



PROTOCOL FOR REVIEW

LAND USE PERMITTING ACTIVITIES

Procedures for Implementing the California
Environmental Quality Act

Prepared by the
Shasta County Air Quality Management District
1855 Placer Street, Suite 101
Redding, CA 96001

November 2003

This document fulfills California Environmental Quality Act (CEQA) and CEQA Guidelines requirements for agencies to adopt procedures and guidelines for implementing CEQA. Copies and updates are available from the SCAQMD Air Quality Division at (530) 225-5674. Questions on content should be addressed to the Air Pollution Control Officer.

Purpose

The purpose of this protocol document is to establish a methodology that can be utilized by the Shasta County Air Quality Management District (District) staff to review and comment on the air quality impacts of land use projects seeking approval through land use permitting process. The District will frequently be called upon to respond with suggested mitigation requirements as a responsible agency under an environmental review process associated with either local ordinances or the California Environmental Quality Act (CEQA). The environmental review process requires that agencies propose and track implementation of feasible mitigation measures that would mitigate significant adverse effects to the environment. Most often the planning agency with jurisdiction for the subject project will be functioning as a lead agency in this project review and permitting process.

Role of the District

Under state law (*California Health & Safety Code Section 40000*), the District has primary responsibility for control of air pollution from all sources, other than emissions from motor vehicles. This includes stationary sources of air contaminants as well as area wide emission sources. Additionally, the District has authority to adopt and enforce rules and regulations to achieve and maintain the state and federal ambient air quality standards in all areas affected by emission sources under their jurisdiction (*California Health & Safety Code Section 40001*). In developing plans and regulations to achieve the above-mentioned air quality standards, the District may consider the full spectrum of emission sources and focus particular attention on reducing the emissions from transportation and area wide emission sources (*California Health & Safety Code Section 40910*).

As part of the District's Attainment Plan developed to comply with *California Health & Safety Code Section 40918(a)(4)*, the District has worked closely with the planning agencies of Shasta County, the City of Redding, the City of Anderson, and the City of Shasta Lake to formulate Air Quality Elements for each respective General Plan. These Air Quality Elements describe in detail the approach to be used by planning agency staff when coordinating with the District to review the indirect air quality impacts (those associated with motor vehicles and area wide emission sources) of the proposed project. Area wide emission sources may include, but are not limited to, multiple smaller emission sources such as water heaters, gas furnaces, wood stoves, architectural coatings, etc.

The District also coordinates closely with the Regional Transportation Planning Agency (RTPA) to ensure a coordinated approach in the development and implementation of transportation plans. This role will become more important as the District responds to the possibility of being classified as a federal non-attainment area with respect to the new 8-hour ozone standard proposed by the U.S. Environmental Protection Agency.

District As Lead Agency

The District may act as a lead agency when it has principal responsibility to carry out or approve a project. This function may be appropriate when the project would require District approval of a discretionary air quality permit and not requiring any discretionary action from any other agency.

District As Responsible Agency

The District acts as a responsible agency when it has discretionary power to approve some aspect of a project, but does not have the principal authority to carry out or approve the project in total. The District is often a responsible agency for development projects that require air pollution control permits. When functioning in this capacity, the District provides the lead agency with important guidance regarding the scope of potential environmental effects of the project on air quality. The District considers the EIR or Negative Declaration prepared by the lead agency and uses the resulting information and findings to prepare its own permit. To ensure that the environmental document is adequate for use, the District provides comments to the lead agency on the air quality analysis and mitigation measures incorporated in the CEQA analysis concurrently with the District's evaluation process for issuing an Authority to Construct. The methodology used in analyzing impacts under the CEQA environmental review process should be carefully coordinated with the parallel process that the District requires for evaluating emissions and impacts in its permitting process.

During the CEQA review process, the District may comment at three points:

Consultations Prior to Environmental Determination

The District may consult with other agencies prior to the lead agency making a determination as to whether a Negative Declaration or an EIR is required for a project. District policy is to respond to all referrals within the review period established by the lead agency. When it is not possible to meet the stated deadlines, the District will notify the lead agency and request additional time or explain why the deadline cannot be met.

