

Office of
The City Attorney
City of San Diego

MEMORANDUM
MS 59

(619) 533-5800

DATE: December 3, 2010

TO: Janice L. Weinrick, Deputy Executive Director, San Diego Redevelopment Agency

FROM: City Attorney

SUBJECT: Analysis of Greenhouse Gas Emissions Under CEQA

INTRODUCTION

You have requested a memorandum that addresses the “impact of the 2010 CEQA legislation on development projects and their respective EIRs regarding greenhouse gas emissions.” Two clarifications of this request are necessary.

First, we believe the reference to “2010 CEQA legislation” refers to the recent amendments to the California Environmental Quality Act Guidelines to address greenhouse gas (GHG) emissions. This was not legislation but instead the amendment of regulations adopted by the California Natural Resources Agency to implement the California Environmental Quality Act (CEQA) (Public Resources Code sections 21000–21177). These regulations, known as the CEQA Guidelines, are found in Title 14 of the California Code of Regulations. Cal. Code Regs., title 14, §§ 15000 to 15387 (CEQA Guidelines). California Senate Bill 97 (2007-2008 Reg. Sess.) required that the Governor’s Office of Planning and Research (OPR) develop and the California Natural Resources Agency (Resources Agency) adopt CEQA Guidelines amendments concerning GHG emissions (Amendments). *See* Legislative Counsel’s Digest, Cal. Stats. 2007, ch. 185. The Resources Agency adopted the Amendments addressing GHG emissions on December 30, 2009, and they became effective March 18, 2010.

Second, questions regarding the analysis of GHG emissions for individual projects and environmental impact reports (EIRs) must be addressed on a case by case basis, as with any other environmental resource or impact. It is our goal that this memorandum assist the Agency by providing a framework for those analyses.

This memorandum begins by discussing general principles applicable to the analysis of GHG emissions. It follows with a discussion of the Amendments' changes to Appendix G of the Guidelines, which provides a model environmental checklist for conducting initial studies. The memorandum then addresses the three major additions made by the Amendments to the CEQA Guidelines concerning tiering, mitigation, and determinations of significance. Last, the memorandum compares varying approaches expert agencies have developed to determine the significance of GHG emissions.

ANALYSIS

I. THE AMENDMENTS DO NOT CHANGE EXISTING CEQA LAW OR PRINCIPLES.

The Amendments include changes to, or additions of, fourteen sections of the CEQA Guidelines, as well as changes to Appendices F (Energy Conservation) and G (the Environmental Checklist Form). These Amendments are incorporated into the current CEQA Guidelines. *See* Cal. Code Regs. title 14, §§ 15000–15387. The CEQA Guidelines state that they are “regulations . . . to be followed by all state and local agencies.” CEQA Guidelines §15000. The CEQA Guidelines are “[a]t a minimum” afforded “great weight” by the courts “except when a provision is clearly unauthorized or erroneous.” *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 391 n. 2 (1988).¹

The Resources Agency published a statement that accompanied its adoption of the Amendments explaining the Agency's reasons for their adoption and providing guidance on how they are to be implemented. *See* 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 Senate Bill 97* (December 2009) (Statement of Reasons), <http://ceres.ca.gov/ceqa/guidelines/> (last visited November 1, 2010). While the Statement of Reasons does not have the force and effect of law, courts will likely rely on it to aid in their interpretation of the CEQA Guidelines. *See, e.g., Cal. Farm Bureau Federation v. Cal. Wildlife Conservation Board*, 143 Cal.App.4th 173, 187-88 (2006) (using prior California Resources Agency Statement of Reasons to examine prior CEQA Guidelines amendments).

The most important point to remember is that the Amendments do not change long-standing CEQA law. All of CEQA's requirements applicable to the analysis of any other environmental resource or effect apply equally to an analysis of GHG emissions. While the Resources Agency recognizes that the “[a]nalysis of GHG emissions in a CEQA document presents unique challenges to lead agencies,” the Resources Agency nonetheless emphasizes that such an “analysis must be consistent with existing CEQA principles.” Statement of Reasons at 13.

¹ The text of the Amendments in ~~strikeout~~ and underline is available at the Resources Agency website. *See* <http://ceres.ca.gov/ceqa/guidelines/>.

The framework for resolving questions regarding the need for amendments to existing environmental documents therefore does not differ from the Redevelopment Agency's routine CEQA procedures. As with any analysis of a project that intends to rely on an existing CEQA document, a lead agency must perform an analysis under CEQA section 21166 and CEQA Guidelines section 15162 to determine if the environmental impacts of a project have been addressed by the existing document. For GHG emissions, this will often not be the case. In such situations, the analysis will have to determine whether the GHG emissions are significant, thus requiring a supplemental or subsequent EIR. Cal. Public Res. Code § 21166; CEQA Guidelines § 15162. If not, an analysis of a project's GHG emissions can be addressed in an addendum to the underlying CEQA document. CEQA Guidelines § 15164.

