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Chapter 6: Special Circumstances for a Project

Special Circumstances for a Project

6.1. Projects with Existing or New Stationary Source Operations

Occasionally, a land use project may include equipment or a process that is considering a stationary source operation which means that a permit from the District is required. Emissions from stationary source operations should be part of the project's air quality analysis. The District strongly recommends that the project's applicant consult with the District prior to attempting any emission calculations.

If there is an existing operational stationary source associated with the project, it may already be under a District Permit to Operate, depending on the type of stationary source and the District's regulatory requirements. A Permit to Operate includes the type of equipment/process/device being regulated, the equipment/process operational conditions, emission limitations, and associated emission factors used to determine the equipment/process emissions. The project's air quality analysis should identify the emissions from its stationary source operation as the baseline condition, which can be determined by the historical operational emissions from related stationary sources. The District can provide the historical emissions data through a [public information request](#). Please note that the existing stationary source emissions identified in the project's baseline conditions should be based on the actual emissions, not the allowed or the potential maximum emissions that may be identified in the District's permit.

- ✓ For more information regarding the Request for Public Information please go to: <http://www.placerair.org/publicrecordsrequest>.

If a project proposes to install new equipment, a device or a new process that will release air pollutants as part of the project, it will be subject to the District's permitting program and must apply for and obtain an Authority to Construct and Permit to Operate before installation or operation. The District's engineer will need to evaluate the proposed device/equipment/process to determine the potential emissions since the District will act as a responsible agency.

The emission estimation for the proposed stationary source should get concurrence from the District. For this reason, the project applicant should contact the District's engineer prior to conducting an analysis to ensure that the emission calculation will be consistent with the results from the District's permit evaluation. Please note that the emission estimation presented in the project's CEQA document will be used during the District's permit application evaluation process unless changes to the project have occurred since the last CEQA document was produced and in that case any significant inconsistencies may require an update to the CEQA document.

- ✓ For more information regarding the Request for the District permit requirement, please go to: <http://www.placerair.org/Placer%20Air/PermitsandFAQ>

6.2. Projects with Toxic Air Contaminants Emissions

Toxic Air Contaminants (TACs) or hazardous air pollutants (HAPs) are airborne pollutants that may be expected to result in "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health"³¹. TACs can be emitted by a wide range of sources from industrial plants to households which emit but are not classified as criteria air pollutants with no ambient air quality standards established for them. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, or genetic damage or short-term acute effects such as watering eyes, respiratory irritation, throat pain, or headaches.

³¹ California Health and Safety Code §39655

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Both federal and state agencies have established processes to identify toxic air contaminants and regulate them through risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. The following are the web links to both the federal and state air toxics program:

- ✓ [National Air Toxics Assessments](#)
- ✓ [California Air Toxic program](#)
- ✓ [California Toxic Air Contaminant Identification List](#)

TACs can be separated into carcinogens and non-carcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. Carcinogens are defined as the substances that cause cancer to humans. Non-carcinogens are the substances that are not associated with human cancer but will cause acute and chronic health effects such as birth defects, organ damage, or death.

The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588), which is known as the “Air Toxics Hot Spots” program, was enacted in 1987³². The Act requires that California air districts evaluate existing stationary sources of emissions (i.e. facilities and businesses) for significant risks to the public, and if significant, the Act requires a reduction in risk to non-significant levels. The Act also requires updated reviews of potentially significant emission sources every four years and the evaluation of new stationary sources after 12 months of operation. The District Board has adopted the significant risk threshold of 10 in a million³³. This risk threshold is used by the District to evaluate potential risks for both existing and new stationary sources in Placer County.

When a land use project proposes a new stationary source that will emit TACs, the project might be required to identify its potential risk to the nearby communities. Common stationary source types which emit TAC emissions include gasoline stations, dry cleaners, and diesel backup generators. These are also subject to District permit requirements along with an evaluation for TACs.

A project may also involve other associated non-stationary sources that may discharge TAC emissions such as diesel delivery trucks and off-road construction equipment. Stationary sources and non-stationary sources of TACs as well as consumer products all contribute to TACs in the air. Each of these sources may contribute a minor increase in risk individually but the risks from all sources could become a cumulatively considerable health impact to the communities. Screening tools such as a Health Risk Assessment (HRA) for the evaluation of associated cumulative community risk and hazard impacts should be considered. The following are common land use proposals which may be required to conduct a HRA for its TAC emissions:

- Goods Distribution Centers,
- Refineries,
- Power Generation Facilities,
- Chrome Platers,
- Dry Cleaners using Perchloroethylene, and
- Gasoline Dispensing Facilities.

³² CARB AB 2588 Air Toxics “Hot Spots” Program. <https://www.arb.ca.gov/ab2588/ab2588.htm>

³³ PCAPCD Board adopted the significant toxic risk thresholds in April 2002.

