is found necessary, the project consultant should check with the District to determine the appropriate model and input data to use in the analysis. Specific information for assessing significance, including screening tools and modeling guidance is available on-line at the District's website www.valleyair.org.

7.14 Result in a Cumulatively Considerable Net Increase of any Criteria Pollutant?

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are either significant or "cumulatively considerable", meaning they add considerably to a significant environmental impact. An adequate cumulative impact analysis considers a project over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed.

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of

State and Federal ambient air quality standards is a function of successful implementation of the District's attainment plans. Consequently, the District's application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

A Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located [CCR §15064(h)(3)].

Thus, if project specific emissions exceed the thresholds of significance for criteria pollutants the project would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the District is in non-attainment under applicable Federal or State ambient air quality standards. This does not imply that if the project is below all such significance thresholds, it cannot be cumulatively significant. The thresholds of significance are presented in Chapter 8.

7.15 Expose Sensitive Receptors to Substantial Pollutant Concentrations?

Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks.

Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a development proposal has the potential to result in localized impacts, Lead Agency staff need to consider the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography.

Lead Agencies are encouraged to use the screening tools for Toxic Air Contaminant presented in section 6.5 (Potential Land Use Conflicts and Exposure of Sensitive Receptors) to identify potential conflicts between land use and sensitive receptors and include the result of their analysis in the referral document.

7.16 Create Objectionable Odors Affecting a Substantial Number of People?

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact.

Rather, the District recommends that odor analyses strive to fully disclose all pertinent information.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley. These are presented in Chapter 8 along with a reasonable distance from the source within which, the degree of odors could possibly be significant.

7.17 Notice of Intent to Adopt a Negative or Mitigated Negative Declaration

A negative declaration (ND) or mitigated negative declaration (MND) for a project subject to CEQA shall be prepared when:

1. There is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
2. Revisions in the project plans or proposals made by or agreed to by the applicant would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment (CCR §15070).

CEQA Guidelines require the Lead Agency to provide a Notice of Intent to Adopt a negative declaration or mitigated negative declaration to the public, responsible agencies, trustee agencies, and the county clerk of each county within which the proposed project is located (CCR §15072 (a)). At a minimum, the comment period for proposed negative or mitigated negative declarations is 20-days (CCR §15073 (a)). When a proposed negative declaration or mitigated negative declaration and initial study are submitted to the State Clearinghouse for review by State agencies, the public review period shall not be less than 30 days (CCR §15073 (a)).

The basic information required by CEQA Guidelines §15071 consists of:

- A brief description of the project, including a commonly used name for the project, if any;
- The location of the project, preferably shown on a map, and the name of the project proponent;
- A proposed finding that the project will not have a significant effect on the environment;
- An attached copy of the Initial Study documenting reasons to support the finding; and
- Mitigation measures, if any, included in the project to avoid potentially significant effects.

In addition to the basic information required by CEQA, the District recommends that it be provided with copies of all technical analyses that relate to air quality, including but not limited to traffic analyses, growth impact projections, health risk assessments, sensitive receptor locations, characterization of construction related emissions, and characterization of stationary, mobile sources and area source emissions.

To facilitate the District's assessment of the adequacy of the determination that a project would not result in a significant impact on air quality the District recommends that it be provided with copies, in electronic format, of all supporting modeling files for risk assessments and characterization of criteria pollutant emissions.

7.18 Notice of Preparation of Environmental Impact Report

Within established exceptions, a Lead Agency shall prepare an Environmental Impact Report (EIR) if there is substantial evidence that any aspect of a project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial (CCR §15063(b)(1)). Upon determination to prepare an EIR, the Lead Agency shall provide each Responsible and Trustee Agency a Notice of Preparation (NOP) stating that an EIR will be prepared. The Lead Agency may begin work on the draft EIR immediately without awaiting responses to the Notice of Preparation. However, the draft EIR cannot be circulated until after the close of the 30-day comment period for the NOP has closed.

A Notice of Preparation shall provide Responsible and Trustee Agencies with sufficient information describing the project and the potential environmental effects to enable the Responsible Agencies to make a meaningful response. At a minimum, the Notice of Preparation shall include a description of the project, identify the project location, and identify probable environmental effects (CCR §15082).

The District recommends that in addition to the basic information required by CEQA, the Notice of Preparation include relevant information concerning proximity to sensitive receptors, and proximity to existing emission sources.

7.19 Disclosure of Significant Environmental Impacts

Disclosure of environmental impacts should include relevant specifics of the area, resources involved, physical changes, alterations to ecological systems, changes induced in population distribution, population concentration, and the human use of the land (including commercial and residential development). Health and safety problems caused by the physical changes shall also be discussed (CCR §15126.2).

Project specific air pollutant emissions can result from both construction and operational activities. Specific sources of air pollution emissions include on-road and off-road motor

vehicles, off-road equipment, natural gas and electricity usage, architectural coatings and solvents, fugitive emissions, area source emissions, and emissions from various commercial and industrial operations. The environmental assessment should discuss air quality impacts from all identifiable emission sources.

The environmental review should also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an Environmental Impact Report (EIR) on a subdivision that would locate residences in close proximity to a source of toxic air contaminants (TACs), such as a freeway, should identify the health risk hazard to future occupants of the subdivision. Please consult section 6.5 (Potential Land Use Conflicts and Exposure of Sensitive Receptors) for a detailed discussion regarding assessing both Type A (New project impacts existing receptors) and Type B (New project impacted by existing toxic sources) projects.

To assist Lead Agencies in assessing project specific impacts on air quality, the Air Quality Section of Appendix G of the CEQA Guidelines (*Environmental Checklist Form*) contains a list of air quality effects that may be deemed potentially significant:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3. 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 standards (including releasing emissions which exceed quantitative thresholds for ozone precursors);
4. Expose sensitive receptors to substantial pollutant concentrations; or
5. Create objectionable odors affecting a substantial number of people.

For some impacts listed above, the criteria to be applied are straight forward, but for others, interpretation is required. To bring consistency to the process of analyzing project specific impacts on air quality and to assist Lead Agencies in preparing environmental assessments which meet the standards of adequacy as established under CEQA, the District has developed various screening tools to streamline the process of determining if a project has the potential to exceed District adopted thresholds of significance.

The most current screening tools are available on the District's website:
www.valleyair.org/ceqa

7.20 Consideration and Discussion of Mitigation Measures

CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible. A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment. Mitigation measures are not required for effects which are not found to be significant (CCR §15126.4(a)(3)). Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design (CCR §15126.4(a)(2)).

Mitigation includes the following:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
3. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
5. Compensating for the impact by replacing or providing substitute resources or environments.

In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors (CCR §15021). When considering alternatives and mitigation measures, a Responsible Agency is more limited than a Lead Agency. A Responsible Agency has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve (CCR §15096(g)).

7.21 Mitigation Monitoring and Reporting

CEQA requires that when a public agency makes findings that changes or alterations have been incorporated into the project which mitigate or avoid the significant effects identified in an EIR, or an MND, the agency must also adopt a program for reporting and monitoring mitigation measures that were adopted or made conditions of project approval. This requirement is intended to assure that mitigation measures included in a certified EIR or MND are indeed implemented. Monitoring for the measures recommended in this document is best accomplished by the agency with land use approval. A Mitigation Monitoring and Reporting Program should include the following components:

- a description of each mitigation measure adopted by the Lead Agency;
- the party responsible for implementing each mitigation measure;
- a schedule for the implementation of each mitigation measure;
- the agency or entity responsible for monitoring mitigation measure implementation;
- criteria for assessing whether each measure has been implemented;
- enforcement mechanism(s).

7.22 CEQA Streamlining

The District encourages Lead Agencies to use the streamlining opportunities provided within CEQA. The use of master EIRs, tiered EIRs, subsequent EIRs/Negative Declarations, etc. allows Lead Agencies to focus on regional and general air quality impacts early in the planning process. However, project specific impacts, particularly potential risks to sensitive receptors, cannot be fully assessed until later in the process when project specific details are known. A project that is ordinarily insignificant in its impact on the environment may, in a particularly sensitive environment, be significant. CEQA provides that a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances (CCR §15300.2(c)). Therefore, the District recommends that projects which would normally be approved, based on a previously approved environmental document, be screened to identify project specific potential impacts to nearby sensitive receptors.

7.23 Relationship between CEQA and NEPA

Some projects subject to CEQA may also require compliance under Federal environmental law, namely the National Environmental Policy Act (NEPA). Both NEPA and CEQA have similar goals. They require agencies to determine whether a proposed action or project may have a significant impact on the environment, and to determine the appropriate level of environmental review.

NEPA and CEQA are similar, both in intent and in the review process (the analyses, public engagement, and document preparation) that they dictate. Importantly, both statutes encourage a joint Federal and state review where a project requires both Federal and state approvals. Indeed, in such cases a joint NEPA-CEQA analysis may be appropriate to avoid redundancy, improve efficiency and interagency cooperation, and be easier for applicants and citizens to navigate.

When NEPA and CEQA apply, agencies must comply by using a Categorical Exclusion/Categorical Exemption, Environmental Assessment and Finding of No Significant Impact (or Mitigated Finding of No Significant Impact)/ Initial Study and

Negative Declaration (or Mitigated Negative Declaration), or an Environmental Impact Statement/Environmental Impact Report. Under certain circumstances, the CEQA Guidelines allow public agencies to use a NEPA document rather than prepare a Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report.

Despite the similarities between NEPA and CEQA, there are several differences that require careful coordination between the Federal and state agencies responsible for complying with NEPA and CEQA. Conflict arising from those differences can create unnecessary delay, confusion, and legal vulnerability. In general, NEPA differs from CEQA in that it does not require a separate discussion of mitigation measures, or growth inducing impacts. These points of analysis need to be added before an Environmental Impact Statement (EIS) required under NEPA can be used as an EIR. If the NEPA and CEQA Lead Agencies will not be combining documents into one, the District recommends that the consultation notices for each document reference the other agency's contact information, including contact name and phone number.

This guidance document can also be used to prepare a NEPA or joint CEQA-NEPA analysis, unless noted otherwise. See PRC §§21083.5, 21083.6, and 21083.7 and CCR §§15220 - 15228 for more information on combined EIR-EIS projects.

CHAPTER 8

ASSESSING AIR QUALITY IMPACTS

8.1 Introduction

This chapter provides general guidance on assessing significance of project-related impacts on air quality.

Specific information for assessing significance, including screening tools and modeling guidance is available at the District's website: www.valleyair.org/ceqa

The Air Quality Section of Appendix G of the CEQA Guidelines (Environmental Checklist Form) contains a list of effects to be assessed using the significance criteria established by the applicable air quality management or air pollution control district to determine if a project would:

a. Conflict with or obstruct implementation of the applicable air quality plan,
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation,
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),
d. Expose sensitive receptors to substantial pollutant concentrations, or
e. Create objectionable odors affecting a substantial number of people

To assess the air quality impact using these five effects per CEQA guidelines, the District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact during the initial study. If the project exceeds the significance threshold established for an effect, the project would be considered to have a significant impact on air quality. If, during the preparation of the Initial Study, the Lead Agency finds that any of the following thresholds may be exceeded and cannot be mitigated, then a determination of significant air quality impact must be made and an EIR is required.

While CEQA Guidelines state that an ironclad definition of a significant effect is not possible because the significance of an effect may vary with the setting, the District has determined that the setting, as referred to in CEQA, can be defined for air quality. Under California state law, the SJVAB is defined as a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health. As such, the District resolves that significance thresholds established herein are based on scientific and factual data.

Therefore, the District recommends that the Lead Agencies apply the adopted significance thresholds when evaluating project specific impacts on air quality within the San Joaquin Valley. If the Lead Agency determines the proposed project would exceed

any of the significance thresholds, then an environmental document should be prepared. However, it is recognized that the final determination of whether a project would have a significant effect on air quality is ultimately within the purview of the Lead Agency pursuant to CEQA Guidelines (CCR §15064(c)).

The District identifies thresholds that separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations. In addition, CEQA states that another condition that could establish a project as having a significant effect on the environment is effects that are considered "cumulatively considerable." Thresholds for project construction impacts, project operations, and cumulative impacts are discussed below.

This chapter along with the thresholds of significance also presents District Rules and Regulation in relation to assessing the project-related impacts. The District recommends that any air quality assessment reflect emission reductions achieved through compliance with District rules and regulations.

8.2 District Rules and Regulations

Project subject to District rules and regulation would reduce its impacts on air quality through compliance with regulatory requirements. In general, a regulation is a collection of rules, each of which deals with a specific topic. For example, Regulation II (Permits) deals with permitting emission sources and includes rules such as District permit requirements (Rule 2010), New and Modified Stationary Source Review (Rule 2201), and implementation of Emission Reduction Credit Banking (Rule 2301). The following is a list of common rules and regulation that can be applicable to a project.

Current District rules can be found online:
www.valleyair.org/rules/1ruleslist.htm.

8.2.1 District Regulation II (Permits)

District Regulation II (Permits) applies to permitted emission sources and includes rules such as District permit requirements (Rule 2010), New and Modified Stationary Source Review (Rule 2201), and implementation of Emission Reduction Credit Banking (Rule 2301).

Many industrial projects and some commercial projects require District permits. Rule 2010 states that "any person who plans to or does operate, construct, alter, or replace any source of emission of air contaminants" must obtain approval of the Air

Pollution Control Officer and receive an Authority to Construct and a Permit to Operate.

Examples of air contaminant emitting equipment and processes include (but are not limited to) the following:

- Agricultural products processing
- Bulk material handling
- Chemical blending, mixing, manufacturing, storage, etc.
- Combustion equipment (boilers, engines, heaters, incinerators, etc.)
- Metals etching, melting, plating, refining, etc.
- Plastics & fiberglass forming and manufacturing
- Petroleum production, manufacturing, storage, and distribution
- Rock & mineral mining and processing
- Solvent use (degreasing, dry-cleaning, etc.)
- Surface coating and preparation (painting, blasting, etc.)

District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District's significance thresholds. However, the Lead Agency can, and should, make an exception to this determination if special circumstances suggest that the emissions from any permitted or exempt source may cause a significant air quality impact. For example, if a source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact.

District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases.

CEQA also requires that the project description include a list of agencies that are expected to use the environmental document in their decision-making, and a list of the approvals for which the environmental document will be used. If the project will require a permit from the District, this should be cited in the project description section of the CEQA document.

8.2.2 District Regulation IV (Prohibitions)

District Regulation IV (Prohibitions) is comprised of prohibitory rules that are written to achieve emission reductions from specific source categories or from all sources. These rules are applicable to existing sources (retrofit requirements) as well as new sources. Examples of source specific prohibitory rules include Rule 4570 (Confined Animal Facilities), Rule 4623 (Storage of Organic Liquids), and Rule 4901 (Wood burning Fireplaces and Wood Burning Heaters). The above list of rules is neither exhaustive nor exclusive. Within the environmental assessment, it is not necessary to identify all prohibitory rules that would apply to a specific project. However, applicants are encouraged to contact the District's Small Business Assistance Office to identify District rules or regulations that apply to the project or to obtain information about District permit requirements. By phone at: Fresno (559) 230-5888; Bakersfield (661) 392-5665; Modesto (209) 557-6446.

8.2.3 District Regulation VIII (Fugitive PM_{10} Prohibition)

The purpose of Regulation VIII (Reg. VIII) is to reduce ambient concentrations of fine particulate matter (PM_{10}) by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions. Reg. VIII requires property owners, contractors, developers, equipment operators, farmers and public agencies to control fugitive dust emissions from specified outdoor fugitive dust sources, including:

- Construction sites
- Excavation, Demolition, and other earthmoving activities
- Bulk material handling, storage and transport
- Carryout and Trackout
- Vacant land
- Paved and unpaved roads
- Unpaved vehicle traffic areas

Regulation VIII specifies the following measures to control fugitive dust:

- Apply water to unpaved surfaces and areas
- Use non-toxic chemical or organic dust suppressants on unpaved roads and traffic areas
- Limit or reduce vehicle speed on unpaved roads and traffic areas
- Maintain areas in a stabilized condition by restricting vehicle access

- Install wind barriers
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling
- Store and handle materials in a three-sided structure
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp
- Don't overload haul trucks. Overloaded trucks are likely to spill bulk materials
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site
- Prevent trackout by installing a trackout control device
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately
- Monitor dust-generating activities and implement appropriate measures for maximum dust control

For projects in which construction related activities would disturb equal to or greater than 1-acre of surface area, the District recommends that demonstration of receipt of a District approved Dust Control Plan or Construction Notification form, before issuance of the first grading permit, be made a condition of project approval.

It should be noted that although compliance with District Regulation VIII substantially reduces project specific fugitive dust emissions, it may not be sufficient to reduce project specific emissions to less than significant levels. Furthermore, District Regulation VIII does not reduce construction exhaust emissions.

8.2.4 District Rule 9510 (Indirect Source Review)

District Rule 9510 (ISR) is intended to reduce a project's impact on air quality through project design elements or mitigation by payments of applicable off-site mitigation fees. Compliance with Rule 9510 will reduce construction exhaust NOx and PM_{10} emissions by 20 percent and 45 percent respectively. Compliance with Rule 9510 will reduce operational emissions of NOx and PM_{10} emissions by 33.3 percent and 50 percent respectively.

Individual development projects would be subject to ISR requirements if upon full build-out the project would include or exceed any one of the following:

- 50 dwelling units;
- 2,000 square feet of commercial space;
- 25,000 square feet of light industrial space;
- 100,000 square feet of heavy industrial space;

- 20,000 square feet of medical office space;
- 39,000 square feet of general office space;
- 9,000 square feet of educational space;
- 10,000 square feet of government space;
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above

The ISR rule also applies to any transportation or transit project where construction exhaust emissions equal or exceed two (2.0) tons NOx or two (2.0) tons of PM_{10}.

For projects subject to District Rule 9510, the District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees before issuance of the first building permit, be made a condition of project approval.

Information on District Rule 9510 can be found on the District's website:
www.valleyair.org/ISR/ISRHome.htm

It should be noted that although compliance with District Rule 9510 substantially reduces project specific impacts on air quality, it may not be sufficient to reduce project specific emissions to less than significant levels.

8.2.5 District Rule 9410 (Employer Based Trip Reduction)

The eTRIP Rule (Rule 9410, Employer Based Trip Reduction), requires larger employers to establish an Employer Trip Reduction Implementation Plan (eTRIP). An eTRIP is a set of measures that encourages employees to use alternative transportation and ridesharing for their morning and evening commutes. Each measure contributes to a workplace where it is easier for employees to choose to use ridesharing or alternative transportation. Through this rule, single-occupancy vehicle trips are reduced, thus reducing emissions of oxides of nitrogen (NOx), volatile organic compounds (VOC) and particulate matter (PM).

Detailed information regarding the eTrip rule can be found at
www.valleyair.org/Programs/Rule9410TripReduction/eTRIP_main.htm

8.3 Thresholds of Significance – Criteria Pollutant Emissions

As of the date of this document, the District's current adopted thresholds of significance for criteria pollutant emissions and their application is presented in the following table.

Table 2: *Air Quality Thresholds of Significance – Criteria Pollutants*

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	*Emissions (tpy)*	*Emissions (tpy)*
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Check for updated thresholds of significance at www.valleyair.org/ceqa

The significance of the impacts of the emissions from construction, operational non-permitted equipment and activities, and operational permitted equipment and activities are evaluated separately. The thresholds of significance are based on a calendar year basis. For construction emissions, the annual emissions are evaluated on a rolling 12-month period.

A project evaluation should characterize emissions associated with the following:

Construction related emissions

- Grading, excavation, road building, and other earth moving activities
- Travel by construction equipment, especially on unpaved surfaces
- Exhaust from construction equipment
- Architectural coatings
- Asphalt paving
- Demolition and renovation of buildings
- Off-road construction equipment

Operational related emissions

- Permitted equipment and activities (Stationary Source Equipment)
- Non-permitted equipment and activities
- Mobile sources (on-site and on-road)
- Non-permitted activities

8.3.1 Basis for Air Quality Thresholds of Significance

The District has determined that use of District Rule 2201 (New Source Review - NSR) Offset thresholds as the District thresholds of significance for criteria pollutants under CCR §15064.7 is an appropriate and effective means of promoting consistency in significance determinations within the environmental review process and is applicable to both stationary and non-stationary emissions sources. The general term, "stationary sources," refers to facilities that are subject to Air District air quality permitting. "Stationary source projects" are proposals that include, at least in part, equipment or activities that are subject to District air quality permitting. Board-adopted revisions to criteria pollutant offset thresholds in the District NSR Rule serve as board-adopted revisions to the District CEQA significance thresholds for criteria pollutants.

As presented in Chapter 3, at the Federal level, the District is designated as extreme nonattainment for the 8-hour ozone standard and is designated nonattainment for Federal $PM_{2.5}$ standards. Consistent with Clean Air Act requirements, the District has adopted attainment plans that demonstrate how the District will attain and maintain the National Ambient Air Quality Standards. These plans are developed through a public process, formally adopted by the State, and submitted by the Governor's designee to the US EPA. The Clean Air Act requires EPA to review each plan and any plan revisions and to approve the plan or plan revisions if consistent with the Clean Air Act.

NSR is a major component of the District's attainment strategy as it relates to growth. It applies to new and modified stationary sources of air pollution. NSR provides mechanisms, including emission trade-offs, by which Authorities to Construct such sources may be granted, without interfering with the attainment or maintenance of Ambient Air Quality Standards. District implementation of NSR ensures that there is no net increase in emissions above specified thresholds from new and modified Stationary Sources for all nonattainment pollutants and their precursors.

Under NSR, all new permitted sources (emission units) with emission increases exceeding two (2) pounds per day, for any criteria pollutant is required to implement best available control technology (BACT). As defined in District Rule 2201, BACT is:

The most stringent emission limitation or control technique of the following:

1. Achieved in practice for such category and class of source;
2. Contained in any State Implementation Plan approved by the Environmental Protection Agency for such category and class of source. A specific limitation or control technique shall not apply if the owner of the proposed emissions unit demonstrates to the satisfaction of the APCO that such a limitation or control technique is not presently achievable; or
3. Contained in an applicable federal New Source Performance Standard; or
4. Any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found by the APCO to be cost effective and technologically feasible for such class or category of sources or for a specific source.

Furthermore, all permitted sources emitting more than the New Source Review Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds.

The District's thresholds of significance for criteria pollutants are applied to evaluate regional impacts of project specific emissions of air pollutants. Regional impacts of a project can be characterized in terms of total annual emissions of criteria pollutants and their impact on the District's ability to reach attainment.

The District's attainment plans demonstrate that project specific emissions below the District's offset thresholds will have a less than significant impact on air quality. Thus, the District concludes that use of District NSR Offset thresholds as the District thresholds of significance for criteria pollutants under CCR §15064.7 is an appropriate and effective means of promoting consistency in significance determinations within the environmental review process and are applicable to both stationary and non-stationary emissions sources. Board-adopted revisions to criteria pollutant offset thresholds in the District NSR Rule serve as board-adopted revisions to the District CEQA thresholds of significance for criteria pollutants.

As of this writing, the current NSR offset threshold for $PM_{2.5}$ is greater than the PM_{10} offset threshold. Since the thresholds of significance are based on the NSR offset thresholds, this would result in a $PM_{2.5}$ threshold that is higher than the PM_{10} threshold. In practice this is not possible since $PM_{2.5}$ is a subset of PM_{10}. Therefore, the $PM_{2.5}$ threshold of significance is based on the PM_{10} NSR offset threshold rather than the $PM_{2.5}$ NSR offset threshold.

8.3.2 Basis for Separate Construction and Operational Emission Thresholds

Emissions occurring in the construction phase of a project are evaluated separately from emissions occurring in the operational phase. The reason for this separation is that construction produces only temporary impacts while the operational phase will produce emissions indefinitely into the future. Although construction activities can produce substantial emissions and can represent a significant air quality impact, the effect is not permanent. In addition, construction emissions and operational emissions generally do not occur at the same time.

Also, measures to reduce and mitigate impacts from short-term activities differ from those applicable to long-term activities.

8.3.3 Basis for Separate Permitted and Non-Permitted Operational Emission Thresholds

Operational emissions from permitted equipment and activities are evaluated separately from non-permitted equipment and activities.

The District considered several options for assessing significance of operational emission impacts from permitted and non-permitted equipment and activities. Using emissions of NOx as an example, the optional paths can be described as follows:

Option 1: Establish a single threshold equal to the sum of the individual threshold of significance for permitted and non-permitted equipment and activities. For example, for NOx, the threshold of significance would be 20 tons year.

Option 2: Establish a single threshold of significance equal to the individual threshold of significance for permitted and non-permitted equipment and activities. For example, for NOx, the threshold of significance would be 10 tons per year applied to the sum of permitted and non-permitted equipment and activities

Option 3: Establish separate thresholds of significance for permitted and non-permitted equipment and activities, equal to its respective individual threshold of significance. For example, for NOx, the threshold of significance would be respectively 10 tons per year each for permitted and for non-permitted equipment and activities.

Option 4: Establish separate thresholds of significance for permitted and non-permitted equipment and activities, at some level below its respective individual threshold of significance. For example, for NOx, the threshold of significance would be less than 10 tons per year each for permitted and for non-permitted equipment and activities.

Option 1 is rejected because projects having only non-permitted emissions would be allowed 20 tons per year of NOx emissions before being determined to have a significant impact and required to implement all feasible mitigations. Option 1 was further rejected for projects having only permitted emissions because allowing 20 tons per year of NOx emissions before being found to have a significant impact and required to implement all feasible mitigations is contrary to the rationale that arrived at the establishment of the 10 ton per year NOx significance level for permitted sources: namely, district ozone and particulate attainment plans that demonstrate the expectation of attaining clean air standards while requiring mitigation for project increases above 10 tons per year of NOx emissions from a stationary source.

Option 2 is similar to Option 1, but establishes a threshold of 10 tons per year of NOx which is applied to the sum of permitted and non-permitted emissions. This approach is more environmentally protective than Option 1, because of the lower threshold. Option 2 would be acceptable for projects with emissions limited to permitted sources only. Only 10 tons of NOx emissions would be allowed before triggering a finding of significance and requirement of all feasible mitigations. That level of emissions increase is consistent with emissions accounted for in District attainment plans.

Similarly, Option 2 would be acceptable for projects with emissions limited to non-permitted sources only. Only 10 tons of NOx emissions would be allowed before triggering a finding of significance and requirement of all feasible mitigation. That level of emissions increase is consistent with emissions accounted for in District attainment plans.

However, Option 2 is not acceptable for projects that involve both permitted and non-permitted sources. For example, if project-specific emissions include 2 tons per year mobile source emissions, a combined threshold of 10 tons per year would limit stationary source impacts to no more than 8 tons per year before triggering a finding of significance and requirement of all feasible mitigations. However, the District's attainment plans demonstrate that project specific-emissions of 10 tons per year of NOx from a permitted source, without mitigation, will not prevent the District from achieving attainment of ambient air quality standards. Because District's attainment plans do not justify a finding of significance at emissions levels lower than 10 tons of NOx emissions per year of unmitigated emissions, a lower threshold cannot be established. Because a combined threshold of 10 tons per

year effectively reduces the threshold for permitted sources to some level below the demonstrated 10 ton level, Option 2 is rejected.

Option 3 is the method of determining significance that the District has been implementing for a number of years. As demonstrated, Option 3 is a more environmental and health protective threshold than a combined 20 ton per year threshold, maintains consistency with the basis of the District's 10 ton threshold for permitted sources, and is consistent with District attainment plans.

Option 4, establishing separate thresholds for permitted emissions and for non-permitted emissions at some level lower than 10 tons of NOx per year, is rejected for the same reason as Option 2. District attainment plans provide the basis for thresholds of significance, and the attainment plans allow 10 tons of emissions from stationary permitted sources before requiring mitigation.

For the reasons discussed above, the District implements Option 3 when determining significance impact.

Furthermore, measures taken to reduce and mitigate impacts from permitted equipment and activities differ from those applicable to non-permitted equipment and activities.

8.3.4 Screening Tools: Small Project Analysis Level (SPAL)

Determination of whether a project would exceed the applicable thresholds of significance for criteria pollutants requires quantification of project specific emissions. To streamline the process of assessing significance of criteria pollutant emissions from commonly encountered projects, the District has developed the screening tool, Small Project Analysis Level (SPAL). Using project type and size, the District has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants.

The District pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding the emissions thresholds. The information is provided in terms of vehicle trips required to exceed the SPAL threshold for five general land use categories. Sizes of various specific development types meeting SPAL are also provided. For a multi-use project, if its combined trip generation rate exceeds the lowest applicable trip threshold from, an air quality analysis should be prepared.

Note that even if a project is on the SPAL list, it does not relieve the Lead Agency from assessing a project for other potential significant air quality impacts. Some industrial and commercial projects may have impacts related to toxic air contaminants, hazardous materials, or odors. Projects containing sensitive

receptors such as residential subdivisions, schools, hospitals, and so on must be assessed for exposure to pollutants from existing or planned industrial and commercial development. Any project that includes demolition or renovation of existing buildings needs to contact the District. When a project falls under the SPAL, the Lead Agency should use the information in the initial study checklist, or whatever format used, to justify a finding of less than significant air quality impacts. The initial study should also verify that no sensitive receptors would be exposed to substantial pollutant concentrations as a result of the project.

Project size, as identified in the SPAL, is not a threshold of significance. SPAL is a screening tool. The Lead Agency has the responsibility to identify and avoid potential land use conflicts, such as potential exposure of sensitive receptors to sources of toxic air contaminants, sources of hazardous materials, and potential odors.

The District concludes that use of the screening tool as an appropriate and effective means of promoting consistency in significance determinations within the environmental review process.

The most current SPAL is available at
www.valleyair.org/ceqa

8.3.5 Construction Emissions

Emissions from construction activities are relatively short-term. However, on a regional level, even short-term activities can have significant impacts on air quality. Construction emissions consist mainly of exhaust emissions (NOx and PM) from construction equipment and other mobile sources, and fugitive dust (PM) emissions from earth moving activities. Construction activities also result in area source emissions such as emissions from paving and architectural coatings.

An Initial Study should evaluate emissions from construction activities. When considering the impact of construction emissions on air quality, on-site and on-road (off-site) mobile source emissions should also be assessed in the evaluation of construction related emissions. In addition, a Lead Agency should consider the extent to which compliance with District Regulation VIII and District Rule 9510 (see section 8.2 - District Rules and Regulations) will reduce fugitive dust and construction exhaust emissions.

The quantity of criteria pollutant emissions is proportionate to the size of the construction project. For large construction projects, compliance with District Regulation VIII and Rule 9510 may not reduce project specific construction emissions to below the District's thresholds of significance. As presented in

section 8.3.4 (Screening Tools: Small Project Analysis Level (SPAL)), to streamline the process of assessing the significance of the impact of criteria pollutant emissions from common projects, the District has developed the screening tool, *Small Project Analysis Level* (SPAL). Using project type and size, the District has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants.

If the initial study demonstrates that construction emissions would be less than significant based one SPAL screening levels, quantification of construction emissions is not necessary. However, to meet the standards of adequacy for disclosure of potential environmental impacts and mitigation, the District recommends that the Lead Agency's environmental document include a narrative that identifies the main sources of construction emissions and include sufficient discussion of applicable District rules and regulation and SPAL values to support the conclusion that criteria pollutant emissions from construction activities would have a less than significant impact on air quality.

If the initial study does not demonstrate that construction emissions would be less than significant, quantification of construction emissions is recommended. Because mitigation measures differ for mobile source and fugitive dust emissions, the District recommends that construction exhaust emissions and fugitive dust emissions be quantified separately. However, when determining significance of PM emissions, construction exhaust PM and fugitive dust PM is summed. A project would be determined to have a significant, short-term impact on air quality if any criteria pollutant exceeds its respective threshold of significance.

Demolition and Renovations

Demolition and renovation of buildings also generate PM_{10} emissions, and is of particular concern if the building(s) contain any asbestos-bearing materials. Buildings often include building materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. The potential for asbestos emissions must also be considered. The demolition or renovation of asbestos containing building materials is subject to the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations requiring notification and inspection. Most demolitions and many renovations are subject to a CAL-OSHA Certified asbestos inspection prior to start of activity. For asbestos, size or complexity of the project does not matter. However, the Lead Agency can also manually quantify PM_{10} emissions from demolition using the following emission factor: 0.00042 lb-PM_{10} per cubic feet of building volume. Project proponents needs to contact the District if their project includes demolition or renovation of existing buildings.

8.3.6 Operational Emissions – Permitted Equipment and Activities

The District's permitting process typically ensures that emissions of criteria pollutants from permitted equipment and activities at stationary sources are reduced or mitigated to below the District's thresholds of significance. District implementation of New Source Review (NSR) generally ensures that there is no net increase in emissions above specified thresholds from new and modified Stationary Sources for all nonattainment pollutants and their precursors. Permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must, in general, offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases.

Although permitted equipment or activities located at stationary sources will generally have a less than significant impact on air quality, to meet the standards of adequacy for disclosure of potential environmental impacts and mitigation, the Lead Agency's environmental document (Negative Declarations, Mitigated Negative Declarations, and Environmental Impact Reports) should include quantification and analysis of criteria pollutant emissions from permitted sources and activities for the purposes of determining significance.

8.3.7 Operational Emissions – Non-Permitted Equipment and Activities

Permit Exempt Equipment

Equipment at stationary sources that is exempt from District permit requirements because they fall below the District's emission thresholds for requiring permits is considered to have a less than significant impact on air quality. As such, there is no need to quantify emissions from these sources.

Mobile Sources

The majority of non-stationary source operational emissions results from mobile source activities, including both on-site and on-road motor vehicle use. For industrial projects, onsite mobile sources commonly include off-road vehicles, such as forklifts and tractors and on-road passenger vehicle use. Off-site mobile sources commonly include heavy-duty vehicles used to transport raw material and ship finished goods and light-duty vehicle use associated with employee trips. For commercial projects, mobile source activities include receipt of goods, and customer and employee trips. For development projects, mobile source activities commonly include vehicular travel from home to work, home to shop, and deliveries.

Other Non-Permitted Equipment and Activities

In addition to mobile source emissions, operational emissions from other non-permitted equipment and activities commonly include emissions from energy use, such as space heating, use of consumer products, and landscape maintenance. Although uncommon, there are source specific non-permitted activities, such as mining operations, that could have a significant impact on air quality.

Quantification

An Initial Study should evaluate emissions from all non-permitted equipment and activities, including all on-site and on-road (off-site) mobile source emissions. Emission levels from non-permitted equipment and activities are a function of project type and size. For example non-permitted equipment and activities would be different for a regional distribution versus a residential development project. As presented in Chapter 7, to streamline the process of assessing significance of criteria pollutant emissions from common projects, the District has developed the screening tool, *Small Project Analysis Level* (SPAL). Using project type and size, the District has pre-quantified emissions and determined a size below which it is reasonable to conclude that operational emissions from a project would not exceed applicable thresholds of significance for criteria pollutants.

If the initial study demonstrates that operational emissions from non-permitted equipment (excluding emissions from permit-exempt equipment) and activities would be less than significant based on SPAL screening levels, quantification of emissions from these sources may not be necessary. However, to meet the standards of adequacy for disclosure of potential environmental impacts and mitigation, the District recommends that the Lead Agency's environmental document include an narrative that identifies the main sources of non-permitted emissions and include sufficient discussion of District SPAL values to support the conclusion that criteria pollutant emissions from non-permitted emission sources would have a less than significant impact on air quality.

If the initial study does not demonstrate that emissions from non-permitted equipment (excluding emissions from permit-exempt equipment) and activities would be less than significant, quantification of those emissions is recommended. Because mitigation measures differ for mobile sources versus other non-permitted operational activities, the District recommends that mobile source (both exhaust emissions and fugitive dust emissions) be quantified separate from other non-permitted sources or activities. However, emissions from all non-permitted equipment and activities are summed by criteria pollutant when determining significance. A project would be determined to have a significant, long-term impact on air quality if any criteria pollutant resulting from non-permitted equipment and activities exceeds its respective threshold of significance.

8.4 Thresholds of Significance – Ambient Air Quality

The thresholds of significance for Ambient Air Quality are based on the California Ambient Air Quality Standard (CAAQS) and National Ambient Air Quality Standard (NAAQS). A project would be considered to have a significant impact if its emissions are predicted to cause or contribute to a violation of an ambient air quality standard by exceeding any of the following:

1. Any of the CAAQS, or
2. Any of the NAAQS, and if available, the associated Significant Impact Level (SIL).

The ambient air quality standards are listed in the following table.

The most current ambient air quality standards are available online at www.arb.ca.gov/research/aaqs/aaqs2.pdf or *www.arb.ca.gov/research/aaqs/aaqs.htm*

The most current SILs are listed in Attachment B of District Policy APR 1925 at http://www.valleyair.org/policies_per/Policies/APR-1925.pdf

Table 3: *Ambient Air Quality Standards*

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O3)	1 Hour	0.09 ppm (180 μg/m^3)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 μg/m^3)		0.075 ppm (147 μg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 μg/m^3	Gravimetric or Beta Attenuation	150 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m^3		--		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	--		35 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 μg/m^3	Gravimetric or Beta Attenuation	15 μg/m^3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	--	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		--	--	
Nitrogen Dioxide (NO_2)[8]	1 Hour	0.18 ppm (339 μg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 μg/m^3)	--	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)		53 ppb (100 μg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[9]	1 Hour	0.25 ppm (655 μg/m^3)	Ultraviolet Fluorescence	75 ppb (196 μg/m^3)		Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	--		--	0.5 ppm (1300 μg/m^3)	
	24 Hour	0.04 ppm (105 μg/m^3)		0.14 ppm (for certain areas)[9]	--	
	Annual Arithmetic Mean	--		0.030 ppm (for certain areas)[9]	--	
Lead[10,11]	30 Day Average	1.5 μg/m^3	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 μg/m^3 (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 μg/m^3		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standard		
Sulfates	24 Hour	25 μg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 μg/m^3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or

exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site 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 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

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

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

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

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

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

8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

9. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10. The ARB 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.

11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

8.4.1 Basis for Threshold

State and Federal ambient air quality standards have been established to protect public health and welfare from the adverse impacts of air pollution. The District concludes that use of the CAAQS/NAAQS to establish thresholds of significance under CEQA Guidelines §15064.7 is appropriate. In addition, using those standards promotes consistency in assessing significance of project specific impacts within the environmental review process.

Because of scientific advancements and potential changes in attainment status, CAAQS/NAAQS are subject to change. Revisions to CAAQS/NAAQS as adopted upon promulgation by the state of California and/or the Federal government will serve as revisions to the District's CEQA thresholds of significance for ambient air quality.

8.4.2 Ambient Air Quality Screening Tools

Impacts on air quality result from emissions generated during short-term activities (construction) and long-term activities (operations). Construction-related emissions consist mainly of exhaust emissions (NOx and PM) from construction equipment and other mobile sources, and fugitive dust (PM) emissions from earth moving activities. Operational emissions are source specific and consist of permitted equipment and activities and non-permitted equipment and activities.

When assessing the significance of project-related impacts on air quality, it should be noted that the impacts may be significant when on-site emission increases from construction activities or operational activities exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures. Under such circumstance, the District recommends that an ambient air quality analysis be performed. An ambient air quality analysis uses air dispersion modeling to determine if emission increases from a project will cause or contribute to a violation of the ambient air quality standards.

More information on ambient air quality and associated modeling can be found online at http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm

8.4.3 Ambient Air Quality Analysis - Stationary Source Projects

The general term, "stationary sources," refers to facilities that are subject to District air quality permitting. "Stationary source projects" are proposals that include, at least in part, equipment or activities that are subject to District air quality permitting.

Construction Emissions

The District recommends that an ambient air quality analysis be performed when the increase in on-site emissions from construction activities exceeds the 100 pounds per day screening level of any criteria pollutant, after implementation of all enforceable mitigation measures.

Operational Emissions – Permitted Equipment and Activities

The District recommends that an ambient air quality analysis be performed when the increase in on-site operational emissions from permitted equipment and activities exceeds the 100 pounds per day screening level of any criteria pollutant, after implementation of all enforceable mitigation measures.

Operational Emissions - Non-Permitted Equipment and Activities

The District recommends that an ambient air quality analysis be performed when the increase in on-site operational emissions from non-permitted equipment and activities exceeds the 100 pounds per day screening level of any criteria pollutant, after implementation of all enforceable mitigation measures.

