

CHAPTER 11

Climate Change Considerations

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11.1 INTRODUCTION

Human activities, such as energy production and land development also result in both direct and indirect emissions that contribute to highly elevated concentrations of greenhouse gas (GHG) emissions in the atmosphere (California Natural Resources Agency 2009).

The Governor's Office of Planning and Research (OPR) submitted recommended amendments to the Secretary for Natural Resources for CEQA Guidelines that would address greenhouse gas emissions. The OPR recommendations were submitted on April 13, 2009. Following the process for certifying and adopting these amendments that commenced on July 3, 2009, the Natural Resources Agency proposed revisions to the text of the proposed Guideline amendments. These amendments were approved by the Office of Administrative Law on February 16, 2010 and became effective on March 18, 2010. These guidelines direct the discussion towards greenhouse gas emissions that would result from project implementation. This is consistent with a Technical Advisory from OPR, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review, dated June 19, 2008 by the OPR.

The statutory and regulatory landscape affecting GHG emissions in California has evolved considerably over the past few years. The Governor's Executive Order 2-3-05, and the Global Warming Solutions Act of 2006 (Assembly Bill 32) established the broad policy goals for the State for 2020 and 2050 (CAPCOA 2009). Additionally, Senate Bill 97 (SB97) required the OPR to develop draft CEQA guidelines "*for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions.*" To conform with the CEQA requirements and in recognition of growing concerns regarding GHG emissions, this chapter provides consideration of these issues.

11.2 REGULATORY SETTING

While there are numerous regulations related to air quality and emission in California standards, several regulations specifically address issues surrounding GHG emissions and climate change. A description of these regulations is provided below.

11.2.1 FEDERAL CLIMATE CHANGE ACTION PLAN

In October 1993, President Clinton announced his Climate Change Action Plan, which had a goal to return GHG emissions to 1990 levels by the year 2000 (AEP 2007). This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in greenhouse gas emissions.

According to the EPA (2009), the United States government has established a comprehensive policy to address climate change that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science (EPA 2010). The federal government's goal is to reduce the GHG intensity (a measurement of GHG

emissions per unit of economic activity) of the American economy by 18% over the 10-year period from 2002 to 2012 (EPA 2009). However, there presently are no adopted federal policies, regulations, or laws directly regulating GHG emissions.

11.2.2 EXECUTIVE ORDER S-3-05

The Governor of California signed Executive Order S-3-05 on June 1, 2005. The Order recognizes California's vulnerability to climate change, noting that increasing temperatures could potentially reduce snowpack in the Sierra Nevada Mountains, which serve as one of the state's primary sources of water. Additionally, according to the Order, climate change could influence human health, coastal habitats, microclimates, and agricultural yield. To address these potential impacts, the Order mandates GHG emission reduction targets. More specifically, by 2010, GHG emissions are expected to be reduced to 2000 levels; by 2020, emissions are expected to reach 1990 levels; and by 2050, emissions are expected to be 80 % below 1990 levels. The Secretary of the California EPA is responsible for overseeing the reduction program targets and coordinating efforts to meet these provisions with numerous state agencies, such as the Resources Agency, which includes DWR. The Secretary also provides biannual reports to the Governor and the State Legislature regarding: (1) progress toward meeting the GHG emissions targets; (2) the ongoing impacts of global warming in the state, including impacts to water supply and the environment; and (3) potential mitigation and adaptation plans to combat these impacts. In order to achieve the climate change emission targets, the Secretary formed the Climate Action Team in June 2005, which is comprised of administrators from numerous state agencies.

11.2.3 ASSEMBLY BILL 32 - THE CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006 (HEALTH AND SAFETY CODE §38501 ET SEQ.)

