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## Chapter 2: Thresholds of Significance

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# Thresholds of Significance

## 2.1. Significance Thresholds for CEQA Projects

Thresholds of Significance are used to determine if a land use project's construction and/or operational emissions would result in potential air quality impacts. CEQA encourages each public agency to develop and publish thresholds of significance to use in the determination of significance of environmental effects. The development of the thresholds of significance should be supported by substantial scientific evidence.

On October 13, 2016, the District's Board of Directors adopted the [Review of Land Use Projects under CEQA Policy](#) (Policy).

The Policy established the thresholds of significance for criteria pollutants as well as greenhouse gases (GHG). In setting these thresholds, the District considered the health-based air quality standards, strategies for attaining air quality standards, historical CEQA project review data in Placer County, statewide regulations to achieve emission reduction targets for GHG, and Placer County's special geographic and land use features.

The District recommends that lead agencies, within Placer County, consider using the District's adopted thresholds for determining the significance of criteria pollutants and GHG impacts from new projects subject to CEQA. The lead agency can adopt its own significance thresholds pursuant to CEQA Section 15064.7 (b)(c) and the District will recognize and use them in the CEQA review process.

### 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. District Adopted Significance Thresholds for Criteria Pollutants

Placer County is located within the Sacramento Federal Ozone Nonattainment Area (SFONA) – an area where the air quality does not currently meet the federal 8-hour ozone standard. This standard was established by U.S. EPA, as a requirement of the federal Clean Air Act, to adopt standards for pollutants harmful to public health and the environment.

It is the District's position that any "nonattainment designation" based on the federal or state air quality standards is a significant air quality environmental issue since all sources in the area, including direct and indirect sources, contribute emissions that result in air quality deterioration. Therefore, the nonattainment status should be addressed in environmental documents within the CEQA process as a basis to establish thresholds of significance. The questions which evaluate air quality impacts on the CEQA Guideline's "Environmental Checklist Form"<sup>15</sup> affirms this position.

The District has concluded that there is a direct nexus between "direct" emissions from stationary sources and "indirect" emissions associated with land use sources, where the emissions from a stationary source are no different than the emissions from a land use project. It is indistinguishable if the pollution is emitted by a stationary facility, or land use project vehicle activities. The impacts from either one or both sources influences the region's ability to attain health-based air quality standards.

Historically, the District has applied its new source review (NSR) rule requirement as the recommend significance thresholds for criteria pollutants under the CEQA review program. The NSR rule requires stationary sources to offset emissions when they emit pollutants in excess of the

15 CEQA Guideline Appendix G "Environmental Checklist Form", Section III-Air Quality question (c). [http://resources.ca.gov/ceqa/guidelines/Appendix\\_G.html](http://resources.ca.gov/ceqa/guidelines/Appendix_G.html)

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identified emission offset threshold requirements which are based on the nonattainment classification for the air quality standards. The current emission offset thresholds of 10 tons per year (or 55 pounds per day) for ROG and NOx and 15 tons per year (or 82 pounds per day) for PM10 are required by District Rule 502<sup>16</sup>. These offset requirements are the most stringent of both the federal and state regulations. This is the foundation of the criteria pollutant's significance thresholds for CEQA projects within Placer County. Please note that the unit of pounds per day will be referred to as lbs/day in the following discussion.

The District evaluated the current regional goal to attain the federal and state ambient air quality standards, the CEQA projects reviewed by the District over the last thirteen years (2003-2015), and the CEQA significance thresholds adopted by other air districts in the Sacramento area. District staff was able to demonstrate that the NSR emission offset requirements are appropriate in addressing the potential air quality impacts from new land use projects in Placer County.

The detailed analyses and justification report can be found at <http://www.placerair.org/landuseandceqa/ceqathresholdsandreviewprinciples>. Table 2-1 shows the construction phase project-level, and cumulative-level significance thresholds, adopted by the District, related to the air quality impacts of construction and operational emissions associated with land use projects.

