CHAPTER 2: Thresholds of Significance

Thresholds of Significance

2.1. Threshold Decision: Are Effects Potentially Significant?

Thresholds of Significance are used to determine the level of significance for air quality impacts from any given land use project. CEQA encourages each public agency to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. The thresholds of significance should be supported by substantial, scientific evidence. CEQA does not, however, require commenting agencies, such as the District, to obtain legislative approval when recommending thresholds for possible use by lead agencies; nevertheless the District's Board of Directors is regularly consulted regarding recommended District thresholds. In setting these thresholds, the District considers both the health-based air quality standards as well as the attainment strategies developed in conjunction with the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (EPA).

Factors to Consider

- Direct effects
- Reasonably foreseeable indirect effects
- Expert disagreement
- "Considerable" contribution to cumulative effects
- Special thresholds for historical and archaeological resources

2.2. Project Level Thresholds

Pollution can come from land use sources and stationary sources which are those sources typically associated with industrial-type uses such as factories, refrigeration units, gasoline service stations, etc. The District regulates and permits stationary sources through a program known as "New Source Review" (NSR). The NSR is a permitting program which was established by Congress as part of the 1977 Federal Clean Air Act Amendment which requires that stationary sources of air pollution shall receive permits before they start construction and/or use of the equipment. The NSR program has two objectives: 1) limiting the emission thresholds to ensure that air quality is not significantly degraded from the addition of new and modified industrial sources and 2) requiring Best Available Control Technology (BACT) to assure that any large new or modified stationary source within a given area will be as clean as possible.

Table 2-1: District Recommended Project-Level Thresholds of Significance

	Thresholds of Significance (lbs per day)		
	ROG	NO_x	PM_{10}
Construction Emissions	82	82	82
Operational Emissions	82	82	82

The District has concluded that the industrial pollutants described under the above NSR Program (stationary sources), are equally significant to those pollutants generated with land use projects (i.e., vehicle emissions).

The District has historically applied the concept of the NSR program to assist with the development of the thresholds for projects under the existing CEQA review program. The threshold of 82 lbs per day is based on 15 tons per year, which was set as the total emission threshold associated within the NSR program. Table 2-1: District Recommended Project-Level Thresholds of Significance shows the current project-level thresholds of significance recommended by the District related to the impacts of construction and operational emissions associated with a land use project.

The District uses these thresholds to determine the level of significance for emissions associated with a project's construction emissions (e.g., demolishing, site preparation, earthmoving, and building) and operational emissions (e.g., space heating, motor vehicle trips, and landscaping maintenance). Mitigation measures are then suggested by the District to the lead agency to offset the project's related air quality impacts. On smaller projects, mitigation is used to offset impacts through a Mitigated Negative Declaration document. An EIR process may be recommended by the District to the lead agency if the project related emissions cannot be mitigated to a less than significant level and the project cannot achieve the thresholds described below.

NOTE: The figures in the following table are for reference purposes only, include only two types of land uses (single family residential and retail strip mall), and were calculated with specific criteria. Modeling results will likely vary depending on land use, project location, and other factors. This table should not be used in place of an air quality analysis to determine the level of impact.

Table 2-2: Project Size as it relates to the 82 lbs per day Threshold (Unmitigated)

The size of land use project which meets the Threshold of 82 lbs per day (NOx only)[1]						
	2012	2015	2020	2025	2030	2035
Residential[2]	340 du	430 du	570 du	695 du	770 du	820 du
Retail[3]	130 ksf	160 ksf	205 ksf	245 ksf	275 ksf	295 ksf

1. CalEEMod 2011.1.1 version
2. Model settings: Placer County APCD, urban area, single family housing
3. Model settings: Placer County APCD, urban area, strip mall

Notes: du = dwelling units; ksf = thousand square feet; NOx = oxides of nitrogen; CalEEMod 2011.1.1 version

2.3. Cumulative Thresholds

In addition to reviewing the impacts associated with a project individually, CEQA requires that lead agencies review the project's possible environmental effects which are "individually limited but cumulatively considerable." CEQA defines "cumulatively considerable" as the incremental effects of an individual project when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Therefore, any land use project should be analyzed whether its emissions could be cumulatively considerable when the project contributes a net increase of emissions within Placer County.

