Attachment 5

Planning Commission Staff Memorandum and Staff Report

COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT

MEMORANDUM

TO: Santa Barbara County Planning Commissioners

FROM: Kevin Drude, Deputy Director, Energy & Minerals Division

DATE: April 6, 2015

RE: Greenhouse Gas Emissions Threshold of Significance

This memorandum provides staff's response to four inquiries from Planning Commissioners during its hearing of a proposed greenhouse gas (GHG) emissions threshold, conducted on March 25, 2015.

1. Adjusted data for GHG emissions from 2013 stationary sources countywide

Commissioner Brown asked how the number of stationary sources might look if non-industrial sources were removed from consideration. Accordingly, staff revised the database for 2013 stationary sources to reflect only those sources that were industrial (e.g., oil/gas operations, mining operations, and manufacturing). Staff further revised the database to reflect only those sources that are located within the unincorporated area of the County, where the County serves as the CEQA lead agency. The adjusted data yielded the following changes:

- The total number of 2013 stationary sources decreased from 418 to 45
- The number of 2013 stationary sources with GHG emissions above 10,000 $MTCO_2e$/year decreased from 12 to 8
- The number of 2013 stationary sources with GHG emissions below 10,000 $MTCO_2e$/year decreased from 406 to 37
- The number of 2013 stationary sources with GHG emissions above 1,000 $MTCO_2e$/year decreased from 71 to 22
- The number of 2013 stationary sources with GHG emissions below 1,000 $MTCO_2e$/year decreased from 347 to 23
- The number of 2013 stationary sources with GHG emissions above 1,000 $MTCO_2e$/year, but below 10,000 $MTCO_2e$/year decreased from 59 to 14
- The cumulative amount of 2013 GHG emissions decreased from 1,001,607 to 784,401 $MTCO_2e$/year
- The cumulative amount of 2013 GHG emissions from sources individually higher than 10,000 $MTCO_2e$/year decreased from 818,506 to 734,401
- The cumulative amount of 2013 GHG emissions from sources individually lower than 10,000 $MTCO_2e$/year decreased from 183,101 to 50,000
- The cumulative amount of 2013 GHG emissions from sources individually higher than 1,000 $MTCO_2e$/year decreased from 987,481 to 779,479
- The cumulative amount of 2013 GHG emissions from sources individually lower than 1,000 $MTCO_2e$/year decreased from 14,126 to 4,922

- The cumulative amount of 2013 GHG emissions from sources individually lower than 10,000 $MTCO_2e$/year, but higher than 1,000 $MTCO_2e$/year decreased from 168,975 to 45,078
- The capture rate for the 10,000 $MTCO_2e$/year threshold increased from 82.4% to 93.6%
- The capture rate for 1,000 $MTCO_2e$/year threshold increased from 98.6% to 99.4%

The revised data illustrates that the difference between a 1,000 $MTCO_2e$/year threshold and a zero threshold is small, amounting to a cumulative difference of 4,922 $MTCO_2e$/year in the year 2013. Looking forward, staff would expect that the capture rate for the staff-recommended 10,000 $MTCO_2e$/year threshold could increase above 95% in the near-term should one permitted and two proposed industrial/stationary-source projects become operational.

2. Treatment of GHG emissions between 1,000 and 10,000 $MTCO_2e$/year

Commissioner Hartman asked staff its thoughts on the testimony provided by the Community Environmental Council (CEC). The CEC advocates for a zero-emission threshold. CEC further states that, if the County chooses not to adopt a zero-emission threshold, then it should adopt a 1,000 $MTCO_2e$/year threshold instead of the staff-recommended 10,000 $MTCO_2e$/year threshold. CEC further explores the concept of a County-prepared Programmatic Environmental Impact Report (PEIR) as a potential mechanism to reduce the regulatory burden posed by choosing a 1,000 $MTCO_2e$/year threshold over a 10,000 $MTCO_2e$/year threshold. In concept, the PEIR would identify a prescriptive list of standard mitigations that would apply to proposed industrial/stationary sources that equal or exceed a 1,000 $MTCO_2e$/year threshold, but are less than a 10,000 $MTCO_2e$/year threshold, thereby avoiding the need for a Project-Specific EIR in favor of a Mitigated Negative Declaration (MND) or an exemption.

Staff and our panel of experts will be prepared to address this concept at greater length on April 9th, and offers the following preliminary thoughts for consideration in advance.

- The CEQA Guidelines define a Threshold of Significance as "... *an identifiable quantitative, qualitative, or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.* (CEQA Guidelines § 15064.7(a).) In subsequent discussions with CEC staff, P&D staff understands that CEC's concept entails two thresholds: a quantitative threshold for proposed projects with 10,000 $MTCO_2e$/year or more of GHG emissions, and a prescriptive performance level threshold for future projects with emissions at 1,000 $MTCO_2e$/year or more, but less than 10,000 $MTCO_2e$/year. Accordingly, an applicant complies with the first threshold by reducing its annual GHG emissions to below 10,000 $MTCO_2e$/year through onsite mitigation or offsite offsets. An applicant complies with the second threshold by employing applicable standard mitigation, regardless of the reduction in emissions gained.

- That said, numbers and capture rates derived from the 2013 database discussed above are based on operational GHG emissions, and do not consider potential short-term emissions from construction. Construction-related GHG emissions from proposed future industrial/stationary sources are unlikely to trigger a 10,000 $MTCO_2e$/year threshold in and of themselves based on recent environmental documents. However, a substantially lower 1,000 $MTCO_2e$/year threshold could be very well triggered by construction-related GHG emissions, even where operational emissions fall below the threshold. It would also mean that standard mitigation would be needed for both construction-related and operational emissions.

- As a procedural matter, the preparation of a PEIR would likely increase the cost of adopting a threshold of significance for GHG emissions by at least $80,000 beyond the currently approved budget. Additionally, a PEIR is neither necessary nor the appropriate procedure for adopting a threshold of significance. A prescriptive list of standard mitigation, if desired, may be developed and adopted as part of the current threshold process, without the substantial additional cost and time of preparing a PEIR. However, the currently approved budget for this threshold is not sufficient to develop such a prescriptive list of measures.

3. Economic burden of a stricter threshold

Commissioner Ferini asked what the economic burden might be on applicants subject to a stricter threshold (e.g., a zero-emission or 1,000 $MTCO_2e$/year threshold). The economic burden would depend upon the treatment of projects with emissions greater than a stricter threshold but lower than 10,000 $MTCO_2e$/year. For example, the economic burden would be relatively substantial if the GHG emissions were treated in a quantitative manner, with mitigation to below the stricter threshold being required to achieve a less-than-significant impact. The applicant's costs may extend beyond that of onsite mitigation to include purchase and verification of offsite emission reduction credits each year of operation. Alternatively, if GHG emissions for projects below 10,000 MTCO2e/year are only subjected to complying with a list of prescriptive mitigation standards, as applicable, then the costs would focus on the cost of that mitigation.

4. Summary of case law on GHG thresholds of significance

Commissioner Cooney expressed interest in seeing a summary of the relevant case law associated with GHG emissions thresholds. County Counsel will present that summary at the hearing on April 9th.

In conclusion, staff reiterates its recommendation of a 10,000 MTCO2e/year threshold as an appropriate one for industrial/stationary sources proposed within the unincorporated area of the County. The revised database indicates this threshold would capture 93.6 percent of GHG emissions, making it similar to capture rates achieved by other air districts and counties that have adopted a 10,000 MTCO2e/year bright-line threshold.

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SANTA BARBARA COUNTY

Staff Report for Greenhouse Gas Emissions Threshold of Significance

Hearing Dates: March 25, 2015
April 9, 2015
Staff Report Date: March 18, 2015
Case No.: 15ORD-00000-00006
Environmental Document: Exempt pursuant to CEQA Guidelines sections 15064.7 and 15378

Deputy Director: Kevin Drude
Division: Energy and Minerals
Staff Contact: Doug Anthony
Staff Contact Phone #: (805) 722-9006

1.0 REQUEST

Hearing on the request of the Santa Barbara County Planning and Development Department (P&D) to consider Case No. 15ORD-00000-00006, and recommend that the Board of Supervisors amend the County of Santa Barbara's *Environmental Thresholds and Guidelines Manual,* by adding a threshold of significance to guide the County's environmental analysis of greenhouse gas emissions from industrial/stationary sources for projects subject to CEQA; and recommend that the Board of Supervisors find the adoption of a new threshold is exempt pursuant to CEQA Guideline Sections 15064.7 and 15378

2.0 RECOMMENDATION AND PROCEDURES

Follow the procedures outlined below and authorize the Chair to execute the attached Resolution, Case No. 15ORD-00000-00006, recommending that the Board of Supervisors adopt a greenhouse gas emissions threshold of significance for industrial/stationary sources.

Your Commission's motion should include the following:

1. Recommend that the Board of Supervisors make the required findings for approval of the proposed amendment, including CEQA findings (Attachment A); and

2. Recommend that the Board of Supervisors determine the project is exempt from CEQA pursuant to CEQA Guideline Sections 15064.7 and 15378 of CEQA, included as Attachment C.

3. Adopt a Resolution recommending that the Board of Supervisors adopt Case No. 15ORD-00000-00006, amending the County of Santa Barbara's *Environmental Thresholds and Guidelines Manual,* by adding a threshold of significance to guide the County's environmental analysis of greenhouse gas emissions from industrial/stationary sources of a project subject to the CEQA (Attachment B).

Refer back to staff if the County Planning Commission takes other than the recommended action.

3.0 JURISDICTION

This project is being considered by the County Planning Commission based on the County of Santa Barbara's *Guidelines for the Implementation of the California Environmental Quality Act of 1970,* §F.3.b (Process for thresholds amendment and adoption), pages 8 – 9, which states in part:

> *"(1) New or revised thresholds. The* Environmental Thresholds and Guidelines Manual *shall be periodically amended by the Board of Supervisors, as necessary to reflect new information or changed environmental circumstances; and new thresholds or guidelines for additional topical areas may be adopted by the Board of Supervisors as deemed necessary. In accordance with Board of Supervisors authorization, the Planning Commission will hold noticed public hearings in north and south county locations to consider (1) existing thresholds and the need for refinement or revision, (2) specific proposed changes to thresholds and guidelines, and/or (3) new thresholds and guidelines for additional topics. The public hearings will have the purpose of advising the public of the basis for thresholds, of obtaining public comment on thresholds and revisions, and of gathering relevant data for inclusion in thresholds data bases. The Planning Commission will provide direction for thresholds revisions and development of new thresholds, and will forward new or revised thresholds for final adoption by the Board of Supervisors."*

4.0 ISSUE SUMMARY

In June, 2014, the Board of Supervisors directed staff to prepare a CEQA threshold to determine the significance of greenhouse gas (GHG) emissions from proposed industrial/stationary sources subject to environmental review. The Santa Barbara County Air Pollution Control District (APCD) is also undertaking a concurrent process to update its Environmental Review Guidelines for the purpose of adding a threshold of significance for greenhouse gas emissions, applicable to new or modified stationary sources. The District has scheduled a workshop before its Community Advisory Council on the evening of March 25; a copy of the district's staff report is available at http://www.ourair.org/greenhouse-gases-and-ceqa/. The District plans to present two threshold options to its Board of Directors in May.

The CEQA Guidelines define a threshold of significance as:

> *"... an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which normally will be determined to be less than significant."* (§15064.7(a))

CEQA provides lead agencies with broad discretion with regard to adopting thresholds of significance, provided that adopted thresholds are based on substantial evidence. An earlier effort undertaken by the California Air Resources Board (CARB) in 2008 to develop statewide guidance for treatment of greenhouse gas (GHG), including thresholds of significance, never progressed beyond draft form. As a result, the County is left with a suite of threshold options from which to consider, as exemplified in staff's survey of various GHG thresholds applied by CEQA lead agencies to date (Attachment E).

Staff is recommending adoption of a numeric, bright-line threshold of 10,000 metric tonnes of carbon dioxide equivalent per year. Proposed industrial/stationary-source projects that exceed the threshold would have a significant cumulative impact on climate change. The threshold, as proposed, is a measurement of GHG emissions applied to incremental growth, with the intent of ensuring all phases of a development under common ownership or control are considered under CEQA. This proposed threshold is also one of two threshold options that the Santa Barbara APCD is presenting for consideration.

Other optional thresholds for consideration include:

- Other non-zero, bright-line thresholds;
- A zero-emission threshold;
- A uniform, percentage-based reduction, based on a statewide GHG reduction target (the other option that APCD is presenting for consideration);
- Performance-based standards on project design, equipment, and operations.

5.0 PROJECT INFORMATION

5.1 Setting

A metric tonne of carbon dioxide equivalent per year (MTCO2e/year) is the commonly used metric to homogenize the emissions of the various GHGs into a single measurement, based on the global warming potential of each gas. The various GHGs include six substances identified in the Kyoto Protocol – carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6) – plus a

seventh GHG, nitrogen trifluoride, recently recognized by the California Air Resources Board (CARB).[1]

P&D's draft Energy and Climate Action Plan provides the most recently available estimate of GHG emissions from all sources within the unincorporated area of Santa Barbara County. The plan estimated total GHG emissions of approximately 1,780,565 $MTCO_2e$ in 2007 (see Attachment D). This estimate excludes emissions from State and Federal lands, the University of California, Santa Barbara, Native American reservations, and offshore sources, as it focused on geographic areas subject to County land-use jurisdiction. It compares to a total of 489 million $MTCO_2e$ statewide for the same year.

California's enactment of the Global Warming Solutions Act of 2006 (Assembly Bill (AB) – 32), codified at Health and Safety Code §§ 38500 *et. seq.*, set into motion several actions to reduce statewide GHG emissions to 1990 levels by the year 2020, or 431 $MMTCO_2e$.[2] The state is on track to meet the 2020 interim short-term target.[3]

Meanwhile, the California legislature and regulators are addressing additional actions and mid-term reduction targets necessary to continue progress towards achieving the long-term 2050 goal, set by the Governor's office through Executive Order S-3-05. That Executive Order charts a policy to reduce statewide GHG emissions to a level that is 80 percent below 1990 emissions[4] – which was recognized in CARB's most recent scoping plan as the long-term target necessary to stabilize the climate and reduce the likelihood of catastrophic climate change.[5] According to CARB: *"Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit."*[6]

Currently, the state is looking at a mid-term target, perhaps for the years 2030 and 2040, thereby setting the stage for future GHG reduction strategies that ensure continued progress toward meeting the 2050 long-term target.[7] CARB's Environmental Justice Advisory Committee recently recommended a 2030 mid-term target of, at least, a 40 percent reduction below 1990

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[1] California Air Resources Board, *First Update to the Climate Change Scoping Plan – Building on the Framework, Pursuant to AB 32 The Global Warming Solutions Act of 2006,* 2014(b), page 14; see also, California Air Resources Board, 2014(a), pages 2-3. Also, Senate Bill (SB) 104, enacted in 2009. The Kyoto Protocol is a treaty made under the United Nations Framework Convention on Climate Change, which was signed on March 21, 1994. The Convention was the first international agreement to regulate GHG emissions; it sets binding targets and timetables for cutting the GHG emissions of industrialized countries An estimated 5 percent reduction in global GHG emissions would result if the Protocol's commitments were met. While the U.S. is a signatory to the Protocol, Congress has not ratified it.

[2] This metric reflects CARB's latest estimate. California Air Resources Board, *Op. Cit.,* 2014(b), page 24).

[3] *Ibid,* page ES2.

[4] Reflected in California Governor Schwarzenegger's Executive Order S-3-05.

[5] California Air Resources Board, *Op. Cit.,* 2014(b), pages 1 and 13.

[6] *Ibid,* page 33.

[7] *Ibid,* pages 34 - 44. California Senate Bill (SB) – 32, introduced on December 1, 2014 by Senator Pavley.

GHG emission levels, and a 2040 mid-term target of, at least, a 60 percent reduction below 1990 GHG emission levels.[8]

Among statewide actions to reduce GHG emissions, the California Legislature adopted Senate Bill 97 that mandated the California Natural Resources Agency to amend the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines). The 2009 amendment requires CEQA lead agencies to *"...make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project"* (CEQA Guidelines §15064.4). The amendment further obligates lead agencies to consider if the estimated amount of GHG emissions from a proposed project exceeds a threshold of significance, and to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Climate change under CEQA differs from most other types of impacts in that, by definition, it is only examined as a cumulative impact that results not from any one project's GHG emissions, but rather from GHG emissions *"... generated globally over many decades by a vast number of different sources."*[9] Therefore, analysis of a project's GHG emissions under CEQA focuses solely on the incremental contribution of estimated project emissions to climate change. A CEQA lead agency may determine that a project's incremental contribution to an existing cumulatively significant issue, such as climate change, is not significant based on supporting facts and analysis (§15130(a)(2)). CEQA Guidelines direct that a project's contribution to a significant cumulative impact will be rendered less than significant if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact (§15130(a)(3)). Such determinations must be based on analysis in the environmental document with substantial evidence to demonstrate that mitigation required of a project represents the project's "fair-share" contribution towards alleviating the cumulative impact.

A GHG threshold(s) of significance has a two-fold purpose. First, the threshold(s) establishes a point at which a proposed project's GHG emissions are substantial enough to be considered a significant cumulative impact on climate change. Second, the threshold(s) establishes a reduction goal, which is achieved via feasible mitigation. The two may be, but are not necessarily, the same, according to a survey of the various GHG thresholds applied throughout California (Attachment E). A CEQA lead agency, for example, may choose a single threshold to satisfy

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[8] *Ibid*, page 7.

[9] Kostka, Stephen I. and Michael H. Ziechke, *Practice Under California Environmental Quality Act,* Second Edition, Volume 2, (Oakland, CA: 2013, Continuing Education of the BAR, §20.83; California Natural Resources Agency, *Notice of Public Hearings and Notice of (Proposed Amendment of Regulation Implementing the California Environmental Quality Act,* 2009; Hegerl, GC. *et. al,* "Chapter 9: Understanding and Attributing Climate Change," *Climate Change 2007: The Physical Basis,* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel of Climate Change (Cambridge: Cambridge University Press, 2007.

both purposes; or it may choose a screening threshold to satisfy the first purpose, and a different goal to determine what might constitute a project's fair-share contribution to the alleviation of the cumulative impact.

