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December 14, 2015

The Honorable Joseph Byrne, Chair
California Water Commission
P.O. Box 942836
Sacramento, CA 94236-0001

Subject: Comments on November 24, 2015 Draft WSIP Regulations

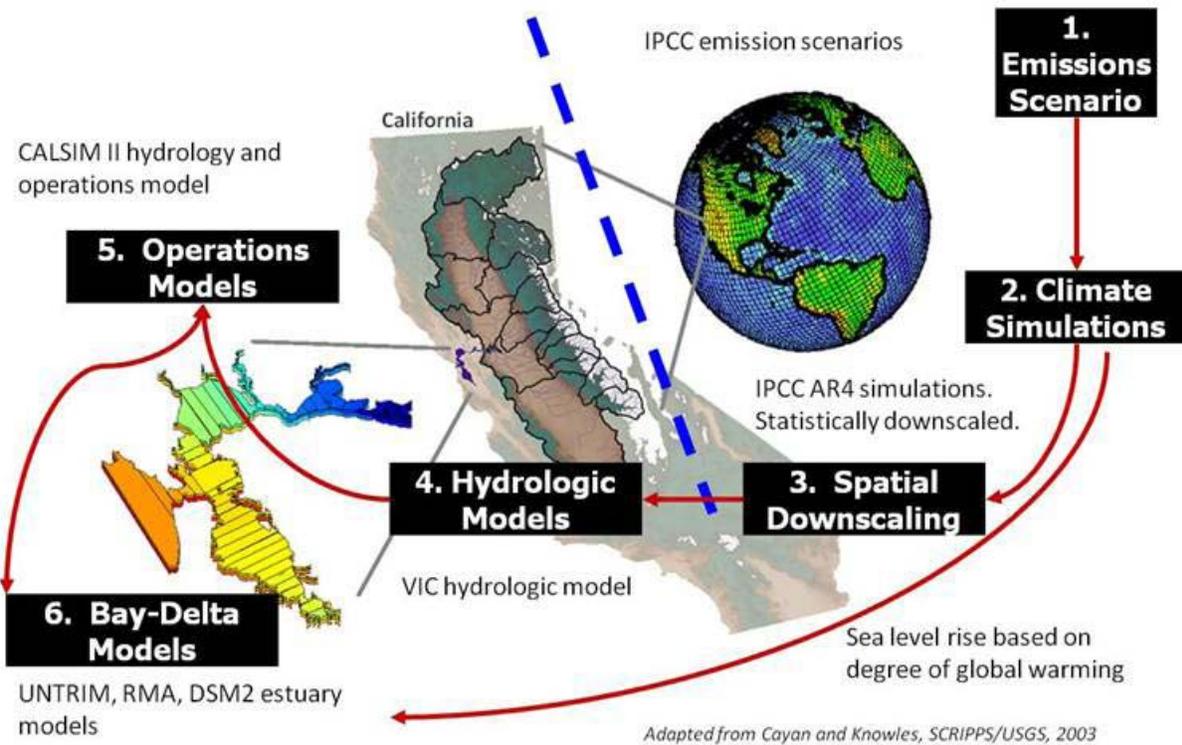
Dear Chair Byrne:

Contra Costa Water District (CCWD) would like to commend California Water Commission (CWC) and staff for all of their hard work in developing the draft regulations. CCWD recognizes the importance of climate change and supports the inclusion of a robust climate change analysis requirement as part of the regulation. However, the language regarding how climate change will be evaluated in the current version of the regulation is problematic.

The most problematic issue from a practical standpoint is that the data and tools required to analyze the climate change conditions specified in the draft regulations are not publicly available at this time. Based on discussions with CWC staff, the climate change conditions specified in the draft regulations are consistent with results from large scale global circulation models released in 2014 as part of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report¹. However, results from global circulation models are only the first step in a long sequence of modeling and technical analyses necessary to evaluate the effects of climate change at the scale of a local water project. The figure below provides a schematic of the tools and the process used to evaluate climate change for the Public Draft of the Bay Delta Conservation Plan (2013)². The BDCP climate change analyses were based on modeling results from the IPCC Fourth Assessment Report in 2007. A similar process would be required to incorporate the most recent update from the IPCC into California water planning. Suffice to say, that each of these technical steps requires time, money, and expertise to develop, evaluate, and fine tune.

¹ <https://www.ipcc.ch/report/ar5/>

² baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Appendix_5A_-_2_-_Climate_Change_Approach_and_Implications_for_Aquatic_Species.sflb.ashx



Adapted from Cayan and Knowles, SCRIPPS/USGS, 2003

Figure 5.A.2.3-1 from the Public Draft of the BDCP released in 2013. Graphical depiction of the analytical process for incorporating climate change into water planning.

