

Meeting Summary

1. Welcome and Introductions

The meeting was called to order at 9:02 a.m., October 31, 2014, by the Chair of the Delta Independent Science Board (ISB or the Board), Tracy Collier. Members present: Brian Atwater, Steve Brandt, Liz Canuel, Tracy Collier, Harindra (Joe) Fernando, Judy Meyer, Jay Lund, Richard Norgaard. Calling in: Vince Resh, John Wiens.

None of the Board members made any new disclosures.

Delta Science Program (DSP) staff in attendance: Peter Goodwin, Lauren Hastings, Marina Brand, Rainer Hoenicke, Jennifer Bigman, Martina Koller, and Maggie Christman.

2. Closed session: Discuss Lead Scientist recruitment. Not open to the public.

3. Reconvene open session

4. Delta Stewardship Council Chair's Report

Randy Fiorini gave the Council Chair's report and also the Executive Officer's report on behalf of Jessica Pearson. Chair Fiorini referred to a recent [talk by Governor Brown at the New Directions for U.S. Water Policy conference](#) at Stanford University, organized by the Hamilton Project and the Stanford Woods Institute for the Environment. The Governor provided an overview of the history of the water project. In his speech he singled out the Delta Stewardship Council. The level of responsibility for the Council has been kicked up. The Governor has committed that if he gets reelected, the water issues will be his priority in his next term.

The Bay Delta Conservation Plan (BDCP) will publish a Recirculated Draft BDCP and the EIR/EIS around the spring of 2015. The EIR/EIS comments the ISB prepared have been referenced numerously.

Last year, the ISB conducted a review of habitat restoration science programs in the Delta and summarized its findings in a report. Consequently this year, Council staff developed a habitat issue paper [Restoring Habitat with Science and Society in Mind](#). The paper builds on some of the findings by the ISB. The Council endorsed the paper at its August 2014 meeting. The habitat issue paper summarizes current restoration activities, describes needs, progress and opportunities, and proposes areas where the Council and other agencies should focus in next two years to advance habitat restoration in the Delta.

At the October 30 Council meeting, Council members heard the ISB Chair's overview of ISB comments on the Draft Interim Science Action Agenda.

The Delta Plan Interagency Implementation Committee (DPIIC) is meeting on November 17. They will highlight areas where the interagency cooperation can progress.

The Council staff is developing a [Delta Levee Investment Strategy](#) (DLIS) that will combine economics, engineering, and decision-making techniques to identify funding priorities and assemble a comprehensive investment strategy for the Delta levees. This is modeled after the State of Louisiana where they committed 50 billion dollars to improve the system and to maximize risk reduction. The DLIS will use a comprehensive methodology that considers the assets protected by Delta levees, the threats to Delta levees, the multiple beneficiaries of Delta levee investments, and both structural and non-structural approaches for reducing risk. The outcome of the project will be a final report that proposes updated priorities for State investments in Delta levees, including revisions to the Delta Plan's flood risk regulatory policies, recommendations, and narrative, and related Delta Plan revisions. The consulting company ARCADIS was hired to develop the strategy. Part of the process is a peer review process. Dr. Goodwin has convened an independent expert panel to review the methodology and scientific basis to support the DLIS.

In a response to a question on what are current challenges of the Council and what actions are being proposed in the Delta, Chair Fiorini said that the Council authority is limited, as the Council's role is more in coordination and early consultation. The covered action process is to prevent harm to the Delta. Council staff provides early consultation to project proponents to help make sure activities are consistent with the Delta Plan. Currently there are a couple of projects seeking certification. There is much less activity than expected. For example, no comments were received during the 30-day comment period on the Sherman Island Whales Mouth Wetland Restoration Project.

Question from the ISB: What topics should be covered more at the 8th Biennial Bay-Delta Science Conference (BDSC)?

Chair Fiorini responded that the posters do a good job of summarizing various issues. It would be ideal if the science community can summarize the 10 most important issues presented by the posters and bring those posters to Council meetings to highlight identified issues. Also, it would be good if there were a permanent website that enables downloading conference posters and to have an archive of the BDSC conference posters.