5.2 Description Of Proposed Threshold

Staff recommends adoption of a Resolution, as shown in Attachment B, recommending that the County Board of Supervisors amend the County of Santa Barbara's *Environmental Threshold Manual*, by adding a new Chapter 11, "Greenhouse Gas Thresholds," and renumbering the current Chapter 11, and all subsequent chapters, beginning with the number 12, and revising the Table of Contents accordingly. The new Chapter 11 would entail a threshold to determine the significance of GHG emissions from industrial/stationary sources that qualify as projects under CEQA. If adopted, this threshold should be revisited periodically and adjusted as appropriate in light of the continuous evolution of climate science and California's progress in reducing its GHG emissions. The specifics of staff's recommended threshold include the following:

Applicability

- The threshold would apply to the following GHGs per the California Health and Safety Code §38505(g): carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3), and any other material that CARB recognizes as a GHG in the future. In so doing, P&D recognizes that this threshold primarily focuses on the first three chemicals, noting that the latter four are unlikely candidates associated with projects subject to this threshold.
- The threshold would apply to both direct and indirect project GHG emissions, where protocols to support calculation of such emissions are available.
  - Direct emissions would entail the project's complete operations, including GHG's emitted from a location within California from all stationary and mobile sources involved in the operation, as well as removal of trees and other vegetation, using best available protocols to estimate such emissions.
  - Indirect emissions would entail GHG emissions produced to provide electricity and water to the project's operations and the emissions to transport and process solid and liquid waste produced from the project's operations, using best available protocols to estimate such emissions.
- Construction-related emissions would be accounted for in the year they occur.
- As explained in section 6.1, below, the threshold does not apply to GHG emissions that are generated throughout the life cycle of products that a project may produce or consume, except as identified above as a project's indirect emissions.
- The threshold does not apply to residential or commercial development.

Numeric Bright-Line Threshold

All industrial/stationary-source projects would be subject to a numeric, bright-line threshold of 10,000 $MTCO_2e$/year to determine if greenhouse gas emissions constitute a significant cumulative impact. Annual GHG emissions that are equivalent to or exceed the threshold are determined to have a significant cumulative impact on global climate change. For the purpose of addressing the potential for unmitigated incremental growth, the combined GHG emissions from one or more previous discretionary permit approvals after adoption of this threshold will be considered in the environmental review of all subsequent discretionary permit applications that, as determined by the County, constitute separate parts or phases of the previously approved projects, including but not limited to:

- Any series of oil and gas production projects under common ownership or control, including related processing and transport operations, that are located within the same State-designated oil field, or represent an expansion of any State-designated oil field.
- Any series of surface mining projects under common ownership or control, including related processing and transport operations, that are located within the same individually designated Surface Mining and Reclamation Act (SMARA) operation, or represent an expansion of any individually designated SMARA operation.

Mitigation

- Projects found to result in a significant cumulative impact would be required to reduce their greenhouse gas emissions to the applicable threshold, where feasible, through onsite reductions and offsite reduction programs approved by the County.

Relation to County Energy and Climate Action Plan

The proposed threshold is recommended as one of several cohesive efforts undertaken by Santa Barbara County to reduce GHG emissions. Those efforts include the draft Energy and Climate Action Plan (ECAP),[10] which was considered by the Planning Commission last fall and recommended to the Board of Supervisors for adoption. GHG reduction measures identified in the proposed ECAP seek to reduce countywide emissions by 15 percent below the 2007 baseline emissions inventory by the year 2020. If adopted, the proposed ECAP would constitute a local GHG reduction plan that, pursuant to CEQA Guidelines §15183.5(b), allows a CEQA lead agency to determine whether a future project's incremental contribution to the cumulative effect of climate is significant or not, based upon compliance with requirements of the reduction plan.

[10] See Santa Barbara County, Planning and Development Department, *Staff Report for County of Santa Barbara Energy and Climate Action Plan,* Planning Commission hearing date of September 3,2014, pages 2 – 4.

Both the recommended ECAP and the recommended industrial/stationary source threshold are intended to complement one another during implementation. Permit approvals of future industrial/stationary-source projects would need to demonstrate compliance with those reduction measures of the ECAP that may be applicable to the project, as well as achieve reductions of emissions, where feasible, to a level below the recommended threshold of significance. Quantifiable measures to reduce a project's GHG emissions in compliance with the ECAP may also count towards GHG reductions under the threshold.

5.3 Background Information

As mentioned previously, the California Natural Resources Agency amended the CEQA Guidelines in 2009, thereby requiring CEQA lead agencies to estimate a project's GHG emissions and determine the extent to which those emissions present a significant cumulative impact. Since that time, P&D has used a numeric, bright-line threshold of 10,000 $MTCO_2e$/year on a case-by-case basis to screen applications for proposed industrial/stationary-source projects. Under this practice, any proposal with annual GHG emissions below 10,000 $MTCO_2e$/year is considered to have a less-than-significant impact on climate change. Alternatively, any proposal with emissions equaling or exceeding 10,000 $MTCO_2e$/year is considered to have a significant cumulative impact. This threshold reflected what had been adopted by the South Coast Air Quality Management District (2008), the Bay Area Air Quality Management District (2009), and the San Luis Obispo Air Pollution Control District (2012) for either stationary sources or stationary-source projects (see Attachment E for explanation of the differences).

In April and September of 2013, the County Planning Commission considered an application for 136 oil wells that would apply a method of production called cyclic steam injection. The project required two steam generators that were fueled by natural gas (combining gas produced onsite and utility gas) and would result in large GHG emissions. This project, with estimated annual GHG emissions reaching a peak of 87,874 $MTCO_2e$/year, was the first application processed by P&D with GHG emissions that exceeded the 10,000 $MTCO_2e$/year screening threshold. The project's environmental impact report[11] discussed several threshold options already in use by other CEQA lead agencies and/or discussed in the CAPCOA White Paper.[12] Following P&D's recommendation, the Planning Commission agreed that the project's GHG emissions constituted a significant cumulative impact on climate change. The Commission debated, however, which methodology was most appropriate to determine the threshold to which the project would be required to reduce and/or offset those emissions. Staff had recommended a method that would

[11] Planning and Development, Santa Barbara County, *FINAL Environmental Impact Report – Santa Maria Energy Production Plan and Development Plan – Laguna County Sanitation District Phase 3 Recycled Water Pipeline,* State Clearing House No. 2011091085, Santa Barbara County EIR No. 12EIR-00000-00003, September 2013, Volume 1: Main Document, pages 5.1-2 – 5.1-13.
[12] California Air Pollution Control Officers Association (CAPCOA), *CEQA and Climate Change*, 2008, page 31.

reduce the project's emissions by 29 percent below Business-As-Usual (BAU). That method would not only achieve consistency with the legislatively established target of AB – 32 (i.e., reducing statewide GHG emissions to 1990 levels by the year 2020), and also had been upheld in two published California Appellate Court decisions as an adequate threshold under CEQA.[13] The Commission's 3-2 majority accepted staff's recommendation and approved the project, requiring GHG emissions to be reduced by 29 percent below BAU.

The Planning Commission's approval was appealed to the Board of Supervisors. The Board conducted a *de novo* hearing of the project and a 3-2 majority of Supervisors approved it. In so doing, the Board disagreed with the Planning Commission's reliance on a threshold of 29 percent below BAU to determine the project's obligation to reduce or offset GHG emissions, concluding instead that the project's annual GHG emissions should be mitigated below a 10,000 $MTCO_2e$/year threshold. This approval held, as no litigation followed the Board's action.

The following spring, the Santa Barbara County Air Pollution Control District (APCD) staff commenced an update to the District's CEQA thresholds of significance in order to prepare a threshold of significance for GHG emissions from stationary sources. With approval of the County annual budget in June of 2014, the Board of Supervisors directed P&D to develop a GHG emissions threshold of significance for its consideration.

6.0 PROJECT ANALYSIS

6.1 Choosing a Threshold

CEQA encourages, but does not require lead agencies to adopt thresholds of significance. CEQA also provides lead agencies broad discretion in adoption of thresholds of significance, provided that adoption is based on substantial evidence. This discretion often results in variations among CEQA lead agencies and different jurisdictions. For example, some lead agencies have applied performance-based thresholds that require a project to incorporate best performance standards into the design of the project. Alternatively, lead agencies apply thresholds that require a reduction in a project's emissions below the normally expected operations (i.e., the Business-As-Usual, or BAU scenario) by a specified percentage (e.g., 29% or 15.3%), based on statutory GHG reduction targets identified in AB 32 and CARB's Scoping Plan. Still other lead agencies have used numeric, bright-line thresholds, such as 1,100, 2,500, 10,000, 25,000, or 100,000 metric tonnes of carbon dioxide equivalent per year ($MTCO_2e$/year). Lastly, the California State Lands Commission has twice sought, on a case-by-case basis, to achieve carbon neutrality in future development by employing a zero-emission threshold of significance in a project-specific environmental impact report (EIR).

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[13] *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, and *Friends of Oroville et. al. v. City of Oroville et. al.* (August 19, 2013) 218 Cal. App. 4th 1352.

Thus, the County is left with a suite of threshold options from which to choose or adjust as it deems appropriate. In so doing, the following issues merit consideration.

Mitigating Incremental Growth

Local experience indicates that the majority of industrial/stationary-source projects that would be subject to the proposed greenhouse gas threshold, including oil/gas production and surface mining, often expand over time. Oil-field operators, for example, currently are seeking to expand wells into new formations within state-designated fields, while others may apply new methods, such as steam injection, into existing wells.

One advantage of adopting thresholds of significance is the guidance provided to prospective applicants, so they may incorporate design features or measures into the proposed project to avoid, reduce, or otherwise mitigate project impacts. P&D's case-by-case use of a screening threshold for greenhouse gases of 10,000 MTCO2e/year has encouraged some applicants to reduce or revise the scope of proposed oil production in order to fall below that threshold.

The foregoing advantage must be balanced against potential unmitigated incremental growth over time; that is, two or more discretionary permit applications submitted by an entity under common ownership or control that individually do not trigger a 10,000 MTCO2e/year threshold. Thresholds that rely on application of Best Performance Standards or a percent reduction from BAU inherently avoid the issue of unmitigated incremental growth in GHG emissions over time, if they do not use a numeric, bright-line screening threshold, because each stage of incremental growth would be held to the same GHG reduction target. However, applying any numeric, bright-line thresholds of significance, other than a zero-emission threshold, may result in unmitigated incremental growth of GHG emissions, unless such results are specifically addressed. The recommended threshold, for example, recognizes that the combined GHG emissions from one or more previous discretionary permit approvals after adoption of the threshold will be considered in the environmental review of all subsequent discretionary permit applications that, as determined by the County, constitute separate parts or phases of the previously approved projects.

Determining Fair-Share Mitigation

By their very nature, GHG emissions are analyzed under CEQA solely for the potential to have a significant cumulative impact on global climate change. Statutory requirements for mitigating a significant cumulative impact under CEQA rely on the extent to which mitigation is feasible, and on the extent to which mitigation renders a project's incremental contribution less than cumulatively considerable if the "... *project is required to implement or fund its fair share of a*

mitigation measure or measures designed to alleviate the cumulative impact."[14] Consequently, the determination of what constitutes a project's fair-share mitigation is as important as choosing a threshold.

The various thresholds of significance thus far adopted by air districts and counties in California vary in the determination of what constitutes a project's fair-share level of mitigation. For example, the South Coast Air Quality Management District has adopted a threshold for stationary-source projects of 10,000 $MTCO_2e$/year, and requires projects that meet or exceed this threshold to reduce project GHG emissions below the threshold to the extent feasible. Alternatively, the Sacramento Metropolitan Air Quality Management District also adopted a screening threshold for stationary-source projects of 10,000 $MTCO_2e$/year, but also views a reduction in a project's emissions by 21.7 percent as representative of the project's fair-share contribution to addressing the cumulative impact,

Determining Fairness across the State

Consideration of the burden a particular GHG reduction threshold places on development within a jurisdiction's boundaries, compared to other jurisdictions, may be important as well. The State of California has chosen GHG reduction strategies that also promote the State's economic vitality. CARB reasoned that requiring overly strict reductions of GHG emissions could affect an exodus of industries to other states, concluding that the goal is to reduce overall GHG emissions, and not shift them to other locations.

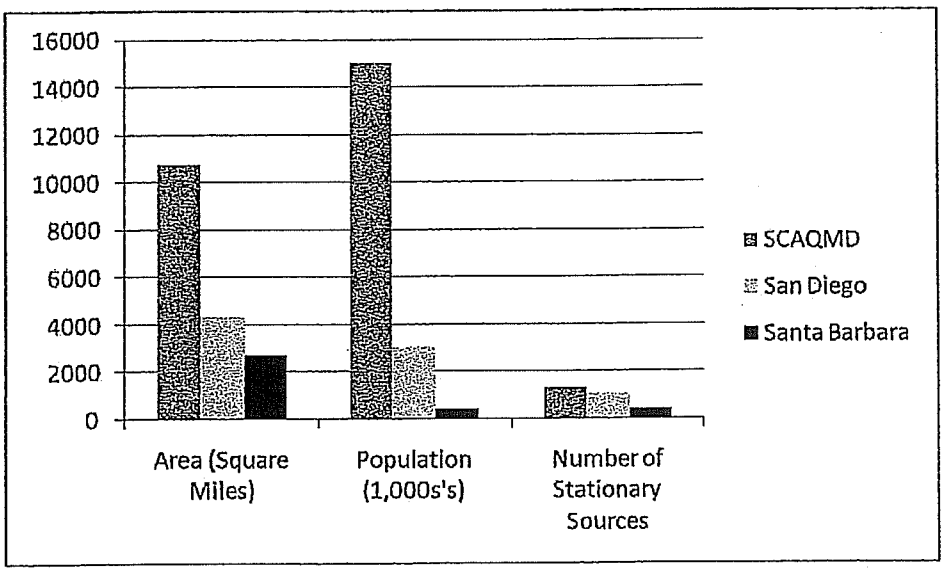
In recommending a 10,000 $MTCO_2e$/year threshold, staff compared the County to the broader southern California region. The South Coastal Air Quality Management District (AQMD) exercises jurisdiction over 10,743 square miles, 15 million inhabitants, 1,297 stationary sources (2011), and includes the entirety of Orange County, and substantially developed portions of Los Angeles, San Bernardino, and Riverside Counties. San Diego County APCD exercises jurisdiction over 4,300 square miles, 3,064,436 inhabitants (2009), and 1,037 stationary sources (2009). Both the South Coast and San Diego have adopted and applied a 10,000 $MTCO_2e$ threshold for stationary sources (see Attachment E).

In comparison, Santa Barbara County has 2,700 square miles, 431,000 inhabitants (2012), and 418 stationary sources in (2013). GHG emissions originated in Santa Barbara County and reported to CARB, pursuant to the Mandatory Reporting Regulation represent 2.2 percent of the GHG emissions from the combined jurisdictions of the South Coast AQMD and San Diego County. Accordingly, the Santa Barbara GHG emissions would have no appreciable effect on the percentage of greenhouse-gas emissions captured by a 10,000 $MTCO_2e$/year threshold for

[14] Title 14, California Code of Regulations, §15130(a)(3).

stationary-source projects in the larger southern California coastal region if the County's GHG emissions from Santa Barbara County were folded into the GHG inventory for that larger region. Alternatively, a lower numeric bright-line would effectively increase the administrative burden of the permitting process for smaller industrial/stationary-source projects in Santa Barbara County with no measureable benefit to achieving California's "fair-share" reduction in GHG emissions,

Figure 1: Graphic Comparison of Santa Barbara County to the Larger Southern California Coastal Region



Selecting Applicability

CEQA lead agencies vary in the application of thresholds, including how to treat construction-related GHG emissions, how to treat "life-cycle" emissions, and whether or not to differentiate GHGs emitted directly from a stationary source from other operational emissions of a proposed project. A survey of practices throughout California, summarized in Attachment E, indicates that inconsistencies in interpretation of thresholds are more likely to occur where thresholds do not provide sufficient clarity about their applicability.

Staff's recommended threshold exempts analysis of GHG emissions that are generated throughout the life cycle of products that a project may produce or consume, except as identified above as a project's indirect emissions. The exemption of "life-cycle" emissions is based on the guidance provided by the California Natural Resources Agency's when it amended the CEQA Guidelines 2009 for purposes of addressing the significance of a project's GHG emissions, as follows:

"The amendments to Appendix F remove the term —lifecycle. No existing regulatory definition of —lifecycle exists. In fact, comments received during OPR's public workshop process indicate a wide variety of interpretations of that term. (Letter from Terry Rivasplata et al. to OPR, February 2, 2009, at pp. 5, 12 and Attachment; Letter from Center for Biological Diversity et al. to OPR, February 2, 2009, at pp. 17.) Thus, retention of the term —lifecycle in Appendix F could create confusion among lead agencies regarding what Appendix F requires. Moreover, even if a standard definition of the term —lifecycle existed, requiring such an analysis may not be consistent with CEQA. As a general matter, the term could refer to emissions beyond those that could be considered —indirect effects of a project as that term is defined in section 15358 of the State CEQA Guidelines.

Depending on the circumstances of a particular project, an example of such emissions could be those resulting from the manufacture of building materials. (CAPCOA White Paper, at pp. 50-51.) CEQA only requires analysis of impacts that are directly or indirectly attributable to the project under consideration. (State CEQA Guidelines, § 15064(d).) In some instances, materials may be manufactured for many different projects as a result of general market demand, regardless of whether one particular project proceeds. Thus, such emissions may not be —caused by the project under consideration. Similarly, in this scenario, a lead agency may not be able to require mitigation for emissions that result from the manufacturing process. Mitigation can only be required for emissions that are actually caused by the project. (State CEQA Guidelines, § 15126.4(a)(4).) Conversely, other projects may spur the manufacture of certain materials, and in such cases, consideration of the indirect effects of a project resulting from the manufacture of its components may be appropriate. A lead agency must determine whether certain effects are indirect effects of a project, and where substantial evidence supports a fair argument that such effects are attributable to a project, that evidence must be considered. However, to avoid potential confusion regarding the scope of indirect effects that must be analyzed, the term —lifecycle has been removed from Appendix F."[15]

6.2 Optional GHG Emissions Thresholds

The CEQA Guidelines provide that: *"... a lead agency may consider thresholds 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."* (§15064.7(c)) The following summary is based on the practices employed by CEQA lead agencies throughout California to analyze GHG emissions from industrial/stationary sources, which are summarized in Attachment E.

[15] California Natural Resources Agency, *FINAL STATEMENT OF REASONS FOR REGULATORY ACTION – Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97*, December 2009,page 71-72.

No Threshold

As noted previously, CEQA encourages, but does not require, lead agencies to adopt thresholds of significance. In general, adoption of thresholds is more advantageous when compared to determining the significance of impacts case-by-case, because adopted thresholds provide decision-makers, applicants, and the public with more certainty, uniformity, and accountability during the permit process. Essentially, all parties know what to expect, and the issues of what standard defines a significant impact have been resolved ahead of time via a public process.

Adopted thresholds also help to reduce significant impacts, because project proponents have the opportunity to design their projects ahead of time in a manner that avoids significant impacts. Lastly, an adopted threshold can also resolve issues such as segmenting by clearly defining the whole of a project, either known or reasonably foreseeable.

That said, the continuously evolving nature of climate science and State GHG reduction targets and strategies will likely require CEQA lead agencies to continuously reassess their treatment of GHG emissions, including determination of significance. A case-by-case approach to determining significance could allow each agency more flexibility, considering the time and effort involved with updating adopted thresholds.

