

Meeting Summary

Day 1: September 12, 2013

1. Boat Tour

On September 12, 2013, the Delta Independent Science Board (ISB or the Board) took a boat tour of the northeastern portion of the Delta. The meeting was called to order at 9:30 a.m. by Tracy Collier, Chair of the ISB. The day's events began on shore with short talks by Jon Burau, U.S. Geological Survey, Chris Enright, Delta Science Program, and Curt Schmutte, consultant to the Metropolitan Water District representing the Lower Yolo Ranch project.

Six members of the Board were present: Brian Atwater, Tracy Collier, Jay Lund, Richard Norgaard, Vince Resh, and John Wiens.

Delta Science Program (DSP) Staff in attendance: Marina Brand, Lauren Hastings, Rainer Hoenicke, and Joanne Vinton.

Delta Plan staff in attendance: Taryn Ravazinni.

Three members of the public were present: Bret Milligan, U.C. Davis landscape architecture professor; Melinda Terry, North Delta Water Agency and Central Valley Flood Control Association; and Jim Allan, Solano County Agricultural Commissioner.

After the talks were completed and questions answered, all participants boarded the two boats provided by the U.S. Geological Survey. Locations that were visited/observed from the boats included Liberty Island, Little Holland Tract, parts of Cache and Lindsey sloughs, Prospect Island, and Lower Yolo Ranch.

Once completed, tour participants disembarked and engaged in a short discussion of what was viewed and discussed during the tour.

The meeting was adjourned at 3:30 p.m.

Day 2: September 13, 2013

1. Welcome & Introductions

The meeting was called to order at 9:05 a.m., September 13, 2013, by the Chair of the Delta Independent Science Board (ISB or the Board), Dr. Tracy Collier. Five members of the Board were present: Brian Atwater, Tracy Collier, Jay Lund, Richard Norgaard, and John Wiens. Two members participated by phone: Liz Canuel and Vince Resh.

Collier disclosed that he will be the Chair of a panel on the use of biomarkers and contaminant exposure in the Delta for the Interagency Ecological Program. He discussed the appointment with the Delta Stewardship Council attorney, who determined that this activity would not constitute a conflict of interest.

Delta Science Program (DSP) Staff in attendance: Marina Brand, Lauren Hastings, Rainer Hoenicke, and Joanne Vinton.

2. Delta Stewardship Council (DSC) Executive Officer's Report

Chris Knopp, DSC Executive Officer, told the Board that the DSC is moving from planning to implementation of the Delta Plan. He said that the DSC is also getting ready to review the public draft of the Bay Delta Conservation Plan (BDCP) Environmental Impact Report/Statement (EIR/EIS). He would like the ISB to comment on the linkage of the adaptive management aspects of the BDCP, biological opinions, and the Board's upcoming fish and flows review and provided a [series of questions](#) that he would like to be considered.

Board members said that adaptive management is experimental. It is possible to sketch out a framework, but real world situations are more complex, and steps taken may not be reversible. In real world applications, scientists need to adaptively manage the adaptive management framework. Also, monitoring is frequently inadequate. For example, the Yolo Ranch restoration project does not intend to conduct pre-project monitoring to establish a baseline.

Knopp said that permits must be obtained to do scientific experiments, and the permits can take as many as five years to obtain. Permits for conducting experiments in the Delta should be streamlined. Environmental safeguards for streamlined permits could include limiting the size of the project, the places where they occur, and perhaps could be approved by a respected body, such as the Board. Other possibilities are developing programmatic plans where agencies combine their permit applications or organizing teams that do nothing but obtain permit approvals. Knopp prefers a legislative exemption for adaptively managing projects because obtaining permits takes so long. These options are being considered by the DSC. Projects need to be evaluated in a timely way because the Delta is in crisis.

Hoenicke stated that the Department of Fish and Wildlife recently received a grant to bring together monitoring and assessment approaches for two major regulatory programs - the Clean Water Act and the Endangered Species Act. The project is funded by the U.S. Environmental Protection Agency Region 9 under section 4(b)(3) of the Clean Water Act. If successful, this combined approach could result in an easier and faster permitting process with an assurance of monitoring. He will keep everyone informed.