More specifically, the Resources Agency states that GHGs should be analyzed like other air pollutants. Air pollutant analyses typically focus on determining concentrations of pollutants produced by a given project, as opposed to the ultimate health and environmental effects of the pollutants. Statement of Reasons at 11. Accordingly, an analysis of GHG emissions focuses on the amount of GHG emissions produced by a project, and not their ultimate environmental effect. The Statement of Reasons also provides that "[d]ue to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis." *Id.* at 17.² In sum, the Amendments and Statement of Reasons counsel that one should analyze GHG emissions as one would any other air pollutant, such as nitrogen oxide (NO_x) emissions, that can incrementally contribute to a cumulative environmental impact.³

² This is consistent with the position taken by the California Air Pollution Control Officers Association (CAPCOA) in its white paper regarding the analysis of GHG emissions under CEQA, which states "GHG impacts are exclusively cumulative impacts; there are no noncumulative GHG emission impacts from a climate change perspective." California Air Pollution Control Officers Association, *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (January 2008) (CAPCOA White Paper) at 35, available at <http://www.capcoa.org/download/CAPCOA+White+Paper> (last visited November 1, 2010).

³ This advice and the remainder of this memorandum address how to evaluate a project's incremental effects on climate change, rather than how to evaluate the effects of climate change on a project. The Amendments clarified the latter issue by adding a sentence to CEQA Guidelines section 15126.2(a). The Guidelines section now states that an EIR should analyze potentially significant effects of locating development in areas susceptible to hazardous conditions including floodplains, coastlines, and wildfire risk areas. CEQA Guidelines §15126.2(a). As the Resources Agency notes, these hazardous conditions could be exacerbated by climate change in the form of increased flooding, sea-level rise and increased wildfire hazard. Statement of Reasons at 43 (noting "[t]he areas susceptible to hazards include those that may result from a changing climate"). The language of the Guidelines suggest that the requirement to analyze such impacts to projects is limited to conditions "identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazard areas." CEQA Guidelines §15126.2(a). However, it is uncertain whether a court would similarly limit CEQA's requirements. If the Agency were in possession of substantial evidence giving rise to a fair argument that the environmental impacts of locating a project in an area susceptible to increased flooding, sea-level rise or increased wildfire hazard could be significant, CEQA could require that this be addressed in an EIR. *See, e.g., No Oil Inc. v. City of Los Angeles*, 13 Cal 3d 68, 75 (1974). In addition, the Resources Agency notes that "where specific information is currently available" regarding potential future changes to these hazards, a CEQA "analysis should address that information." Statement of Reasons at 42. The safer approach would therefore be to consider available information relevant to the identified hazards in CEQA analyses as appropriate.

In conclusion, CEQA's long-standing requirements apply equally to the analysis of GHG emissions as they do to any other environmental impact or resource. For that reason, "the Amendments comprise relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis." Statement of Reasons at 13. We turn now to specific issue areas in which the Amendments clarify or create new requirements for the analysis of GHG emissions.

II. THE AMENDMENTS MADE CHANGES TO APPENDIX G OF THE CEQA GUIDELINES, THE ENVIRONMENTAL CHECKLIST.

The Amendments modified the Appendix G environmental checklist to include two simple questions about GHG impacts. These questions ask whether a project would: "a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment" and "b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases." Cal. Code Regs. Title 14, Division 6, Chapter 3, Article 20, Appendix G, Sample Questions VII. GREENHOUSE GAS EMISSIONS (a) and (b). As discussed below, answering the first question – whether a project's GHG emissions may have a significant impact – is anything but simple. *See infra* at Section V.

The Amendments also rewrote the transportation and traffic questions in Appendix G. *See* Cal. Code Regs. Title 14, Division 6, Chapter 3, Article 20, Appendix G, Sample Questions XVI. TRANSPORTATION/TRAFFIC (a) through (f). The overall intent of the amendments to the transportation questions appears to be the broadening of the focus of transportation analyses beyond vehicular traffic to account for other modes of transportation.

For example, the first question no longer focuses on whether a project would cause an increase in traffic, but instead asks whether the project would "conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit." *Id.* at (a). According to the Resources Agency, the intent of this amendment is to "change[] the focus from an increase in traffic at a given location to the effect of a project on the overall circulation system in the project area." Statement of Reasons at 75. The Resources Agency states that the "change is appropriate because an increase in traffic, by itself, is not necessarily an indicator of a potentially significant *environmental* impact" and that an increase in traffic could actually be the result of an improvement to transportation as a whole. *Id.* (citations omitted) (emphasis in original).⁴

⁴ According to the Resources Agency, "even if some projects may result in a deterioration of vehicular level of service – that is, delay experienced by drivers – the overall effectiveness of the circulation system as a whole may be improved. Such projects could include restriping to provide bicycle lanes or creating dedicated bus lanes." Statement of Reasons at 75.