Application of Best Performance Standards

The performance-based approach to addressing a stationary source's greenhouse gas emissions has been adopted by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the Eastern Kern Air Pollution Control District. If applied in Santa Barbara County, this approach might offer two advantages. First, it would provide standards that, if met by an applicant, would render the project's cumulative contribution of GHG emissions less-than-significant. In doing so, the performance-based approach provides applicants with certainty of a local jurisdiction's expected mitigation. Second, the performance-based approach would also address the issue of unmitigated incremental growth of GHG emissions that has been described previously, because there would be no reason for an applicant to reduce a project's scope to fall under a numeric threshold. Best performance standards may also result in reductions of criteria pollutants and toxic emissions.

Many CEQA lead agencies, however, have not chosen this approach. Staff believes a primary reason is that the approach does not demonstrate sufficient progress toward achieving anticipated, more stringent, statewide GHG reduction targets. Other approaches, such as numeric bright-line thresholds or percent reduction below Business-As-Usual (BAU), have also required

application of Best Available Control Technologies and Methods to achieve reductions in GHG emissions onsite, in addition to offsite offsets.

In comparison, the proposed threshold of 10,000 $MTCO_2e$/year would allow application of best performance standards as one of several mitigation measures to reduce and offset emissions. Experience indicates that the proposed threshold would be substantially more rigorous in meeting State GHG reduction goals than reliance solely on performance-based standards. The recently approved Santa Maria Energy cyclic steaming, oil production project, for example, included best performance standards in the applicant's project description; however, project approval required mitigation above and beyond application of best performance standards.

Uniform Percentage-Based Reduction from Business-As-Usual Scenario

Attachment E indicates that the SJVAQMD and the Sacramento Metropolitan Air Quality Management District (SMAQMD) have adopted GHG thresholds that partly rely on a uniform, percentage-based reduction of GHG emissions. The percentage-based reduction is based on AB - 32's near-term GHG reduction target; that is, reducing statewide emissions to 1990 levels by the year 2020. The uniform percentage is determined by subtracting 1990 GHG emissions from the level of GHG emissions projected in 2020 if no action were taken to reduce these emissions – often referred to as the Business-As-Usual (BAU) scenario. The percentage of GHG- emission reductions from BAU necessary to reach 1990 levels by the year 2020 represents the uniform percentage-based reduction. This approach is advantageous because it has been upheld in two published California Appellate Court decisions, as noted on page 8 of the staff report.

Potential drawbacks of this approach are twofold. First, percentage-based reduction from BAU lacks uniformity. CARB's originally projected percentage-based reduction of 29 percent, presented in its 2008 *Scoping Plan,* has since been updated twice, to 16 percent in 2011, then to 15.3 percent in 2014. These changes reflect both downward adjustments to the projected 2020 BAU level of GHG emissions because of the originally unanticipated economic recession, and the successes in achieving statewide GHG reductions through current programs. Second, the percentage-based reduction is expected to increase in the future as California adopts new, mid-term GHG reduction targets. As previously mentioned, CARB's Environmental Justice Advisory Committee recently recommended a 2030 mid-term target of, at least, a 40 percent reduction below 1990 GHG emission levels, and a 2040 mid-term target of, at least, a 60 percent reduction below 1990 GHG emission levels.

In comparison, the proposed threshold of 10,000 $MTCO_2e$/year would avoid the uncertainty that is present with ever-evolving percentages. The proposed threshold also focuses environmental review to a fewer number of larger emitters, while considering the larger number of smaller emitters to be less than cumulatively significant. Consideration of combining a numeric, bright-

line screening threshold with a percentage-based reduction threshold to determine a project's "fair-share" obligation to reduce GHG emissions is discussed further below.

Fixed Numeric Threshold Based on State-Adopted Reporting Threshold

Section 95812 of CARB's Cap-and-Trade[16] regulation (Title 17, California Code of Regulations) requires mandatory reporting of GHG emissions from specified stationary sources where those emissions equal or exceed 25,000 $MTCO_2e$/year. The CAPCOA White Paper cites CARB's estimate that the 25,000 $MTCO_2e$/year would account for 90 percent or more of GHG emissions emitting from statewide stationary sources.[17] As described in Attachment E, pages 8 and 15:

- Eastern Kern Air Pollution Control District adopted a 25,000 $MTCO_2e$/year screening threshold because it reflects the reduction target that CARB identified for the Industrial Sector.
- Shasta County relied the 25,000 $MTCO_2e$/year in the environmental review of a quarry project, because it reflected CARB's Inclusion Thresholds for Covered Entities, as described in §95812 of the Cap and Trade regulations.

A primary advantage of this approach lies with the simplicity of its application. With this threshold, most, if not all, of a project's GHG emissions would be addressed by CARB's Cap-and-Trade program. A project's GHG emissions from stationary sources would be addressed directly by Cap-and-Trade, and a project's GHG emissions from mobile sources would be addressed by both the Low Carbon Fuel Standards and the Cap-and-Trade program. Meanwhile, Cap-and-Trade also extends to power plants, thereby covering the indirect emissions of a project.

A primary disadvantage of this approach is that it under-achieves in comparison to CEQA thresholds of 10,000 $MTCO_2e$/year adopted and applied in much of southern California and the Bay Area, which seek to address at least 90 percent of GHG emissions from new stationary-source projects. Based on 2013 data, a 25,000 $MTCO_2e$/year would capture 74.1 percent of GHG emissions from stationary sources within the jurisdiction of the Santa Barbara County Air Pollution Control District, including 7 of 418 stationary sources emitting 730,578 out of 1,001,607 $MTCO_2e$. In comparison, the proposed threshold follows the trend of the more

[16] The Cap-and-Trade program is designed to reduce GHG emissions from about 80 percent of statewide sources through a market trading system. The program would reduce emissions by reducing the available GHG allowances for each applicable facility through the year 2020. While the specifics of the program beyond 2020 has not yet been designed, it is intended to extend beyond 2020.
[17] California Air Pollution Control Officers Association, *Op. Cit*,, 2008, page 45.

prominently adopted CEQA threshold for stationary-source projects, and offers a capture rate of 82.4 percent, including 12 of 418 stationary source emitting 818,506 $MTCO_2e$ in 2013.[18]

Fixed Numeric Thresholds Based on Gap Analysis

As described in Attachment E, both the Bay Area Air Quality Management District (BAAQMD) and San Diego County chose to apply a dual bright-line threshold to stationary-source projects. Under this approach, the GHG emissions from the actual stationary sources of a project, such as from boilers or steam generators, are compared to a 10,000 $MTCO_2e$/year threshold. A substantially lower bright-line threshold, which is also optionally used for residential and commercial development, is compared to the project's other operational GHG emissions. BAAQMD calculated a 1,100 $MTCO_2e$/year "gap-based" threshold and San Diego County calculated a 2,500 $MTCO_2e$/year threshold, as explained in Attachment E, page E-4. The "gap-based" approach is designed to be consistent with the State's near-term GHG target of reducing emissions to 1990 levels by the year 2020.

Perhaps the major advantage of this approach is that the dual numeric thresholds reflect a different suite of mitigation measures to address each one. It also holds operational GHG emissions from non-stationary sources of an industrial project to the same standard as residential and commercial development. Jurisdictions that have adopted Climate Action Plans (CAPs) have developed lists of these options (e.g., measures to reduce vehicle miles traveled), and they can be incorporated directly in order to reduce a project's operational emissions to less-than-significant separately from the determination of significance regarding the GHG emissions from the stationary components of a project.

However, the "gap-based" threshold will likely require recalculation once the state adopts new, mid-term targets for reducing emissions beyond 2020. The process of calculating these projections requires dedication of sufficient funding by CEQA lead agencies to keep thresholds consistent with evolving statewide targets. Additionally, the underlying uncertainties of such projections, considering the myriad of variables that affect future increases in a region's GHG emissions, may jeopardize the evidentiary support of the threshold.[19] Lastly, the thresholds are not designed to address the potential for unmitigated incremental growth in greenhouse gas emissions, as described in section 6.1.

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[18] The figure of 818,506 $MTCO_2e$/year represents the sum of total GHG emissions from each of the 12 stationary sources with emissions that exceed 10,000 $MTCO_2e$/year, resulting in an amount that is slightly less than what one would calculate by multiplying total GHG emissions for 2013 by 82.4 percent.

[19] Indeed, CARB has revised its projections of statewide GHG emissions three times since its original 2008 Scoping Plan, based on slowing effects of the economic recession and the successes of other statewide strategies in reducing statewide emissions.

In comparison, the proposed threshold has a longer shelf-life because it addresses growth of GHG-emissions beyond the near-term 2020 target. The proposed threshold also avoids potential controversy over projections of future growth in GHG emissions, simplifies the environmental review process, and resolves the issue of segmenting under CEQA.

Fixed, Non-Zero Numeric Thresholds Based on Market Capture Rate

Attachment E identifies CEQA lead agencies that have adopted numeric, non-zero, bright-line thresholds for stationary sources or stationary-source projects, based on a capture rate. The concept behind this approach seeks a threshold that is low enough to capture a substantial fraction of GHG emissions from future stationary-source projects, yet high enough to exclude small projects that, in aggregate, will contribute a relatively small fraction of the cumulative statewide GHG emissions.[20] Essentially, this approach establishes a minimum screening basis for screening proposed projects; those with GHG emissions below the threshold are deemed to have less than considerable contribution to the cumulative impact of global climate change.[21] Accordingly, those projects with GHG emissions exceeding the threshold are captured for purposes of environmental review. This reduces the burden of environmental review for smaller projects with relatively lower emissions.

The following CEQA lead agencies have adopted a 10,000 $MTCO_2e$/year numeric threshold:

Table 1: Uses of 10,000 $MTCO_2e$/year Threshold & Related Capture Rates

CEQA Lead Agency	*Capture Rate Used*
South Coast Air Quality Management District (SCAQMD)	90%
Bay Area Air Quality Management District (BAAQMD)*	≥95%
San Luis Obispo County Air Pollution Control District (SLOAPCD)	≥90%
San Diego County*	≥90%
Sacramento Metropolitan Air Quality Management District (SMAQMD)**	83%

*Applies only to the stationary-source GHG emissions of a project, while a different "gap-based" threshold applies to other operational GHG emissions.
** Utilized solely as a screening threshold, while a reduction from BAU basis is used to determine the amount of GHG mitigation is necessary to reduce the impact to less-than-significant.

Most CEQA lead agencies applying this approach have also used the threshold to establish the level of required GHG reductions that a proposed project is required to achieve, where feasible, in order to render its emissions less-than-significant. In so doing, it establishes the "fair-share" contribution that a region's industrial/stationary-source projects are expected to make towards addressing the cumulative impact in a manner consistent with California GHG reduction goals.

[20] California Air Pollution Control Officers Association, *Op. Cit.*, 2008, page 31.
[21] *Ibid*, page 31.

Accordingly, those projects with GHG emissions exceeding the threshold are required to reduce those emissions to a level below the threshold, whether done so through onsite reductions or via offsite offsets. This establishes clear expectations upfront and provides prospective applicants incentive to design a project with emissions below the threshold.

Table 2: Comparison of Numeric, Bright-line Threshold Capture Rate Options*

Threshold (MTCO2e/yr)	*Capture Rate*	*Number of Sources*	*GHG Emissions*
Zero-emissions	100.0%	418	1,001,607
1,754	95.0%	44	950,701
3,974	90.0%	25	900,130
10,000	82.4%	12	818,506**
25,000	74.1%	7	730,578

* Based on total GHG emissions from existing stationary sources under Santa Barbara APCD jurisdiction in the year 2013, including offshore oil platforms.

** This figure represents the sum of total GHG emissions from each of the 12 stationary sources with emissions that exceed 10,000 $MTCO_2e$/year, resulting in an amount that is slightly less than what one would calculate by multiplying total GHG emissions for 2013 by 82.4 percent.

The non-zero, bright-line threshold can be susceptible to unmitigated incremental growth of GHG emissions, wherein an applicant seeks separate applications for different phases of a development to avoid or minimize consideration of the environmental impacts emanating from the whole of a project. The recommended threshold is designed to address unmitigated incremental growth of GHG emissions case-by-case considering GHG emissions of successive projects under common ownership or control after the approval date of the threshold, such as development of an oil field. As illustrated in Table 2 based on data from the Santa Barbara APCD, the proposed 10,000 $MTCO_2e$/year threshold falls short of the 90 percent capture rate. As explained previously on pages 11 and 12 of this staff report, however, a 10,000 $MTCO_2e$/year threshold retains a "fair-share" mitigation standard, compared to other southern California's coastal counties.

Zero-Emission Threshold

Several interested parties in Santa Barbara County have previously testified in favor of adopting a zero threshold. A zero-emission threshold is the most aggressive of all available options to reduce GHG emissions. To the best of staff's knowledge, it has been applied on two occasions by the California State Lands Commission; both applications entailed oil projects offshore Santa Barbara County. In considering a proposed oil production project, the City of Hermosa Beach's EIR applies the South Coast AQMD's 10,000 $MTCO_2e$/year threshold for purposes of determining the significance of the project's GHG emissions, but then discusses mitigation to

zero as an option for the City, based on the city's strategy of achieving carbon neutrality in future development.

The advantages of the zero-emission threshold are three-fold. First, as noted in the CAPCOA White Paper, it addresses all sources of emissions.[22] Second, this threshold would exceed goals of State GHG reduction plans, because the latter accounts for future growth. Third, it resolves the issue of unmitigated incremental growth in GHG emissions from two or more discretionary applications that expand existing operations.

The CAPCOA White Paper, however, notes the following advantages of choosing a non-zero threshold instead of a zero threshold:

> *"The practical advantages of considering non-zero thresholds for GHG significance determinations can fit into the concept regarding whether the project's GHG emissions represent a "considerable contribution to the cumulative impact" and therefore warrant analysis."*
>
> *"Specifying a non-zero threshold could be construed as setting a* de minimis *value for a cumulative impact. In effect, this would be indicating that there are certain GHG emission sources that are so small that they would not contribute substantially to the global GHG budget."*[23]

Staff's proposed threshold chooses a *de minimis* value, thereby focusing attention on projects with relatively larger GHG emissions. Based upon preliminary figures, 418 stationary sources within the Santa Barbara County APCD jurisdiction (including oil platforms in offshore federal waters) emitted 1,001,607 $MTCO_2e$ in 2013. About 82.4 percent of those emissions, or 818,506 $MTCO_2e$, exceeded 10,000 $MTCO_2e$ per source. These emissions involved 12 out of 418 stationary sources – three percent in all. Meanwhile, 347 out of 418 stationary sources (83percent) emit less than 1,000 $MTCO_2e$/year.

Staff's recommendation of a non-zero threshold also seeks to identify a "fair-share" standard by which GHG emissions from proposed industrial/stationary-source projects in Santa Barbara County are screened for analysis and required to mitigate. As discussed previously, staff compared the County to the broader southern California region. The South Coast AQMD exercises jurisdiction over 10,743 square miles, 15 million inhabitants, 1,297 stationary sources (2011), and includes the entirety of Orange County, and substantially developed portions of Los Angeles, San Bernardino, and Riverside Counties. San Diego County APCD exercises jurisdiction over 4,300 square miles, 3,064,436 inhabitants (2009), and 1,037 stationary sources

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[22] California Air Pollution Control Officers Association, *Op. Cit*, 2008, pages 27 - 28.
[23] *Ibid*, page 31.

(2009). Both districts have adopted and applied a 10,000 $MTCO_2e$ threshold for stationary sources (see Attachment E).

As shown in Figure 1 on page 12, Santa Barbara County has 2,700 square miles, 431,000 inhabitants (2012), and 418 stationary sources in (2013) in comparison. If the GHG emissions from Santa Barbara County were folded into an inventory for the larger southern California coastal region, the Santa Barbara data would have no appreciable effect on the percentage of greenhouse-gas emissions captured by a 10,000 $MTCO_2e$/year threshold for stationary-source projects in that larger region. Accordingly, a zero-emission approach would effectively increase the administrative burden of the permitting process for smaller industrial/stationary-source projects in Santa Barbara County with no measureable benefit to achieving California's "fair-share" reduction in GHG emissions,

Numeric Screening Threshold Combined with Performance-Based or Percentage-Based Reduction Standard

The Sacramento Metropolitan AQMD adopted CEQA GHG thresholds in the fall of 2014. For stationary-source projects, the Sacramento Metropolitan AQMD employs a 10,000 $MTCO_2e$/year bright-line screening threshold; projects with estimated GHG thresholds less than the threshold are considered to be less-than-significant, and projects that exceed the threshold are required to mitigate emissions, through onsite reductions or offsite offsets, by 21.7 percent, based on the AB – 32 target for 2020. A similar approach is one of two options being considered by Santa Barbara APCD, and is one that has received conceptual support by the local oil industry. The Santa Barbara APCD also is considering a 10,000 $MTCO_2e$/year screening threshold in combination with both performance-based mitigation and a percentage-based reduction standard.

Staff believes that any decision to adopt a percentage-based reduction threshold is best implemented with a numeric screening threshold, as Sacramento Metropolitan AQMD has done. The advantages and disadvantages of this approach are largely reflected in the summary of each individual threshold, above. Required mitigation of a project's GHG emissions would be less under this approach than the recommended threshold. Additionally, the percentage-based reduction would need adjustment following the state's adoption of new GHG reduction targets.

6.3 Comprehensive Plan Consistency

The County's Comprehensive Plan, (including the Coastal Land Use Plan) contains many policies and recommendations that seek to protect resources that are subject to serious damage as the result of climate change. These resources include: agriculture, archaeology, groundwater, surface water, natural habitats, forests, as well as land uses, transportation, and mineral

extraction critical to human needs. The adoption of the threshold of significance sets standards for reducing greenhouse emissions from future industrial development. In doing so, the threshold is one of many strategies aimed at reducing the adverse catastrophic effects that climate change is projected to have on the foregoing resources if future greenhouse gas emissions are not reduced by scientifically estimated amounts. Therefore, adoption of the recommended threshold is consistent with and furthers the goals and policies of the County's Comprehensive Plan.

6.4 Zoning: Compliance with Chapter 35 of the County Code

Among other things, Chapter 35 of the County Code, Zoning (including the Coastal Zoning Ordinance for the Coastal Zone and the Land Use and Development Code for most inland areas), identifies permitting processes for different types of land-uses and development. It differentiates which types of development are exempt from permits, require ministerial approval, or require discretionary approvals. With regard to discretionary approvals, the Zoning Code generally requires environmental review to identify the potential for significant environmental impacts, and feasible mitigation when significant impacts are identified. Adoption of the recommended threshold of significance complements those foregoing requirements by prescribing standards to determine the cumulative significance of a project's greenhouse gas emissions. Therefore, the adoption of the recommended threshold of significance is consistent with Chapter 35 of the County Code.

