

Draft of February 12, 2013

To: Delta Stewardship Council
From: Delta Independent Science Board
Subject: BDCP Chapter 7, administrative draft of December 12, 2012

SUMMARY

The Delta Independent Science Board recommends the nascent Delta Science Plan as the platform for science and monitoring of adaptive management under the Bay Delta Conservation Plan.

Science and monitoring for BDCP need an independent platform to serve the public interest in the State's waters and ecological heritage. Mere coordination with other Delta science programs will not be enough for BDCP science to rise above the tussle of stakeholder interests.

The Board encourages BDCP to work closely with the Delta Science Program toward DSP's goal of "One Delta, one science" and encourages the Delta Stewardship Council to help facilitate this outcome.

BACKGROUND

The Board previously stated that a stand-alone research and monitoring program within BDCP "would be inefficient, detrimental to existing programs, and lacking in the independence needed to build trust in adaptive management." The board offered this view in its memo of June 12, 2012, to Jerry Meral and Dale Hoffman-Floerke, on the February 29, 2012 administrative draft of BDCP Chapters 3 and 7.

The current review was prompted by a request on January 16, 2013, from Phil Isenberg, Chair of the Delta Stewardship Council. Mr. Isenberg asked the Board to consider reviewing the December 12, 2012 administrative draft of Chapter 7 of the Bay Delta Conservation Plan.

The Board's views are founded in part on findings of a recent National Research Council report. The NRC report, "Sustainable Water and Environmental Management in the California Bay-Delta," identified scientific synthesis and consensus as essential to addressing challenges inherent in the adaptive management of Delta water and ecosystems (http://www.nap.edu/catalog.php?record_id=13394). The Board also notes that Interior Secretary Salazar, in his joint appearance with Governor Brown on July 25, 2012, vowed

that science would guide BDCP.

MAIN FINDING

The administrative structure proposed in Chapter 7 is likely to yield further fragmentation in Delta science and decision-making. The proposed structure favors combat science over the collegiality and integration needed to address the complex and urgent task of implementing the coequal goals for the Delta.

The Board recognizes that BDCP alone cannot undo the current fragmentation of Delta science conducted by many government agencies and other entities. The Board also acknowledges that integration may appear to be contrary to the long-term interests of water users in the Authorized Entities Group. And the Board understands how BDCP planners may want to disentangle BDCP from other extremely difficult, long-standing, problems of managing the Delta.

However, the Board does not expect that additional, separate, and effectively sovereign management and science programs will yield sustainable improvements in water reliability while also meeting the related habitat-restoration objectives proposed in response to Federal Court decisions. Delta diversion infrastructure, operations, and affiliated habitat actions are too integrated with numerous other Delta issues to be managed separately.

ELABORATION AND ADDITIONAL RECOMMENDATIONS1. Integrate BDCP's implementation structure with the Delta Science Plan

The need for integrated science for the Delta was a major conclusion of the 2012 National Research Council report, "Sustainable Water and Environmental Management in the California Bay-Delta." The Delta Plan requires the Delta Science Program to propose an integrated Delta Science Plan by the end of 2013. While the structure of this science plan is still under development, the Board fully expects the science plan to require leadership by the Delta Stewardship Council, integration of other state and federal Delta science activities, potential additional state legislation, and new pacts between state and federal agencies.

The Board encourages the BDCP to participate in integrating its scientific efforts with others in the framework of a Delta Stewardship Council Delta Science Plan and in building the BDCP implementation structure clearly within the overall DSC Delta Plan and Delta Science Plan. Such integration will contribute toward the assurance that BDCP will meet its environmental goals.

2. Structure science and monitoring for independence

BDCP's organization and scientific activities should follow through on its promise of independent science. The existing Chapter states that science in support of BDCP will be undertaken in a manner that ensures independence (p. 7-4, lines 28-33). Yet the Chapter also states that the Science Manager will be chosen by and report to a Program Manager, who in turn is chosen by and reports to the Authorized Entities Group. How will this chain of command produce independent scientific advice?