In the second question, the Amendments removed the emphasis from vehicular levels of service and placed it on broader “congestion management programs,” which may contain elements in addition to level of service designations. Cal. Code Regs. Title 14, Division 6, Chapter 3, Article 20, Appendix G Sample Questions XVI. TRANSPORTATION/TRAFFIC (b).⁵

The Amendments also removed the question regarding parking, formerly question (f), in its entirety. *Id.* The Resources Agency did so because “nothing in the CEQA statute, or cases interpreting that statute, require an analysis of parking demand.” Statement of Reasons at 97. This Office agrees with the Resources Agency that parking supply and demand is not in and of itself an environmental impact that requires analysis. *See San Franciscans Upholding the Downtown Plan v. City & County of San Francisco*, 102 Cal. App. 4th 656, 697 (2002). That said, “if there is substantial evidence indicating adverse indirect environmental impacts from a project related to parking capacity, the lead agency must address such potential impacts regardless of whether the checklist contains parking questions.” Statement of Reasons at 76; *San Franciscans Upholding the Downtown Plan*, 102 Cal. App. 4th at 697. Last, the Amendments rewrote the question concerning alternative modes of transportation “to support the use of alternative transportation.” Statement of Reasons at 76.

In sum, these revisions to the Transportation and Traffic questions evince an intent to broaden transportation analyses beyond vehicular traffic analyses. This presents a challenge for transportation analysts, but an opportunity for the Agency. Many of the Agency’s projects are urban infill projects that will rely upon alternative modes of transportation. It will be to the Agency’s advantage to ensure that its transportation analyses effectively address all modes of transportation because doing so could likely result in fewer determinations that such projects would produce significant transportation and GHG emissions impacts.

Last, the Amendments added a note at the beginning of Appendix G clarifying that it is only a sample checklist that may be modified as necessary by a lead agency. Please note, however, that if the Agency fails to revise its checklist to ask questions regarding GHG emissions impacts and address multimodal transportation, it risks failing to analyze those impacts in its CEQA documents.⁶ The City’s Environmental Analysis Section has adopted the revised Appendix G in its entirety and employs it when conducting initial studies and reviewing whether previously-prepared CEQA documents have analyzed proposed actions. *See* attached Memorandum from Cecilia Gallardo to Environmental Analysis Section entitled “UPDATED - Addressing Greenhouse Gas Emissions from Projects Subject to CEQA” (August 18, 2010) at 2.

⁵ Congestion management programs (CMPs) are prepared by regional transportation planning agencies to reduce traffic congestion and improve the performance of a multi-modal transportation system. Cal. Gov’t Code § 65088 *et seq.* The San Diego Association of Governments (SANDAG) adopted the CMP for the San Diego region in November 2008.

⁶ As the Resources Agency notes, “[d]espite the detailed provisions in the Guidelines themselves, questions related to GHG emissions should also appear in the checklist because some lead agencies will not seriously consider an environmental issue unless it is specifically mentioned in the checklist.” Statement of Reasons at 7.

III. THE AMENDMENTS ENCOURAGE AGENCIES TO ADDRESS GHG EMISSIONS ON A PROGRAMMATIC SCALE AND TO TIER GHG ANALYSES.

The Resources Agency states that both it and OPR hold the view that “the effects of GHG emissions resulting from individual projects are best addressed and mitigated at a programmatic level,” explaining that “[b]ecause GHG emissions raise a cumulative concern, analysis of such emissions in a long-range planning document lends itself to tiering and use in later project-specific environmental review.” Statement of Reasons at 17 and 65 (citation omitted).

The Amendments accordingly added a new CEQA Guidelines section to specifically address “tiering and streamlining the analysis of greenhouse gas emissions.” CEQA Guidelines § 15183.5. This new section first “clarifies that existing provisions in the State CEQA Guidelines regarding tiering and streamlining may be applied to the analysis of GHG emissions.” Statement of Reasons at 65. Subsection (a) of the new Guidelines section states that the effects of GHG emissions may be analyzed and mitigated at a programmatic level, with later project-specific environmental documents tiering from that programmatic review. CEQA Guidelines § 15183.5(a). It further states that “[p]roject-specific environmental documents may rely on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in sections 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs), 15175-15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning).” *Id.*

If an agency chooses to analyze and mitigate GHG emissions in a plan for the reduction of GHG emissions or similar document, that plan may be used as the basis for programmatic analysis. CEQA Guidelines § 15183.5(b). “[A] lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.” *Id.*

CEQA Guidelines section 15183.5, however, lists a number of requirements that a plan should meet to provide the necessary analysis and mitigation of GHG emissions for purposes of tiering. The section states that a plan for the reduction of greenhouse gasses should:

- (A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- (B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;
- (C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;

- (D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- (E) Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
- (F) Be adopted in a public process following environmental review.

CEQA Guidelines § 15183.5(b)(1).

The section also specifies the requirements a subsequent CEQA document must fulfill to rely on a plan for the reduction of greenhouse gasses. To rely on a plan, the CEQA document must "identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project." CEQA Guidelines § 15183.5(b)(2).

Last, compliance with a plan that meets the Guidelines' requirements does not conclusively establish that a project will not have significant GHG emissions impacts. The section notes that even if a project complies with the requirements of a plan for the reduction of greenhouse gas emissions, an EIR must nonetheless be prepared for the project if there is substantial evidence that the effects of the project may be cumulatively considerable notwithstanding its compliance with the plan's requirements. *Id.* The Guidelines section also notes that the determination that a project will have a less than significant contribution to GHG emissions based on conformity to a plan is subject to the "fair argument" standard. CEQA Guidelines § 15183.5(b)(1).