7.0 APPEALS PROCEDURE

Amendments to the County's *Environmental Thresholds and Guidelines Manual* that are recommended for approval or denial are automatically forwarded to the Board of Supervisors for final action, therefore no appeal is required.

ATTACHMENTS

A. Findings
B. Draft Resolution to the Board of Supervisors with Recommended Threshold as an Exhibit
C. CEQA Exemption
D. Greenhouse Gas Emissions
E. What CEQA Lead Agencies Are Doing To Address Industrial/Stationary Greenhouse Gas Emissions

ATTACHMENT A: FINDINGS

CEQA FINDINGS

Findings for Adoption of Thresholds of Significance. In compliance with Section 15064.7(b) of the State of California's *Guidelines for the Implementation of the California Environmental Quality Act* (Title 14, California Code of Regulations, Chapter 3), the Board of Supervisors makes the following finding:

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.

The Board of Supervisors has adopted this threshold of significance by resolution, following a public review process in compliance with the County of Santa Barbara's *Guidelines for the Implementation of the California Environmental Quality Act of 1970,* §F.3.b (Process for thresholds amendment and adoption). The public review process entailed:

- Two duly noticed public workshops held on February 9, 2015, in the Board of Supervisors hearing room in Santa Maria, and on February 11, 2015, in the Planning Commission hearing room in Santa Barbara.
- Two duly noticed public hearings before the Santa Barbara County Planning Commission held on March 25, 2015, in the Planning Commission hearing room in Santa Barbara, and on April 9, 2015, in the Board of Supervisors hearing room in Santa Maria.
- One duly noticed public hearing before the Santa Barbara County Board of Supervisors held on May 19, 2015, in the Board of Supervisors hearing room in Santa Barbara.

The Board of Supervisors finds that its adoption of the threshold of significance is supported by the following substantial evidence:

1. A 10,000 metric tonnes of carbon dioxide equivalent per year ($MTCO_2e$/year) threshold is low enough to capture a substantial amount of future industrial/stationary-source projects, while setting the threshold high enough to intentionally exclude small projects that, in aggregate, will contribute a relatively small amount of cumulative statewide greenhouse gas emissions. As example, a total of 418 stationary sources reported 1,001,607 $MTCO_2e$ of greenhouse gas emissions to

the Santa Barbara County Air Pollution Control District in 2013. Of this total, 12 sources reported greenhouse gas emissions in excess of 10,000 $MTCO_2e$, accounting for 825,324 $MTCO_2e$, or 82.4 percent of the aggregate emissions and less than 3 percent of all stationary sources. A threshold of 10,000 $MTCO_2e$ is more appropriate than a zero threshold, because the former will assure that all feasible greenhouse gas mitigation will be implemented for a large majority of emissions, while not resulting in substantial administrative requirements for projects that individually produce only a nominal contribution towards cumulative statewide greenhouse emissions.

2. A 10,000 $MTCO_2e$ threshold reflects the threshold adopted and applied by a broader portion of the southern California coastal region, covered by the much larger South Coastal Air Quality Management District (AQMD). Choosing this threshold allows Santa Barbara County to achieve a goal of a capture rate of at least 90 percent based on an emissions inventory comprised of a large portion of the developed area of Southern California. The South Coast AQMD exercises jurisdiction over 10,743 square miles, a population of 15 million in southern California, and at least 1,297 stationary sources in 2011. It includes the entirety of Orange County, and substantially developed portions of Los Angeles, San Bernardino, and Riverside Counties. Additionally, San Diego County also has adopted and applied a 10,000 $MTCO_2e$ threshold. San Diego County Air Pollution Control District exercises jurisdiction over 4,300 square miles, 3,064,436 inhabitants (2009), and 1,037 stationary sources (2009). Santa Barbara County, in comparison, has 2,700 square miles, a population of 431,000 (2012), and much less commercial and industrial land use, amounting to 418 stationary sources in 2013. If the greenhouse gas emissions from Santa Barbara County were folded into an inventory for the larger South Coast AQMD and/or San Diego County APCD regions, the additional data would have no appreciable effect on the percentage of greenhouse-gas emissions captured by a 10,000 $MTCO_2e$/year threshold for stationary-source projects in that larger region. Santa Barbara County's 2013 greenhouse gas emissions from stationary sources represent 3.4 percent of South Coast AQMD's inventory, based on the California Air Resources Board's 2013 database that compiles GHG emissions from stationary sources through the Mandatory Reporting Regulation (MRR).[24] Santa Barbara County's greenhouse gas emissions would represent 2.2 percent of the combined emissions of the South Coast AQMD and San Diego County reported for 2013 pursuant to the MRR. Therefore, there is little policy reason for applying a 90 percent or larger capture rate threshold, based on to Santa Barbara County's emissions data because the County's emissions base is so small compared to the larger southern

[24] Available at http://www.arb.ca.gov/cc/reporting/ghg-rep/reported-data/ghg-reports.htm. Based on emissions from stationary sources that are required to report, pursuant to the Mandatory Reporting Regulation.

California coastal region. Rather, a 10,000 $MTCO_2e$/year threshold, as applied by the South Coast AQMD and San Diego County, is a reasonable numeric, bright-line threshold to determine the significance of greenhouse gas emissions from industrial/stationary sources subject to discretionary permit approvals in Santa Barbara County.

3. A 10,000 $MTCO_2e$/year threshold better reflects a "fair-share" contribution of mitigation from stationary-source projects in Santa Barbara County, considering it reflects the same "fair-share" standard applied by a broader portion of southern California coastal regions that is required to alleviate a cumulative impact in a manner that is consistent with Statewide goals. Alternatively, application of a 90 percent or larger capture rate threshold based on emissions in Santa Barbara County would place a greater economic burden on new stationary-source projects, by way of requiring more mitigation of projects, and by way of requiring more projects with individually nominal emissions to be subjected to mitigation, instead of being screened out where projected emissions are less than 10,000 $MTCO_2e$/year. Accordingly, for either of the more stringent thresholds (that is, either a zero-emission threshold or one based on a 90 percent capture rate based on Santa Barbara County emissions data alone) would increase the administrative burden of the permitting process for smaller industrial/stationary-source projects in Santa Barbara County with no measureable benefit to achieving California's "fair-share" reduction in greenhouse gas emissions.

4. Santa Barbara County's previous use of the South California AQMD 10,000 $MTCO_2e$/year threshold for the Santa Maria Energy 136-well oil production project 2013 was questioned by the applicant.[25] At that time, the applicant suggested that calculating a 90 percent capture rate through the use of the California Air Resources Board greenhouse gas MRR 2011 data would produce a much higher threshold – estimated by the applicant to be 205,299 $MTCO_2e$ instead of 10,000 $MTCO_2e$. The MRR data includes GHG emissions from stationary sources that emit 25,000 $MTCO_2e$ or more annually. The applicant derived a hypothetical threshold from the CARB dataset without the inclusion of approximately 1,200 facilities within South Coast AQMD's jurisdiction that fall below the 25,000 $MTCO_2e$ reporting threshold.

[25] The applicant sought an Oil Drilling and Production Plan permit (Case No. 09PPP-00000-00002) and a Development Plan permit (Case No. 12DVP-00000-00008), and this comment was addressed in the project's environmental document – Planning and Development, Santa Barbara County, *FINAL Environmental Impact Report – Santa Maria Energy Production Plan and Development Plan; Laguna County Sanitation District Phase 3 Recycled Water Pipeline,* State Clearinghouse No. 2011091085, Santa Barbara County EIR No. 12EIR-00000-00003, Volume 1, September 2013, pages 5.1-6 – 5.1-7.

South Coast AQMD staff developed a greenhouse gas emissions dataset for stationary sources, based on annually reported natural gas usage, with a goal of determining a screening threshold level that would capture 90 percent of the greenhouse gas emissions related to new stationary source projects. The data set South Coast AQMD staff used was deemed to be the best information available at the time. South Coast AQMD staff acknowledged in its proposal that not all greenhouse gas emissions and source types were included in the data set used to determine a screening threshold of 10,000 $MTCO_2E$/year as follows:

> *"Staff's interim GHG* [greenhouse gas] *significance threshold proposal for stationary sources was developed using AQMD's AER* [Annual Emissions Reporting] *Program ... because this is the only comprehensive data base available to SCAQMD staff. Staff then compiled reported annual natural gas consumption for 1,297 permitted facilities for 2006 through 2007 and rank-ordered the facilities to estimate the 90th percentile of the cumulative natural gas usage for all permitted facilities. Most GHG emissions from industrial facilities are generated from stationary sources, while a relatively small percent is generated by traffic, water usage, etc. Therefore, although staff's GHG significance threshold proposal was derived without considering offsite indirect GHG emissions, staff believes the interim GHG significance threshold for stationary source projects is appropriate because it is consistent with staff's overarching goal of capture 90 percent or more of the GHG emissions from industrial projects."*[26] [underlining added.]

As a result of the ongoing implementation of AB 32 requirements and other local initiatives, other greenhouse gas emission inventories and data sets have been developed for more recent years. These more recent inventories may include combustion emissions from natural gas combustion, additional fuel types, indirect GHG emissions from electricity, mobile source emissions, and greenhouse gas from fugitive methane releases. However, some of the more recent inventories do not include smaller sources (less than 25,000 $MTCO_2e$/year or less than 10,000 $MTCO_2e$/yr), as is the case for the dataset based on the California Air Resources Board MRR emissions data.[27]

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[26] South Coast Air Quality Management District, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans,* Attachment D, 2008 pages 2 – 3.

[27] The GHG emissions that were reported to CARB for 2011 (hereafter referred to as the 2011 MRR data set), although more complete in terms of some emissions sources (fugitive methane emissions, process gas emissions, electricity emissions), is deficient for developing a threshold level as it includes very few sources that emit less than 25,000 $MTCO_2E$/year (only 69 for the South Coast AQMD region). The South Coast AQMD dataset includes a total of 1,297 sources, 58 of which are above 25,000 $MTCO_2E$/year and 1,239 of which are below 25,000 $MTCO_2E$/year. The CARB 2011 Mandatory Reporting Requirement data set includes a total of 132 sources in the South Coast AQMD region, 67 of which are above 25,000 $MTCO_2E$/year, and 65 of which are below 25,000 $MTCO_2E$/year. Both data sets have their limitations; by design, the MRR 2011 data set excludes a large portion of the projects in the region, and captures only the very largest projects.

Hence, there are two notable differences between the dataset used by the South Coast AQMD and the Air Resources Board's 2011 MRR dataset. First, the South Coast dataset does not include large greenhouse gas emissions from combustion of natural gas not derived from public utilities, but instead extracted during the refining of crude oil into products. Second, the MRR dataset does not include smaller greenhouse gas emitters. The practical result is that South Coast's use of 10,000 $MTCO_2e$/year threshold captures at least 90 percent of greenhouse gas emissions from stationary sources, and likely captures a higher rate closer to 95 percent, because inclusion of the originally omitted refinery emissions are larger than 10,000 $MTCO_2e$/year. This result is consistent with the overarching goal of the South Coast AQMD, as quoted above.

5. The threshold exempts analysis of GHG emissions that are generated throughout the life cycle of products that a project may produce or consume, except as identified above as a project's indirect emissions. The exemption of "life-cycle" emissions is based on the guidance provided by the California Natural Resources Agency's when it amended the CEQA Guidelines 2009 for purposes of addressing the significance of a project's GHG emissions, as follows:

"The amendments to Appendix F remove the term —lifecycle. No existing regulatory definition of —lifecycle exists. In fact, comments received during OPR's public workshop process indicate a wide variety of interpretations of that term. (Letter from Terry Rivasplata et al. to OPR, February 2, 2009, at pp. 5, 12 and Attachment; Letter from Center for Biological Diversity et al. to OPR, February 2, 2009, at pp. 17.) Thus, retention of the term —lifecycle in Appendix F could create confusion among lead agencies regarding what Appendix F requires. Moreover, even if a standard definition of the term —lifecycle existed, requiring such an analysis may not be consistent with CEQA. As a general matter, the term could refer to emissions beyond those that could be considered —indirect effects of a project as that term is defined in section 15358 of the State CEQA Guidelines.

Depending on the circumstances of a particular project, an example of such emissions could be those resulting from the manufacture of building materials. (CAPCOA White Paper, at pp. 50-51.) CEQA only requires analysis of impacts that are directly or indirectly attributable to the project under consideration. (State CEQA Guidelines, § 15064(d).) In some instances, materials may be manufactured for many different projects as a result of general market demand, regardless of whether one particular project proceeds. Thus, such emissions may not be —caused by‖ the project under consideration. Similarly, in this scenario, a lead agency may not be able to require mitigation for emissions that result from the manufacturing process. Mitigation can only be required for emissions that are actually caused by the project. (State CEQA Guidelines, § 15126.4(a)(4).) Conversely, other projects may spur the manufacture of certain materials, and in such cases, consideration of the indirect effects of a project resulting from the manufacture of its components may be

appropriate. A lead agency must determine whether certain effects are indirect effects of a project, and where substantial evidence supports a fair argument that such effects are attributable to a project, that evidence must be considered. However, to avoid potential confusion regarding the scope of indirect effects that must be analyzed, the term —lifecycle‖ has been removed from Appendix F."[28]

[28] California Natural Resources Agency, *FINAL STATEMENT OF REASONS FOR REGULATORY ACTION – Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97,* December 2009,page 71-72.

ATTACHMENT B: DRAFT RESOLUTION

RESOLUTION OF THE SANTA BARBARA COUNTY PLANNING COMMISSION
COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA

E

IN THE MATTER OF RECOMMENDING THAT THE BOARD OF SUPERVISORS AMEND THE COUNTY'S ENVIRONMENTAL THRESHOLDS AND GUIDELINES MANUAL TO ADD A THRESHOLD TO DETERMINE THE CUMULATIVE SIGNIFICANCE OF GREENHOUSE EMISSIONS FROM INDUSTRIAL/STATIONARY-SOURCE PROJECTS SUBJECT TO ENVIRONMENTAL REVIEW

RESOLUTION NO.: 15 –

WITH REFERENCE TO THE FOLLOWING:

A. The California Natural Resources Agency amended the *Guidelines for the Implementation of the California Environmental Quality Act* in 2009, requiring lead agencies to estimate a project's greenhouse emissions, determine if the project's emissions exceed a threshold, and determine if the project is consistent with a state, regional, or local greenhouse gas reduction plan.

B. In June of 2014, the County Board of Supervisors directed the Planning and Development Department to draft an interim threshold of significance for greenhouse gas emissions from industrial/stationary sources for the Board's consideration.

C. The County's *Guidelines for County Guidelines for the Implementation of CEQA* define a process by which the County's *Environmental Thresholds and Guidelines Manual* is amended, which includes two hearings before the County Planning Commission and transmittal of the Commission's recommendation to the Board of Supervisors.

D. The County Planning Commission now finds that it is in the interest of the residents of the County of Santa Barbara to recommend that the Board of Supervisors amend the County's *Environmental Thresholds and Guidelines Manual*, by adding a new Chapter 11, Greenhouse Gas Threshold, and renumbering the current Chapter 11 and all subsequent chapters, beginning with the number 12, as written in Exhibit A to this Resolution.

E. The proposed amendment is consistent with and implements the policies of the Santa Barbara County Comprehensive Plan (including the Coastal Land Use Plan) and Chapter 35, Zoning, of the Santa Barbara County Code (including the Coastal Zoning Ordinance for coastal areas and the Land Use and Development Code for most inland areas).

F. This Commission held two duly noticed public hearing at which time the proposed amendment to the aforementioned *Environmental Threshold and Guidelines Manual* was explained and comments were invited from the attendees of these two hearings.

NOW, THEREFORE, IT IS HEREBY RESOLVED as follows:

1. The above recitations are true and correct.

2. In compliance with the *Guidelines for the Implementation of the California Environmental Quality Act of 1970,* §F.3.b (Process for thresholds amendment and adoption), the Planning Commission recommends that the Board of Supervisors of the County of Santa Barbara, State of California, following the required noticed public hearing, approve and adopt the aforementioned recommendation of this Commission.

3. A certified copy of this Resolution shall be transmitted to the Board of Supervisors.

4. The Chair of this Commission is hereby authorized and directed to sign and certify all documents and other materials in accordance with this Resolution to show the aforementioned action by the Planning Commission.

PASSED, APPROVED AND ADOPTED this 9th day of April, 2015, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

_____

Cecilia Brown, Chair
Santa Barbara County Planning Commission

ATTEST:

_____

Dianne M. Black
Secretary to the Commission

APPROVED AS TO FORM:

Michael C. Ghizzoni
County Counsel

_____

William M. Dillon
Senior Deputy County Counsel

Exhibit A

11. GREENHOUSE GAS EMISSIONS

Introduction

This chapter provides CEQA lead agencies with a quantitative criterion by which to determine if greenhouse gas (GHG) emissions from applicable industrial/stationary sources that are subject to discretionary approval will have a significant cumulative effect on climate change. Among statewide actions to reduce greenhouse gas emissions, the California Natural Resources Agency amended the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines) in 2009. The amendment requires CEQA lead agencies to *"...make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project"* unless the lead agency determines that the project is exempt from CEQA (CEQA Guidelines §15064.4). The amendment further obligates lead agencies to consider if the estimated amount of greenhouse gas emissions from a proposed project exceeds a threshold of significance, and to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Climate change under CEQA differs from most other types of impacts in that, by definition, it is only examined as a cumulative impact that results not from any one project's GHG emissions, but rather from GHG emissions *"... generated globally over many decades by a vast number of different sources."*[29] Therefore, analysis of a project's GHG emissions under CEQA focuses solely on the incremental contribution of estimated project emissions to climate change. A CEQA lead agency may determine that a project's incremental contribution to an existing cumulatively significant issue, such as climate change, is not significant based on supporting facts and analysis (§15130(a)(2)). CEQA Guidelines direct that a project's contribution to a significant cumulative impact will be rendered less than significant if the project is required to implement or fund its fair share of a mitigation measure designed to alleviate the cumulative impact (§15130(a)(3)). Such determinations must be based on analysis in the environmental document with substantial evidence to demonstrate that mitigation required of a project represents the project's "fair-share" contribution towards alleviating the cumulative impact.

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[29] Kostka, Stephen I. and Michael H. Ziechke, *Practice Under California Environmental Quality Act,* Second Edition, Volume 2, (Oakland, CA: 2013, Continuing Education of the BAR, §20.83; California Natural Resources Agency, *Notice of Public Hearings and Notice of (Proposed Amendment of Regulation Implementing the California Environmental Quality Act,* 2009; Hegerl, GC. *et. al,* "Chapter 9: Understanding and Attributing Climate Change," *Climate Change 2007: The Physical Basis,* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel of Climate Change (Cambridge: Cambridge University Press, 2007.

