

## USEFUL QUESTIONS FOR INDEPENDENT REVIEWERS OF PHASE 2 DRAFT SCIENTIFIC BASIS REPORT

For each water quality objective (or, if applicable, period of time the objective might control) that is intended to protect or benefit fish and wildlife beneficial use(s):

### Understanding the Science in the Context of all Factors Affecting the Beneficial Use(s)

1. Does the report adequately present the scientific basis in the context of the species' full life cycle? If not, what elements of the species' life cycle is the report lacking?
2. Does the report discuss the stressor(s) involved, how the stressor(s) involved affect a biological mechanism(s), and the basis (science, conceptual model, hypothesis) for assuming a relationship between the stressor(s) and the mechanism(s)?
3. Does the report adequately identify uncertainties in the science and the likelihood the benefit(s) will be realized (uncertainties could include, but should not be limited to, statistical uncertainties and uncertainties in future environmental conditions)?
4. Does the report identify testable conceptual models or hypotheses that would enable investigators to better understand the uncertainties? If not, what are the testable conceptual models or hypotheses that can be identified from the scientific literature?
5. Does the report identify the anticipated result(s), both qualitative and quantitative?
6. Does the report adequately identify the monitoring program needed to evaluate the expected outcomes?

### Scientific Information Relied Upon

7. Does the report reflect current scientific information/lessons learned from prior management actions?
8. Does the report adequately identify the science relied upon and any science that may contradict the findings or conclusions presented? If not, what scientific report(s) should be cited?

### Presentation of Science to Inform Decision

9. Is there an alternative methodology/approach that would provide similar levels of benefit/ protection or greater certainty with less cost to water resources?
10. Does the report incorporate adequately the structured decision-making required to support development of adaptive management and necessary monitoring to support adaptive management?