In order to ascertain the risk evaluation appropriately, the Office of Environmental Health Hazard Assessment (OEHHA) developed a guidance manual which describes the algorithms, exposure variates, and modeling protocols needed to prepare a HRA. The latest guidance manual was released by OEHHA on March 6, 2015. The CARB along with the CAPCOA updated the guidance document that provides procedures for the performance of risk assessments, incorporating the new OEHHA health risk assessment methodology. These two documents are references for a project in which might a health risk assessment for potential toxic emissions needs to be prepared.

- ✓ [OEHHA Air Toxics Hot Spots Program Guidance Manual \(March 2015\)](#)
- ✓ [CARB/CAPCOA Risk Management Guidance for Stationary Sources of Air Toxics \(July 2015\)](#)

The project specific information needed to prepare a HRA are listed but not limited to:

- Proposed equipment/process,
- Types of TACs emitted by the proposed equipment/process and associated health variates,
- Emission factors of TACs applied to the proposed equipment/process,
- Proposed operational duration such as number of hours per day or seasons,
- Location of equipment or process staging area,
- Distance to the nearest sensitive receptors such as schools, day-care centers, hospitals, or residential areas,
- Selected computer models, and
- Meteorological data including predominant wind direction, speed, mixing heights, and temperature for the modeling analysis.



Prior to conducting a HRA, the project applicant/consultant should discuss with the District the data inputs and modeling techniques to ensure the HRA evaluates the project's health risk appropriately.

6.3. Projects Siting in the Vicinity of Existing TAC Sources

Unlike stationary source projects, a project proposing new residential houses, apartments, schools, or day care facilities may not involve any stationary device or emissions from its stationary device component are small and would not cause considerable health concerns. However, sometimes these types of land use proposals may be located in an area surrounded by nearby existing TAC sources which could cause long-term serious health problems to future house owners, children, students, or patients. Although the District does not establish any health risk related thresholds for such types of land use projects, it is especially important that lead agencies be aware of the potential health impacts with the proposed land use projects.



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For the above reason, the CARB prepared the [Air Quality and Land Use Handbook](#) (CARB Land Use Handbook) which characterizes some common air pollution sources and provides recommendations to lead agencies to avoid siting sensitive land uses such as residences, schools, day care centers, playgrounds, and medical facilities near these types of air pollution sources. These common air pollution sources identified by the CARB Land Use Handbook are as follows:

- High Traffic Freeways and Roads,
- Goods Distribution Centers,
- Rail Yards,
- Ports,
- Refineries,
- Chrome Plating Facilities,
- Dry Cleaners using Perchloroethylene, and
- Large Gasoline Dispensing Facilities.

From the review of related scientific studies, the CARB Land Use Handbook recommends buffer distances between those air pollution sources and sensitive land uses. Table 6-1 summarizes the CARB Handbook's recommendations³⁴. Please note that these recommendations with qualitative analysis are advisory, lead agencies may have to balance other considerations.

Table 6-1: CARB Recommended Minimum Separations for Sensitive Land Uses

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 CARB 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 Perchloroethylene	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.

In April 2017, CARB released a technical advisory as a supplement to its previous Land Use Handbook. This advisory is to provide planners and other stakeholders involved in land use

³⁴ CARB Air Quality and Land Use Handbook Table 1-1. <https://www.arb.ca.gov/ch/handbook.pdf>

planning and decision-making with information on scientifically based strategies to reduce exposure to traffic emissions near high-volume roadways in order to protect public health and promote equity and environmental justice. Strategies to reduce exposure include practices and technologies that reduce traffic emissions, increasing dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air. The document compiles a list of recommended strategies including detailed discussion. The technical advisory can be downloaded from the following:

- ✓ [CARB Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways Guide](#)

In addition to the CARB Handbook, CAPCOA has also developed the [Health Risk Assessments for Proposed Land Use Projects](#) guidance which describes when and how a health risk assessment should be prepared and what to do with the results. The CAPCOA guidance outlines the recommended procedures to identify when a project should undergo further risk evaluation, how to conduct a HRA, how to engage the public, what to do with the results from the HRA, and what mitigation measures may be appropriate for various land use projects under CEQA. [APPENDIX G](#) summarizes the procedures from the CAPCOA guidance on preparing HRAs for land use projects. Detailed information regarding the CAPCOA guidance can be found in the following:

- ✓ [CAPCOA Health Risk Assessments for Proposed Land Use Projects](#)

Recently, the California Supreme Court ruled that lead agencies are not required by CEQA to analyze the impact of the existing environmental conditions on a project's future users or residents unless the project will exacerbate the existing environmental hazards or conditions³⁵. Some lead agencies may limit their CEQA analysis of existing TAC source impacts on a proposed project's new users, but the District maintains that siting new sensitive land uses within the vicinity of existing TAC sources could cause potential health concerns. Specifically, if a project involves the purchase of a school site or the construction of a new elementary or secondary school, the project's environmental document shall identify whether any existing TAC sources are around the proposed school site which would result in potential public health concerns, pursuant to Public Resources Code requirements³⁶. The District recommends that these situations be analyzed and necessary measures be identified to reduce the potential health impacts through the lead agency's CEQA review process, or least within their use permit structure. The District is available to work with lead agencies closely to identify existing TAC sources near the proposed project and provide any necessary assistance for its health risk assessment.

