From: Darcy Austin
Sent: Friday, November 12, 2021 6:39 PM
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RE: Feedback on Delta Independent Science Board's Monitoring Enterprise Review

Dear Edmund,

On behalf of the State Water Contractors, I am submitting informal comments on the Delta Independent Science Board draft review on the Delta monitoring enterprise. We appreciate the opportunity to comment. Overall, we felt this review did a great job summarizing issues and providing recommendations, and we have provided detailed comments for consideration. We also know it will be a challenge to have these recommendations implemented, so we urge the Delta Independent Science Board to work with the agencies and stakeholders to explore ways for the recommendations to be incorporated into current practices. We note that this could be facilitated through the monitoring assessment effort at CAMT or other venues such as DPIIC.

If you have any questions about the comments, please don't hesitate to ask. Thank you again for the opportunity to provide comments.

Sincerely,

Darcy

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Delta Independent Science Board Monitoring Enterprise Review Comments – SWC

Overall comments

Overall, we are impressed at the level of attention given to this review as well as its organization and the specificity and actionability of the recommendations provided. The framing of the five best practices and 3 big moves is structurally effective for digesting and understanding the recommendations. There are several comments below that recommend more information in the summary of Component 1 reviews that led up to this report. The summary of Component 1 reports does a good job at explaining what was done in these investigations but often stops short of providing a succinct summary of the results and takeaways, and we recommend adding this to the Component 1 overview. The graphics and tables throughout the report and the appendices are useful and effective at synthesizing key information. We agree with many recommendations outlined in the review, such as the need to diversify funding sources and the need for a more coordinated and integrated monitoring program.

The SWC supports the three "big-move" recommendations for the monitoring enterprise and agrees these recommendations are important for building a stronger and more effective monitoring enterprise. We recognize the challenge in implementing the recommendations, but we urge the Delta Independent Science Board (Delta ISB) to continue the dialogue with the agencies and stakeholders to explore how the enterprise can move forward on the recommendations. This could be facilitated through the monitoring assessment effort at CAMT or at other venues such as DPIIC.

Specific Comments

P 4 – "As part of this review, 157 unique monitoring activities were catalogued into an inventory. Of the 157 monitoring activities, 62% (97) are influenced by a management driver, such as a biological opinion or incidental take permit, and 44% (69) meet fundamental attributes that represent high data quality, such as publicly accessible data, data collection guided by a monitoring design or sampling protocol, and reliable QA/QC procedures."

> Organizationally, this statistic may fit better later in the executive summary of the report in order to have the proper context or definitions to understand the relevance of this statement. The desirable outcome here is unclear. Is the Delta ISB recommending that 100% of monitoring activities be influenced by a management driver and meet fundamental attributes of high data quality? Clarify if the target is achieving 100%. Consider moving to after the next paragraph or incorporating within that paragraph for better flow.

P 4 – Discrepancy between reference to 34 questionnaire respondents and 23 questionnaire respondents. Please clarify if the reference to 23 respondents is the number that responded to the specific question about whether the information collected from monitoring is serving the needs of decision-makers.

P 4, 29 to 30 – Questionnaire Analysis – We recommend expanding on the sample size of survey participants (34 participants out of roughly 3,000 people that it was distributed to). Was there decent variety in the participant's affiliations? What points of view or portions of the Delta scientific community do you think were adequately captured or not (this was addressed somewhat on p 69 but would be good to bring up the subject here as well)? Maybe include recommendations for how to increase sample size in future efforts.

The results from the surveys indicating that 70% of the respondents found that the monitoring did not meet the needs of management should be just the beginning of the discussion. It would be helpful to follow-up on that topic and identify the reasons that survey respondents did not think the monitoring meets management needs.

P 5 to 7 – It is exciting to see such explicit recommendations and the clear direction given on what to do with these recommendations (i.e., the call to formally adopt them into individual monitoring programs). The distinguishment between these and the three big moves is also clear and effective. In addition, the steps to incorporate the inventory into the Data Science Tracker in 2022 shows positive progress that the Delta ISB and Delta Science Program are "walking the walk" when they declare the importance and urgency of improving the monitoring enterprise.

P 10 – The adaptive management framework has been attempted in the Delta multiple times. Some limitations on its implementation have been well documented by the Delta ISB efforts in the past. How would you recommend addressing those limitations for the implementation of a monitoring program?