Threshold for Industrial/Stationary Sources

Applicability

- The threshold applies to the following greenhouse gases, per the California Health and Safety Code §38505(g), and any other gas that the California Air Resources Board recognizes as a greenhouse gas in the future: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3). The County recognizes that environmental documents will primarily focus on the first three chemicals, because the latter four are unlikely candidates to be associated with projects subject to this threshold.
- The threshold applies to industrial/stationary sources subject to discretionary approvals by the County, where the County is the CEQA lead agency. The County encourages other CEQA lead agencies and NEPA lead agencies to use this threshold, where the County is a CEQA responsible agency for a project.
- The threshold applies to both direct and indirect emissions of greenhouse gases, where protocols to support calculation of such emissions are available.
    - Direct emissions encompass the project's complete operations, including greenhouse gases emitted from a location within California from all stationary and mobile sources, involved in the operation, including off-road equipment, as well as removal of trees and other vegetation.
    - Indirect emissions encompass greenhouse gases that are emitted:
        - To provide the project with electricity, including generation and transmission;
        - To supply the project with water, including water treatment;
        - To transport and treat solid and liquid waste produced from the project's operations and water to the project's operations and the emissions to transport and process solid.
- Construction-related emissions are to be accounted for in the year that they occur.
- The threshold does not apply to greenhouse gases that are emitted throughout the life cycle of products that a project may produce or consume, except as identified above as a project's indirect emissions.
- The threshold does not apply to residential or commercial development.

Quantification of Greenhouse Gas Emissions

- The environmental document shall first quantify and disclose a project's greenhouse gas emissions by individual greenhouse gas and then convert the project's emissions to metric tonnes of carbon dioxide equivalent per year (MTCO2e/year), based on the global warming potential of each gas.
- Renewable energy projects, such as solar and wind projects, shall be credited for greenhouse gas emissions that would otherwise be emitted by natural gas-fueled electrical generation,

based on consistency with California greenhouse gas reduction strategies to increase statewide reliance on renewable energy.

Numeric Bright-Line Threshold

All industrial/stationary-source projects would be subject to a numeric, bright-line threshold of 10,000 $MTCO_2e$/year to determine if greenhouse gas emissions constitute a significant cumulative impact. Annual GHG emissions that are equivalent to or exceed the threshold are determined to have a significant cumulative impact on global climate change. For the purpose of addressing the potential for unmitigated incremental growth, the combined GHG emissions from one or more previous discretionary permit approvals after adoption of this threshold will be considered in the environmental review of all subsequent discretionary permit applications that, as determined by the County, constitute separate parts or phases of the previously approved projects, including but not limited to:

- Any series of oil and gas production projects under common ownership or control, including related processing and transport operations, that are located within the same State-designated oil field, or represent an expansion of any State-designated oil field.
- Any series of surface mining projects under common ownership or control, including related processing and transport operations, that are located within the same individually designated Surface Mining and Reclamation Act (SMARA) operation, or represent an expansion of any individually designated SMARA operation.

Mitigation

Projects found to result in a significant cumulative impact would be required to reduce their greenhouse gas emissions to the applicable threshold, where feasible, through onsite reductions and offsite reduction programs approved by the County.

Periodic Revisions

This threshold shall be re-examined at least every five years to ensure its consistency with evolving GHG reduction progress, plans, targets and regulations.

Relation to County Energy and Climate Action Plan

This threshold represents one of several cohesive efforts undertaken by Santa Barbara County to reduce GHG emissions. Those efforts include the Energy and Climate Action Plan (ECAP), which seeks to reduce countywide emissions by 15 percent below the 2007 baseline emissions inventory by the year 2020. The ECAP constitutes a local GHG reduction plan that, pursuant to CEQA Guidelines §15183.5(b), allows a CEQA lead agency to determine whether a future

project's incremental contribution to the cumulative effect of climate is significant or not, based upon compliance with requirements of the reduction plan.

This threshold and the ECAP are intended to complement one another during implementation. Permit approval of future industrial/stationary-source projects would need to demonstrate compliance with the reduction measures of the ECAP that may be applicable to the project, as well as mitigation measures to achieve reductions of emissions to a level below the recommended threshold of significance where feasible. Quantifiable measures to reduce a project's GHG emissions in compliance with the ECAP may also count towards GHG reductions under this threshold.

ATTACHMENT C

NOTICE OF EXEMPTION

TO: Santa Barbara County Clerk of the Board of Supervisors

FROM: Kevin Drude, Deputy Director, Planning and Development Department, Energy and Minerals Division

The project or activity identified below is determined to be exempt from further environmental review requirements of the California Environmental Quality Act (CEQA) of 1970, as defined in the State and County Guidelines for the Implementation of CEQA.

Case No.: 15GPA-00000-00002

Location: Countywide

Project Title: Greenhouse Gas Threshold of Significance

Project Description: The project entails adoption of a new chapter 11, Greenhouse Gas Threshold, to the County's *Environmental Thresholds and Guidelines Manual.* The project establishes a threshold of 10,000 metric tonnes of carbon dioxide equivalent per year. Any increases in emissions from proposed discretionary development after the effective date of the threshold, that are equivalent to or exceed the threshold is determined to have a significant cumulative impact on global climate change.

Name of Public Agency Approving Project: County of Santa Barbara

Name of Person or Agency Carrying Out Project: Planning & Development Department

Exempt Status:

_____Ministerial
_____Statutory Exemption
_____Categorical Exemption
_____Emergency Project
_____Declared Emergency
__X__Other

Cite specific CEQA and/or CEQA Guideline Section: §§15064.7 & 15378

Reasons to support exemption findings:

The adoption of thresholds of significance pursuant to CEQA Guidelines section 15064.7 is not itself a "project" requiring CEQA review, because the CEQA Guidelines, §15064.7, prescribe a process that public agencies must follow to adopt thresholds of significance, and prior CEQA review is not part of the process.

Lead Agency Contact Person: Doug Anthony

Department/Division Representative: Kevin Drude, Deputy Director

Phone #: (805) 568-2519

Date: March 18, 2015

Acceptance Date: _____

Distribution: Hearing Support Staff

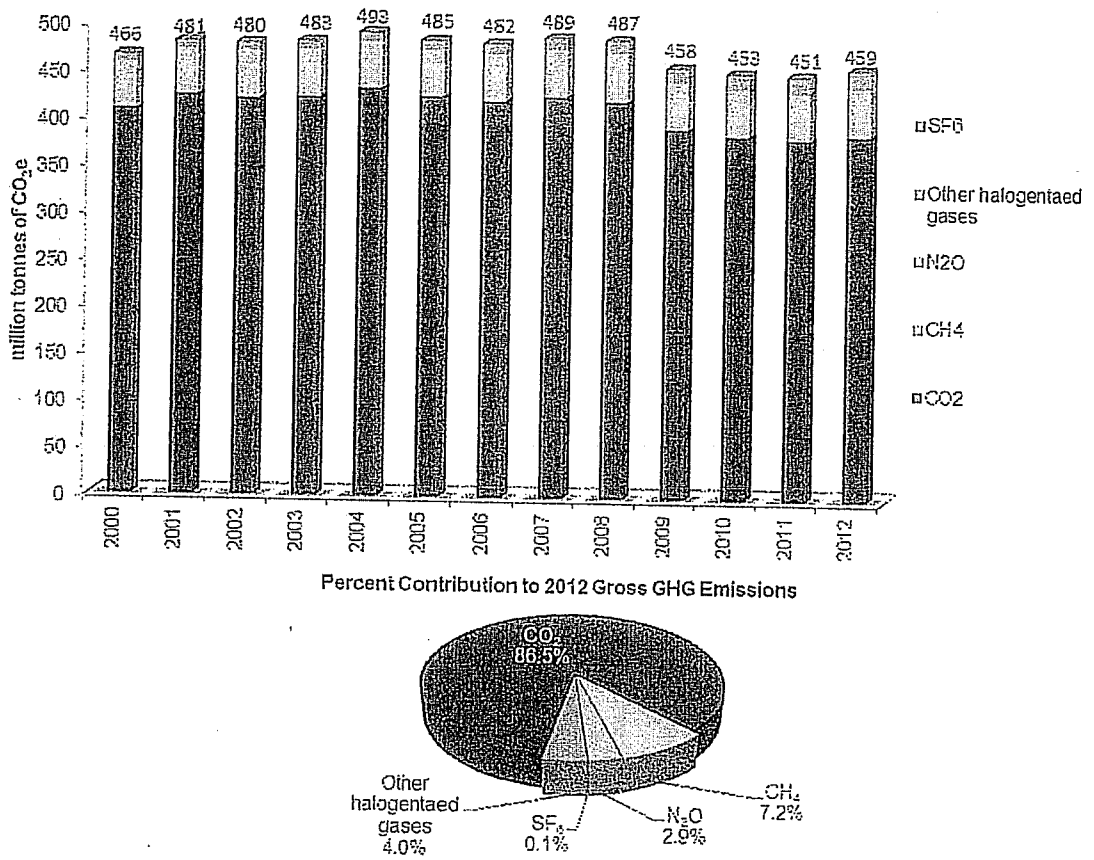
Date Filed by County Clerk: _____.

ATTACHMENT D

GREENHOUSE GAS EMISSIONS

California emitted 459 million metric tonnes of carbon dioxide equivalent emissions in 2012.[30] These emissions were produced primarily from anthropogenic sources. The transportation sector was the single largest source of these emissions, accounting for 37 percent, followed by generation of electricity at 21 percent, and industrial processes at 19 percent. Figure 1, below, depicts statewide emissions by specific gas between 2000 and 2012, and Figure 2, below, compares California GHG emissions with U.S. emissions over the same period.

Figure 1. California Greenhouse Gas Emission by Gas[31]



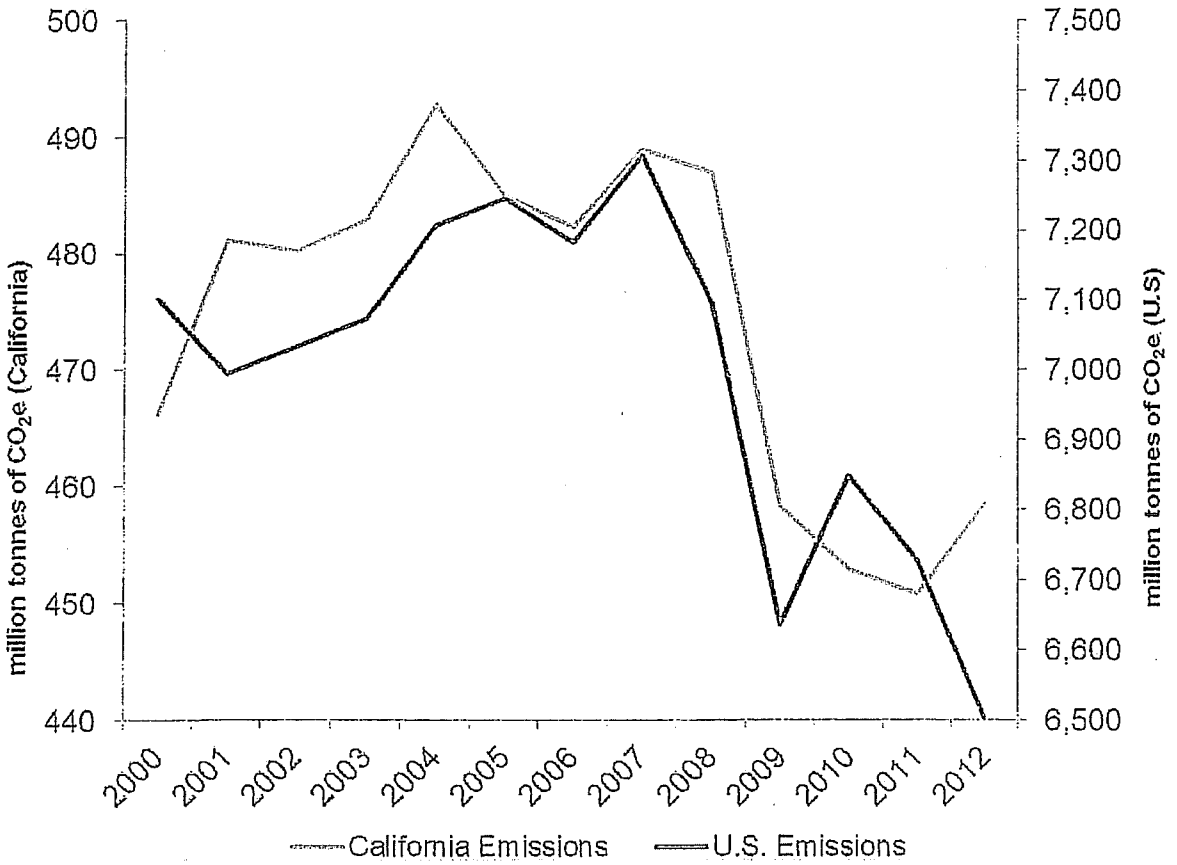
The most recently available estimates for Santa Barbara County's unincorporated area places total GHG emissions at approximately 1,780,565 $MTCO_2e$/year in 2007, based on a detailed,

[30] California Air Resources Board, *California Greenhouse Gas Emission Inventory: 2000-2012*, 2014(a), pages 3 and 7. Metric tons of carbon dioxide equivalent

[31] *Ibid*, page 7.

"bottom-up" methodology. This estimate excludes emissions from State and Federal lands, the University of California, Santa Barbara, Native American reservations, and offshore seeps.[32] The industrial sector was the single largest source of these emissions, accounting for 28.5 percent, followed by transportation sector at 27.9 percent, and agriculture and forestry at 19.1 percent.[33] Using a different, less accurate methodology in order to compare 2007 GHG emissions to 1990 levels, the County estimated GHG emissions at 1,537,819 $MTCO_2e$ and 1,623,051 $MTCO_2e$ for the years 2007 and 1990, respectively.

Figure 2. Recent Trends in Greenhouse Gas Emissions (U.S. and California)[34]



Another preliminary estimate being finalized by the Santa Barbara County Air Pollution Control District is 1,001,607 MTCO2e in the year 2013 solely from stationary sources within the district's jurisdiction, including emissions from oil platforms offshore.

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[32] Santa Barbara County, *Climate Action Strategy: Phase I – Climate Action Study*, 2011, pages 22 and 23. A **metric tonne of carbon dioxide equivalent per year ($MTCO_2e$/year)** is a unit of measurement that homogenizes the reporting of emissions from various greenhouse gases, based on their global warming potential. Each GHG is converted

[33] *Ibid*, page 23.

[34] California Air Resources Board, *Op. Cit.*, 2014(a), page 11.

ATTACHMENT E

WHAT CEQA LEAD AGENCIES ARE DOING TO ADDRESS INDUSTRIAL/STATIONARY GREENHOUSE GAS EMISSIONS

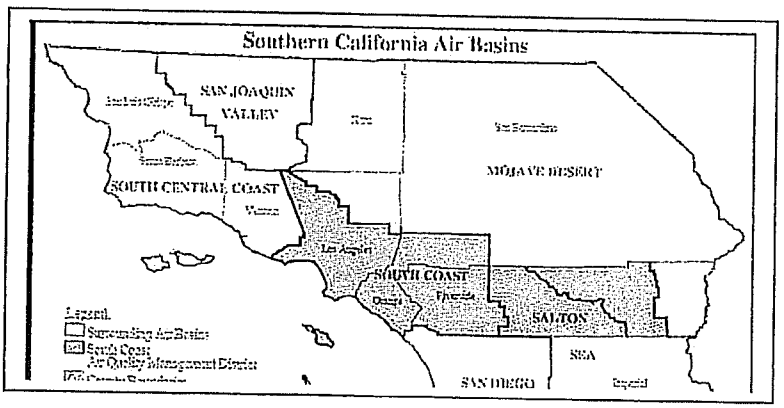
The following appendix summarizes a survey conducted by the Planning and Development Department (P&D) of air districts, counties, and commercial ports throughout California, along with selected state agencies and cities, in late 2014 and early 2015. The survey's purpose was to identify methods used by lead agencies to determine the significance of projected greenhouse gas (GHG) emissions in environmental documents prepared pursuant to the California Environmental Quality Act (CEQA), focusing on proposed industrial/stationary-source projects. Such projects generally include oil/gas production, oil refining, asphalt plants, cement plants, mineral processing plants, electrical power plants. Staff also included utility-scale alternative energy projects in the survey. Part I of this summary describes various adopted thresholds of significance; Part II identifies uses of adopted thresholds by other CEQA lead agencies; Part III addresses other approaches used by CEQA lead agencies in environmental documents, and describes other observations made during the survey. Part IV lists the state and local governmental websites and environmental documents consulted.

I. Local CEQA Lead Agencies with Adopted Thresholds of Significance

Eight air districts and two counties in California have adopted thresholds of significance for greenhouse gas (GHG) emissions so far. The various numeric bright-line thresholds described below apply to a project's estimated GHG emissions, presented as **metric tons of carbon dioxide equivalent per year (MTCO$_2$e/year),** a unit of measurement that accounts for the emissions from various greenhouse gases based on their global warming potential. The following summary only describes the components of adopted thresholds that address industrial/stationary sources.

A. Single Bright-Line Threshold Based on Capture Rate

Agencies: **South Coast Air Quality Management District (SCAQMD)**
San Luis Obispo County Air Pollution Control District SLOAPCD)
San Luis Obispo County



These three agencies each adopted an interim threshold of **10,000 (MTCO$_2$e/year)** for industrial and stationary-source projects. Proposed projects that exceed this threshold are considered to have a cumulatively significant impact on climate change and are required to reduce annual GHG emission to a level below the

threshold to the maximum extent feasible.

The 10,000 MTCO2e/year thresholds are based on achieving a capture rate of at least 90 percent, using the Executive Order S-3-05 as a basis.[35] The selected capture rate means that the thresholds are expected to capture at least 90 percent of GHG emissions from new or modified industrial/stationary-source projects within each agency's jurisdiction. According to SCAQMD staff:

> *"... a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions."*[36]

The capture rates were based on GHG emissions from stationary sources, reported during the period of 2006 through 2007 for SCAQMD and 2009 for SLOAPCD.

These adopted thresholds apply to each project's total GHG emissions, including direct emissions from stationary-source equipment and mobile sources, and indirect emissions from offsite generation of electricity used by the project, and of electricity used to convey water to the project. With regard to life-cycle emissions, SCAQMD staff notes:

> *"The goal of a life cycle analysis is to compare the full range of environmental damages assignable to products and services, to be able to choose the least burdensome one. The term 'life cycle' refers to the concept that a fair, holistic assessment requires the assessment of raw material production, manufacture, distribution, use and disposal including all intervening transportation steps necessary or caused by the product's existence. The sum of all those steps - or phases - is the life cycle of the product."*
>
> *"Performing a life cycle analysis may be difficult for a number of projects or processes because life cycle emission factors may not be well established for many activities or projects and the life cycle process itself may not be known or well-defined. SCAQMD staff, however, recommends that life cycle analyses be prepared for all projects undergoing a CEQA analysis, as this will produce a more defensible approach. If, however, any component of the life cycle analysis is unavailable, unknown, or not*

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[35] South Coast Air Quality Management District, Staff Report titled: *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans,* Board Meeting Date – December 5, 2008, Agenda No. 31, page 4. Executive Order S-3-05, signed by former Governor Schwarzenegger, sets the goal of reducing statewide GHG emissions to a level 80 percent below 1990 emissions levels by the year 2050 in order to stabilize the global climate.