An idea was discussed that posters are more efficient way to communicate science topics to policy people and it was suggested to bring the best posters to be presented at Council meetings.

5. ISB Chair's Report

ISB Chair Tracy Collier proposed a meeting schedule for the first quarter of 2015: January 15-16; March 5-6; and April 9-10.

Collier announced that his term will be up in June, 2015. The ISB members need to start thinking about who might be the next chair and set an election early in 2015.

6. Lead Scientist's Report

Lead Scientist Peter Goodwin highlighted [the presentation by Deputy Secretary of the Interior, Michael Connor](#) at the BDSC and commented on its balanced view.

At the BDSC, Robin Grossinger gave a talk on the Delta Landscapes Project that has developed management tools for landscape-scale restoration of ecological functions. The project uses historical perspective of the Delta as a basis to identify present-day landscape level opportunities and appropriate metrics to assess individual projects. The report titled [A Delta Transformed](#) has been released recently. It has two formats: a hardcopy report that all the ISB members will receive and an [interactive e-book](#) that features tools for viewing maps and information from the report.

Goodwin informed the ISB about an upcoming peer review event that is very relevant to the ISB Fish and Flows programmatic review: [2014 Long-term Operations Biological Opinions \(LOBO\) Annual Science Review](#) on November 6-7, 2014. This annual review informs the National Marine Fisheries Service and the United States Bureau of Reclamation on the efficacy of the prior year's water operations and regulatory actions. This year the review will specifically look at: 1) modified Delta Cross Channel Gate operations criteria; 2) modifications to the winter-run Chinook salmon juvenile production estimate calculation; and 3) a proposal for calculating cumulative salvage index values for estimating take of adult Delta smelt.

Goodwin also announced the scheduled release of the Environmental Data Summit White Paper by the end of the year. The white paper is a product of a two-day [Environmental Data Summit](#) held in early June in Davis and Sacramento. The document entitled *Enhancing the Vision for Managing California's Environmental Information* is intended to be consistent with and support national trends, enhance California's existing initiatives and lay the foundation for creating the capacity to facilitate access to data and metadata across organizational boundaries and develop shared web services.

The first [peer review panel](#) for the Collaborative Adaptive Management Team (CAMT) will be held on November 14th, 2014. This is a review of a proposal on Delta smelt entrainment, a directed research project proposed under the CAMT process. Val Connor, CAMT co-chair, elaborated on details about the process and the issues being proposed in the entrainment proposal: 1) a detailed look at the conditions that lead to entrainment of adult Delta smelt at the pumps in the south Delta; 2) how to better measure entrainment, rather than just salvage of adults; 3) the population effects of entrainment; and 4) new models for Delta smelt behavior, hydrodynamics and habitat suitability. Val added that even though adaptive management is the CAMT name, as a group they are not quite there yet. They are using the Science Plan as their north star but learning as they proceed.

Vince Resh commented that the ISB is conducting an adaptive management review and it would be great if the Board could receive updates about CAMT-related developments.

Val Conner said that she and Leo Winternitz, the CAMT co-chair, will fill out the ISB questionnaire on adaptive management that was distributed in early October.

Goodwin continued with his report: currently his highest priority is the Interim Science Action Agenda (ISAA). The final ISAA is expected to come out in very early November. Big kudos to Lindsay Correa who has done a tremendous job compiling diverse comments and developing the document. One of the challenges after the ISAA is finalized will be development of the full Science Action Agenda. The final ISAA will be discussed at the upcoming DPIIC meeting on November 17.

Delta Science Program is planning to organize a modeling workshop in spring 2015 with junior researchers from the University of California, Davis.

The State of Bay Delta Science (SBDS) is being updated and planned to be finished in 2015. The 2015 effort reprises the role of the editors from 2008 in order to have continuity in the reports. Dick Norgaard was asked to suggest a lead editor for the socio-environmental system chapter, and if ISB might enable one of its members to participate on the editorial board. Other editors might be: Mike Healey, Mike Dettinger, Dick Norgaard and the lead scientist. There are existing guidelines for reaching out to chapter writers and request contributions.