Responses to the Notice of Preparation for an EIR

The District may provide written guidance on what aspects of a proposed project should be fully addressed in the Draft EIR document regarding air quality impacts.

Comments on a Draft EIR

The District may provide written comments on the air quality impact analysis and recommended mitigation measures discussed in the Draft EIR. The District should expect a written response (in the form of responses in the Final EIR or by separate letter) from the lead agency on any comments it has made on a Draft EIR.

District As Commenting Agency

The District may act as a commenting agency for any project that has the potential to impact air quality. Typically, the District will request that the planning agency make it a condition of the use permit for the applicant to obtain an Authority to Construct from the District. Specific mitigation measures to control direct or fugitive emissions of air contaminants may also be suggested as use permit conditions.

Data Needed For District Review

In order for the District to properly review a project, 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 direct and indirect (associated with motor vehicle trips) emissions associated with the project. For all EIRs prepared for projects in Shasta County, the District requests that it be sent the Notice of Preparation (NOP). 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.

The Draft EIR prepared for any project involving direct or indirect emissions of air contaminants should be sent to the District for review and comment. 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. All assumptions used in the modeling analysis for the 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.

Thresholds of Significance

Significant air quality impacts are defined to include situations where a proposed project “violates any ambient air quality standard, contributes substantially to an existing or projected air quality violation, or exposes sensitive receptors to substantial pollutant concentrations.” Air quality impacts may be caused by direct emissions from stationary sources or by indirect emissions (associated with motor vehicles and/or area wide emission 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. Projects demonstrated to have

significant adverse impacts are required to mitigate impacts to levels considered less than significant or to prepare an environmental impact report (EIR).

A violation of air quality standards can be predicted for pollutants that can be modeled for atmospheric concentration. Typically, this modeling is done by a consulting firm with modeling expertise using EPA-approved dispersion models. Also, by comparing a project's daily or annual emissions with emission levels considered significant under local or state law, this impact can be evaluated. One such level is the stationary source emissions offset threshold required in a specific city or county Air Quality Element of the General Plan. With respect to toxic emissions, on November 14, 2000, the Shasta County Air Pollution Board approved a policy document establishing guidelines for toxic health risk assessments. Under these guidelines, the air pollution control officer (APCO) can approve a new source if the cumulative excess cancer risk to the nearest sensitive receptor is less than 10 in a million and the total hazard index (THI) is less than or equal to one.

The direct emissions from stationary sources will be calculated by District staff after receiving complete emission data from the applicant proposing the project. While District Rule 2:1-New Source Review establishes emission thresholds at which Best Available Control Technology (BACT) is to be required for new or modified emission sources, projects are usually not recognized as having a significant environmental impact unless the direct stationary source emissions of either oxides of nitrogen, reactive organic compounds, or inhalable particulate matter (PM_{10}) exceed 25 Tons/yr. The preparation of an EIR and the requirement of emission offsets (depending on policies stated in the Air Quality Element of the General Plan for the jurisdiction) may be requested of the applicant by the planning agency when emissions of the above-mentioned pollutants exceed the 25 Tons/yr. threshold.

Indirect emission sources are defined as any building, facility, structure, or property that attracts or generates mobile source activity (autos and trucks). For projects such as office parks, shopping centers, residential subdivisions, and other indirect sources, motor vehicles traveling to and from the projects represent the primary source of air pollutant emissions. With respect to indirect and area wide emissions of PM_{10} and ozone precursors, the District coordinates with the planning agency having jurisdiction over the proposed project to apply standard mitigation measures (SMMs) and best available mitigation measures (BAMMs) to the project as listed in the respective Air Quality Elements. SMMs are applied to all projects, while the list of BAMMs found in the respective Air Quality Element are reviewed by the planning agency staff for consideration of specific project applicability at two distinct indirect emission thresholds:

- | | |
|---------|---|
| Level A | 25 pounds per day of either oxides of nitrogen or reactive organic compounds
80 pounds per day of inhalable particulate matter (PM_{10}) |
| Level B | 137 pounds per day of either oxides of nitrogen, reactive organic compounds,
or inhalable particulate matter (PM_{10}) |

