



**San Joaquin Valley
Air Pollution Control District**

**SAN JOAQUIN VALLEY
GREENHOUSE GAS CEQA GUIDANCE
ISSUE PAPER**

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CHAPTER 1- INTRODUCTION

The California Legislature enacted CEQA in 1970. CEQA is intended to address a broad range of environmental issues, including water quality, noise, land use, natural resources, transportation, energy, human health, biological species, and air quality. CEQA requires that public agencies (i.e., local, county, regional, and state government) consider and disclose the environmental effects of their decisions to the public and governmental decision makers. Further, it mandates that agencies implement feasible mitigation measures or alternatives that would mitigate significant adverse effects on the environment. CEQA requires public agencies to identify potentially significant effects on the environment of projects they intend to carry out or approve, and to mitigate significant effects whenever it is feasible to do so.

Although AB 32 gives wide responsibility to ARB to regulate GHG emissions from all sources, including non-vehicular sources, it does not preempt or excuse permitting agencies from addressing GHGs under CEQA.

In August 2008 the District's Governing Board adopted the Climate Change Action Plan (CCA). The CCAP authorized the Air Pollution Control officer to develop guidance documents to assist land use agencies address greenhouse gas (GHG) emissions as part of the California Environmental Quality Act (CEQA) process, develop a greenhouse gas banking program, enhance the existing emissions inventory process to include greenhouse gas emissions, and administer voluntary greenhouse gas emission reduction agreements. These items would then be brought before the Governing Board for their consideration.

This white paper focuses solely on various issues concerning the development of District guidance for addressing project related greenhouse emissions during the CEQA process. This paper does not address the other items called for in the CCAP. Information on climate change and governmental activities in California to reduce GHG emissions are presented in the District's Climate Change Action Plan Staff Report.

The intent of this white paper is to provide a starting point for developing guidance for addressing GHG emissions during the CEQA process. There are many potentially valid concepts, each with its own benefits and disadvantages that will be evaluated by the GHG CEQA Guidance Technical Workgroup.

The goals of the GHG CEQA guidance are to provide a mechanism:

- to identify the scope of GHG emissions related to specific projects,
- quantify those GHG emissions,
- identify GHG emissions mitigation measures, and
- to assess the significance of project related GHG emissions.

CHAPTER 2 SCOPE OF PROJECT GHG EMISSIONS

Per CEQA Guidelines Section 15378, "Project" means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following:

- (1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100-65700.
- (2) An activity undertaken by a person which is supported in whole or in part through public agency contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- (3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies

For the purpose of this GHG CEQA guidance, a key issue to be resolved is what emissions should be attributed to a project?

Project related GHG emissions could consist of:

- Direct project GHG operational emissions:
 - o Combustion emissions,
 - o Methane generation, etc
- Ancillary project GHG operational emissions:
 - o Power consumption to operate project equipment
 - o Power consumption to operate peripheral equipment
- Indirect project GHG emissions:
 - o Operational mobile sources emissions
 - Delivery vehicles - raw material
 - Shipping vehicles - finished goods
 - o Project life cycle emissions
 - Emissions generated during the entire life cycle of the project: ranging from mining of raw materials, processing those materials into steel, manufacturing of equipment, to shipment and installation of equipment at the project site, etc.

CHAPTER 3 QUANTIFICATION OF PROJECT GHG EMISSIONS

Protocols for quantifying GHG emissions:

- Translating project activities into GHG emissions
- Emission factors associated with each activity

For example, determining GHG emission from electricity consumption associated with the operation of the project equipment would require consideration of the following:

- o Energy consumption (e.g. kwh used)
- o Source of electricity (e.g. fossil fuel combustion, hydroelectric, solar, etc)
- o Energy production characterization (fossil fuel: coal, natural gas, oil, etc)
- o Energy production source %
- o Emission factors
- o Etc

For example, determining GHG emission from mobile sources (raw materials delivery trucks) associated with the project would require consideration of the following:

- o Size of truck
- o Truck engine tier
- o Truck engine horse power
- o Vehicle Miles Traveled (VMT)
- o % of VMT attributed to the specific project operation
- o Fuel type
- o Emission factors
- o Etc

For example, determining GHG emission from mobile sources (worker commute) associated with the project would require consideration of the following:

- o Number of workers
- o Number of vehicles
- o Type of vehicles
- o Carpooling parameters
- o Vehicle Miles Traveled (VMT)
- o % of VMT attributed to the specific operation
- o Fuel type
- o Emission factors
- o Etc

CHAPTER 4 GHG EMISSIONS MITIGATIONS

CEQA Guideline, section 15370, defines mitigations as:

- Avoiding the impact all together by not taking a certain action or parts of an action,
- Minimizing impacts by limiting the degree or magnitude of the actions and its implementation,
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment,
- Reducing or eliminating the impact over time by preservation and maintenance operation during he life of the action, or
- Compensating for the impact by replacing or providing substitute resources or environments.

Identifying GHG emission mitigations would require consideration of the following:

- Reference point:
 - o Business As Usual (BAU),
 - o AB32 mandates,
 - o Etc
- Surplus aspect of proposed mitigation compared to any current or future GHG emission reduction requirements:
 - o Identify current and future GHG emission reduction requirements
- Longevity of the GHG emission mitigations:
 - o Life of the GHG emissions reduction projects (e.g. planting trees versus trees decomposition, etc)
 - o GHG emission reduction future requirements
- Quantification GHG emission mitigations:
 - o Type and nature of GHG emissions reduction project
 - o Scope of GHG emissions reduction project (See identification and quantification of project GHG emission sections)
- Voluntary Emission Reduction Agreement
- GHG emission reduction banking system used to mitigate future GHG emissions increases
- Verification and enforceability of the proposed GHG emission mitigations:
 - o Local GHG emissions reduction projects
 - o GHG emissions reduction projects occurring somewhere else on Earth

CHAPTER 5 SIGNIFICANCE OF PROJECT RELATED GHG EMISSIONS

CEQA requires public agencies to identify potentially significant effects on the environment of projects they intend to carry out or approve, and to mitigate significant effects whenever it is feasible to do so. Per CEQA Guidance, section 15382, "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

This determination of significance must be based on the substantial evidence in light of all the information before the agency. At this time there are no generally accepted thresholds of significance for determining the impact of GHG emissions from an individual project on global climatic change.

Under state law, it is the purview of each lead agency to determine what, if any, significance thresholds will be established to guide its review of projects under CEQA. Traditionally, the District has provided local lead agencies technical guidance for assessing a project's potential impact on air quality, including establishment of significance thresholds for criteria pollutants.

Existing and proposed approaches to addressing the significance of GHG emissions during the CEQA process will be discussed and evaluated.

Possible approaches for addressing GHG during the CEQA process:

- Single GHG significance threshold
- Multiple GHG significance thresholds
- Specific project type determination
- Program level CEQA determination
- Facility level CEQA determination
- Performance based threshold
- Tiered classification of projects' impacts
- Combination of any of the above
- Others, to be determined