Ambient Air Quality Analysis

If an ambient air quality analysis is performed, the analysis should include emissions from both project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis. Specific information for assessing significance, including screening tools and modeling guidance is available on-line at the District's website, www.valleyair.org/ceqa.

8.4.4 Ambient Air Quality Analysis – Development Projects

The general term, "stationary sources," refers to facilities that are subject to District air quality permitting. "Non-stationary source projects" are proposals that do not include any equipment or activities that are subject to District air quality permitting. An example is development projects.

The District applies the following guidance in determining whether an ambient air quality analysis should be conducted for development projects. For a typical development project, the need to perform an ambient air quality analysis is determined on a case-by-case basis, depending on project size.

The ISR rule is the District's groundbreaking regulation that requires developers to reduce emissions from residential and commercial development projects.

Compliance with ISR reduces criteria pollutant emissions from both construction and operation of development projects occurring within the San Joaquin Valley.

The District ISR rule exempts small development projects (see Table 4) from project-specific mitigation requirements. The District performed extensive analysis to identify small projects for which additional mitigation is not feasible. For instance, the exemptions include small residential housing developments of less than 50 units and commercial developments of less than 2,000 square feet.

All projects on the exemption list emit less than 2 tons per year of either PM_{10} or NOx, which is substantially lower than the District's 10-ton per year significance thresholds. Furthermore, as the tailpipe emissions from motor vehicles continue to decline, these projects will emit even less today than was estimated in 2005 when this rule was adopted. In addition, two tons per year is expected to result in daily emissions of less than the 100 lb/day screening level for either NOx or PM10 that the District has concluded that projects under the ISR exemption thresholds will have a less than significant impact on air quality.

Consequently, projects below ISR applicability thresholds are not expected to exceed the thresholds of significance for criteria pollutants emissions (see Section 8.3). In addition, projects below the ISR applicability thresholds are not expected to violate any air quality standards or contribute substantially to an existing or projected air quality violation and will not exceed the thresholds of significance for ambient air quality. In this case, the District concludes no emission calculation is needed and no ambient air quality analysis is required.

To meet the standards for adequacy for disclosure of potential environmental impacts and mitigation, the District recommends that the Lead Agency's environmental document include a qualitative assessment of why the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The District recommends that the narrative include sufficient detail of the proposed project size and type and applicability of the ISR rule to provide decision makers and the public with information enabling them to make an informed decision regarding the environmental consequences of criteria pollutant emissions from the proposed development project.

For projects equal to or above the applicability thresholds, the District recommends that emissions from the project be quantified to determine if an ambient air quality analysis is needed.

Table 4: AAQA Analysis Screening Levels For Development Project

Development Project Type	Space/Size
Residential	50 dwelling units
Commercial	2,000 square feet
Light Industrial	25,000 square feet
Heavy Industrial	100,000 square feet
Medical Office	20,000 square feet
General Office	39,000 square feet
Educational	9,000 square feet
Governmental	10,000 square feet
Recreational	20,000 square feet
Transportation/Transit	Construction exhaust emissions equal or exceed two (2.0) tons NOx or two (2.0) tons of PM_{10}*

* The District has established guidance when determining Indirect Source Review applicability for transportation projects. Projects in which construction of a new paved surface equals to or is less than 1/8 (0.125) miles in length are considered to have emissions below two tons NOx and two tons PM10. This applicability guidance is subject to change.

Project Construction Emissions

Compliance with Rule 9510 frequently reduces project specific emissions but may not be sufficient to reduce the project impact to less than significant levels. For large development projects, additional mitigation may be required and an Initial Study should be conducted to evaluate emission increases resulting from construction activities related to the project.

The District recommends that an ambient air quality analysis be performed when emissions of any criteria pollutant related to construction activities exceed the 100 pounds per day screening level, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures.

If such ambient air quality analysis is determined to be necessary, the District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

More information on ambient air quality and associated modeling can be found online at http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm

Project Operational Emissions

Compliance with Rule 9510 frequently reduces project specific emissions but may not be sufficient to reduce the project impact to less than significant levels. For large development projects, additional mitigation may be required and an Initial Study should be conducted to evaluate emission increases resulting from the project operational activities.

The District recommends that an ambient air quality analysis be performed for all criteria pollutants when emissions of any criteria pollutant resulting from project operational activities exceed the 100 pounds per day screening level, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures.

If such ambient air quality analysis is determined to be necessary, the District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

More information on ambient air quality and associated modeling can be found online at http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm

8.4.5 Ambient Air Quality - Carbon Monoxide Hot Spot from Mobile Sources

Emissions and ambient concentrations of carbon monoxide have decreased greatly in the recent past. These improvements are due largely to the introduction of lower emitting motor vehicles and cleaner burning fuels. The last exceedance of either the state or national CO standard recorded at any of the SJVAB's monitoring stations was in 1991. At present, all areas within the SJVAPCD have attained the federal CO standard and are attainment or unclassified for the state CO standard.

Despite the progress and success in achieving CO standards, localized CO concentrations still warrant concern in the SJV and should still be assessed in environmental documents. The reasons for this are twofold. First, state and federal laws require the SJVAB to attain and maintain ambient air quality standards. The District must ensure that increased motor vehicle use and congestion do not nullify the great strides that have been made with respect to ambient concentrations of CO. Secondly, the District must safeguard against localized high concentrations of CO that may expose nearby sensitive receptors that may not be recorded at a given monitoring sites. Because elevated CO concentrations are often localized, heavy traffic volumes and congestion can lead to high levels of CO, or CO "hotspots", while concentrations at the closest air quality monitoring station may be below state and federal standards.

Determining Significance of CO Impacts – Preliminary Screening

Based on the CO Protocol Analysis developed by the California Department of Transportation (CalTrans), and due to the fact that increased CO concentrations are usually associated with roadways that are congested and with heavy traffic volume, the District has established that preliminary screening can be used to determine with fair certainty that the effect a project has on any given intersection would not result in a CO hotspot. Therefore, the District has established that if neither of the following criteria are met at all intersections affected by the developmental project, the project will result in no potential to create a violation of the CO standard:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or

- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity.

If either of the above criteria can be associated with any intersection affected by the project, the applicant/consultant would need to conduct a CO analysis to determine a project's significance.

Determining Significance of CO Impacts – CO Analysis

Even if the two above criteria are met, the project's influence on any given intersection may still not create a violation of the CO NAAQS/CAAQS standard thereby showing a less than significant effect on the air quality of the area. Prior to conducting a full CO air quality model, the effect of the project can still be determined to be less than- significant by conducting an analysis using a protocol developed by the Institute of Transportation Studies at University of California, Davis entitled Transportation Project-Level Carbon Monoxide Protocol. This is a project-level protocol for use by agencies to evaluate the potential local level CO impacts of a project. If the results of this analysis demonstrate no potential for significance, the Lead Agency should include a description of the Protocol Analysis results in a report to the District. If the results demonstrate that the project will potentially have a significant effect on any intersection, the Lead Agency should conduct a CO analysis.

8.5 Thresholds of Significance – Toxic Air Contaminants

The District's current thresholds of significance for toxic air contaminant (TAC) emissions from the operations of both permitted and non-permitted sources are combined and presented in the following table.

Table 5: Air Quality Thresholds of Significance – Toxic Air Contaminants

Carcinogens	Maximally Exposed Individual risk **equals or exceeds 10 in one million**
Non-Carcinogens	**Acute**: Hazard Index **equals or exceeds 1** for the Maximally Exposed Individual
	Chronic: Hazard Index **equals or exceeds 1** for the Maximally Exposed Individual

Carcinogenic (cancer) risk is expressed as cancer cases per one million. Non-carcinogenic (acute and chronic) hazard indices (HI) are expressed as a ratio of expected exposure levels to acceptable exposure levels.

The significance of the impacts of TAC emissions from both permitted and non-permitted equipment and activities is evaluated under a single threshold, for example 10 in one million.

The most current thresholds of significance and risk assessment methodologies are available at www.valleyair.org/ceqa

8.5.1 Definition of Toxic Air Contaminants

TACs as defined by the California Health & Safety Code (CH&SC) §44321 are listed in Appendices AI and AII in AB 2588 Air Toxic "Hot Spots" and Assessment Act's Emissions Inventory Criteria and Guideline Regulation document. Potential health impacts from TACs are generally categorized into two groups:

1) Carcinogenic (cancer causing) effects; and
2) Non-carcinogenic (non-cancer causing) effects

The non-carcinogenic effects can be further divided into long-term (chronic) health effects such as birth defects, neurological damage, or genetic damage; and short-term (acute) effects such as eye irritation, respiratory irritation, and nausea.

The California TAC list identifies about 700 plus pollutants. Carcinogenic and/or non-carcinogenic toxicity criteria have been established for a subset of these pollutants by the Office of Environmental Health Hazard Assessment (OEHHA), as required by CH&SC §44360.

TACs used in determining the potential exposure to the public should not be confused with the 189 Hazardous Air Pollutants (HAP) listed in the Clean Air Act.

8.5.2 Basis for Risk Thresholds

The District's risk management objectives for permitting and CEQA are as follows:

- Minimize health risks from new and modified sources of air pollution.
- Health risks from new and modified sources shall not be significant relative to the background risk levels and other risk levels that are typically accepted throughout the community.
- Avoid unreasonable restrictions on permitting.

A key factor in establishing the District's risk thresholds was the background risk levels. The 10 in a million risk threshold was established in 1995. According to the 2009 California Almanac of Emissions and Air Quality, the background cancer risk in 1990 was estimated at about 1,200 in a million. The District's comprehensive regulatory and incentive-based programs, combined with state and federal air toxic control regulations, have significantly reduced the public's exposure to air toxics over the past two decades. The cancer risk using current risk assessment methodologies has dropped from about 1,200 in a million in 1990 to under 200 in a million today.

To provide some context and appreciation for the District's threshold of significance for risk assessment, the following is a list of risks associated with other known activities (risk of occurrence in an individual's lifetime):

Occurrence	Lifetime Risk
Contracting cancer (from all sources)	250,000 in a million
Dying of cancer	140,000 in a million
Dying in a car accident	12,000 in a million
Dying from a fall	4,600 in a million
Dying from excessive heat	73 in a million
Being struck by lighting	7.4 in a million

As shown above, the District's threshold is very conservative in protecting public health. For instance, the chance of contracting cancer from an approvable project with risk less than 10 in a million is, on the face of it, less than significant when

compared to the 250,000 in a million overall chance of contracting cancer from all sources.

Therefore, the District concludes that use of the same risk thresholds in the District's risk management policy is appropriate to determine significance within the environmental review process. Revisions to the risk thresholds in the District's risk management policy will serve as revisions to the District CEQA thresholds of significance for toxic air contaminants.

8.5.3 Basis for Health Risk Assessment Methodology

The OEHHA Risk Assessment Guidelines are the standards for estimating health risks. OEHHA is responsible for developing and providing toxicological and medical information relevant to decisions involving public health to state and local government agencies. Historically, state laws have required OEHHA to develop Risk Assessment Guidelines for estimating health risk associated with various sources of air pollution. Furthermore, the Children's Environmental Health Protection Act (SB 25, Escutia, 1999) requires OEHHA to biennially review risk assessment methods for air toxics, and related information, to ensure that they adequately protect infants and children.

The District's risk management policy works in conjunction with the OEHHA Risk Assessment Guidelines. The District's risk management policy further clarifies and provides guidance on the appropriate options to use, such as a longer exposure period and more conservative air dispersion modeling.

District staff members are considered leading statewide experts in the field of health risk assessment and have developed significant resources from guidance documents to database tools to assist other agencies, consultants, and regulated sources.

Therefore, the District concludes that use of its risk management policy and the OEHHA Risk Assessment Guidelines is appropriate in determining significance within the environmental review process. Revisions to the OEHHA Risk Assessment Guidelines and/or the District's risk management policy will serve as revisions to the District CEQA risk assessment methodology.

The latest policy is available at
www.valleyair.org/ceqa

8.6 Thresholds of Significance – Odors

While offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable distress among the public and often resulting in citizen complaints to local governments and the District.

The project should be evaluated to determine the likelihood that the project would result in nuisance odors. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact. Nuisance odors may be assessed qualitatively taking into consideration of project design elements and proximity to off-site receptors that potentially would be exposed objectionable odors.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Rather, projects must be assessed on a case-by-case basis.

Lead Agencies should consider all available pertinent information to qualitatively determine if a significant impact is likely to occur. Lead Agencies should disclose applicable information regarding the characteristics of the buffer zone between the sensitive receptor(s) and the odor source(s), local meteorological conditions, and the nature of the odor source. Consideration of such parameters assists in evaluating the potential for odor impacts as a result of the proposed project. To the extent feasible, the analysis of potential odor impacts should be based on District's experience and data regarding similar facilities in similar settings. Lead Agencies should contact the District's for information regarding specific facilities and categories of facilities, and associated odor complaint records.

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. An analysis of potential odor impacts should be conducted for the following two situations:

1. Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
2. Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley Air Basin. These are presented in Table 6 (*Screening Levels For Potential Odor*

Sources) along with a reasonable distance from the source within which, the degree of odors could possibly be significant.

Table 6 (*Screening Levels for Potential Odor Sources*), can be used as a screening tool to qualitatively assess a project's potential to adversely affect area receptors. This list of facilities is not all-inclusive. The Lead Agency should evaluate facilities not included in the table or projects separated by greater distances if warranted by local conditions or special circumstances. If the proposed project would result in sensitive receptors being located closer than the screening level distances, a more detailed analysis should be provided.

Table 6: Screening Levels for Potential Odor Sources

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

The most current screening tools are available on-line at the District's website www.valleyair.org/ceqa

The Lead Agency should prepare a more detailed analysis for any project that would result in an odor source and sensitive receptors being located closer to one another than the distances indicated in Table 6. When projects trigger the screening level distances in Table 6, the Lead Agency or consultant should contact the District's Compliance Division for information regarding odor complaints.

Existing Odor Sources

For projects involving a new receptor being located near an existing odor source(s), the District's Compliance Division should be contacted. The Compliance Division will provide information on odor complaints logged for the facility(ies) for the previous three years. Odor complaints should be mapped in relation to the odor source to establish a general boundary of any existing impacts. The location of the proposed project should be identified. For projects involving new receptors locating near an existing odor source where there is currently no nearby development and for new odor sources locating near existing receptors, the analysis should be based on a review of odor complaints for similar facilities. In assessing potential odor impacts, consideration also should be given to local meteorological conditions, particularly the intensity and direction of prevailing winds.

Because offensive odors rarely cause any physical harm and no requirements for their control are included in state or federal air quality regulations, the District has no rules or standards related to odor emissions, other than its nuisance rule. Any actions related to odors are based on citizen complaints to local governments and the District.

Lead Agencies can also make a determination of significance based on a review of District complaint records. For a project locating near an existing source of odors, the impact is potentially significant when the project site is at least as close as any other site that has already experienced significant odor problems related to the odor source. Significant odor problems are defined as:

- More than one confirmed complaint per year averaged over a three year period, or
- Three unconfirmed complaints per year averaged over a three-year period.

An unconfirmed complaint means that either the odor/air contaminant release could not be detected, or the source/facility cannot be determined. Because of the subjective nature of odor impacts and the lack of quantitative or formulaic methodologies, the significance determination of potential odor impacts should be considered on a case-by-case basis.

8.7 Thresholds of Significance – Accidental Releases

The California Emergency Management Agency (CalEMA) develops regulations for the California Accidental Release Prevention (CalARP) Program. The purpose of the CalARP program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. The CalARP program is implemented at the local level by the Certified Unified Program Agencies which may be the county health department, local Office of Emergency Services, or local fire department. The California Environmental Protection Agency has a section of its website devoted to CUPAs

(www.calepa.ca.gov/CUPA) that includes a directory. The CUPA for the area where a project is located should be contacted for the specific requirements.

The District has no responsibility for accidental releases under the CalARP program. Therefore, the District has not established a Threshold of Significance. The determination of significance for potential impacts from accidental releases of acutely hazardous air pollutants should be made in consultation with the local administering agency of the Risk Management Prevention Program. The county health department, Office of Emergency Services, or local fire department is usually the administering agency.

8.8 Thresholds of Significance – Cumulative Impacts

8.8.1 Introduction

By its very nature, air pollution has a cumulative impact. The District's nonattainment status is a result of past and present development within the San Joaquin Valley Air Basin (SJVAB). Furthermore, attainment of ambient air quality standards can be jeopardized by increasing emissions-generating activities in the region. No single project would be sufficient in size, by itself, to result in nonattainment of the regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development within the San Joaquin Valley Air Basin.

When assessing whether there is a new significant cumulative effect, the Lead Agency shall consider whether the incremental effects of the project are cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects [CCR §15064(h)(1)].

Per CEQA Guidelines §15064(h)(3) a Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located.

8.8.2 District Attainment Plans

As presented in Chapter 3, at the Federal level, the District is designated as extreme nonattainment for the 8-hour ozone standard and is designated nonattainment for Federal $PM_{2.5}$ standards. Consistent with Clean Air Act requirements, the District has adopted attainment plans that demonstrate how the District will attain and maintain the National Ambient Air Quality Standards. These plans are developed through a public process, formally adopted by the State, and submitted by the Governor's designee to the US EPA. The Clean Air Act requires EPA to review each plan and any plan revisions and to approve the plan or plan revisions if consistent with the Clean Air Act.

Each attainment plan includes a comprehensive and exhaustive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the Valley. Consistent with the direction of each plan, the Governing Board adopted regulatory measures that, in the majority of cases, exceed the plan commitment for a given source category, especially through the implementation of the Confined Animal Facilities Rule (4570), Phase II of the Stationary Internal Combustion Engines Rule (4702), Stationary Gas Turbines Rule (4703), and multiple rules for Boilers, Steam Generators, and Process Heaters (4306, 4307, 4320).

Many of the rules implemented through the Extreme Ozone Attainment Demonstration Plan and 2007 Ozone Plan, such as the Indirect Source Review (ISR) rule, are the first of their type in the nation, or are deemed the most stringent in the nation. The District's (ISR) Rule bridges the gap between regulations and incentives to maximize reductions while minimizing socioeconomic impacts. The ISR rule requires developers of new development projects to reduce emissions during both the construction and operational phases of the project. The District works closely with developers to maximize on-site emissions reductions. However, if developers are not able to fully achieve required reductions through on-site measures, fees may be collected to fund off-site emission reduction projects.

The District's strategy to reduce emissions also includes the proactive use of incentives to obtain reductions that would otherwise not be cost-effective for industry or are outside the District's regulatory authority. The path towards attainment is being further accelerated by Valley industry and municipal investments in cleaner technologies and emissions reductions implemented at the state and local level. These included over 20 regulations developed by the California Air Resources Board (ARB) in the last 3 years, numerous transportation control measures implemented by the metropolitan planning organizations, and many measures implemented by the federal government that were not included in either ozone attainment plan.

The District expects air quality to continue to improve as recent regulations are fully implemented, new control technologies are developed, and increased partnership between government and private entities occurs through programs such as Healthy Air Living, the Fast Track Action Plan, Regional Energy Efficiency Strategy, and the Technology Advancement Program.

8.8.3 State Implementation Plan

The District's attainment plans are a regional component of the State Implementation Plan (SIP). The SIP includes annual increases in air pollutant emissions resulting from regional growth (including construction-generated emissions) anticipated according to local land use plans (e.g., general plans, regional transportation plans). The SIP also assumes the incremental increase in emissions will be partially offset through the implementation of stationary, area, and indirect source control measures contained within the SIP.

The SIP is the State of California's plan for attaining the National Ambient Air Quality Standards (NAAQS). The contents of a typical SIP fall into several categories:

- State-adopted control measures which consists of either rules/regulations or source-specific requirements (e.g., orders and consent decrees);
- State-submitted comprehensive air quality plans, such as attainment plans, maintenance plans, rate of progress plans, and transportation control plans demonstrating how these state regulatory and source-specific controls, in conjunction with federal programs, will bring and/or keep air quality in compliance with federal air quality standards;
- State- submitted "non-regulatory" requirements, such as emission inventories, small business compliance assistance programs; statutes demonstrating legal authority, monitoring networks, etc.); and
- Additional requirements promulgated by EPA (in the absence of a commensurate State provision) to satisfy a mandatory section 110 or part D (Clean Air Act) requirement.

8.8.4 Cumulative Impact - Criteria Pollutants

If a project is significant based on the thresholds of significance for criteria pollutants, then it is also cumulatively significant. This does not imply that if the project is below all such significance thresholds, it cannot be cumulatively significant.

For instance, another measure of a project's individual significance contained in the GAMAQI is the impact on criteria pollutant concentrations in the ambient air. If the concentration exceeds any of the federal health-based ambient air concentration standards or causes a worsening of areas already exceeding those standards, the project is considered to be individually significant. Lead Agencies

should also consider the cumulative impact of multiple simultaneously proposed projects, located within the same area. If the combined impacts of such projects cause or worsen an exceedance of the concentration standards, the project would have a cumulatively significant impact under CEQA.

For example, simultaneous proposals for two 3 ton per year NOx sources located in the same area are each below the 10 ton per year criteria pollutant significance threshold. In this hypothetical example, analysis of each project's impact on ambient air quality shows that they do not individually cause an exceedance of any ambient air quality standard. However, when their combined emissions are considered, air quality modeling determines that their combined impacts cause an exceedance. In this hypothetical case, each of these projects would be considered to have a cumulatively significant impact.

Stationary Source Emissions - Permitted Equipment and Activities

As discussed in section 8.3.1 (Basis for Air Quality Thresholds of Significance), the District's thresholds of significance for criteria pollutants are based on District rule 2201 (New Source Review) offset requirements. Furthermore, New Source Review (NSR) is a major component of the District's attainment strategy. NSR provides mechanisms, including emission trade-offs, by which Authorities to Construct such sources may be granted, without interfering with the attainment or maintenance of Ambient Air Quality Standards. District implementation of NSR ensures that there is no net increase in emissions above specified thresholds from new and modified Stationary Sources for all nonattainment pollutants and their precursors. In fact, permitted emissions above offset thresholds equivalent to the District's thresholds of significance for criteria pollutants are mitigated to below the thresholds, and the District's attainment plans show that this level of emissions increase will not interfere with attainment or maintenance of ambient air quality standards.

The District's attainment plans demonstrate that project-specific net emissions increase below New Source Review (NSR) offset requirements will not prevent the District from achieving attainment. Consequently, emission impacts from sources permitted consistent with NSR requirements are not individually significant and are not cumulatively significant.

Stationary Source Emissions - Non-permitted Equipment and Activities

When determining cumulative significance, air quality impacts from all non-permitted equipment and activities emissions sources are to be considered when determining if project-specific emissions impacts would be individually significant.

The District concludes that when activities and emissions from non-permitted sources are individually significant when above the District's criteria pollutant thresholds of significance, they are also cumulatively significant.

Development Projects

Nearly all development projects within the San Joaquin Valley Air Basin have the potential to generate air pollutants, making it more difficult to attain State and Federal ambient air quality standards. Land use decisions and project design elements such as preventing urban sprawl, encouraging mix-use development, and project designs that reduce vehicle miles traveled (VMT) have proven to benefit air quality.

As discussed above, the SIP accounts for annual increases in air pollutant emissions resulting from regional growth (including construction-generated emissions) anticipated according to local land use plans (e.g., general plans, regional transportation plans). In addition to the State's strategies for reducing air impacts from future growth and development, the District's attainment plans include innovative strategies, such as the District's highly successful Emissions Reduction Incentive Program (ERIP), Rule 9410 (eTRIP), Healthy Air Living, and District Rule 9510 (Indirect Source Review).

The District's Indirect Source Review (ISR) Rule establishes a link between regulations and incentives to maximize reductions while minimizing socioeconomic impacts. The ISR Rule requires developers of new development projects to reduce emissions during both the construction and operational phases of the project. The District works closely with developers to maximize on-site emissions reductions. However, if developers are not able to fully achieve required reductions through on-site measures, fees may be collected to fund off-site emission reduction projects which result in real emission reductions throughout the San Joaquin Valley Air Basin.

As such, any proposed development project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.

8.8.5 Cumulative Impact: Carbon Monoxide

Cumulative carbon monoxide impacts are accounted for in the CO hotspot analysis described earlier in this chapter. The CALINE4 model uses background concentrations that include CO contributions from other sources. Traffic levels used in the model should include all reasonably foreseeable projects that will contribute traffic to the intersections and road segments being analyzed.

8.8.6 Cumulative Impact: Toxic Air Contaminants (TAC) Emissions

Impacts from hazardous air pollutants are localized impacts. As presented above in section 8.3 (Thresholds of Significance - Toxic Air Contaminants), the District has established thresholds of significance for TACs that are extremely conservative and protective of health impacts on sensitive receptors. Because impacts from TACs are localized and the thresholds of significance for TACs have been established at such a conservative level, risks over the individual thresholds of significance are also considered cumulatively significant. No other cumulative risk thresholds apply.

8.9 Thresholds of Significance – Greenhouse Gas Emissions

This section is included here for informational purposes. The District's policies on addressing GHG emissions in CEQA were adopted through a separate process and are available at www.valleyair.org/Programs/CCAP/CCAP_idx.htm.

On December 17, 2009, the District's Governing Board adopted the District Policy: *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District's Governing Board also approved the guidance document: *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA.* In support of the policy and guidance document, District staff prepared a staff report: *Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act*. These documents adopted in December of 2009 continue to be the relevant policies to address GHG emissions under CEQA. As these documents may be modified under a separate process, the latest versions should be referenced to determine the District's current guidance at the time of analyzing a particular project.

These documents and the supporting staff reports are available at the District's website:
www.valleyair.org/Programs/CCAP/CCAP_idx.htm
Check this location for the latest District policies on addressing GHG emissions in CEQA.

8.9.1 Development of District Guidelines on Addressing GHG

By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze greenhouse gas emissions as a part of the CEQA process. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of greenhouse gas emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead Agencies must analyze the greenhouse gas emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. [See CCR §15064.4];
- When a project's greenhouse gas emissions may be significant, Lead Agencies must consider a range of potential mitigation measures to reduce those emissions. [See CCR §15126.4(c)];
- Lead Agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. [See CCR §15126.2(a)];
- Lead Agencies may significantly streamline the analysis of greenhouse gases on a project level by using a programmatic greenhouse gas emissions reduction plan meeting certain criteria. [See CCR §15183.5(b)];
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.)

It is widely recognized that no single project could generate enough GHG emissions to noticeably change the global climate temperature. However, the combination of GHG emissions from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change. GHG emissions, and their associated contribution to climate change, are inherently a cumulative impact issue. Therefore, project-level impacts of GHG emissions are treated as one-in-the-same as cumulative impacts.
In summary, the staff report evaluates different approaches for assessing significance of GHG emission impacts. As presented in the report, District staff reviewed the relevant scientific information and concluded that the existing science is inadequate to support quantification of the extent to which project specific GHG emissions would impact global climate features such as average air temperature, average rainfall, or average annual snow pack. In other words, the District was not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. This is readily understood, when one considers that global climate change is the result of the sum total of GHG emissions, both manmade and natural that occurred in the past; that is occurring now; and will occur in the future.

In the absence of scientific evidence supporting establishment of a numerical threshold, the District policy applies performance based standards to assess project-specific GHG emission impacts on global climate change. The determination is founded on the principal that projects whose emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006, commonly referred to as "AB 32", should be considered to have a less

than significant impact on global climate change. For a detailed discussion of the District's establishment of thresholds of significance for GHG emissions, and the District's application of said thresholds, the reader is referred to the above referenced staff report, District Policy, and District Guidance documents.

As presented in Figure 6 (*Process of Determining Significance of Greenhouse Gas Emissions*), the policy provides for a tiered approach in assessing significance of project specific GHG emission increases.

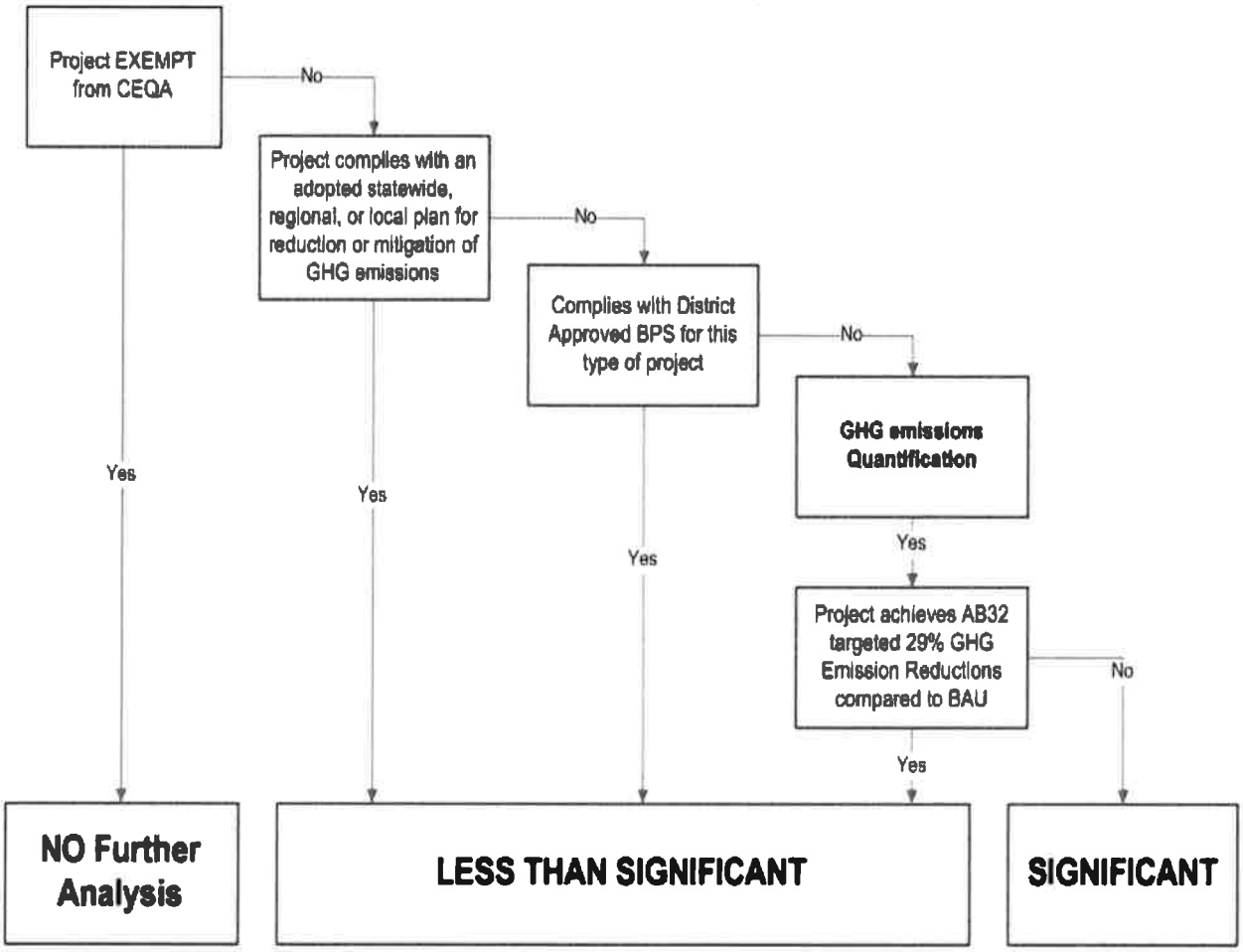
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the Lead Agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the Lead Agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).

- Projects implementing BPS would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

- Projects not implementing BPS would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% *GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.*)

The District guidance for development projects also relies on the use of BPS. For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Projects implementing any combination of BPS, and/or demonstrating a total 29 percent reduction in GHG emissions from business-as-usual (BAU), would be determined to have a less than cumulatively significant impact on global climate change.

Figure 6: Process of Determining Significance of Greenhouse Gas Emissions



CHAPTER 9

MITIGATION MEASURES

9.1 Introduction

CEQA requires Lead Agencies to mitigate or avoid significant environmental impacts associated with discretionary projects. Environmental documents for projects that have any significant environmental impacts must identify all feasible mitigation measures or alternatives to reduce the impacts below a level of significance. If after the identification of all feasible mitigation measures, a project is still deemed to have significant environmental impacts, the Lead Agency can approve a project, but must adopt a Statement of Overriding Consideration to explain why further mitigation measures are not feasible and why approval of a project with significant unavoidable impacts is warranted.

By definition, air quality mitigation measures must go beyond existing regulations. Regulatory programs are in place at the federal, state, and air district level to reduce air pollutant emissions from nearly all sources, yet they are not always sufficient to eliminate all air quality impacts. For example, the ARB motor vehicle program has dramatically reduced average tailpipe emissions from the vehicle fleet. However, motor vehicle emissions will be a major source of Valley pollution problems in the foreseeable future due to growth in the number of vehicles and in miles traveled.

A public agency shall provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other public project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.

Some examples the District considers to be feasible mitigation in light of existing regulations and research are included.

More measures are available on the District's website at:
http://www.valleyair.org/transportation/GAMAQI-Mitigation-Measures.pdf

The District recognizes that the final determination of feasibility will fall to the Lead Agency. In selecting appropriate air quality mitigation measures, the District advocates the following criteria:

Criteria required by CEQA:

- Mitigations shall be enforceable by permit conditions, legally binding agreements, or other measures (Public Resources Code §21081.6)
- Mitigation measures shall be capable of being monitored and enforced;

Recommended criteria:

- Mitigation measures should coincide with the level and timing of an impacts;
- The agency responsible should have adequate resources to implement the mitigation;
- Mitigation measures should be carried out within a reasonable period. Mitigation measures taking more than five years should contain interim targets;
- Mitigation measures benefits should be quantified with methods acceptable to the District

9.2 Voluntary Emission Reduction Agreement

Design elements, mitigation measures, and compliance with District rules and regulations may not be sufficient to reduce project-related impacts on air quality to a less than significant level. In such situations, project proponents may enter into a Voluntary Emission Reduction Agreement (VERA) with the District to reduce the project related impact on air quality to a less than significant level. A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of air emissions increases through a process that funds and implements emission reduction projects. A VERA can be implemented to address impacts from both construction and operational phases of a project.

To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate project specific emissions by providing funds to the District. The District's role is to administer the implementation of the VERA consisting of identifying emissions reductions projects, funding those projects and verifying that emission reductions have been successfully achieved. The VERA implementation process also provides opportunity for the project proponent to identify specific emission reduction projects to be administered by the District. The funds are disbursed by the District in the form of grants. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

The District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. The initial agreement is generally based on the projected maximum emissions increases as calculated by a District approved air quality impact assessment, and contains the corresponding fiscal obligation. However, the District has designed flexibility into the VERA such that the final mitigation can be based on actual emissions related to the project as determined by actual equipment used, hours of operation, etc. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation

measure demonstrating that project specific emissions have been mitigated to less than significant.

To ensure all feasible mitigation measures are incorporated into the project to reduce project air quality impact to less than significant, the District recommends the project proponent (and/or Lead Agency) engage in discussion with the District to have the VERA adopted by the District prior to the finalization of the environmental document. This process will allow the environmental document to appropriately characterize the project emissions and demonstrate that the project impact on air quality will be mitigated to less than significant under CEQA as a result of the implementation of the adopted VERA.

The District has been developing and implementing VERA contracts with project proponents to mitigate project specific emissions since 2005. It is the District's experience that implementation of a VERA is a feasible mitigation measure, which effectively achieves the emission reductions required by a Lead Agency, including mitigation of project-related impacts on air quality by supplying real and contemporaneous emissions reductions.

Therefore, Lead Agencies should require the project proponent to negotiate a VERA with the District prior to the Lead Agency's final approval of the CEQA document. This allows the Lead Agency to disclose to the public the certainty that the VERA is assuring full mitigation of air quality impacts as specified in the environmental review document or equivalent documentation certified by the Lead Agency.

9.2.1 Pollutant-by-Pollutant vs. Net Zero

Under a VERA, two mitigation approaches are available: "pollutant-by-pollutant" and "net zero".

Pollutant-by-Pollutant Mitigation

The mitigation of project emissions impacts "pollutant-by-pollutant" means that each NOx, VOC and PM_{10} project emission will be mitigated individually to their respective significance threshold level.

Net Zero Mitigation

The mitigation of project emissions impacts to "net zero" means that the sum of NOx, VOC and PM_{10} combined project emissions will be fully mitigated by the sum of NOx, VOC and PM_{10} combined emission reductions achieved under the VERA. The "net zero" concept is limited to the three pollutants NOx, VOC and PM_{10}, due to their strong interrelatedness. NOx is the driving pollutant for both the wintertime PM problem and the summertime ozone problem (in combination with VOC). The District considers "net zero" mitigation to result in a less than significant air quality impact for these three pollutants, even if VOC or PM_{10} emissions remain above

their individual significance thresholds after mitigation, because this means that the mitigation has achieved excess reductions of NOx, the critical component to the Valley's air quality issues.

Recommended Approach

The District strongly recommends the "net-zero" approach. This method results in a significantly larger amount of NOx reduction, which is the primary driver to the formation of ozone and PM in the Valley.

9.2.2 Indirect Source Review and VERA

The District Rule 9510 (ISR) is a regulatory requirement while a VERA is a potentially feasible mitigation measure for projects subject to CEQA requirements. The emission reductions achieved under ISR are intended to satisfy ISR regulatory requirements. Even though compliance with District Rule 9510 substantially reduces project specific impacts on air quality, it may not be sufficient to reduce project specific emissions to less than significant levels under CEQA.

In contrast, VERAs provide emission reductions that can be used to satisfy both ISR and CEQA requirements. Entering into a VERA does not exempt a project from ISR requirements, but the emission reductions achieved under a VERA can be applied towards satisfying ISR emission reduction requirements.

For example, providing 1 ton of emission reduction under a VERA results in 1 ton of emission reduction for CEQA mitigation purposes and contributes to 1 ton of emission reduction for ISR purposes. In most cases, a VERA achieving a "net zero" mitigation provides sufficient emission reductions to also satisfy ISR emission reduction requirements.

9.3 Mitigating Criteria Pollutants Emission Impacts

9.3.1 Project Construction Emission Impacts

Although the impacts from construction-related air pollutant emissions are temporary in duration, in some cases, such emissions can represent a significant air quality impact. Construction activities such as grading, excavation, and travel on unpaved surfaces can generate substantial amounts of fugitive dust, and can lead to elevated concentrations of PM_{10}. Emissions from construction-related equipment engines also can contribute to elevated concentrations of PM_{10} as well as increased emissions of ozone precursors.

Fugitive Dust

The recommended approach to mitigating fugitive dust emissions from construction-related activities focuses on a consideration of whether all feasible control measures are being implemented. District fugitive dust rules, collectively known as Regulation VIII, contain a series of requirements. The purpose of Regulation VIII is to reduce the amount of PM_{10} entrained into the atmosphere as a result of emissions generated from anthropogenic (man-made) fugitive dust sources. Compliance with Regulation VIII does not constitute mitigation because it is already required by law. The District provides Enhanced and Additional Control Measures that will provide a greater degree of PM_{10} reduction than required by Regulation VIII. Entering into a VERA with the District is also an approach to address mitigation of fugitive dust emissions. The District will recommend a VERA and these enhanced and additional measures when project conditions warrant; e.g. potential for impacting sensitive receptors, construction sites of significant size, or any other conditions that may warrant additional emission reductions necessary to minimize dust emissions to less than significant levels.

Exhaust Emissions – Construction Activities

Lead Agencies should also seek to reduce emissions from construction-related equipment exhaust. Feasible mitigation of construction exhaust emission includes use of construction-related equipment powered by engines meeting, at a minimum, Tier II emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations, and limitations of hours of activities. Lead Agencies can impose additional mitigation measures as conditions of project approval such as requirements for the project proponent to enter into a VERA with the District.

9.3.2 Project Operational Emission Impacts

Operational Emissions – Permitted Equipment and Activities

All permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases. In such cases, the District will advise Lead Agencies of the need to impose additional mitigation measures as conditions of project approval, such as a requirement for the project proponent to enter into a Voluntary Emission Reduction Agreement (VERA) with the District.

Operational Emissions – Non-Permitted Equipment and Activities

Operational emissions from non-permitted equipment and activities are caused by mobile sources (on-site and on-road), combustion of fuels for space heating, cooking, and landscape maintenance, etc.

