



***SUMMARY OF COMMENTS ON:***

**“SCOPING DOCUMENT: WATER QUALITY CONTROL POLICY ON THE USE OF COASTAL AND ESTUARINE WATERS FOR POWER PLANT COOLING”**

***FROM:***

**SWRCB EXPERT REVIEW PANEL**

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***Panel Members:***

**Sarah Abramson – Heal the Bay**

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## **Have current, statewide and individual power plant impingement and entrainment impacts been correctly estimated?**

### Majority

Not always clear that impingement and entrainment data are current. “Current” needs to be better defined. Impingement and entrainment data need to be separately presented and discussed. Data need to be standardized (e.g., design flow/year?) and justification provided for standard used.

### Other

- ▶ Why consider zooplankton?
- ▶ Impacts should consider all species that provide a unique ecosystem baseline.
- ▶ Impingement should be based on normal operations + heat treatment.
- ▶ Need to consider cumulative impacts.
- ▶ Assumption that impacts to adult populations scale with number of organisms entrained is questionable. Need plant-by-plant impact assessment.
- ▶ Impacts are worse case and appear to be based on a conservation precautionary principle. If based on this, need to so state and justify.

## How will baseline be defined for Track II?

- ▶ Three members: Baseline should be design flow, not actual flow, and existing technology above EPA “calculation baseline” and flow reduction should be counted toward compliance.

EPA “calculation baseline” = Intake at shore, opening at or near water surface, with  $\frac{3}{4}$  inch mesh traveling screens oriented parallel to shore.

- ▶ Baseline should be actual flow and impacts assessed relative to a reference site to avoid using a depleted environmental baseline.
- ▶ Baseline should be based on legal interpretation.
- ▶ Baseline options not defined well enough to comment on.
- ▶ If do not count flow reduction and technology already used that is above the EPA calculation baseline, Track II will be impossible to achieve using existing technology.
- ▶ How will current restoration (compensation) at some plants be used to establish baseline?
- ▶ Plants operating at <15% should be exempt from further compliance.
- ▶ Flow reduction should not be allowed as compliance for Track II.

## How will baseline be defined for interim restoration?

- ▶ Three members: Baseline should be defined as actual flows (= design flow minus existing controls and flow reductions).
- ▶ One member: A legal question.
- ▶ One member: Reference sites are needed to determine baseline.
- ▶ One member: Baseline not well enough defined and important questions not considered sufficiently to determine baseline.

## **Are proposed interim controls effective and feasible to prevent mortality and reduce takes of wildlife?**

### ***Tetrapod Exclusion Screens:***

#### Majority

Such screens may not be effective and/or feasible at many plants.  
Tetrapod impingement is not a significant impact given low numbers impinged.

#### Other

- ▶ This is primarily a political issue.
- ▶ Such impingement is a plant-specific, not generic issue.
- ▶ Screens might increase impingement and result in higher mortality.
- ▶ Clogging, especially during storms, could cause plant shut-down.
- ▶ Why 4 inch mesh size?
- ▶ The NMFS, not the SWRCB, should regulate such impingement.
- ▶ Screens should be used, and maintenance described and documented.

## Interim controls?

### *Flow Reduction*

#### Majority

Flow reduction should be an interim control option.

#### Other

- ▶ Variable speed pumps are a reasonable flow control option.
- ▶ 10% is arbitrary. Plants vary in their need for flow when not generating electricity. Should set limits on a plant-by-plant basis.
- ▶ What is the basis for allowing <10% of permitted flow if plant is not generating electricity for two or more consecutive days?
- ▶ If allow as interim compliance, need to specify temporal variation to avoid seasonal impacts.

## Interim Controls?

### *Restoration*

#### Majority

Restoration can be a reasonable possible interim “control,” but more details are needed about how restoration would be scaled and how it would be done using the Habitat Production Foregone method in habitats other than estuaries.

#### Other

- ▶ Two members: Given difficulties with determining restoration for power plants, it would be better to impose a “Mitigation Fee” based on cooling water used, and establish a Restoration Fund Committee to decide how to best use the funds.
- ▶ Two members: More detail needed to adequately respond to the question.
- ▶ Given the time to go through the restoration process relative to the proposed compliance schedule, restoration may turn out to be an addition to compliance rather than an interim measure.
- ▶ If restoration is scaled to fully offset impacts it would represent double compliance when Track I or Track II is achieved.

**For Track I, are adverse impacts associated with conversion to closed-cycle cooling adequately considered?**

Majority

No they have not. The energy penalty may be underestimated (especially during summer), there is no estimate of the actual increase in air emissions, no discussion of noise, no discussion of the amount of land required for dry cooling, and no discussion of the potential for heat trapping during inversions.

SWRCB should have appropriate experts determine and evaluate these impacts.

## **For Track II, should the proposed policies require monitoring appropriate to determine percent reductions in mortality?**

### Majority

Yes, but determining compliance does not necessarily involve monitoring. Assessing reduction in mortality depends on how reductions were achieved. For example, if achieved by technology, verification that the technology works is required, not monitoring.

### Other

- ▶ If compliance is via flow reduction there is no need for monitoring.
- ▶ The question is moot relative to technological compliance for Track II because there is no existing technology that can achieve compliance.

## **Should restoration projects be monitored for compliance?**

### Majority

Yes they should.

### Other

- ▶ Any monitoring done via a Mitigation Fee approach should be the responsibility of the Restoration Fund Committee.
- ▶ It is impossible to discuss monitoring without knowing the details of individual projects.
- ▶ Better to focus on compliance not using restoration.

## **Should there be remediation if restoration does not comply?**

- ▶ Two members: Yes there should, but a more detailed response is impossible because of lack of detail.
- ▶ One member: This is a policy issue.
- ▶ One member: No if restoration is only interim, and inappropriate if use a Mitigation Fee approach (except as specified by Restoration Fund Committee).
- ▶ Should focus on compliance other than via restoration.