Question from the ISB: How is public policy relevance incorporated, does it have its own chapter? How do you provide for what is important?

Goodwin answered that there has been a lot of thinking about it. There is a need for concise summaries. It will be in the form of an executive summary, which could be modeled after the glossy summary for the NSF Science and Engineering Indicators. These are engineering reports with a summary and maximum of 6 graphics. Other features to look at are policy summaries and embedding live links in the document. The guidance from the ISB could include assistance with how we to present the information and periodic check-ins. When the draft is out, it would be helpful if the ISB would review it. At the next ISB meeting, the Lead Scientist will provide an update on the SBDS timeline.

State Fellows interviews are next week (November 3-7). The plan is to have up to 3 fellows next year: one assigned to the ISB, one for IEP, and one for implementation of the Science Plan.

An upcoming Center for Aquatic Biology and Aquaculture seminar is scheduled for December 9, entitled [Meeting Nature Halfway on a Floodplain, the Yolo Bypass as a Reconciled Ecosystem](#). The symposium is at the UC Davis Conference Center, Ballroom B, from 9 a.m. to 4:30 p.m., it is free and open to the public. Presentations will be recorded, archived and made available afterwards.

Rainer Hoenicke, the Deputy Executive Officer for Science Program, announced that the IEP Lead Scientist position is still open and asked all ISB members to help with distributing the recruitment flyer. IEP wants to attract mid-career, high-caliber researchers and offers a competitive salary.

7. Update on the Science Advisory Committee Charge

Goodwin briefed the ISB on updates to the charge to the Science Advisory Committee (SAC). The charge is in the internal review process by SAC members. The charge now includes specific wording on state conflict of interest. The goal is to have top notch

scientists within the SAC but not to preclude them from applying for any future funding. It is important to be transparent and clear in order to prevent any misperception on the topic. The updated draft charge will be brought to ISB at the November teleconference. After the charge is finalized it will become a part of the appendix of the Delta Science Plan.

8. Update on the Fish, Flows and Other Stressors Program Review

Steve Brandt said the Fish and Flows report is being revised and finalized. It is 130 pages long and incorporates about 100 comments. The report still needs a discussion that fleshes out the main ideas, it also needs to add the 'other stressors' component to it. The outline of the report includes: an overview of the current state of research of tidal flows effects on fishes; identification of critical science issues; structure of the science community and how it is organized to address issues; policy ramifications; and some specific recommendations. The report considers the coequal goals from the fish (ecosystem) and flow (water management) perspective. The group has not met its deadline, but a cleaner version of the report is expected in mid-December.

Meyer hoped to be further along with the report. There is a lot of good science out there, but she wants the report to be fresh and specific.

Lund added that the report still needs a concise introduction, comments on the effectiveness of the current administration and a list of promising directions for some of the controversial issues.

Jennifer Bigman announced her acceptance into a Ph.D. program at the Simon Fraser University in Vancouver, Canada. Her last day will be November 20, after which her participation in the group will be limited.

9. Update on Other Program Reviews

i. Adaptive Management

John Wiens updated the ISB on the progress of the review of Adaptive Management programs and distribution of a questionnaire to 35 recipients. These recipients were selected from a longer list and included agencies and programs potentially most active in the adaptive management. The deadline for returning the questionnaire is November 20, 2014. So far only one respondent returned the survey. At the December meeting, responses to the questionnaire will be summarized and next steps will be planned.

ii. Water Quality

Liz Canuel reported that she and Tracy Collier will be meeting with the IEP Contaminants Workgroup on December 10, 2014.

iii. Delta Levees and Delta as Place

Brian Atwater reported that he and Dick Norgaard will be meeting with Erik Vink from the Delta Protection Commission on December 10, 2014. Dick Norgaard commented on the difficulty of finding enough activity and interest in the Delta as Place issue among the Delta community. There is nothing to review since there

is very limited research literature specific to the Delta on this topic. This is an important finding and can be turned into how to structure a research agenda in this area. In order to do so, the ISB should consider a better definition of what is meant by Delta as a place; it is broader than just the economy.