Monitoring (pre- and post-project as well as during implementation) is not yet considered essential by many permitting agencies. However, the Board feels monitoring is essential in order to conduct adaptive management. The nine-step adaptive management framework described in the Delta Plan is the most extensive version of the process, but all steps might not

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be needed depending on the project. A framework for adaptive management options should be developed and the options explored and articulated now rather than later.

Knopp then explained the role of the [Implementation Committee](#) and new staff member Taryn Ravazinni. The committee will meet every six months to discuss tasks completed by work groups convened to address specific issues.

Knopp said that public drafts of the BDCP will be released in early November, and the BDCP Draft EIR/EIS will be released shortly thereafter.

Public Comment

- Val Connor, State and Federal Contractors Water Agency – Connor said that the Collaborative Adaptive Management Team (CAMT) is at a crisis point. The group has 12 members and two facilitators who are trying to bring people together in a collaborative manner. The group agrees on the need for best available science and they are trying to coordinate with the Delta Science Plan. She would like Hoenicke and Hastings to continue to be involved. She would like the Board and the DSP to look closely at what CAMT is doing. Communication and trust-building are needed. A tool is being developed to report on CAMT activities. Connor also explained that delays on restoration in the lower Yolo Bypass were caused by working out credits rather than getting permits. She sees the Lower Yolo project as a pilot not only for restoration but also for how everyone can move forward in the future.

Lund said that the Lower Yolo project is an example for the need for the DSP. There is still chaos and this is an opportunity to fill the void. He does not consider an incremental approach workable or acceptable.

3. Boat Tour Recap

Chris Enright, DSP, summarized the boat tour taken on September 12. The trip was in the northeast part of the Delta: the Cache Slough complex, Liberty Island, and Lindsey Slough, all of which are important areas proposed for restoration. The net flow around Lindsey Slough is toward Solano County's North Bay Aqueduct. This intake siphons off water but more importantly, water that contains the nutrients, phyto- and zoo-plankton needed to sustain the lower food web. Curt Schmutte, a consultant to the Metropolitan Water District working on the Lower Yolo Ranch project, stated that he is discussing relocating the North Bay Aqueduct intake with a representative from Solano County. Relocation of the intake would affect Prospect Island and Lower Yolo Ranch.

Modeling was a major topic during the tour. Jon Burau, U.S. Geological Survey (USGS), discussed a number of opportunities that require more modeling support than is currently available.

The USGS is engaged in monitoring activities in the southern portion of Liberty Island. This site experiences a lot of wave energy, is relatively deep, is turbid, and supports a population of delta smelt. Miner Slough is connected to the Sacramento River and is much less turbid. Restoration of Prospect Island is expected to result in a net export of food. The Toe Drain and Stair Step canal (the northern boundary of Liberty Island) support a beautiful one-tree deep riparian area. Tules have been planted successfully although they are slow to spread laterally. The tour also visited the Lower Yolo Ranch project, where the cost of restoration and permitting is controlling the type and amount of scientific exploration that can be done. Finally, the tour visited a Trust for Public Lands' property, which is a speculative mitigation project for selling credits.

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ISB members appreciated seeing part of the Delta. Wiens said it is a challenge and necessity to reconcile restoration in the abstract with actual restoration. Resh noted that the tour visited the best parts of the Delta, so a trip to the south Delta would be good. Lund enjoyed having members of the public on the tour and hearing the different perspectives. Many unplanned changes—flooding islands—have occurred in the Delta and have brought negative and positive outcomes. Collier said that unintended flooding has gotten around permitting, and that permitting needs to be streamlined. He also commented on the dire lack of monitoring.

Public Comment

- Melinda Terry, Central Valley Flood Control Association – Terry read from written [comments](#) and brought several handouts (see [Day 2 agenda item 3](#)). In general, Terry stated that participants on the tour should have been better balanced and that more stakeholder group representatives should have been invited to participate. She was specifically concerned about the presence of Curt Schmutte and questioned the Board's objectivity.