IV. THE AMENDMENTS ADDED GUIDANCE FOR MITIGATING GHG EMISSIONS.

CEQA Guidelines section 15126.4 contains general requirements for the analysis of mitigation measures. The Amendments added a new subsection to this section that specifically addresses mitigation of GHG emissions. The subsection states that "lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions." CEQA Guidelines § 15126.4(c). The subsection then lists ways to mitigate GHG effects, including:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;

- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases;
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

It will be important for the Agency to focus on GHG emissions mitigation. The first California appellate court decision to examine the analysis of GHGs under CEQA focused on mitigation, found it lacking, and emphasized that CEQA's requirements regarding mitigation apply equally to GHG emissions mitigation. In *Communities for a Better Environment v. City of Richmond*, a California Court of Appeals reversed the City of Richmond's certification of an EIR for the retrofitting and expansion of a Chevron oil refinery. 184 Cal. App. 4th 70 (2010). The court found that the EIR did not comply with CEQA because although it contained a goal of completely mitigating GHG emissions, it improperly deferred the formulation of measures to achieve that goal for a year and only listed a "handful of candidate mitigation measures" that might be implemented to achieve that goal. *Id.* at 92. The court held that this mitigation did not satisfy CEQA because "no effort [was] made to calculate what, if any, reductions in the Project's anticipated greenhouse gas emissions would result from each of these vaguely described future mitigation measures." *Id.* at 93. The court further criticized the "perfunctory listing of possible mitigation measures" as "nonexclusive, undefined, untested and of unknown efficacy." *Id.*

This opinion indicates that courts will require that GHG mitigation measures not be deferred; that their GHG emissions reductions be quantified if they are intended to reduce a quantifiable amount of GHGs; and that some evidence be provided to support their efficacy in achieving those reductions. While the court recognized the "ever-changing nature of this complex scientific field," it nonetheless stated that "the difficulties caused by evolving technologies and scientific protocols do not justify a lead agency's failure to meet its responsibilities under CEQA by not even attempting to formulate a legally adequate mitigation plan." *Id.* at 96.

The Agency should note that while quantifying GHG emissions from mitigation is not an easy task, the California Air Pollution Control Officers Association recently published a resource that should provide some assistance in accomplishing that task. *See California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* (August, 2010) available at <http://www.capcoa.org/> (last visited November 1, 2010).

V. THE AMENDMENTS PROVIDE ONLY LIMITED GUIDANCE FOR DETERMINING WHETHER GHG EMISSIONS ARE SIGNIFICANT.

The Amendments added a new CEQA Guidelines section that addresses the determination of significance for GHG emissions. CEQA Guidelines §15064.4. Unfortunately, this section provides only limited assistance in resolving whether GHG emissions are significant because it does not establish a statewide significance threshold for GHG emissions.⁷

Instead, CEQA Guidelines section 15064.4 provides more general guidance regarding the type of analyses used, and the factors that should be considered, to make a determination of significance. The section begins by stating that an agency must “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(a). According to the Guidelines section, this may be done either through modeling or through reliance “on a qualitative analysis or performance based standards.” *Id.*

The Resources Agency interprets this section to mean that an agency should quantify a project’s GHG emissions if it is possible to do so. Statement of Reasons at 20 (“lead agencies should quantify GHG emissions where quantification is possible and will assist in the determination of significance, or perform a qualitative analysis, or both as appropriate in the context of the particular project, in order to determine the amount, types and sources of GHG emissions resulting from the project”). The Resources Agency further adds that “the quantification called for . . . is reasonably necessary to ensure an adequate analysis of GHG emissions using available data and tools.” *Id.* at 21 (citing Cal. Public Res. Code § 21083.05). The Resources Agency notes that “quantification of GHG emissions is possible for a wide range of projects using currently available tools,” in particular the URBEMIS air quality modeling software “already widely used in CEQA air quality analyses.” *Id.* (citing CAPCOA White Paper at 59).

⁷ Prior to the adoption of the Amendments, it appeared that a statewide significance threshold was being developed. OPR issued a Technical Advisory in June 2008 suggesting that it was developing statewide significance thresholds, stating that “the global nature of climate change warrant[ed] investigation of a statewide threshold of significance for GHG emissions” and that OPR had “asked [C]ARB technical staff to recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state.” State of California, Governor’s Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review* (June 2008) at 4. In October 2008, the California Air Resources Board (CARB) issued a “Preliminary Draft Staff Proposal on Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act.” Ultimately, however, CARB did not adopt or suggest any statewide thresholds.

CEQA Guidelines section 15064.4 then provides a non-exclusive list of factors that a lead agency “should consider . . . when assessing the significance of impacts from greenhouse gas emissions on the environment.” CEQA Guidelines § 15064.4(b). Determinations of the significance of GHG emissions for any project should address all three factors. These factors are:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
- (3) 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 greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project’s incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Id.