The California Global Warming Solutions Act of 2006 (AB32) was signed into law on September 27, 2006. The bill requires the California Air Resources Control Board (CARB), in coordination with state agencies as well as members of the private and academic communities, to adopt regulations to require the reporting and verification of statewide GHG emissions and to monitor and enforce compliance with this program. Similar to Executive Order S-3-05, under the provisions of the bill, by 2020, statewide GHG emissions will be limited to the equivalent emission levels in 1990. To achieve the 2020 reduction goal, by January 2011, the CARB shall adopt emission limits and reduction measures, which may include a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit greenhouse gases. It is anticipated that limits and emission standards adopted by the CARB will become operative beginning January 2012. In addition, the Climate Action Team established by the Governor to coordinate the efforts set forth under Executive Order S-3-05 is expected to continue its role coordinating overall climate policy.

11.2.4 SENATE BILL 97, MODIFICATION TO THE PUBLIC RESOURCES CODE (2007)

In 2007, the California legislature passed Senate Bill 97 (SB97), which amended the CEQA statute to specifically establish that GHG emissions and their impacts are appropriate subjects for CEQA analysis. The law directed the state Resources Agency to "certify and adopt guidelines prepared and developed by the Office of Planning and Research" "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" on or before January 1, 2010 (Pub. Resources Code §21083.05(a)-(b).) However, SB97 does not address the evaluation and determination of "significance." Pursuant to the SB97 directive, OPR developed, and the

Resources Agency adopted certain amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions on December 30, 2009 (Public Resources Code §21000 et seq.). On March 18, 2010, the amendments to the CEQA Guidelines became effective.

11.2.5 2010 AMENDMENTS INCORPORATING CLIMATE CHANGE INTO THE CEQA GUIDELINES

The amendments to the CEQA Guidelines include changes to, or additions of, fourteen sections of the existing Guidelines, as well as changes to appendices addressing energy conservation and the CEQA Environmental Checklist Form (California Natural Resources Agency 2009). OPR's CEQA Amendments Section 15064.4 provides that lead agencies should "*make a good faith effort, based on available information to describe, calculate, or estimate*" GHG emissions and notes that an agency may identify emissions either by selecting a "*model or methodology*" to quantify the emissions or relying on "*qualitative or other performance based standards.*"

The CEQA Guidelines do not establish thresholds of significance for potential environmental impacts, nor did SB97 authorize the development of a statewide significance threshold for GHG emissions. Amendments to the CEQA Environmental Checklist address whether a proposed project would: (1) generate GHG emissions, either directly or indirectly, that may have a significant effect on the environment; and (2) conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG. Additionally, nothing stated in either AB32 or SB97 requires a finding of significance for any particular level of increase in GHG emissions (California Natural Resources Agency 2009).

Consistent with CEQA's treatment of cumulative impacts, some lead agencies have explicitly determined that any increase in GHG emissions above existing levels is a significant impact under CEQA (Marin Countywide Plan Update DEIR 2007; San Diego Association of Governments Regional Transportation Plan DEIR 2007). Review of the 2010 CEQA Guideline amendments suggests that the intent of the amendments, including determination of thresholds of significance, primarily focuses on addressing changes in GHG emissions, relative to the Existing Condition, rather than determining the broader significance of climate change impacts on other environmental topics (e.g., water-related resources). At the direction of OPR, CARB is currently developing statewide interim thresholds of significance for GHG emissions. CARB is focusing on common project types that, collectively, are responsible for substantial GHG emissions, specifically industrial, residential and commercial projects.

The amendments appropriately focus on a project's potential incremental contribution of GHG emissions rather than on the potential effect itself (i.e., climate change). Notably, however, the amendments expressly incorporated the fair argument standard (California Natural Resources Agency 2009). Thus, if there is any substantial evidence supporting a fair argument that a project's GHG emissions may result in any adverse impacts, including climate change, the lead agency must resolve that concern in an EIR (California Natural Resources Agency 2009).

11.3 ENVIRONMENTAL CONSEQUENCES

For CEQA compliance purposes, a project impact must be assessed if it has "an effect on the environment within the meaning of CEQA" (See *Protect the Historic Amador Waterways v. Amador Water Agency* [2004] 116 Cal. App. 4th 1099, 1111). Global warming affects the

“environment”, as defined by CEQA¹, because global warming affects the physical conditions in all regions of California (Center for Biological Diversity 2007). Because a project that generates GHG emissions contributes to global warming, this impact must be fully disclosed and analyzed under CEQA (Center for Biological Diversity 2007).