[36] *Ibid,* page 4. See also San Luis Obispo County Air Pollution Control District, *Greenhouse Gas Thresholds and Supporting Evidence,* March 28, 2012, page 27.

supported by scientific evidence, the lead agency should note such an analysis would be speculative pursuant to CEQA Guidelines §15145 and terminate discussion of that impact.[37]"

San Luis Obispo County APCD's thresholds do not give guidance on addressing life-cycle emissions.

Construction-related emissions are estimated and amortized over the typical life of a project; SCAQMD's threshold prescribes a 30-year period of amortization, and San Luis Obispo APCD's threshold prescribes a 25-year period of amortization. Projects are required to reduce project emissions or reduce GHGs offsite in an amount equivalent to the project's GHG emissions over the threshold.

In recent practice, SCAQMD has considered a project's Cap-and-Trade allowances, as required by the California Air Resources Board (CARB), to be applied towards any required mitigation of GHG emissions. In one case, it has considered the additional GHG emissions estimated for a proposed modification to a refinery to represent a less-than-significant impact, because the entire refinery and a proposed new co-generation unit, would be subject to CARB's Cap-and-Trade program, and thus already mitigated.[38]

B. Two Bright-Line Thresholds Based on Capture Rate & Gap-Analysis

Agencies: **Bay Area Air Quality Management District (BAAQMD)**
San Diego County

Both agencies have adopted interim thresholds of significance that employ two separate bright-line thresholds for stationary-source projects:

- **10,000 $MTCO_2e$/year bright-line threshold** for GHG emissions from stationary sources of a proposed project; and

- **1,100 $MTCO_2e$/year bright-line threshold (BAAQMD) and 2,500 $MTCO_2e$/year bright-line threshold (San Diego County)** for the operational components (e.g., mobile sources, use of electricity).[39]

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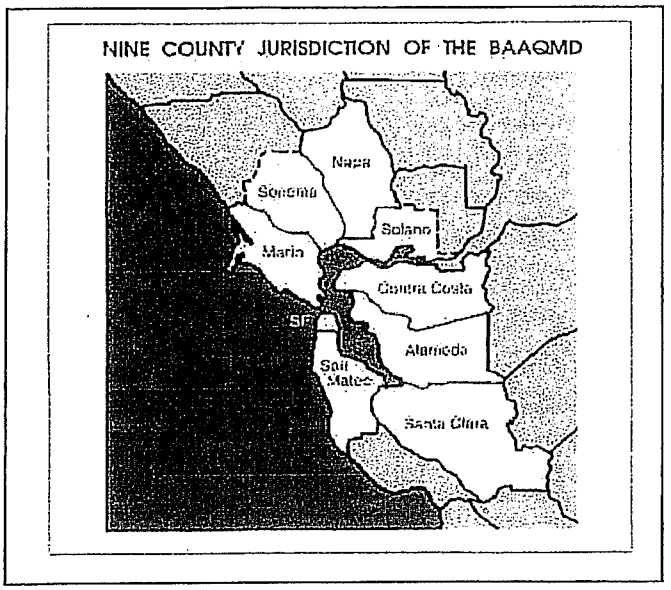
[37] South Coast AQMD, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*, Board Letter December 5, 2008 Hearing, Attachment E, page 3-8.
[38] South Coast Air Quality Management District, *Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project*, October 2014, State Clearinghouse No. 2012041014. Pages 2-31- and 2-32.
[39] Bay Area Air Quality Management District, *California Environmental Quality Act Guidelines Update: Proposed Thresholds of Significance*, May 3, 2010, pages 11-21, and 27-28.



For example, the environmental document for a newly proposed quarry or an expansion of an existing quarry will quantify annual GHG emissions from the stationary components – typically being emissions from the equipment of a cement plant or an asphalt plant– and compare that calculation to the threshold of 10,000 $MTCO_2e$/year.[40] The environmental document separately quantifies GHG emission from non-stationary components of the project – typically being emissions from generation of electricity (often delivered on the grid) to power the operations and to power delivery of water, off-road equipment (e.g., scrapers, graders), and mobile sources (e.g., delivery trucks, product-haul trucks, employee commute vehicles) and compares those emissions to the non-stationary source bright-line threshold.[41] Any project with emissions that exceed these two thresholds are considered to have a cumulatively significant impact on climate change.

The premise behind the use of two separate bright-line thresholds can be found in the underlying methodologies to derive each threshold. The 10,000 $MTCO_2e$/year thresholds reflect capture ratios of $\geq$ 90% and $\geq$ 95% for San Diego County and BAAQMD, respectively, based on GHG emissions from existing stationary sources permitted by the respective air districts.[42] Meanwhile, the 1,100 $MTCO_2e$/year operational threshold (BAAQMD) and the 2,500 MT operational threshold (San Diego County) is derived from a "gap-based approach." Under this approach, projected reductions of statewide GHG emissions achieved by 2020 through statewide regulations to reduce GHG emissions is subtracted from the amount of statewide GHG emissions in the year 2020 if no actions were taken to reduce those emissions. The difference represents the gap, which falls to local jurisdictions to address, based on projected development in each local jurisdiction through the year 2020.[43]

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[40] See, for example, Alameda County, *SMP-30 Revised Use Permit Sunol Valley Aggregate Quarry Project, Draft Environmental Impact Report,* SCH# 2011102051, April 2012, prepared by Lamphier – Gregory, pages 8-26, 8-29, 8-33,8-35, and 8-36, wherein BAAQMD CEQA thresholds were applied. Also, San Diego County, *Guidelines for Determining Significance: Climate Change,* November 2013, pages 29-31.

[41] *Ibid.*

[42] County of San Diego, *Op. Cit.,* 2013, pages 29 – 31. Bay Area Air Quality Management District, *California Environmental Quality Act Guidelines Update: Proposed Thresholds of Significance,* May 3, 2010, pages 27-28.

[43] This is a simplified description of a more complex methodology, which can be accessed from the previous citations.

Other noteworthy characteristics of these adopted thresholds include:

- Both thresholds address a project's direct and indirect GHG emissions, except that neither threshold applies to construction-related GHG emissions. San Diego County's Guidelines quantified construction emissions for land use projects between 2013 and 2020, and incorporated them into the 2,500 $MTCO_2e$/year bright-line threshold. "The Bright Line is set such that the land use gap and construction emissions are both addressed by feasible mitigation for projects above the Bright Line. In other words, the feasible mitigation that will be triggered by projects above the Bright Line will reduce GHG emissions at a level that is sufficient both to meet the land use gap and to make up for construction-related emissions."[44] BAAQMD Guidelines recommend quantification and disclosure of construction-related emissions, followed by a case-by-case determination of significance in relation to AB 32 GHG reduction goals. BAAQMD also encourage application of best management practices during construction, such as using alternative-fueled construction vehicles and equipment and recycling construction waste.
- The San Diego County threshold prioritizes mitigation of GHG emissions from stationary sources, requiring implementation of all feasible Best Available Control Technology (BACT) and Best Available Control Measures (BACM) as a first priority, followed by verifiable offsets necessary to reduce GHG emissions to below 10,000 $MTCO_2e$/year.[45]
- BAAQMD's guidelines, with regard to life-cycle emissions, recommends using the BAAQMD GHG Model to quantify a project's GHG emissions to include calculation of indirect emissions, such as the project's estimated use of electricity and natural gas onsite, its use of water (including electricity used to supply, treat, and distribute the water), its use of wastewater (including electricity used to transport and treat offsite), and its generation and disposal of solid waste.[46] No guidance is provided beyond these indirect emissions.
- San Diego County's guidance, with regard to life-cycle emissions, direct that a project's indirect emissions, such as electricity use and water delivery be assessed. Otherwise, the County's guidance explicitly advises that "life cycle" emissions embodied in manufactured materials not be included in the calculation of a project's emissions, noting that:

> *"Construction materials (primary manufacturing and transport) or other materials used in projects are intended to meet general market demand, regardless of whether any particular project proceeds." In order to clarify whether life cycle emissions should be a part of CEQA analyses, 2010 amendments to the CEQA Guidelines removed the term "lifecycle," since "the term could refer to emissions beyond those that could be considered indirect effects of a project as that term is defined in section 15358 of the State CEQA Guidelines." California Natural Resources Agency. 2009 (December). Final Statement of Reasons for Regulatory Action. Amendments to the State CEQA*

[44] County of San Diego, *Op. Cit.*, 2013, page 29.
[45] County of San Diego, *Op. Cit*, 2013, page 31.
[46] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, Draft, May 2010, page 4-6.

Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97." [47]

The BAAQMD has not applied its thresholds, because its overall *California Environmental Quality Act Guidelines Update* (2010) has been subject to litigation.[48] However, many other local CEQA lead agencies located with the BAAQMD's jurisdiction have applied the thresholds, as described in Section II-B, below.

C. Single Bright-Line Threshold Based on Capture Rate + 21.7% Reduction Based on Scoping Plan Year 2020 Reduction Target

Agencies: Sacramento Metropolitan Air Quality Management District (SMAQMD)

In November of 2014, the SMAQMD, encompassing Sacramento County, adopted a 10,000 $MTCO_2e$/year threshold for all operational GHG emissions from stationary-source projects, and a 1,100 $MTCO_2e$/year threshold for construction-related GHG emissions. Any project with emissions that exceed these two thresholds are considered to have a cumulatively significant impact on climate change. However, different than other bright-line thresholds, SMAQMD requires projects that exceed said bright-line thresholds to mitigate impacts, where feasible, by 21.7 percent to qualify as a "less-than-significant" impact with mitigation.[49] According to district staff, any applicant that exceeds the 10,000 $MTCO_2e$/year threshold by a small margin may choose, instead, to reduce or offset GHG emissions to below 10,000 $MTCO_2e$/year even though that reduction may fall below 21.7 percent.[50]

The stated goal of the 10,000 $MTCO_2e$/year operational thresholds is "... to insure that at least 90 percent of GHG emissions from new stationary sources and land development projects are reviewed and analyzed, and that projects with significant emissions are mitigated."[51] However, the district discovered that only about 2 percent of permitted sources (73 out of 4,211) had annual GHG emissions over 10,000 $MTCO_2e$/year in 2011, because its jurisdictional area does not have a heavy industrial presence. This 2 percent accounted for 83 percent of the total emissions from all permits. Choosing a 90 percent capture rate, as was done in other air districts described above, would require a bright-line threshold of 1,933 $MTCO_2e$/year, representing a far

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[47] County of San Diego, *Guidelines for Determining Significance: Climate Change,* November 2013. page 14.
[48] Besides addressing thresholds of significance for greenhouse gas emissions, the update also addresses thresholds for criterion pollutants and precursors, local community risk and hazard impacts, local carbon monoxide impacts, odor impacts, construction-related impacts, and plan-level impacts.
[49] Sacramento Metropolitan Air Quality Managements District, *Guide to Air Quality Assessment in Sacramento County,* November 2014 (latest revision), pages 6-10, 6-11, 6-12, and 6-14.
[50] Phone conversation with Jorge De Guzman, Program Supervisor, SMAQMD, January 27, 2015.
[51] Sacramento Metropolitan Air Quality Management District, *SMAQMD GHG Thresholds of Significance Concepts,* August 2014, page 1.

more stringent threshold than proposed by any other jurisdiction.[52] So SMAQMD chose a 10,000 MTCO2e/year threshold, which would capture 83 percent of the emissions (7 percent less than the 90 percent goal), would remain consistent with other air districts that use a bright-line threshold for stationary-source projects, and would remain consistent with a level imposed on stationary sources requiring the reporting of emissions through CARB's Mandatory GHG Reporting regulation (California Code of Regulations Title 17, Division 3, Chapter 1, Subchapter 10, Article 2).

Meanwhile, the 21.7 percent reduction in emissions is required, where determined to be feasible, to achieve full mitigation to less-than-significant is based upon achieving the goals of AB -32 and the CARB Scoping Plan to meet the 2020 near-term target.[53] In doing so, SMAQMD subtracted the AB-32 target goal for reducing statewide emissions by 2020 from the projected amount of statewide emissions in 2020 if no actions were taken, adjusted for the slowdown of development by the economic recession, to determine the 21.7% reduction (i.e., (545 $MMTCO_2e$ – 427 $MMTCO_2e$) / 545 $MMTCO_2e$ = 21.7%). The district plans to adjust this percentage when CARB adjusts its *Scoping Plan* goal.[54]

SMAQMD's guidelines with regard to life-cycle emissions provide direction on quantifying a project's indirect GHG emissions, such as the project's estimated use of electricity and natural gas onsite, its use of water (including electricity used to supply, treat, and distribute the water), its use of wastewater (including electricity used to transport and treat offsite), and its generation and disposal of solid waste.[55]

D. Single Bright-Line Threshold with Federal Tailoring Rule Basis

Agencies: **Mojave Desert Air Quality Management District (MDAQMD)**
Antelope Valley Air Quality Management District (AVAQMD)

Both agencies have adopted thresholds in August of 2011 of 100,000 $MTCO_2e$/year, along with a 548,000 pound of CO_2e/day threshold to address short-term GHG emissions, such as project construction.[56] This threshold is based on two regulations adopted by the U.S. Environmental Protection Agency (USEPA) in 2013 that establish permitting requirements for GHG emissions

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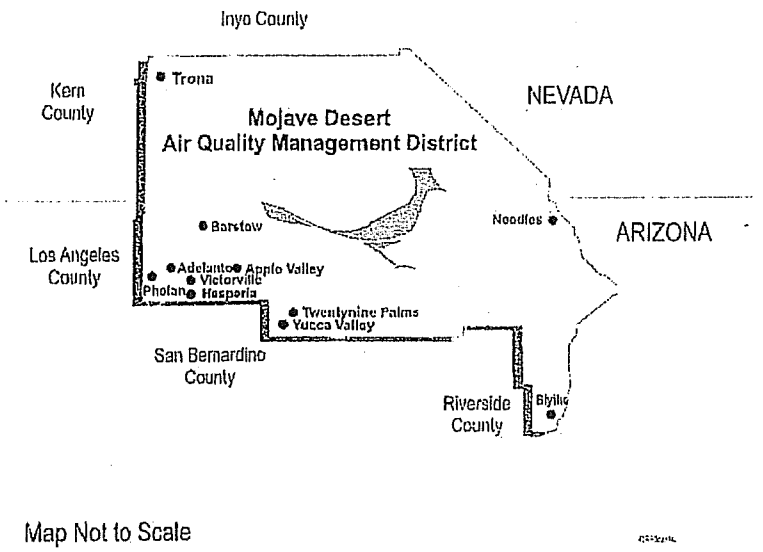
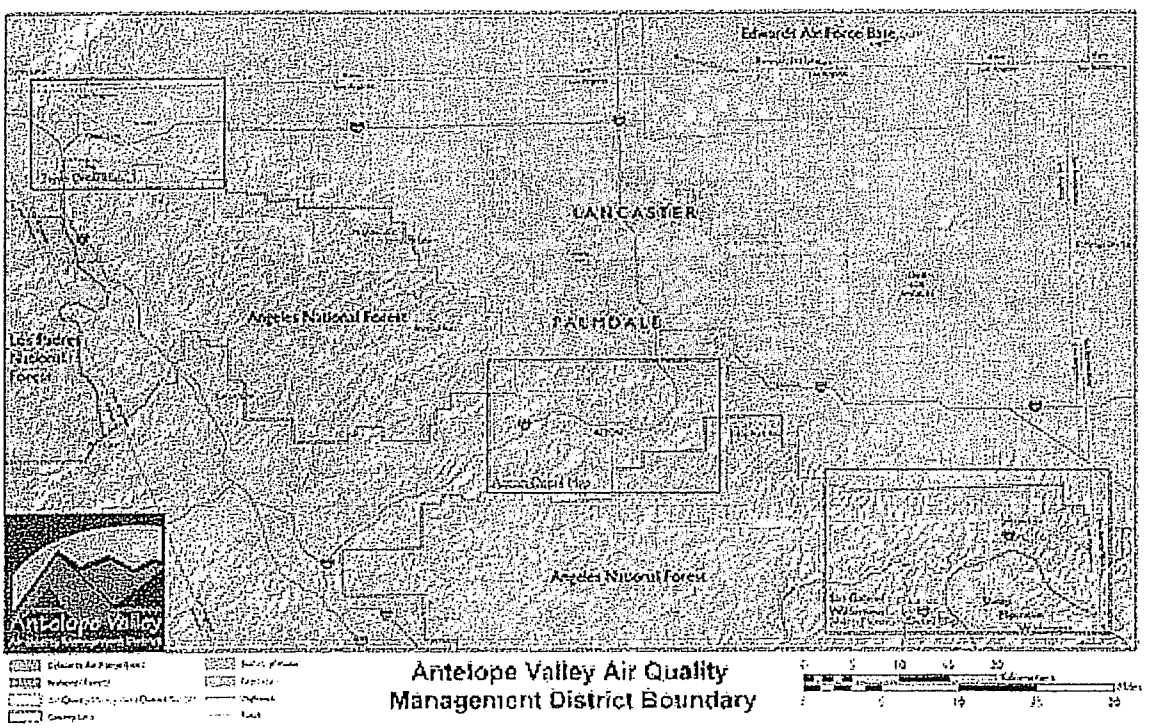
[52] Sacramento Metropolitan Air Quality Management District, *Justification for Greenhouse Gas Emissions Thresholds of Significance*, September, 2014, pages 16 -17.
[53] *Op. Cit.* August, 2014, page 2.
[54] *Op. Cit*, September, 2014, page 19.
[55] Sacramento Metropolitan Air Quality Management District, *Quantification of Greenhouse Gas Emissions for Non-Transportation Activities*, Revised November 2014, prepared by ENVIRON International Corp.
[56] Mojave Desert Air Quality Management District, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, page 10, Antelope Valley Air Quality Management District, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines*, page 7.



from larger stationary sources: the Prevention of Significant Deterioration permitting requirements (PSD) and Part 70, the Greenhouse Gas Tailoring Rule (a.k.a. Tailoring Rule). Essentially, the USEPA tailors its regulation of GHG emissions so that GHG emissions would not be subject to the same thresholds as criteria air pollutants; otherwise, these rules would require permits for a larger number of smaller stationary sources. The jurisdictional boundaries of these two air districts include several US military bases.