The Resources Agency makes two points with respect to the first factor, namely the extent to which a project may increase or reduce GHG emissions. It notes first that “all project components, including construction and operation, equipment and energy use, and development phases must be considered in [the] analysis” of how much a project increases or decreases GHGs. Statement of Reasons at 24 (citing CEQA Guidelines § 15378). To illustrate the necessity of considering both short and long-term emissions, the Resources Agency provides an example of how the construction of a mass transit project may increase GHG emissions in the short term, but decrease them in the long term once the project begins operation. *Id.*

The Resources Agency also notes that this section is meant to emphasize that the increase or decrease of GHG emissions resulting from a project should be compared to the existing environmental setting, and not “against a ‘business as usual’ scenario as defined by” CARB in its scoping plan for cutting GHG emissions. *Id.* The need to use the existing environmental setting as the baseline for calculating emissions was emphasized by a recent California Supreme Court decision. In *Communities for a Better Environment v. South Coast Air Quality Management District*, the defendant air quality management district had prepared a CEQA document that compared the NO_x emissions of a refinery project against the maximum permitted refinery operations, rather than against existing emissions. 48 Cal. 4th 310, 318 (2010). The court held that this violated CEQA, stating that “the District’s use of the maximum capacity levels set in prior boiler permits, rather than the actually existing levels of emissions from the boilers, as a

baseline to analyze NO_x emissions from the Diesel Project was inconsistent with CEQA and the CEQA Guidelines.” *Id.* at 326-27.

In addition to being required by the Guidelines, a comparison of a project’s emissions to existing conditions can provide substantial evidence to support a determination that GHG emissions impacts are not significant when a new project reduces GHG emissions when compared to existing conditions. This can result when a new, energy-efficient project producing less GHG emissions replaces an old, inefficient project producing more GHG emissions.

The third factor, concerning a project’s consistency with plans for the reduction or mitigation of greenhouse gas emissions, provides an incentive for an agency to perform the programmatic analysis and tiering discussed above. *See supra* at Section III. The inclusion of plan consistency in the factors to be considered when determining significance emphasizes the Resources Agency’s belief that GHGs are best addressed by tiering projects to a programmatic document, including compliance with programmatic mitigation.

The second factor will be the hardest for the Agency to address. The San Diego Air Pollution Control District (SDAPCD) has not provided a significance threshold for GHG emissions as it has for other air pollutants. The following discussion provides some examples of significance thresholds for the Agency to consider in analyzing the significance of GHG emissions.

VI. EXPERT AGENCIES HAVE DEVELOPED DIFFERENT APPROACHES TO DETERMINE WHETHER GHG EMISSIONS ARE SIGNIFICANT.

Unlike the SDAPCD, other Air Pollution Control Districts in California have adopted or proposed significance thresholds for GHG emissions. The thresholds differ in their approaches. The Bay Area Air Quality Management District (BAAQMD) and South Coast Air Quality Management District (SCAQMD) have both taken a quantitative approach, whereas the San Joaquin Air Pollution Control District (SJAPCD) is pursuing a business-as-usual (BAU) based approach. Both quantitative and BAU-based approaches are discussed in the CAPCOA White Paper.

Before describing these thresholds, it is important to note that the recent CEQA Guidelines amendments clarify that a lead agency’s decision to adopt significance thresholds, including those recommended by other agencies or experts, must be supported by substantial evidence. CEQA Guidelines § 15064.7(c); *see also* Statement of Reasons at 30 (“In adopting any threshold of significance, including one developed by an expert or agency with specialized expertise, the lead agency must support the threshold with substantial evidence in the administrative record.”) (citing CEQA Guidelines § 15064.7(b)). The Resources Agency makes this point explicitly with respect to the CAPCOA White Paper, stating that “[a] lead agency could potentially use CAPCOA’s suggestions in developing its own thresholds,” but that any threshold would have to be supported by substantial evidence and adopted through a public process to ensure its legitimacy. Statement of Reasons at 30 (citing CEQA Guidelines § 15064.7(b)).

A. The Bay Area Air Quality Management District Has Adopted, and the South Coast Air Quality Management District Has Proposed, Quantitative Thresholds.

The CAPCOA White Paper “evaluates a range of conceptual approaches toward developing GHG significance criteria.” CAPCOA White Paper at 31. One of these approaches posits a 900 metric ton CO₂e/yr⁸ figure as a quantitative significance threshold. *Id.* at 42-44. CAPCOA developed the 900 metric ton significance threshold by examining the number of residential units and square footage of commercial space that would capture 90 percent of the proposed development in four California cities: Dublin, Livermore, Los Angeles, and Pleasanton. *Id.* at 43. CAPCOA stated the objective for capturing 90 percent of development was “to set the unit thresholds low enough to capture a substantial fraction of future housing and commercial developments that will be constructed to accommodate future statewide population and job growth, while setting the unit thresholds high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions.” *Id.* at 46. The CAPCOA White Paper states that the “900-ton threshold corresponds to 50 residential units” and “office projects of approximately 35,000 square feet, retail projects of approximately 11,000 square feet, or supermarket space of approximately 6,300 square feet.” *Id.* at 43 and 44. Projects with emissions above the 900 metric ton threshold would be considered to have significant GHG emissions impacts under CEQA and would therefore “be required to implement the comprehensive set of Level 2 mitigation.” *Id.* According to the CAPCOA White Paper, that Level 2 mitigation “[c]ould include such measures as: Parking reduction beyond code, solar roofs, LEED Silver or Gold Certification, exceed Title 24 by 20%, TDM measures, etc.” *Id.* at 41, Table 2.