P 17 – "In adaptive management programs elsewhere (e.g., Missouri River, Fischenich et al. 2018), such a distinction enables decision makers to focus on those uncertainties that are most relevant to them and scientists to focus on priority research efforts."

> Are there any lessons learned from the Missouri River as a case study on how we can better distinguish management uncertainties and scientific uncertainties in our monitoring?

P 20 – "Results from this literature review are summarized in Nelitz et al. 2019."

> Consider adding a one sentence synthesis of the takeaway from the results.

P 21 – "However, it is widely known that the Delta is strongly influenced by upstream and downstream influences"

Redundancy of word ‘influence’.

P 27 – “…to qualitatively identify potential opportunities to improve efficiency and reducing redundancies, with a focus on considering improvements to data management, sampling methods/approaches, and monitoring design.”

We suggest adding a summary of the potential opportunities identified.

P 28 – “What resources are being dedicated to monitoring?”

We suggest characterizing the findings about this question in a one sentence takeaway

P 31 – “Synthesis Findings”

Change header “Synthesis Findings” to “Synthesis of Findings”?

P 33 – “Figure 3 provides a detailed framework for designing…”

When referring to Fig 3, recommend including page number since one has to scroll many pages back to find it

P 45 – Change “educe” to “reduce”

P 50 – Figure 9 – difficult to read the white text with black outline

P 54 – The report states that 53% of science expenditures was spent on monitoring. It would be helpful to compare that to monitoring costs in other systems.

P 55 – Figure 12 – Figure not clear. Does mentions of Coordination mean that there was mention of sufficient or insufficient coordination?

P 56 – “Others acknowledged that funds are currently allocated primarily by the California Department of Water Resources and the United States Bureau of Reclamation – and thus there is a need for funding sources that are not tied to the water projects (e.g., the State general fund).”

We strongly agree with this need.

P 57 – “Relatedly, permits with more specific guidance on how to achieve compliance could incentivize coordination…”

We agree that permits should specify the goal for compliance monitoring but believe that permits should leave the means open for the permittee to determine, as this would

more effectively allow for adaptive management if monitoring is not achieving the goal or as new technologies are developed.

P 59 – For the Best Practices, it would be helpful to provide an example using one of the fish surveys to demonstrate how a survey monitoring plan would adhere to the six steps. Please take us through the steps with a tangible example.

P 60 – Monitoring closely tied to questions of interest to managers

The only advice provided on how to link monitoring with management goals is for improved communication between scientists and managers. It would be helpful to include additional tools and recommendations and more specific communication practices in order to better link monitoring with management goals. We suggest making this section more in line with the level of detail given in #2 Stakeholder Engagement. Some of the ideas on p 75 may be helpful to include here.

P 70 – "For instance, there is limited effectiveness monitoring, which only makes up 3% of monitoring activities in the inventory"

We suggest defining or pointing to earlier definition of "effectiveness monitoring". We see this as a key finding and support the recommendation to "encourage investments in a reimagined monitoring design for priority needs that are of fundamental importance to decision-makers and adaptive management across the Delta."

For the recommendation to "Reimagine monitoring designs that are guided by priority management-informed science needs and a system-wide conceptual model," it would be helpful to elaborate on what is meant by a "system-wide conceptual model" and why the Delta ISB thinks it does not currently exist.

P 75 – "In addition, there is value in looking at other programs within California, including the San Francisco Bay Regional Monitoring Program, the San Francisco Estuary Project, the Southern California Coastal Water Research Project, and Southern California Wetland Regional Monitoring Program."

Support the idea of looking into these programs for implementable ideas, especially SF RMP and SFEP

P 76 to 78 – Next Steps

Include in this section other next steps that are mentioned earlier in the report such as the coordination and melding of other monitoring review efforts such as the steelhead monitoring plan, IEP monitoring review, and CAMT efforts, as mentioned on p 45.

P 78 – “opportunities for public participation and stakeholder engagement”

> The monitoring workgroup mentioned in the Next Steps section should be expanded from how it is currently in Delta Science Plan Action 3.4 as an interagency working group, to include membership from stakeholders. Key stakeholders should be represented as working group members rather than engaged from the outside providing comments on already formed ideas.

P 107 – If possible, we suggest adding monitoring by the vector control districts to the list of monitoring programs.

P 133 – Clarification that herbicides are pesticides so when mentioning herbicides and pesticides just use pesticides.