Table 2-3: Cumulative-Level Threshold

	Cumulative Impact Threshold (lbs per day)	
	ROG	NO_x
Operational Emissions	10	10

On June 10, 2010, the District's Board of Directors held a meeting to discuss cumulative thresholds for land use projects within Placer County under the California Environmental Quality Act (CEQA). In their action, the Board stated that, as a policy, the Board supports the continued use of the 10 lbs per day staff recommended cumulative impact threshold.

The District has historically recommended 10 lbs per day as the cumulative thresholds for land use projects in Placer County. It is very important to emphasize that the primary reason the District applies a "10 lbs per day" standard as the threshold for a project's cumulative impacts resulting from its ROG and NO_x emissions is because Placer County lies within the federal ozone nonattainment area. This threshold was established based on the NSR requirement, which requires that any stationary source that emits more than 10 lbs per day of ROG and NO_x must employ BACT. Therefore the District recommends any project which emits more than 10 lbs per day should implement mitigation measures to reduce cumulative impacts. Mitigation measures can include both on-site and off-site mitigation measures.

The District does not recommend the use of this cumulative threshold to determine the need for an EIR. Rather, this threshold is used by the District to recommend mitigation measures to offset the project's cumulative air quality impacts. Local governments acting as lead agencies have the responsibility to determine the type of environmental document that should be prepared and should determine when a project's impacts, even after complying with the District's offsite and/or fee programs, are potentially significant as defined under CEQA.

The following table represents the approximate size of a project which would exceed the District's "cumulative" threshold of 10 lbs per day which only applies to a project's operational emissions. This screening methodology may not be appropriate for larger projects which exceed 82 lbs per day. In addition please note that, depending on the location of the project as well as the projects proposed design features, different conclusions may be reached other than those listed below.

NOTE: The figures in the following tables are for reference purposes only, include only two types of land uses (single family residential and retail strip mall), and were calculated with specific criteria. Modeling results will likely vary depending on land use, project location, and other factors. This table should not be used in place of an air quality analysis to determine the project level of impact.

Table 2-4: Project Size as it relates to the 10 lbs per day Threshold (Unmitigated)

The size of land use project which meets the Threshold of 10 lbs per day (NOx only)[1]						
	2012	2015	2020	2025	2030	2035
Residential	40 du	50 du	69 du	84 du	94 du	100 du
Retail	15 ksf	19 ksf	25 ksf	30 ksf	33 ksf	35 ksf

1. CalEEMod 2011.1.1 version
2. Model settings: Placer County APCD, urban area, single family housing
3. Model settings: Placer County APCD, urban area, strip mall

Notes: du = dwelling units; ksf = thousand square feet; NOx = oxides of nitrogen; CalEEMod 2011.1.1 version

The District will recognize any threshold adopted by a lead agency pursuant to CEQA Section 15064.7 (b)(c) and will use the adopted threshold as the applicable threshold for the District's CEQA review process.

The following figure represents general steps for evaluating a project's air quality impacts and determining environmental significance.

