

Guidance on Frequently Questioned Topics in Roadway Analysis for the California Environmental Quality Act (CEQA)

February 2018

The purpose of this guidance is to provide clarity and guidance on frequently questioned topics in roadway analysis for air quality impacts under CEQA. Recent legal decisions about CEQA baseline selection, for example, have supported more flexibility in this area, leading to questions about considerations in baseline selection. Further, state level guidance measuring actual environmental impacts from automobile use, rather than impacts to driver convenience, have prompted questions about how best to evaluate the air quality impacts resulting from added roadway capacity.

Some of the topics are intended to address common misconceptions about adequate CEQA review. For example, the greenhouse gas (GHG) analysis section clarifies that significance determination is requisite for an adequate GHG emissions analysis. The construction analysis section clarifies that adequate CEQA review incorporates all construction, and does not limit analysis to particular pollutants or construction of a given duration. Further, the section on local criteria and methods clarifies that any decision not to use them should be justified.

Please note that this is not comprehensive guidance on roadway review under CEQA; it only responds to common questions and misconceptions. Air districts typically have guidance on a full range of topics in CEQA review, which is appropriate for overall CEQA review in their geographic area. We intend to update this document as future common questions arise, and recommend checking back periodically to help ensure the best possible public disclosure of air quality impacts for CEQA review of roadway projects.

CEQA Baseline

For any CEQA analysis, a baseline year must be selected for determining the existing air quality impacts from criteria pollutants, for both construction emissions analysis and operational emissions analysis. CEQA analysis describes changes to the environment attributable to project activities by comparing baseline conditions to conditions anticipated to result from the project. CEQA's purpose is to disclose the environmental impacts of the project to the public and decision makers, and careful judgement should be exercised when selecting a CEQA baseline.

For construction emissions analysis for some roadway projects with long-term construction scenarios, the CEQA baseline year is held constant (i.e., using emission rates existing when CEQA review begins) and compared to future year (i.e., using emission rates projected for a future year when construction is occurring). This approach may underestimate a project's actual impacts by taking credit for emission reductions that will occur in the future due to adopted state and federal rules and regulations and technology advancements that are independent of the project.

In *Neighbors for Smart Rail v. Exposition Metro Line Construction (2013) 57 Cal.4th 439*, the California Supreme Court held that using a future baseline is proper in some cases, if using existing environmental conditions would be uninformative or misleading to decision makers and the public. Lead agencies may wish to use a future baseline for roadway projects that have a long term construction scenario, becoming

operational 20 or 30 years after CEQA review. For example, lead agencies may wish to select a future baseline year, and compare emissions estimated without the project to emissions estimated with the project, for that same year. Use of a future baseline is only proper, however, if future operational conditions estimates are supported by reliable projections based on substantial evidence in the record rather than hypothetical conditions.

Use of Local Thresholds, Guidance, Standards, and Recommended Mitigation

CEQA documents should evaluate project significance using air quality management or air pollution control districts' (air districts') thresholds, guidance, and standards. Air districts ensure conformity with the state implementation plan for federal air quality standards at the local level, and their thresholds and guidance are informed by a thorough knowledge and understanding of the air quality conditions and conformity considerations for the geographic area of their jurisdiction.

Any decision to not use air district thresholds, guidance, and standards for CEQA air quality and health risk analyses should be justified and supported by substantial evidence in the administrative record, to adequately provide the public disclosure required by CEQA. This stipulation also applies to use of air district thresholds, guidance, and standards for project alternatives analysis.

Moreover, the California Governor's Office of Planning and Research (OPR) [November 2017 Proposed Updates to the CEQA Guidelines](#) Appendix G checklist's air quality section preamble reads "Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make ... determinations." Air districts' thresholds provide a clear quantitative benchmark to determine the significance of project and project alternative air quality impacts. They also help identify the magnitude of the impacts, facilitate the identification of feasible mitigation measures, and evaluate the level of impacts before and after mitigation measures. Since one of the basic purposes of CEQA is to inform government decision makers and the public about the potential, significant environmental effects of any proposed activities (CEQA Guidelines § 15002(a)(1)), use of air district thresholds is a best practice for CEQA impact determinations.