For industrial projects, onsite mobile sources commonly include off-road vehicles, such as forklifts and tractors, and on-road passenger vehicles use. Off-site mobile sources commonly include heavy-duty vehicles used to transport raw material and ship finished goods and light-duty vehicle use associated with employee trips. For commercial projects, mobile source activities include receipt of goods, and customer and employee trips. For development projects, mobile source activities commonly include vehicular travel from home to work, home to shop, and deliveries.

Mobile sources

Mitigation measures identified by the District to reduce operational air quality impacts from mobile sources are discussed below. Several examples of general approaches can be taken to reduce emissions from motor vehicles:

- Reduce vehicle trips. These measures reduce air pollutant emissions by entirely eliminating some of the vehicle trips associated with a project. An example is the provision of bicycle facilities to encourage bicycle use instead of driving.

- Reduce vehicle miles traveled. These measures reduce emissions by reducing the length of vehicle trips associated with a project. An example is satellite offices/telecommuting centers provided to reduce the length of employee commute trips.

- Use of low emission vehicles. These measures are not intended to reduce trips or VMT, but rather promote the use of fuels that are less polluting than gasoline or diesel. Less use of fuels results in less emission released into the atmosphere. For example,
    - Replace diesel fleet with alternative fuel engine technology and infrastructure;
    - Retrofit existing equipment to reduce emissions using methods such as particulate filters, oxidation catalysts, or other approved technologies;
    - Repower/Retrofit heavy-duty diesel fleet with cleaner diesel engine technology and/or diesel particulate filter after-treatment technology;
    - Replace diesel fleet vehicles with cleaner fueled low emission vehicles (i.e. school buses, buses, on- and off- road heavy duty vehicles, lighter duty trucks and passenger vehicles)

- Voluntary Emission Reduction Agreement. As discussed above, this is an agreement entered by the project proponent and the District by which the project proponent provides pound-for-pound mitigation of air emissions increases through a process that funds and implements emission reduction projects, and has found to be a feasible mitigation measure for many development projects.

More measures are available on the District's website at:
http://www.valleyair.org/transportation/GAMAQI-Mitigation-Measures.pdf

The District recommends that Lead Agencies use each of the above categories of measures where appropriate. However, caution should be used when selecting some types of measures. In general, measures that reduce vehicle trips entirely achieve the greatest emission reductions. This is because vehicle emissions are highest during the first several miles of a trip. Measures to reduce VMT are most effective when the trips reduced are long such that cold start emissions are less important. PM_{10} emission reductions are better achieved by reducing VMT. This is because PM_{10} emissions (due to entrained road dust) are more directly correlated to VMT.

Area sources

Area sources are sources that individually emit small quantities of air pollutants, but which cumulatively may represent significant quantities of emissions. Water heaters, fireplaces, wood heaters, lawn maintenance equipment, and application of paints and lacquers are examples of area source emissions. Mitigation measures include the following examples:

- Provide electric maintenance equipment
- Eliminate or limit the amount of traditional fireplaces installed (i.e., natural gas fireplaces/inserts or at least EPA certified wood stoves or inserts instead of open hearth fireplaces)
- Use solar or low-emission water heaters

More measures are available on the District's website at:
http://www.valleyair.org/transportation/GAMAQI-Mitigation-Measures.pdf

9.4 Mitigating Hazardous Air Pollutants

Specific mitigation measures should be identified and considered for those projects that may release toxic or hazardous air pollutants to the atmosphere in amounts that have the potential be injurious to nearby populations. Such mitigation measures should consider both routine and non-routine toxic air pollutant releases. Mitigation measures may involve handling, storage, and disposal methods that minimize release of the subject substances to the atmosphere. In some cases, air pollution control devices or process operation modifications can be employed. Furthermore, facilities that may release toxic or hazardous substances to the atmosphere should not be located adjacent to sensitive receptors such as residences, schools, day-care centers, extended-care facilities, and hospitals.

Lead Agencies should also be aware that many facilities such as dry cleaners and gasoline stations produce toxic emissions, but under most circumstances, existing controls reduce impacts to less than significant levels.

Facilities and equipment that require permits from the District are screened for risks from toxic emissions and those exceeding thresholds are subject to detailed health risk assessments. Projects exceeding deminimus levels are required to install Toxic Best Available Control Technology (T-BACT) to reduce risks to below significance. If a significant impact remains after T-BACT is implemented, the permit may not be issued unless it meets the discretionary approval criteria of the District Risk Management Policy for Permitting New and Modified Sources.

Projects where significant numbers of diesel powered vehicles will be operating such as truck stops, transit centers, and warehousing may create risks from toxic diesel particulate emissions. These facilities and vehicles are not subject to District permit and so may need mitigation measures adopted by the Lead Agency to reduce this impact. Measures such as limiting idling, electrifying truck stops to power truck auxiliary equipment, use of diesel particulate filters, and use of alternative fuel heavy-duty trucks have been required by some jurisdictions.

9.5 Mitigating Odor Impacts

Appendix G (Environmental Checklist Form) of the state CEQA Guidelines specifies that the Lead Agency determines whether a project would "create objectionable odors affecting a substantial number of people."

Projects that have a significant odor impact because they place sources of odors and members of the public near each other should establish a buffer zone to reduce odor impacts to a less than significant level. The dimensions of the buffer zone must ensure that the encroaching project does not expose the public to nuisance levels of odorous emissions.

In establishing the appropriate dimensions of the buffer zone, the Lead Agency should consider actions currently being taken at the facility to control odors, as well as any future actions to which the facility is firmly committed. A safety margin also should be considered in establishing a buffer zone to allow for future expansion of operations at the source of the odors.

In order to reduce the dimensions of the buffer zone, add-on control devices (e.g. filters or incinerators) and/or process modifications implemented at the source of the odors may be feasible, depending on the specific nature of the facility. Lead Agencies should consult the District for further information regarding add-on controls and process modifications to control odors. Odor mitigation measures that are targeted at the *receptors* (e.g. residential areas) that rely on sealing buildings, filtering air, or disclosure statements are not appropriate mitigation measures to be used in place of buffer zones or technical controls.

For some projects, operational changes, add-on controls, or process changes, such as carbon absorption, incineration, or relocation of stacks/vents can reduce odorous emissions. In many cases, however, the most effective mitigation strategy is to provide a sufficient distance, or buffer zone, between the source and the receptor(s). Recent experience has shown that locating upwind from an odor source does not necessarily eliminate potential problems. Even places with reliable prevailing winds experience days with light and variable winds and days with winds opposite prevailing winds related to the passage of storms. Residents in these upwind areas while exposed less frequently may be more sensitive to the odors.

9.6 Mitigating Air Quality Impacts from General and Area Plan Level

Selecting mitigation measures appropriate for a particular project can be a complex task. The complexity arises from several factors. CEQA applies to a wide variety of projects. Complete general plan updates covering thousands of acres are discretionary projects and so are parcel maps and even site plans in some jurisdictions. The general plan often only identifies the eventual use of a parcel of land in vague terms. The site plan review may occur too late in the process and affect too small of an area to allow effective mitigation measures to be identified. In addition, differences in conditions at a site greatly influence the effectiveness of mitigation measures. The overall approach recommended by the District is to use policy statements, design standards, and community-wide programs at the general plan/specific plan level, and site specific measures when the site specific uses are proposed.

As discussed in Chapter 6, the District has prepared a guidance document on these issues entitled *Air Quality Guidelines for General Plans* (AQGGP). The AQGGP document provides guidance to local officials and staff on developing and implementing

local policies and programs to improve air quality to be included in local jurisdictions' general plans

There is no definitive line between plan and project. For example, in some cases, a developer will file a general plan amendment, zone change, and subdivision map or site plan simultaneously. In other cases, the general plan amendment is filed first and the other actions are filed later pending approval of the plan amendment. Some specific plans provide a high level of design detail and some land use approvals for individual parcels provide few details of the final use. This being the case, mitigation measures for each project are best identified on a project-by-project basis.

Agencies preparing new or updated plans for their communities have special responsibilities for mitigating air quality impacts. Large scale plans and policy documents often set the pattern of new development for the next twenty or more years. Land use patterns can be laid out in ways that produce more or less air pollution. Policies can be set in motion that encourage or discourage air quality friendly development. The District encourages local agencies to view their general plans, community plans, and specific plans as opportunities to improve the Valley's air quality.

9.7 Air Quality Design Guidelines

The District encourages cities and counties to adopt air quality friendly design guidelines as part of a general plan implementation strategy. Most current design practices can be improved upon. The District recommends the following websites to get ideas and concepts on what constitutes land use and design strategies that would be beneficial for air quality:

- The Local Government Commission's Center for Livable Communities (www.lgc.org/center)
- Walkable Communities, Inc. (www.walkable.org)

Design guidelines can be voluntary suggestions for developers or they can be standards adopted by ordinance that must be followed. The choice is up to the local jurisdiction. Numerous examples of design guidelines with air quality benefits are also available from California communities including Sacramento, San Diego, Modesto, and Merced.

Some examples of design guidelines are:

- Adopt air quality enhancing design guidelines/standards
- Designate pedestrian/transit oriented development areas on general plan/specific plan/ planned development land use maps
- Adopt ordinance limiting wood burning appliances/fireplace installations
- Fugitive dust regulation enforcement coordinated with the District

- Energy efficiency incentive programs
- Coordinate location of land uses to separate odor generators and sensitive receptors
- Provide traffic flow improvements for areas impacted by the project
- Provide on-site improvement: bikeways, transit infrastructure, pedestrian enhancements

More design guidelines are available at www.valleyair.org/ceqa/designguidelines

9.8 Quantifying Mitigation Measures

The effectiveness of proposed mitigation measures should be quantified when feasible. Because the measures' effectiveness will depend greatly on the specific characteristics of the project and its setting, this quantification should be based on a project-specific analysis.

When quantifying project emissions, the latest approved models by the District should always be used for air quality analysis. Models are subject to change. At the time of writing, the model available is the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The model is available at www.caleemod.com and at
http://www.valleyair.org/ISR/ISRResources.htm#Models
Assistance with operating the model is available by contacting the District at
(559) 230-6000, or hramodeler@valleyair.org

In some cases, it simply may not be possible to quantify the effect of proposed mitigation measures. It may be that the specific conditions surrounding a particular project are so unique as to render extrapolation from other examples unreliable. A proposed measure may be innovative, with little precedent. The combined effects of a package of measures may be too difficult to quantify. While a certain degree of professional judgment is usually involved in estimating the effectiveness of mitigation measures, excessively speculative estimates should be avoided. If the Lead Agency cannot quantify mitigation effectiveness with a reasonable degree of certainty, the environmental document should at least address effectiveness qualitatively. If the Lead Agency makes a finding that non quantified mitigation measures reduce an impact to a level of insignificance, the environmental document should provide a detailed justification of that conclusion.

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10. EVERY 001 GENERAL CONDITIONS	SP - Hold Harmless	Status: INEFFECT	Conditions: Informational

The applicant/permittee or any successor-in-interest shall defend, indemnify, and hold harmless the County of Riverside or its agents, officers, and employees (COUNTY) from the following:

(a) any claim, action, or proceeding against the COUNTY to attack, set aside, void, or annul an approval of the COUNTY, its advisory agencies, appeal boards, or legislative body concerning the SPECIFIC PLAN and,

(b) any claim, action or proceeding against the COUNTY to attack, set aside, void or annul any other decision made by the COUNTY concerning the SPECIFIC PLAN including, but not limited to, decisions made in response to California Public Records Act requests.

The COUNTY shall promptly notify the applicant/permittee of any such claim, action, or proceeding and shall cooperate fully in the defense. If the COUNTY fails to promptly notify the applicant/permittee of any such claim, action, or proceeding or fails to cooperate fully in the defense, the applicant/permittee shall not, thereafter, be responsible to defend, indemnify or hold harmless the COUNTY.

The obligations imposed by this condition include, but are not limited to, the following: the applicant/permittee shall pay all legal services expenses the COUNTY incurs in connection with any such claim, action or proceeding, whether it incurs such expenses directly, whether it is ordered by a court to pay such expenses, or whether it incurs such expenses by providing legal services through its Office of County Counsel.

10. EVERY 002 GENERAL CONDITIONS	SP - Definitions	Status: INEFFECT	Conditions: Informational

The words identified in the following list that appear in all capitals in the attached conditions of Specific Plan No.375 shall be henceforth defined as follows:

SPECIFIC PLAN = Specific Plan No. 375

CHANGE OF ZONE = Change of Zone No. 7623.

GPA = Comprehensive General Plan Amendment No. 910.

EIR = Environmental Impact Report No. 514.

DISTRICT or DISTRICTS = A SPECIFIC PLAN'S Planning Cluster of Planning Areas as specified in the SPECIFIC PLAN, a large planning area. The intent of the DISTRICT is to break down a very large Specific Plan into manageable sections or pieces. Each DISTRICT should be about the size of a traditional Specific Plan.

DISTRICT REFINEMENT PLAN or DRP = a substantial conformance to the SPECIFIC PLAN intended to become a Design Guideline Document, submitted separately for each DISTRICT within the SPECIFIC PLAN. The DISTRICT REFINEMENT PLAN may address features that are specific to an individual DISTRICT and may not affect the entire SPECIFIC PLAN.

TOTAL DWELLING UNIT TRACKING MATRIX = A chart for purposes of tracking the total build out of the SPECIFIC PLAN maintained by TLMA Counter Services Divison. The matrix shall differentiate between individual building permits and the total number of dwelling units that are represented by the building permits that have been issued for the entire Specific Plan.

BUILDING PERMITS = the number of dwelling units constructed within an implementing project. Any condition of approval that uses the term "building permit" to trigger an event or to cause another action to take place shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

CLIMATE ACTION PLAN or CAP = a section of the SPECIFIC PLAN that outlines standards, suggestions, and guidance intended to reduce Greenhouse Gases.

10. EVERY 003 GENERAL CONDITIONS	SP - SP Document	Status: INEFFECT	Conditions: Informational

Specific Plan No. 375 shall include the following:

a. Specific Plan Document, which shall include:

1. Board of Supervisors Specific Plan Resolution including the Mitigation Reporting/Monitoring Program 2. Conditions of Approval. 3. Specific Plan Zoning Ordinance. 4. Land Use Plan in both 8 1/2" x 11" black-and-white and 11" x 17" color formats. 5. Specific Plan text. 6. Descriptions of each DISTRICT in both graphical and narrative formats.

b. Final Environmental Impact Report No. 514 Document, which must include, but not be limited to, the following items:

1. Mitigation Monitoring/Reporting Program. 2. Draft EIR 3. Comments received on the Draft EIR either verbatim or in summary. 4. A list of person, organizations and public agencies commenting on the Draft EIR. 5. Responses of the County to significant environmental points raised in the review and consultation process. 6. Technical Appendices on CD.

If any specific plan conditions of approval differ from the specific plan text or exhibits, the specific plan conditions of approval shall take precedence.

10. EVERY 004 GENERAL	SP - Ordinance Requirements	Status: INEFFECT	Conditions: Informational

CONDITIONS

The development of the property shall be in accordance with the mandatory requirements of all Riverside County ordinances including Ordinance Nos. 348 and 460 and state laws; and shall conform substantially with the adopted SPECIFIC PLAN as filed in the office of the Riverside County Planning Department, unless otherwise amended.

10. EVERY 005 GENERAL CONDITIONS — SP - Limits of SP DOCUMENT — Status: INEFFECT — Conditions: Informational

No portion of the SPECIFIC PLAN which purports or proposes to change, waive or modify any ordinance or other legal requirement for the development shall be considered to be part of the adopted specific plan. Notwithstanding to above, the design guidelines and development standards of the SPECIFIC PLAN shall apply in place of more general County guidelines and standards.

10.BS GRADE 001 GENERAL CONDITIONS — SP-GSP-1 ORD. NOT SUPERSEDED — Status: INEFFECT — Conditions: Informational

Anything to the contrary, proposed by this Specific Plan, shall not supersede the following: All grading shall conform to the California Building code, County General Plan, Ordinance 457 and all other relevant laws, rules and regulations governing grading in Riverside County.

10.BS GRADE 002 GENERAL CONDITIONS — SP-GSP-2 GEO/SOIL TO BE OBEYED — Status: INEFFECT — Conditions: Informational

All grading shall be performed in accordance with the recommendations of the included -County approved- geotechnical/soils reports for this Specific Plan.

10.BS GRADE 003 GENERAL CONDITIONS — SP-ALL CLEARNC'S REQ'D B-4 PMT — Status: INEFFECT — Conditions: Informational

Prior to issuance of a grading permit, all certifications affecting grading shall have written clearances. This includes, but is not limited to, additional environmental assessments, erosion control plans, geotechnical/soils reports, and departmental clearances.

10.BS GRADE 004 GENERAL CONDITIONS — SP-NO GRADING & SUBDIVIDING — Status: INEFFECT — Conditions: Informational

If grading of the entire - or any portion there of - Specific Plan site is proposed, UNDER A SUBDIVISION OR LAND USE CASE ALREADY APPROVED FOR THIS SPECIFIC PLAN, at the same time that application for further subdivision of any of its parcels is being applied for, an exception to Ordinance 460, Section 4.5.B, shall be obtained from the Planning Director, prior to issuance of the grading permit (Ord. 460 Section 3.1). THIS EXCEPTION WILL NOT APPLY TO ANY CASE HAVING ONLY AN APPROVED SPECIFIC PLAN.

10.FIRE 001 GENERAL CONDITIONS — SP-#47 SECONDARY ACCESS — Status: INEFFECT — Conditions: Informational

In the interest of Public Safety, the project shall provide an Alternate or Secondary Access(s) as

stated in the Transportation Department Conditions. Said Alternate or Secondary Access(s) shall have concurrence and approval of both the Transportation and Fire Departments and shall be maintained through out any phasing.

10.FIRE 002
GENERAL CONDITIONS — SP-#86-WATER MAINS — Status: INEFFECT — Conditions: Informational

All water mains and fire hydrants providing required fire flows shall be constructed in accordance with the appropriate sections of Riverside County Ordinance 460 and/or No.787, subject to the approval by the Riverside County Fire Department.

10.FIRE 003
GENERAL CONDITIONS — SP-#101-DISCL/FLAG LOT — Status: INEFFECT — Conditions: Informational

1) FLAG LOTS WILL NOT BE PERMITTED BY THE FIRE DEPARTMENT.

) This project lies within the VERY HIGH FIRE HAZARD SEVERITY ZONE.

3) A fire fuel analysis of the open space/wildlands within and outside the project area may be required prior to submitting a fuel modification plan.

NOTICE: The transferor of real property shall disclose to the transferee that this project lies within a VERY HIGH FIRE HAZARD area.

10.FIRE 004
GENERAL CONDITIONS — SP-#71-ADVERSE IMPACTS — Status: INEFFECT — Conditions: Informational

The proposed project will have a cumulative adverse impact on the Fire Department's ability to provide an acceptable level of service. These impacts include an increased number of emergency and public service calls due to the increased presence of structures and population. The project proponents/develpers shall participate in the development Impact fee program as adopted by the Riverside County Board of Supervisors to mitigate a portion of these impacts. This will provide funding for capitol improvements such as land/equipment purchases and fire station construction. The Fire Department reserves the right to negotiate developer agreements associated with the development of land and/or construction of fire facilities to meet service demands through the regional integrated fire protection response system.

10.FIRE 005
GENERAL CONDITIONS — SP-#100-FIRE STATION — Status: INEFFECT — Conditions: Informational

Based on the adopted Riverside County Fire Protection Master Plan, one new fire station and/or engine company could be required for every 2,000 new dwelling units,and/ or 3.5 million square feet of commercial/industrial occupancy. Given the project's proposed development plan, up to 6 fire station(s) MAY be needed to meet anticipated service demands. The Fire Department reserves the right to negotiate developer agreements associated with the development of land and/or construction of fire facilities to meet service demands through the rgional intergrated fire protection response system.

10.PLANNING 017 — SP - PDP01341 — Status: — Conditions:

GENERAL CONDITIONS INEFFECT Informational

County Paleontological Report (PDP) No. 1341, submitted for this case (SP00375), was prepared by Paleo Environmental Associates, Inc. and is entitled: "Paleontological Resources Inventory and Impact Assessment Technical Report prepared in support of Travertine Point Specific Plan, Vicinity of Salton Sea, Riverside County, California", dated December 2008.

PDP01341 concluded:

1.The project plan area is underlain by paleontologically highly sensitive strata.

2.Earthmoving activities associated with development of the plan area would have a high potential for encountering fossil remains.

3.Paleontological resources might be adversely affected by the earth-moving activities associated with the development of the Travertine Point Specific Plan.

4.Paleontological resources impact mitigation is warranted.

PDP01341 recommended:

1.Paleontological construction monitoring and fossil/sample recovery.

2.Paleontological Resource Impact Mitigation Program design criteria are discussed in this report.

3.The level and type of mitigation effort in a particular part of the plan area reflects the paleontologic or scientific importance and the corresponding impact sensitivity.

PDP01341 satisfies the requirement for a Paleontological Study for Planning/CEQA purposes. PDP01341 is hereby accepted for SP00375. A project specific Paleontological Resource Impact Mitigation Program (PRIMP) shall be prepared and submitted to the County Geologist for review and approval prior to issuance of any grading permit for each implementing project under this Specific Plan.

10.PLANNING 018
GENERAL CONDITIONS SP - GEO02091 Status: INEFFECT Conditions: Informational

County Geologic Report (GEO) No. 2091, submitted for this project (SP00375) was prepared by Sladden Engineering and is entitled: "Geotechnical Investigation, Proposed Master Planned Community, Rivera-Travertine Properties, South of 81st Avenue Along Highway 86, Oasis Area of Riverside County, California, Project No. 544-06699", dated November 30, 2006. In addition, Sladden prepared the following documents:

"Response to County of Riverside Review comments dated October 30, 2008: County Geologic Report No. 2091", dated May 24, 2009.

"Response to County of Riverside Review comments dated November 12, 2009: County Geologic Report No. 2091; Review Comments #2", dated December 16, 2009

These documents are herein incorporated as a part of GEO02091.

GEO02091 concluded:

1.The subject site is located in an area of seismic activity and will likely experience intense seismic shaking during the design life of the proposed project.

2.No known faults have been mapped trending through the site.

3.Risks associated with surface fault rupture should be considered low.

4.The low calculated factors of safety for some of the granular layers and non-plastic silt deposits suggest that the layers may exhibit liquefaction behavior for the design level earthquake ground shaking considered.

5.The maximum total liquefaction-induced ground settlement at the site could be up to 3 inches during the postulated earthquake. The differential settlement resulting from liquefaction should be less than 1.5 inches.

6.The subject parcels are located on relatively level ground and are not situated immediately adjacent to any mountains or hillsides. As such, the subject parcels are not susceptible to any forms of slope instability.

7.Seiches should be considered a potential hazard to the site.

8.Risks associated with flooding and erosion may need to be considered.

GEO02091 recommended:

1.Remedial grading for building areas to result in the construction of a uniform compacted soil mat beneath all structures.

2.Post-tensioned slabs are recommended to mitigate surficial ground movement related to liquefaction.

3.Mitigation of seiche potential through the use of earthen levees, dykes, or similar water retaining structures.

GEO02091 satisfies the requirement for a Geologic Study for Planning / CEQA purposes. GEO No. 2091 is hereby accepted for Planning purposes for this Specific Plan. This approval is not intended, and should not be misconstrued as approval for any future entitlement project or grading permit. Engineering and other building code parameters will be reviewed and additional comments and/or conditions may be imposed by the Building and Safety Department upon

application for grading and/or building permits.

A geologic investigation report will be required for all implementing projects (Tract Map, Plot Plan, etc.) as described elsewhere in this conditions set.

10.PLANNING 019 GENERAL CONDITIONS	SP - MANTN AREAS,PHASES&DIST	Status: INEFFECT	Conditions: Informational

All planning area's, phase numbers, and DISTRICT numbers shall be maintained throughout the life of the SPECIFIC PLAN, unless changed through the approval of a specific plan amendment or specific plan substantial conformance accompanied by a revision to the complete SPECIFIC PLAN document.

10.PLANNING 020 GENERAL CONDITIONS	SP - NO P.A. DENSITY TRANSPER	Status: INEFFECT	Conditions: Informational

Density transfers between Planning Areas within the SPECIFIC PLAN shall not be permitted, except through the Specific Plan Amendment process.

In this SPECIFIC PLAN, each Planning Area (PA) has a "Target" unit count. Each PA also has a Land Use Designation Range. The Target unit count is an estimate used to create a total dwelling unit number for the entire SPECIFIC PLAN. However, the target for each PA does not limit the number of dwelling units in a PA. A PA is permitted to build over or under the Target density so long as the PA total unit count does not exceed the top or bottom of its Land Use Designation range. In no case shall the SPECIFIC PLAN maximum total permitted residential dwelling units (16,655) be exceeded.

10.PLANNING 022 GENERAL CONDITIONS	SP - LC LANDSCAPING PLANS	Status: INEFFECT	Conditions: Informational

All landscaping plans shall be prepared in accordance with Ordinance No. 859 (as adopted and any amendments thereto), the Riverside County Guide to California Landscaping, and Ordinance No. 348, Section 18.12. In the event conflict arises between Ordinance No. 859 and the SPECIFIC PLAN, then the requirements of Ordinance No. 859 shall prevail.

10.PLANNING 023 GENERAL CONDITIONS	SP - MITIG MEASURE 6.2-2	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.2-2 from EIR514 requires:

Prior to building final inspection, applicant shall provide for the purchasers of residential, commercial, and industrial units in planning areas that would be located adjacent to active agricultural land (either active agricultural land within the project site or adjacent to the project site's boundaries) to be notified pursuant to either the Right To Farm notice for Riverside County (Ordinance No.460) and/or Imperial County (Right-to-Farm Ordinance) as appropriate.

10.PLANNING 024 GENERAL CONDITIONS	SP - MITIG MEASURE 6.3-19	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.3-19 from EIR514 requires:

Prior to issuance of the wastewater treatment facility building final permits for each tract map, the wastewater treatment facility shall enclose odor-generating processes and utilize other odor-abatement technologies as required under state and local regulations.

10.PLANNING 025 GENERAL CONDITIONS	SP - MITIG MEASURE 6.3-18	Status: INEFFECT Conditions: Informational

Mitigation Measure 6.3-18 from EIR514 requires:

Prior to issuance of the wastewater treatment facility building final permits for each tract map, the wastewater treatment facility shall develop a protocol for handling odor complaints.

10.PLANNING 026 GENERAL CONDITIONS	SP - MITIG MEASURE 6.5-7	Status: INEFFECT Conditions: Informational

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"Mitigation Measure 6.5-7 from EIR514 (as revised by the RRDEIR) requires:

If human remains are encountered during a public or private construction (earthmoving) activity, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Riverside County Coroner must be notified within 24 hours. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis. Upon clearance by the coroner and the NAHC for Native American remains, construction(earthmoving) activities may resume."

10.PLANNING 027 GENERAL CONDITIONS	SP - MITIG MEASURE 6.5-5	Status: INEFFECT Conditions: Informational

Mitigation Measure 6.5-5from EIR514 requires:

If avoidance and/or preservation in place of cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site:

(1) A participant-observer from the appropriate Indian Band or Tribe shall be used during archaeological testing or excavation in the project site.

(2) Prior to grading final, the project applicant shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible,

period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either register. The research design shall be submitted to the County of Riverside Regional Park and Open-Space District or the County or Imperial Planning Department, as appropriate, for review and comment. For sites determined through the testing program to be ineligible for listing on either the California or National Register, execution of the testing program will suffice as mitigation of project impacts to this resource.

(3) Prior to the issuance of a grading permit issuance for each implementing project, and after approval of the research design, the project applicant shall complete the excavation program as specified in the research design. The results of this excavation program shall be presented in a technical report that follows the County of Riverside outline for Archaeological Testing. The Test Level Report shall be submitted to the County of Riverside Regional Park and Open-Space District or the County of Imperial Planning Department, for review and comment. If cultural resources that would be affected by the project are found ineligible for listing on the California or National Register, test level investigations will have depleted the scientific value of the sites and the project can proceed.

(4) If the resource is identified as being potentially eligible for either the California or National Register, and project designs cannot be altered to avoid impacting the site, a Treatment Program to mitigate project effects shall be initiated. A Treatment Plan detailing the objectives of the Treatment Program shall be developed. The Treatment Plan shall contain specific, testable hypotheses relative to the sites under study and shall attempt to address the potential of the sites to address these research questions. The Treatment Plan shall be submitted to the County of Riverside Regional Park and Open-Space District or Imperial Planning Department, as appropriate, for review and comment.

(5) After approval of the Treatment Plan, the Treatment Program for affected, eligible sites shall be initiated. A Treatment Program typically involves excavation of a statistically representative sample of the site to preserve those resource values that qualify the site as being eligible for the California or National Register. At the conclusion of the excavation or research program, a Treatment Report, following the outline of the County of Riverside for Archaeological Mitigation or Data Recovery, shall be developed. This data recovery report shall be submitted to the County of Riverside Regional Park and Open-Space District or Imperial Planning Department, as appropriate, for review and comment.

10.PLANNING 028 GENERAL CONDITIONS	SP - MITIG MEASURE 6.5-4	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.5-4from EIR514 requires:

Consultation and in conjunction with the Torres-Martinez Desert Cahuilla Indians is recommended to ascertain if Phase II Testing and Evaluation is warranted for CA-IMP-33 to assess the site's content, depth, and integrity for cultural deposits, as well as data removal. It is also recommended that the modern graffiti be carefully removed from Travertine Rock in its entirety, with special care not to damage the prehistoric rock art. It is also recommended that aesthetically pleasing and protective fencing be placed around Travertine Rock. And finally,

Travertine Rock should be formally nominated as a Traditional Cultural Property (TCP).

10.PLANNING 029 GENERAL CONDITIONS	SP - MITIG MEASURE 6.5-2	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.5-2 from EIR514 requires:

The following standard policies and policy implementation measures shall be implemented prior to implementing project approval:

Cultural Resources Policy 1

Prior to grading final for each implementing project, a comprehensive survey program for unsurveyed areas within the project area shall be completed to identify, document, and protect, if feasible, prehistoric and historical archaeological sites, and sites containing Native American human remains.

Implementation Measure 1.1 The proposed project would be covered under the State CEQA Guidelines (California 2005) or Section 106 of the NHPA, and shall be surveyed by a professional who meets the Secretary of the Interior's Standards and Guidelines regarding archaeological activities and methods prior to the County's approval of proposed project plans and prior to grading final (48 CFR 44716-44742).

Implementation Measure 1.2 All archaeological site location data collected during the cultural resources surveys must be considered to be of a sensitive nature and must remain confidential. Caution must be exercised when disseminating this information; in particular, maps and site location data should be made available only to managers, County officials, and other professionals who have a legitimate need to know.

Implementation Measure 1.3 For potentially significant prehistoric archaeological resources or sites containing Native American human remains identified during the project's archaeological surveys, the project proponent, Federated Insurance Company or their designee, shall continue consultation with the NAHC in Sacramento and interested Native American individuals and organizations.

Cultural Resources Policy 2

Avoid impacts to potentially significant prehistoric and historical archaeological resources and sites containing Native American human remains, where feasible.

Implementation Measure 2.1 If cultural resources avoidance is feasible, potentially significant archaeological resources and sites containing Native American human remains shall be placed within permanent project-specific conservation easements or dedicated open space areas prior to grading final.

Implementation Measure 2.2 Where avoidance of archaeological resources and sites containing Native American human remains is not a feasible management option, capping these resources

with sterile sediments and avoidance planting (e.g., planting of cactus, mesquite, or other native plants) shall be considered the next most favorable management option. In doing so, capping the resource(s) will ensure that indirect impacts from increased public availability to these sites are avoided. Plans for capping identified cultural resources shall be submitted to and approved by the County prior to map recordation.

Cultural Resources Policy 3

Reduce adverse impacts to significant archaeological resources that cannot be protected in place through data recovery excavations.

Implementation Measure 3.1 If avoidance and/or preservation in place of known prehistoric and historical archaeological resources is not a feasible management option, the project proponent shall ensure that potentially significant archaeological resource(s) and site(s) shall be investigated pursuant to the standards, guidelines, and principles of the Advisory Council's Treatment of Archaeological Properties: A Handbook (ACHP 1980).

Prior to grading final for each implementing project, the project applicant shall retain a qualified archaeologist who meets the Secretary of Interior's Standards and Guidelines, and shall use the project's Research Design detailed in the Phase I Cultural Resources Survey Report for the Travertine Point Specific Plan (Applied EarthWorks 2008) to guide the implementation of a Phase II Testing and Evaluation Program. In general terms, the Phase II Testing and Evaluation Program shall be designed to further define site boundaries and to assess the structure, content, nature, and depth of subsurface cultural deposits and features. Emphasis shall also be placed on assessing site integrity and the site's potential to address regional archaeological research questions. These data shall then be used to address the NRHP/CRHR eligibility requirements for the archaeological resource and make recommendations as to the suitability of the resource for listing on either the NRHP/CRHR.

Prior to grading final for each implementing project and after approval of the project's various cultural resources survey reports by the County, the project applicant shall retain a qualified archaeologist to complete the Phase II Testing and Evaluation Program as specified in the project's Phase II Testing and Evaluation Proposal and Research Design and prior to the issuance of a project grading permit. The results of this Phase II Testing Program shall be presented in a technical report that follows the State of California Office of Historic Preservation Archaeological Resource Management Report Recommended Contents and Format Guidelines (California 1990). The Phase II Report shall be submitted to the County's Planning Department for review and comment and the Torres-Martinez Desert Cahuilla Indians prior to the issuance of a project grading permit. If the resource is determined to be ineligible for listing on the NRHP or CRHR upon completion of the Phase II Testing Program, no further cultural resources management of this resource would be required.

Implementation Measure 3.2 A participant-observer(s) from the Torres-Martinez Desert Cahuilla Indians shall be present during Phase II archaeological excavations involving all sites of Native American concern.

Implementation Measure 3.2 A participant-observer(s) from the Torres-Martinez Desert Cahuilla Indians shall be present during Phase II archaeological excavations involving all sites of Native American concern. Implementation Measure 3.3?If the cultural resource is identified as being potentially eligible for listing on either the NRHP or CRHR, and project designs cannot be altered to avoid impacting the site, a Phase III Data Recovery Program to mitigate project effects shall be initiated. A Data Recovery Treatment Plan detailing the objectives of the Phase III Program shall be developed and shall contain specific testable hypotheses pertinent to the project's Research Design and relative to the site(s) under study. The Phase III Data Recovery Treatment Plan shall be submitted to the County's Planning Department, the Torres-Martinez Desert Cahuilla Indians, if applicable, and the SHPO for review and comment prior to implementation of the Data Recovery Program.

After approval of the Treatment Plan, the Phase III Data Recovery Program for affected, eligible site(s) shall be completed. Typically, a Phase III Data Recovery Program involves the excavation of a statistically representative sample of the site(s) to preserve those resource values that qualify the site(s) as being eligible for listing on the NRHP/CRHR. Again, participant-observer(s) from the Torres-Martinez Desert Cahuilla Indians shall be present during archaeological data-recovery excavations involving sites of Native American concern. At the conclusion of the Phase III Program, a Phase III Data Recovery Report shall be prepared, following the State of California Office of Historic Preservation Archaeological Resource Management Report Recommended Contents and Format Guidelines (California 1990).

The Phase III Data Recovery Report shall be submitted to the County's Planning Department, the Torres-Martinez Desert Cahuilla Indians, if applicable, and the SHPO for review and comment prior to the issuance of a project grading permit.

Implementation Measure 3.4 All archaeological materials recovered during implementation of the project's Phase II Testing or Phase III Data Recovery programs shall be processed, including cleaning and cataloging, detailed description, and analysis, as appropriate. Following completion of laboratory and analytical procedures, all project-related collections shall be suitably packaged and transferred to a curation facility that meets the standards of 36 CFR 79 for long-term storage. Materials to be curated include archaeological specimens and samples, field notes, feature and burial records, maps, plans, profile drawings, photo logs, photographic negatives, consultants' reports of special studies, and copies of the final technical reports.

It should be noted that provisions of the Native American Graves Protection Repatriation Act (NAGPRA) pertaining to Native American burials, sacred objects, and objects of cultural patrimony would come into effect when archaeological materials are recovered from lands owned by the Torres-Martinez Desert Cahuilla Indians and managed by the BIA. NAGPRA would also come into effect when ownership of the collections from anywhere within the Travertine Specific Plan study area is transferred to a curation repository that receives federal funding.

Cultural Resources Policy 4

Ensure proper identification and treatment of cultural resources discovered during project

development and construction.

Implementation Measure 4.1 Registered professional archaeologists and culturally affiliated Native Americans, with knowledge in cultural resources, shall monitor all project-related ground-disturbing activities that extend into natural sediments in areas determined to have high archaeological sensitivity for prehistoric resources.

Prior to grading final for each implementing project, the project applicant shall include in its mitigation plan provisions for the identification and evaluation of archaeological resources inadvertently discovered during construction. If buried archaeological resources are uncovered during construction, all work shall be halted in the vicinity of the archaeological discovery until a registered professional archaeologist can visit the site of discovery and evaluate the significance of the archaeological resource.

Implementation Measure 4.2 If the archaeological resource is determined to be a potentially significant cultural resource, the project proponent's mitigation plan shall include provisions for the preparation and implementation of a Phase III Data Recovery Program, as well as disposition of recovered artifacts, in accordance with Cultural Resources Policy 3 Implementation Measure 4, above. The mitigation plan shall be reviewed and approved by the County prior to grading final.

Implementation Measure 4.3 In the event of an accidental discovery of any human remains in a location other than a dedicated cemetery on privately owned or State-owned land, the steps and procedures specified in Health and Safety Code Section 7050.5, State CEQA Guidelines 15064.5(d), and Public Resources Code Section 5097.98 shall be implemented. Specifically, in accordance with Public Resources Code (PRC) Section 5097.98, the Riverside County Coroner shall be notified within 24 hours of the discovery of potentially human remains. The Coroner shall then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the NAHC by phone within 24 hours, in accordance with PRC Section 5097.98. The NAHC shall then designate a Most Likely Descendant (MLD) with respect to the human remains within 48 hours of notification.

The MLD shall then have the opportunity to recommend to the project proponent means for treating or disposing, with appropriate dignity, the human remains and associated grave goods within 24 hours of notification. Whenever the NAHC is unable to identify a MLD, or the MLD fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the MLD and the mediation provided for in subdivision (k) of PRC Section 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

It should be noted in the event that Native American human remains are inadvertently discovered during the County-permitted, project-related construction activities, there would be unavoidable significant adverse impacts to these resources. Implementation of the Cultural Resources Policies

1, 2, and 3 and their corresponding implementation measures would, however, reduce impacts to other types of archaeological resources to a level that is less than significant.

Implementation Measure 4.4 The treatment and management of potential TCPs identified with the Travertine Point Specific Plan study area shall be conducted through extensive consultation with concerned Native American groups and organizations. These consultation efforts shall be conducted utilizing the County of Riverside's SB 18 consultation process.

Cultural Resources Policy 5

Ensure that the project proponent shall bear all costs associated with cultural resources management within the County's jurisdiction.

Implementation Measure 5.1 The project proponent shall bear all expenses related to the identification, evaluation, and treatment of cultural resources directly or indirectly affected by project-related construction activity. Such expenses may include pre-field planning, field work, post-field analysis, research, interim and summary report preparation, and final report production (including draft and final versions), and costs associated with the curation of project documentation and the associated artifact collections.

Implementation Measure 5.2 Prior to grading final, on behalf of the County and the project applicant, the final technical reports detailing the results of the Phase II Testing or Phase III Data Recovery programs shall be submitted to the appropriate Archaeological Information Centers of the California Historical Resources Inventory System for their information and where they would be available to other researchers. Final Phase III Data Recovery Reports shall also be submitted to local libraries, schools, and historical societies to enable the general public to learn about their local cultural heritage.