**Table 2-1: PCAPCD Significance Thresholds for Criteria Pollutants**

Construction Phase Project-Level			Operational Phase Project-Level			Operational Phase Cumulative-Level		
ROG	NOx	PM10	ROG	NOx	PM10	ROG	NOx	PM10
(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)
82	82	82	55	55	82	55	55	82

Table 2-2 presents the approximate size of a project for selected land use categories which would result in NOx operational emissions equal to the threshold of 55 lbs/day. The detailed modeling scenario assumptions, settings, and modeling outputs are presented in the [PCAPCD Threshold Justification Report Appendix B](#). This table serves as the preliminary screening methodology and it does not include ROG operational emissions. It may be used in place of an air quality analysis with appropriate discussion to determine the level of significance for a project's air quality impacts. Please note that, depending on the location of the project as well as the project's proposed land use categories, design features, and buildout year, different conclusions may be reached other than the ones shown in Table 2-2.

**Table 2-2: Corresponding Size of a Project for 55 lbs/day of NOx Emissions**

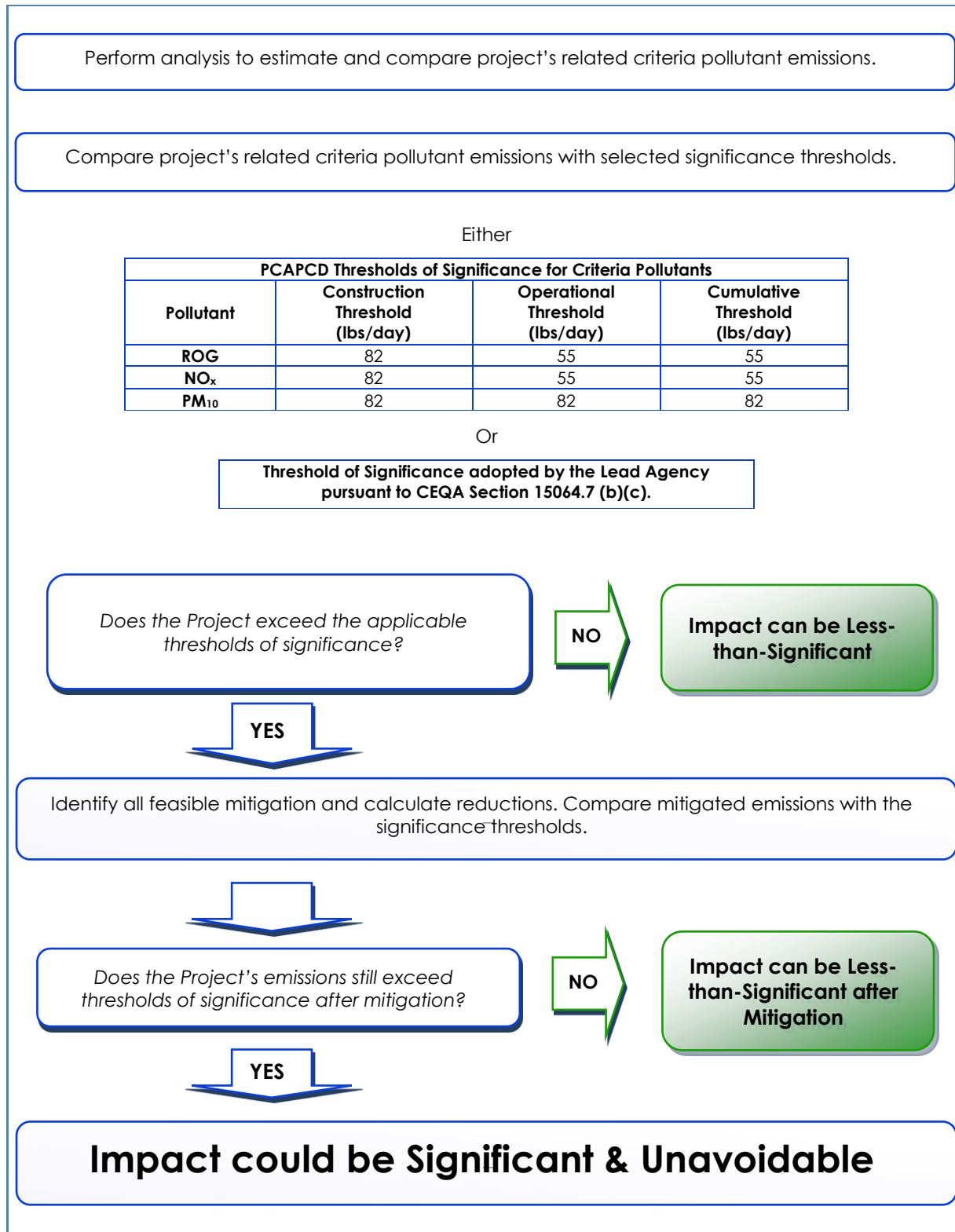
Residential (# of units)			Commercial/Industrial (sf)		
Single Family	Condo	Apartment	General Commercial	General Office	General Industrial
617	868	911	249,099	648,661	894,262