To address these considerations for CEQA purposes, the focus of this section addresses the extent to which the proposed project would contribute to the global GHG emissions that are causing climate change and whether the proposed project could contribute to the adverse effects of climate change.

Although CEQA guidelines require an analysis of GHGs emitted by a project, there are no defined criteria against which project emissions can be compared to determine significance. Various influential agencies and groups, including the California Air Pollution Control Officers Association, the South Coast Air Quality Management District and County of San Diego have released guidance on significance thresholds. CARB has also issued a preliminary draft staff proposal for recommending approaches to setting significance thresholds to evaluate project GHG emissions, but this document does not suggest specific thresholds². In the absence of CEQA significance thresholds related to GHG emissions, the Town of Mammoth Lakes General Plan Update (2007) policy “...to support the objectives of the U.S. Mayors Climate Protection Agreement, AB32, and California Executive Order S-03-05 and implement actions to reduce Mammoth Lakes’ carbon footprint”, the following impact indicator/significance threshold is used for analytical purposes in this Draft EIR.

- The project’s incremental contribution to climate change would be considered cumulatively significant if the proposed project generates GHG emissions that are not consistent with the objectives of AB32, California Executive Order S-03-05 and the Town of Mammoth Lakes General Plan Update (2007) policy.

11.3.1 POTENTIAL FOR THE PROPOSED PROJECT TO CONTRIBUTE TO GREENHOUSE GAS EMISSIONS OR OTHER EFFECTS RELATED TO GLOBAL WARMING

Because none of the alternatives proposed in this Draft EIR would involve potential increased emissions related to construction activities, or increased energy demand-driven emissions associated with water diversions or District operations at its facilities, potential direct effects on global warming are not anticipated. Potential changes in Lake Mary storage and the timing and pattern of flows in Mammoth Creek associated with the proposed project are similar to the types of hydrologic effects exhibited by changing diversion-related activities evaluated in other EIRs. As described in Reclamation (2009), water-related projects associated with diversions have been found to have virtually no direct effect on climate change because there is no discernible direct effect on regional changes in climate. Reclamation (2009) states that even a potentially large water diversion project with the capability of significantly depleting a reservoir will have no discernible direct effect on regional changes in climate because climate change is driven primarily by the net radiative energy balance of the atmospheric layers (e.g., troposphere and stratosphere), whose interactive processes are unaffected by the singular action of diverting

¹ CEQA defines “environment” as the “physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance” Public Resources Code §21060.5.

² Preliminary Draft Staff Proposal Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act. CARB October 24, 2008

water at the ground surface. Assuming that a residual water supply remains in the waterbody after diversion, the continued presence of ongoing exchange mechanisms (e.g., gradient of saturated vapor pressure) between the water surface and atmosphere will remain. By all of the atmospheric, hydroclimatological and climatological processes known and accepted, water diversions, in and of themselves, cannot affect changes in global climate (Reclamation 2009). Because the proposed project does not include any atmospheric changes, there would be no measurable direct effects to climate change as a result of changing the bypass flow requirements or other WOCs associated with the proposed project.

When considering the potential for indirect impacts on climate resulting from water diversion projects, the issue becomes more complex. As an action that can be viewed as accommodating approved growth (i.e., development, urbanization, land clearing, etc.), the indirect effects of water diversions can be tied, at least in some manner, to a variety of land activities to which it serves (Reclamation 2009). However, in the case of the proposed project, changing the bypass flow requirements or other WOCs associated with Permit 17332 would not accommodate additional growth.

In the context of climate change, there would be no measurable changes in the composition of the atmosphere or in land use associated with the proposed project. Therefore, the proposed project (i.e., the Proposed Project Alternative and the other action alternatives) would not have an impact on GHG emissions and climate change.

Impact Determination 11.3.1 - No Impact

Mitigation Measure 11.3.1 - None Required