The BAAQMD has recently adopted significance thresholds for GHGs that rely on a similar quantitative approach. *See* Bay Area Air Quality Management District, *Draft CEQA Guidelines* (May 2010), <http://www.baagmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>, (last visited November 2, 2010). The BAAQMD has set a GHG emission significance threshold of 1,100 metric tons CO₂e/yr for land use development projects, which include residential, commercial, industrial, and public land uses and facilities. *Id.* at 2-4. It has also calculated, based on modeling and other substantial evidence, dwelling unit and square footage figures for land use development that would produce GHG emissions equivalent to the 1,100 metric ton significance threshold. *Id.* at 3-2, Table 3-1.

⁸ This abbreviation denotes metric tons of carbon dioxide (CO₂) equivalents per year, which includes the emissions of all GHGs from the project. CO₂ is the major contributor to GHG emissions and is accordingly used as the yardstick to measure the emissions of other GHGs. The measurement of CO₂e/yr takes into account all GHGs and calculates their aggregate warming potential as a measure of metric tons of CO₂. One metric ton of NO₂, for example, traps 298 times the amount of heat as a metric ton of CO₂. If a project created a metric ton of NO₂ emissions per year, it would create 298 metric tons CO₂e/yr. *See* Bill Chameides, Nicholas School of the Environment, Duke University, *Climate Change: What Is Equivalent to 'CO2 Equivalents'?*, (April 09, 2009) <http://www.nicholas.duke.edu/thegreengrok/co2equivalents> (last visited November 2, 2010).

The BAAQMD has also established two “efficiency” significance thresholds. These thresholds establish maximum emissions per “service population,” defined as residents and employees, in place of an overall project threshold. One threshold (6.6 MTCO₂e/yr per service population) applies to comprehensive general plan amendments. *Id.* at 2-8. The second, lower threshold (4.6 MTCO₂e/yr per service population) applies to all other projects. *Id.* at 2-4. This project-level efficiency threshold is designed to encourage large residential, mixed use and office projects that incorporate emissions-reducing features. For example, while a large project might exceed the 1,100 metric tons CO₂e/yr threshold, were it energy efficient, located such that its service population could maximize use of alternative transportation, or both, it might nonetheless reduce GHG emissions to below 4.6 MTCO₂e/yr per service population such that the emissions would no longer be considered significant.

The SCAQMD has also pursued a quantitative approach to setting GHG emissions thresholds, but has not advanced as far as the BAAQMD. The SCAQMD has at this point only adopted a GHG significance threshold of 10,000 MTCO₂e/yr for stationary industrial sources. *See* SCAQMD Resolution No. 08-35, Dec. 5, 2008. The staff report accompanying that threshold, however, proposed a significance threshold of 3,000 MTCO₂e/yr for residential and commercial projects. *Id.* SCAQMD has an ongoing GHG CEQA Significance Threshold Working Group that has not met in 2010, but that in late 2009 proposed a number of thresholds, including “land use” thresholds of 3,500 MTCO₂e/yr for residential projects, 1,400 MTCO₂e/yr for commercial projects, and 3,000 MTCO₂e/yr for mixed use projects. *See* SCAQMD, *Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #14* (November 19, 2009) at <http://www.aqmd.gov/ceqa/handbook/GHG/2009/nov19mtg/ghgmtg14.pdf>. (last visited November 2, 2010).

B. The San Joaquin Valley Air Pollution Control District Has Proposed a BAU-Based Threshold.

The CAPCOA White Paper discusses another approach that would compare a project’s emissions to what the project would emit under a “business as usual” (BAU) scenario to determine whether those emissions are significant. The White Paper describes using a 33 percent reduction from BAU as a possible significance threshold, meaning that unless a project reduced GHG emissions by at least 33 percent below BAU, its GHG emissions would be considered significant. CAPCOA White Paper at 32-33.

The SJVAPCD has incorporated a BAU-based approach into its proposed GHG emissions thresholds. At the end of 2009 the SJVAPCD adopted significance thresholds for stationary source projects (which are generally large industrial projects) subject to the District’s permitting authority. *See* SJVAPCD Policy “Final Staff Report – Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act,” *available at* http://www.valleyair.org/programs/CCAP/CCAP_idx.htm#Adopt2009Dec17 (last visited November 2, 2010). At the same time, the SJVAPCD adopted “Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA.” In both, the SJVAPCD proposes thresholds of significance based on compliance with measures it labels “best

performance standards.” In the alternative, projects would be required to reduce emissions by 29 percent as compared to BAU to “be determined to have a less than significant individual and cumulative impact for GHG.” *Id.*, Guidance for Valley Land-use Agencies at 5.

C. Quantitative Thresholds Would Be More Effective, More Easily Implemented, and More Cost-Effective Than BAU-Based Thresholds.

The CAPCOA White Paper lists advantages and disadvantages of using various threshold approaches which demonstrate that a quantitative threshold would be more effective in reducing GHG emissions, more easily administered, and provide better economic feasibility and cost effectiveness than would a BAU-based threshold.

