NATURAL RESOURCES DEFENSE COUNCIL

Via Electronic Mail
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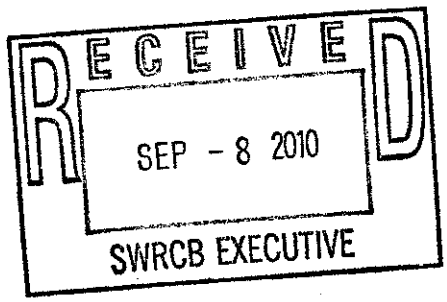

September 8, 2010

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Re: Comment Letter – Proposed CEQA Regulations

Dear Members of the Board:

The Natural Resources Defense Council ("NRDC") appreciates the State Water Resources Control Board's ("State Board") recognition of the need to include the consideration of greenhouse gas emissions in its CEQA checklist found in Appendix A ("Checklist") of the Proposed Amendments to Regulations for Implementation of the California Environmental Quality Act of 1970 ("Proposed CEQA Regulations"). By this letter, NRDC respectfully requests that the State Board revise the Checklist in Appendix A and any related CEQA analysis to ensure consideration of project impacts in a way that more fully recognizes the complex relationship between climate change and state action. NRDC also submits these comments in order to remind the State Board of the important opportunity it has when conducting environmental review – and indeed in all of its actions – to protect California's water resources from both the impact of projects that contribute to climate change and the impact that climate change might have on such projects.

The current and anticipated effects of a changing climate will require the development of many new strategies for water management and project planning in California and across the United States. Not only will certain future State Board actions have an impact on climate change's effects through associated greenhouse gas emissions, but climate change's effects will also impact the planning and implementation of a wide variety of State Board actions. Both types of impacts must be considered in future State Board CEQA analyses.

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I. *The Greenhouse Gas Emissions Associated with State Board Actions must be Considered*

As the draft Checklist recognizes, the State Board will undertake and regulate activities with associated greenhouse gas emissions. For example, State Board approval may be needed for certain projects undertaken in order to protect, move and treat large quantities of water for California's citizens. Water use, transfer, storage and supply projects, and many other water management projects all have the potential to have a significant effect on the environment.[1]

The use, treatment, distribution and disposal of water all require large amounts of energy. Nationwide, drinking water and wastewater utilities use 75 million kWh of electricity annually, resulting in the emission of 116 billion pounds, or about 52 million metric tons, of CO_2 every year.[2] Energy use by drinking water and wastewater facilities alone accounts for 3-4% of U.S. energy consumption, but in many places that percentage is much higher; in California, for example, where, as you know, water is scarce and must be delivered across long distances, water use accounts for 19% of all electricity consumed.[3] Energy use becomes even greater when the end use of water, especially heating, is added to the equation. One study has estimated the carbon footprint associated with moving, treating, and heating water in the U.S. to be 290 million metric tons per year.[4] Short-sighted management strategies can be energy intensive, leading to the release of greenhouse gases and thereby contributing to additional climate change effects.

When the State Board undertakes, regulates, or authorizes any water-related action it is critical that the agency consider alternative actions with fewer greenhouse gas emissions. For example, EPA has suggested consideration of water conservation, green building design and smart growth as alternatives that may mitigate greenhouse gas emissions associated with water use.[5] Consideration of these types of alternatives is critical for all State Board actions, but is especially important when the State Board approves projects involving requests for discretionary financial assistance.

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[1] *See, e.g.,* Public Resources Code § 21083 (discussing guidelines for identifying actions that may have a significant effect on the environment).

[2] U.S. Environmental Protection Agency, *National Water Program Strategy: Response to Climate Change* (2008) at 25, at http://water.epa.gov/scitech/climatechange/upload/20081016_nwpsresponse_to_climate_change_revised.pdf (all website citations last visited Sept. 3, 2010).

[3] Natural Resources Defense Council, *Water Efficiency Saves Energy: Reducing Global Warming Pollution Through Water Use Strategies* (2009) at 1, at http://www.nrdc.org/water/files/energywater.pdf.