16 PCAPCD Rule 502 New Source Review Section 303.1 Emission Offset Requirements <http://www.placerair.org/~media/apc/documents/rules/reg%205/rule502newsourcereview.pdf?la=en>

## 2.3. Significance Determination for Criteria Pollutant Impacts

Figure 2-1 represents the general steps for evaluating and determining the level of significance for a project's related air quality impacts.

**Figure 2-1: Significance Determination Flowchart for Criteria Pollutants**



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## 2.4. District Adopted Significance Thresholds for Greenhouse Gases

On June 1, 2005, Governor Arnold Schwarzenegger issued Executive Order S-3-05<sup>17</sup>. Although it was not included in state law, Executive Order S-3-05 set an ultimate goal for California to reduce GHG emissions to 80 percent below 1990 levels by 2050.

The California Global Warming Solutions Act (AB32) signed into law in September 2006, required statewide GHG emissions to be reduced to 1990 levels by 2020<sup>18</sup>. AB32 established regulatory, reporting, and market mechanisms to achieve this goal and provide guidance to help attain quantifiable reductions in emissions efficiently, without limiting population and economic growth. CARB is the state agency primarily responsible for implementing AB32. In order to implement AB32, CARB adopted a Scoping Plan in 2008<sup>19</sup> that outlined actions necessary to reduce statewide GHG emissions. The Scoping Plan estimated that California would need to reduce emissions by 29 percent from a “business as usual” scenario to achieve AB32 emission reduction goals.

With the enactment of Senate Bill (SB) 97, California’s lawmakers identified the need to analyze greenhouse gas emissions as a part of the CEQA process. The Office of Planning and Research (OPR) amended the CEQA Guidelines to include the analysis and mitigation of GHG emissions, which became effective on March 18, 2010<sup>20</sup>. Even in the absence of adopted CEQA thresholds for GHG emissions, lead agencies are required to analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.

Senate Bill (SB) 32 was signed by Governor Jerry Brown, on September 8, 2016, to establish a California GHG reduction target of 40 percent below 1990 levels by 2030<sup>21</sup>. California is on track to meet or exceed this current target, as established in the California Global Warming Solutions Act of 2006 (AB 32). This new emission reduction target will make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050.

To develop the GHG significance thresholds, the District considered the following factors: 1) the significance thresholds adopted by the other air districts, 2) the CEQA projects reviewed by the District over the last 13 years, 3) the applicable statewide regulatory requirements required by 2030, and 4) the special geographic features in Placer County. The District’s adopted GHG significance thresholds include three components: 1) Bright-line Thresholds of 10,000 metric tons (MT) of carbon dioxide equivalent per year (CO<sub>2</sub>e/yr), 2) Efficiency Matrix for residential and non-residential development, and 3) De Minimis Level for the operational phase of 1,100 MT CO<sub>2</sub>e/yr).

Table 2-3 shows the District’s adopted Bright-line thresholds for different projects’ construction phase and the stationary source projects’ operational phase GHG emissions. The Bright-line threshold is the point at which a project would be deemed to have a cumulatively considerable<sup>22</sup> contribution to global climate change. Table 2-4 shows the adopted 3-tier significance thresholds for the land use operational phase GHG emissions. Detailed technical analyses for the GHG significance threshold development can be found at <http://www.placerair.org/landuseandceqa/ceqathresholdsandreviewprinciples>.