Lund responded that the Board is quite able to discern biased statements and that it has received comments from Delta residents that support the Board's concerns expressed over the past three years in various comment letters and summary reports. He said that the Board heard many points of view on the tour, although not all. Lund explained that the Board is not a political body. Collier said that the purpose of the tour was to see the Delta and hear about the science used for restoration projects.

4. Delta ISB Chair's Report

Collier said that he received a phone call from Phil Isenberg, DSC Chair, asking if the Board would discuss the proposed realignment of the BDCP tunnels as it would impact Staten Island, a sandhill crane refuge. Collier talked to Norgaard and Lund, and all agreed that the Board cannot make those types of rapid assessments. The Board discussed whether or not they should answer questions as individual members and agreed that if contacted as a member of the ISB they should not provide their viewpoints. Rather, the entire Board should discuss the issue and provide a Board opinion. If contacted as individual scientists with specific expertise, however, Board members will consider providing their viewpoint. Hastings reminded the members that they should avoid saying anything about a document that the Board might review.

5. Delta ISB Business Matters

Collier asked DSP to send out a poll for two-day meetings in 2014. Wiens requested that a general meeting framework be established that would allow the Board to adapt to issues/tasks as they arise.

Collier will probably be in Sacramento on September 26 to give the [Board's report](#) at the Delta Stewardship Council meeting.

The application deadline for the Board vacancy closed on September 3.

6. Lead Scientist's Report

In the Lead Scientist's absence, Hoenicke and Hastings gave a brief report on upcoming workshops. DSP will host the annual review of the Long-Term Operations Biological Opinions (LOBO) on November 6-7. DSP is helping State Water Resources Control Board (SWRCB) plan

a workshop on Delta outflow, which is scheduled for November 12-14. DSP is also planning on reconvening the BDCP Effects Analysis independent scientific review panel to review the public draft of the BDCP Effects Analysis once it is released.

7. Delta ISB Review of the Second Draft Delta Science Plan

Collier, Lund, and Wiens collated the Board members' comments on the Second Draft Delta Science Plan (Plan) to create the first draft of their [memo on the Second Draft Delta Science Plan](#). Norgaard indicated frustration about whether the culture change needed to make the Science Plan happen will occur. He felt that the ISB needs to help put the Science Plan into a broader perspective and suggested that the Plan include a transitional statement about how science has been conducted over the last 40 years. He said that more outreach to legislators and the public is needed to effect the culture change. People need a new relationship with the environment, and the economy also needs to change, including the use of more renewable energy. These problems are not unique to the Delta.

Atwater said that it is the ISB's responsibility to state things that DSP cannot and development of the memo should proceed on that basis. He also suggested that the Board consider preparing an opinion editorial in addition to the memo. Wiens agreed that the Delta needs to undergo a cultural change. He was not sure what the steps would be to accomplish that, but a strategy needs to be developed and become part of the Science Plan. Uncertainty will increase and there needs to be a shift in how science can address the uncertainty – science cannot provide “certain” answers. The Board can help change the culture perhaps through direct communication with the DSC council members. Resh said that DSP might need to be more realistic about what can be done incrementally but that it is unrealistic to expect transformation as a result of the Science Plan. Canuel said that the Board's draft memo captures her thoughts. She likes that the memo pushes DSP to be more aspirational, but wondered if the memo will be viewed as constructive because it does not offer guidance. It will be important to have incremental successes as the Plan is implemented. Priorities will need to be set because resources are limited. She also stated that the Plan contains a lot of great ideas but she is not sure they are doable.

Lund's biggest concern is that the Plan does not make clear the need for significant change. The status quo is not a desirable condition, but there is an immense legal system that says the status quo is the preferred environmental condition. Four ways to encourage change are: 1) regulatory and legal—DSP could talk with people at the SWRCB, who have legal authority to make change; 2) funding; 3) bully pulpit and public shaming; and 4) momentum of positive examples. Without “muscular” reasons for change, the Plan is only another set of meetings that will not result in successful change. Everyone will be better off with strong direction, even if they oppose it.