Furthermore, the scenarios and tools used to analyze climate change in the BDCP are not based on the same climate conditions as the proposed draft regulations. The table below provides a brief summary of the climate scenarios and assumptions used in the BDCP and those proposed in the draft regulations.

Table 1 Comparison of climate change assumptions between BDCP (based on 2007 IPCC report) and those proposed in draft WSIP regulations.

	BDCP Late Long Term Assumptions	CWC Proposed Future Conditions
Projected Year	2060	2050
Sea Level Rise	45 cm	30 cm
Air Temperature Increase	1-4° F varied by hydrologic basin	4.9° F statewide average
Precipitation Shift	Shift from snowpack runoff in April, May, and June to rainfall runoff in January February, and March	No change

While Commission staff have expressed an intention to complete or with work other agencies and institutions to complete all of the necessary tasks required to incorporate the latest IPCC results into tools suitable for evaluating potential projects in the future, that work will not be completed prior to initiating the rule making process. Given that the climate change tools to evaluate the scenarios specified in the draft regulations do not yet exist and are not currently available, the climate change specifications should not be included in the regulations. We urge you to remove the specific climate change scenario requirements from the regulations and instead include any such technical guidance as part of the Project Solicitation Package in 2017 when adequate new information and tools may be available for project proponents to consider using.

Suggested redline edits to the draft regulations are attached. Your consideration of our comments is greatly appreciated. If you would like to discuss our comments or have any questions, please do not hesitate to call me at (925) 688-8018 or Maureen Martin at (925) 688-8323.

Sincerely,



Marguerite Patil
Special Assistant to the General Manager

MP/MM:wec

Attachment

Suggested Redline Edits for the Draft Regulations Released November 24, 2015.

Article 3. Quantification and Management of Benefits Section 6004. Quantification of Benefits

(a) The applicant shall quantify the magnitude of public and non-public benefits that would be provided by the proposed project. The applicant shall indicate whether a benefit is public or non-public to provide an accurate cost allocation to determine allowable Program funding. The magnitude of benefits shall be calculated using the physical, chemical, or biological change in each benefit resource condition that is created by or caused by the proposed project, less any negative impacts created or caused by the proposed project. To comply with this section, the methods used by the applicant to quantify the benefits shall use the best available science and include the following characteristics:

(1) Define the Without-Project Future Conditions. The applicant shall define the without-project future conditions for surface water and groundwater operations and physical, chemical, biological, economic, and other resource conditions as needed to quantify the potential benefits and costs of the proposed project. The without-project future conditions shall include the infrastructure, population, land use, water use, water operations, laws, regulations, ~~future climate and sea level conditions,~~ and other characteristics relevant to the project that are assumed at a particular year in the planning horizon. The without-project future conditions shall be developed using best available information on existing conditions and projections of reasonable and foreseeable future conditions. Reasonable and foreseeable future conditions that require actions of others or that are structural in nature must be defined sufficiently and documented in feasibility study or environmental documentation in order to be included in the without-project future conditions.

(A) If the without-project future conditions are different from those shown in the applicant's CEQA No Project Alternative required by California Code of Regulations, Title 14, section 15126.6, subdivision(e), the applicant shall describe how and why the conditions are different and the implications of those differences, including the results of any sensitivity analyses conducted.

(B) The applicant's analysis of without-project future conditions shall include any changes to watershed(s) or regions(s) that affect or are affected by the proposed project may create or cause. If the project affects State Water Project or Central Valley Project operations or both, the analysis must include the watersheds where the affected State Water Project or Central Valley Project facilities, as applicable, are located.

~~(C) The without-project future conditions shall represent the "median level of change in future climate and sea level conditions" for California at mid-century (characterized by climate conditions during the 30 years surrounding 2050). The "median level of change in future climate and sea level conditions" are represented by a combination of changes in temperature and sea level for the period of (2036-2065) that differs from the historical period average (1961-1990) by the following amounts:~~

- ~~1. No change in average statewide precipitation;~~
- ~~2. Average statewide temperature of 4.9 degrees Fahrenheit warmer; and~~
- ~~3. Sea level rise of 30 centimeters.~~

~~In the without-project future conditions, the applicant shall include climate change and sea level rise for year 2050. For future conditions prior to 2050, applicants shall interpolate between~~

~~current conditions without climate change and 2050 conditions with climate change. After 2050, climate conditions shall be assumed to remain at 2050 conditions.~~

(D) The applicant shall include in the without-project future conditions information relevant to estimating benefits or costs associated with the proposed project. For proposed projects with planning horizons that extend beyond years covered by existing planning and environmental documentation, reasonable assumptions or extrapolations may be used to estimate the without-project future condition and explained.