Science and monitoring for BDCP needs more independence from BDCP. BDCP's science efforts could gain independence through integration with the Delta Science Plan, with BDCP management engaging a separate Science Advisor instead of a Science Manager. Alternatively, the BDCP Science Program Manager could be chosen by and ultimately be responsible to an independent scientific body, although this would imply less integration of Delta science activities.

3. Rethink the Adaptive Management Team

The Board finds that the Adaptive Management Team, operating under the proposed guidelines in draft Chapter 7, is unlikely to ensure that science is incorporated into management decisions. Adaptive management is mostly about management, something defeated by its separation from management.

The draft states that the Adaptive Management Team (AMT) will consist mostly of agency scientists. Such members will tend to have split loyalties, in part to their agencies and in part to the quality of science.

The draft further states that the AMT will operate by consensus (unanimity) and that when consensus cannot be reached, decision authority moves to the Authorized Entity Group (AEG) and the Permit Oversight Group (POG). However, complex scientific issues rarely lead scientists to the same management conclusion. Scientific disagreement contains information -- scientific uncertainty -- that should be factored into management decisions. Split loyalties in AMT will compound this problem.

It can be expected that the AEG and POG may need to delegate authority to the Program Manager when management decisions need to be made quickly. The draft does not appear to require that science guide such decisions, in contrast with Governor Brown's and Secretary Salazar's commitment.

4. Define the kinds of decisions that BDCP managers will make

Chapter 7 needs to state more clearly how different types of water and habitat decisions, and their scientific support, will be orchestrated. Decadal plans for habitat restoration, for instance, requires a different management than daily water-export decisions. The issues of monitoring the Delta ecosystem differ from monitoring performance compliance at specific restoration sites. Some adaptive management decisions might need to be made on a weekly basis, others annually, some for the Delta as a whole, some for particular restoration sites. The Board recommends greater clarity on how these different roles of science and management for BDCP will be done and coordinated with other Delta science and management processes.

5. Define the roles of science more clearly

Chapter 7 could be improved by providing a section that spells out how science will guide the implementation of BDCP. Such a section would bring together material that currently seems scattered and incomplete.

The clarifications could also extend to the Science Manager's functions and qualifications. According to the current draft, she or he will chair the Adaptive Management Team and variously "coordinate," "engage," "support," and "assist" (p. 7-4). The list of qualifications for the Science Manager should ensure a current and deep understanding of science.

Participation by sciences could be strengthened elsewhere in the implementation structure. Per the current draft, the Stakeholder Group will include at least three scientists with expertise in management (not necessarily actual science), but this Group's function is only to "provide input to the Program Manager concerning the current significant issues at hand" rather than to be a central part of planning and implementation of BDCP actions.

6. Reconsider the need for the Stakeholder Council

The Board wonders whether BDCP will need a Stakeholder Council. Key stakeholders will already be in the Authorized Entities Group, provided all the expected AEG members receive authorization to take endangered fish. Other stakeholders will have other venues to express their concerns, including the Delta Stewardship Council, the Delta Conservancy, and Delta Protection Commission. Paradoxically, an excess of venues may tend to diminish public participation on the management of water and ecosystems. It seems unwise to have so many fragmented venues for broad stakeholder involvement.

7. Consider an Independent Review of BDCP

Chapter 7 could include a provision for broad, independent reviews of the activities of the Implementation Office or the Program Manager or, for that matter, of the Authorized Entities Group itself. Such reviews would help protect the public interest in the natural resources that BDCP would affect.