The project's indirect and area wide emissions are estimated by planning agency staff using the latest version of the URBEMIS Model approved for use by the California Air Resources Board. All of the planning agencies have the latest version of this modeling program which predicts the indirect and

area wide emissions of various types of land uses. Generally, the planning staff is able to work directly with the project applicant in reviewing the lists of mitigation measures which may be appropriate for implementation on a specific project. If the project's indirect and area wide emissions are greater than the Level A thresholds but less than Level B thresholds, appropriate Level A mitigation as listed in the jurisdiction's Air Quality Element to the General Plan should be implemented by the project applicant. If the project's indirect and area wide emissions remain above the Level B threshold of 137 pounds per day (25 Tons/yr.) after applying all feasible mitigation measures, the project is considered to have a significant impact from an air quality perspective and an EIR is appropriate for the project.

Construction Impacts

A project's construction phase produces many types of emissions, but PM_{10} is the pollutant of greatest concern. PM_{10} emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle exhaust. Construction related emissions can cause substantial increases in localized concentrations of PM_{10} , as well as affecting PM_{10} compliance with ambient air quality standards on a regional basis. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces. Asbestos can also be of concern during demolition activity associated with construction. The use of diesel powered construction equipment produces ozone precursor emissions and combustion related particulate emissions.

The District's approach to minimizing construction PM_{10} impacts is to require implementation of effective and comprehensive control measures. PM_{10} emitted during construction can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors, making quantification difficult. Despite this variability in emissions, experience has shown that there are a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction. The District has provided planning jurisdictions with suggested mitigation measures to reduce PM_{10} impacts to a level considered less-than-significant.

Project construction sometimes requires the demolition of existing buildings at the project site. Buildings sometimes include 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 demolition, renovation, or removal of asbestos-containing 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 an asbestos inspection prior to start of activity. The Environmental Protection Agency (EPA) Region IX office has authority to implement the asbestos NESHAP in Shasta County and should be consulted by owners or contractors prior to commencing any demolition or renovation of any building to determine inspection and compliance requirements. Notification of the District and EPA Region IX is required for all projects involving the handling of asbestos-containing materials. Strict compliance with existing asbestos regulations will normally prevent asbestos from being considered a significant adverse impact.

Odor Impacts

Odor impacts can be judged significant based on the number of complaints expected for each type of odor producing process. While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the District. Any project with the potential to frequently expose members of the public to objectionable odors will be deemed to have a significant impact. 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, work sites, and commercial areas. Analysis of potential odor impacts should be conducted for the following two situations:

Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and

Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The District has determined that the following facilities are examples of the type of facility that has the potential to produce odors and may require special attention in the environmental review process:

- Wastewater Treatment Facilities
- Sanitary Landfills
- Transfer Stations
- Composting Facilities
- Asphalt Batch Plants
- Chemical Manufacturing
- Fiberglass Manufacturing
- Polyester Resin Use
- Painting/Coating Operations (e.g. auto body shops)
- Food Processing Facilities
- Rendering Plants

If a proposed project is determined to be a potentially significant odor source, mitigation measures should be required. For some projects, operational changes, add-on controls, or process changes, such as carbon absorption, neutralizing agents, 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). Experience has shown that locating upwind from an odor source does not necessarily eliminate potential problems, since areas with reliable prevailing winds still 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 still experience odor impacts or be more sensitive to the odors.

Hazardous Air Pollutants (HAPs)

There are currently more than 900 substances classified as hazardous air pollutants by the ARB and EPA. All projects requiring air quality permits from the District are evaluated for HAP emissions. A screening health risk assessment is performed for any source emitting HAPs using estimated emission rates, stack exhaust flow rates, SCREEN 3 modeling, individual component substance risk factors, and distances to receptors. The thresholds of significance cited earlier are used as references in evaluating necessary mitigation.

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 may 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. Therefore, it would not be appropriate to automatically reject such facilities just because they are near a sensitive receptor. More detailed analysis to determine the potential risk and feasible control measures may be appropriate in these cases. Projects exceeding a one in one million excess cancer risk or a toxic hazard index of 1.0 are required to install Toxic Best Available Control Technology (T-BACT) in accordance with the District Toxics Health Risk Assessment Policy adopted on November 14, 2000.