CAPCOA states that the 900 metric ton CO₂e/yr threshold would have a high effectiveness in reducing GHG emissions and a high consistency with California Assembly Bill 32 (AB 32).⁹ CAPCOA White Paper at 57. In contrast, a BAU-based approach would have a low effectiveness in reducing GHGs and only a medium level of effectiveness in complying with AB 32. *Id.*

This is the reason that the California Attorney General expressed disapproval of the SJVAPCD’s adoption of its BAU-based approach. Following the SJVAPCD’s publication of its “Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA” in December 2009, the California Attorney General sent comments to the SJVAPCD opposing the air district’s approach and raising a number of objections to the use of a BAU-based threshold in particular. *See* California Attorney General Comment Letter re: Final Draft Staff Report on Greenhouse Gas Emissions Under CEQA (November 4, 2009) at 3-4, *available at* “San Joaquin Valley Air Pollution Control District – Threshold Proposal,” <http://www.ag.ca.gov/globalwarming/ceqa/comments.php> (last visited November 2, 2010). In doing so, the Attorney General “note[d] that CAPCOA expressly found that an approach that would rely on 28 to 33 percent reductions from BAU would have a ‘low’ GHG emissions reduction effectiveness.” *Id.* at 3 n. 7 (citing CAPCOA White Paper at 56).

The Attorney General also challenged the SJVAPCD’s reliance on defining “business as usual” as what was “done in similar projects in the 2002-2004 timeframe,” because doing so would “award emission reduction ‘points’ for undertaking mitigation measures that are already required by local or state law.” *Id.* at 3. Last, the Attorney General challenged the use of the BAU-based threshold on the basis that the SJVAPCD had not provided evidence that a large project, even if meeting a BAU-based threshold, would not have a significant effect on the environment. *Id.* at 4. The letter concluded that the Attorney General “fear[s] that the recommended approach in its current form may unnecessarily subject lead agencies that follow them to CEQA litigation.” *Id.*

⁹ AB 32, entitled the “California Global Warming Solutions Act of 2006,” mandates a reduction in GHG emissions to 1990 levels by the year 2020. Cal. Assembly Bill 32 (2005-2006 Reg. Sess.) § 38550. The California Air Resources Board is charged with developing measures to achieve these emissions reductions. *Id.* § 38510. CARB is supposed to finalize the measures by January 1, 2011, and the measures are supposed to become effective a year later on January 1, 2012.

The CAPCOA White Paper also points out that a quantitative threshold would be easier to administer than a BAU-based approach. CAPCOA White Paper at 56-67. The logistical difficulties in administering BAU-based thresholds arise, in part, because what constitutes BAU changes as time progresses and additional regulations apply. *Id.* at 54 (BAU-based thresholds “have higher uncertainties” than quantitative thresholds “because they rely on a constantly changing definition of business-as-usual”). The CAPCOA White Paper reiterates this point in its discussion of the various thresholds’ advantages and disadvantages, stating that BAU “will change over time as described above.” *Id.* at 55. Accordingly, if the Agency were to rely on the CAPCOA White Paper to support the use of a BAU-based threshold, BAU would have to be assessed for each project to ensure that it incorporates up-to-date regulatory mandates and other relevant standards.


The CAPCOA White Paper also ranks quantitative thresholds as having higher economic feasibility, as well as better cost effectiveness, as compared to BAU-based thresholds. *Id.* at 56-67. There are two reasons. First, use of a BAU-based threshold “would require all projects to quantify emissions in order to determine needed reductions relative to business-as-usual.” *Id.* at 55; *see also id.* at 56, Table 4 (listing disadvantage of BAU-based threshold as “Requires all projects to quantify emissions”). Second, a BAU-based threshold would not exclude small projects as would a quantitative threshold, but instead “would require all discretionary projects to achieve a 33 percent reduction from projected business-as-usual emissions in order to be considered less than significant.” *Id.* at 33; *see also id.* at 53 (“thresholds that require equivalent reductions relative to business-as-usual . . . do not establish a quantitative threshold below which projects do not have to mitigate”); *see also id.* at 56, Table 4 (listing cost effectiveness of BAU as “[l]ow” because it “[w]ill require all types of projects to reduce the same regardless of the cost/ton of GHG reductions”).

CONCLUSION

GHG emissions analyses should be treated the same under CEQA as analyses for any other air pollutant, subject to the requirements contained in the Amendments to the CEQA Guidelines. With the emphasis given by the CEQA Guidelines to programmatic approaches to and tiering of GHG emissions analyses and mitigation, addressing GHG emissions at the programmatic level is advised. The CEQA Guidelines and recent case law also make clear that GHG emissions mitigation must meet the requirements of CEQA – that it be enforceable and measurable – notwithstanding difficulties in calculating emissions reductions. Last, the SDAPCD has not established a threshold of significance for GHG emissions. In the absence of an APCD-established threshold, the Agency should consider the various approaches taken by CAPCOA and other APCDs in assessing whether and how to apply a significance threshold to its projects. This Office hopes that this memorandum has provided a useful framework for analyzing GHG emissions under CEQA and remains available to assist you with those analyses.