10.PLANNING 030 GENERAL CONDITIONS	SP - MITIG MEASURE 6.22-2	Status: INEFFECT Conditions: Informational

Mitigation Measure 6.22-2 from EIR514 requires:

The project proponent shall make every effort feasible to recycle, reuse, and/or reduce the amount of construction and demolition materials (i.e., concrete, asphalt, wood, etc.) generated by development of the project that would otherwise be taken to a landfill. This diversion of waste must exceed a 50 percent reduction by weight. The project shall complete the Riverside County Waste Management Department Construction and Demolition Waste Diversion Program Form B or and Form C process as evidence to ensure compliance. Form B (Recycling Plan) must be submitted and approved by the Riverside County Waste Management Department and provided to the Department of Building and Safety prior to the issuance of building permits. Form C (Reporting Form) must be approved by the Riverside County Waste Management Department and submitted to the Department of Building and Safety prior to the issuance of certificate of occupancy/final inspection.

10.PLANNING 031 GENERAL CONDITIONS	SP - MITIG MEASURE 6.22-3	Status: INEFFECT Conditions: Informational

Mitigation Measure 6.22-3from EIR514 requires:

Applicant(s) shall dispose of any hazardous wastes, including paint, used during construction and grading at a licensed facility in accordance with local, state, and federal guidelines.

10.PLANNING 032
GENERAL CONDITIONS — SP - MITIG MEASURE 6.22-4 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.22-4 from EIR514 requires: All commercial and residential refuse generated from the proposed project within Riverside County portion of the proposed project shall be delivered to the Coachella Valley Transfer Station or the Edom Hill Transfer Station; any residual waste that these transfer stations could not accept shall be disposed of at the Lamb Canyon Landfill or Badlands Landfill or other locations as determined by the Riverside County Waste Management Department. All commercial and residential refuse generated from the proposed project within the Imperial County portion of the proposed project shall be delivered to Salton City Landfill or other locations as determined by the Imperial County Waste Management Department.

10.PLANNING 033
GENERAL CONDITIONS — SP - MITIG MEASURE 6.22-5 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.22-5 from EIR514 requires:

The Homeowners Association established for the proposed development shall establish green waste recycling through its yard maintenance or waste hauling contracts. Green waste recycling includes such things as grass recycling (where lawn clippings from a mulching-type mower are left on the lawn) and on- or off-site composting. This measure shall be implemented to reduce green waste going to landfills. If such services are not available through the yard maintenance or waste haulers in the area, the HOA shall provide individual homeowners with information about ways to recycle green waste individually and collectively. Homeowners shall be notified of such in the CC&Rs.

10.PLANNING 034
GENERAL CONDITIONS — SP - MITIG MEASURE 6.7-1 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.7-1 from EIR514 requires:

Proposed school sites shall undergo subsequent environmental review prior to construction as required by the Coachella Valley Unified School District (CVUSD). Final locations shall be subject to the review and approval of the CVUSD subject to the requirements of the California Department of Education (CDE) and the Department of Toxic Substances Control (DTSC).

10.PLANNING 035
GENERAL CONDITIONS — SP - MITIG MEASURE 6.7-4 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.7-4 from EIR514 requires:

Prior to building final inspection for each development phase, the homeowner's associations (HOAs) shall coordinate with the CVMVCD to provide public pamphlets that provide

information to minimize mosquito breeding grounds and the HOAs shall work with the CVMVCD to control the mosquito population.

10.PLANNING 036
GENERAL CONDITIONS — SP - MITIG MEASURE 6.7-5 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.7-5 from EIR514 requires:

Work crews shall use respirators during project clearing, grading, and excavation operations, in accordance with California Division of Occupational Safety and Health regulations. The cabs of grading and construction equipment shall be air conditioned.

10.PLANNING 037
GENERAL CONDITIONS — SP - MITIG MEASURE 6.7-6 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.7-6 from EIR514 requires:

Construction roads shall be paved, when possible, to reduce fugitive dust and potential exposure to the fungus; or the access road into the project site shall be paved or treated with environmentally safe dust control agents, and where unpaved shall be wetted two times per day to minimize dust.

10.PLANNING 038
GENERAL CONDITIONS — SP - MITIG MEASURE 6.7-7 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.7-7 from EIR514 requires:

Prior to building final inspection for each planning area, the HOA, in coordination with government authorities (i.e., California Fish and Game), shall prepare public outreach programs and information pamphlets regarding the potential danger of digesting fish and waterfowl tissue that would be contaminated with selenium.

10.PLANNING 039
GENERAL CONDITIONS — SP - MITIG MEASURE 6.8-4 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.8-4 from EIR514 requires:

Periodic inspection of the conditions of the channels will need to be performed year round and after significant precipitation events will be required to be performed by each homeowner-owner association (HOA). Annual inspection reports shall be prepared by each HOA, and submitted to and filed with the Coachella Valley Water District by June 30th of each calendar year.

10.PLANNING 040
GENERAL CONDITIONS — SP - MITIG MEASURE 6.8-7 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.8-7from EIR514 requires:

The location, nature, and importance of the subdrainage system shall be disclosed to the ultimate owners of the property, so that the property owners can avoid damage to the drains' or negatively

affect the drains' performance. In addition to disclosure to potential homeowners, tile drains that cross onto private lots shall be protected by one or more of the following mechanisms: the creation of easements, CC&R protocols, identification through flagging or risers, or other suitable mechanisms.

10.PLANNING 041
GENERAL CONDITIONS — SP - MITIG MEASURE 6.8-9 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.8-9 from EIR514 requires:

Prior to implementing project approval for each phase or district, as appropriate, the applicant shall submit for review and approval a hydrology report to further define flow conditions related to Channel 4 at SR-86S and for all channels east of SR 86S, and provide for the design of such facilities such that discharge is released in a manner consistent with pre-project/existing conditions, or alternatively, provide for storage or discharge flows within the boundaries of the northern portion of the proposed project or off-site with approval and easements from adjacent property owners.

10.PLANNING 042
GENERAL CONDITIONS — SP - MITIG MEASURE 6.8-11 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.8-11 from EIR514 requires:

Prior to implementing project approval for each phase or district, as appropriate, the applicant shall submit for review and approval a hydrology report to address potential sediment depositions in the Salton Sea and downstream properties. The report shall provide for design considerations to be implemented in proposed Channels 1, 2 and 3, as appropriate.

10.PLANNING 043
GENERAL CONDITIONS — SP - MITIG MEASURE 6.8-12 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.8-12 from EIR514 requires:

Prior to implementing project approval for each phase or district, as appropriate, the applicant shall submit for review and approval a plan for the management, operation and maintenance of the flood control system.

10.PLANNING 044
GENERAL CONDITIONS — SP - MITIG MEASURE 6.11-1 — Status: INEFFECT — Conditions: Informational

Mitigation Measure 6.11-1 from EIR514 requires:

Where feasible and consistent with the Riverside County standards, any paving or repaving of off-site roadways that must be conducted in conjunction with implementation of the specific plan should utilize asphalt-rubber paving material consisting of 20 percent recycled rubber or more and 80 percent paving-grade asphalt. Studies have demonstrated that such paving material will reduce traffic noise by as much as 3 to 5 dB(A).

10.PLANNING 045 — SP - MITIG MEASURE 6.11-2 — Status: — Conditions:

GENERAL CONDITIONS INEFFECT Informational

Mitigation Measure 6.11-2 from EIR514 requires:

With permission from the Riverside County Transportation Departments, speed limits on arterials experiencing significant noise impacts off-site should be reduced from existing speed limits. Each 5 mile per hour reduction in the speed limit can decrease the CNEL level by about 1 dB(A).

10.PLANNING 046

GENERAL CONDITIONS SP - MITIG MEASURE 6.11-8 Status: INEFFECT Conditions: Informational

Mitigation Measure 6.11-8 from EIR514 requires:

The project applicant shall require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels:

-Two weeks prior to the commencement of construction, notification must be provided to surrounding land uses within 1,000 feet of a project site disclosing the construction schedule, including the various types of activities that would be occurring throughout the duration of the construction period.

-Ensure that construction equipment is properly muffled according to industry standards and in good working condition.

-Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible.

-Schedule high noise-producing activities between the hours of 8:00 AM and 5:00 PM to minimize disruption to sensitive uses.

-Implement noise attenuation measures to the extent feasible, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources.

-Use electric air compressors and similar power tools rather than diesel equipment, where feasible.

-Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes.

-Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the Riverside County or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed

project construction documents, which shall be reviewed by Riverside County prior to grading final.

The Riverside County Building and Safety Department shall monitor and oversee the BMPs to verify that they are implemented correctly by the construction contractors.

10.PLANNING 047
GENERAL CONDITIONS | SP - MITIG MEASURE 6.13-4 | Status: INEFFECT | Conditions: Informational

Mitigation Measure 6.13-4 from EIR514 requires:

Prior to final building inspection for each implementing project, applicants for implementing projects shall provide final fire-flow plans to the RCFD and SCSD, as appropriate, which include fire-flow requirements within commercial projects to be based on square footage and type of construction associated with development of the structures.

10.PLANNING 048
GENERAL CONDITIONS | SP - MITIG MEASURE 6.13-5 | Status: INEFFECT | Conditions: Informational

Mitigation Measure 6.13-5 from EIR514 requires:

Prior to final building inspection for each implementing project, applicants for implementing projects shall provide final fire flow plans to the RCFD ensuring that all water mains and fire hydrants providing required fire flows would be constructed in accordance with the appropriate development schedule sections of Riverside County Ordinance No. 460 and/or Ordinance No. 787. Each fire flow plan that is submitted would be reviewed and approved by the RCFD prior to final building inspection.

10.PLANNING 049
GENERAL CONDITIONS | SP - MITIG MEASURE 6.21-1 | Status: INEFFECT | Conditions: Informational

Mitigation Measure 6.21-1 from EIR514 requires:

The applicant shall prepare and submit to CVWD, SCSD, the County of Riverside, as appropriate, a Wastewater Management Plan (WMP) that provides for the final location, development, and funding mechanisms of the wastewater conveyance infrastructure system and wastewater treatment system associated with development of the entire project. This WMP shall describe and finalize the design parameters and locations of piping necessary to convey wastewater originating within the project site for the specified tract. Each WMP shall also be submitted to the Regional Water Quality Control Board for approval and to ensure that the wastewater infrastructure conveyance system meets their requirements for collection and treatment of wastewater. The Wastewater Management Plan shall be reviewd and approved by CVWD and Riverside County for the portion of the project in Riverside County prior to the recordation of any final subdivision map in Riverside County.

10.PLANNING 051
GENERAL CONDITIONS | SP - MITIG MEASURE 6.22-6 | Status: INEFFECT | Conditions: Informational

Mitigation Measure 6.22-6 from EIR514 requires:

Prior to issuance of Building Permits for any multi-unit residential, commercial or industrial facilities, clearance from the Riverside County Waste management Department is needed to verify compliance with California Solid Waste Reuse and Recycling Act of 1991 (AB 1327), which requires the local jurisdiction to require adequate areas for collecting and loading recyclable materials.

10.PLANNING 052 GENERAL CONDITIONS	SP - MITIG MEASURE 6.22-8	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.22-8 from EIR514 requires:

Prior to implementing project approval for Planning Areas 2-17, 2-21, 2-19, and 2-20, the applicant(s) shall provide for a buffer and restrict development adjacent to the active or closed landfill from the Oasis Landfill property line for a distance of a minimum of 1,000 feet and a maximum of 1,320 feet originating at the Oasis Landfill disposal footprint, until the landfill is closed to provide adequate spacing for monitoring probes, as recommended by the RCWMD and in accordance with the Southern California Air Quality Management District's Rule 1150.1.

10.PLANNING 053 GENERAL CONDITIONS	SP - MITIG MEASURE 6.22-9	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.22-9 from EIR514 (as revised by the RRDEIR) requires:

Prior to implementing project approval for Planning Areas 2-18 and 2-19, the Oasis landfill shall be closed by the RCWMD in accordance with CalRecycle guidelines for closure with waste in place.

10.PLANNING 054 GENERAL CONDITIONS	SP - MITIG MEASURE 6.22-10	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.22-10 from EIR514 requires:

Prior to implementing project approval in Planning Area 2-18, the applicant shall consult with officials from RCWMD and agree on a circulation plan for roads that would be developed around and adjacent to the Oasis Landfill site. Best Management Practices (BMPs) shall be developed and implemented within the circulation plan for Planning Areas 2-18 and 2-19 to avoid the restructuring of roadways around and adjacent to the Oasis Landfill.

10.PLANNING 055 GENERAL CONDITIONS	SP - MITIG MEASURE 6.23-4	Status: INEFFECT	Conditions: Informational

Mitigation Measure 6.23-4 from EIR514 requires:

Prior to the first implementing project approval for each development phase, the project applicant shall submit a plan for providing local transit services within the project site to the Riverside County Planning Department for review and approval.

10.PLANNING 056	SP - HOLD HARMLESS (2)	Status:	Conditions:

GENERAL CONDITIONS INEFFECT Informational

The Desert Recreation District (DRD) or other designated entity responsible for park maintenance shall indemnify all usual park and recreational activities and shall be responsible for all maintenance and repair activities of improvements proposed by and for the SPECIFIC PLAN within Planning Area 2-18. This does not include Riverside County Waste Management facilities.

10.PLANNING 057
GENERAL CONDITIONS SP - DRP CONSISTENCY Status: INEFFECT Conditions: Informational

All implimenting projects must be consistent with the approved DISTRICT REFINEMENT PLAN of the corresponding DISTRICT, per the SPECIFIC PLAN.

10.PLANNING 058
GENERAL CONDITIONS SP - DU/BLDG PERM MATRIX Status: INEFFECT Conditions: Informational

Given the size and scope of the project, every condition of approval which uses the term "Building Permit" as a trigger point shall be interpreted to mean "Residential Dwelling Unit." For example a 100 unit apartment complex in one building shall count as 100 BUILDING PERMITS for purposes of these conditions, not simply one building permit. Additionally, the Matrix shall make it clear which residential units are within the County Jurisdiction and which are not. A total unit count, regardless of jurisdiction, must be shown as most conditions are triggered by a total project unit count for all jurisdictions.

For purposes of tracking the total build out of the SPECIFIC PLAN, the TLMA Counter Services Team shall maintain a TOTAL DWELLING UNIT TRACKING MATRIX. The matrix shall differentiate between individual building permits and the total number of dwelling units that are represented by the building permits that have been issued for the entire SPECIFIC PLAN. Any condition that requires a specific action at a specified "building permit issuance" shall use the TOTAL DWELLING UNIT TRACKING MATRIX to determine if the threshold has been met.

10.PLANNING 059
GENERAL CONDITIONS SP - PUB BLDG STANDARDS Status: INEFFECT Conditions: Informational

All public buildings which require an occupancy permit and are intended to be owned by the County upon completion shall comply with Board Policy H-29.

10.PLANNING 060
GENERAL CONDITIONS SP - MODIFICATN TO CONDITIONS Status: INEFFECT Conditions: Informational

Once the SPECIFIC PLAN is approved, in addition to any thresholds listed in the SPECIFIC PLAN, any modifications to the Conditions of Approval that affect the entire SPECIFIC PLAN shall require a SPECIFIC PLAN Amendment unless otherwise determined by the County Planning Director. Any modifications to the Conditions of Approval that only affect a specific DISTRICT shall require a Substantial Conformance determination to the SPECIFIC PLAN.

10.PLANNING 061
GENERAL SP - IMPERIAL SP APPROVAL Status: INEFFECT Conditions: Informational

CONDITIONS

The County of Riverside adoption of the SPECIFIC PLAN only pertains to those areas where the County has jurisdiction. If for any reason Imperial County does not approve the portion of the SPECIFIC PLAN within Imperial County, or if Imperial County adopts a version of the SPECIFIC PLAN that is not in substantial conformance with the County of Riverside adopted SPECIFIC PLAN, then an amendment to the entire SPECIFIC PLAN, through the County of Riverside will be required to assure consistency.

10.PLANNING 062
GENERAL CONDITIONS | SP - IMPLEMENTING PROJECTS | Status: INEFFECT | Conditions: Informational

For the purposes of this project, any condition of approval that refers to "implementing projects" shall include Schedule I subdivisions as identified in Ordinance No. 460.

10.PLANNING 063
GENERAL CONDITIONS | SP - TILE DRAINS | Status: INEFFECT | Conditions: Informational

Portions of the site are underlain by an existing tile drain system installed in the past to help control high groundwater levels and related saltation problems associated with former agricultural activities. If any tile drains exist within the boundaries of any implementing project, that project shall complete a review of the tile drain system to be submitted for review and approval by the County Geologist. Said study shall, at a minimum, determine if the drains are structurally sound, or if the system should be replaced. In no case shall a project with previous tile drains be permitted to develop without a tile drain system to control future groundwater levels which will assist in the mitigation of liquefaction. In addition these drains will help prevent the development of a "salt" crust related to evapotranspiration of landscape water.

Any future underground utility lines which intercept the existing tile drain system should be evaluated on a case-by-case basis to determine if they will interfere with or assist the performance of the existing tile drains. All underground utilities which may potentially provide for enhanced groundwater control should be incorporated into the existing system so as to provide additional control of the groundwater levels beneath this site. Any interference of a newly installed utility or any other underground installation (i.e. swimming pools, basements, etc.) with the existing tile drains should be addressed in such a way as to maintain the functionality of the tile drain system. If no tile drains are located this condition shall not apply.

10.PLANNING 064
GENERAL CONDITIONS | SP - DRP REQUIRED | Status: INEFFECT | Conditions: Informational

Prior to or concurrent with the first approval of any implementing project within any DISTRICT, a Specific Plan Substantial Conformance application for a DISTRICT REFINEMENT PLAN shall be required in accordance with Section 3.13.1.1 of the SPECIFIC PLAN. No implementing project shall be approved before a DISTRICT REFINEMENT PLAN for the corresponding DISTRICT receives approval from the Planning Commission. DISTRICT REFINEMENT PLANS may be processed concurrently with implementing projects.

Note: The DISTRICT REFINEMENT PLAN is processed as a Specific Plan Substantial Conformance; however, once approved the Planning Director shall create a new LMS

development number for the land management tracking system and all implementing projects within the respective DISTRICT shall be attached to the new DISTRICT REFINEMENT PLAN development number. Once the DISTRICT REFINEMENT PLAN is approved, all Specific Plan Conditions of approval shall be transferred into the new development number created by the DISTRICT REFINEMENT PLAN. All dwelling units shall be tracked at the DISTRICT level through the DISTRICT REFINEMENT PLAN development number and through the separate spread sheet referenced in condition 10.Planning.58 DU/BUILDING PERMIT MATRIX. Additionally, only Conditions of Approval approriate to the DISTRICT need be moved. Minor modifications to the Conditions of Approval are permitted for the DRP if said revisions are specific to the DISTRICT and do not significantly alter the intent of the Condition of Approval. This note shall not apply if an alternative permit tracking process to LMS is being used.

Once approved, the DISTRICT REFINEMENT PLAN shall be added as an appendix to the SPECIFIC PLAN and act as additional Design Standards for the respective DISTRICT."

10.PLANNING 065 GENERAL CONDITIONS	SP - NEIGHBORHOOD PARKS	Status: INEFFECT	Conditions: Informational

A minimum of 6.6 acres of neighborhood parks shall be developed in conjunction for every 500 residential dwelling units.

10.PLANNING 066 GENERAL CONDITIONS	SP - AG SETBACKS	Status: INEFFECT	Conditions: Informational

Existing Agricultural uses are allowed to continue during the development of the SPECIFIC PLAN. Proposals to improve, enhance, intensify and/or expand an existing agricultural operation shall be subject only to the approval of the Travertine Point Property Owners Association, provided the public's health, safety and welfare are protected and that no existing residential use is closer than 300 feet of the existing and/or proposed improvement, enhancement, intensification and/or expansion. Residential units associated with or ancillary to the existing agricultural operation are not included in the 300 foot setback requirement. Agricultural uses proposed less than 300 feet from existing residential uses would require a Conditional Use Permit.

10.PLANNING 067 GENERAL CONDITIONS	MM - LANDFILL MOU IMP	Status: INEFFECT	Conditions: Informational

All provisions of the Landfill MOU specified in condition of approval 30.PLANNING.2 shall be implemented throughout the life of the project to the satisfaction of the Riverside County Waste Management Department.

10.PLANNING 068 GENERAL CONDITIONS	SP - MUOZ BOUNDARY	Status: INEFFECT	Conditions: Informational

The zoning ordinance for the project permits the use of Mixed Use Overlay Zones (MUOZ) intended to foster different types of mixed use development. Mixed Use Overlay Zones are only permitted in Planning Areas with a Mixed Use Designation, specifically Districts 1, 2, and/or 4. The boundary of any MUOZ shall be legally defined by zoning ordinance in conjunction with approval of one or more Districts Refinement Plans (DRPs) as outlined in the SPECIFIC PLAN.

Changes to the boundaries of any established MUOZ shall require a change of zone application to be approved.

10.PLANNING 069 GENERAL CONDITIONS	SP - MITIG MEASURE 6.3-17(2)	Status: INEFFECT	Conditions: Informational

To assure that all payments indicated in Condition of Approval 30.PLANNING.157 have been made, 10 years after the first $25,000 payment has been made to the Salton Sea Authority, the applicant shall provide evidence that all payments required by EIR Mitigation Measure 6.3-17 have been made.

*This Condition was added as a result of the RRDEIR.

10.PLANNING 070 GENERAL CONDITIONS	SP - MITIG MEASURE 6.16-7	Status: INEFFECT	Conditions: Informational

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"Mitigation Measure 6.16-7 from EIR514 (as revised by the RRDEIR) requires:

Prior to approval of any subsequent actions to implement the project in planning areas as defined in the specific plan located adjacent to western boundary of the site, a landscaping plan shall be developed and submitted for drainage channels along the western perimeter of the project site. The landscaping plan shall require the planting of native plant species with thorns, such as cat-claw acacia and mesquite shrubs, adjacent to walls and trails on the western boundary of the site. This plan must be reviewed and approved by the Riverside or Imperial County Planning Director for the portions of the project located in each county."

10.TRANS 001 GENERAL CONDITIONS	SP - SP375/TS CONDITIONS	Status: INEFFECT	Conditions: Informational

The Transportation Department has reviewed the Traffic Impact Analysis (TIA), dated March 9, 2009 submitted for the proposed project. The TIA has been prepared in accordance with County-approved guidelines. The Transportation Department has also reviewed the Traffic Study Supplement (TSS), dated August 5, 2010. We generally concur with the findings relative to traffic impacts.

The General Plan circulation policies require a minimum of Level of Service 'C', except that Level of Service 'D' may be allowed in community development areas at intersections of any combination of secondary highways, major highways, arterials, urban arterials, expressways or state highways and ramp intersections.

The TIA and TSS indicate that it is possible to achieve adequate levels of service for the following intersections based on the traffic study assumptions.

Harrison Street (NS) at: 62nd Avenue (EW)

Harrison Street (NS) at: 64th Avenue (EW)

Harrison Street (NS) at: 66th Avenue (EW)

Harrison Street (NS) at: 70th Avenue (EW)

Harrison Street (NS) at: 72nd Avenue (EW)

Harrison Street (NS) at: 74th Avenue (EW)

Harrison Street (NS) at: Pierce Street (EW)

Harrison Street (NS) at: 78th Avenue (EW)

Harrison Street (NS) at: 81st Avenue (EW)

Polk Street (NS) at: 74th Avenue (EW)

Fillmore Street (NS) at: 78th Avenue (EW)

Village Way (NS) at: 82nd Avenue (EW)

Village Way (NS) at: Jewel Street (EW)

Village Way (NS) at: Town Center Way North (EW)

Village Way (NS) at: Town Center Way South (EW)

SR-86S Southbound Ramps (NS) at: 62nd Avenue (EW)

SR-86S Northbound Ramps (NS) at: 62nd Avenue (EW)

SR-86S Southbound Ramps (NS) at: 66th Avenue (EW)

SR-86S Northbound Ramps (NS) at: 66th Avenue (EW)

SR-86S Southbound Ramps (NS) at: 70th Avenue (EW)

SR-86S Northbound Ramps (NS) at: 70th Avenue (EW)

SR-86S Southbound Ramps (NS) at: 74th Avenue (EW)

SR-86S Northbound Ramps (NS) at: 74th Avenue (EW)

SR-86S Southbound Ramps (NS) at: 81st Avenue (EW)

SR-86S Northbound Ramps (NS) at: 81st Avenue (EW)

SR-86 Southbound Ramps (NS) at: Town Center Way (EW)

SR-86 Northbound Ramps (NS) at: Town Center Way (EW)

SR-86 Southbound Ramps (NS) at: Desert Shores Drive (EW)

SR-86 Northbound Ramps (NS) at: Desert Shores Drive (EW)

SR-86 Southbound Ramps (NS) at: Brawley Avenue (EW)

SR-86 Northbound Ramps (NS) at: Brawley Avenue (EW)

SR-86 Southbound Ramps (NS) at: Sea Oasis Boulevard (EW)

SR-86 Northbound Ramps (NS) at: Sea Oasis Boulevard (EW)

SR-86 Southbound Ramps (NS) at: Marina Drive (EW)

SR-86 Northbound Ramps (NS) at: Marina Drive (EW)

Paseo Street (NS) at: 81st Avenue (EW)

Lincoln Street (NS) at: 81st Avenue (EW)

Lincoln Street (NS) at: Paseo Street (EW)

Lincoln Street (NS) at: Jewel Street (EW)

Gateway Street (NS) at: Town Center Way West (EW)

Jewel Street (NS) at: Paseo Street North (EW)

Jewel Street (NS) at: Paseo Street South (EW)

Jewel Street (NS) at: Bayside Way (EW)

Town Center Way (NS) at: Paseo Street North (EW)

Town Center Way (NS) at: Paseo Street South (EW)

Travertine Estates (NS) at: Paseo Street (EW)

A Street (NS) at: Jewel Street (EW)

A Street (NS) at: Desert Shores Drive (EW)

Sea Oasis Drive (NS) at: Travertine Estates (EW)

Sea Oasis Drive (NS) at: Desert Shores Drive (EW)

The associated conditions of approval incorporate mitigation measures identified in the traffic study, which are necessary to achieve or maintain the required level of service.

10.TRANS 002 GENERAL CONDITIONS	SP-SP375/DEF-PROJ DEV DISTS	Status: INEFFECT	Conditions: Informational

In SP00375 five Development Districts are identified. The Planning Areas in each District are numbered as follows:

District 1:Planning Areas 1-1 through 1-23

District 2:Planning Areas 2-1 through 2-21

District 3:Planning Areas 3-1 through 3-12

District 4:Planning Areas 4-1 through 4-8

District 5:Planning Areas 5-1 through 5-15

10.TRANS 003 GENERAL CONDITIONS	SP-SP375/DEF-RDWY IMPVT PHASES	Status: INEFFECT	Conditions: Informational

In the TSS for SP00375, dated August 5, 2010, nineteen (19) transportation improvement phases are identified. Following is a listing of the transportation system improvement phases and the Planning Areas that would be developed in each phase.

Rdwy Impvt Phase Planning Areas Developed

1 1-1,1-2,1-3,1-5,1-7,1-8,1-12 (partial)

2a 1-9,1-12(partial),1-13,1-14,1-15

2b 1-4,1-6,1-11

2c 2-1,2-1,2-3

2d 2-8,2-9,2-14 (partial)

2e 1-16,4-5 (partial)

2f 2-19 (partial),2-20 (partial), 2-21,4-1

3a 1-10,2-4,2-5,2-6,2-7,2-10,2-11,2-12

3b 4-3,4-4 (partial), 5-1

3c 5-13

3d 2-13,2-14 (partial),2-15,2-16

3e 2-17, 2-18,2-19 (partial),2-20 (partial)

3f 4-2,4-5 (partial),4-6

3g 1-17,1-18,1-19,1-20,1-21,1-22,1-23

3h 4-7,4-8

3i 3-1,3-2

3j 3-3,3-4,3-5,3-6,3-7,3-8,3-9,3-10, 3-11,3-12

3k 4-4,5-2,5-3,5-4,5-5

3l 5-6,5-7,5-8,5-9,5-10,5-11,5-12, 5-14,5-15

If development occurs in a different order, or if there is substantial overlapping of phases, then a new traffic study shall be completed to determine if any improvements from the prior un-built phase need to be constructed to mitigate impacts caused by the phase being developed.

10.TRANS 004 GENERAL CONDITIONS	SP-SP375/FUND SR-86/SR-86S IMP	Status: INEFFECT	Conditions: Informational

Recognizing that 00375 and other developments in Riverside and Imperial Counties along the SR-86/SR86-S will necessitate improvements along SR-86/SR-86S, Riverside County will take the lead in upgrading SR-86/SR-86S to a six-lane freeway between 62nd Avenue in Riverside County and Marina Drive in Imperial County. The six-lane freeway would have grade-separated interchanges in Riverside County at SR-86S/62nd Avenue, SR-86S/66th Avenue,SR-86S/70th Avenue, SR-86S/74th Avenue, SR-86S/81st Avenue, SR-86/Town Center Way North, and in Imperial County at SR-86/Desert Shores Drive, SR-86/Brawley Avenue, SR-86/Sea Oasis Boulevard, and SR-86/Marina Drive. Pending the outcome of further engineering, financial,

environmental, and other studies, the County intends to establish a Road and Bridge Benefit District (RBBD), or other area-wide funding mechanism for the corridor, which includes this project site, in order to upgrade SR-86/SR-86S to a six-lane freeway. The funding mechanism may have a two-tiered structure:

One tier to fund the addition of one lane in each direction along SR-86/SR-86S that would include the entire benefit corridor, and

A second tier consisting of several subareas within the benefit corridor to fund interchanges that would serve a specific subarea.

The Traffic Study for the Project used a 10 mile study area north and south of the Project site, which is twice the 5 mile study scope typically required by the County. Impacts within the study scope area are fully mitigated as set forth in this EIR. Possible impacts beyond the 10 mile study area are deemed too speculative to evaluate at this time, given various unknown factors such as the pace of Specific Plan implementation over an estimated 30-40 year build out, the pace of other improvements to local roads and highways during that 30-40 year project build out, and the pace of other development in the vast area north and south of the Specific Plan site that may contribute trips but also funding sources for road and highway improvements. The project conditions of approval require that all future tract maps be conditioned to provide updated traffic studies prior to final map approval. Those traffic studies shall include an analysis of potentially significant traffic impacts beyond the 10 mile study scope established by the County for the Specific Plan traffic study. To the extent that future traffic studies, required for all implementing tract maps, show any significant impacts beyond the 10 mile study area used for the Specific Plan traffic study, including but not limited to significant impacts to 86s, the I-10, and/or local roadways, the tract map applicants shall be required to participate in an RBBD, or other similar financial mechanism such as a CFD, to mitigate such impacts to a less than significant level. Implementing projects of SP375 shall be required to pay CVAG TUMF fees. The fees collected can also be made eligible, through the CVAG transportation prioritization process, for regional improvements within and beyond the study area.

20.PLANNING 001
PRIOR TO A CERTAIN SP - 90 DAYS TO PROTEST DATE

Status: INEFFECT Conditions: Outstanding

The applicant has ninety (90) days from the date of the approval of these conditions to protest, in accordance with the procedures set forth in Government Code Section 66020, the imposition of any and all fees, dedications, reservations, and/or exactions imposed on this project as a result of the approval or conditional approval of this project.

20.PLANNING 002
PRIOR TO A CERTAIN SP - SUBMIT FINAL DOCUMENTS DATE

Status: INEFFECT Conditions: Outstanding

Within 60 days of the tentative approval of the project by the Board of Supervisors and prior to closing the DBF accounts for the project, Four (4) hard copies and Fifteen (15) copies on CD of the final SPECIFIC PLAN and EIR documents (SP/EIR) documents shall be submitted to the Planning Department for review, approval and distribution. The documents shall include all the items listed in the condition titled "SP - Documents". The final SP/EIR documents shall be

distributed in the following fashion:

One hard copy to the Planning Counter Services Division,

One hard copy to the Planning Department Library,

One hard copy to the Desert Office,

One hard copy to the Planning Department Project Manager,

Digital versions (CD) to the following:

Building and Safety Department 1 copy

Department of Environmental Health 1 copy

Fire Department 1 copy

Flood Control and Water Conservation District 1 copy

Transportation Department 1 copy

Executive Office - CSA Administrator 1 copy

Clerk of the Board of Supervisors 1 copy

Any park provider if not the CSA 1 copy

Any and all remaining documents shall be kept with the Planning Department in Riverside, or as otherwise determined by the Planning Director.

30.E HEALTH 001 PRIOR TO ANY PROJECT APPROVAL	SP-WATER AND SEWER WILL SERVE	Status: INEFFECT	Conditions: Outstanding

A "will serve" letter from the agency serving potable water and sanitary sewers is required.

30.E HEALTH 002 PRIOR TO ANY PROJECT APPROVAL	SP - LEA CLEARANCE	Status: INEFFECT	Conditions: Outstanding

Clearance from Environmental Resource Management Division (Local Enforcement Agency) is required.

30.EPD 001 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-1	Status: INEFFECT	Conditions: Outstanding

EIR00514 MM 6.4-1 Prior to implementing project approval, a qualified biologist currently holding an MOU with Riverside County shall conduct a focused survey for the two special-status plant species observed within the Riverside County portion of the proposed project site,

chaparral sand verbena and Peirson's pebble pincushion, which are not covered under the CVMSHCP within the proposed development areas in order to determine the extent of individual plants to be impacted by the implementing project design. Impacts resulting from project construction to the two special-status plant species observed shall be mitigated through a seed collection and planting program. The planting program will be reviewed and approved by the Environmental Programs Division and CDFG and will include provisions for monitoring success criteria and performance standards.

30.EPD 002

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-2	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-2 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), the project applicant shall retain a qualified biologist currently holding an MOU with Riverside County, to collect seed from special status plant species individuals during the appropriate season (after the blooming period, when seeds have formed). The collected seed shall be planted in predetermined suitable habitat in an appropriate area within Open Space (Conservation) on the project site that will not be impacted by project development or subsequent activities. A portion of Sonoran creosote bush scrub and blue palo verde wash woodland located in the southern portion of the proposed project site will remain undeveloped upon implementation of the proposed project. In addition, appropriate disturbed/recovering Sonoran creosote bush scrub areas will also be areas for potential seed planting.

30.EPD 003

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-3	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-3 Prior to map recordation (AND/OR OTHER APPROPRIATE MILESTONE), the project applicant shall protect those portions of Sonoran creosote bush scrub and blue palo verde wash woodland occurring within the Open Space-Conservation land use category through a conservation easement, deed restriction, or similar mechanism. This area provides suitable habitat for relocation of chaparral sand verbena and Peirson's pebble pincushion. A report documenting the seed collection and planting plan shall be submitted to the Riverside County Environmental Programs Division.

30.EPD 004

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-4	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map,

parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-4 Impacts resulting from project construction within the Riverside County portion of the proposed project site to those special-status wildlife species covered under the CVMSHCP, including desert pupfish, flat-tailed horned lizard, Yuma clapper rail, burrowing owl, Crissal thrasher, Le Conte's thrasher, western yellow bat, Palm Springs round-tailed ground squirrel, and Palm Springs pocket mouse, shall be mitigated through payment of the CVMSHCP Local Development Mitigation Fee.

Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), fee payment shall be made in accordance with Ordinance 875 by the project applicant to Riverside County.

30.EPD 005

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-5	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-5 Impacts resulting from project construction within the Riverside County portion of the proposed project site to Couch's spadefoot, which is not covered under the CVMSHCP, shall be mitigated. Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), in areas of suitable habitat for Couch's spadefoot on the project site, a qualified biologist currently holding an MOU with Riverside County shall conduct focused surveys including areas of ruts or small pools, as well as the irrigation ponds, and relocate any toad individuals or eggs found. The survey shall be conducted during the active season of Couch's spadefoot (which corresponds with the rainy season). The survey results shall be submitted to the Riverside County Environmental Programs Division and CDFG.

30.EPD 006

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-6	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-6 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), if the focused surveys required under mitigation measure 6.4-5 result in the observation of Couch's spadefoot within project impact areas, observed individuals and/or eggs shall be removed from project impact areas (with the prior approval of the CDFG) and relocated to predetermined suitable habitat in an appropriate area within Open Space-Conservation areas on the project site that will not be impacted. A portion of Sonoran creosote

bush scrub and blue palo verde wash woodland located in the southern portion of the proposed project site will remain undeveloped upon implementation of the proposed project.

Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), the project applicant shall protect those portions of Sonoran creosote bush scrub and blue palo verde wash woodland occurring within the Open Space-Conservation land use category through a conservation easement, deed restriction, or similar mechanism, as required by Mitigation Measure 6.4-3. If suitable habitat for relocation of Couch's spadefoot is found within this area, toad individuals or eggs will be taken to this location. In addition, suitable disturbed/recovering Sonoran creosote bush scrub areas will also be considered for relocation efforts.

30.EPD 007
PRIOR TO ANY PROJECT APPROVAL | SP - MITIG MEASURE 6.4-7 | Status: INEFFECT | Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-7 Impacts resulting from project construction to rosy boa, which is not covered under the CVMSHCP, within the Riverside County portion of the proposed project site shall be mitigated through pre-construction surveys and relocation. Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), the applicant shall retain a qualified biologist currently holding an MOU with Riverside County to conduct focused pre-construction surveys for individuals of this species within suitable habitat for the species. Surveys shall be conducted within suitable habitat located within 500 feet of the grading limits. Surveys shall include an examination of those portions of Sonoran creosote bush scrub, blue palo verde wash woodland, disturbed/recovering Sonoran creosote bush scrub, and saltbush scrub habitats that will be developed as part of project implementation.

If rosy boa individuals are found, an active trapping and relocation program, conducted by a qualified biologist currently holding an MOU with Riverside County and in coordination with the CDFG, that will move individuals to suitable on-site habitat that will not be directly impacted by project implementation, shall take place. A portion of Sonoran creosote bush scrub and blue palo verde wash woodland located in the southern portion of the proposed project site will remain undeveloped upon implementation of the proposed project.

In the event that off-site habitat areas within 500 feet of grading are not accessible during preconstruction surveys, the presence of rosy boa shall be assumed and the entire project site boundary within 500 feet of grading activities shall be fenced to prohibit entry of rosy boa into the grading site. The fence shall be monitored as a regular part of construction monitoring.

The project applicant shall protect those portions of Sonoran creosote bush scrub and blue palo verde wash woodland occurring within the Open Space-Conservation land use category through a conservation easement, deed restriction, or similar mechanism, as required by Mitigation Measure 6.4-3. This area provides suitable habitat for relocation of rosy boa.

30.EPD 008 | SP - MITIG MEASURE 6.4-8 | Status: | Conditions:

PRIOR TO ANY PROJECT APPROVAL

INEFFECT Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-8 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), impacts resulting from project construction within the Riverside County portion of the proposed project site to special-status bird species not covered under the CVMSHCP, which include loggerhead shrike and black tailed gnatcatcher, shall be mitigated through pre-construction surveys for nesting individuals of these species. Such surveys may be conducted concurrently with general nesting bird surveys, discussed in Mitigation Measure 6.4-13, and shall follow the methodology given in Mitigation Measure 6.4-13. If construction activities on the site are proposed during the nesting/breeding season (February 1 through August 31), a pre-activity survey shall be conducted by a qualified biologist currently holding an MOU with Riverside County prior to implementing project approval, to determine if active nests of species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Game Code are present in the construction zone. Once the survey is complete, a report shall be prepared and sent to the Environmental Programs Division for review and concurrence. If active nests are observed and located, consultation with the California Department of Fish and Game (CDFG) to establish appropriate buffers will be required and the results of the report shall be submitted to CDFG for review and approval. The Environmental Programs Division will be contacted to ensure that proper CDFG approved buffers are in place prior to the issuance of a grading permit. No grading permits will be issued until the Environmental Programs Division confirms the presence of appropriate buffers. In addition, a biological monitor will also be required to be on site during all grading activities to ensure that the buffers are not compromised. At the conclusion of all grading activity, the biological monitor will submit a letter report to the Environmental Programs Division summarizing the result of the grading activity. Focused surveys for nesting loggerhead shrike and black-tailed gnatcatcher individuals shall be conducted in trees and shrubs of Sonoran creosote bush scrub, blue palo verde wash woodland, disturbed/recovering Sonoran creosote bush scrub, and saltbush scrub habitats that will be developed as part of project implementation or that is located within 500 feet of development areas. Because of the high mobility of non-nesting adult individuals of these species, it is expected that surveys for nesting individuals and their young, and protection for any nesting birds found, will provide the mitigation appropriate for project-related impacts. Where nesting loggerhead shrike and/or black tailed gnatcatcher individuals are found, protection of nests shall include postponing or halting clearing and construction activities within 500 feet of the nest until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting, as determined by the biologist Construction personnel shall be instructed on the sensitivity of nest areas and shall be instructed to avoid entering the approved buffers around the nest. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas (within 500 feet) to ensure that no inadvertent impacts on these nests will occur. The results of the survey, as well as any avoidance measures taken and the success of those measures, shall be submitted to the Riverside County Environmental Programs Division within 30 days of completion of the pre-construction surveys and/or

construction nest monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

30.EPD 009

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-9	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-9 Prior to implementing project approval, impacts resulting from project construction within the Riverside County portion of the proposed project site to pallid San Diego pocket mouse, which is not covered under the CVMSHCP, shall be mitigated through focused surveys utilizing small mammal trapping and relocation of this species. The applicant shall retain a qualified biologist currently holding a MOU with Riverside County to conduct the trapping. The survey results shall be submitted to the Riverside County Environmental Programs Division and CDFG. If pallid San Diego pocket mouse is found during small mammal trapping efforts, an active trapping and relocation plan shall be prepared by a qualified biologist currently holding a MOU with Riverside County. The relocation plan shall be submitted to Riverside County Environmental Programs Division and CDFG for review and approval.

Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), if pallid San Diego pocket mouse is found during small mammal trapping efforts, an active trapping and relocation program shall be conducted by a qualified biologist currently holding a MOU with Riverside County, in accordance with the approved relocation plan. The active trapping and relocation program shall move individuals to suitable on-site or off-site habitat that will not be directly impacted by project implementation. Permits will not be issued until all appropriate documentation relative to the completion of the trapping effort has been submitted to Riverside County Environmental Programs Division and CDFG for review and approval. A portion of Sonoran creosote bush scrub and blue palo verde wash woodland located in the southern portion of the proposed project site will remain undeveloped upon implementation of the proposed project. Prior to implementing project approval, the project applicant shall protect those portions of Sonoran creosote bush scrub and blue palo verde wash woodland occurring within the Open Space- Conservation land use category through a conservation easement, deed restriction, or similar mechanism, as required by Mitigation Measure 6.4-3. This area provides suitable habitat for relocation of pallid San Diego pocket mouse.

30.EPD 010

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-10	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-10 Prior to the issuance of a grading permit (AND/OR OTHER

APPROPRIATE MILESTONE), impacts resulting from project construction within the Riverside County portion of the proposed project site to Colorado Valley woodrat, which is not covered under the CVMSHCP, shall be mitigated through pre-construction surveys and relocation. The applicant shall retain a qualified biologist currently holding an MOU with Riverside County, to conduct focused pre-construction surveys for individuals of this species within suitable habitat for the species. Surveys shall be conducted within suitable habitat located within 500 feet of grading limits. Surveys shall include an examination of those portions of Sonoran creosote bush scrub, blue palo verde wash woodland, disturbed/recovering Sonoran creosote bush scrub, and saltbush scrub habitats that will be developed as part of project implementation. The biologist shall survey for Colorado Valley woodrat nests.

Where a Colorado Valley woodrat nest is found, it shall be determined by the biologist in which direction escape by any rat individuals occurring inside the nest will be encouraged. Vegetation around the nest in the opposite direction shall be cleared to discourage woodrat individuals from moving in that direction. Once vegetation in that direction is cleared, the nest shall be nudged with a front-end loader, encouraging any woodrats in the nest to exit the structure in the direction that leads toward adjacent habitat occurring within the Open Space-Conservation land use category of the proposed project or alternatively within areas near the project site (such as ABDSP and SRSJM National Monument, or other state or federally controlled open space lands as allowable by the administering agencies) including areas within conservation easements). Once any woodrats present in the nest have been encouraged to exit the nest, nest materials shall be carefully and slowly picked up with a front end loader (slowly enough that any woodrats remaining in the nest can escape), and the materials shall be moved to adjacent suitable habitat, as noted above, that will not be impacted by project development, where woodrats may scavenge nest materials to build new nests. Due to hantavirus hazards, the nest shall not be excavated by hand, and nest materials shall not be carried by hand.

In the event that off-site habitat areas within 500 feet of grading are not accessible during preconstruction surveys, the presence of Colorado Valley woodrat shall be assumed and the entire project site boundary within 500 feet of grading activities shall be fenced to prohibit entry of woodrats into the grading site. The fence shall be monitored as a regular part of construction monitoring.

30.EPD 011

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-11	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-11 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), impacts resulting from project construction within the Riverside County portion of the proposed project site to American badger, which is not covered under the CVMSHCP, shall be mitigated through a pre-construction clearance survey. The applicant shall retain a qualified biologist currently holding an MOU with Riverside County to conduct focused pre-construction surveys for individuals of this species within suitable habitat

for the species. Surveys shall be conducted within suitable habitat located within 500 feet of grading limits. Surveys shall include an examination of those portions of Sonoran creosote bush scrub, blue palo verde wash woodland, disturbed/recovering Sonoran creosote bush scrub, and saltbush scrub habitats that will be developed as part of project implementation.

If an active American badger burrow is located within project impact areas, a relocation program shall be implemented to remove the individual(s) from the area. The relocation program may be passive, in which badgers are excluded from occupied burrows by installation of a one-way door in burrow entrances, monitoring of the burrow for one week to confirm badger usage has been discontinued, and hand excavation and collapse of the burrow to prevent reoccupation; or the relocation program may be active, in which badger individuals are safely captured and transported to suitable habitat outside the impact area. Trapped individuals of the above species shall be safely relocated onto on-site Sonoran creosote bush scrub and blue palo verde wash woodland habitat located in of the project site that is not planned for development. A portion of Sonoran creosote bush scrub and blue palo verde wash woodland located in the southern portion of the proposed project site will remain undeveloped upon implementation of the proposed project.

In the event that off-site habitat areas within 500 feet of grading are not accessible during preconstruction surveys, the presence of American badger shall be assumed and the entire project site boundary within 500 feet of grading activities shall be fenced to prohibit entry of badgers into the grading site. The fence shall be monitored as a regular part of construction monitoring.

The project applicant shall protect those portions of Sonoran creosote bush scrub and blue palo verde wash woodland occurring within the Open Space (Conservation) land use category through a conservation easement, deed restriction, or similar mechanism, as required by Mitigation Measure 6.4-3. This area provides suitable habitat for relocation of American badger and sufficient carrying capacity is assumed for the conserved areas.

30.EPD 012 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-12	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-12 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), impacts resulting from project construction within the Riverside County portion of the proposed project site to special-status bird species not covered under the CVMSHCP, which include great egret, great blue heron, black-crowned night heron, double-crested cormorant, snowy egret, gull billed tern, white-faced ibis, and black skimmer, shall be mitigated through pre construction surveys for nesting individuals of these species. Such surveys may be conducted concurrently with general nesting bird surveys, discussed in Mitigation Measure 6.4-13, below, and shall follow the methodology given in Mitigation Measure 6.4-13. If construction activities on the site are proposed during the nesting/breeding season (February 1 through August 31), a pre-activity survey shall be conducted by a qualified

biologist currently holding an MOU with Riverside County prior to implementing project approval, to determine if active nests of species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Game Code are present in the construction zone. Once the survey is complete a report shall be prepared and sent to the Environmental Programs Division for review and concurrence. If active nests are observed and located consultation with the California Department of Fish and Game (CDFG) to establish appropriate buffers will be required and the results of the report shall be submitted to CDFG for review and approval. The Environmental Programs Division will be contacted to ensure that proper CDFG approved buffers are in place prior to grading permit issuance. No grading permits will be issued until the Environmental Programs Division confirms the presence of appropriate buffers. In addition, a biological monitor will also be required to be on site during all grading activities to insure that the buffers are not compromised. At the conclusion of all grading activity, the biological monitor will submit a letter report to the Environmental Programs Division summarizing the result of the grading activity. Focused surveys for nesting individuals of these species shall be conducted in trees and shrubs and on the ground of Salton Sea shoreline habitat and arrowweed scrub adjacent to the Salton Sea that will be developed as part of project implementation or that is located within 500 feet of development areas. Because of the high mobility of non-nesting adult individuals of these species, it is expected that surveys for nesting individuals and their young, and protection for any nesting birds found, will provide the mitigation appropriate for project-related impacts.

30.EPD 013 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-13	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-13 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), proposed project construction impacts to nesting birds located in project impact areas within the Riverside County portion of the project site shall be mitigated through pre-construction nesting bird surveys and avoidance of any nesting birds found.

If construction activities on the site are proposed during the nesting/breeding season (February 1 through August 31), a pre-activity survey shall be conducted by a qualified biologist currently holding an MOU with Riverside County prior to implementing project approval, to determine if active nests of species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Game Code are present in the construction zone. Once the survey is complete, a report shall be prepared and sent to the Environmental Programs Division for review and concurrence. If active nests are observed and located, consultation with the California Department of Fish and Game (CDFG) to establish appropriate buffers will be required and the results of the report shall be submitted to CDFG for review and approval. The Environmental Programs Division will be contacted to ensure that proper CDFG approved buffers are in place prior to grading permit issuance. No grading permits will be issued until the Environmental Programs Division confirms the presence of appropriate buffers. In addition, a biological monitor will also be required to be on site during all grading activities to insure that the buffers are not compromised. At the

conclusion of all grading activity, the biological monitor will submit a letter report to the Environmental Programs Division summarizing the result of the grading activity. Prior to grading final for each implementing project for construction or site preparation, including grubbing or grading, the applicant shall have weekly surveys conducted by a qualified biologist currently holding an MOU with Riverside County to determine if active nests of native bird species (including the special-status species discussed above) protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within 300 feet (500 for raptors) of the construction zone. Surveys shall take place in all habitat types containing trees, shrubs, or grasses. Because many birds known to the project area (including loggerhead shrike) nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January, February, and early March for winter nesting species. The surveys shall continue on a weekly basis, with the last survey being conducted no more than three days prior to initiation of clearance or construction work. If ground-disturbing activities are delayed, then additional pre-construction surveys shall be conducted such that no more than three days will have elapsed between the last survey and the commencement of ground disturbing activities. Surveys shall include examination of trees, shrubs, and the understory, as several bird species known to the area and project site, are ground nesters, including burrowing owl, California horned lark, and mourning dove.

30.EPD 014
PRIOR TO ANY PROJECT APPROVAL | SP - MITIG MEASURE 6.4-25 | Status: INEFFECT | Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-25 Prior to building final inspection (AND/OR OTHER APPROPRIATE MILESTONE), a public awareness program shall be developed by the homeowners' association (HOA), or an acceptable land manager/agency, as approved by the Riverside County Environmental Programs Division, to educate residents of the proposed project about impacts to biological resources resulting from increased human and domestic animal presence in the area. The public awareness program shall address the impact domestic cats have on local wildlife populations (especially birds and small mammals), to encourage pet owners to keep their cats indoors. This program shall include supplying educational information to future residents of the project site regarding the importance of preventing unleashed domestic animals from entering ecologically sensitive areas within the proposed project (Open Space [Conservation]) or areas adjacent to the project site (such as ABDSP, SRSJM National Monument, or other state or federally protected lands) and of prohibiting off-leash domestic animals from disturbing native wildlife species. The public awareness program shall specifically address potential indirect impacts to Peninsular bighorn sheep associated with human and domestic animal presence in the rocky hills and mountains. In addition, the public awareness program will include discussion of cryptobiotic soils and their role in preserving desert soils, promoting nitrogen fixation, storing atmospheric carbon, and preventing erosion by wind and water.

30.EPD 015
PRIOR TO ANY | SP - MITIG MEASURE 6.4-26 | Status: INEFFECT | Conditions: Outstanding

PROJECT APPROVAL

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-26 Dogs and cats owned by future residents of the proposed project shall be contained within their property boundary, or shall be leashed while in areas designated Open Space-Conservation. Prior to building final inspection (AND/OR OTHER APPROPRIATE MILESTONE), the HOA, or an acceptable land manager/agency, as approved by the Riverside County Environmental Programs Division, shall add a prohibition to the covenants, conditions, and restrictions (CCRs) for the community against unleashed dogs and cats in areas designated Open Space-Conservation.

30.EPD 016

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-27	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-27 Prior to building final inspection (AND/OR OTHER APPROPRIATE MILESTONE), to reduce indirect impacts to wildlife remaining in the project area upon implementation of the proposed project, waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas throughout the project site. The HOA, or an acceptable land manager/agency, as approved by the Riverside County Environmental Programs Division, shall be responsible for maintaining these receptacles.

30.EPD 017

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-28	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-28 Prior to building final inspection (AND/OR OTHER APPROPRIATE MILESTONE), the HOA, or an acceptable land manager/agency, as approved by the Riverside County Environmental Programs Division, shall supply educational information to future residents of the project site regarding the importance of not feeding wildlife, ensuring that trash containing food is not accessible to wildlife, and not leaving pet food outside.

30.EPD 018

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-29	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the

implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-29 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), the project applicant shall develop a lighting plan that shall be subject to approval by the Riverside County Environmental Programs Division. The plan is discussed in detail within Section 6.1, Aesthetics, of EIR00514 and incorporates dark-sky requirements for the project site area.

30.EPD 019

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-30	Status: INEFFECT	Conditions: Outstanding

EIR00514 MM 6.4-30 Prior to implementing project approval, the applicant shall prepare a landscape plan for all common areas of the site in accordance with modified Tables 3-7a through 3-7f, Proposed Plant Palette, in Section 3.11, Landscape Design Guidelines, of the Travertine Point Specific Plan, which will be consistent with the Coachella Valley Native Plants Recommended for Landscaping per the CVMSHCP (Table 6.4-4). This plan shall be prepared by or approved by a qualified biologist currently holding an MOU with Riverside County, and will be subject to review by the Riverside County Environmental Programs Division. The plan shall include a plant palette composed of non-invasive species that are adapted to the conditions found on the project site, including the condition of a dry, low-rainfall climate. The landscaping plan will also include a list of invasive plant species prohibited from being planted in the common areas of the project site. Plant species included in the Prohibited Invasive Ornamental Plants per the CVMSHCP (Table 6.4-5) will be prohibited from all landscape plant palettes within 1,000 feet of the western boundary of the Travertine Point Specific Plan area. The Specific Plan landscape plant palette will exclude invasive Acacia species, fruiting Olea europaea, Phoenix canariensis, and Washingtonia robusta. Phoenix dactylifera existing on the project site, especially male trees, may be planted outside of conservation areas, a minimum distance of 1,000 feet. The HOA, or an acceptable land manager/agency, as approved by the Riverside County Environmental Programs Division, shall be responsible for providing the landscape plan to landscapers hired to install landscaping in common areas within the proposed project site.

30.EPD 020

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.4-31	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-31 Prior to building final inspection (AND/OR OTHER APPROPRIATE MILESTONE), the HOA, or an acceptable land manager/agency, as approved by the Riverside County Environmental Programs Division, shall supply future residents of the project site with a list of invasive plant species prohibited from being planted on the project site and with educational materials emphasizing the importance of planting noninvasive, drought-tolerant plants.

30.EPD 021 SP - MITIG MEASURE 6.4-32 Status: Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-32 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), the applicant or grading contractor shall develop a plan indicating that all stockpiled soils and vegetation shall be covered daily with sheeting to prevent wind and waterborne transport of such propagules in order to discourage the transport of invasive species propagules to undeveloped on-site and off-site areas.

30.EPD 022

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.4-33 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project. This language represents the minimum requirement, and therefore additional language may be added to clarify the process of implementation:

EIR00514 MM 6.4-33 Prior to the issuance of a grading permit (AND/OR OTHER APPROPRIATE MILESTONE), the applicant or grading contractor shall develop a plan indicating that all graded areas, in the event that construction activities are anticipated to be postponed for longer than one year subsequent to continued grading, shall be hydroseeded with a cover crop of locally indigenous native annual species prior to the first rainfall subsequent to the cessation of construction activity so as to discourage the growth of invasive species within disturbed areas.

30.EPD 023

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.4-34 Status: INEFFECT Conditions: Outstanding

EIR00514 MM 6.4-34 Prior to each implementing project approval, the Riverside County Environmental Programs Division shall review the subdivision design for the proposed project. The County shall confirm that recreational trails associated with the proposed project do not lead into Open Space-Conservation areas or other environmentally sensitive areas adjacent to the project site (such as ABDSP, SRSJM National Monument, or other state or federally protected lands) to the south and west of the project site. Specifically, the County shall ensure that trails do not lead into Peninsular bighorn sheep habitat in ABDSP and the SRSJM National Monument in the rocky hills and mountains. In addition, each subdivision design shall provide a minimum 500-foot setback between ABDSP or SRSJM National Monument lands and proposed residential or commercial land uses.

30.EPD 024

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.4-48 Status: INEFFECT Conditions: Outstanding

EIR00514 MM 6.4-48 Prior to implementing project approval, the applicant shall retain a qualified biologist currently holding an MOU with Riverside County to conduct a jurisdictional

delineation in the Riverside County portion of the project site. The jurisdictional delineation shall be submitted to the USACE and CDFG for review, and the delineation shall be certified by the USACE prior to grading final. To mitigate for impacts to jurisdictional waters, the applicant shall either recreate habitat of similar value and area or secure lands in a program that has already entered a conservation easement at a minimum of 1:1 replacement ratio by acreage to maintain equivalent habitat of suitable USACE and CDFG waters, in consultation with the permitting agency. Use of other tribal lands that are currently being considered for mitigation banking including the Torres-Martinez Desert Cahuilla Indians Wetland Project near the Whitewater River water at the north end of the Salton Sea for delivery into a freshwater wetland and into a shallow saline habitat wetland on the Torres- Martinez Reservation. As feasible, mitigation for USACE and CDFG waters may be carried out in conjunction with mitigation for potential impacts to blue palo verde wash woodland, a sensitive plant community, which is discussed in Mitigation Measure 6.4-46, above.

30.PARKS 001

PRIOR TO ANY PROJECT APPROVAL	SP - SP TRAILS PLAN	Status: INEFFECT	Conditions: Outstanding

PRIOR TO THE APPROVAL OF ANY PROJECT (TENTATIVE MAP, USE PERMIT, AND/OR CHANGE OF ZONE):

The applicant is required to submit a trails plan for the project to the Riverside County Regional Park and Open-Space District for review and approval prior to project approval. The plan is to show an internal trail network and all connections to both the County of Riverside and County of San Diego trails systems and surrounding cities. It is provide typical cross sections for proposed development.

The applicant and its representative is advised to coordinate a meeting with the Planning staff at the Regional Park and Open-Space District to review trails and trail standards. The District's phone number is 951.955.4310

30.PLANNING 001

PRIOR TO ANY PROJECT APPROVAL	MM - TRIBAL MOU	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the applicant shall secure a Memorandum of Understanding (MOU) between (a) the applicat, Riverside County, and the Torres Martinez Desert Cahuilla Indians (TMDCI) and (b) the applicant, Imperial County, and the TMDCI to address issues relating to tribal involvement on the properties within the boundaries of the specific plan and the application of EIR mitigation measures for the entire project site.

The MOU shall, at a minimum, include:

a. a tax-sharing arrangement between each County and the TMDCI;

b. assurances that drainage can and will be maintained across tribal land in perpetuity;

c. assurances that conservation easements can and will be maintained on tribal land in perpetuity;

d. assurances that the roads and circulation through tribal land will remain open to the public;

e. assurances that the land uses on tribal land will remain compatible with those areas in each County areas surrounding the tribal land;

f. permission to perform studies, including but not limited to, health risk assessments and biological surveys to ensure that public health and safety are maintained;

g. that proposed mitigations that involve tribal lands shall be permitted and implemented on all land within the project site; and

h. a limited waiver of sovereign immunity by the TMDCI sufficient to ensure that each County has an adequate legal remedy with respect to enforceability of the above items.

30.PLANNING 002		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	MM - WASTE MGMT MOU (1)	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN, the County of Riverside Waste Management Department and the applicant shall enter into a Memorandum of Understanding (MOU) regarding the entire 166.6-acre County owned property, which includes the Oasis Landfill (two parcels consisting of APN 737-240-003 consisting of 161 acres and APN 737-200-032 consisting of 5.6 acres, and also referred as Planning Areas 2-18 and 2-19 of the SPECIFIC PLAN). If a portion of the 166.6 acre aforementioned property is not used as a regional style park, an amendment to the SPECIFIC PLAN shall be filed to specify an alternate location for a regional style park.

The Oasis Landfill shall remain open and active until Riverside County decides in its discretion to close the Oasis Landfill. The applicant shall use approximately 116.6 acres of the Oasis Landfill site as a future regional style park or other related uses (e.g., drainage). If the Oasis Landfill is to be used as a park site or otherwise developed, a formal agreement must be entered into between Riverside County and applicant or their successors and assigns, allowing for development of the 116.6-acre site for the use proposed by the applicant.

The MOU shall, at a minimum:

a. provide that approximately 50 acres of the Oasis Landfill site within the 161-acre parcel (APN 737-240-003), including the 23 acres currently permitted and used for solid waste disposal, will remain owned by the Riverside County Waste Management Department (the 50-acre site);

b. specify applicant's obligation to provide replacement off-site acreage (in fee simple title), for the 116.6 acres of non-landfill acreage owned by the County within the project site (i.e., SPECIFIC PLAN Planning Area 2-18 and the 166.6 acres owned by the County less the 50 acre site for the Oasis Landfill), in an acreage amount and location acceptable to the Riverside County Waste Management Department. The acreage amount shall not exceed 116.6 replacement acres. Other financial arrangements acceptable to the Riverside County may also be made in lieu of providing 116.6 replacement acres to the County;

c. specify the amount and timing of applicant's obligations, if any, with respect to funding the Box Canyon/State Highway 195 realignment and securing any and all necessary right-of-way approvals for such realignment;

d. provide that the applicant shall be responsible for mitigating the land use compatibility impacts associated with developing the SPECIFIC PLAN area and shall fund all mitigation costs necessary to make development activities compatible with adjacent Oasis Landfill (including, but not limited to screening, enhanced security, and enhanced environmental monitoring);

e. provide that applicant shall convey easements to the County sufficient to allow for the County's environmental monitoring/control activities within areas adjacent to the Oasis Landfill site;

f. provide that the Riverside County Waste Management Department and Riverside County is defended and indemnified for any liabilities arising out of applicant's activities on the 116.6 acre site;

g. provide that Riverside County Waste Management Department shall continue to be responsible for all monitoring and maintenance activity on the 50-acre site.

In the event that the Developer and/or the County elects not to enter into an MOU, then a Specific Plan Amendment shall be filed that shall, at a minimum, remove the 166.6-acre County owned land from the SPECIFIC PLAN, identify an alternative regional park location within the SPECIFIC PLAN, revise the Land Use Plan to reflect the new park site, and revise all other aspects of the SPECIFIC PLAN to accommodate the new park site. Any revised CEQA documentation shall also be completed with the Specific Plan Amendment.

30.PLANNING 003 PRIOR TO ANY PROJECT APPROVAL	MM - WASTE MGMT MOU (2)	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"Prior to the issuance of any grading permits within the Specific Plan boundaries, a clearance letter shall be obtained from the Riverside County Waste Management Department (RCWMD) indicating that the applicant is in substantial conformance with the terms of the Landfill MOU specified in condition of approval 30.PLANNING.2, to the satisfaction of RCWMD."

30.PLANNING 004 PRIOR TO ANY PROJECT APPROVAL	SP - MASTER CULTURAL RES PLAN	Status: INEFFECT	Conditions: Outstanding

The following policies and implementation measures comprise the Master Cultural Resources Plan for SP 375 - Travertine Point Specific Plan and any descendant or implementing projects

within the specific plan boundaries.

Cultural Resources Policy 1: To actively pursue a comprehensive survey program for the entire 4,918-acre project area to identify, document, and protect, if feasible, prehistoric and historical archaeological sites, and sites containing Native American human remains.

Implementation Measure 1-1: the proposed Project would be covered under the CEQA Guidelines (California 2005) or Section 106 of the National Historic Preservation Act (NHPA), and shall be surveyed by a professional who is registered with the County of Riverside for those areas within Riverside County, and acceptable to Imperial County and/or the Bureau of Indian Affairs for those project areas under those jurisdictions, regarding archaeological activities and methods prior to the County's approval of proposed Project plans (48 CFR 44716-44742).

Implementation Measure 1-2: All archaeological site location data collected during the cultural resources surveys shall be considered to be of a sensitive nature and must remain confidential. Caution must be exercised when disseminating this information; in particular, maps and site location data should be made available only to managers, County officials, federal officials, and other professionals on a demonstrated need to know basis.

Implementation Measure 1-3: For potentially significant prehistoric archaeological resources or sites containing Native American human remains identified during the Project's archaeological surveys, the Project proponent, or their designee or successors, shall continue consultation with the Native American Heritge Commission (NAHC) in Sacramento and interested Native American individuals and organzations.

Cultural Resources Policy 2: To avoid impacts to potentially significant prehistoric and historical archaeology resources and sites containing Native American human remains, where feasible.

Implementation Measure 2-1: If Cultural resources avoidance is feasible, potentailly significant archaeological resources and sites containing Native American human remains shall be placed within permanent Project-specific conservation easements or dedicated open space-conservation areas.

Implementation Measure 2-2: Where avoidance of archaeological resources and sites containing Native American human remains is not a feasible managment option, capping these resources with sterile sediments and avoidance planting (e.g. planting of cactus, mesquite, or other Native plants) shall be considered the next most favorable management option. In doing so, capping the resource(s) will ensure that direct impacts from increased public availability to these sites are avoided. Site CA-RIV-8895 (33-17086) deep sediments may contain intact subsurface cultural deposits below the zone of disturbance. If this site cannot be avoided during project development, Phase II Testing and Evaluation is required to ascertain site integrity, data potential, and significance.

Site CA-RIV-8896 (33-17087) - If this site cannot be avoided during project development, Phase II testing is required to ascertain site integrity, data potential, and significance.

Site CA-IMP-8784 (13-009821) - If this site cannot be avoided during project development, Phase II testing is required to ascertain site integrity, data potential, and significance, in accordance with the standards of Imperial County.

Site CA-IMP-8785 (13-009822) - If this site cannot be avoided during project development, Phase II testing is required to ascertain site integrity, data potential, and significance, in accordance with the standards of Imperial County.

Site CA-IMP-8786 (13-009823) - this site consists of several interconnecting segments of a prehistoric aboriginal trail system that may be part of the "Northwest Santa Rosa Trail". Consultation with the participating Native American tribes is required to complete a determination for significance. Pending that consultation, this site is determined to be significant, in accordance with teh standards of Imperial County.

Site CA-IMP-33 - Travertine Rock - This is a significant site and avoidance is strongly recommended, in accordance with the standards of Imperial County. This site shall be be formally nominated as a Traditional Cultural Property (TCP) and to the National Register of Historic Places, if it has not already been listed, in accordance with the standards of Imperial County.

Site CA-IMP-92 - This site shall be tested to ascertain site integrity, data potential, and site signfiicance if it cannot be avoided during project development, in accordance with the standards of Imperial County.

Site CA-IMP-100 - This site shall be tested to ascertain site integrity, data potential, and site significance if it cannot be avoided during project development, in accordance with teh standards of Imperial County.

Site CA-IMP-2626 - If this site cannot be avoided during project development, Phase II Testing and Evaluation is recommended to ascertain site integrity, data potential, and significance, in accordance with the standards of Imperial County.

Site CA-RIV-1525 - This site contained the largest aggregate of fish traps yet found in the Coachella Valley, however much of the site was destroyed by agriculture and land clearing by the applicant. Extant portions of the site may be eligible for listing on the National Register of Historic Places, and further evaluation is required prior to any implementing project approval within the site area. Portions of the site located on the tribal lands of the Torres-Martinez Desert Cahuilla Indians should be preserved in perpetuity.

Cultural Resources Policy 3: To reduce adverse impacts to significant archaeological resources

that cannot be protected in place through data recovery excavations.

Implementation Measure 3-1: If avoidance and/or preservation in place of known prehistoric and historical archaeological resources is not a feasible management option, the Project proponent or his/her successors, shall ensure that potentially significant archaeological resource(s), and site(s) shall be investigated pursuant to the standards, guidelines, and principles of the Advisory Council's Treatment of Archaeological Properties: A Handbook (ACHP 1980), except where any existing policies or guidelines adopted by the County of Riverside, County of Imperial, and/or Bureau ofIndian Affairs differ.

Prior to the issuance of a Project-related grading permit, the Projects' proponent's consultant, registered with the County of Riverside and/or who meets the professional requirements of the County of Imperial or the Bureau of Indian Affairs, shall use the Project's Research Design detailed in Chapter 6 of the Phase I Cultural Resources report prepared by Applied Earthworks, dated April 2008, to guide the implementation of a Phase II Testing and Evaluation Program. In general terms, the Phase II Testing and Evaluation Program shall be designed to further define site boundaries and to assess the structure, content, nature, and depth of subsurface cultural deposits and features. Emphasis shall also be placed on assessing site integrity and the site's potential to address regional archaeological research questions. These data shall then be used to address the NRHP/CRHR eligibility requirements for the archaeological resource, and make recommendations as to the suitability of the resource for listing on either the national or state register of sites.

After approval of the Project's various cultural resources reports by the appropriate County and/or Bureau of Indian Affairs and prior to issuance of Project-related grading permits, the Project proponent's consultant shall complete the Phase II Testing Program as specified in the Project Phase II Testing and Evaluation Proposal and Research Design and prior to the issuance of a Project grading permit. The results of this Phase II Testing Program shall be presented in a technical report that follows the report requirements of the County of Riverside and/or the County of Imperial or the Bureau of Indian Affairs. The Phase II Report shall be submitted to the Lead Agency's Planning Department for review and comment and the Torres-Martinez Desert Cahuilla Indians prior to the issuance of a Project-related grading permit. If the resource is determined to be ineligible for listing on the NRHP/CRHR upon completion of the Phase II Testing Program, no further cultural resources management of this resource would be required.

Implementation Meausre 3-2: A participant-observer(s) from the Torres-Martinez Desert Cahuilla Indians shall be present during Phase II archaeological excavations involving all sites of Native American concern.

Implementation Measure 3-3: If the cultural resource is identified as being potentially eligible for listing on wither NRHP and CRHR, and Project designs cannot be altered to avoid impacting the site, a Phase III Data Recovery Program to mitigate project effects shall be initiated. A Data Recovery Treatment plan detailing the objectives of the Phase III Program shall be developed and contain specific testable hypotheses pertinent to the project's Research Design and relative to the site(s) under study. The Phase III Data Recovery Treatment Plan shall be submitted to the County's Planning Department, the Torres-Martinez Desert Cahuilla Indians, if applicable, and

the State Historic Preservation Office (SHPO) for review and comment prior to implementation of the Data Recovery program.

After Approval of the Treatment Plan, the Phase III Data Recovery Program for affected, eligible site(s) shall be completed. Typically, a Phase III Data Recovery Program involves the excavation of a statistically representative sample of the site(s) as being eligible for listing on the National Register of Historic Places of the California Register of Historic Resources. Again, participant-observer(s) from the Torres-Martinez Desert Cahuilla Indians shall be present during archaeological data-recovery excaations involving sites of Native American concern. At the conclusion of the Phase III Program, a Phase III Data Recovery Report shall be prepared, fulfilling the report requirements of the County of Riverside, County of Imperial, and/or the Bureau of Indian Affairs, as applicable. The Phase III Data Recovery Report shall be submitted to the County's Planning Department, the Torres-Martinez Desert Cahuilla Indians, if applicable, and the BIA and SHPO for review and comment prior to the issuance of a Project grading permit.

Implementation Measure 3-4: All arcaheological materials recovered during implementation of the Project's Phase II Testing or Phase III Data Recovery programs shall be processed, including cleaning and cataloguing, detailed description, and analyses, as appropriate. Following completion of laboratory and analytical procedures, all Project-related collections shall be suitably packaged and transferred to a curation facility that meets the standards of 36 CFR 79 for long-term storage. Materials to be curated include archaeological specimens and samples, field notes, feature and burial records, maps, plans, profile drawings, photo logs, photographic negatives, consultant's reports of special studies, and copies of the final technical reports.

It should be noted that provisions of the Native American Graves Protection Repatriation Act (NAGPRA) pertaining to Native American burials, sacred objects, and objects of cultural patrimony would come into effect when archaeological materials are recovered from lands owned by the Torres-Martinez Desert Cahuilla Indians and managed by the BIA. As well, NAGPRA would also apply when ownership of the collections from anywhere within the Travertine Point Specific Plan study area transfer to a curation repository that received federal funding. Should the Torres-Martinez Band of Desert Cahuilla Indians request repatriation of cultural materials from non-federal lands within the Specific Plan, those materials shall be repatriated upon submittal of the Phase IV Archaeological Monitoring Report to the County Archaeologist. This report shall follow the report format posted on the TLMA website for Phase IV work.

Cultural Resources Policy 4: To ensure proper identification and treatment of cultural resources discovered during Project development and construction.

Implementation Meaure 4-1: Registered professional archaeologists and culturally affiliated Native Americans, with knowledge in cultural resources, shall monitor all Project-related ground-disturbing activities that extend into natural sediments or other land forms in areas determined to have high archaeological sensitivity for prehistoric resources.

Prior to the County-permitted Project, the Project proponent shall include in their Mitigation Plan

provisions for the identification and evaluation of archaeological resources inadvertantly discovered during construction. Thus, if buried archaeological resources are uncovered during construction, all work shall be halted in the vicinity of the archaeological discovery until a registered professional archaeologist can visit the site of discovery and evaluate the significance of the archaeological resource.

Implementation Measure 4-1a: Registered professional archaeologists experienced in historical archaeological resources shall monitor all Project-related ground-disturbing activities that extend into natural sediments or other land forms in areas determined to have high archaeological sensitivity for historical resources.

Implementation Measure 4-2: If the archaeological resource is determined to be a potentially significant cultural resource, the Project proponent's Mitigation Plan shall include provisions for the preparation and implementation of a Phase III Data Recovery Program, as well as disposition of recovered artifacts, in accordance with Cultural Resource Policy 3, Implementation Measure 4, above.

Implementation Measure 4-3: In the event of an accidental discovery of any human remains in a location other than a dedicated cemetery on privately-owned or State-owned land, the steps and procedures specified in Health and Safety Code Subsection 7050.5, State CEQA Guidelines 15064.5(d, and Public Resources Code Subsection 5097.98 shall be implemented. Specifically, in accordance with Public Resources Code Subsection 5097.98, the Riverside County Coroner shall be notified within 24 hours of the discovery of potentially human remains. The Coroner shall then detemine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with PRC Subsection 5097.98. The NAHC shall then designate a Most Likely Descendant (MLD) with respect to the human remains within 48 hours of notification.

The MLD shall then have the opportunity to recommend to the Project proponent means for treating or dispsoing with appropriate dignity, the human remains and associated grave goods wtihin 24 hours of notification. Whenever the NAHC is unable to identify an MLD, or the MLD fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the MLC and the mediation provided for in subdivision (k) of the PRC SS 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

It should be noted that in the event that Native American human remains are inadvertantly discovered during the County-permitted, Project-related construction activitie, there would be unavoidable signfiicant adverse impacts to these resources. Implementation of the Cultural Resources Policies 1, 2 and 3 and their corresponding implmentation measures would, however, reduce impacts to other types of archaeological resources to a level that is less than significant.

Implementation Measure 4-4: The treatment and management of potential Traditional Cultural

Properties (TCPs) identified with the Travertine Point Specific Plan study area shall be conducted through extensive consultation with concerned Native American groups and organzations. These consultation efforts shall be conducted utilizing the County of Riverside's SB 18 consultation process, or those employed by the County of Imperial, as appropriate.

Cultural Resources Policy 5: To ensure that the Project proponent shall bear all costs associated with cultural resources management within the County's jurisdiction. Implementation Measure 5-1: The Project proponent shall bear all expenses realted to the identification, evaluation, and treatment of cultural resources directly or indirectly affected by Project-related construction activity. Such expenses may include, pre-field planning, field work, post field analyses, research, interim and summary report preparation, and final report production (including draft and final versions), and costs associated with the curation of project documentation and the associated artifact collections.

Implementation Measure 5-2: On behalf of the County and the Project proponent, the final technical reports detailing the results of the Phase II Testing or Phase III Data Recovery programs shall be submitted to the appropriate Archaeological Information Centers of the California Historical Resources Inventory System for their information and where they would be available to other researchers. As well, final Phase III Data Recovery Reports shall be submitted to local libraries, schools, participating tribes, and historical societies to enable the general public to learn about their local cultural heritage.

Implementation Measure 5-3: Phase IV Archaeological Monitoring Reports shall be submitted prior to final inspection for each permitted project within the specific plan. Every grading permit subject to archaeological monitoring shall result in a Phase IV report submitted to the County Archaeologist and/or BIA.

Cultural Resources Policy 6- Directives for specific cultural resources sites known as of September 18, 2008, pursuant to the recommendations from the Phase I Cultural Resources report prepared for this specific plan by Applied Earthworks, April 2008:

Site AE-TRV-1H - preliminary significance evalution determines that this site is potentially significant resource as it has been an important source of fresh water to enable the settlement and agricultural development of this portion of the Coachella Valley for the past 70 years.

Site CA-RIV-8891 (33017082) - if this site cannot be avoided during project development, Phase II Testing and Evaluation is recommended to ascertain site integrity, data potential, and significance.

Site CA-RIV-8892/H (33-17083) - The data potential was realized during site recordation and archival resarch, therefore no further management of this resource is recommended.

Site CA-RIV-8893/H (33-17084) - The data potential was realized during recordation and archival research, therefore no further management of this resource is recommended.

Site CA-RIV-8894 (33-17085) - The site is located within an alluvial, depositional environment

with undetermined soil depth, and there is some potential for intact subsurface cultural deposits beneath the zone of mechanical distrubance. If this site cannot be avoided during the project development, Phase II Testing and Evaluation is recommended to ascertain site integrity, data potential, and significance.

Site CA-RIV-8895 (33-17086) deep sediments may contain intact subsurface cultural deposits below the zone of disturbance. If this site cannot be avoided during project development, Phase II Testing and Evaluation is required to ascertain site integrity (33-17086) - The potentially s

30.PLANNING 007

PRIOR TO ANY PROJECT APPROVAL	SP - GEOLOGIC STUDY	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project and satisified prior to scheduling that project for public hearing:

"PRIOR TO SCHEDULING THIS PROJECT FOR A PUBLIC HEARING/ACTION, THE FOLLOWING SPECIAL GEOLOGIC STUDIES SHALL BE SUBMITTED TO AND APPROVED BY THE COUNTY GEOLOGIST:

A geologic/geotechnical investigation report. The investigation shall address geologic hazards including, but not necessarily limited to, slope stability, rock fall hazards, landslide hazards, surface fault rupture, fissures, liquefaction potential, collapsible and/or expansive soils, subsidence, wind and water erosion, debris flows, and groundshaking potential. For completeness and direct correlation to the proposed project, the consultant shall be provided the most recent copy of the project case exhibit (tract map, parcel map, plot plan, CUP, etc.) for incorporation into the consultant's report. Furthermore, the consultant shall plot all appropriate geologic and geotechnical data on this case exhibit and include it as an appendix/figure/plate in their report. The geologic/geotechnical investigation report shall be reviewed and approved by the County Engineering Geologist prior to scheduling this case for a public hearing.

Note: acquisition of a County geologic report (GEO) number and submittal of review fees is required (DBF to be determined). All reports (2 wet-signed original copies), Planning Geologic Report application (case sub-type GEO3) and deposit base fee payment should be submitted, in person by the applicant or his/her representative, at one of the County's two main offices (Riverside, Palm Desert). These items should be submitted at the Land Use counter. Reports and payment should not be given to the Planner or County Geologist directly.

The applicant and their consultant should also be aware that County Ordinance 457.98 requires a grading permit for any exploratory excavations consisting of 1000 cubic yards or greater in any one location of one acre or more. This applies to all trenching, borings and any access road clearing/construction that may be necessary."

30.PLANNING 008

PRIOR TO ANY PROJECT APPROVAL	SP - M/M PROGRAM (GENERAL)	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map,

parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"The EIR prepared for the SPECIFIC PLAN imposes specific mitigation measures and monitoring requirements on the project. Certain conditions of the SPECIFIC PLAN and this implementing project constitute reporting/monitoring requirements for certain mitigation measures."