[4] River Network, *The Carbon Footprint of Water* (2009), at 1, at http://rivernetwork.org/resource-library/carbon-footprint-water.

[5] EPA, *supra note* 2, at 29.

The benefits of this type of integrated thinking are immense. For example, in San Diego, energy savings from relying on conservation instead of additional deliveries from the Bay-Delta to provide 100,000 acre-feet would be approximately 770 million kWh. This is enough electricity for 118,000 households for a year—25% of the household electricity use in the City of San Diego.[6]

Similarly, many environmental groups have recommended low impact development as an alternative action with a lower carbon footprint.[7] In one case study, NRDC found that implementing low impact development practices in certain areas of California could save enough water to translate into electricity savings of 1,225,500 MWh per year, avoiding the release of as much as 535,500 metric tons of CO_2 annually.[8]

It will be increasingly critical that the State Board thoroughly evaluate these types of alternatives as the state and the nation seek to curb greenhouse gas emissions in order to mitigate the effects of climate change.

II. Climate Change's Effects on Water must be Considered when Evaluating Proposed State Board Actions

Climate change is predicted to have serious and wide-ranging impacts on water resources throughout the U.S., and, in fact, many effects have already been documented. As has been acknowledged by the U.S. Global Change Research Program, "[c]limate change has already altered, and will continue to alter, the water cycle, affecting where, when, and how much water is available for all uses."[9] Rising temperatures, loss of snowpack, escalating size and frequency of flood events, and seal level rise are just some of the impacts of climate change that have broad implications for the management of water.[10] Each type of water-related impact has the potential to influence how agencies plan and design a wide variety of actions. Moreover, many State Board actions have the potential to exacerbate a changing climate's impact on water. It is essential that the State Board assess projects' vulnerability to these changes and identify alternatives that will make projects resilient regardless of any changes that may occur. The State Board's CEQA analyses must consider how the State Board can design its actions to minimize vulnerability to climate impacts – both now and in the long term – and avoid exacerbating those impacts.

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[6] NRDC, *Energy Down the Drain, The Hidden Costs of California's Water Supply* (Aug. 2004).

[7] River Network, *supra* note 4, at 2.

[8] Natural Resources Defense Council, *A Clear Blue Future: How Greening California Cities Can Address Water Resources and Climate Challenges in the 21st Century* (2009) at 4, at http://www.nrdc.org/water/lid/files/lid.pdf.

[9] Thomas R. Karl, Jerry M. Melillo, and Thomas C. Peterson, (eds.), Global Climate Change Impacts in the United States, Cambridge University Press, 2009. (U.S. Global Change Research Program FACA Report) at 41, at http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf.

[10] *Id.*

A recent study conducted by Tetra Tech for NRDC shows that climate change will have a significant impact on the sustainability of water supplies in the coming decades.[11] California and the West face the highest additional risk of shortages due to climate change, in part due to changes in precipitation and evapotranspiration. As average air temperatures rise, the water cycle speeds up, increasing evaporation. Increased evaporation may make more water available in the air for precipitation, while in some areas it may contribute to drying. As a result, storm-affected areas will experience increased precipitation and flooding, while areas located farther away from storm tracks will experience less precipitation and more drought.[12]

One particular impact of climate change that must be considered is an increased risk of water scarcity. From 2001 to 2009, roughly 30%-60% of the U.S. experienced drought conditions at any given time.[13] With additional climate change, multi-year droughts will become more frequent, as longer periods between rainfalls, combined with higher air temperatures, dry out soils and vegetation. Moreover, climate change also contributes to water scarcity by leading to a reduction in snowpack, an important water source for many areas of the country. Snowpack has decreased in most areas, in some by as much as 75%.[14] Thus, the State Board must consider whether proposed actions are vulnerable to water shortages. If projects are located in areas predicted to face water scarcity issues, or in areas that depend heavily on snowpack as a water supply, alternatives should be considered, such as undertaking the action in a different area or redesigning it to require less water. For example, when considering protection of instream flows for purposes of water right administration, the State Board should consider whether an action or policy would be affected by changes in precipitation patterns or runoff due to climate change and require adjustments accordingly. Similarly, when approving total maximum daily loads ("TMDLs") or other Basin Plan provisions, the State Board should evaluate whether those provisions include adequate margins of safety and contemplate environmental conditions in a changing climate.