Janice L. Weinrick, Deputy Executive Director, San Diego Redevelopment Agency
December 3, 2010
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JAN I. GOLDSMITH, City Attorney

By 
Keith Bauerle
Deputy City Attorney

KB/hm
MS-2010-16

Attachment

cc: Kelly Broughton, Director, Development Services Department
Cecilia Gallardo, Assistant Deputy Director, Development Services Department

CITY OF SAN DIEGO
M E M O R A N D U M

DATE: August 18, 2010

TO: Environmental Analysis Section

FROM: Cecilia Gallardo

SUBJECT: UPDATED - Addressing Greenhouse Gas Emissions from Projects
Subject to CEQA

This memo revises and replaces the Memo dated March 19, 2010 on the same subject.

Assembly Bill 32, the California Global Warming Solutions Act, established a state goal of reducing Greenhouse Gas Emissions (GHG) emissions to 1990 levels by the year 2020. Senate Bill (SB) 97, a companion bill, directed the California Natural Resources Agency (Resource Agency) to certify and adopt guidelines for the mitigation of GHG or the effects of GHG emissions. SB 97 was the State Legislature's directive to the Resources Agency to specifically establish that GHG emissions and their impacts are appropriate subjects for CEQA analysis. On December 30, 2009, the Resources Agency adopted revisions to the State CEQA Guidelines (Title 14, California Administrative Code Section 15000 et.seq.) to address analysis and mitigation pursuant to SB 97. These amendments became effective March 18, 2010. CEQA requires that public agencies review the environmental impacts of proposed projects, and this memo is intended to address analysis of GHG emissions from projects subject to CEQA.

Greenhouse Gas Emissions Analysis Screening Criteria

The CEQA Guidelines allow agencies to perform either a quantified or qualitative analysis to determine if the impact from GHG emissions is significant. The City of San Diego (City) does not currently have adopted thresholds of significance for GHG emissions or measures in place to indicate that a quantitative or qualitative assessment is necessary to ensure that a project's contribution to the cumulative impact is not cumulatively considerable.

At this time, the City will utilize the California Air Pollution Control Officers Association (CAPCOA) report "CEQA & Climate Change" dated January 2008 as an interim approach to determine whether a GHG analysis will be required. A 900 metric ton screening threshold for determining when a GHG analysis is required was chosen based on available guidance from the CAPCOA white paper. The 900 metric tons was developed by CAPCOA by analyzing the capture of 90 percent or more of future discretionary development for residential units and square footage of commercial space. Residential units or office space from pending discretionary development applications in four cities were analyzed: Los Angeles in Southern California, and Pleasanton, Dublin and Livermore in Northern California. Based on the data from the four cities, the 90 percent capture was the "market capture" rate that equated to 50 single-family residential units and 30,000 square feet of office. The GHG emissions associated with 50 single-family residential units and 30,000 square feet of office were found to be 900

metric tons and 800 metric tons respectively. The single emissions threshold of 900 metric tons was selected for residential and office projects. This emission level is based on the amount of vehicle trips, the typical energy and water use, and other factors associated with projects. CAPCOA identifies project types that are estimated to emit approximately 900 metric tons of GHG's annually.

The following Table identifies project types and project sizes that are estimated to emit approximately 900 metric tons of GHGs, based on the CAPCOA White Paper. Discretionary projects that are greater than or equal to the project sizes listed in the Table below must perform a GHG analysis. For project types not listed in the Table, for example Industrial and Mixed-Use projects, an analysis must be performed to show that the project is below the 900 metric ton screening criteria.

TABLE – Project Types* that Require a GHG Analysis and Mitigation

Project Type	Project Size that Generates Approximately 900 Metric Tons of GHGs per Year
Single Family Residential	50 units
Apartments/Condominiums	70 units
General Commercial Office Space	35,000 square feet
Retail Space	11,000 square feet
Supermarket/Grocery Space	6,300 square feet

* For project types that do not fit the categories in this table, a determination on the need for a GHG analysis will be made on a case-by-case basis, based on whether the project could generate 900 metric tons or more of GHGs.

Guideline for Determining Significance

If proposed projects exceed the 900 metric tons, the project would be required to provide a full analysis of the GHG emissions. The preparation of a focused GHG analysis would be required to analyze GHG emissions resulting from construction activities related to the project and on-going operation of the project. The analysis should include, but is not limited to, the five primary sources of GHG emissions: vehicular traffic, generation of electricity, natural gas consumption/combustion, solid waste generation, and water usage. The California Air Resources Board (CARB) has developed a year 2020 “business-as-usual” forecast model which represents the GHG emissions that would be expected to occur without any GHG project reducing features or mitigation. To reduce potential impacts to below a level of significance, proposed projects must show a 28.3% reduction to the 2020 business-as-usual model, consistent with AB 32.

New CEQA Initial Study Checklist

As part of the changes made by the Resources Agency to address GHG, Appendix G, the Initial Study Checklist, of the CEQA Guidelines was amended. The changes address Forest Resources, GHGs, and Transportation/Traffic. EAS is now using the state’s new CEQA checklist. In addition, we will be eliminating the separate Initial Study document and including all of the necessary information in the Initial Study checklist, which will result in a change in the format of the environmental documents.