

The SHIBATANI GROUP, INC.

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*Climate Change Hydrology, Water Supply Strategic Planning, New Reservoir Development
And CVP/SWP Operational Compliance for California's Water Industry*

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DELIVERED VIA U.S. MAIL

The Hon. Joseph Byrne, Chairman
California Water Commission
State of California, Resources Building
1416 Ninth Street, Room 1131
Sacramento, California 95814

**Re: California Water Commission
Public Benefits – New Regulations and Guidelines**

Dear Chairman Byrne:

With the recent passing of the Water Bond and the likely re-initiation of work by the Water Commission to finalize its Regulations and Guidelines regarding public benefits for new water storage projects, the following comments are provided. Many of these comments and themes have not changed from earlier letter(s). Accordingly, this current submittal simply reiterates key hydrological considerations, but in a more prescient context. As project applicants begin (or continue) preparing their various environmental analyses (in support of their ultimate public benefits claims), these and other key hydrological issues should be prioritized for consideration. Addressing these issues would effectively serve as the early guidance of the Water Commission considered essential by many proponents today.

1. Uniform Hydrological Baseline (Current Condition)

Project applicants must use a uniform and consistent hydrological baseline among and between each other. Without such commonality, it will be virtually impossible for reviewers of these documents to decipher which hydrological baseline (and the modeling that generated the public benefits) are biased, relative to the next document. Models can skew results as an inadvertent outcome of their inherent differences. This would result in a classic *apples and oranges* comparative problem for the Water Commission. We are not interested in assessing model differences, but the differences in claimed public benefits between projects. For this reason, it is important to set one consistent hydrologic baseline for the current condition since this would represent a uniform *starting point*; the baseline from which all applicants (through their modeling) would derive their claims for public benefits.

All facets of this hydrological baseline must be standardized in this baseline (e.g., upstream inflows, resops, application of instream flow standards, assumed accretions/depletions, selected year, etc.). This must apply to not only upper basin inflow modeling, but also all facets of CALSIM II, Reclamation's river and reservoir water temperature modeling, early life-stage salmon mortality modeling, Delta water quality modeling, etc. A common hydrologic baseline for the current condition would ensure that all applicants would be starting from the same point. The Water Commission would have greater confidence that the differences in claimed public benefits between the projects represent just that, and not the differences between models and their developed baselines.

Recommendation:

The Water Commission to identify a common and standard hydrologic baseline for the current condition.

2. Forced Climatic Scenario (Future Condition)

Project applicants are proposing new storage initiatives that will likely take years to plan, assess, construct, and implement. The future scenario (e.g., 2020, 2025, 2030 and beyond), therefore, holds significant importance. Given that reality, forced climate changes, continuing into the future, must be acknowledged. In fact, all California state agencies already now accept climate change as do the primary federal water agencies across the U.S. The Water Commission should establish a future climatic scenario for use by all applicants. Identifying one future condition baseline will standardize the timeframe and hydrology for the future so that all applicants would be deriving their claimed benefits using a common future boundary condition.

Unlike the current condition, the number of possible future scenarios is quite wide with over 80 potential GCM ensembles, several archival sources (e.g., CMIP3, CMIP5), GHG loading scenarios (e.g., A1, B1, etc.), numerous methods to downscale gross scale precipitation and temperature input into regional and local hydrology, and actual runoff generating models to choose from. It is not so important which of these various permutations is selected (i.e., each have their own demonstrable advantages), but rather, that one single future climatic scenario be selected for use by everyone.

Recommendation:

The Water Commission to identify a common and standard future climatic scenario for the future condition.

3. Future Cumulative Scenario (Future Condition)

Under CEQA, a future cumulative condition is required. This includes all reasonable and foreseeable actions. Accordingly, for each project applicant, they will need to determine which of the many likely *other* new storage projects must be included in their analysis. Normally, this responsibility and its implications would reside with the Lead Agency (i.e., project applicant); there is little concern on whether their future condition is different from others. However, under the Water Commission ranking and selection process, this takes on new meaning. Without a consistent future cumulative scenario (future condition) between project applicants, the comparative platform for the Water Commission to assess public benefits between projects will be compromised.