6.4. Projects Siting in an Area with Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) was identified as a TAC in 1986 by the CARB. NOA is located in many parts of California and is commonly associated with ultramafic rocks, according to the California Department of Geology's special publication titled [Guidelines for Geologic Investigations of Naturally Occurring Asbestos in California](#). Asbestos is the common name for a complete group of naturally occurring fibrous silicate minerals that can be separated into thin but strong and durable fibers. Ultramafic rocks form in high-temperature environments well below the surface of the earth. By the time they are exposed, at the surface by geologic uplift and erosion, ultramafic rocks may be partially altered into a type of metamorphic rock called serpentinite. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in the bodies of these rocks or along their boundaries.

³⁵ California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369

³⁶ California Public Resources Code §21151.8 (a)(2)

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For individuals living in areas of NOA, there are many potential pathways for airborne exposure. Exposures to soil dust containing asbestos can occur under a variety of scenarios, including children playing in the dirt, dust raised from unpaved roads and driveways covered with crushed serpentine, grading and earth disturbance associated with construction activity, quarrying, gardening, and other human activities.

People exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) of lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled dose (quantity of fibers), and also increases with time since first exposure. Although there are a number of factors that influence the disease causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogens.

NOA is present in several foothill areas of Placer County. The District recommends the applicant should identify if the proposed project is located in areas where NOA is most likely found. District NOA maps show where serpentine rock formations could be found in Placer County. If a project located within the most likely to contain NOA area and the project involves earth-disturbing construction activity, the project may have the potential to expose people to airborne asbestos. A Naturally-Occurring Asbestos Dust Mitigation Plan (ADMP) will need to be developed to comply with the requirements listed in the CARB's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations. The ADMP guidance can be reviewed on the District's website. The following are websites which contain NOA information for the land use projects in Placer County:

- ✓ [Placer NOA Maps](#)
- ✓ [Placer ADMP guidance](#)
- ✓ [CARB Asbestos ATCM](#)

6.5. Projects with Odors or Siting Near to Existing Odor Sources



The District is responsible for odor complaints/nuisance. 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 headaches. Some common sources of odors emitted by facilities are sulfur compounds, organic solvents, and the decomposition/digestion of biological materials. With the subjective nature of a receptor'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.

Certain facilities such as sanitary landfills, paint and/or coating operations, and wastewater treatment facilities might have the potential to cause significant odor impacts. The followings are the common land use types that typically generate significant odor impacts:

- Wastewater Treatment Plants,
- Sanitary Landfills,
- Composting/Green Waste Facilities,
- Recycling Facilities,
- Chemical Manufacturing Plants,
- Painting/Coating Operations,

- Agricultural Operations, and
- Slaughterhouse/Food Packaging Plants.

If a land use project proposes any of the above type of land uses, which have the potential to cause significant odor impacts, the odor impacts should be identified and discussed in the environmental document so mitigation measures may be identified. New development projects such as residential subdivisions or other sensitive receptors may also have the potential to be affected when the project is located downwind of the above types of land uses. In this case, the District recommends that odor issues are discussed early in the site design process so that any potential odor impacts could be mitigated.

One of the most important factors influencing odor impacts is the distance between the odor source and receptors, referred to as a buffer zone or setback. The greater the distance between an odor source and receptor, the less odor impact when it reaches the receptor. Table 6-2 is a recommended Odor Screening Distances table used by a neighboring air district³⁷ in the Sacramento Region which lists suggested buffer distances for a variety of odor-generating facilities. In addition to distance, the potential for a significant odor impact relies on a variety of factors. Lead agencies should not apply the recommended screening distances as the only factor to determine the significance of the potential odor impact.

Table 6-2: Odor Screening Distances

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	2 miles
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	4 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	2 miles
Metal Smelting Plants	1 mile

Source: SMAQMD: CEQA Guide to Air Quality Assessment, Chapter 7, Odors / Recommended Odor Screening Distances.

The District recommends that a significance determination for odor impact be made on a case-by-case basis with all the parameters considered. The parameters include distance, the downwind/upwind situation, dominant wind direction, and a facilities odor compliant history. Lead agencies should clearly present the evidence in the discussion to support its significance determination. Please note that the issuance of a land use permit cannot prevent a third party from bringing a nuisance action against another party, and the outcomes of such litigation would be based on the facts of the situation.

³⁷ Sacramento Metropolitan Air Quality Management District (SMAQMD) CEQA Guide Chapter 7 Odor Screening Table <http://www.airquality.org/LandUseTransportation/Documents/Ch7ScreeningDistancesFINAL12-2009.pdf>

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