Wiens said that the Plan needs to include specifics. The Plan is written as if the incremental approaches it describes will result in a transformation of how the culture of science is conducted in the Delta. It needs a preamble that explains the broader, strategic, philosophical framework, so that readers understand that the Plan is just the first step in moving towards a different paradigm. The Plan needs to describe how to implement the transformation using Lund's four ways to encourage change (see previous paragraph). Hastings said that the Plan could set the stage for regulatory and legal change. Actions could include things that the Plan could do now that would inform decisions made in the future. Collier said that a preamble could explain the bigger issue as the Plan did not address the bigger issue in the first draft. Hoenicke said that DSP has done outreach to many agency representatives, who said that regulatory tools exist, but they are not used. One example is [Water Code Section 13267](#). He also stated that science

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needs to have a core function in what goes on in the Delta. Agency heads need to be encouraged to be bold. Lund sees the Plan as a catalyst and a unique opportunity. The Board is considering writing a cover memo in support of the Plan.

The next version (proposed final draft) of the Plan will be published on October 14. The DSC may be asked to endorse the Plan at its October meeting. Collier is concerned that the funding section is missing, so the Board would not have a chance to comment on it. Hastings said that DSP might be able to estimate the cost of the actions in the Plan. Wiens asked if the actions will be prioritized. Hastings thinks it might be possible.

Lund asked Knopp if the DSC is willing to reach out to other agencies to support the Delta Science Plan. Knopp said that the DSC wants to use science to shift the status quo and change views about how science is used. The idea of "One Delta, One Science" is viewed positively, but it is difficult for agencies to give up authority. If the governor would give DSP additional authority, agency managers would be unhappy. Lund said that the three most promising opportunities for change are through the SWRCB, federal judges, and the DSC's consistency authority.

The Board discussed specifics in their comment memo. The Plan could help the Board focus its reviews and would probably do its work differently focusing on what the DSP is doing if the Plan is successful. For example, the Board might commission reviews instead of performing them. The Plan could acknowledge the beneficial change in how the Board functions and could add detail about the role that the Board will play.

Atwater asked about the grand challenges. Knopp said grand challenges are also known as key questions in biological opinions and the six principles in BDCP. He suggested that all of the challenges, questions, and principles be brought together into one set of questions, which could focus science. Hastings said that the grand challenges were not provided in the Plan because DSP doesn't want to presume what the policymakers think they are. Development will occur through the Policy-Science Forum. However, the Plan could include examples. Lund said that before the grand challenges can be tackled, some fundamental work needs to be done on developing one set of models and data and that the grand challenges should be policy relevant and include fundamental technical challenges.

Collier said that the Science Steering Committee is a newly proposed body in the second draft of the Plan. The committee is given a charge, but not authority and he asked if the committee could be given funding authority. Norgaard said that trust and collaboration should be built among agencies and is uncomfortable with the idea of giving the committee "authority". Hastings said that DSP does not have the power to convey authority. Wiens suggested that the Plan recommend greater authority for the committee, that it is sufficient to merely put the concept into the Plan. Knopp said that a memorandum of understanding or creation of a joint powers authority among relevant agencies could be suggested. However, he appreciates Goodwin's recommendation that this needs to be done from the ground up.

Wiens asked why scientific conflict rose to a high priority in the second draft of the Plan. He was not comfortable with how scientists are portrayed as squabbling all the time. Scientific debate is part of the scientific process. Hoenicke said that the intent is to avoid legal battles and the selective use of data by special interests. Norgaard stated that he is comfortable with conflict and felt the Plan text was acceptable. Collier pointed out that the reason for synthesis is to manage conflict and Lund indicated that the domain of the DSP should be independent science.

Wiens will weave written comments into the Board's draft memo. The Board approved the [memo with edits](#).

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Norgaard asked if the Board should write a cover letter for the Plan, which would also describe the bigger, long-term goal. Lund and Norgaard agreed to write a first draft and send it to the Board for comments.

The Board briefly discussed the DSP [items to prepare for discussing the Plan](#) at the September 26 DSC meeting. Staff noted that the Interim Science Action Agenda is scheduled to be completed in March 2014 and completion of the update to *The State of Bay-Delta Science* is scheduled for the end of 2014.