The District must follow certain procedures outlined in Section 42301.6 of the California Health and Safety Code (CH&SC) for approval of permits for facilities that would have the potential to emit hazardous air pollutants within 1000 feet of a school. This usually involves conducting a screening health risk assessment and notification of surrounding receptors and the parents of the children attending the subject school(s).

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 may not be subject to District permitting 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.

Cumulative Emission Analysis

Individual project emissions are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects will exceed air quality standards. An adequate cumulative impact analysis considers a project over time and in conjunction with other related past, present, and reasonably foreseeable future projects whose impacts might compound or interrelate with those of the project being assessed. A single source of hazardous air pollutants (HAPs) may be insignificant, but when combined with emissions from neighboring sources could expose sensitive receptors to significant pollutant levels. Cumulative analysis of HAPs can be accomplished by identifying all sources of these pollutants near the project site and using a dispersion model to determine exposure levels from the combined emissions of all sources. Dispersion modeling, if indicated by initial screening, should include existing sources, the project, and any reasonably foreseeable projects.

Typical Projects Requiring District Permitting

District Rule 2:1A requires that any person who is building, erecting, altering, or replacing any article, machine, equipment or other contrivance which causes the issuance of air contaminants, shall first obtain written authority for such construction from the Air Pollution Control Officer (APCO). Examples of air contaminant emitting equipment and processes include (but are not limited to):

- 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.
- Plastic and fiberglass forming and manufacturing
- Petroleum production, manufacturing, storage, and distribution
- Rock and mineral mining and processing
- Solvent use (de-greasing, dry cleaning, etc.)
- Surface coating and preparation (painting, blasting, etc.)
- Lumber and wood products manufacturing
- Motor Burnout Ovens

Land Use Conflicts and Sensitive Receptors

The location of a development project is a major factor in determining whether it will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and members of the public decreases. Impacts on sensitive receptors are of particular concern. 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.

For each of the situations discussed below, the impacts generally are not limited only to sensitive receptors. *All* members of the population can be adversely affected by criteria pollutants, toxic air contaminants, odor, and dust. Therefore, any consideration of potential air quality impacts should include all members of the population. This discussion focuses on sensitive receptors, however, because they are most vulnerable to the effects of air pollution.

Air quality problems arise when sources of air pollutants and sensitive receptors are located near one another. There are several types of land use conflicts that should be avoided:

Development projects with sensitive receptors in close proximity to a congested intersection or roadway with high levels of emissions from motor vehicles. High concentrations of carbon monoxide, fine particulate matter, or toxic air contaminants are the most common concerns.

Development projects with sensitive receptors close to an industrial source of toxic air contaminants.

Development projects with sensitive receptors close to a source of odorous emissions. Although odors generally do not pose a health risk, they can be quite unpleasant and often lead to citizen complaints to the District and to local governments.

Localized development-related air pollution impacts to sensitive receptors generally occur in one of two ways:

- 1) a (new) source of air pollutants is proposed to be located close to existing sensitive receptors; for example, an industrial facility proposed for a site near a school; or
- 2) a (new) development project with sensitive receptors is proposed near an existing source of air pollutants; for example, a hospital proposed for a site near a refinery.

Specific legislation has addressed the first concern with respect to evaluating potential impacts to schools. Section 42301.6 of the California Health and Safety Code (CH&SC) imparts certain evaluation and notification requirements for the District's approval of permits for facilities that would have the potential to emit hazardous air pollutants that would be located within 1000 feet of a school, and Section 39003 of the Education Code and Section 21151.4 of the PRC requires Lead Agencies to not approve Negative Declarations or Environmental Impact Reports for any new school facilities which are located within ¼ mile of any potential source of hazardous air emissions unless certain requirements are met.

For all development projects, preliminary consultation between project proponents, Lead Agency staff, and District staff can be helpful in avoiding or minimizing localized impacts to sensitive receptors. When evaluating whether a development proposal has the potential to result in localized impacts, the District should assist Lead Agency staff in considering the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography. Often, providing an adequate distance, or a buffer zone, between the source of emissions and the receptor(s) will mitigate the potential problem in many cases. This underscores the importance of addressing these potential land use conflicts as early as possible in the development review process.