<sup>17</sup> California Executive Order S-3-05, (June 2005) <https://www.gov.ca.gov/news.php?id=1861>

<sup>18</sup> California Assembly Bill No. 32 <https://www.arb.ca.gov/cc/docs/ab32text.pdf>

<sup>19</sup> AB32 required CARB to adopt a Scoping Plan to describe the approach that California will take to reduce statewide GHG emissions to 1990 levels by 2020. [http://www.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf)

<sup>20</sup> [https://www.opr.ca.gov/s\\_ceqaandclimatechange.php](https://www.opr.ca.gov/s_ceqaandclimatechange.php)

<sup>21</sup> California Senate Bill No. 32 [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32)

<sup>22</sup> CEQA Guidelines §15064 (h)(1)

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**Table 2-3: PCAPCD GHG Significance Thresholds for Different Construction and Stationary Source Operational Phases**

All Construction Project-Level	Stationary Source Operational Project-Level
10,000 MT CO <sub>2</sub> e/yr	

**Table 2-4: PCAPCD GHG Significance Thresholds for Land Use Operational Phase Only**

<b>Bright-Line Thresholds</b>			
10,000 MT CO <sub>2</sub> e/yr			
<b>Efficiency Matrix</b>			
<b>Residential</b>		<b>Non-Residential</b>	
<b>urban</b>	<b>rural</b>	<b>urban</b>	<b>rural</b>
(MT CO <sub>2</sub> e/capita)		(MT CO <sub>2</sub> e/1,000 sf)	
<b>4.5</b>	<b>5.5</b>	<b>26.5</b>	<b>27.3</b>
<b>De Minimis Level</b>			
1,100 MT CO <sub>2</sub> e/yr			

The District's Bright-line GHG Threshold of 10,000 MT CO<sub>2</sub>e/yr is applied to land use projects' construction phase and stationary source projects' construction and operational phases. In general, GHG emissions from a project (either the construction or operational phase) that exceed 10,000 MT CO<sub>2</sub>e/yr would be deemed to have a cumulatively considerable contribution to global climate change.

The Efficiency Matrix and De Minimis Level are only applied to a land use project's operational phase. For a land use project, it can be considered as less than cumulatively considerable and be excluded from future GHG impact analysis if its operational phase GHG emissions are equal to or less than 1,100 MT CO<sub>2</sub>e/yr. A land use project with GHG operational emissions between 1,100 MT and 10,000 MT CO<sub>2</sub>e/yr can still be found less than cumulatively considerable when the results of the project's related efficiency analysis meets one of conditions in the efficiency matrix for that applicable land use setting and land use type. The detailed discussion of GHG efficiency matrix development in Placer County is presented in the [PCAPCD Threshold Justification Report Appendix C](#).

Tables 2-5 and 2-6 presents the approximate size of a project for some of the land use categories which would result in GHG operational emissions equal to the Bright-line threshold of 10,000 MT CO<sub>2</sub>e/yr and the De Minimis Level of 1,100 MT CO<sub>2</sub>e/yr. The detailed modeling scenario assumptions, settings, and modeling outputs are presented in the [PCAPCD Threshold Justification Report Appendix D](#). These two tables serve as a preliminary screening methodology and should not be used in place of an analysis to determine the level of significance for a project's related GHG impact. Please note that, depending on the location of the project as well as the project's proposed land use categories and design features, different conclusions may be reached other than the ones shown in Tables 2-5 and 2-6.

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**Table 2-5: Corresponding Size of a Project for Bright-Line Thresholds of 10,000 MT CO<sub>2</sub>e/yr**

Residential (# of units)			Commercial/Industrial (sf)		
Single Family	Condo	Apartment	General Commercial	General Office	General Industrial
646	957	1,044	323,955	756,170	901,709

**Table 2-6: Corresponding Size of a Project for De Minimis Level of 1,100 MT CO<sub>2</sub>e/yr**

Residential (# of units)			Commercial/Industrial (sf)		
Single Family	Condo	Apartment	General Commercial	General Office	General Industrial
71	105	115	35,635	83,180	99,189