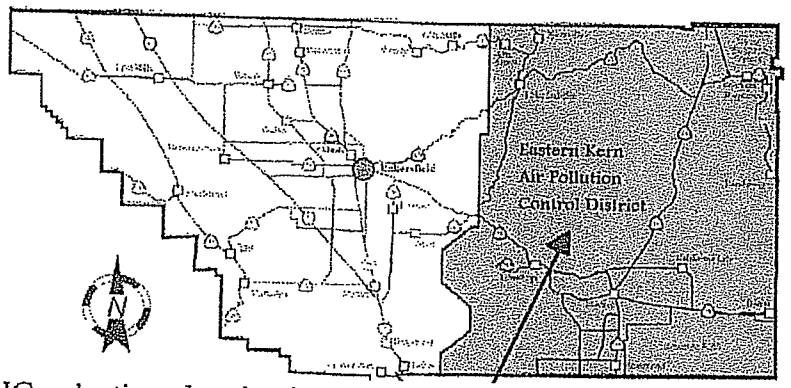
The adopted guidelines prescribe that both a project's direct and indirect emissions be calculated and compared to the threshold.



E. Bright-Line Threshold Based on AB-32 Year 2020 Target

Agencies: Eastern Kern Air Pollution Control District (EKAPCD)

The EKAPCD adopted a **25,000 $MTCO_2e$/year threshold** that applies to stationary-source projects. EKAPCD chose 25,000 $MTCO_2e$/year because it reflects the reduction target identified for the Industrial Sector in CARB's Scoping Plan Functional Equivalent Document (2011) necessary to meet AB-32's year 2020 target, and is more conservative than the 16% overall reduction required across all sectors statewide.[57] Alternatively, a project that demonstrates to EKAPCD that it is in compliance with a state GHG reduction plan, such as AB 32, or a future federal GHG reduction plan that is more stringent than a state plan, is considered to less than significant.



Proposed projects that exceed the thresholds are considered to be a cumulatively significant impact and are required to reduce GHG emissions, to the maximum extent feasible, by one or more of three emission-reduction strategies that achieve at least a combined 20% reduction in GHG emissions compared to business-as-usual (BAU). The three strategies include: (1) implementing District-approved Best Performance Standards (BPS), based on selection of equipment, design elements, and best management practices; (2) offsetting project emissions by reducing emissions elsewhere; and (3) implementing other technologies, equipment design, or operational practices in lieu of adopted BPS or if no BPS is available that achieves at least a 20% reduction of GHG emissions below BAU.[58]

The guidelines do not provide direction on treatment of life-cycle emissions.

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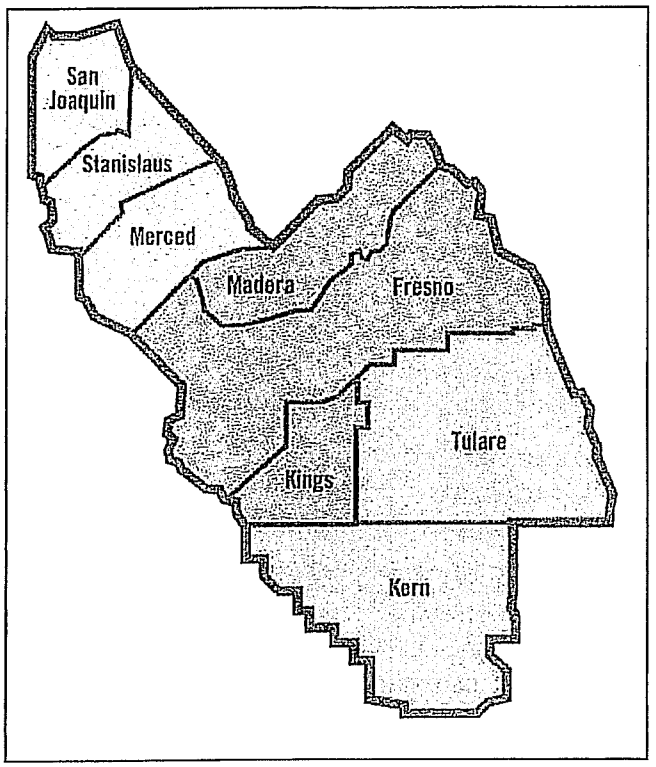
[57] Eastern Kern Air Pollution Control District, *Addendum to CEQA Guidelines Addressing GHG Emission Impacts For Stationary Source Projects When Serving As Lead CEQA Agency*, March 2012, page 5.
[58] *Ibid*, page 5.

F. Performance-Based Standard or Consistency with AB-32 Target

Agencies: San Joaquin Valley Air Pollution Control District (SJVAPCD)



In principle, the SJVAPCD requires all proposed stationary-source projects with increased GHG emissions to implement performance-based standards or otherwise demonstrate a reduction in project GHG emissions by at least 29 percent below business-as usual.[59] The application of performance-based standards is a method for determining whether any increased GHG emissions associated with a stationary-source project subject to CEQA is a significant cumulative impact or not. SJVAPCD defines Best Performance Standards (BPS) as the most effective, District approved, Achieved-In-Practice means of reducing or limiting GHG emissions from a source that is also economically feasible. BPS includes equipment type, equipment design, and operational and maintenance practices.

Any project that does not implement feasible BPS is considered to be a cumulatively significant impact, which then requires mitigation to a level of 29 percent below BAU to be considered less-than-significant. BAU is the emissions for a type of equipment or operation projected for the year 2020 if no improvements were implemented to reduce GHGs emitted from these equipment and operations established during the baseline period, 2002- 2004.

SJVAPCD recently amended its guidance documents to determine that any project with increased GHG emissions that is covered under CARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA for two reasons.[60] First, the Cap-and-Trade regulation is a statewide plan for reducing GHG emissions from targeted industries. Therefore, the project emissions would be less-than-significant, consistent with CEQA Guidelines §

[59] San Joaquin Valley Air Pollution Control District, *District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency,* December, 2009, page 6.
[60] San Joaquin Valley Air Pollution Control District, *APR – 2030: CEQA Determinations of Significance for Projects Subject to ARB's Cap-and-Trade Regulation,* June, 2014, page 4.

15064(h)(3). Second, as discussed above, the Cap-and-Trade regulation requires a source's allowable emissions under the cap to decrease over time.[61]

The District's guidance does not address treatment of life-cycle emissions.

II. Use of Another Agency's Adopted Thresholds by an Lead Agency

A review of environmental impact reports and mitigated negative declarations prepared throughout the state for industrial/stationary-source projects indicates that many CEQA-lead agencies lack an adopted threshold of significance. In those cases, most CEQA-lead agencies rely upon the thresholds of significance adopted by the SCAQMD, BAAQMD, or SJVAQMD. Such practices sometimes reveal case-by-case interpretations or adaptations of the adopted threshold for various reasons, as summarized below.

A. Use of SCAQMD's Threshold for Industrial/Stationary Sources

Several CEQA Lead Agencies have employed SCAQMD's threshold of 10,000 $MTCO_2e$/year. All have amortized the project's construction-related impact over the life of the project, variably using a 25-year or a 30-year project life span. Some observations regarding implementation of the threshold in environmental documents follow below.

- Carson City applied SCAQMD's threshold to a proposed oil development project (202 wells) and new processing facility within the existing Dominguez Hills oil field. Total GHG emissions for the new project were estimated at 18,18,497 $MTCO_2e$/year; however, the draft environmental impact report (DEIR) subtracted GHG emissions from existing operations within the oil field, determining that the new project's net contribution was only 472 $MTCO_2e$/year.[62] With regard to life-cycle GHG emissions, the DEIR calculated and compared the carbon intensity of the crude oil to be produced from the project (21.4 kilograms (kg) CO_2e /barrel (bbl) to that of foreign imported crude oils (ranging from 29.2 to 41.4 kg CO_2e/bbl. Carbon intensity of crude oil measures the per barrel carbon equivalent to produce, process, and transport crude oil to a refinery. The DEIR assumed that the project's crude oil production would displace foreign imports, since California crude oil production is currently not exported, but is refined in local refineries and local refinery capacity is fixed.[63] The DEIR further compared the quality of the project's crude oil, using viscosity and sulfur content as metrics, to other crude oils imported to southern California refineries (Alaska North Slope, Saudi Arabia, Ecuador, and Iraq), noting that more energy is required to refine high-sulfur, highly viscous crude oil, compared to lighter crudes with less sulfur.[64]

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[61] *Ibid,* pages 5-6.
[62] City of Carson, *Draft Environmental Impact Report – Oxy USA, Inc. Dominguez Hills Oil Field Development Project,* SCH No. 2012031019, January, 2014, prepared by Environmental Audit, Inc., pages 5-18 – 20.
[63] *Ibid,* page 5-21.
[64] *Ibid,* pages 5-21 – 23.

- The Port of Long Beach employed the district's threshold of 10,000 $MTCO_2e$/year to three separate projects – the Mitsubishi cement facility, TTI grain export terminal, and Eagle Rock aggregate terminal.[65] While indirect emissions associated with generation of electricity was addressed by the environmental documents, no further discussion of life-cycle emissions was included.

- The City of Hermosa Beach applied the district's threshold to a proposed oil production project of 30 wells and associated processing equipment and pipelines.[66] The Final Environmental Impact Report (FEIR) concluded that project GHG emissions would exceed the threshold of 10,000 $MTCO_2e$/year, with emissions peaking at 21,845 $MTCO_2e$/year during the drilling phase of the project; this conclusion resulted in finding the project to have a Class II impact that can be reduced to less-than-significant through direct mitigation and offsets.[67] However, the FEIR provides notes an option of mitigating GHG emissions to zero, based on the city's carbon-neutral approach to the project, as defined in the city's strategic plan.[68] With regard to life-cycle emissions, the FEIR did not analyze and assess the impact associated with the refining or end-use of the crude oil and natural gas produced by the project. The FEIR noted that:

  > *"End use of the crude oil produced as a part of this Project has not been included in the GHG emissions. Crude oil is supplied to the region from a number of different sources, both local, from California, by train from other parts of the U.S and Canada, and by tanker from Alaska and foreign countries. The demand for crude oil in the region is not a function of supply; if this crude oil is not produced, it will be supplied by another source, as crude oil prices are set largely on the global market. CARB and SCAQMD specifications for the calculation of GHG emissions from a project do not include the end use estimates. Current policies, such as Cap-and-Trade and automobile efficiency standards and the Low Carbon Fuel Standard, address GHG emissions from transportation fuels. The end use of fossil fuels will be encompassed by the Cap-and-Trade program in 2015."*[69]

  The FEIR then disclosed, for informational purposes only, that an average of 535,000 $MTCO_2e$/year over the project's life would result from the combustion of natural gas, and crude oil products.

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[65] Port of Long Beach, *MCC Cement Facility Modification Project – Draft Environmental Impact Report (EIR),* SCH No. 2011081098, September, 2014, pages 3.3-8 -- 11. Port of Long Beach, *Total Terminals International Grain Export Terminal Installation Project Final Environmental Impact Report and Application Summary Report,* SCH No. 2011081020, August, 2013, pages 3.4-9 -- 11. Port of Long Beach, *EAGLE ROCK AGGREGATE TERMINAL PROJECT – Final Environmental Impact Statement/Environmental Impact Report,* SCH No. 2011101042, April, 2013, pages 3.2-8 – 16.

[66] City of Hermosa Beach, *E&B Oil Drilling & Production Project – Final Environmental Impact Report,* SCH No. 2013071038, June, 2014, page 4.2-34.

[67] *Ibid,* pages 4.2-58 and 4.2-63.

[68] *Ibid,* page 4.2-61.

[69] *Ibid,* page 4.2-61.

- Orange County applied the district's threshold to a 5-mile long 12-inch common carrier jet fuel pipeline, connecting the John Wayne Airport (Airport) to an existing 16-inch products pipeline operated by Kinder Morgan Energy. The pipeline allows the airport to access jet fuel from all Long Beach area refineries and terminals without the need for highway truck transportation, eliminating 44 to 70 individual tanker truck trips per day. The Initial Study concluded that both construction and operation of the project would reduce existing operational-related GHG emissions.[70]

- Ventura County used the district's threshold in its consideration of an expanded mining facility, noting that this threshold was also adopted by the BAAQMD and San Luis Obispo APCD.[71] Construction-related emissions were amortized over the life of the project, as done in the SCAQMD's threshold.

- The California State Lands Commission (CSLC) relied on the district's threshold in its environmental analysis of renewing Chevron's El Segundo Marine Terminal Lease. Although the majority of GHG emissions attributed to the lease renewal resulted from marine vessel traffic, the marine terminal was considered to be part of the onshore refinery – an industrial and stationary source of emissions. The estimated increase of GHG emissions of 22,107 $MTCO_2e$/year constituted a cumulatively significant impact.[72]

B. Use of BAAQMD's Thresholds for Industrial/Stationary Sources

Not all CEQA lead agencies that applied the BAAQMD thresholds have taken the dual threshold approach for industrial projects. Instead, some quantified total project GHG emissions (i.e., those derived from stationary sources, mobile sources, and electricity use) and compared them to the 10,000 $MTCO_2e$/year threshold. Some CEQA lead agencies also relied on the SCAQMD prescribed method of amortizing construction-related impacts over the life of a project.

- The CSLC used BAAQMD's threshold in three separate environmental impact reports addressing marine terminal leases.[73] In doing so, CSLC interpreted the 10,000 $MTCO_2e$/year to apply to all operational emissions, rather than applying solely to stationary-source components of the project.

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[70] Orange County, *Initial Study for John Wayne Airport New Jet Fuel Pipeline and Tank Farm,* December, 2013, pages 109 – 113.

[71] County of Ventura, *Grimes Rock, Inc. Expanded Mining Facility – Final Environmental Impact Report,* SCH No. 2003111064, June 2013, 4.9-9 -- 11

[72] California State Lands Commission, *Chevron El Segundo Marine Terminal Lease Renewal – Final Environmental Impact Report,* SCH No. 2006031091, November, 2010, prepared by MRS, page 4.4-34.

[73] California State Lands Commission, *Draft Environmental Impact Report for the Tesoro Avon Marine Oil Terminal Lease Consideration,* SCH No. 2014042013, September, 2014, prepared by TRS Solutions, page 4.5-5 and 6. California State Lands Commission, *Final Environmental Impact Report for the Shell Martinez Marine Terminal Lease Consideration Project,* SCH No. 2004072114, May, 2011, prepared by MRS, page 4.6-18. California State Lands Commission, *Final Environmental Impact Report for the Tesoro Amorco Marine Terminal Lease Consideration,* SCH No. 20140422013, February, 2014, prepared by TRC Solutions, page 4.4-17.

- The City of Richmond used the district's threshold to assess the cumulative impact of GHG emissions from Chevron's Refinery Modernization Project. Similar to the interpretation applied by the CSLC, above, the city also compared the project's construction-related and operational emissions to the 10,000 MTCO2e/year threshold, while ignoring the 1,100 $MTCO_2e$/year threshold identified by the district for application to non-stationary sources of a project.[74] The threshold was applied separately to construction-related impacts, which would occur prior to operations. Several construction-related mitigation measures recommended in the BAAQMD guidelines were listed.

  With regard to life cycle emissions, the city applied the same reasoning as San Diego County in its threshold guidance> The DEIR states:

  > *"When the California Natural Resources Agency released for public comment draft CEQA Guidelines to implement SB97, the draft guidelines included language suggesting that CEQA documents would be required take into account greenhouse emissions generated throughout the lifecycle of products that a Project might consume. This language, however, was later removed from the guidelines that were ultimately adopted. In its Final Statement of Reasons for Regulatory Action published upon adoption of the SB97 greenhouse gas guidelines, the Natural Resource Agency explained its rejection of the lifecycle analytical paradigm as follows:*
  >
  > *As a general matter, the term ["lifecycle"] could refer to emissions beyond those that could be considered "indirect effects" of a project as that term is defined in section 15358 of the State CEQA Guidelines. ... CEQA only requires analysis of impacts that are directly or indirectly attributable to the project under consideration. In some instances, materials may be manufactured for many different projects as a result of general market demand, regardless of whether one project proceeds. Thus such emissions may not be "caused by" the project under consideration. Similarly, in this scenario, a lead agency may not be able to require mitigation for emissions that result from the manufacturing processes. Mitigation can only be required for emissions that are actually caused by the project. ...* [T]*o avoid potential confusion regarding the scope of indirect effects that must be analyzed, the term "lifecycle" has been removed from* [the adopted guidelines] (CNRA, 2009e, p. 71-72).[75]

- The City of Benicia prepared a DEIR to address the proposed installation of a rail spur, rail tank car loading rack, pumps, and connecting pipelines that would allow the

[74] City of Richmond, *Chevron Refinery Modernization Project Environmental Impact Report, Volume 1 – Draft EIR,* SCH No. 2011062042, March, 2014,
[75] *Ibid,* page 4.8-23.

refinery to receive as many as 70,000 barrels of crude oil daily from oil fields in the U.S. (up to 100 tank cars daily). The DEIR used BAAQMD's threshold for operational GHG emissions, and SCAQMD's threshold approach to address construction-related emissions. The DEIR estimated that the shipments of crude oil via rail would displace GHGs emitted from marine vessels shipping crude oil to the refinery, finding the project has no net emissions.[76]

- The County of Contra Costa applied the BAAQMD threshold of 10,000 $MTCO_2e$/year to the entire operational GHG emissions of a proposed propane recovery project at the Phillips 66 refinery.[77] The EIR used the SCAQMD approach to address construction-related impacts, amortizing them over a 30-year period.[78] With regard to life-cycle emissions, the EIR found that the uncertainty in how the propane and butane it would ultimately be used, quantification of the associated net GHG emissions would be speculative, citing CEQA Guidelines §15145.[79] A more generic description of how the end-products may be used was provided for informational purposes.

- Alameda County applied BAAQMD's dual threshold to its environmental analysis of a revised use permit for the Sunai Valley Aggregate Quarry; that is, a threshold of 10,000 $MTCO_2e$/year for GHG emissions from stationary equipment in the asphalt plant, and a threshold of 1,100 $MTCO_2e$/year for GHG emissions from mobile sources, off-road equipment, and electricity use.[80] The DEIR quantified construction-related emissions at 63 $MTCO_2e$, but did not determine significance of these emissions.[81]

- Similarly, Napa County used BAAQMD's dual threshold to assess the emissions from the proposed expansion of the Syar Napa Quarry, applying the 10,000 $MTCO_2e$/year to the asphalt plant, and the 1,100 $MTCO_2e$/year threshold to the project's use of electricity and natural gas, mobile sources, off-road mobile equipment, and explosive detonations.[82] This DEIR found the GHG emissions from non-stationary-source exceeded the threshold by 7,958 $MTCO_2e$/year. The mitigation involves the applicant's choice of recommended measures, including contribution to a state or county offset mitigation program, to be incorporated into a GHG Reduction Plan. Different than other environmental documents consulted herein, the DEIR concluded that the impact was Class I, significant and unavoidable, because the GHG

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[76] City of Benicia, *Valero Benicia Crude by Rail Project – Draft Environmental Impact Report,* SCH No. 2013052074, June, 2014, pages 4.6-9 –14.
[77] Contra Costa County, *Phillips 66 Propane Recovery Project – Recirculated Draft Environmental Impact Report,* SCH No. 2012072046, October, 2014, page 4.5-8.
[78] *Ibid, page 4.5-9.*
[79] *Ibid, page 4.5-13.*
[80] County of Alameda, *SMP – 30 Revised Use Permit – Sunai Valley Aggregate Quarry Project – draft Environmental Impact Report,* SCH No. 2011102051, April, 2012, pages 8-33 and 8-36.
[81] *Ibid,* page 8-38.
[82] Napa County, *Draft Environmental Impact Report – Syar Napa Quarry Project Expansion, Surface Mining Permit #P08-00337,* SCH No. 2009062054, August, 2013, pages 4.17-10 and 4.17-11.