8. Requiring an Annual Delta Water Operation Plan is a good idea.

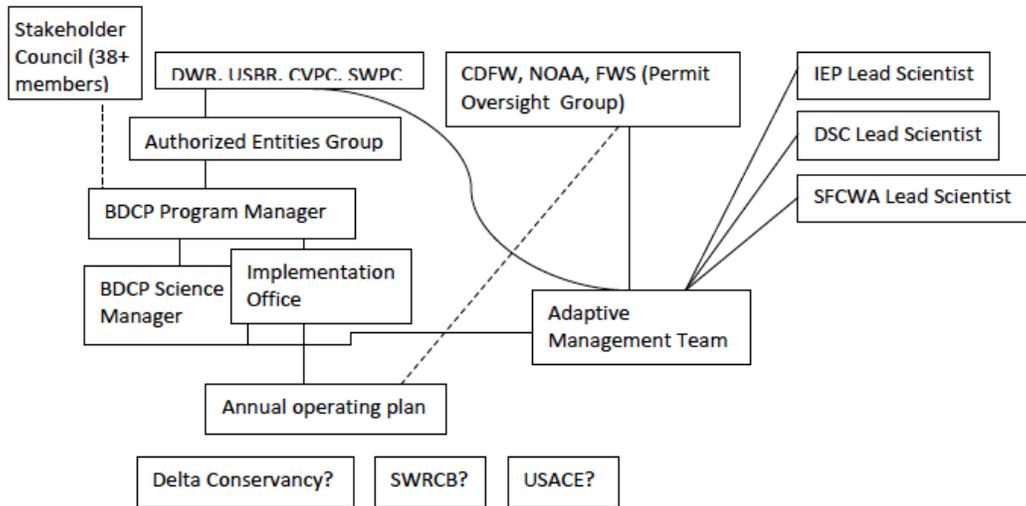
In the draft, the Delta Water Operation Plan includes only CVP and SWP facilities. It might be better to use the opportunity of such an annual operations planning exercise to have a Delta annual operations plan that also includes other Delta water operations, including CCWD and in-Delta diversions for local purposes, and other annual activities for ecosystem management, such as habitat-related activities (e.g., habitat development and managed floodplain inundations, invasive species management, etc.). This would provide an operating equivalent of integrated strategic planning (now under DSC authority) and help make integration and coordination routine.

9. Providing an explicit claims procedure is a good idea.

Broadening the claims procedure to include not only local landowners, but also cities and county governments might further reduce broader fears of uncompensated impacts.

10. Depict the structure of science and monitoring to be used for adaptive management in BDCP

Chapter 7 needs diagrams of the implementation structure. A clear presentation of the governance and science structure is important to portray lines of authority and loci of responsibility. The following sketch shows the interpretation from one of the Board members:

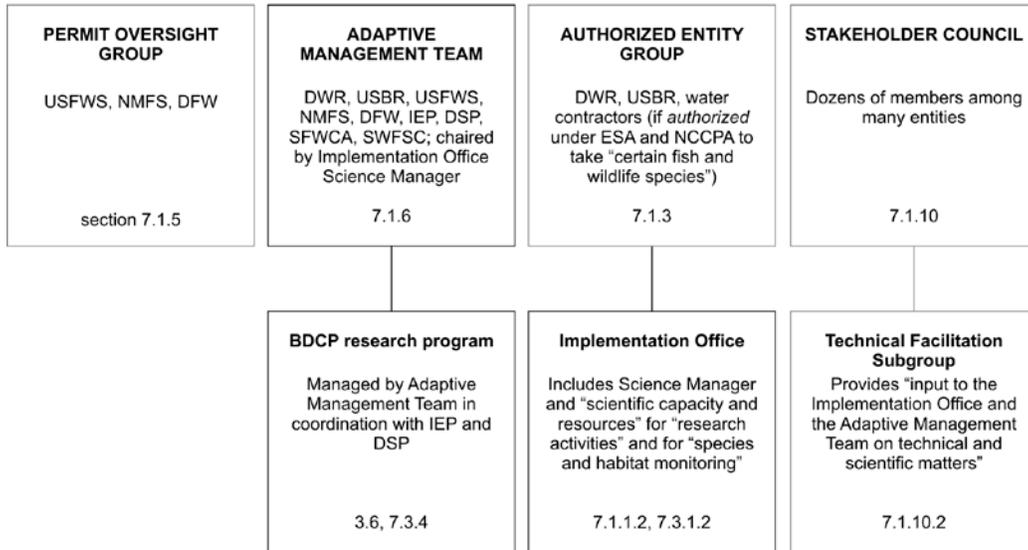


Another Board member tried to identify where BDCP science would be housed:



Homes for science in the Bay Delta Conservation Plan

Keyed to sections in
Chapter 3 (administrative draft of 29 February 2012) and
Chapter 7 (revised administrative draft of 12 December 2012)



- BDCP Bay-Delta Conservation Plan
- DFW California Department of Fish and Game
- DSP Delta Science Program
- DWR California Department of Water Resources
- ESA Federal Endangered Species Act
- IEP Interagency Ecological Program
- NCCPA California Natural Community Conservation Planning Act
- NMFS National Marine Fisheries Service
- SFWCA State and Federal Water Contractor Agency
- SWFSC NOAA Southwest Fisheries Science Center

Both diagrams illustrate the layers of management above BDCP's proposed science program and the dispersion of scientists among multiple silos. Future drafts of the implementation structure should provide appropriate diagrams depicting how scientists and managers interrelate for different types of decisions.

The Board has not obtained a copy of the BDCP *Implementing Agreement* mentioned in footnote 1 that apparently includes additional detail regarding the roles and responsibilities of the different parties to the agreement. To the extent this additional detail is relevant to the implementing structure, it should be included in Chapter 7.

Attachment: Material from the DISB letter to BDCP lead personnel on June 12, 2012 regarding the role of science in the implementation of the BDCP.

1. Integrated science

The BDCP process provides an unprecedented opportunity for building collaboration, consensus, and trust in Delta science. We encourage principals in BDCP to work toward these outcomes by improving on the draft Plan's evolving structure for scientific monitoring and research.

BDCP entails vast amounts of new research and monitoring in the Delta. How these efforts would be managed is outlined in chapters 3 and 7 of the draft Plan. The draft highlights the capabilities of two existing Delta science programs – the Interagency Ecological Program (IEP) and the Delta Science Program (DSP). But the draft goes on to imply that most of the new research and monitoring would be done by a new BDCP science program “in coordination” with existing Delta science efforts (chapter excerpts are attached below).

We advise against this stand-alone approach. Coordination is not enough to build scientific consensus for integrated action. A new parallel research and monitoring program would be inefficient, detrimental to existing programs, and lacking in the independence needed to build trust in adaptive management under BDCP.

We previously voiced these concerns on May 3, 2012, when we met with two BDCP representatives, Chris Earle of ICF International and Laura King Moon of the Department of Water Resources. They told us that the final structure of the research and monitoring plan remained undecided.

That structure will be fundamental to the conservation measures for habitats and natural communities under BDCP. Delta science needs coordinated institutional foresight, collaboration in research and monitoring, integration of the findings, consensus on implementation, and public trust in this process and its practitioners. Human behavior and organization will be key to building scientific and public understanding, as well as support, for adaptive management in the Delta.

The recent National Research Council report identifies scientific synthesis and consensus as essential to addressing challenges inherent in the adaptive management of Delta water and ecosystems (http://www.nap.edu/catalog.php?record_id=13394). We encourage BDCP to strengthen Delta science as a truly integrated enterprise.

This recommendation dovetails with an ongoing concern about the state of Delta science. Writing to the Delta Stewardship Council on March 14, 2012, we reported that “Delta science programs, particularly those in state agencies, have difficulty retaining their best scientists, hiring new scientists, and providing support for science.” We noted that state agencies increasingly rely on science and engineering consultants, instead of expertise in-house. We advised helping state agencies rebuild the scientific capacity and institutional memory they need to develop and apply best available science for adaptive management. Such rebuilding could become a lasting and positive effect of a BDCP process that integrates with the future Delta Science Plan that we expect will be prepared as a part of the Delta Plan.