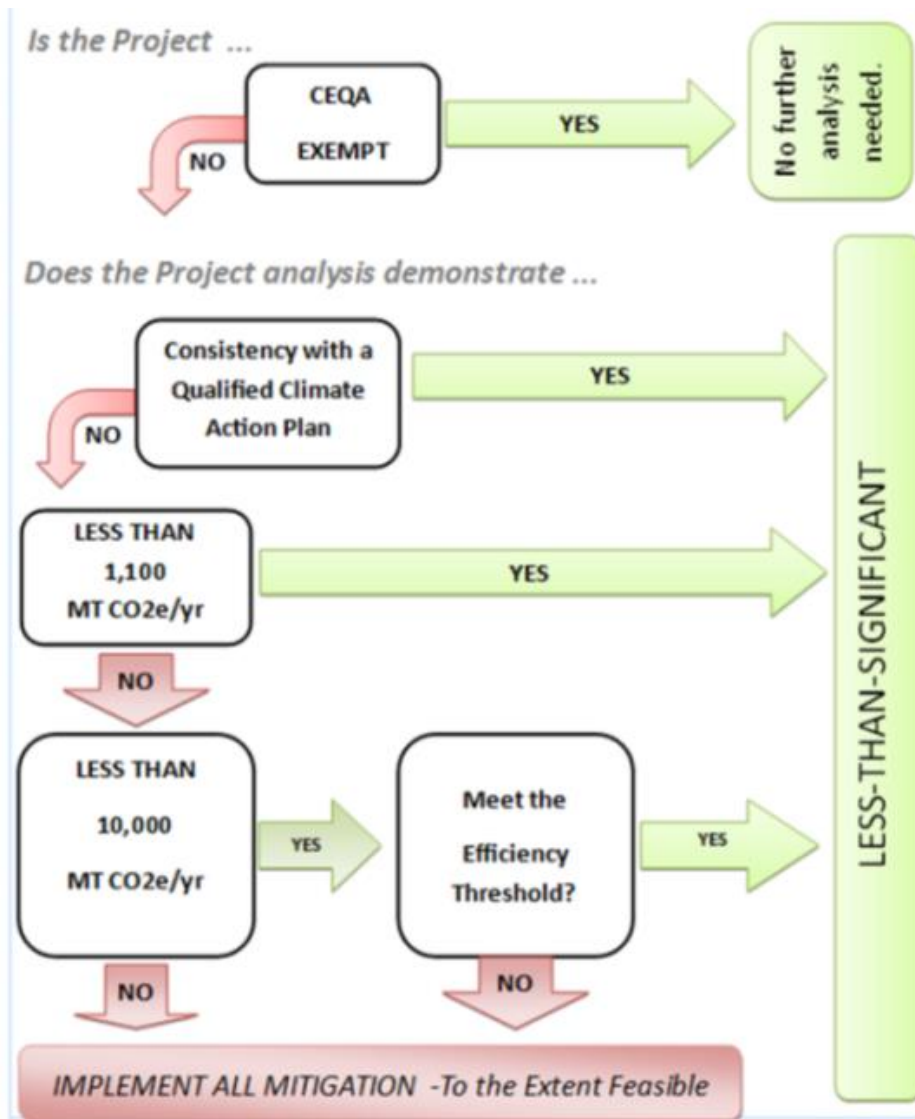
The District believes that the adopted GHG thresholds which were developed based on Placer County's special conditions can facilitate a uniform process for local jurisdictions in Placer County to analyze and identify potentially significant GHG impacts from land use projects. This uniform process will assist local jurisdictions in demonstrating a balance between the future growth in Placer County and the assumed responsibility in assisting California to achieve its GHG reduction goals.

## 2.5. Qualified Climate Action Plan

Alternatively, in lieu of applying the District's adopted GHG significance thresholds, local jurisdictions in Placer County can develop their own climate action plans pursuant to the CEQA requirement. If a jurisdiction has a qualified climate action plan (CAP) or greenhouse gas reduction plan (GHGRP) that meets all the criteria stated in CEQA Guidelines Section 15183.5 (b), the qualified plan can be used to determine the project's GHG impact in lieu of applying the District's adopted GHG significance thresholds. If a land use project can demonstrate consistency with the mitigation strategies identified in that jurisdiction's qualified CAP or GHGRP, the project can be deemed as less than cumulatively considerable for its associated GHG impacts.

Figure 2-2 represents the general steps for evaluating and determining the level of significance for a project's related GHG impacts

Figure 2-2: Significance Determination Flowchart for GHGs



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