Reduction Plan was not clearly defined as to results in reducing or offsetting emissions.[83]

C. Use of SJVAPCD's Threshold for Stationary Sources

- Fresno County applied SJVAPCD's threshold to two separate mining projects. In so doing, however, the environmental impact reports (EIRs) adjusted the threshold from a 29 percent below BAU to 16 percent, reflecting CARB's 2011 revision to statewide GHG reductions necessary to achieve AB -32's interim target of 1990 emission levels by the year 2020.[84]

  The foregoing DEIRs also concluded that, because demand for aggregate is, in the short-term, inelastic, and in the long-term, a function of population growth, development of local aggregate mining and processing facilities essentially reduces GHG emissions by reducing vehicle miles traveled to transport aggregate to end uses.[85]

- Kern County prepared an EIR for a modification to the Alon Bakersfield Refinery to add a new rail facility. In so doing, the County estimated and deducted the project's Cap-and-Trade allowances as part of its calculation of the project's GHG emissions.[86]

III. Other Approaches Applied by CEQA-Lead Agencies

A. Use of Different Threshold

The following environmental documents relied on a different bright-line threshold

- County of Madera, *Madera Quarry Project – Draft Revised Environmental Impact Report,* October, 2008 (see page 4.0-5). This EIR relied on CARB's draft interim threshold of **7,000 $MTCO_2e$/year** from industrial sources (except transportation-related emissions). CARB ultimately did not adopt any thresholds.

- County of Shasta, *Moody Flats Quarry Project – Draft Environmental Impact Report,* SCH No. 20120122013, October, 2014 (see page 3.7-17); County of Shasta, *Second Recirculated Draft Environmental Impact Report for the Sierra Pacific Cogeneration Power Project,* SCH No. 2009072011, February, 2012 (see page 2.0-16). These documents relied on CARB's Inclusion Thresholds for Covered Entities of **25,000 $MTCO_2e$/year**, as described in §95812

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[83] *Ibid,* page 4.17-13.
[84] County of Fresno, *Riverbend Sand and Gravel Project – Draft Environmental Impact Report,* SCH No. 2013071097, July, 2014, prepared by Sespe Consulting, Inc., page 3.7-12. County of Fresno, *Carmelita Mine and Reclamation Project – Draft Environmental Impact Report,* SCH No. 2010081037, October 2011, page 4.7-6.
[85] County of Fresno, *Op. Cit,* July 2014, page 3.7-16 – 3.7-19; County of Fresno, *Op. Cit.,* October, 2011, page 4.7-8.
[86] Kern County, *Alon Bakersfield Refinery Crude Flexibility Project – Draft Environmental Impact Report,* SCH No. 2013091062, May 2014, pages 4.5-15 and 4.5-16.

of the Cap and Trade regulations (Title 17, California Code of Regulations). In so doing, the DEIR notes that, while CARB uses this threshold as a reporting threshold for its Cap-and-Trade program, its use as a CEQA threshold of significance is appropriate as referenced in the 2008 white paper by the California Air Pollution Control Officers Association.[87]

- County of Tehama guidance recommends use of a **900 MTCO2e/year screening criterion**; for project's that exceed that criterion, a **25 percent reduction in construction and operational emissions combined** would render a project's GHG emissions to be less-than-significant.[88]

- As noted above, the California State Lands Commission (CSLC) has no adopted thresholds of significance for GHG emissions, but tends to use the threshold of the local air district if one has been adopted; e.g., the Tesoro Avon Marine Oil Terminal Lease Consideration (used BAAQMD's 10,000 $MTCO_2e$/year), Shell Martinez marine Terminal Lease Consideration (used BAAQMD's 10,000 $MTCO_2e$/year) and Chevron El Segundo Marine Terminal Lease Renewal (used SCAQMD's 10,000 $MTCO_2e$/year). For two oil projects offshore Santa Barbara County – the Recommissioning of PRC-421 and the Extension of the Ellwood Marine Terminal offshore lease – the CSLC used a zero threshold. On another project, the CSLC determined that there was no impact from GHG emissions because the proposed project was included in the statewide GHG inventory.[89]

B. GHG emissions from Utility-Scale Solar, Wind, & Geothermal Projects

Several environmental documents prepared for proposed solar, wind, and geothermal energy projects concluded that such projects provide a net benefit with regard to GHG emissions, because these facilities displace the need to generate sufficient electricity to meet statewide demand from power plants fueled by natural gas.[90] Some documents calculated all GHG emissions associated with construction and operation of the facilities. They also calculated the amount of GHG emissions that would result from a new hypothetical power plant fueled by natural gas that would generate an equivalent amount of electricity as the solar or wind project.

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[87] California Air Pollution Control Officers Association (CAPCOA), *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act,* 2008, page 44-45.

[88] Tehama County Air Pollution Control District, *CEQA Planning and Permitting Handbook: Guidelines for Assessing Air Quality Impacts,* December, 2009, pages 3-8 and 3-9.

[89] California State Lands Commission, *Shore Marine Oil Terminal Lease Project – Final Environmental Impact Report,* SCH No. 2007112108, January, 2012, page 4.6-17.

[90] U.S. Department of the Interior, Bureau of Land Management, *Proposed Plan Amendment & Final Environmental Impact Statement/ Final Environmental Impact Report for the Ocotillo Wind Energy Facility,* February, 2012, 4.3-9. County of Imperial, *East Brawley Geothermal Environmental Impact Report,* March, 2011, page 4.14-14. County of Alameda, *Altamount Solar Energy Center Project – Mitigated Negative Declaration,* August, 2011. County of San Benito, *Panoche Valley Solar Farm – Final Environmental Impact Report,* SCH No. 2010031008 September, 2010, page C.5-7. County of San Diego, *Draft Environmental Impact Report – Soitec Solar Development Project,* SCH No. 2012-121-018, January, 2014, pages 3.1.37 – 39,

The GHG emissions from the hypothetical power plant were then subtracted from the total GHG emissions for the solar or wind project, resulting in a net benefit

C. Treatment of Combustion of Certain Biomass Fuels

In its analysis of a cogeneration power project fueled by biomass, Shasta County noted that facilities fueled by biomass have been treated as carbon neutral" by national and international carbon tracking and trading systems. [91] It also cites §95852.2 of the California Code of Regulations where CO_2 emissions derived from combustion of certain biomass fuels are exempt from CARB's Cap-and-Trade program.

> *"The process of using wood as a fuel source for production of electricity and/or biogenic fuels, will continue to present a significant opportunity to improve atmospheric GHG levels. The technology to produce energy without adding net CO2 to the atmosphere by burning fossil fuels is mature and employed worldwide. CO2 emissions from the combustion or decomposition of biogenic materials (e.g., paper, wood products, and trimmings) grown on a sustainable basis are considered to mimic the closed loop of the natural carbon cycle—that is, they return CO2 to the atmosphere that was originally removed by photosynthesis (without any net addition to the total carbon in the atmospheric carbon cycle). [U.S. EPA, 2009 – Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2007, page 8---6].Thus for U.S. greenhouse gas inventory purposes, biogenic fuel sources are not counted in emissions inventories. Both the IPCC and U.S. EPA consider biomass fuels "carbon neutral" as long as the fuel source is managed sustainably. Cogeneration is a process by which biomass is burned to make electricity while the cooling steam produced is used to heat and dry lumber (using the steam twice). Using Cogeneration to consume the wood fiber waste material and ultimately remove and further sequester the carbon in forests presents a substantial opportunity to go beyond just photosynthesis (atmospheric Carbon removal by trees) to help mitigate the problem of rising CO2 Levels in the atmosphere."*[92]

Imperial County concluded that a proposed facility that would convert sugarcane and sweet sorghum into ethanol, electricity and bio-methane would generate a net credit of GHG emissions between -361,720 and -368,778 $MTCO_2e$/year.[93] The DEIR based this conclusion on the associated sequestration of CO_2 from cultivation of approximately 41,000 and 33,000 acres of sugarcane and sweet sorghum, respectively, year round to provide the plant with feedstock.

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[91] Shasta County, *Second Recirculated Draft Environmental Impact Report for the Sierra Pacific Cogeneration Power Plant,* SCH No. 2009072011, February 2012.
[92] Shasta County, *Op. Cit.,* February, 2012, page 2.0-25.
[93] County of Imperial, *Sugarcane and Sweet Sorghum to Ethanol, Electricity, and Bio-Methane Facility – Draft EIR.* April 2013, pages 4.5-20 and 21.

D. Other Observations

In its environmental analysis of a quarry expansion, Shasta County calculated GHGs emitted from the removal of trees and vegetation, taking into account both conversion of biomass into CO_2 (estimated at 7,803 $MTCO_2e$/year including annual clearing) and the long-term loss of carbon sequestration (5,548 $MTCO_2e$/year).[94]

[94] Shasta County, *Op. Cit.*, October, 2014, pages 3.7-24 – 3.7-28.

IV. Websites and Environmental Documents Consulted

A. Websites

Counties:

Alameda	Madera	San Joaquin
Alpine	Marin	San Luis Obispo
Amador	Mariposa	San Mateo
Butte	Mendocino	Santa Clara
Calaveras	Merced	Santa Cruz
Colusa	Modoc	Shasta
Contra Costa	Mono	Sierra
Del Norte	Monterey	Siskiyou
El Dorado	Napa	Solano
Fresno	Nevada	Sonoma
Glenn	Orange	Stanislaus
Humbolt	Placer	Sutter
Imperial	Plumas	Tehama
Inyo	Riverside	Trinity
Kern	Sacramento	Tulare
Kings	San Benito	Tuolumne
Lake	San Bernardino	Ventura
Lassen	San Diego	Yolo
Los Angeles	San Francisco	Yuba

Cities:

Alameda	Huntington Beach	San Mateo
Bakersfield	Livermore	San Rafael
Benicia	Long Beach	San Ramon
Carson	Los Angeles	Santa Rosa
Concord	Martinez	Sausalito
Danville	Oakland	Stockton
Daly City	Pleasanton	Torrance
El Segundo	Richmond	Walnut Creek
Hermosa Beach	San Jose	

Air Districts:

AQMD = Air Quality Management District; APCD = Air Pollution Control District

Amador County APCD
Antelope Valley AQMD
Bay Area AQMD
Butte County AQMD
Calaveras APCD
Colusa County APCD
East Kern APCD
El Dorado County AQMD
Feather River AQMD
Glenn County APCD
Great Basin Unified APCD
Imperial County APCD
Lake County AQMD
Lassen County APCD
Mariposa County APCD
Mendocino County AQMD
Modoc County APCD
Mojave Desert AQMD
Monterey Bay Unified APCD
North Coast Unified AQMD
Northern Sierra AQMD
Northern Sonoma County APCD
Placer County APCD
Sacramento Metropolitan AQMD
San Diego APCD
San Joaquin Valley APCD
San Luis Obispo APCD
Shasta County AQMD
Siskiyou County APCD
South Coast AQMD
Tehama County APCD
Tuolumne County APCD
Ventura County APCD
Yolo-Solano APCD

Ports:

Oakland
Long Beach
Los Angeles
Stockton

State Agencies

California Department of Conservation
    Division of Oil, Gas, & Geothermal Resources
    Office of Mine Reclamation
California Energy Commission
California State Lands Commission

Environmental Documents Consulted

Antelope Valley Air Quality Management District, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines,* August, 2011.

Bay Area Air Quality Management District, *California Environmental Quality Act Guidelines Update: Proposed Thresholds of Significance,* May 3, 2010.

California State Lands Commission, *Chevron El Segundo Marine Terminal Lease Renewal – Final Environmental Impact Report,* SCH No. 2006031091, November, 2010, prepared by MRS.

California State Lands Commission, *Draft Environmental Impact Report for the Tesoro Avon Marine Oil Terminal Lease Consideration,* SCH No. 2014042013, September, 2014, prepared by TRS Solutions.

California State Lands Commission, *Final Environmental Impact Report for the Shell Martinez Marine Terminal Lease Consideration Project,* SCH No. 2004072114, May, 2011, prepared by MRS.

California State Lands Commission, *Final Environmental Impact Report for the Tesoro Amorco Marine Terminal Lease Consideration,* SCH No. 20140422013, February, 2014, prepared by TRC Solutions.

California State Lands Commission, *Final Environmental Impact Report for the Revised PRC-421 Recommissioning Project,* SCH No. 2005061013, November, 2014, prepared by AMEC.

California State Lands Commission, *Shore Marine Oil Terminal Lease Project – Final Environmental Impact Report,* SCH No. 2007112108, January, 2012, prepared by ESA.

City of Benicia, *Valero Benicia Crude by Rail Project – Draft Environmental Impact Report,* SCH No. 2013052074, June, 2014, prepared by ESA.

City of Carson, *Draft Environmental Impact Report – Oxy USA, Inc. Dominguez Hills Oil Field Development Project,* SCH No. 2012031019, January, 2014, prepared by Environmental Audit, Inc.

City of Hermosa Beach, *E&B Oil Drilling & Production Project – Final Environmental Impact Report,* SCH No. 2013071038, June, 2014, prepared by MRS.

City of Richmond, *Chevron Refinery Modernization Project Environmental Impact Report, Volume 1 – Draft EIR,* SCH No. 2011062042, March, 2014.

Contra Costa County, *Phillips 66 Propane Recovery Project – Recirculated Draft Environmental Impact Report,* SCH No. 2012072046, October, 2014.

County of Alameda, *Altamount Solar Energy Center Project – Mitigated Negative Declaration,* August, 2011, prepared by ICF.

County of Alameda, *SMP – 30 Revised Use Permit – Sunai Valley Aggregate Quarry Project – draft Environmental Impact Report*, SCH No. 2011102051, April, 2012, prepared by Lamphier – Gregory.

County of Fresno, *Riverbend Sand and Gravel Project – Draft Environmental Impact Report,* SCH No. 2013071097, July, 2014, prepared by Sespe Consulting, Inc.

County of Fresno, *Carmelita Mine and Reclamation Project – Draft Environmental Impact Report,* SCH No. 2010081037, October 2011.

County of Imperial, *Sugarcane and Sweet Sorghum to Ethanol, Electricity, and Bio-Methane Facility – Draft EIR.* April 2013

County of San Benito, *Panoche Valley Solar Farm – Final Environmental Impact Report,* SCH No. 2010031008 September, 2010, prepared by Aspen.

County of San Diego, *Guidelines for Determining Significance: Climate Change,* November 2013.

County of San Diego, *Draft Environmental Impact Report – Soitec Solar Development Project,* SCH No. 2012-121-018, January, 2014, prepared by Dudec.

County of Ventura, *Grimes Rock, Inc. Expanded Mining Facility – Final Environmental Impact Report,* SCH No. 2003111064, June 2013.

Eastern Kern Air Pollution Control District, *Addendum to CEQA Guidelines Addressing GHG Emission Impacts for Stationary Source Projects When Serving As Lead CEQA Agency,* March 8, 2012,

Kern County, *Alon Bakersfield Refinery Crude Flexibility Project – Draft Environmental Impact Report,* SCH No. 2013091062, May 2014.

Madera County, *Madera Quarry Project – Draft Revised Environmental Impact Report,* SCH No. 2003102128, October, 2008, prepared by Resource Design Technology, Inc.

Mojave Desert Air Quality Management District, *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines,* August, 2011.

Napa County, *Draft Environmental Impact Report – Syar Napa Quarry Project Expansion, Surface Mining Permit #P08-00337,* SCH No. 2009062054, August, 2013, prepared by Winzler & Kelly.

Orange County, *Initial Study for John Wayne Airport New Jet Fuel Pipeline and Tank Farm,* December, 2013, prepared by Michael Brandman Associates.

Port of Long Beach, *EAGLE ROCK AGGREGATE TERMINAL PROJECT – Final Environmental Impact Statement/Environmental Impact Report,* SCH No. 2011101042, April, 2013, prepared by Aspen Environmental Group.

Port of Long Beach, *MCC Cement Facility Modification Project – Draft Environmental Impact Report (EIR),* SCH No. 2011081098, September, 2014, prepared by Leidos.

Port of Long Beach, *Total Terminals International Grain Export Terminal Installation Project Final Environmental Impact Report and Application Summary Report,* SCH No. 2011081020, August, 2013, prepared by Aspen Environmental Group.

Sacramento Metropolitan Air Quality Management District, *CEQA Guide, Revised November 2014.*

Sacramento Metropolitan Air Quality Management District, *Justification for Greenhouse Gas Emissions Thresholds of Significance*, September, 2014.

Sacramento Metropolitan Air Quality Management District, *Quantification of Greenhouse Gas Emissions for Non-Transportation Activities,* Revised November 2014, prepared by ENVIRON International Corp.

San Joaquin Valley Air Pollution Control District, *District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency,* December, 2009.

San Joaquin Valley Air Pollution Control District, *APR – 2030: CEQA Determinations of Significance for Projects Subject to ARB's Cap-and-Trade Regulation,* June, 2014.

San Luis Obispo County Air Pollution Control District, *CEQA Air Quality Handbook: A guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review,* April 2012.

San Luis Obispo County Air Pollution Control District, *Greenhouse Gas Thresholds and Supporting Evidence,* March 28, 2012.

Shasta County, *Moody Flats Quarry Project – Draft Environmental Impact Report,* SCH No. 2012012013, October, 2014, prepared by De Novo Planning Group.

Shasta County, *Second Recirculated Draft Environmental Impact Report for the Sierra Pacific Cogeneration Power Project,* SCH No. 2009072011, February, 2012, prepared by De Novo Planning Group.

South Coast Air Quality Management District, *Volume I – Final Environmental Impact Report for the Shell Carson Facility Ethanol (E10) Project,* December 2012, SCH No. 2010041057, prepared by AECOM.

South Coast Air Quality Management District, *Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project,* October 2014, State Clearinghouse No. 2012041014.

Tehama County Air Pollution Control District, *CEQA Planning and Permitting Handbook: Guidelines for Assessing Air Quality Impacts,* December, 2009.

U.S. Department of the Interior, Bureau of Land Management, *Proposed Plan Amendment & Final Environmental Impact Statement/ Final Environmental Impact Report for the Ocotillo Wind Energy Facility,* February, 2012.