(2) Define the With-Project Future Conditions. The applicant shall define and assess future conditions with the project completed as proposed. The with-project future conditions shall be based on the without-project future conditions and include all additions or modifications specific to the proposed project.

(3) Calculating Physical Changes. The applicant shall quantify the physical changes between the with-project future conditions and without-project future conditions that would be created or caused by the proposed project. The calculation of potential physical benefits (i.e., positive or beneficial physical changes) should consider any negative physical changes or impacts, including any non-mitigable impacts. (A) To calculate the physical changes, the applicant shall:

1. Use sequential hydrologic datasets, ~~drawn from the available historical records with~~ sufficient to ~~account for the~~ range of meteorologic and hydrologic variability, including driest and wettest years, and extended droughts.
2. Use a geographic scope, spatial resolution, and time-step that are sufficient to accurately quantify the physical benefits claimed.

~~3. The future with and without project conditions should cover the same temporal and spatial range. 3. Revise the datasets from subsection (3)(A)1. to describe the without project future conditions over the planning horizon, adjusted to reflect changes to the historical infrastructure, population, land use, water use, water operations, agreements, laws, regulations, future climate and sea level conditions, and other characteristics relevant to the project that are assumed at a particular year in the planning horizon. If the applicant determines that an alternative approach is appropriate, the applicant shall provide justification for the alternative approach.~~

4. Document how calculations of expected physical changes are derived and show the relationship between the proposed project, its operations, and the expected physical changes, and public and non-public benefits created or caused by the proposed project.

(8) Sources of Uncertainty. The applicant shall conduct sensitivity analyses to describe how the expected physical changes and public benefits that would be provided by the proposed project might change due to potential uncertainties not included in the without-project future conditions and the with-project future conditions described in Section 6004(a)(1)-(2). (A) Sensitivity analyses, with the best available science, shall include:

1. Climate change and sea level rise.
 - a. Quantitative analysis that includes projected changes in precipitation, temperature, and sea level in California for the year 2050. Projected climate scenarios should represent climate changes at the watershed level that are regionally consistent in magnitude with projections of statewide changes in

Commented [MM1]: Since there are only requirements to analyze the future condition, not the existing condition, it does not make sense to reference the historical record since the climate change analyses proposed may not be adjustments to the historical record but rather new model output.

Commented [MM2]: This information is already included in the definition of the future project condition and the text above states how to compare the future with and without project conditions so this is redundant with the definition of the future without project baseline.

precipitation, temperature, and sea level for the period of analysis. Projected climate scenarios should be consistent with the best available science and guidance provided by the Commission.

2. Future projects and water management actions:

- a. Qualitative or quantitative analysis using future projects and water management actions included in the applicant's CEQA cumulative impact analysis that could affect the public benefits claimed.

~~that represent the "high degree of change toward highly challenging future climate and sea level conditions," for California at mid-century (characterized by climate conditions during the 30 years surrounding 2050). The "high degree of change toward highly challenging future climate and sea level conditions" are represented by a combination of changes in precipitation, temperature, and sea level for the period (2036-2065), that differs from the historical period average (1961-1990) by the following amounts:~~

- ~~(i) Average statewide precipitation of 11.4 percent drier;~~
- ~~(ii) Average statewide temperature of 5.0 degrees Fahrenheit warmer; and~~
- ~~(iii) Sea level rise of 61 centimeters.~~

~~b. Discussion and supporting quantitative or qualitative analysis to disclose how potential changes in precipitation, temperature, and sea level in the region(s) that supply water to the project and receive water from the project might reduce the public benefits claimed and how, if reduced, operations of the proposed project could be adapted to sustain public benefits. Potential changes should represent climate changes at the watershed level that are regionally consistent in magnitude with projections of statewide changes in precipitation, temperature, and sea level for the period (2070-2099), that differs from the historical period average (1961-1990) by the following amounts:~~

- ~~(i) Average statewide precipitation of up to 15 percent wetter and up to 6 percent drier;~~
- ~~(ii) Average statewide temperature of at least 5.3 and up to 8.8 degrees Fahrenheit warmer; and~~
- ~~(iii) Sea level of at least 61 and up to 105 centimeters.~~