Recommendation:

The Water Commission to identify a common and standard future cumulative condition and 1) make the assumption that all applicant projects are reasonable and foreseeable and, therefore, included in the future condition, and 2) request that under a future condition and future no-project analysis, project applicants will be able to “decouple” its benefits, relative to the current condition, as verification of its own project benefits.

4. Standardized Metrics for Public Benefits

Numerous metrics that define public benefits have been discussed over the past several years. While the law identifies broad categories of eligible public benefits, it does not provide the range of hydrologic metrics typically assessed and generated through hydrologic modeling; and that range is quite expansive. If we take ecosystem benefits as an example; are we talking about flows, habitat improvement, water temperature, species recovery, etc.? Drilling down further, if we look only at flows, what specifically is being referred to: river reach, WY type, specific month, length of flow-related habitat improvement, etc.? And how does one weigh the benefits derived from one river to another, in the context of WY type and specific river reach?

The following very simplistic example best illustrates this challenge:

Project "A" (upper Sacramento River storage) claims:

- ◆ Sac River flows at Freeport increased by 10% for May in wet years
- ◆ Delta inflow increased by 3% for May in all years
- ◆ Water temperature at Keswick decreased by 0.3° F in June during normal years
- ◆ American River flows increased by 5% at Nimbus in the June-August period for dry years

Project "B" (upper American River storage) claims:

- ◆ American River flows at mouth increased by 8% in above normal years
- ◆ Sac River flows at Bend Bridge increased by 2% for April in all years
- ◆ Water temperature benefit of 0.5° F at the Nimbus Fish Hatchery
- ◆ X2 position improved by 0.1 km during summer months in most normal years

Based on the above claims, derived from hydrologic modeling, which Project appears to provide the greater ecosystem public benefit related to flow and how much better is it than the other?

Recommendation:

The Water Commission to identify a comprehensive listing of public benefits for each category of hydrologic metric.

5. Consistency with SWRCB Filed Petitions

New water storage projects will, in most cases, involve the applicant filing a new water right petition before the SWRCB for storage and/or diversion rights. As part of the SWRCB water right review process, a Water Availability Analysis will be generated by the applicant. This information will likely form the basis for the project applicant's claims before the Water Commission that indeed, the amount of water, and its timing availability (i.e., seasonally and inter-annually) will be sufficient to meet their project needs. But that information will exist both pre-protest and certainly pre-Hearing of their requested water right.

Will the Water Commission assume that those new water rights will be fully granted by the SWRCB? If not, would it apply some sort of reduction factor or impose seasonal and/or volume constraints on its own assessment(s) before the SWRCB has adjudicated the water right request? And if so, then on what basis would the Water Commission make those determinations? The easiest approach would be for the Water Commission to simply await final adjudication by the SWRCB; but that could take a decade or more given the backlog of water right request on file and waiting processing (not to mention the water right Hearings themselves).

Recommendation:

The Water Commission to thoroughly discuss this issue at possible public working group meetings (see below); this requires further deliberation between project applicants, affected public trust resource agencies, and public stakeholders.

6. Public Input Recommendation

Given the complexity and importance of these issues, it is recommended that the Water Commission consider holding a series of public working meetings to thoroughly consider and deliberate these issues. The timing for any such public dialogue certainly appears ripe, as the State heads into another drought year, the public has accepted the Water Bond, new water storage is now accepted by the public as essential, and many project applicants have already begun work towards developing new storage (e.g., see NID's water right filing for 222 TAF from the Bear River as part of its Parker Dam and Reservoir Project).

Thank you for the opportunity to provide these comments. I am confident that collectively, the Commission, its staff, resource agency experts, and the public can continue to work closely together to develop a highly efficient, equitable, and transparent Regulations and Guidelines document along with an effective screening and ranking process.

As always, please do not hesitate to contact me if you have any questions or require further enhancement.

Very sincerely yours,

The SHIBATANI GROUP, Inc.

A handwritten signature in blue ink, appearing to read "R. Shibatani".

Robert Shibatani
CEO & Principal Hydrologist

RS/sj

cc: Sue Sims, Executive Director, California Water Commission