30.PLANNING 012
PRIOR TO ANY PROJECT APPROVAL — SP - PROJECT LOCATION EXHIBIT — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"The applicant shall provide to the Planning Department an 8 1/2" x 11" exhibit showing where in the SPECIFIC PLAN this project is located. The exhibit shall also show all prior implementing projects within the SPECIFIC PLAN that have already been approved.

This condition shall be considered MET once the applicant provides the Planning Department with the required information. This condition may not be DEFERRED."

30.PLANNING 019
PRIOR TO ANY PROJECT APPROVAL — SP - EA REQUIRED — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementation project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"If this implementing project is subject to the California Environmental Quality Act (CEQA), an environmental assessment shall be filed and processed concurrently with this implementing project. At a minimum, the environmental assessment shall utilize the evaluation of impacts addressed in the EIR prepared for the SPECIFIC PLAN.

This condition shall be considered as MET if an environmental assessment was conducted for this implementing project. This condition may be considered as NOT APPLICABLE if this implementing project is not subject to CEQA. This condition may not be DEFERRED."

30.PLANNING 020
PRIOR TO ANY PROJECT APPROVAL — SP *- ADDENDUM EIR — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"This implementing project has been reviewed in the context the EIR, which is associated with this SPECIFIC PLAN. The Planning Department has reviewed this project and its relationship to the EIR, and has found that no new environmental impacts have arisen since the certification of

the EIR. Although the EIR adequately addressed the environmental impacts of the SPECIFIC PLAN as a whole, more detailed technical informaiton (i.e. traffic studies, updated biological studies, etc.) have been required by the Planning Department and/or other COUNTY land development review departments in order to complete its environmental review. Therefore, an ADDENDUM to the previously certified EIR has been prepared in conjunction with this implementing application.

This condition shall be considered MET if an ADDENDUM to the EIR has been prepared. Alternatively, this condition shall be considered as NOT APPLICABLE if an ADDENDUM to the EIR is not required."

30.PLANNING 021 PRIOR TO ANY PROJECT APPROVAL	SP *- SUPPLEMENT TO EIR	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"This implementing project has been reviewed in the context the EIR, which is associated with this SPECIFIC PLAN. The Planning Department has reviewed this project and its relationship to the EIR, and has found that although the EIR adequately addressed the environmental impacts of the SPECIFIC PLAN at the time, new environmental impacts have arisen since the certification of the original EIR. The Planning Department has determined that the new environmental impacts can be mitigated to below a level of significance. Therefore, a SUPPLEMENT to the previously certified EIR has been prepared in conjunction with this implementing application.

This condition shall be considered MET if a SUPPLEMENT to the EIR has been prepared. Alternatively, this condition shall be considered as NOT APPLICABLE if a SUPPLEMENT to the EIR is not required."

30.PLANNING 022 PRIOR TO ANY PROJECT APPROVAL	SP *- SUBSEQUENT EIR	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"This implementing project has been reviewed in the context the EIR, which is associated with this SPECIFIC PLAN. The Planning Department has reviewed this project and its relationship to the EIR, and has found that although the EIR adequately addressed the environmental impacts of the SPECIFIC PLAN at the time, new environmental impacts have arisen since the certification of the original EIR. The Planning Department has determined that this implementing project may have a signficant impact to the new environmental impacts that have arisen. Therefore, a SUBSEQUENT EIR has been prepared in conjunction with this implementing application.

This condition shall be considered MET if a SUBSEQUENT EIR has been prepared. Alternatively, this condition shall be considered as NOT APPLICABLE if a SUBSEQUENT to

the EIR is not required."

30.PLANNING 023
PRIOR TO ANY PROJECT APPROVAL | SP - COMPLETE CASE APPROVALS | Status: INEFFECT | Conditions: Outstanding

Prior to the approval of any implementing project (tract map, parcel map, use permit, plot plan, etc.) the SPECIFIC PLAN, the GPA, the CHANGE OF ZONE, and the EIR must have been approved, adopted, and certified by the Board of Supervisors, respectively.

This condition shall be considered as MET once the SPECIFIC PLAN, the GPA, the CHANGE OF ZONE, and the EIR have been approved, adopted, and certified by the Board of Supervisors, repectively. This condition may not be DEFERRED.

30.PLANNING 024
PRIOR TO ANY PROJECT APPROVAL | SP - AMENDMENT REQUIRED | Status: INEFFECT | Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"If this implementing project meets any of the following criteria, an amendment to the SPECIFIC PLAN shall be required and processed concurrently with this implementing project:

1. The implementing project adds any area to, or deletes area from, the SPECIFIC PLAN;

2. The implementing project proposes a substantially different use than currently allowed in the SPECIFIC PLAN (i.e. proposing a residential use within a commercially designated area); or

3. as determined by the Planning Director.

Any amendment to the SPECIFIC PLAN, even though it may affect only one portion of the SPECIFIC PLAN, shall be accompanied by a complete specific plan document which includes the entire specific plan, including both changed and unchanged parts.

This condition shall be considered MET if the specific plan amendment has been filed, and NOT APPLICABLE if a specific plan amendment is determined to be unnecessary."

30.PLANNING 025
PRIOR TO ANY PROJECT APPROVAL | SP - PARK AGENCY REQUIRED | Status: INEFFECT | Conditions: Outstanding

Prior to the approval of any implementing land division project within the SPECIFIC PLAN (i.e. tract map, or parcel map), the following condition shall be placed on the implementing project:

"PRIOR TO MAP RECORDATION of any subdivision, or other residential development application, all portions of this implementing project not currently within the boundaries of the Desert Recreation District (DRD), shall be annexed into the DRD or a similar entity such as a County Service Area/District that has been designated by the Board of Supervisors, pursuant to Section 10.35(G) of Ordinance No. 460, to receive park dedications and fees. Documentation of

said annexation shall be provided to the Planning Department.

This condition shall be considered as NOT APPLICABLE if the DRD, or simmilar entity, is unwilling or unable to annex the property in question."

30.PLANNING 026

PRIOR TO ANY PROJECT APPROVAL	SP - AG/DAIRY NOTIFICATION	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing residential land division within the SPECIFIC PLAN, and within one half mile of existing agricltural uses, the following condition of approval shall be applied to the implementing project stating that:

"PRIOR TO MAP RECORDATION, the applicant shall submit a detailed proposal for the notification of all initial and future purchasers of dwelling units within the subject project of the existence of dairies and/or other agricultural uses within one half mile of the subject property (both within and external to the SPECIFIC PLAN) and potential impacts resulting from those uses. Said notification shall be in addition to any notice required by Ordinance No. 625 (Riverside County Right-to-Farm Ordinance). Said approved notification shall be provided to all initial and all future purchasers of dwelling units within the subject project as long as proximal agricultural uses continue."

30.PLANNING 027

PRIOR TO ANY PROJECT APPROVAL	SP *- PA PROCEDURES	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map or parcel map), the following condition shall be placed on the implementing project PRIOR TO MAP RECORDATION in the case of land division applications (tentative parcel maps or tentative tract maps) or PRIOR TO BUILDING PERMITS in the case of use permit applications (plot plans, conditional use permits, or public use permits):

"The planning area[s] for which this land division application is located must be legally defined. Any of the following procedures may be used in order to legally define this [these] planning area[s]:

1. The project proponent has processed a FINAL CHANGE OF ZONE MAP concurrent with the SPECIFIC PLAN which legally defined this [these] planning area[s]. 2. The project proponent shall file a change of zone application along with a legal description defining the boundaries of the planning area affected by this land division application. The applicant will not be changing the allowed uses or standards within the existing zone but will merely be providing an accurate legal description of the affected planning area. The change of zone shall be approved and adopted by the Board of Supervisors."

30.PLANNING 028

PRIOR TO ANY PROJECT APPROVAL	SP *- CC&R RES PUB COMMON AREA	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing land division project (i.e. tract map or parcel map), the following condition shall be applied to the land division PRIOR TO MAP RECORDATION if the permanent master maintenance organization referenced in the condition entitled "SP -

Common Area Maintenance" is a public organization:

"The applicant shall convey to the County fee simple title, to all common open space areas, free and clear of all liens, taxes, assessments, leases (recorded or unrecorded) and easement, except those easements which in the sole discretion of the County are acceptable. As a condition precedent to the County accepting title to such areas, the applicant shall notify the Planning Department that the following documents shall be submitted to the Office of the County Counsel and submit said documents for review along with the current fee, which shall be subject to County Counsel approval:

1. A cover letter identifying the project for which approval is sought;

2. A signed and notarized declaration of covenants, conditions and restrictions;

3. A sample document, conveying title to the purchaser, of an individual lot or unit which provides that the declaration of covenants, conditions and restrictions is incorporated therein by reference; and,

4. A deposit equaling three (3) hours of the current hourly fee for Review of Covenants, Conditions and Restrictions established pursuant to County Ordinance No. 671 at the time the above referenced documents are submitted for County Counsel review.

The declaration of covenants, conditions and restrictions submitted for review shall a) provide for a minimum term of 60 years, b) provide for the establishment of a property owners' association comprised of the owners of each individual lot or unit as tenants in common, and c) contain the following provisions verbatim:

"Notwithstanding any provision in this Declaration to the contrary, the following provisions shall apply:

The property owners' association established herein shall, if dormant, be activated, by incorporation or otherwise, at the request of the County of Riverside, and the property owners' association shall unconditionally accept from the County of Riverside, upon the County's demand, title to all or any part of the 'common area', more particularly described on Exhibit '___' attached hereto. Such acceptance shall be through the president of the property owner's association, who shall be authorized to execute any documents required to facilitate transfer of the 'common area'. The decision to require activation of the property owners' association and the decision to require that the association unconditionally accept title to the 'common area' shall be at the sole discretion of the County of Riverside.

In the event that the 'common area', or any part thereof, is conveyed to the property owners' association, the association, thereafter, shall own such 'common area', shall manage and continuously maintain such 'common area', and shall not sell or transfer such 'common area' or any part thereof, absent the prior written consent of the Planning Director of the County of Riverside or the County's successor-in-interest. The property owners' association shall have the right to assess the owner of each individual lot or unit for the reasonable cost of maintaining such

'common area', and shall have the right to lien the property of any such owner who defaults in the payment of a maintenance assessment. An assessment lien, once created, shall be prior to all other liens recorded subsequent to the notice of assessment or other document creating the assessment lien.

This declaration shall not be terminated, 'substantially' amended, or property deannexed therefrom absent the prior written consent of the Planning Director of the County of Riverside or the County's successor-in-interest. A proposed amendment shall be considered 'substantial' if it affects the extent, usage or maintenance of the 'common area' established pursuant to this Declaration.

In the event of any conflict between this Declaration and the Articles of Incorporation, the Bylaws, or the property owners' association Rules and Regulations, if any, this Declaration shall control."

Once approved by the Office of County Counsel, the declaration of covenants, conditions and restrictions shall be recorded by the Planning Department with one copy retained for the case file, and one copy provided to the County Transportation Department - Survey Division."

30.PLANNING 029			
PRIOR TO ANY PROJECT APPROVAL	SP *- CC&R RES PRI COMMON AREA	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing land division project within the SPECIFIC PLAN (tract map or parcel map), the following condition shall be placed on the implementing project PRIOR TO MAP RECORDATION if the permanent master maintenance organization referenced in the condition entitled "SP - Common Area Maintenance" is a private organization:

"The applicant shall notify the Planning Department that the following documents shall be submitted to the Office of County Counsel and submit said documents for review along with the current fee, which shall be subject to County Counsel approval:

1. A cover letter identifying the project for which approval is sought;

2. A signed and notarized declaration of covenants, conditions and restrictions;

3. A sample document, conveying title to the purchaser of an individual lot or unit, which provides that the declaration of covenants, conditions and restrictions is incorporated therein by reference; and,

4. A deposit equaling three (3) hours of the current hourly fee for Review if Covenants, Conditions and Restrictions established pursuant to County Ordinance No. 671 at the time the above referenced documents are submitted for County Counsel review.

The declaration of covenants, conditions and restrictions submitted for review shall a) provide for a minimum term of 60 years, b) provide for the establishment of a property owners' association comprised of the owners of each individual lot or unit as tenants in common, c) provide for ownership of the common area by either the property owners' association or the

owners of each individual lot or unit as tenants in common, and (d) contain the following provisions verbatim:

"Notwithstanding, any provision in this Declaration to the contrary, the following provisions shall apply:

The property owners' association established herein shall manage and continuously maintain the 'common area', more particularly described on Exhibit '___', attached hereto, and shall not sell or transfer the 'common area' or any part thereof, absent the prior written consent of the Planning Director of the County of Riverside or the County's successor-in-interest.

The property owners' association shall have the right to assess the owners of each individual lot or unit for the reasonable cost of maintaining such 'common area' and shall have the right to lien the property of any such owner who defaults in the payment of a maintenance assessment. An assessment lien, once created, shall be prior to all other liens recorded subsequent to the notice of assessment or other document creating the assessment lien.

This Declaration shall not be terminated, 'substantially' amended, or property deannexed therefrom absent the prior written consent of the Planning Director of the County of Riverside or the County's successor-in-interest. A proposed amendment shall be considered 'substantial' if it affects the extent, usage or maintenance of the 'common area' established pursuant to this Declaration.

In the event of any conflict between this Declaration and the Articles of Incorporation, the Bylaws, or the property owners' association Rules and Regulations, if any, this Declaration shall control."

Once approved by the Office of County Counsel, the declaration of covenants, conditions and restrictions shall be recorded the Planning Department with one copy retained for the case file, and one copy provided to the County Transportation Department - Survey Division."

30.PLANNING 031

PRIOR TO ANY PROJECT APPROVAL	SP - PALEO M/M PROGRAM	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMITS, the project applicant shall enter into an agreement with a qualified paleontologist. This agreement shall include, but not be limited to, the preliminary mitigation and monitoring procedures to be implemented during the process of grading. A copy of said agreement shall be submitted to the Planning Department. No grading permits will be issued unless the preliminary mitigation and monitoring procedures as described in the EIR are substantially complied with."

30.PLANNING 032

PRIOR TO ANY PROJECT APPROVAL	SP - GENERIC M/M PROGRAM	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMITS, the project applicant shall provide to the Planning Department a detailed proposal for complying with the preliminary mitigation and monitoring procedures described in the EIR for the process of grading. Grading permits will not be issued unless the preliminary mitigation and monitoring procedures as described in the EIR are substantially complied with."

30.PLANNING 033

PRIOR TO ANY PROJECT APPROVAL	SP - F&G CLEARANCE	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e. tract map, parcel map, use permit, plot plan, etc.) which may propose grading or construciton within or along the banks of any blue-lined stream, the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMITS, the applicant shall obtain written notification to the County Planning Department that the appropriate California Department of Fish and Game notification pursuant to Sections 1601/1603 of the California Fish and Game Code has taken place, or obtain an "Agreement Regarding Proposed Stream or Lake Alteration" (Sections 1601/1603 Permit) should any grading or construction be proposed within or along the banks of any natural watercourse or wetland, located either on-site or any required off-site improvement areas. Copies of any agreement shall be submitted with the notification."

30.PLANNING 034

PRIOR TO ANY PROJECT APPROVAL	SP - ACOE CLEARANCE	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e. tract map, parcel map, use permit, plot plan, etc.) which may propose grading or construciton within or along the banks of any blue-lined stream which is determined to be within the jurisdiction of the United States Army Corps of Engineers, the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMITS, the applicant shall obtain written notification to the County Planning Department that the alteration of any watercourse or wetland, located either on-site or on any required off-site improvement areas, complies with the U.S. Army Corps of Engineers Nationwide Permit Conditions, or obtain a permit under Section 404 of the Clean Water Act should any grading or construction be proposed within or along the banks of any natural watercourse or wetland. Copies of any agreement shall be submitted with the notification."

30.PLANNING 036

PRIOR TO ANY PROJECT APPROVAL	SP - POST GRADING REPORT	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the

implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMITS, the project applicant shall provide to the Planning Department a post grading report. The report shall describe how the mitigation and monitoring program as described in the EIR and pre-grading agreement with the qualified archaeologist/paleontologist/other were complied with."

30.PLANNING 037
PRIOR TO ANY PROJECT APPROVAL — SP - SCHOOL MITIGATION — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO BUILDING PERMITS, impacts to the Coachella Valley Unified School District shall be mitigated in accordance with state law."

30.PLANNING 038
PRIOR TO ANY PROJECT APPROVAL — SP - ARCHAEOLOGIST RETAINED — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any land division or development permit (use permit, plot plan, etc.), a condiiton of approval shall be applied to the land division or development permit to ensure that the unique archaeologic resources identified in the Cultural Resources Report prepared as part of this Specific Plan's environmental documentation have been adequately addressed. The condition shall read as follows:

Prior to the issuance of grading permits, a qualified archaeologist shall be retained by the land divider for consultation and comment on the proposed grading with respect to potential impacts to unique archaeological resources. Should the archaeologist, after consultation with the appropriate Native American tribe, find the potential is high for impact to unique archaeological resources (cultural resources and sacred sites), a pre-grading meeting between the archaeologist, a Native American observer, and the excavation and grading contractor shall take place. During grading operations, when deemed necessary in the professional opinion of the retained archaeologist (and/or as determined by the Planning Director), the archaeologist, the archaeologist's on-site representative(s) and the Native American Observer shall actively monitor all project related grading and construction and shall have the authority to temporarily divert, redirect, or halt grading activity to allow recovery of unique archaeological resources. Prior to the issuance of grading permits, the NAME, ADDRESS and TELEPHONE NUMBER of the retained archaeologist shall be submitted to the Planning Department and the B&S Grading Division. If the retained archaeologist, after consultation with the appropriate Native American tribe, finds no potential for impacts to unique archaeological resources, a letter shall be submitted to the Planning Department certifying this finding by the retained qualified archaeologist.

30.PLANNING 039
PRIOR TO ANY PROJECT APPROVAL — SP - IF HUMAN REMAINS FOUND — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any land division or development permit (use permit, plot plan, etc.), a condition of approval shall be applied to the land division or development permit, and shall read

as follows:

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resource Code section 5097.98. The County Coroner shall be notified of the find immediately. If the remains are determined to be prehistoric, the coroner shall notify the Native American Heritage Commission, which will determine and notify the appropriate NATIVE AMERICAN TRIBE who is the most likely descendent. The descendent shall inspect the site of the discovery and make a recommendation as to the appropriate mitigation. After the recommendations have been made, the land divider, a Native American Tribe representative, and a County representative shall meet to determine the appropriate mitigation measures and corrective actions to be implemented.

30.PLANNING 040		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - COMMON AREA MAINTENANCE	INEFFECT	Outstanding

Prior to the approval of any implementing land division project within the SPECIFIC PLAN (i.e. tract map or parcel map), the following condition shall be placed on the implementing application:

"PRIOR TO MAP RECORDATION, the following procedures for common area maintenance procedures shall be complied with:

a. A permanent master maintenance organization shall be established for the SPECIFIC PLAN area to assume ownership and maintenance responsibility for all common recreation, open space, circulation systems and landscaped areas. The organization may be public or private. Merger with an area-wide or regional organization shall satisfy this condition provided that such organization is legally and financially capable of assuming the responsibilities for ownership and maintenance. If the organization is a private association then neighborhood associations shall be established for each residential development, where required, and such associations may assume ownership and maintenance responsibility for neighborhood common areas.

b. Unless otherwise provided for in these conditions of approval, common open areas shall be conveyed to the maintenance organization as implementing development is approved or any subdivision as recorded.

c. The maintenance organization shall be established prior to or concurrent with the recordation of the first land division. Any agreements with the maintenance organization shall stipulate that maintenance of landscaped areas will occur in accordance with Ordinance No. 859 (as adopted and any amendments thereto) and the Riverside Guide to California Friendly Landscaping.

d. Covenants, Conditions, and Restrictions for the SPECIFIC PLAN shall prohibit the use of water-intensive landscaping and require the use of low water use landscaping pursuant to the provisions of Ordinance No. 859 (as adopted and any amendments thereto).

e. Covenants, Conditions, and Restrictions for the SPECIFIC PLAN shall incorporate provisions concerning landscape irrigation system management and maintenance for the purpose of

facilitating the water-efficient landscaping requirements of Ordinance No. 859 (as adopted and any amendments thereto). The common areas to be maintained by the master maintenance organization shall be identified in the DISTRICT REFINMENT PLAN'S"

30.PLANNING 041

PRIOR TO ANY PROJECT APPROVAL	SP - ENTRY MONUMENTATION	Status: INEFFECT	Conditions: Outstanding

All monumentation shall be in substantial conformance to the DISTRICT REFINMENT PLAN for the respective DISTRICT of the SPECIFIC PLAN.

Landscaping of entry monument(s) shall comply with Ordinance No. 859 (as adopted and any amendments thereto) and the Riverside County Guide to California Friendly Landscaping."

30.PLANNING 045

PRIOR TO ANY PROJECT APPROVAL	SP - CVWD CLEARANCE	Status: INEFFECT	Conditions: Outstanding

The Coachella Valley Water District (CVWD) has indicated a conceptual approval of the Specific Plan design and related studies in a letter provided to the Planning Department on October 22, 2010. The following conditions of approval were requested in said letter. Prior to approval of any implementing project, the project proponent shall provide a clearance letter from CVWD to the Planning Department indicating that the following requirements have been met to the satisfaction of CVWD:

1. Flood risks from two drainage areas and potential flows from the Un-named Canyon South of Barton Canyon-Fan 6 and Barton Canyon-Fan 5 were not identified in the Report as a flood hazard that impact the development at the northwestern and north boundaries (Pierce Street and Avenue 80). The two drainage areas contribute approximately 1,200 - 2,000 cfs per square mile. The flows from the two drainage areas along with potential flows from Un-named Canyon-Fan 6 and Barton Canyon-Fan 5 will need to be determined and facilities constructed to collect, route and discharge the flows in a manner compatible with pre-project/existing conditions. These flood risks are identified on the Exhibit.

2. The proposed flood control scheme will need to adequately address potential upstream and downstream impacts, as summarized below:

a. Channel 4 collects flow from a fan surface and discharges 3,490 cfs of concentrated flow into a culvert at HWY 86 where there are no downstream improvements. The discharge from Channel 4 must be released in a manner consistent with pre- project/existing conditions, which will require future analysis to define these conditions. Altematively, the developer can store or discharge flows within the boundaries of the northem portion of the development or obtain flooding easements from northem adjacent property owners.

b. The existing flood hazard analysis shows depths of 1 to 2 feet and velocities of 6 to 7 feet per second (fps) near the upstream (southwesterly) boundary of the development. The flood control concept plans show velocities that exceed 15 fps and depths of over 2 feet in the proposed channels. It is our view that the proposed depths and velocities will rapidly erode their proposed (natural bottom) flood channels and erosion may extend upstream of the development boundary.

Future detailed analyses will be required to demonstrate that the channels remain stable, maintain their flood conveyance capacity and do not alter properties upstream of the development. Engineering solutions may include wider or concrete lined flood control channels.

c. The flood control scheme proposes to excavate flood basins and sediment traps and construct diversion channels to route flows from Channel 1, 2 and 3 through existing culverts within HWY 86's right-of-way. It is not known if Caltrans will permit the developer to build these facilities and we are not yet convinced that routing the peak flows through the existing culverts is a practical solution to flood management. Future detailed analysis will be required and engineering solutions may require improved or new culverts/bridges under HWY 86.

d. The developer will be required to obtain tentative approval from Caltrans for use and/or improvements within their right-of-way.

e. The flood control scheme has three channels that discharge concentrated flows of 840 cfs, 34,039 cfs and 11,306 cfs into the Salton Sea. No analysis has been provided to demonstrate these discharges are reasonably similar to pre-project conditions. As well, potential impacts from sediment deposition and the Sea's receding shoreline on downstream properties have not been addressed. Future detailed analysis will be required that demonstrates the issues above have been addressed; such an analysis may result in changes to the conceptual designs of Channels 1, 2 and 3.

f. The flood control scheme proposes flood basins and sediment traps to the east of HWY 86 as part of protecting the development. These basins will capture sediment transported from the Santa Rosa Mountains and also capture sediments eroded from the flood control channels. Future detailed analyses will be required to predict the volumes of sediment that might be transported and trapped to ensure that the flood control scheme will function under these predicted volumes and develop a practical sediment management program.

3. A future detailed document that discusses the management, operations, and maintenance of the flood control system will also be required.

The development proposes to use for flood control several CVWD irrigation drainage channels that discharge into the Salton Sea. Coachella Valley drainage channels have existing beneficial uses that include preservation of rare, threatened or endangered species. Please note that the Conditional Letter of Map Revision (CLOMR) process as of October 1, 2010, requires compliance with the Endangered Species Act (ESA). ESA compliance documentation is required prior to submitting the CLOMR to FEMA. Because of the recent change, CVWD may require that the developer obtain a CLOMR prior to approval of Tentative Map.

The Salton Sea is designated as Waters of the United States; the developer will be required to obtain permission and/or permits for the construction of the channels at the Salton Sea from the Army Corps of Engineers, the Environment Protection Agency (EPA) and the Regional Water Quality Control Board.

The developer is urged to begin consultation with U.S. Department of Interior's Fish and

Wildlife Service, California Department of Fish and Game, Army Corps of Engineers and other environmental agencies regarding the flood control scheme to minimize any potential future impacts/changes to the flood control scheme.

CVWD requests the county require the developer to update the pertinent sections of Specific Plan 375 and the EIR documentation to include the above conditions as part of the flood control scheme concept approval. Also, CVWD requests to reserve the right to comment on the flood control scheme in the event modifications are made during the finalization of the Specific Plan & EIR documentation.

30.PLANNING 046

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.1-4	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.1-4 from EIR514 requires:

Prior to grading final, the project applicant shall develop a lighting plan to reduce off-site and nighttime lighting impacts that shall be subject to approval by the Riverside Planning Department. The plan shall require all lighting adjacent to open space areas to be downcast luminaries with light patterns directed away from and shielded so that light is not directed into open space areas. Mercury vapor and halide lighting shall not be used on the perimeter of the developed areas and in areas adjacent to undeveloped open space. Security lighting throughout the project shall be controlled to limit light shine to necessary periods."

30.PLANNING 047

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.3-1	INEFFECT	Outstanding

Mitigation Measure 6.3-1 from EIR514 requires:

Prior to implementing project approval, applicants for implementing projects shall 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.

30.PLANNING 048

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.3-2	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following

language shall be added to the implementing project:

Mitigation Measure 6.3-2 from EIR514 requires:

Prior to grading permit issuance, applicants for implementing projects shall develop a Construction Emission Management Plan to minimize construction-related emissions. The Construction Emission Management Plan shall include, at a minimum, the following elements:

-Use of water trucks or sprinkler system in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency.

-Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 20 miles per hour).

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

-Active sites shall be watered at least three times daily during dry weather.

-Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies.

-Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days) or plant vegetative ground cover as soon as possible. -Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas.

-Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles.

-Retrofit 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., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment.

-The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following:

-Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the

time of mobilization of each applicable unit of equipment.

-Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions.

-An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.

"The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.

Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions."

30.PLANNING 049
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-3 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.3-3 from EIR514 requires:

Prior to implementing project approval, applicants for implementing projects located in areas under the jurisdiction of the SCAQMD shall be required to conduct a project-level Localized Significance Thresholds (LST) analysis in accordance with the SCAQMD Final Localized Significance Thresholds Methodology or any superseding guidance document adopted by the SCAQMD Governing Board (South Coast Air Quality Management District, Final Localized Significance Threshold Methodology (2008). The guidance document may be viewed at the following website: http://www.aqmd.gov/ceqa/handbook/lst/lst.html.).

30.PLANNING 050
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-4 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.3-4 from EIR514 requires:

Prior to building final inspection, the applicant shall submit building plans to the County Building Department to demonstrate that all residential buildings are designed to achieve energy efficiency equivalent to levels 30 percent better than the current standards required by Title 24 (2008) Standards at the time building permits are issued."

30.PLANNING 051 — SP - MITIG MEASURE 6.3-5 — Status: — Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.3-5 from EIR514 requires:

Prior to building final inspection, the applicant shall submit building plans to the County Building Department to demonstrate that all commercial buildings shall be designed to achieve energy efficiency equivalent to levels 15 percent better than the current standards presently required by Title 24 (2008) Standards at the time building permits are issued."

30.PLANNING 052

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.3-6 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.3-6 from EIR514 requires:

Prior to building final inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified in plot plans and may not be pooled in one location. A minimum of 10 percent of parking spaces in excess of those required by County ordinance shall be reserved for carpool or vanpool parking."

30.PLANNING 054

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.3-7 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.3-7 from EIR514 requires:

Prior to building final inspection, applicants shall post "5-minute idling" signs for trucks where

applicable."

30.PLANNING 055
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-8 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.3-8 from EIR514 requires:

Prior to implementing project approval, applicants for implementing projects shall provide or make arrangements to provide shuttle service connecting the project's medium- and high-density development areas to existing transit service until such time that full transit service is provided to and within the project site.

30.PLANNING 056
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-10 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.3-10 from EIR514 requires:

Prior to implementing project approval, plans demonstrating that active parks, playgrounds, schools, and nursing/hospital facilities are to be located at least 500 feet from the closest right of way of State Route 86S shall be submitted to the County Planning Department for review and approval.

30.PLANNING 057
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-11 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.3-11 from EIR514 requires:

Prior to implementing project approval, plans demonstrating that residential units are to be located a minimum of 300 feet from the nearest right of way of State Route 86S to the lot line shall be submitted to the County Planning Department for review and approval.

30.PLANNING 058
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-12 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.3-12 from EIR514 requires:

Prior to building final inspection, residential units located within 500 feet from the closest right of way of State Route 86S shall be equipped with high-efficiency electrostatic cleaning devices."

30.PLANNING 059
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-13 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.3-13 from EIR514 requires:

Prior to implementing project approval, residential units located within 500 feet from the closest right of way of State Route 86S shall be required to conduct a health risk assessment.

30.PLANNING 060 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.3-14	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.3-14 from EIR514 (as revised by the RRDEIR) requires:

Prior to building final inspection, permit applicants shall provide the County Planning Department with a disclosure document form, to be provided to all future property owners (residential and commercial), disclosing that the property is in the Salton Sea Air Basin, which is an area designated as in nonattainment status by the U.S. EPA and California Air Resources Board (CARB) for particulate matter, including but not limited to PM10. The documentation shall note that periodic wind blown dust and particulate matter from agricultural lands in Riverside and Imperial County, and exposed Salton Sea shoreline areas if sea levels recede further, may result in adverse respiratory health impacts. The disclosure form shall be provided to all future property owners within the Project site, after review and approval by the County Planning Department."

30.PLANNING 061 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.3-15	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.3-15 from EIR514 (as revised by the RRDEIR) requires:

Prior to grading permit issuance, the construction contractor shall prepare a Work Plan for review and approval by County Building and Safety Department and County Department of Public Health that includes the following measures, where feasible, to reduce valley fever and Hantavirus risk during construction:

-For construction activity involving substantial soil disturbance activity, preferentially assign persons with positive coccidioidin skin tests (since those with positive tests can be considered

immune to reinfection of valley fever) to perform the work.

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

-Consult with staff from the Coachella Valley Mosquito and Vector Control District to ascertain whether the wild rodent surveillance program has identified risks posed by the Hantavirus in areas under construction. Construction activity shall be limited in areas identified as a risk and workers shall be notified of the findings.

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

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

-Preferentially assign crews to work upwind from excavation sites to the greatest extent possible. This measure does not apply to persons with positive coccidioidin skin tests (since those with positive tests can be considered immune to reinfection of valley fever).

-Pave or apply sufficient water or environmentally safe dust control agents on all construction roads.

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

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

30.PLANNING 062 PRIOR TO ANY PROJECT APPROVAL | SP - MITIG MEASURE 6.3-18 | Status: INEFFECT | Conditions: Outstanding

Mitigation Measure 6.3-18 from EIR514 requires:

Prior to implementing project approval, stationary sources of diesel, ozone, toxic air contaminants (TAC's) or particulate matter (PM10 and PM2.5) contaminants or projects attracting or generating substantial numbers of diesel truck trips shall be required to demonstrate to the County Planning Department that such projects would not exceed the health-based significance thresholds established by the SCAQMD and/or ICAPCD as appropriate. Based on the current health-based significance thresholds, if the assessment determines that the project would result in an incremental increase in cancer risk of more than 10 in 1 million at the maximally impacted residential, sensitive, and off-site workplace receptors or that the chronic hazard indices for non-cancer health impacts are above 1.0 at the maximally exposed residential, sensitive, and off-site workplace receptors, the proposed project shall be required to implement project design changes or measures that would reduce impacts to below the existing established thresholds.

30.PLANNING 063 | SP - MITIG MEASURE 6.3-21 | Status: | Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Mitigation Measure 6.3-21 from EIR514 (as revised by the RRDEIR) requires:

Prior to implementing project approval, plans demonstrating that auto body shops with painting/coating operations are to be located at least 1 mile feet from odor sensitive receptors shall be submitted to the County Planning Department for review and approval.

30.PLANNING 064

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.3-22 Status: INEFFECT Conditions: Outstanding

Mitigation Measure 6.3-22 from EIR514 (as revised by the RRDEIR) requires:

Prior to implementing project approval, plans demonstrating that asphalt plants are to be located at least 1 mile feet from odor sensitive receptors shall be submitted to the County Planning Department for review and approval.

30.PLANNING 065

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.5-1 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.5-1 from EIR514 requires:

Prior to issuance of a grading permit, as required by State CEQA Guidelines Sections 15064.5(e) and (f), a cultural resources management plan (CRMP) shall be prepared and submitted for the appropriate County Planning Department for review and approval. The CRMP shall contain detailed provisions for the treatment of unanticipated discoveries during project construction, including human remains. The provisions of the CRMP should be consistent with state law as contained in Health and Safety Code Section 7050.5, and PRC Sections 5097.94 and 5097.98. Such mitigation shall be addressed in a manner consistent with the following:

-If buried materials of potential historical or cultural significance are accidentally discovered during any earth-moving operations associated with the proposed project, all work in that area shall be halted or diverted until a qualified historian/archaeologist can evaluate the nature and significance of the finds. If the find is determined to be an historical resource, as defined in Section 15064.5 of the California Code of Regulations (State CEQA Guidelines), avoidance or other appropriate measures as discussed in the CRMP shall be implemented.

-If evidence of potentially significant prehistoric or historic resources is uncovered during project-related grading areas in which archaeological and Native American monitoring has already been required, the extent of monitoring shall be amended and the presence of a Native

American monitors shall be incorporated into the monitoring program for all areas in the affected tentative tract."

30.PLANNING 066
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.5-3 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.5-3 from EIR514 requires:

Prior to grading final for any grading activity near any of the sites listed below, the respective following site shall be tested and evaluated in consultation with the Torres-Martinez Desert Cahuilla Indians as required, and pursuant to the requirements of Phase II Archaeological standards and practices, as approved by Riverside County, for the sites to determine integrity, data potential and significance: CA-RIV-8891 (33-17082), CA-RIV-8894 (33-17085), CA-RIV-8895 (33-17086), CA-RIV-8896 (33-17087), CA-IMP-8784 (13-009821), CA-IMP-8785 (13-009822), CA-IMP-8786 (13 009823), CA-IMP-92, CA-IMP-100, and CA-IMP-2626."

30.PLANNING 067
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.5-7 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

"Mitigation Measure 6.5-7 from EIR514 (as revised by the RRDEIR) requires:

Prior to grading final for each implementing project, the areas under consideration shall be monitored by a County-approved and qualified paleontologist, who shall develop a formal agreement with a recognized museum repository, such as the Natural History Museum of Los Angeles County Vertebrate Paleontology Department (LACM). Prior to earth moving activities, the paleontologist shall coordinate with appropriate construction contractor personnel.

Should paleontological resources be discovered during earthmoving activities, work shall cease and no further disturbance shall occur in the immediate vicinity of the uncovered resource and an area 50 feet in diameter of the find. A paleontologist shall be contacted to investigate the find and, if deemed necessary, collect uncovered paleontological resources, curate any resources collected with an appropriate reposition, and file a report with the appropriate Planning Department documenting any paleontological resources that are found. Upon completion of the

field investigation, collection of the resources, if necessary, and clearance of the find by the paleontologist, earthmoving activities may resume."

30.PLANNING 068
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.6-1 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.6-1 from EIR514 requires:

Prior to implementing project approval, site-specific geotechnical and engineering geologic investigations that analyze site-specific seismic shaking including provisions for appropriate construction techniques, including adherence to local codes and the California Building Code's design criteria for construction within former Seismic Zone 4, now Seismic Design Category E or F, shall be prepared by California-registered geotechnical engineers and certified engineering geologists, and submitted to the Riverside County Planning Department-Geology (or equivalent) for review and approval.

30.PLANNING 069
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.6-2 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.6-2 from EIR514 requires:

Prior to implementing project approval, site-specific geotechnical and engineering geologic investigations shall analyze site-specific lateral spread landslide potential (in accordance with Special Report 117 and the 2007 CBC) and (as appropriate) include provisions for appropriate construction techniques. This shall include adherence to the California Building Code's design criteria for construction within Seismic Design Category E or F. This study and all appropriate recommendations shall be prepared by California registered geotechnical engineers and certified engineering geologists, and submitted to the Riverside County Planning Department-Geology (or equivalent) for review and approval.

30.PLANNING 070
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.6-3 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GARDING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.6-3 from EIR514 requires:

Prior to the issuance of grading permits and in compliance with the requirements of Riverside County ordinances, a detailed design-level geotechnical report(s) shall be submitted to the County's Geologist for review and approval concurrent with each tract map or parcel map application. The report(s) shall identify and address site-specific (a) underlying soil conditions (including corrosive and expansive soil conditions), (b) liquefaction potential, (c) seismic parameters and building requirements, (d) tile drain and subdrainage system conditions, and (e)

slope stability and rockfall hazards. The measures recommended in the final geotechnical report(s) shall be identified on applicable grading plans and shall be implemented to the satisfaction of the County Geologist. Grading shall be performed in accordance with applicable provisions of the Standard Grading Specifications contained in the design-level geotechnical reports."

30.PLANNING 071
PRIOR TO ANY PROJECT APPROVAL | SP - MITIG MEASURE 6.6-4(A) | Status: INEFFECT | Conditions: Outstanding

Mitigation Measure 6.6-4 from EIR514 requires:

Prior to implementing project approval (and grading final, see 30.PLANNING.72) site-specific hydrologic, geotechnical and engineering geologic investigations shall analyze site-specific soils for erosion, sedimentation, and debris flow potential (in accordance with local codes and the 2007 CBC) and (as appropriate) include provisions for appropriate construction techniques. These studies and all appropriate recommendations shall be prepared by California registered geotechnical engineers, registered civil engineers, and certified engineering geologists, and submitted to the Riverside County Planning Department-Geology (or equivalent) for review and approval.

30.PLANNING 072
PRIOR TO ANY PROJECT APPROVAL | SP - MITIG MEASURE 6.6-4(B) | Status: INEFFECT | Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.6-4from EIR514 requires:

Prior to grading final, site-specific hydrologic, geotechnical and engineering geologic investigations shall analyze site-specific soils for erosion, sedimentation, and debris flow potential (in accordance with local codes and the 2007 CBC) and (as appropriate) include provisions for appropriate construction techniques. These studies and all appropriate recommendations shall be prepared by California registered geotechnical engineers, registered civil engineers, and certified engineering geologists, and submitted to the Riverside County Planning Department-Geology (or equivalent) for review and approval."

30.PLANNING 073
PRIOR TO ANY PROJECT APPROVAL | SP - MITIG MEASURE 6.6-5 | Status: INEFFECT | Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following

language shall be added to the implementing project:

Mitigation Measure 6.6-5 from EIR514 requires:

Prior to grading final for each implementing project, the project applicant shall submit a copy of the Notice of Intent (NOI) to obtain coverage under the Construction General Permit of the National Pollutant Discharge Elimination System (NPDES) issued by the Colorado River Regional Water Quality Control Board (CRRWQCB). The applicant shall submit a copy of the NOI and shall provide a copy of the required Storm Water Pollution Prevention Plan (SWPPP) to Riverside (or equivalent) for review and approval. A copy of the SWPPP must be maintained on the project site during grading and construction activities. The Riverside County Planning Department shall review the documentation and shall conduct site inspections during construction to monitor for compliance with the SWPPP. The project's SWPPP shall also include the following provisions:

-Pre-Grading: The portions of the site to be graded shall be pre-watered to a depth designated by the soils engineer prior to the onset of grading operations.