Public Comment

- Val Connor, State and Federal Contractors Water Agency – Advised the Board that Water Code Section 13267 has limitations that were not discussed.

8. Delta ISB Review of the Bay Delta Conservation Plan Draft EIR/EIS

Larry Roth of ARCADIS, an independent consultant to the DSC for review of the BDCP EIR/EIS, said that ARCADIS prepared a review of the administrative draft of the EIR/EIS, which DSC staff transmitted to the Department of Water Resources (DWR). ARCADIS did not review the BDCP, which includes the effects analysis. The company recently wrote two reviews for DSC, one on implementation and governance, and the other on adaptive management. Roth is not sure if the memos are available to the public yet, but he hopes that the Board will be able to read them sometime in the future. Many issues could be of interest to the Board, including flow criteria and the decision tree process. Geographically, the BDCP EIR/EIS is limited to the Delta, so it does not consider consequences of actions outside the Delta – tweaking just one part could have unintended consequences elsewhere. DWR does not want to expand the number of alternatives, and believes that the alternatives adequately address the flow criteria. The DSC is concerned with whether or not the EIR/EIS meets the requirements of the Delta Reform Act. The administrative draft is weak at showing conformance. The DSC also needs to decide if the EIR/EIS is compatible with the Delta Plan, and if not, which plan should be adjusted. The review period is still 90 days, but could be increased to 120 days. ARCADIS has not reviewed the effects analysis. The company is ready to assist the Board in any way.

Board members did not ask to change their review assignments.

Norgaard said that the Board could consider reviewing comments made by others on the Draft EIR/EIS as an alternative to reviewing the EIR/EIS directly.

Public Comment

- Melinda Terry, North Delta Water Agency and Central Valley Flood Control Association – Terry is concerned about the size of the Sacramento River intakes proposed in the EIR/EIS. The average size of agricultural intakes is 30 cubic feet per second (cfs), and the urban intakes are less than 300 cfs. The proposed Sacramento River intakes are much larger at 3000 cfs each and could cause jeopardy to species, just as the pumps have in the south Delta. Over 650 impacts are listed in the EIR/EIS: 217 are listed under aquatic, and only two are beneficial; 182 are biological, none of which are beneficial. Even if most impacts can be mitigated to less than significant, the project will not contribute to recovery. Forty-eight of the impacts are significant and unavoidable, including decreased water quality. This does not meet the coequal goals and does not protect the Delta as place. Terry brought a copy of [Table 9.7 in the BDCP](#) (in the Plan, not the EIR/EIS) and encouraged the Board to read it. The table compares take for the BDCP alternatives. Terry also encouraged the Board to read the Conservation Measures carefully and compare them to projects under the Fish

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Restoration Program Agreement and in the biological opinions. The measures need to contribute to recovery.

Collier requested that Terry send copies of her [comments](#) and materials (see [Day 2 agenda item 3](#)), and she said that she would. Lund asked for succinct comments. He also explained that the Board will not approve or disapprove the BDCP EIR/EIS or comment on adherence to law. The Board will comment on the scientific aspects and completeness.

9. Fish and Flows Program Review

Lund said that the team's time has been taken up with its review of the Delta Science Plan, and the team will probably not have time to work on the fish and flows program review until the review of the BDCP EIR/EIS is finished. One or more team members may try to attend the State Water Board's workshop on Delta Outflows. Staff agreed to send the workshop agenda to team members when it is available.

10. Public Comment (For matters that were not on the agenda, but within subject matter jurisdiction of the Delta ISB.)

None.

11. Meeting outcomes

The Board will write a cover letter for the Delta Science Plan to the DSC about the need to change the status quo of how science is conducted in the Delta and finish the comment memo on the Second Draft Delta Science Plan. The Fish and Flows team will try to cover the SWRCB Delta Outflow workshop in November. DSP will plan a boat tour to the south Delta in the spring.

The next meeting, potentially a teleconference, will occur sometime in October.

3:08 p.m. – Adjourned