Due to air districts' unique role in conformity and expertise in air quality and public health, the CEQA analysis should include all applicable feasible mitigation recommended by air districts. This includes both operations and construction analyses and health risk assessments. Further, less-than-significant determinations for impacts under CEQA should include an assessment of the impact based on applicable air district thresholds of significance.

Complete Construction and Operations Emissions Analysis for All Projects

Air quality impacts should be assessed for construction and operations emissions for all projects under CEQA.^{1,2} Air districts determine their air quality thresholds in large part to assess cumulative impacts that

¹ CEQA Guidelines §15063 Initial Study (a)(1) requires consideration of all phases of project planning, implementation and operation in considering potential significant impacts.

² CEQA Guidelines §15003 Policies – In addition to the policies declared by the Legislature concerning environmental protection and administration of CEQA in Sections 21000, 21001, 21002 and 21002.1 of the

affect attainment of the air quality standards for which they are responsible. Neglecting analysis based on more subjective thresholds undermines the purpose of air district thresholds.

For example, failing to assess air quality impacts for shorter construction periods would underestimate overall impacts and undermine the air district thresholds' objective of meeting air quality standards. Shorter construction can generate significant pollutants, and thresholds should reflect actual impacts rather than screening for the time period in which they occur. Construction duration is not an appropriate screening threshold.

Furthermore, to meet CEQA requirements, project-level conformity and hot-spot analyses under the Clean Air Act should not be used as a substitute for construction and operations analysis for roadway projects. Project-specific analysis of regional and localized air quality impacts from construction and operations that is both adequate and complete is recommended to ensure a good faith effort at full disclosure.

It is also important to report and assess all construction and operational air pollutants, including criteria pollutants, toxics, and GHG emissions. Potential emission sources may include, but are not limited to, the operation of construction equipment and vehicle trips made by construction workers and operational emissions from roadways.

Moreover, construction and operation of roadways have the potential to generate significant toxic air pollutants that are detrimental to human health, regardless of duration. The Air Toxics Hot Spots Information and Assessment Act requires that air districts determine which facilities must provide an assessment of their potential health risk.³ The [OEHHA Air Toxics Hotspot Program Risk Assessment Guidelines](#) (Section 8.2.10) and the [CAPCOA Health Risk Assessments for Proposed Land Use Projects](#) both provide guidance for evaluating cancer and other risk from shorter term projects. Finally, when project construction and operation phases overlap, we recommend consulting the local air district in which the project is located to determine the appropriate methodology for evaluating each phase.

Vehicle Miles Traveled (VMT) and Induced Demand

Roadway CEQA review, including for roadway expansion projects, should assess and report VMT, including induced VMT, quantitatively and accurately to the maximum extent feasible. VMT analysis should specifically address the projected change in VMT resulting from a project, including any change associated with induced demand. Project proponents should tabulate GHG, toxic emissions and criteria pollutant emissions for the project and compare the emissions to air district thresholds. If thresholds are exceeded, mitigation measures will likely be necessary.

Induced VMT occurs when the addition of roadway capacity affects the amount of VMT by changing travel behavior such as trip length and mode use. A quantitative assessment of induced VMT is requisite to an accurate assessment of project VMT and associated GHG, toxic emissions, and criteria pollutant emissions.

Public Resources Code, the courts of this state have declared the following policies to be implicit in CEQA. (h) The lead agency must consider the whole of an action, not simply its constituent parts, when determining whether it will have a significant environmental effect.

³ [OEHHA Air Toxics Hotspot Program Risk Assessment Guidelines](#) Section 1.1 – 1.3 and Appendix B.

An accurate assessment of induced VMT is requisite to assess polluting emissions' impacts on the environment and public health. It is also requisite to assess emissions' effect on GHG emission reductions required by state law and policy.

CEQA requires public agencies to document and consider the environmental implications of their actions, and to analyze the direct, indirect (or secondary effects), and cumulative physical changes in the environment that proposed projects would cause. A substantial body of research exists quantifying the increase in VMT induced by added roadway capacity.^{4,5,6} VMT, including induced VMT, is a reasonably foreseeable impact that should be analyzed under CEQA. Induced VMT resulting from secondary effects is recognized as a potential significant irreversible environmental change under CEQA (CEQA Guidelines § 15126.2 (c)).

