

From: Steve Culberson, Interagency Ecological Program Lead Scientist
Sent: 11/9/2021
To: Delta Independent Science Board (disb@deltacouncil.ca.gov)

Comments on: Review of the Monitoring Enterprise in the Sacramento – San Joaquin Delta (DRAFT)

General Comments:

This is a very ambitious (and successful) review of many activities and efforts. The report is well-written, digestible, logical, and is easy to follow and understand. This review should provide a foundation for re-evaluating and revising the governance and coordination of environmental monitoring efforts in the Delta, should such a revisioning be conducted in the near term.

There are so many potential monitoring questions to provide answers to that limitations on what to aspire to collect information about is necessary prior to outlining the general terms of a monitoring enterprise. The larger Estuary/Delta governance community has not yet attempted this as a coordinated effort.

Understanding what management options are available to decision-makers is also a largely undefined parameter space. Too many assumptions about what management objectives are available result in confusion about what options are available to assess what policy alternatives.

Additionally, the complications of understanding ecological sampling (and the inherent signal-to-noise issues) make for uncertain use of environmental data in management and decision-making venues.

The review concentrates on larger-scale issues and governance, which is warranted. However, the lack of comments and suggestions for how to implement a resource-limited data collection enterprise in service of environmental management is telling. I would welcome some discussion of how to implement an effective monitoring enterprise given that most managers are not continuously engaged in environmental management and interpretation of ecological data streams as their primary concern. Conversations supporting environmental management are infrequent, truncated, and tend to have long lapses in exchange of information.

Specific Comments:

Page 13: The descriptions of steps imply only singular action or imperative. What of multiple asks of the data collection enterprise? Do policy options admit the vagaries of ecological process and change through time?

Page 14: By whom and for whom is the “learning” performed? Is there an assessment of the effectiveness of such “learning?” We don’t often ask managers what they know about the systems they manage.

Page 15, second paragraph: Our current social/scientific system does not support the type of communication described here. Is this a failure of science or of society?

Page 17, first paragraph: This is well-stated. The current enterprise tends to conflate each/all of these ideas and therefore lacks clarity about which to pursue, how, and when, and by whom, over what time horizon.

Page 24, third paragraph: probably the core of the review: "...there is not a consolidated description of the management context, decision-making needs, or specific questions for adaptive management in the Delta."

Page 32, third paragraph: These responses are easy to assert without querying further. What are the specifics of each claim? When I have dug into "complaints," I have often found that a misunderstanding about the underlying justification for a particular sampling program or proper use of resulting data is actually responsible for the dissatisfaction of the sampling programs rather than simply "not serving the needs" of a particular stakeholder.

Page 32, last paragraph, last sentence: Can the ISB entertain a discussion about an example where the existing monitoring program is not "nimble" enough? The details of the discussion might be very informative.

Page 34, second paragraph: I wonder if such a "comprehensive conceptual model" would be possible – meaning workable, tractable, and deliverable.

Page 35, second paragraph: Agreed in the main with the point being made here, but is the current TMDL approach a useful way forward?

Page 37: There is no existing mandate to explicitly monitor non-native species, is there? We do this as a by-product of samples collected for other mandates. This is a common way of collecting ecosystem data in our estuary (perhaps not the best way, however....).

Page 40, third paragraph: This needs unpacking. I don't know if the judgement here is meant to be supportive or critical.

Page 41, second paragraph: Is there a mandate to monitor benthic invertebrates?

Page 48, second paragraph: Any suggestions for how to structure resource allocations for future environmental sampling technologies? Program managers are notoriously reluctant to earmark funds for techniques that may not yet exist or be widely already deployed....

Page 56, second paragraph: identifying take limitations as a key impediment to effective sampling seems questionable from my perspective. I have been involved in oversight of scientific and incidental take of endangered species for IEP and have not been aware of any formal refusal to extend take coverage to any activity covered under the IEP program of sampling activities.

Page 69, first paragraph: Does this paragraph effectively describe the role of the DSP Lead Scientist?

Page 70 (Recommendation B): When the mandating agencies do not publish performance goals for the monitoring effort, what then is an effective monitoring enterprise solution?

Page 70, third to last line (“can be co-located”): isn’t this co-location of samples already largely true?

Page 71, second paragraph: What level of performance will be requested by the ESA agencies?

Page 72, second paragraph: Where lies (what agency) the responsibility of this conceptual model?