-Pre-Grading: Undisturbed areas of biological soil crusts in "non-construction" areas adjacent to proposed roadways, buildings, parking areas, etc., shall be marked so that unnecessary disturbance of the biological soil crusts is minimized.

-During Grading: Once grading has commenced, and until grading has been completed, watering of the site and/or other treatment(s) determined to be appropriate shall be ongoing.

-Post-Grading: All disturbed areas shall be treated to prevent erosion during the term that the area will remain undeveloped.

-Landscape and irrigation shall be installed per future plan submittals."

		Status:	Conditions:
30.PLANNING 074 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.6-6	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.6-6 from EIR514 requires:

Prior to grading final for each implementing project, the applicant/owner shall submit and implement a Storm Water Quality Management Plan (SWQMP). The SWQMP shall include the following elements: identification of potential pollutant sources that may affect the quality of the storm water discharges; the proposed design and placement of structural and non-structural best management practices (BMPs) to address identified pollutants; a proposed inspection and

maintenance program; and a method for ensuring maintenance of all BMPs over the life of the project. The approved measures shall also be shown on site, building, and grading plans. Maintenance records shall be maintained by the applicant/owner for residential developments, or landowners for commercial developments. Prior to approval of the Land Use Permit, the SWQMP shall be submitted to Riverside County Flood Control and Water Conservation District. All measures specified in the plan shall be constructed and operational prior to occupancy clearance. Maintenance records shall be submitted to Riverside County Planning Department on an annual basis prior to the start of the rainy season and for five years thereafter. After the fifth year, the records shall be maintained by the landowner or applicant/owner, and be made available to Riverside County Planning Department on request."

30.PLANNING 075
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.6-7 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.6-7 from EIR514 requires:

Prior to implementing project approval, site-specific geotechnical investigations shall be prepared and submitted to the Riverside County of Planning Department-Geology, as appropriate, to identify areas of potential shallow groundwater. The geotechnical studies shall identify appropriate construction techniques (e.g., dewatering, groundwater barriers, et al.) where groundwater is identified within 50 feet of the ground surface.

30.PLANNING 076
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.6-8 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.6-8 from EIR514 requires:

Prior to implementing project approval, site-specific geotechnical investigations shall be prepared and submitted to the Riverside County Planning Department-Geology, as appropriate, to identify potential impacts related to subsidence. The geotechnical studies shall identify appropriate construction techniques to be used during grading and building design such as the compaction of soils, modified grading techniques, use of spread footings, the use of post tensioned slabs, and other methods.

30.PLANNING 077
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.6-9 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.6-9 from EIR514 requires:

Prior to implementing project approval, site-specific geotechnical and engineering geologic investigations that analyze site-specific soil conditions, including the potential for collapsible soils, shall be prepared by California registered geotechnical engineers and certified engineering geologists, and submitted to the Riverside County Planning Department-Geology (or equivalent) for review and approval. Recommended mitigations may include overexcavation of the subject soils and recompaction on new engineered fill material, possibly pre-saturating the subject soils, and provision of proper surface drainage away from structures and building foundations.

30.PLANNING 078
PRIOR TO ANY — SP - MITIG MEASURE 6.6-10 — Status: INEFFECT — Conditions: Outstanding

PROJECT APPROVAL

Mitigation Measure 6.6-10 from EIR514 requires:

Prior to implementing project approval, site-specific geotechnical studies, including soil expansion tests, shall be prepared and submitted to the Riverside County Planning Department-Geology, as appropriate, and shall include appropriate construction methods to reduce impacts from expansive soils.

30.PLANNING 079

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.7-2	Status: INEFFECT	Conditions: Outstanding

Mitigation Measure 6.7-2 from EIR514 requires:

Prior to implementing project approval and grading final, future applicants for implementing projects and grading permits on the project site shall conduct a site survey by a County-approved licensed professional to identify and remediate all contaminated soils on the project site. All pesticide residue measured in on-site soils shall not exceed the applicable Preliminary Remediation Goals and the survey report shall be approved and documented by the Riverside County Department of Environmental Health.

30.PLANNING 080

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.7-3	Status: INEFFECT	Conditions: Outstanding

Mitigation Measure 6.7-3 from EIR514 requires:

Prior to implementing project approval, the applicant shall submit plans to the Coachella Valley Mosquito and Vector Control District (CVMVCD) which identify potential breeding sources for mosquitoes (such as standing water in street catch basins, subdivision drains, roadside ditches, flood channels, ravines, and similar places on public right-of-way and parks) that demonstrate designs that would minimize such breeding sources.

30.PLANNING 081

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.8-1	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.8-1 from EIR514 requires:

Prior to grading final for each implementing project, a project-specific water quality management plan (WQMP) shall be submitted to Riverside County for review and approval."

30.PLANNING 082

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.8-2	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.8-2 from EIR514 (as revised by the RRDEIR) requires:

Prior to grading final for each implementing project, a detailed operation and maintenance plan shall be submitted to the Riverside County and Coachella Valley Water District for review and approval for the as-built project conditions."

30.PLANNING 083

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.8-3	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.8-3 from EIR514 requires:

Prior to grading final for each implementing project, a Storm Water Pollution Prevention Plan (SWPPP) shall be developed and submitted to the Regional Water Quality Control Board for review approval. The SWPPP shall identify potential sources of pollution and specify runoff controls or BMPs during construction for the purpose of minimizing the discharge of pollutants in stormwater from the construction area. In addition, the SWPPP must identify post-construction control measures and a monitoring plan."

30.PLANNING 084

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.8-5	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.8-5 from EIR514 requires:

Prior to grading final for each implementing project, the applicant shall provide a plan for re-routing or connecting to existing irrigation and drainage facilities. This may include use of or alternation to facilities operated by or within the rights-of-way of other entities/The plan shall be

submitted to the appropriate agency (US Bureau of Reclamation, Caltrans, or Coachella Valley Water District) for review and approval."

30.PLANNING 085
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.8-6 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.8-6 from EIR514 requires:

During grading, the existing under-drainage system (tile drains), shall be preserved, where possible, to reduce potential adverse effects due to groundwater. Light weight excavation equipment shall be used where excavations come near the existing title drains to prevent damage to the underdrainage system. Where the tile drains are to be disrupted or exposed during grading, a replacement set of drains will be needed. The grading and construction aspects of the underdrainage system shall be performed under the guidance, observation/documentation, and recommendations of the Project Geologist. A formal evaluation of the installed subdrainage system, including the remaining tile drains, shall be evaluated for operation and flow once grading activities are completed. This report shall be prepared by the Project Geologist, the Project Civil Engineer, or the Project Agricultural/Civil Engineer and submitted to Riverside County for review."

30.PLANNING 086
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.8-8 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.8-8 from EIR514 requires:

Prior to implementing project approval, the applicant shall submit to Coachella Valley Water District (CVWD) for review and approval a hydrologic study that evaluates the potential flows from Un-Named Canyon-Fan 6 and Barton Canyon-Fan 5. This study will identify facilities to be constructed to collect, route and discharge flows in a manner compatible with pre-project/existing conditions across the project site.

30.PLANNING 087
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.8-10 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.8-10 from EIR514 requires:

Prior to implementing project approval for each phase or district, as appropriate, the applicant shall submit for review and approval a hydrology report to address potential erosion issues within the proposed channels to demonstrate that the channels remain stable, maintain their flood conveyance capacity, and do not alter properties upstream of the proposed project.

30.PLANNING 088 — SP - MITIG MEASURE 6.11-3 — Status: — Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Mitigation Measure 6.11-3 from EIR514 requires:

Prior to implementing project approval for each implementing project, for residential lots located within 65 dB(A) CNEL or greater noise contour or adjacent to a road that is classified as a secondary or larger, an acoustic analysis shall be required to address requirements for determining and mitigating traffic noise impacts to residential structures. The acoustical analysis must be received, reviewed, and approved by the appropriate agency (such as the Riverside County Office of Industrial Hygiene). Methods that may be implemented to meet the standards include, but are not limited to, providing noise walls of sufficient size to break the line of sight between roadways and residential areas, providing open-space buffers, providing natural barriers such as hills, berms, boulders, and dense vegetation, or a combination of these methods.

30.PLANNING 089

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.11-4 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"Mitigation Measure 6.11-4 from EIR514 (as revised by the RRDEIR) requires:

Prior to implementing project approval for each implementing project, a future noise study is required to address the stationary commercial noise standard as it relates to parking lot noise. Facility-related noise as projected to any portion of any surrounding property containing a "habitable dwelling, hospital, school, library, or nursing home," must not exceed the following worst-case noise levels of 45 dB(A) - 10-minute noise equivalent level (Leq) between the hours of 10:00 PM to 7:00 AM (nighttime standard); and 65 dB(A) - 10-minute Leq, between 7:00 AM and 10:00 PM (daytime standard). The noise study must be received, reviewed, and approved by the appropriate agency (such as the Riverside County Office of Industrial Hygiene). Methods that may be employed to reduce parking lot noise may include a noise barrier of sufficient size to break the line of sight, an open-space buffer, a setback, or a combination of methods shall be developed along locations between parking lot noise and exterior usable areas within residential uses where these uses interface."

30.PLANNING 090

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.11-5 Status: INEFFECT Conditions: Outstanding

Mitigation Measure 6.11-5 from EIR514 requires:

Prior to implementing project approval for each implementing project, a future noise study is required to address the stationary commercial noise standard as it relates to loading dock noise. Facility-related noise as projected to any portion of any surrounding property containing a "habitable dwelling, hospital, school, library, or nursing home," must not exceed the following worst-case noise levels of 45 dB(A) - 10-minute noise equivalent level (Leq) between the hours of 10:00 PM to 7:00 AM (nighttime standard); and 65 dB(A) - 10-minute Leq, between 7:00 AM

and 10:00 PM (daytime standard). The noise study must be received, reviewed, and approved by the appropriate agency (such as the Riverside County Office of Industrial Hygiene) prior to each implementing project approval. Methods that may be employed to reduce parking lot noise may include designing loading docks to have either a depressed (i.e., below grade) loading dock area, an internal bay, or a wall to break the line of sight between residential land uses and loading operations.

30.PLANNING 091

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.11-6	INEFFECT	Outstanding

Mitigation Measure 6.11-6 from EIR514 requires:

Prior to implementing project approval, a future noise study is required to address the stationary commercial noise standard as it relates to mechanical, electrical, or other related commercial type noise. Facility-related noise as projected to any portion of any surrounding property containing a "habitable dwelling, hospital, school, library, or nursing home," must not exceed the following worst-case noise levels of 45 dB(A) - 10 minute noise equivalent level (Leq) between the hours of 10:00 PM to 7:00 AM (nighttime standard); and 65 dB(A) - 10-minute Leq, between 7:00 AM and 10:00 PM (daytime standard). The noise study must be received, reviewed, and approved by the appropriate agency (such as the Riverside County Office of Industrial Hygiene) prior to each implementing project approval. Method that may be employed to reduce mechanical, electrical, or other commercial type noise may include locating equipment away from receptor areas, proper selection and sizing of equipment, installation of equipment with proper acoustical shielding, and incorporating the use of parapets into building design.

30.PLANNING 092

		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.11-7	INEFFECT	Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.11-7 from EIR514 requires:

Prior to grading final for each implementing project, the construction contractors shall use best management practices (BMPs) to reduce vibration due to specific plan construction activities by implementing the following:

-identifying all uses in the vicinity that may be adversely affected by the vibrations, including residences built in earlier phases and non-residential land uses that may contain vibration-sensitive equipment;

-installing seismographs at the aforementioned sensitive locations to ensure that vibration thresholds are not exceeded, and/or that construction activities would not cause structural

damage or adversely affect vibration-sensitive equipment;

-adjusting vibration amplitudes of the construction equipment used on site such as limiting the number of pieces operating in one location at the same time in areas where conditions would affect structures, the sensitivity of vibration sensitive equipment, and/or human tolerance;

-utilizing cast-in-drilled-hole (CIDH) piles in lieu of pile driving;

-providing notification to the residential land uses directly adjacent to the project site, at least 10 days in advance, of construction activities that are anticipated to result in vibration levels above the thresholds;

-conducting demolition, earthmoving, and ground-impacting operations sequentially, so as not to have two such operations occurring on the project site at the same time;

-selecting a demolition method to minimize vibration, where possible (e.g., sawing masonry into sections rather than demolishing it by pavement breakers); and/or

-operating earth-moving equipment on the construction site as far away as possible or practical from vibration-sensitive sites; using wheeled or rubber-tracked equipment, and using small pieces of equipment such as smaller bulldozers when possible.

The Riverside County Building and Safety Department shall monitor the conditions to determine that these BMPs are being utilized correctly and efficiently in order to reduce vibration impacts throughout the proposed project."

30.PLANNING 093

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.11-9	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.11-9from EIR514 requires:

Prior to grading final for each implementing project, the project applicant shall submit copies of proposed project construction documents and specifications to the Riverside County Building and Safety Department, as appropriate, indicating that construction staging areas along with the operation of earthmoving equipment within the project area is located as far away from vibration- and noise-sensitive sites as possible."

30.PLANNING 094

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.11-10	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.11-10 from EIR514 requires:

Prior to grading final for each implementing project, the project applicant shall submit copies of proposed project construction documents and specifications to the Riverside County Planning Department, as appropriate, indicating that heavily loaded trucks used during construction would be routed away from residential streets to the extent feasible."

30.PLANNING 095

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.13-7	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.13-7 from EIR514 requires:

Prior to grading final, the construction contractor shall provide a plan for review and approval by Riverside County Fire Department (RCFD) to demonstrate that during all grading and site clearance activities, all earth-moving equipment shall be equipped with spark arrestors and at least two portable fire extinguishers per vehicle. All equipment used in the vegetation-clearance phase shall be equipped with spark arrestors and best available fire safety technology. The vegetation-clearance activities shall be coordinated with and approved by the RCFD or SCSD in advance."

30.PLANNING 096

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.13-8	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.13-8 from EIR514 requires:

Prior to building final permit, the applicant shall submit proof that all structures adjacent to open

space shall be designed to satisfy at least a 1-hour fire resistant rating. Such structures shall incorporate fire retardant features such as boxed-in eaves, reduced overhangs, double-paned windows, convection resistant roof design, non-combustible roofing material, and related design features, as determined necessary by the RCFD and/or SCSD. Building permits shall not be issued until review of fire-retarding architectural features has been completed by the RCFD and/or SCSD. Design standards meeting RCFD and/or SCSD shall be included in the Fire Hazard Reduction Program and incorporated into the Fire Hazard Reduction Design Guidelines for the residential units."

30.PLANNING 097
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.13-10 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.13-10 from EIR514 requires:

Prior to building final inspection, the applicant shall provide for the purchasers of residential, commercial, and industrial units in planning areas that would be located adjacent to Open Space-Conservation and other off-site undeveloped or natural areas to be notified as to the requirements and maintenance of a brush-clearance radius of 100 feet around all buildings pursuant to Riverside County Ordinance No. 787 as appropriate."

30.PLANNING 098
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.14-1 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.14-1 from EIR514 requires:

Prior to grading final for each implementing project, a designated parking area with a security officer shall be provided for the construction workers during grading and construction operations. A site security plan shall be prepared and submitted to the Riverside County Sherriff's Department by the contractor indicating security features that shall be incorporated on the construction site(s), such as fencing and locked entrances, and construction equipment, tools, and material shall be secured by locking or placing them within sheds and/or other inaccessible areas while not in use."

30.PLANNING 099 — SP - MITIG MEASURE 6.15-1 — Status: — Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Mitigation Measure 6.15-1 from EIR514 requires:

Prior to implementing project approval, applicant(s) for implementing project development shall pay the development impact fees at the designated level (Level I, II, or III) as set forth by the Coachella Valley Unified School District (CVUSD), at the current rate. Fees shall be paid based on the square-footage of development per single-family residential unit, multi-family residential unit, commercial unit, and secondary living unit as required by CVUSD policy in each implementing project area. Active adult residential units proposed in the specific plan shall pay the development impact fees at the designated level (Level I, II, or III) for commercial/industrial development, as set forth by the CVUSD, at the current rate.

30.PLANNING 100

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.16-1 Status: INEFFECT Conditions: Outstanding

Mitigation Measure 6.16-1 from EIR514 requires:

Prior to the implementing project approval, a final biding Memorandum of Understanding (MOU) shall be executed between the applicant and Desert Recreation District (DRD) for the maintenance and operation of parks, including regional parks, within Riverside County. For the open space areas and other public parks areas within Riverside County not included as part of the final binding MOU between the applicant and DRD, the applicant shall annex into Community Service Area (CSA) 125, or other appropriate CSA, to provide for the maintenance and operation of such areas.

30.PLANNING 101

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.18-1 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.18-1 from EIR514 requires:

Prior to grading final for each implementing project, the contractors for construction activities for the applicants of implementing projects shall prepare a construction safety plan and submit it to the appropriate County Planning Department and Fire Department for review and approval. The plan shall include provisions for safety activities, including prevention, work-related injuries, on-site safety equipment, notification procedures, and other activities to prevent, reduce, and respond to injuries during construction."

30.PLANNING 102

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.20-1 Status: INEFFECT Conditions: Outstanding

Mitigation Measure 6.20-1 from EIR514 requires:

Prior to implementing project approval, future applicants for development permits must submit plans for water delivery systems to Coachella Valley Water District (CVWD) for review and approval.

30.PLANNING 103
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.20-2 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.20-2 from EIR514 requires:

Prior to implementing project approval, water quality testing for irrigation and fire suppression that uses nonpotable water shall submit documentation to Coachella Valley Water District (CVWD) indicating that the water quality meets the requirements of the California Department of Public Health and fire flow requirements for the Fire Department.

30.PLANNING 104
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.22-1 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.22-1 from EIR514 requires:

Prior to implementing project approval, a Waste Recycling Plan (WRP) shall be submitted to the appropriate County Waste Management Department or Planning Department for approval. At a minimum the WRP shall identify the materials (e.g., concrete, asphalt, wood, etc.) that would be generated by construction and development, the project amounts, measures/methods that would be implemented to recycle, reuse, and/or reduce the amount of materials, the facilities and haulers that would be utilized, and the targeted recycling or reduction rates to be achieved.

30.PLANNING 105
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.22-7 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.22-7 from EIR514 requires:

Prior to implementing project approval, applicant(s) shall submit for review and approval landscape plans that provide for the use of xeriscape landscaping and the use of drought tolerant low maintenance vegetation in all landscaped areas of the project.

30.PLANNING 106
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.23-1 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.23-1 from EIR514 requires:

Prior to building final, residential and commercial buildings shall be conditioned to participate in any future programs, such as green pricing programs, which allow customers to support the development of renewable energy sources by paying a small premium on their electric bills, established by the Imperial Irrigation District. If the district establishes a green pricing program whereby energy generated from renewable resources either exclusively or at a higher proportion may be purchased, the proposed project shall participate in the program. Proof of participation (enrollment) shall be submitted to the Planning Department within 30 days of occupancy."

30.PLANNING 107
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.23-2 — Status: INEFFECT — Conditions: Outstanding

Mitigation Measure 6.23-2 from EIR514 requires:

Prior to implementing project approval, the applicant shall submit plans showing the proposed locations of electricity transmission and distribution infrastructure to the Imperial Irrigation District for review and approval.

30.PLANNING 108
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.24-1 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-1 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide a listing of the green building practices and design elements used in the building that reduce GHG emissions to the appropriate Planning Department. The green building practices and design elements shall be consistent with the CAP and any other green building standards adopted by either Riverside County. (See, e.g., California Department of Housing and Community Development's Green Building & Sustainability Resources handbook at www.hcd.ca.gov/hpd/green_build.pdf; e.g., the American Institute of Architects at http://www.wiki.aia.org/Wiki%20Pages/Home.aspx)"

30.PLANNING 109
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.24-2 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUILDING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-2 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence of its use of energy-efficient designs meeting and/or consistent with the standards in the CAP and any other green building standards adopted by either Riverside County to the appropriate Planning Department. In accordance with the CAP, all residential buildings shall, at a minimum, exceed Title 24 (2008) by 30 percent and all non-residential buildings shall, at a minimum, exceed Title 24 (2008) by 15 percent. This measure does not exempt buildings from meeting future energy efficiency obligations that may result from future revisions to the Title 24 standards."

30.PLANNING 110 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.24-3	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-3 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of its use of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, including the installation of ENERGY STAR-certified products, consistent with the standards in the CAP and any other energy efficiency standards adopted by either Riverside County or \ County. (Information about ENERGY STAR-certified products are available at http://www.energystar.gov /index.cfm?fuseaction=find_a_product; see also the California Energy Commission's database of appliances meeting federal or state energy standards at http://www.appliances .energy.ca.gov; see the Electronic Product Environmental Assessment Tool for ranking of energy efficient computer equipment at http://www.epeat.net /AboutEPEAT.aspx; see the Online Guide to Energy Efficient Commercial Equipment at http://www.aceee.org/ogeece/ch1_index .htm)"

30.PLANNING 111 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.24-4	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-4 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of the use of "cool" roofs or "green" roofs, and cool

pavements. (See Consumer Energy Center, Cool Roofs at http://www.consumerenergycenter .org/coolroof/)"

30.PLANNING 113
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.24-5 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-5 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of the use of automatic covers, efficient pumps and motors, and solar heating for pools and spas. (See http://www.consumerenergycenter.org/home /outside/pools_spas.html)."

30.PLANNING 114
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.24-6 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-6 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence that the building is consistent with and/or does not conflict with the following Specific Plan-wide renewable energy targets:

-80 percent of residential units shall meet 60 percent of their baseline demand power energy needs with renewable energy; and

-80 percent of commercial building square footage shall meet 40 percent of their baseline demand power energy needs with renewable energy.

Should the individual structure not be able to demonstrate that power provided by the Imperial Irrigation District (IID) does not comply with this standard, then the individual structure shall comply by providing renewable energy power from a source within the limits of the Specific Plan. "

30.PLANNING 115 — SP - MITIG MEASURE 6.24-7 — Status: — Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-7 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of the use of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods consistent with measures recommended in the CAP. In accordance with the CAP, the applicant shall provide evidence that the building is consistent with the following Specific Plan-wide water conservation measures and/or does not prevent or conflict with the Specific Plan's ability to meet the following water conservation measures:

-90 percent of all builder-installed plumbing devices in each residential buildings will be low-flow and water-efficient;

-90 percent of all builder-installed plumbing devices in each non-residential buildings will be low-flow and water-efficient;

-Turf will not exceed 20 percent of the total landscaped area of each Planning Area, with the exception of parks, recreation centers, and schools;

-80 percent of public and common landscape areas will use smart irrigation systems per project; and

-80 percent of public and common landscape areas will use drought-tolerant, native, and/or water-efficient plant materials per project.

(See http://www1.eere.energy.gov/femp/program/waterefficiency_ bmp5.html; see also http://www.water.ca.gov/wateruseefficiency/landscape/.)"

30.PLANNING 116

PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.24-8 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT FINAL INSPECTION, the following language shall be added to the implementing project:

Mitigation Measure 6.24-8 from EIR514 requires:

Prior to grading final for each implementing project, the applicant or their contractor shall submit to the appropriate Public Works Department for review and approval of a site construction management plan for the reuse and recycle construction and demolition waste (including soil, vegetation, concrete, lumber, metal, and cardboard). (See http://www.ciwmb.ca.gov/condemo/)."

30.PLANNING 117

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.24-9	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-9 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of reuse and recycling measures in residential, industrial, and commercial projects consistent with measures recommended in the CAP. In accordance with the CAP, the applicant shall provide evidence that the building is consistent with the following Specific Plan-wide recycling and waste reduction measures and/or does not prevent or conflict with the Specific Plan's ability to meet the following recycling and waste reduction measures:

-Provide recycling containers within all multi-family residential communities;

-Provide recycling containers within all commercial, office, and light industrial buildings;

-Provide containers for community composting within all multi-family residential communities; and

-Provide containers for community composting within all commercial, office, and light industrial buildings.

(See http://zerowaste.ca.gov; see also http://www.ca-ilg.org/wastereduction)."

30.PLANNING 118

PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.24-10	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT, the following language shall be added to the implementing project:

Mitigation Measure 6.24-10 from EIR514 requires:

Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of the use of "smart growth" principles to reduce GHG emissions (i.e., ensure mixed-use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services) consistent with measures recommended in the CAP. In accordance with the CAP, the applicant shall provide evidence that the building is consistent with the following Specific Plan-wide "smart growth" measures and/or does not prevent or conflict with the Specific Plan's ability to meet the following "smart growth" measures:

-60 percent of building frontages will have the principal functional entry facing a public space such as a street, square, park, paseo, or plaza, but not a parking lot based on type of project;

-75 percent of mixed-use streets shall have minimum 8-foot-wide sidewalks that front primarily commercial retail uses and all other areas will have minimum 4-foot-wide sidewalks;

-60 percent of all housing with a density of 7 dwelling units per acre or more will lie within 0.5 mile of a transit stop;

(See http://www.epa.gov/smartgrowth/index.htm.)"

30.PLANNING 119 PRIOR TO ANY PROJECT APPROVAL	SP - MITIG MEASURE 6.24-11	Status: INEFFECT	Conditions: Outstanding

Mitigation Measure 6.24-11 from EIR514 requires:

Prior to implementing project approval for each tract map, the applicant shall preserve existing trees, to the extent feasible and encourage the planting of new trees consistent with the final landscape palette in the Specific Plan. Removed trees shall be replaced at a minimum 1:1 ratio in accordance with acceptable tree species defined in the final landscape palette.

(See http://www.epa.gov/dced/brownfields.htm)

30.PLANNING 123 PRIOR TO ANY PROJECT APPROVAL	SP - TOTAL BP/DU TRKNG	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project, the applicant shall provide a "SP375 Total Dwelling Unit Tracking Spreadsheet." This spreadsheet shall be considered part of the SPECIFIC PLAN. Over time, this spreadsheet will track per Planning Area entitled units, tentative tract map units, final map recorded units and units actually built within every Planning Area in the SPECIFIC PLAN. The purpose of this tracking sheet is to enable the Planning Department to ensure compliance with the established Planning Area development ranges as outlined in Table 3-11 of the SPECIFIC PLAN. This sheet will also be used to ensure constancy with the separate tracking spread sheet referenced in condition 10.Planning.58 DU/BUILDING PERMIT MATRIX.

This condition cannot be DEFERRED or set to NOT APPLICABLE"

30.PLANNING 124
PRIOR TO ANY PROJECT APPROVAL — SP - TILE DRAINS (1) — Status: INEFFECT — Conditions: Outstanding

PRIOR TO THE APPROVAL OF ANY IMPLEMENTING PROJECT (i.e. Tentative Map, Plot Plan, Conditional Use Permit, and/or Public Use Permit), given the high ground water table in the project area, all implementing projects must provide a letter from Coachella Valley Water District (CVWD) indicating that the subsurface drainage facilities (tile drains) in the implementing project area can accommodate the new urban drainage to the satisfaction of CVWD.

30.PLANNING 125
PRIOR TO ANY PROJECT APPROVAL — SP - TILE DRAINS (2) — Status: INEFFECT — Conditions: Outstanding

PRIOR TO THE APPROVAL OF ANY IMPLEMENTING PROJECT (i.e. Tentative Map, Plot Plan, Conditional Use Permit, and/or Public Use Permit), given the high ground water table in the project area, all implementing projects must provide a letter from Coachella Valley Water District (CVWD) indicating that the boundaries shown on the APPROVED TENTATIVE MAP and/or SITE PLAN shall become annexed, incorporated, and/or included to the satisfaction of the Colorado River Basin Water Quality Control Board into the National Pollution Discharge Elimination System Permit (NPDES) program as detailed by CVWD and as well the project shall annexed, incorporated, and/or included to the satisfaction of the Colorado River Basin Water Quality Control Board into the Waste Discharge Requirements for the discharge of stormwater into the Whitewater River Watershed, which is known as the MS4 Permit, to the satisfaction of CVWD.

30.PLANNING 126
PRIOR TO ANY PROJECT APPROVAL — SP - TILE DRAINS (3) — Status: INEFFECT — Conditions: Outstanding

PRIOR TO THE APPROVAL OF ANY IMPLEMENTING PROJECT (i.e. Tentative Map, Plot Plan, Conditional Use Permit, and/or Public Use Permit), given the high ground water table in the project area, all implementing projects must provide a letter from Coachella Valley Water District (CVWD) indicating that the boundaries shown on the APPROVED TENTATIVE MAP and/or SITE PLAN shall become annexed, incorporated, and/or included to the satisfaction of CVWD into a future district(s) for recovery of capital and operation/maintenance costs associated with any tile/subsurface drainage system, to the satisfaction of CVWD.

30.PLANNING 127
PRIOR TO ANY PROJECT APPROVAL — SP - COMM FACILITY FINC SEC — Status: INEFFECT — Conditions: Outstanding

Prior to the submittal of any implementing project within a Planning Area of the SPECIFIC PLAN, as outlined in exhibit B.6.16 of the SPECIFIC PLAN, the applicant shall provide financial securities for all community facilities improvements required within the respective Planning Area. All required improvements shall be completed within five (5) years of the approval of the first implementing project within the Planning Area. If any portion of the required community facilities improvements are not completed after five (5) years the County shall use the financial securities provided by the applicant to fund the completion of the

remaining improvements. If all community facilities improvements are completed prior to the five (5) year requirement, all financial securities shall be returned to the applicant in full. Satisfaction of this condition shall be at the discretion of the Planning Director. No implementing project shall be approved unless evidence of secured financial securities for all community facilities improvements within the Planning Area is presented.

This condition cannot be waived, DEFERRED or set to NOT APPLICABLE. The condition shall be set to MET at the project level individually for each project prior to a project approval.

30.PLANNING 128 PRIOR TO ANY PROJECT APPROVAL	MM - CVWD SPECIAL AGREEMENT	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"Prior to building final inspection for the first residential unit and/or commercial unit within the Riverside County portion of the proposed project, the applicant shall execute a Special Agreement, with for CVWD to design, permit, construct, operate, and maintain an expandable wastewater treatment plant and nonpotable water storage and distribution system that shall be sized to initially accommodate approximately 3.0 mgd, or as approved by CVWD. Wastewater treatment and reuse facilities are provided for in Planning Area 4-3 or alternately an off-site location as provided for in the Wastewater Master Plan (see Figure 3.0-21). The project applicant shall provide necessary funding for the construction of this facility. All wastewater treatment facilities will be creditable toward the facilities component of CVWD's Sanitation Capacity charge for all residential, commercial, and industrial structures within CVWD's portion of the project boundary. The applicant's financial responsibility for these facilities is only for those components of the wastewater treatment facilities necessary to provide wastewater treatment for the proposed project's and its associated effluent."

30.PLANNING 150 PRIOR TO ANY PROJECT APPROVAL	SP - ARCHAEO STUDY REQD	Status: INEFFECT	Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO PROJECT APPROVAL, a complete archaeological study shall be submitted to the Planning Department for review and approval. Adequate archaeological investigation shall be conducted to provide significance evaluations pursuant to CEQA for all cultural resources identified. This condition shall be considered MET if the relevant study has been approved by the Planning Department. This condition may be considered as NOT APPLICABLE if the Planning Department determines that the required study is not necessary.

The submittal of this study mandates that a CEQA determination of an Addendum to a previously adopted EIR be made, at a minimum."

30.PLANNING 151	SP - PALEO M/M PROGRAM	Status:	Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMITS, the project applicant shall enter into an agreement with a qualified paleontologist. This agreement shall include, but not be limited to, the preparation of a project specific paleontological resources impact mitigation program (PRIMP) to be implemented during the process of grading. A copy of said agreement and PRIMP shall be submitted to the County Geologist for review. No grading permit will be issued until the project specific agreement and PRIMP is reviewed and approved by the County Geologist.

30.PLANNING 153
PRIOR TO ANY PROJECT APPROVAL SP - ARCHAEO M/M PROGRAM Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF GRADING PERMITS, the project applicant shall enter into an agreement with a qualified archaeologist. This agreement shall include, but not be limited to, the preliminary mitigation and monitoring procedures to be implemented during the process of grading, as found in the Master Cultural Resources Plan for this Specific Plan. A copy of said agreement shall be submitted to the Planning Department. No grading permits will be issued unless the preliminary mitigation and monitoring procedures required prior to grading permits as described in the Master Cultural Resources Plan are substantially complied with."

30.PLANNING 154
PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.16-7 Status: INEFFECT Conditions: Outstanding

Prior to approval of any subsequent actions to implement the project in planning areas as defined in the specific plan located adjacent to western boundary of the site, a landscaping plan shall be developed and submitted for drainage channels along the western perimeter of the project site. The landscaping plan shall require the planting of native plant species with thorns, such as cat-claw acacia and mesquite shrubs, adjacent to walls and trails on the western boundary of the site. This plan must be reviewed and approved by the Riverside or Imperial County Planning Director for the portions of the project located in each county.

30.PLANNING 155
PRIOR TO ANY PROJECT APPROVAL SP - MITIG MEASURE 6.4-25 Status: INEFFECT Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"PRIOR TO THE ISSUANCE OF BUIDLING PERMIT FINAL INSPECTION, the following

language shall be added to the implementing project:

Mitigation Measure 6.4-25 from EIR514 requires:

Prior to building final inspection for each implementing project, a public awareness program shall be developed by the homeowners' association (HOA), or an acceptable land manager/agency, as approved by the Riverside County Environmental Programs Department, to educate residents of the proposed project about impacts to biological resources resulting from increased human and domestic animal presence in the area. The public awareness program shall address the impact domestic cats have on local wildlife populations (especially birds and small mammals), to encourage pet owners to keep their cats indoors. This program shall include supplying educational information to future residents of the project site regarding the importance of preventing unleashed domestic animals from entering ecologically sensitive areas within the proposed project (Open Space [Conservation]) or areas adjacent to the project site (such as ABDSP, SRSJM National Monument, or other state or federally protected lands) and of prohibiting off-leash domestic animals from disturbing native wildlife species. The public awareness program shall specifically address potential indirect impacts to Peninsular bighorn sheep associated with human and domestic animal presence in the rocky hills and mountains. In addition, the public awareness program will include discussion of cryptobiotic soils and their role in preserving desert soils, promoting nitrogen fixation, storing atmospheric carbon, and preventing erosion by wind and water."

30.PLANNING 156
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-16 — Status: INEFFECT — Conditions: Outstanding

Prior to the first implementing project approval, the applicant shall provide evidence that a payment to the Salton Sea Authority in the amount of $100,000 for IFD formation has been paid.

*This Condition was added as a result of the RRDEIR.

30.PLANNING 157
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.3-17(1) — Status: INEFFECT — Conditions: Outstanding

Prior to the first implementing project approval, the applicant shall provide evidence that an arrangement has been made to provide a payment to the Salton Sea Authority the amount of $25,000 to be paid annually for a period of 10 years for use in administering the IFD.

*This Condition was added as a result of the RRDEIR.

30.PLANNING 158
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.5-6 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

"Mitigation Measure 6.5-6 from EIR514 (as revised by the RRDEIR) requires:

In order to ensure that residents of the project do not gain access through the project to the Anza Borrego State Park or other adjacent offsite open space areas the applicant shall implement the following program prior to grading final for the first implementing project: (1)Pay $25,000 annually to the Torres Martinez Desert Cahuilla Indians (TMDCI), for 10 years for the expansion of the TMDCI conservation/patrol officer program to provide supplemental patrols along the edge of the project adjacent to offsite park and open space areas to prevent project residents and visitors from accessing these adjacent areas from the project. (2)Provide authorization for the TMDCI patrols to access the applicant's property and patrol the edge of the project; (3)Create a volunteer Citizens Patrol, similar to the successful volunteer patrols in other Coachella Valley cities and communities, to supplement the TMDCI patrols along the boundary of the project with adjacent park lands. A local Community Policing office would be located on the Travertine Point Specific Plan site to support this program; and (4)Create a volunteer docent program, similar to the successful volunteer programs in other Coachella Valley cities and communities, to assist in educating residents on the importance and sensitivity of nearby cultural resources and park lands."

30.PLANNING 159
PRIOR TO ANY PROJECT APPROVAL — SP - MITIG MEASURE 6.11-11 — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

Mitigation Measure 6.11-11 from EIR514 (as revised by the RRDEIR) requires:

Prior to building final inspection, permit applicants shall provide to the County Planning Department a disclosure document form, to be provided to all future property owners (residential and commercial), disclosing that the property is subject to overflight from military aircraft. The disclosure form shall be provided to all future property owners within the Project site, after review and approval by the County Planning Department."

30.PLANNING 160
PRIOR TO ANY PROJECT APPROVAL — SP - TEMP PERIM FENCING — Status: INEFFECT — Conditions: Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

PRIOR TO THE ISSUANCE OF A GRADING PERMIT temporary construction fencing (chain link) shall be installed along the projects entire western perimeter as shown in exhibit 3-30 of the SPECIFIC PLAN. If said fencing has already been installed and is in place, this condition shall be set to not apply.

*This Condition was added as a result of discussions at the December 13, 2011 Board Hearing.

30.PLANNING 161 — SP - PERMANENT PERIM FENCING — Status: — Conditions:

PRIOR TO ANY PROJECT APPROVAL INEFFECT Outstanding

Prior to the approval of any implementing project within the SPECIFIC PLAN (i.e.: tract map, parcel map, use permit, plot plan, etc.), the following condition shall be placed on the implementing project:

PRIOR TO THE ISSUANCE OF A BUILDING PERMIT the temporary fencing required in Condition of Approval 30.PLANNING.160 for the area that boarders the entire planning area where this development is being proposed (regardless of the proximity of the proposed development to the actual edge of the SPECIFIC PLAN), shall be replaced with permanent fencing that shall consist of tube steel, wrought iron, block wall, or similar permanent fencing as shown in exhibit 3-30 of the SPECIFIC PLAN. If said fencing has already been installed and is in place, this condition shall be set to not apply. To be clear, it is the responsibility of the first proposed development (commercial or residential) within the Planning Area to construct all fencing for the entire Planning Area as it relates to the western edge of the SPECIFIC PLAN.

With respect to the fencing along the edge of Planning Area 1-17, permanent fencing that shall consist of tube steel, wrought iron, block wall, or similar permanent fencing as shown in exhibit 3-30 of the SPECIFIC PLAN shall be installed prior to the operation of any portion of the site that would consitute any use other than the current (as of 2012) waste management use of the site.

*This Condition was added as a result of discussions at the December 13, 2011 Board Hearing.

30.TRANS 001
PRIOR TO ANY PROJECT APPROVAL SP - SP375/IMPROVEMENTS Status: INEFFECT Conditions: Outstanding

All roads shall be improved to the recommended General Plan or Specific Plan designation, as approved by the County Board of Supervisors, or as approved by the Transportation Department. If there is a conflict between the General Plan and Specific Plan, the General Plan designation would prevail unless specific findings are made by the County that the Specific Plan improvement is consistent with the General Plan.

30.TRANS 002
PRIOR TO ANY PROJECT APPROVAL SP - SP375/PAYMENT OF FEES Status: INEFFECT Conditions: Outstanding

The project proponent shall be required to pay all applicable fees in accordance with the fee schedule in effect at the time of development.

30.TRANS 003
PRIOR TO ANY PROJECT APPROVAL SP - SP375/TS REQUIRED Status: INEFFECT Conditions: Outstanding

During the District Refinement Plan (DRP) process, the project proponent shall prepare a Traffic Impact Analysis (TIA), in accordance with Riverside County guidelines, for each "Development District" within the SP. The District-level traffic analysis will be a refinement of the SP Traffic Impact Analysis and shall determine the need and timing of improvements needed to mitigate the traffic impacts of each Development District under conditions existing at the time of the DRP. In addition, TIAs for individual implementing projects may be required for individual

implementing projects within the boundaries of SP00375, at the discretion of the Transportation Department. TIAs for individual implementing projects, if needed, shall identify the impacts of the implementing project and needed transportation system improvements to be constructed prior to each implementing project.

Site-specific focused traffic studies may be required for subsequent implementing projects within the boundaries of SP00375. These subsequent traffic studies shall identify specific project impacts and needed transportation system improvements to be constructed in conjunction with each project.

Each implementing project shall make all necessary on-site and off-site improvements to achieve/maintain adequate LOS at all locations.