Another climate impact that will affect CEQA analysis is the projected rise in heavy precipitation events and the *intensity* of storms. In recent years, a higher percentage of precipitation in the U.S. has come in the form of intense single-day events; eight of the top ten years for extreme one-day events have occurred since 1990.[15] This trend is

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[11] Roy, S.B., L. Chen, E. Girvetz, E.P. Maurer, W.B. Mills, and T.M. Grieb, *Evaluating Sustainability of Projected Water Demands Under Future Climate Change Scenarios*, prepared for the Natural Resources Defense Council (July 2010), at http://rd.tetratech.com/climatechange/projects/doc/Tetra_Tech_Climate_Report_2010_lowres.pdf.

[12] U.S. Environmental Protection Agency, *Climate Change Indicators in the United States* (2010) at 26, at http://www.epa.gov/climatechange/indicators/pdfs/ClimateIndicators_full.pdf.

[13] *Id.*

[14] *Id.* at 7.

[15] *Id.*

predicted to continue. Intense storms may damage property, erode soil, and increase flood risk. In addition, runoff from heavy rains can negatively impact water quality as pollutants deposited on land wash into water bodies. The State Board must consider whether a proposed action is located in an area at risk for frequent heavy precipitation events that may lead to flood damage or create an increased regulatory burden for meeting Clean Water Act regulations. Moreover, the State Board must consider alternative actions either located outside of increased risk areas or designed to withstand the resulting impacts of heavy precipitation.

In addition to considering climate change's impacts on its proposed actions, the State Board must consider whether its actions might render the surrounding environment more vulnerable, or conversely more resilient, to climate change. If increased vulnerability is anticipated due to a project or policy, the State Board should consider alternatives in its CEQA analyses. For example, when considering the long-term impacts of State Board actions, the State Board must determine whether a project or policy could exacerbate climate-induced water shortages by allowing the withdrawal or consumption or unreasonable use of large quantities of water, or whether a project might add pollutants to a body of water already facing ecological stresses due to decreased volume or temperature change. Both of these results would increase the vulnerability of those aquatic ecosystems to climate change impacts. In such cases, more water-efficient alternatives, alternatives discharging less pollution, or alternative locations must be evaluated. Multi-beneficial approaches (such as low impact development) that address not only water supply issues but also interrelated issues such as water quality, aquatic habitat, and reduced energy consumption should be given special consideration.

III. Recommendations

Numerous sections of the draft regulations must be read to require consideration by the State Board of a project's greenhouse gas emissions and the effects of climate change to water. *See, e.g.*, 23 C.C.R. § 3742 (authority to ensure long-term protection of water resources); § 3777(b)(2) (identification of potentially significant adverse environmental impacts); §3777(b)(3) (analysis of reasonable alternatives); §3777(b)(4) (analysis impacts associated with methods of compliance); § 3780 (prohibition on adoption where alternatives available to lessen impact).

Moreover, while NRDC supports the recent inclusion of greenhouse gas emissions considerations in the newly proposed Checklist, NRDC believes modification[16] to the Checklist is warranted because the proposed provisions by themselves fall short of providing the necessary guidance for staff to assess the full scope of project impacts in the water and climate arena. In particular, NRDC requests the following additions to Section VII of the Checklist to provide important, consistent direction to staff in

[16] NRDC notes that both the existing and proposed regulations allow for modification of the checklist as is deemed appropriate. 23 C.C.R. §3777(a)(2) (providing for checklist modification).

conducting future environmental review, while bridging the existing gap between project impacts and long-term change in the environment:

VII. GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE – Would the project:

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c) Place substantial additional demands on resources that are projected to be adversely affected by climate change?

d) Bring or promote development into areas that are projected to be adversely affected by climate change, creating a significant hazard to the public?

Thank you for your consideration of these comments. If you have any questions, please do not hesitate to contact me at (202) 289-2394.

Sincerely,

Steve Fleischli
Senior Attorney