Atwater commented that this might be an area where young people are active, for instance, a young woman he met at the Science Conference works at the [Delta Science Center](#) in Oakley, which does education and outreach at schools and the community. Goodwin proposed that during the upcoming interviews with potential State Fellows DSP staff should inquire with applicants on their background in relevant areas (of benefit to all other ISB program reviews and writing reports).

Other ideas suggested include looking at other areas with more advanced activity and research in this topic and organizing a workshop with the morning focused on an information session and the afternoon on a discussion how to structure the research in this area. Norgaard commented that the ISB might do a program development rather than a program review.

iv. **Water Supply Reliability**

Jay Lund reported that there was no activity in this program review.

10. Recap of the Bay-Delta Science Conference (BDSC) 2014

Atwater noted a number of talks about levees at the BDSC. He highlighted a few, including a talk on using dredge spoils as a potential source of material for wetland restoration by a USACE presenter; a talk by a Science Fellow on subsidence and levee movement in the Delta and using radar imaging to make a region-wide assessment; a talk on breached Delta levees and re-colonization of vegetation, with a conclusion that round-stem vegetation is stronger than other types of vegetation; and the Baylands Project talk on carbon sequestration, concluding that tidal wetlands sequester more carbon per unit area than most ecosystems. Atwater also highlighted a poster on advantages of using dredged rock material for levee stabilization.

Brandt said that this BDSC was his first one and he was impressed how well it was run. He suggested session chairs should invite each speaker to highlight findings and identify how individual talks relate to other talks.

Marina Brand responded that this is similar to a recommendation made by ISB in its memo to the 2012 Conference Organizing Committee. The committee took the memo very seriously and consequently organized some of this year's sessions with an introduction at the beginning and final session wrap up at the end. Many other sessions were less structured with a collection of independent talks. Members of the Organizing Committee also wanted to accommodate requests from conference attendees to listen to the talks rather than syntheses from session chairs. Some sessions are better as an organized set of talks, while other sessions can stay as loose talks. Meyer identified acoustic tagging talks as those which could benefit from a more organized session approach and to include a better discussion of emerging new technologies in tagging.

Meyer also commented on a talk by Brad Cavallo as one of the more interesting and thoughtful talks she heard at the conference. The presentation was about Central Valley salmon life-cycle monitoring, and it was not just a presentation of data, but asked questions, such as: where are the existing data gaps, how can we sample and monitor better, what else is needed, is that really needed? Meyer made a recommendation to have more presentations or even a whole session on overview and integration talks such as this one.

ISB members engaged in a discussion on the optimal number of concurrent sessions with recommendations ranging from fewer sessions and more poster time to more concurrent sessions (up to 10, similar to Puget Sound science conferences) with shorter talks (15 minutes).

The poster session has become an important part of the BDSC. Proposed ideas included giving more time and more space (add the Convention Center third floor indoor and/or outdoor space), making poster presentations more prominent and bring the best posters from the conference to be displayed at to Delta Stewardship Council meetings.

Goodwin raised a question on how to solicit presentations from under-represented topics; there were just few social science and climate change presentations. Lund suggested adding those people to the organizing committee.

Marina Brand volunteered to compile the discussion points into collated notes and send to Lund, who will elaborate on it and prepare a memo on the BDSC 2014. The draft memo will be finalized at the November 11 ISB meeting.

Public comment: Lisa Thompson from the Sacramento Regional County Sanitation District suggested developing a conference-specific application for mobile devices and smartphones, for example with session schedules. This has been already developed for other conferences.

Collier responded that the Puget Sound conference has a similar application. It also has a smartphone application for event evaluation. However, this may not be ideal, since it introduces a bias based on who is actually using the application.

11. Public Comments

No public comment.

12. Meeting Outcomes

Proposed agenda items for the next meeting on November 11 include: a draft memo on the Bay Delta Science Conference 2014; an update on the Lead Scientist recruitment; the draft Fish, Flows and Other Stressors report; and the Science Advisory Committee charge.

Meeting Adjourned