If development within SP00375 occurs in a different order than stated in 10. 3 TRANS. SP - SP375/ DEFINITION OF PROJECT PHASES BY PLANNING AREA, or if phases overlap substantially, a new DRP-level or project-level TIA may be required to determine if any improvements from the prior un-built phase need to be constructed to mitigate impacts by the phase being developed.

All improvements on Caltrans facilities shall conform to Caltrans design guidelines and shall be subject to Caltrans approval.

If any improvements proposed by the applicants for individual projects are found to be infeasible, the applicants for individual projects will be required to provide alternative feasible improvements to achieve levels of service satisfactory to the County.

All intersection spacing for individual tracts, parcel maps, CUPs, or plot plans shall conform to the minimum County intersection spacing standards.

All turn pocket lengths shall conform at least to the minimum County turn pocket length standards.

30.TRANS 004 PRIOR TO ANY PROJECT APPROVAL	SP-SP375/SR-86 & SR-86S ML IMP	Status: INEFFECT	Conditions: Outstanding

Prior to the issuance of any building permit for any implementing projects within SP00375, Riverside County shall prepare a financial plan to make mainline improvements to add one lane in each direction on SR-86S/SR-86 between 62nd Avenue and Marina Drive in Imperial County and to construct interchanges at SR-86S/62nd Avenue, SR-86S/66th Avenue, SR-86S/70th Avenue, SR-86S/74th Avenue, SR-86S/81st Avenue, SR-86/Town Center Way North, SR-86/Desert Shores Drive, SR-86/Brawley Avenue, SR-86/Sea Oasis Boulevard, and SR-86/Marina Drive. The financial plan shall identify the cost of the improvements based on a Preliminary Engineering study. In addition to fair share developer contributions, the financial plan shall consider funding that may be available through CVAG, RCTC, or other agencies. The County will assist in obtaining available funding that is, or may become available, through CVAG, RCTC, and other agencies, as appropriate.

Prior to the issuance of any building permit for any implementing projects within SP00375, Riverside County shall conduct a Nexus Study, based on the financial plan, and establish an RBBD or other funding mechanism in accordance with the Nexus Study recommendations.

If the County has not formed an RBBD or other area-wide funding mechanism for SR-86/SR-86S improvements at the time the proponent of SP00375 or any subsequent implementing agencies are ready to request building permits, , the project proponent shall establish a Community Facilities District (CFD) or other funding mechanism, prior to the issuance of any building permit within SP00375, to help fund its share of the cost of SR-86S/SR-86 mainline improvements (SP00375's fair share is estimated preliminarily as 37% of the total cost of the SR86 additional lane improvements) and its share of interchange construction at SR-86S/81st Avenue and at SR-86/Town Center Way North (SP00375's share is estimated preliminarily as 95 to 100% of the total cost).

Prior to the issuance of any building permit for any implementing projects within SP00375, the project proponent shall deposit with Riverside County the funds necessary for the County to prepare the Preliminary Engineering Study, the Financial Plan, and the Nexus Study (" the studies"). The project proponent shall be eligible for fee credits, fee credits not to exceed the amount of actual costs for the Studies, after the establishment of the RBBD or other corridor-wide funding mechanism.

After building permits for 1,608 residential units have been issued, no further building permit, or permits, shall be issued for any residential or non-residential implementing project in SP00375 until the project proponent, or implementing projects within SP00375, have deposited funds for Riverside County to prepare an environmental document for adding one lane in each direction along SR-86S/SR-86 between 62nd Avenue and Marina Drive in Imperial County. The project proponent, or the implementing projects, will be eligible for fee credits, fee credits not to exceed the amount of actual costs for the Studies, after the establishment of the RBBD or other area-wide funding mechanism. Based on subsequent traffic studies and at the discretion of the Director of Transportation, the threshold number of residential units may be adjusted.

After building permits for 5,718 residential units have been issued, no further building permit, or permits, shall be issued for any residential or non-residential implementing project in SP00375 until Riverside County obtains environmental clearance to add one lane in each direction along SR-86S/SR-86 between 62nd Avenue and Marina Drive in Imperial County. Based on subsequent traffic studies and at the discretion of the Director of Transportation, the threshold number of residential units may be adjusted. TUMF credit, where eligible, shall be provided in accordance with CVAG's policies and approvals.

After building permits for 5,718 residential units have been issued, no further building permit, or permits, shall be issued for any residential or non-residential implementing project in SP00375 until SR-86 has been improved to add one lane in each direction between the northern boundary of SP00375 and Town Center Way North. Based on subsequent traffic studies and at the discretion of the Director of Transportation, the threshold number of residential units may be adjusted.

After building permits for 11,864 residential units have been issued, no further building permit, or permits, shall be issued for any residential or non-residential implementing project in SP00375 until a construction contract, or contracts shall have been let to improve SR-86S/SR-86 to add one lane in each direction between 62nd Avenue and Marina Drive in Imperial County.

After building permits for 12,788 residential units have been issued, no further building permit, or permits, shall be issued for any residential or non-residential implementing project in SP00375 until SR-86S/SR-86 shall have been constructed to provide three lanes in each direction between 62nd Avenue and Marina Drive in Imperial County. Depending on the progress of construction and at the discretion of the Director of Transportation, the threshold number of residential units may be adjusted.

30.TRANS 005		Status:	Conditions:
PRIOR TO ANY PROJECT APPROVAL	SP-SP375/IMPVTS SR-86 & SR86S	INEFFECT	Outstanding

Prior to the issuance of any building permit for any implementing projects within SP00375, the project proponent shall obtain Caltrans approval to install a traffic signal and construct eastbound and westbound left turn lanes at the intersection of SR-86S and 81st Avenue.

Prior to the issuance of any building permit for any implementing projects within SP00375, the project proponent shall obtain Caltrans approval to install a traffic signal at the intersection of SR-86 and Lincoln Street (between 83rd Avenue and 84th Avenue) and to provide a southbound left turn lane. The signal at this location will be temporary and shall be removed when a grade separation (no access to SR-86) is constructed at this location.

Prior to the issuance of the 659th occupancy permit within SP00375, or earlier if the need is indicated in traffic studies for implementing projects, the proponent of SP00375 and/or implementing projects shall install and activate a traffic signal at SR-86S and 81st Avenue, and shall construct eastbound and westbound left turn lanes.

Prior to the issuance of the 659th occupancy permit, or earlier if the need is indicated in traffic studies for implementing projects, the proponent of SP00375 and/or implementing projects shall install and activate a traffic signal at SR-86 and Lincoln Street, and shall provide a southbound left turn lane. Access at this location shall be temporary, and the signal at this location shall be removed when a grade separation (no access to SR-86) is constructed.

After building permits for 8,139 residential units have been issued, no further building permit, or permits, shall be issued for any residential or non-residential implementing project in SP00375 until the proponent of SP00375, and/or implementing projects within the SP, shall have constructed a new interchange on SR-86 at Town Center Way North (approximately at 85th Avenue).

Where the need is indicated in Traffic Impact Analyses (TIAs) to be conducted during the District Refinement Process (DRP) or based on TIAs for specific implementing projects, taking into consideration conditions prevailing at the time, and unless otherwise implemented by others, the proponent of SP00375 and/or implementing projects shall install and activate off-site traffic signals and construct additional turning or through lanes at intersections along SR-86S/SR-86

(between 62nd Avenue and Marina Way) when needed to mitigate the traffic impacts of implementing projects within SP00375, or shall make in lieu payments, or as approved by the Director of Transportation.

30.TRANS 006
PRIOR TO ANY PROJECT APPROVAL SP - SP375/TRAFFIC SIGNALS Status: INEFFECT Conditions: Outstanding

The project proponent, or the implementing projects within the SP, shall be responsible for the design, installation and necessary modifications to all on-site traffic signals. Signals shall be installed, modified as needed, and shall be operational, or other traffic control measures, such as roundabouts shall be installed at the locations indicated in Exhibit 2.1C and Exhibits 6.2-B through 6.2-T of the TSS dated August 5, 2010.

Where the need is indicated in DRP-level or project-level TIAs and , unless the signals are designed and installed by others, the project proponent, or the implementing projects within the SP, shall also be responsible for the design, installation and necessary modifications to off-site traffic signals at the intersections listed below. Any on-site intersections on SR-86 and SR-86S are included in the "off-site" list, since they will help accommodate external traffic.

Prior to the issuance of any certificates of occupancy that would result in more than 658 dwelling units in SP00375, or sooner if the need is indicated in project-level TIAs, the following signals shall be installed and operational:

SR-86S (NS) at: 81st Avenue (EW)

SR-86 (NS) at: Lincoln Street (EW)

with no credit given for Traffic Signal Mitigation Fees

Prior to the issuance of any certificates of occupancy that would result in more than 2,600 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following signals shall be installed and operational:

81st Avenue (EW) at: Paseo Street (NS)

Prior to the issuance of any certificates of occupancy that would result in more than 2,818 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following signals shall be installed and operational, with credit toward signal mitigation fees if the signal is included in the DIF needs list at the time of installation.

Harrison Street (NS) at: 62nd Avenue (EW)

Harrison Street (NS) at: 66th Avenue (EW)

Harrison Street (NS) at: 70th Avenue (EW)

Harrison Street (NS) at: 74th Avenue (EW)

Harrison Street (NS) at: Pierce Street (EW)

Unless DRP-level or project-level TIAs indicate that one or more signals are not needed or can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 3,071 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level traffic studies, the following signals shall be installed and operational:

81st Avenue (EW) at: Harrison Street/SR-86 (NS)

with no credit given for Traffic Signal Mitigation Fees

Prior to the issuance of any certificates of occupancy that would result in more than 3,478 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level traffic studies, the following signals shall be installed and operational:

SR-86 (NS) at: Town Center Way (EW)

with no credit given for Traffic Signal Mitigation Fees

Prior to the issuance of any certificates of occupancy that would result in more than 5,284 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level traffic studies, the following signals shall be installed, or modified, and operational, with credit toward signal mitigation fees if the signal is included in the DIF needs list at the time of installation.

Harrison Street (NS) at: 72nd Avenue (EW)

Harrison Street (NS) at: 78th Avenue (EW)

SR-86S (NS) at: 70th Avenue (EW)

SR-86S (NS) at: 74th Avenue (EW)

SR-86 (NS) at: Desert Shores Drive (EW)

SR-86 (NS) at: Brawley Avenue (EW)

SR-86 (NS) at: Sea Oasis Boulevard (EW)

SR-86 (NS) at: Marina Drive (EW)

unless otherwise approved by Imperial County, or DRP-level or project-level TIAs indicate that one or more signals are not needed or can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 13,260 dwelling units in SP00375, or sooner if the need is indicated in DRP-level traffic studies, signals shall be installed, modified as needed, and shall be operational, or other traffic control measures, such as roundabouts, shall be installed at the locations indicated in Exhibit 2.1C and Exhibits 6.2-B through 6.2-T of the TSS dated August 5, 2010.

with no credit given for Traffic Signal Mitigation Fees

The modification of traffic signals to accommodate the phased improvements shall be the responsibility of the SP00375 proponent or the implementing projects.

30.TRANS 008			
PRIOR TO ANY PROJECT APPROVAL	SP - SP375/GEOMETRICS	Status: INEFFECT	Conditions: Outstanding

The project proponent, or the implementing projects within the SP, shall be responsible for the necessary improvements or modifications at all on-site intersections. The improvements shall be made at the locations indicated and with the number of lanes as specified in Exhibit 2.1C and Exhibits 6.2-B through 6.2-T of the TSS dated August 5, 2010.

Where the need is indicated in DRP-level or project-level TIAs and, unless the improvements are made by others prior to the time they are needed, the project proponent, or the implementing projects within the SP, shall also be responsible for the improvements at the off-site intersections listed below. If eligible under any applicable funding programs in effect at the time of implementation, these improvements may qualify for fee credits. Any on-site intersections on SR-86 and SR-86S are included in the "off-site" list, since they will help accommodate external traffic.

While the intersection improvements, both on-site and off-site, may be made in phases as the need arises, all improvements shall be designed and constructed to be consistent with the ultimate configuration of the intersection. All improvements listed below can be deferred to a later stage, or accelerated to an earlier stage of development, subject to the approval of the Director of Transportation based on subsequent traffic studies. Depending on the progress of construction and at the discretion of the Director of Transportation, the threshold number of residential units may be adjusted.

Prior to the issuance of any certificates of occupancy that would result in more than 658 dwelling

units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following intersection improvements shall be made:

The intersection of SR-86S (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one right turn lane Southbound:One left turn lane, two through lanes, one right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of SR-86S (N/S) and Lincoln Street (E/W) shall provide the following geometrics:

Northbound:Two through lanes, one right turn lane Southbound:One left turn lane, two through lanes Eastbound:N/A Westbound:One left turn lane, one shared through/right turn lane

The intersection of Paseo Street (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One shared left turn/right turn lane - stop control Southbound:NA Eastbound:One shared through/right turn lane Westbound:One shared left turn/through lane

The intersection of Lincoln Street (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane Southbound:NA Eastbound:One right turn lane Westbound:NA

Prior to the issuance of any certificates of occupancy that would result in more than 2,818 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following offsite intersection improvements shall be made. If eligible under any applicable funding programs in effect at the time of implementation, these improvements may qualify for fee credits.

The intersection of Harrison Street (N/S) and 62nd Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one right turn lane Southbound:One left turn lane, one through lane, one right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of Harrison Street (N/S) and 66th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one right turn lane Southbound:One left turn

lane, one through lane, one right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of Harrison Street (N/S) and 70th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one shared through/right turn lane Southbound:One left turn lane, one shared through/right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of Harrison Street (N/S) and 74th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one right turn lane Southbound:One left turn lane, one through lane, one right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of Harrison Street (N/S) and Pierce Street (E/W) shall provide the following geometrics:

Northbound:One through lane, one right turn lane Southbound:One left turn lane, one through lane Eastbound:N/A Westbound:One left turn lane, one right turn lane

The intersection of SR-86S (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one right turn lane Southbound:Two left turn lanes, two through lanes, one right turn lane Eastbound:One left turn lane, one through lane, one right turn lane Westbound:One left turn lane, one through lane, one right turn lane with overlap phasing

NOTE: Signal modification will be necessary to accommodate a second southbound left turn lane, an eastbound right turn lane and a westbound right turn lane with overlap phasing.

The intersection of Paseo Street (NS) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one right turn lane Southbound:N/A Eastbound:One through

lane, one right turn lane Westbound:One left turn lane, one through lane

unless DRP-level or project-level TIAs indicate improvements at one or more intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 2,818 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following intersection improvements shall be made:

The intersection of Harrison Street/Village Way (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one right turn lane Southbound:Two left turn lanes, one shared through/right turn lane Eastbound:One shared left turn/through lane, one right turn lane Westbound:Two left turn lanes, one shared through/right turn lane

unless DRP-level or project-level TIAs indicate improvements at this intersection are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 3,478 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following intersection improvements shall be made:

The intersection of SR-86 (N/S) and Town Center Way North (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one shared through/right turn lane Southbound:One left turn lane, two through lanes, one right turn lane with overlap Eastbound:Two left turn lanes, two through lanes, one right turn lane Westbound:One left turn lane, two through lanes, one right turn lane

unless DRP-level or project-level TIAs indicate improvements at this intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 5,284 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following offsite intersection improvements shall be made. If eligible under any applicable funding programs in effect at the time of implementation, these improvements may qualify for fee credits.

The intersection of Harrison Street (N/S) and 64th Avenue (E/W) shall provide the following

geometrics:

Northbound:One shared through/right turn lane Southbound:One shared left turn/through lane Eastbound:NA Westbound:One shared left turn/right turn lane - stop control

The intersection of Harrison Street (N/S) and 72nd Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one shared through/right turn lane Southbound:One left turn lane, one shared through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

The intersection of Harrison Street (N/S) and 74th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one right turn lane Southbound:One left turn lane, one through lane, one right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

NOTE: Signal modification will be necessary to accommodate an eastbound left turn lane and a westbound left turn lane.

The intersection of Harrison Street (N/S) and Pierce Street (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one right turn lane Southbound:One left turn lane, one shared through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

NOTE: Signal modification will be necessary to accommodate a northbound left turn lane.

The intersection of Harrison Street (N/S) and 78th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one right turn lane Southbound:One left turn lane, two through lanes, one right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of Harrison Street (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, three through lanes, one right turn lane with overlap phasing Southbound:Two left turn lanes, two through lanes, one shared through/right turn lane Eastbound:One left turn lane, one through lane, one shared through/right turn lane Westbound:Two left turn lanes, one through lane, one free-flow right turn lane

NOTE: Signal modification will be necessary to accommodate three northbound through lanes, overlap phasing on the northbound approach, three southbound through lanes, and a westbound right turn lane.

The intersection of Polk Street (N/S) and 74th Avenue (E/W) shall provide the following geometrics:

Northbound:NA Southbound:One shared left turn/right turn lane - stop control Eastbound:One shared left turn/through lane Westbound:One shared through/right turn lane

The intersection of Fillmore Street (N/S) and 78th Avenue (E/W) shall provide the following geometrics:

Northbound:One shared left turn/right turn lane - stop control Southbound: NA Eastbound:One shared through/right turn lane Westbound:One shared left turn/through lane

The intersection of SR-86S (N/S) and 62nd Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one shared through/right turn lane Southbound:One left turn lane, two through lanes, one shared through/right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

NOTE: Signal modification will be necessary to accommodate three northbound through lanes, three southbound through lanes, an eastbound left turn lane, and a westbound left turn lane.

The intersection of SR-86S (N/S) and 66th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one shared through/right turn lane Southbound:One left turn lane, two through lanes, one shared through/right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:Two left turn lanes, one shared through/right turn lane

NOTE: Signal modification will be necessary to accommodate three northbound through lanes, three southbound through lanes, an eastbound left turn lane, and two westbound left turn lanes.

The intersection of SR-86S (N/S) and 70th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one shared through/right turn lane

Southbound:One left turn lane, two through lanes, one shared through/right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of SR-86S (N/S) and 74th Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one shared through/right turn lane Southbound:One shared left turn/through lane, one through lane, one shared through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

The intersection of SR-86 (N/S) and Desert Shores Drive (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one right turn lane Southbound:One left turn lane, two through lanes, one shared through/right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of SR-86 (N/S) and Brawley Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one shared through/right turn lane Southbound:One left turn lane, two through lanes, one right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

The intersection of SR-86 (N/S) and Sea Oasis Boulevard (E/W) shall provide the following geometrics:

Northbound:One shared left turn/through lane, one shared through/right turn lane Southbound:One left turn lane, one through lane, one shared through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

The intersection of SR-86 (N/S) and Marina Drive (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one through lane, one shared through/right turn lane Southbound:One left turn lane, one through lane, one shared through/right turn lane Eastbound:One left turn lane, one shared through/right turn lane Westbound:One left turn lane, one shared through/right turn lane

The intersection of Village Way (N/S) and 82nd Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes Southbound:Two through lanes, one right turn lane Eastbound:One left turn lane, one right turn lane Westbound:NA

The intersection of Travertine Estates (N/S) and Paseo Street (E/W) shall provide the following geometrics:

Northbound:One shared left turn/through/right turn lane Southbound:One shared left turn/through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

The intersection of A Street (N/S) and Desert Shores Drive (E/W) shall provide the following geometrics:

Northbound:One shared left turn/through/right turn lane Southbound:One shared left turn/through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

The intersection of Sea Oasis Drive (N/S) and Travertine Estates (E/W) shall provide the following geometrics:

Northbound:One shared left turn/through lane Southbound:One shared through/right turn lane Eastbound:One shared left turn/right turn lane Westbound:NA

The intersection of Sea Oasis Drive (N/S) and Desert Shores Drive (E/W) shall provide the following geometrics:

Northbound:One shared left turn/through/right turn lane Southbound:One shared left turn/through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

unless otherwise approved by Imperial County, or unless DRP-level or project-level TIAs indicate improvements at one or more intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 5,464 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following intersection improvements shall be made:

The intersection of Lincoln Street (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, one shared through/right turn lane Southbound:One shared left turn/through/right turn lane Eastbound:One shared left turn/through/right turn lane Westbound:One shared left turn/through/right turn lane

unless DRP-level or project-level TIAs indicate improvements at one or more intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of

development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 5,718 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following intersection improvements shall be made:

The intersection of SR-86 (N/S) and Town Center Way North (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes Southbound:One left turn lane, two through lanes, one right turn lane with overlap Eastbound:Two left turn lanes, one through lane, one right turn lane Westbound:One left turn lane, one through lane, one right turn lane

unless DRP-level or project-level TIAs indicate improvements at one or more intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 5,770 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following intersection improvements shall be made:

The intersection of SR-86S (N/S) and 81st Avenue (E/W) shall provide the following geometrics:

Northbound:One left turn lane, two through lanes, one shared through/right turn lane Southbound:Two left turn lanes, three through lanes, one right turn lane Eastbound:Two left turn lanes, two through lanes, one right turn lane Westbound:One left turn lane, two through lanes, one right turn lane with overlap phasing

NOTE: Signal modification will be necessary to accommodate three northbound through lanes, three southbound through lanes, two eastbound left turn lanes, two eastbound through lanes, and two westbound through lanes.

unless DRP-level or project-level TIAs indicate improvements at this intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

Prior to the issuance of any certificates of occupancy that would result in more than 8,139 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level TIAs, the following intersection improvements shall be made:

The intersection of Paseo Street (N/S) and 81st Avenue (E/W) shall provide the following

geometrics:

Northbound:One left turn lane, one shared left turn/through/right turn lane Southbound:One left turn lane, one shared through/right turn lane Eastbound:One left turn lane, one through lane, one right turn lane Westbound:One left turn lane, one shared through/right turn lane

unless DRP-level or project-level TIAs indicate improvements at one or more intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

NOTE: Signal modification will be necessary to accommodate a northbound left turn lane, the southbound approach, eastbound left turn and right turn lanes, and the westbound left turn lane.

The intersection of SR-86 Southbound Ramps (N/S) and Town Center Way (E/W) shall provide the following geometrics:

Northbound:NA Southbound:Two left turn lanes, two right turn lanes Eastbound:Two through lanes, two right turn lanes Westbound:Two through lanes, one right turn lane

unless DRP-level or project-level TIAs indicate improvements at one or more intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

The intersection of SR-86 Northbound Ramps (N/S) and Town Center Way (E/W) shall provide the following geometrics:

Northbound:Two left turn lanes, one right turn lane Southbound:NA Eastbound:Two through lanes, two right turn lanes Westbound:Two through lanes, two right turn lanes

unless DRP-level or project-level TIAs indicate improvements at one or more intersections are not needed, or fewer lanes are needed, or improvements can be deferred to a later stage of development, subject to approval by the Director of Transportation.

All improvements on Caltrans facilities shall conform to Caltrans design guidelines and shall be subject to Caltrans approval.

All improvements listed are requirements for interim conditions only. Full right-of-way and roadway half sections adjacent to the SP00375 property for the ultimate roadway cross-section per the County's Road Improvement Standards and Specifications must be provided.

All implementing projects within the SP00375 shall be subject to a condition of approval providing that: Any off-site widening required to provide these geometrics shall be the responsibility of the landowner/developer, consistent with Riverside County Ordinance 460 Section 3.2J.

30.TRANS 009
PRIOR TO ANY PROJECT APPROVAL | SP - SP375/PEDESTRIAN PATHS | Status: INEFFECT | Conditions: Outstanding

The project proponent and individual implementing projects within SP00375 shall implement the system of Travertine Point Walkways/Pedestrian Paths as illustrated in Exhibits 3.1-A and 3.1-B of the TSS.

30.TRANS 010
PRIOR TO ANY PROJECT APPROVAL | SP - SP375/BIKEWAYS | Status: INEFFECT | Conditions: Outstanding

The project proponent and individual implementing projects within SP00375 shall implement the system of Travertine Point Bikeways Plan as illustrated in Exhibits 3.2-A and 3.2-B of the TSS.

30.TRANS 011
PRIOR TO ANY PROJECT APPROVAL | SP - SP375/TRANSIT FEATURES | Status: INEFFECT | Conditions: Outstanding

The project proponent and individual implementing projects within SP00375 shall implement the Travertine Point Transit Features as illustrated in Exhibits 4.1-A nd 4.1-B of the TSS.

30.TRANS 012
PRIOR TO ANY PROJECT APPROVAL | SP - SP375/NEV ACCOMMODATIONS | Status: INEFFECT | Conditions: Outstanding

The project proponent and individual implementing projects within SP00375 shall implement the Travertine Point Neighborhood Electrical Vehicle Accommodations as illustrated in Exhibit 6.1-I of the TIA. State legislation will be required to allow NEVs to use roadways that have a speed limit higher than 35 mph. The applicant shall assist the County in obtaining legislative approval.

30.TRANS 013
PRIOR TO ANY PROJECT APPROVAL | SP - SP375/DRAINAGE STUDIES | Status: INEFFECT | Conditions: Outstanding

Drainage studies will be required for all subsequent development proposals within the boundaries of Specific Plan No. 375 as approved by the Transportation Department.

30.TRANS 014
PRIOR TO ANY PROJECT APPROVAL | SP - SP375/TUMF | Status: INEFFECT | Conditions: Outstanding

Prior to the issuance of a building permit, the applicant shall pay the Transportation Uniform Mitigation Fee (TUMF) in accordance with the fee schedule in effect at the time of issuance, pursuant to Ordinance No. 673.

30.TRANS 015
PRIOR TO ANY PROJECT APPROVAL | SP - SP375/ROAD IMPROVEMENTS | Status: INEFFECT | Conditions: Outstanding

Roadways internal to the project shall be developed as needed for development and as determined based on the recommendations presented in Exhibits 6.2-B through 6.2-T of the TSS dated August 5, 2010.

Prior to the issuance of any building permits within SP00375, the project proponent shall construct Lincoln Street between the northern project boundary and 81st Avenue and 81st

Avenue between SR-86 and Lincoln Street as two-lane interim roadways (34 ft traveled way).

Prior to the issuance of any building permits within Planning Areas 1-1, 1-2, or 1-9 within SP00375, the project proponent shall construct 81st Avenue between the western boundary of Planning Area 1-1 and SR-86S as a Secondary (64-ft. curb-to-curb, 100-ft. right-of-way). At the discretion of the Director of Transportation, the right-of-way requirement in the off-site portion of the facility may be reduced, so long as four through travel lanes and necessary turn lanes at intersections are provided.

Prior to the issuance of any building permits within Planning Areas 1-1, 1-2, or 1-9 within SP00375, the project proponent shall realign, as necessary, the portion of SR-86/Harrison Street north of 81st Avenue to form the four-legged intersection at 81st Avenue/ SR-86/Village Way and shall get Caltrans concurrence for the relinquishment of the portion of SR-86 between 81st Avenue and SR-86S.

Prior to the issuance of any certificates of occupancy that would result in more than 7,078 dwelling units in SP00375, or sooner if the need is indicated in DRP-level or project-level traffic studies, the project proponent, or implementing projects within SP00375, shall construct 81st Avenue between SR-86S and Paseo Street as a Major. Based on subsequent traffic studies and at the discretion of the Director of Transportation, the threshold number of residential units may be adjusted.

100.PLANNING 002 PRIOR TO ISSUE GIVEN BLDG PRMT	SP - COUNT RES BUILD PERMITS	Status: INEFFECT	Conditions: Outstanding

This condition is applied to assist the Planning Department with tracking the build-out of the SPECIFIC PLAN by automatically counting all the issuance of all new residential building permits on the County's Land Management System which are electronically associated with the Specific Plan. Accordingly, this condition will not allow more than 16650 residential building permits to be issued within the SPECIFIC PLAN.

100.PLANNING 003 PRIOR TO ISSUE GIVEN BLDG PRMT	SP -* COUNT RES PRMTS IN DRP	Status: INEFFECT	Conditions: Outstanding

This Condition is applied to assist the Planning Department with tracking the build-out of each DISTRICT within the SPECIFIC PLAN.

Each DISTRICT within the SPECIFIC PLAN shall receive a different development level designation when the DISTRICT REFINEMENT PLAN application is filed. All subsequent implementing projects, including any processed concurrently with the DISTRICT REFINEMENT PLAN shall be attached to the development level designation for the corresponding DISTRICT REFINEMENT PLAN. This condition shall be applied to each DISTRICT REFINEMENT PLAN to automatically count the development of all new residential dwelling units for that DISTRICT on the County's Land Management System. Accordingly, this condition will not allow more than _____ residential dwelling units to be issued within DISTRICT _____.

The total dwelling unit count shall be tracked in a separate spreadsheet by the Planning Director and updated by the applicants for each new project. This is part of the application submittal requirements per the SPECIFIC PLAN.

100.PLANNING 004
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - AFFORDABILITY REQ (1) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 3,133rd building permit within the SPECIFIC PLAN, at least 117 affordable housing units shall have been constructed and operating per the requirements of SPECIFIC PLAN section 3.13.1 subsection 5.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 005
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - AFFORDABILITY REQ (2) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 6,658th building permit within the SPECIFIC PLAN, at least 317 affordable housing units shall have been constructed and operating per the requirements of SPECIFIC PLAN section 3.13.1 subsection 5.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 006
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - AFFORDABILITY REQ (3) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 9,628th building permit within the SPECIFIC PLAN, at least 833 affordable housing units shall have been constructed and operating per the requirements of SPECIFIC PLAN section 3.13.1 subsection 5.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 007
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - AFFORDABILITY REQ (4) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 15,160th building permit within the SPECIFIC PLAN, at least 1,416 affordable housing units shall have been constructed and operating per the requirements of SPECIFIC PLAN section 3.13.1 subsection 5.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 008 PRIOR TO ISSUE GIVEN BLDG PRMT	SP - AFFORDABILITY REQ (5)	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 16,405th building permit within the SPECIFIC PLAN, at least 1,666 affordable housing units shall have been constructed and operating per the requirements of SPECIFIC PLAN section 3.13.1 subsection 5.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 009 PRIOR TO ISSUE GIVEN BLDG PRMT	SP - NONRES JOBS REQ (1)	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 3,250th building permit within the SPECIFIC PLAN, at least 89,000 square feet of nonresidential development shall have been constructed and occupied per the requirements of SPECIFIC PLAN section 3.13.8 subsection 2. The intent of this condition of approval is to assure that an adequate number of jobs will be provided for the project. Shell buildings, or construction alone shall not satisfy this condition of approval. Planning Department inspection of operating uses within the 89,000 square feet may be required.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 010 PRIOR TO ISSUE GIVEN BLDG PRMT	SP - NONRES JOBS REQ (2)	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 6,500th building permit within the SPECIFIC PLAN, a cumulative total of at least 529,000 square feet of nonresidential development (an addition of 440,000 square feet over the requirement shown in condition of approval number 100.Planning.9) shall have been constructed and occupied per the requirements of SPECIFIC PLAN section 3.13.8 subsection 2. The intent of this condition of approval is to assure that an adequate number of jobs will be provided for the project. Shell buildings, or construction alone shall not satisfy this condition of approval. Planning Department inspection of operating uses within the additional 440,000 square feet may be required.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 011		Status:	Conditions:
PRIOR TO ISSUE GIVEN BLDG PRMT	SP - NONRES JOBS REQ (3)	INEFFECT	Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 9,500th building permit within the SPECIFIC PLAN, a cumulative total of at least 1,629,500 square feet of nonresidential development (an addition of 1,100,000 square feet over the requirement shown in condition of approval number 100.Planning.10) shall have been constructed and occupied per the requirements of SPECIFIC PLAN section 3.13.8 subsection 2. The intent of this condition of approval is to assure that an adequate number of jobs will be provided for the project. Shell buildings, or construction alone shall not satisfy this condition of approval. Planning Department inspection of operating uses within the additional 1,100,000 square feet may be required.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 012		Status:	Conditions:
PRIOR TO ISSUE GIVEN BLDG PRMT	SP - NONRES JOBS REQ (4)	INEFFECT	Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 13,500th building permit within the SPECIFIC PLAN, a cumulative total of at least 4,029,500 square feet of nonresidential development (an addition of 2,400,000 square feet over the requirement shown in condition of approval number 100.Planning.11) shall have been constructed and occupied per the requirements of SPECIFIC PLAN section 3.13.8 subsection 2. The intent of this condition of approval is to assure that an adequate number of jobs will be provided for the project. Shell buildings, or construction alone shall not satisfy this condition of approval. Planning Department inspection of operating uses within the additional 2,400,000 square feet may be required.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 013

PRIOR TO ISSUE GIVEN BLDG PRMT	SP - NONRES JOBS REQ (5)	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 15,000th building permit within the SPECIFIC PLAN, a cumulative total of at least 5,029,500 square feet of nonresidential development (an addition of 1,000,000 square feet over the requirement shown in condition of approval number 100.Planning.12) shall have been constructed and occupied per the requirements of SPECIFIC PLAN section 3.13.8 subsection 2. The intent of this condition of approval is to assure that an adequate number of jobs will be provided for the project. Shell buildings, or construction alone shall not satisfy this condition of approval. Planning Department inspection of operating uses within the additional 1,000,000 square feet may be required.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 014

PRIOR TO ISSUE GIVEN BLDG PRMT	SP - FIRE STATIION REQ (1)	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 2,000th building permit within the SPECIFIC PLAN, or to the satisfaction of the RCFD, a fire station for the RCFD within the Riverside County portion of the proposed project shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 015

PRIOR TO ISSUE GIVEN BLDG PRMT	SP - FIRE STATION REQ (2)	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 4,000th building permit within the SPECIFIC PLAN, or to the satisfaction of the RCFD, a second fire station for the RCFD within the Riverside County portion of the proposed project shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 016
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - SHERIFF STATION REQ (1) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 3,249th building permit within the SPECIFIC PLAN, or to the satisfaction of the RCSD, a sheriff's substation for the RCSD within the Riverside County portion of the proposed project shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 017
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - SHERIFF STATION REQ (2) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 6,857th building permit within the SPECIFIC PLAN, or to the satisfaction of the RCSD, a second sheriff's substation for the RCSD within the Riverside County portion of the proposed project shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 018
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - PARK PLANS REQ (1) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 2,250th building permit within the SPECIFIC PLAN, detailed plans for a minimum of 43 additional acres of park (representing 5 acres per thousand) shall be approved by the Planning Department. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 019
PRIOR TO ISSUE — SP - PARK CONST (1) — Status: INEFFECT — Conditions: Outstanding

GIVEN BLDG PRMT

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 3,250th building permit within the SPECIFIC PLAN a minimum of 43 acres of park land shall be constructed and opened.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 020
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - PARK PLANS REQ (2) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 5,500th building permit within the SPECIFIC PLAN, detailed plans for a minimum of 48 additional acres of park (for a total of 91 acres representing 5 acres per thousand) shall be approved by the Planning Department. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 021
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - PARK CONST (2) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 6,500th building permit within the SPECIFIC PLAN, detailed plans for a minimum of 48 additional acres of park (for a total of 91 acres representing 5 acres per thousand) shall be approved by the Planning Department. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 022
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - PARK PLANS REQ (3) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as

enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 9,000th building permit within the SPECIFIC PLAN, detailed plans for a minimum of 47 additional acres of park (for a total of 138 acres representing 5 acres per thousand) shall be approved by the Planning Department. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 023
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - PARK CONST (3) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 10,000th building permit within the SPECIFIC PLAN a minimum of 47 acres of park land (for a total of 138 acres) shall be constructed and opened. To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 024
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - PARK PLANS REQ (4) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 12,500th building permit within the SPECIFIC PLAN, detailed plans for a minimum of 68 additional acres of park (for a total of 206 acres representing 5 acres per thousand) shall be approved by the Planning Department. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 025
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - PARK CONST (4) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 13,500th building permit within the SPECIFIC PLAN a minimum of 68 acres of park land (for a total of 206 acres) shall be constructed and opened. To

track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 026
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - LIBRARY PLANS REQ (1) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 2,500th building permit within the SPECIFIC PLAN, detailed plans for an estimated 5,000-square-foot library facility shall be approved by the Planning Department in coordination with the Riverside County Library System. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 027
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - LIBRARY CONST (1) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 3,500th building permit within the SPECIFIC PLAN for an estimated 5,000-square-foot library facility shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 028
PRIOR TO ISSUE GIVEN BLDG PRMT — SP - LIBRARY PLANS REQ (2) — Status: INEFFECT — Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 6,000th building permit within the SPECIFIC PLAN, detailed plans for an estimated 5,000-square-foot library facility (in addition to library space previously required) shall be approved by the Planning Department in coordination with the Riverside County Library System. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 029 — SP - LIBRARY CONST (2) — Status: — Conditions:

PRIOR TO ISSUE INEFFECT Outstanding
GIVEN BLDG PRMT

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 7,000th building permit within the SPECIFIC PLAN for an estimated 5,000-square-foot library facility (in addition to library space previously required) shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 030
PRIOR TO ISSUE SP - LIBRARY PLANS REQ (3) Status: Conditions:
GIVEN BLDG PRMT INEFFECT Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 9,500th building permit within the SPECIFIC PLAN, detailed plans for an estimated 5,000-square-foot library facility (in addition to library space previously required) shall be approved by the Planning Department in coordination with the Riverside County Library System. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 031
PRIOR TO ISSUE SP - LIBRARY CONST (3) Status: Conditions:
GIVEN BLDG PRMT INEFFECT Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 10,500th building permit within the SPECIFIC PLAN an estimated 5,000-square-foot library facility (in addition to library space previously required) shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 032
PRIOR TO ISSUE SP - LIBRARY PLANS REQ (5) Status: Conditions:
GIVEN BLDG PRMT INEFFECT Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as

enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 13,000th building permit within the SPECIFIC PLAN, detailed plans for an estimated 5,000-square-foot library facility (in addition to library space previously required) shall be approved by the Planning Department in coordination with the Riverside County Library System. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

This last library may be in Imperial County as opposed to Riverside County. The Plans shall be coordinated with the Riverside County Library System and/or the Imperial County Free Library System. The applicant shall execute a joint Memorandum of Understanding with both the Riverside County Library System and Imperial County Free Library System that provides for the location of this library site in either Riverside or Imperial County and that this library will provide services to both systems. Regardless of the location of this library, the applicant shall participate in development fees for library services as required by each County. In the event that the library is located in Imperial County, this condition of approval shall be set to NOT APPLY.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 033 PRIOR TO ISSUE GIVEN BLDG PRMT	SP - LIBRARY CONST (5)	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 14,000th building permit within the SPECIFIC PLAN an estimated 5,000-square-foot library facility (in addition to library space previously required) shall be constructed and operating. This structure may, alternatively, be located in Imperial County in which case this condition of approval shall be set to NOT APPLY.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 034 PRIOR TO ISSUE GIVEN BLDG PRMT	SP - URGENT CARE PLANS REQ	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 1,500th building permit within the SPECIFIC PLAN, detailed plans for an urgent care medical facility within the Travertine Point Specific Plan area shall be approved by the Planning Department. All designs shall substantially conform to the design criteria as specified in the DISTRICT REFINEMENT PLAN for the respective DISTRICT.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 035

PRIOR TO ISSUE GIVEN BLDG PRMT	SP - URGENT CARE CONST	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 2,500th building permit within the SPECIFIC PLAN an urgent care medical facility shall be constructed and operating.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 037

PRIOR TO ISSUE GIVEN BLDG PRMT	SP - HOSPITAL SITE	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 5,000th building permit within the SPECIFIC PLAN, a site for a hospital within the Travertine Point Specific Plan area or other nearby location acceptable to the Planning Director shall be identified and approved by the Planning Department. The development of such site shall be subject to an agreement with a health care provider to construct and operate a hospital at such time as a provider determines there is sufficient need to make the construction and operation of a hospital financially feasible. The design shall substantially conform to the design criteria as specified in the district refinement plan for the respective district.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

100.PLANNING 038

PRIOR TO ISSUE GIVEN BLDG PRMT	SP - HOSPITAL CONST	Status: INEFFECT	Conditions: Outstanding

Whenever a condition of approval uses the term "building permit" to trigger an event or to cause another action to take place, the condition shall be interpreted to mean "Dwelling Units" as enumerated within the TOTAL DWELLING UNIT TRACKING MATRIX.

PRIOR TO THE ISSUANCE OF THE 15,000th building permit within the SPECIFIC PLAN a structure for a hospital shall be constructed and operational.

To track total dwelling unit counts see condition "10.Planning.58 DU/BUILDING PERMIT MATRIX."

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