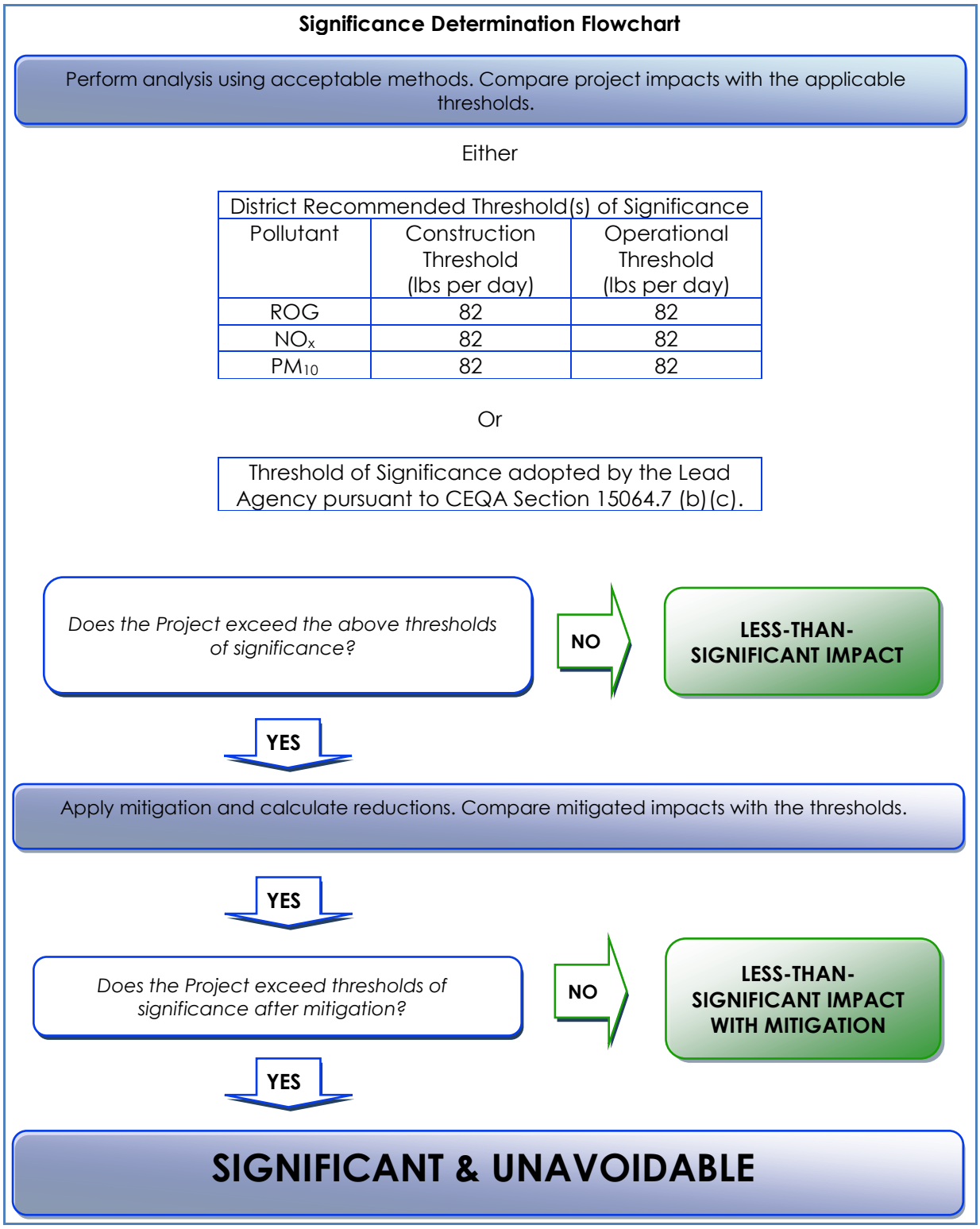

Figure 2-1: Significance Determination Flowchart

2.4. Special Consideration for Projects

In addition to criteria pollutants, a project's impacts may warrant special consideration if one or more of the following conditions apply:

Construction Activities

a. If a project will result in release of diesel emissions in areas with potential for human exposure, even if overall emissions are low, factors that will be considered by District staff when determining significance of a project include the expected emissions from diesel equipment including operation time, location of the project, and distance to sensitive receptors.

b. Remodeling and demolition activities have potential negative air quality impacts, including issues surrounding proper demolition and disposal of asbestos containing material (ACM). Asbestos is listed as a toxic air contaminant by both CARB and by the U.S. Environmental Protection Agency (EPA). If a project involves demolition and disposal of asbestos containing material, the Demolition Permit issued by the Building Department is subject to the requirements stipulated in the National Emissions Standards for Hazardous Air Pollutants Information (NESHAP).