As part of documenting and considering these physical changes, roadway capacity expansion project analysis should consider implications of induced travel on the state's ability to achieve GHG reductions that climate science shows are needed. The amount of induced VMT from roadway capacity expansion project contributes, both individually and together with other roadway capacity expansion projects, towards the maximum amounts of allowable additional vehicle travel that the California Air Resources Board (CARB) reports would be consistent with the GHG reductions necessary to achieve climate stabilization and attainment of air quality goals and standards. CARB reports those VMT amounts in its Mobile Source Strategy and Scoping Plan.^{7,8} CEQA review should link VMT outcomes from the project to the VMT goals articulated in those documents.

CEQA requires analysis of project growth-inducing impacts, and the resulting effects on transportation. A project that expands roadway capacity leads to more dispersed land use development, which in turn leads to additional vehicle travel, and that in turn leads to increases in GHG emissions, emissions of criteria and toxic pollutants, and other environmental impacts. Growth-inducing and emissions impacts are also cumulative, and must be assessed accordingly to be adequate under CEQA.

To address changes in land use generated by the project, the analysis must discuss (1) "the ways in which the proposed project could foster economic or population growth, or the construction of additional

⁴ *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, National Center for Sustainable Transportation, http://www.dot.ca.gov/research/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf

⁵ *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions: Policy Brief*, California Air Resources Board, https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf

⁶ *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions: Technical Background Document*, California Air Resources Board, https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_bkgd.pdf

⁷ California Air Resources Board 2016 Mobile Source Strategy, <https://www.arb.ca.gov/planning/sip/2016sip/2016mobsr.htm>

⁸ California Air Resources Board AB 32/SB 32 Scoping Plan, <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>

housing, either directly or indirectly, in the surrounding environment,” and (2) “the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively” (CEQA Guidelines § 15126.2(d)).

Greenhouse Gas Analysis

Pursuant to the CEQA Guidelines, CEQA documents must disclose a project’s potential impacts on GHG emissions, climate change, and adaptation, and make a GHG significance determination. Climate science is sufficiently developed to make significance determinations on GHG emissions, and per SB 97 GHG emissions must be considered under CEQA. There is ample technical information and evaluation criteria available to make a significance determination. The California Code of Regulations guidelines for CEQA implementation includes factors for consideration in assessing the significance of impacts from GHG emissions on the environment (CEQA Guidelines § 15064.4). The California Air Pollution Control Officers (CAPCOA) guidance, [CEQA & Climate Change](#), also provides guidance on determining significance.

The determination should consider GHG emissions from VMT, including “induced” VMT. Induced VMT is a result of induced travel which occurs where roadway capacity is expanded in an area of present or projected future congestion.⁹ GHG emissions from VMT, including induced VMT, can be quantified using readily available methods.^{10,11} Further, almost 40% of California’s GHG emissions are generated from the transportation sector,¹² so assessment, significance determination, and mitigation of transportation impacts are essential to the CEQA disclosure requirement for GHG impacts and achieving GHG reductions required by state law, including but not limited to AB 32 and SB 375. Technical considerations, including methodologies and modeling, are detailed in OPR’s [November 2017 Technical Advisory on Evaluating Transportation Impacts in CEQA](#).

Furthermore, conformity with a Regional Transportation Plan (RTP) and / or consistency with a regional Sustainable Communities Strategy (SCS) is not typically sufficient to demonstrate a less than significant VMT or GHG impact. RTP/SCS implementation alone will not achieve sufficient VMT containment to keep GHG emissions from exceeding levels needed statewide to stabilize the climate,¹³ even if fully implemented. Additional VMT mitigation at the project level is typically necessary to contain GHG emissions to the levels climate science deems necessary.

⁹ *Technical Advisory on Evaluating Transportation Impacts in CEQA*, Office of Planning and Research, http://opr.ca.gov/docs/20171127_Transportation_Analysis_TA_Nov_2017.pdf

¹⁰ *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions: Policy Brief*, California Air Resources Board, https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf

¹¹ *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions: Technical Background Document*, California Air Resources Board, https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_bkgd.pdf

¹² <https://www.arb.ca.gov/cc/inventory/data/data.htm>

¹³ California Air Resources Board Final Staff Report Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets, see p. 12 and p. 29, https://www.arb.ca.gov/cc/sb375/final_staff_proposal_sb375_target_update_october_2017.pdf