   For information regarding the remodel or demolition of a building or structure that may contain asbestos, please access the following links:

   - ✓ EPA Asbestos Laws and Regulations: http://www.epa.gov/asbestos/pubs/asbreg.html;
   - ✓ Code of Federal Regulations: 40 CFR Part 763 - Asbestos (pdf);
   - ✓ National Emission Standards for Hazardous Air Pollutants (NESHAPS): 40 CFR Part 61, Subpart M - National Emission Standards for Asbestos (pdf);
   - ✓ California Code of Regulations (CCR) Title 22 Social Security, Division 4.5: http://ccr.oal.ca.gov/linkedslice/default.asp?SP=CCR-1000&Action=Welcome.

c. Naturally-occurring asbestos (NOA) has been identified by CARB as a toxic air contaminant. Serpentine and ultramafic rocks are very common throughout California and may contain naturally-occurring asbestos. The District has identified areas throughout the county where NOA may be present. Under CARB's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to any grading activities at a project site located in a potential NOA area, a geologic evaluation will be necessary to determine if naturally-occurring asbestos is present. If NOA is found at the site the applicant must comply with all requirements outlined in the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. These requirements may include but are not limited to: 1) an Asbestos Dust Mitigation Plan which must be approved by the District before construction begins, and 2) an Asbestos Health and Safety Program (which may be required for some projects). In addition, the Air Resources Board adopted two statewide control measures which prohibits the use of serpentine or ultramafic rock for unpaved surfacing and controls dust emissions from

construction, grading, and surface mining in areas with these rocks.

- ✓ More information about areas "Most Likely to Contain Naturally-Occurring Asbestos (NOA)" a fact sheet, information and maps may be found on the NOA web page of the Placer County Air Pollution Control District web site: http://www.placer.ca.gov/Departments/Air/NOA/NOAMapsAnd%20Resources.aspx.

Operational Activities

a) If a project has the potential to emit toxic or hazardous air pollutants and is located in close proximity to sensitive receptors, impacts may be considered significant due to increased cancer risk for the affected population. Such projects may be required to prepare a risk assessment to determine the potential level of risk associated with their operations[12]. A project which has the potential to emit toxic or hazardous air pollutants may be required to meet special requirements, including notification and consultation with the District prior to the adoption or certification of an environmental document[13].

b) If a project is located near an existing or planned sensitive receptor, such as a school, hospital or senior center, its health effects to the sensitive receptor should be carefully examined even if other criteria do not apply. The health effects of a project's emissions may be more pronounced if they impact a considerable number of children, elderly, or people with compromised respiratory or cardiac conditions. Potential sensitive receptor locations should be identified in the environmental documents for District staff evaluation.

c) If a project has the potential to cause an odor or other nuisance problem which could impact a considerable number of people, it should be carefully examined and disclosed in the environmental document.

d) If a project is likely to be a place where people live, play, or gather for long periods of time, it should be considered a receptor. Examples of receptors include residences, outdoor seating areas, schools and school yards, parks and play grounds, daycare centers, nursing homes, and medical facilities. When siting a new receptor, a lead agency shall examine existing or future proposed sources of TAC and/or $PM_{2.5}$ emissions that would adversely affect individuals within the project area. In general, the District recommends that all TAC and $PM_{2.5}$ sources including freeways and major roadways, located within a 1,000 foot radius of the project site be identified and described within the project description. A lead agency should enlarge the 1,000 foot radius on a case-by-case basis if an unusually large source (i.e., such as a rail yard) or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius.

e) Residential and other housing type projects located within, or near existing or planned TAC sources including freeways and major roadways should be analyzed for potential exposure to significant hazards from existing toxic sources. The effects of the potential exposure shall be mitigated to a level of insignificance in compliance with state and federal requirements[14].

f) School facilities, as well as certain project types near schools are subject to special requirements to ensure that potential health impacts resulting from exposure to hazardous materials, wastes, and substances will be carefully examined and disclosed in the environmental document[15]. Lead agencies are required to notify in writing and consult with the District prior to the adoption or certification of the environmental document[16].

- ✓ Additional information regarding Toxic Air Contaminants (TACs) can be found in CHAPTER 4:

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