



June 13, 2012

VIA E-MAIL

Delta Stewardship Council
980 Ninth Street, Suite 1500
Sacramento, California 95814
DeltaPlanComment@deltacouncil.ca.gov

Re: Comments on Final Draft Delta Plan

Dear Chairman Isenberg:

The Coalition for a Sustainable Delta (“Coalition”) is writing to provide its comments on the Delta Stewardship Council’s (“Council”) Final Draft Delta Plan (“Delta Plan”). The Coalition is a California nonprofit corporation comprised of agricultural, municipal, and industrial water users, as well as individuals in the San Joaquin Valley. The Coalition and its members depend on water from the Sacramento-San Joaquin Delta (“Delta”) for their continued livelihood. Individual Coalition members frequently use the Delta for environmental, aesthetic and recreational purposes; thus, the economic and non-economic interests of the Coalition and its members are dependent on a healthy and sustainable Delta ecosystem.

The Coalition is committed to the Delta Reform Act’s coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem in a manner that protects and enhances the unique cultural, recreational, natural resource and agricultural values of the Delta as an evolving place. The Coalition has been an active participant in issues involving the Delta and is deeply familiar with the myriad of challenges facing the Delta and the hurdles that policymakers and stakeholders face in finding solutions for maintaining a healthy Delta ecosystem.

In a number of respects, the Council has made important progress toward the development of a high quality, comprehensive Delta Plan, but important work remains to be done. We applaud the Council’s inclusion of a number of new or revised recommendations and policies to address other stressors on the Delta ecosystem, including predation and water quality, and appreciate the willingness of the Council and staff to address concerns raised throughout this Delta Plan process. Below we describe those areas of the draft Delta Plan that are in need of further refinement.

Strengthen the discussion of the role of science in decisions

In the discussion of science and adaptive management on pages 38-40 and throughout the document, we urge the Council to take care to use key terms, such as “science,” “adaptive management,” and “habitat” in an accurate and consistent manner. The misuse of these and other similar terms in various documents regarding the Delta has caused confusion and contributed to suboptimal decision-making in the past. For example, on page 38, line 15, the term “science” should be replaced with “scientific research.” Likewise, on page 38, lines 18-19, the term “habitat restoration” should be replaced with “wetlands restoration” or “ecosystem restoration.”

The Council asserts that “science provides the basis for nearly all current understanding of the Delta’s status.” Respectfully, we disagree with this assertion. Many resource managers and other stakeholders rely on surmise, supposition, or lore to inform their understanding of the Delta’s status. For example, at the time the Fish and Game Commission rejected a proposal to evaluate changes to the striped bass sport fishing regulations that was made by the Department of Fish and Game in cooperation with the Fish and Wildlife Service and National Marine Fisheries Service (and with support from the Council), the former President of the Fish and Game Commission concluded that striped bass predation does not harm salmonids and delta smelt, but that the water exports are the root of the current status of those species without reliance on any scientific research whatsoever.

In its description of “best available science,” the Council cites to the six criteria set forth by the National Research Council (NRC 2004). These criteria are consistent with the information quality guidelines and information quality bulletin for peer review developed by the Office of Management and Budget in response to enactment of the Information Quality Act (OMB 2005, 2002). Nonetheless, they provide only limited guidance. For example, the NRC indicates that “[d]ata collection and analysis should be unbiased and obtained from credible sources” to meet the objectivity criterion (NRC 2004, p. 56). But, the NRC does not specify standards or a process to ascertain whether and to what extent data collection and analysis is biased.

By way of comparison, the American Fisheries Society has prescribed a set of common elements of studies or analyses that are necessary to, in their words, “achieve high quality science” (Sullivan et al. 2006, p.4). These are: a clear statement of objectives; a conceptual model; a good experimental design and standardized method for collecting data; statistical rigor and sound logic; clear documentation of methods, results, and conclusions; and peer review. Whereas the NRC focused on both (i) the quality of data and analyses that agencies rely upon in making decisions and (ii) the process of properly interpreting and synthesizing such standing data and analyses and linking them to resource management options, the American Fisheries Society adopted a more limited focus on the quality of empirical analyses that inform the agencies tasked with making decisions.

We believe it is important for the Council to convey the fact that science is a process, not a product. Science “consists of confronting different descriptions of how the world works with data, using data to arbitrate between different descriptions, and using the ‘best’ descriptions to make additional predictions or decisions” (Hilborn and Mangel 1997). It involves the analysis of data using available models or tools, carried out in an experimental framework. Often times, resource managers, stakeholders, journalists, and even scientists mistakenly refer to data or to a model as science or scientific. They frequently refer to reports as the best available science. Such sources of information are not science, rather, they may (or may not) describe information that is derived from the application of the scientific method. The legislature got it right when it indicated that the Delta Plan must be “based on the best available scientific information,” rather than the best available science.

In the context of efforts to slow, halt, or reverse declines in at-risk species, it will sometimes be necessary for agencies to draw upon empirical research from a wide range of disciplines that emerges from the application of the scientific method. Among these disciplines, one is central to the effort to manage at-risk species; that is, conservation biology. And one tool developed by conservation biologists, population viability analysis (PVA), is a critical component of any resource management decision involving at-risk species. PVA is a tool “to assess threats to a species’ persistence, and to intervene before declines become irreversible” (Noon et al. 1999). We believe that the Council

should acknowledge the important role of PVA in the development of the best available scientific information and integration of that information into decision-making in the Delta.

The Delta Science Plan should include a role for other stakeholders

There are a number of groups and institutions involved in researching critical Delta issues that are outside of the major regulatory agencies and research entities, and there is an important role for these other stakeholders to play in development and implementation of a Delta Science Plan. G R1 should be revised to reflect this.

Acknowledge the need for an improved monitoring scheme

The draft Delta Plan discusses monitoring on page 40. The standing monitoring scheme was developed in a piecemeal fashion over decades, and without a focus on data gathering to facilitate empirical analyses that can inform resource management decisions. That scheme is the most important source of data that scientists may analyze using tools such as PVA. We are surprised that the Council does not acknowledge the critical need to overhaul the standing monitoring scheme in order to improve the quality of data that scientists may draw upon to develop scientific information to inform decision-making. In its 2010 report on the Bay-Delta the NRC concluded Delta monitoring should be improved to better inform resource management decisions (NRC 2010). A robust monitoring scheme is one of a number of essential prerequisites for an effective adaptive management program.

Overhaul the discussion of the low salinity zone and X2

Regarding the influence of the position of the low-salinity zone in the estuary on survival and recovery of desired fishes (page 131), the draft Delta Plan asserts that “using Delta outflow to position the low salinity zone (“X2”) in Suisun Bay at key times of the year when salinity, refuge, and food resources there can benefit native fish.” As much as the statement reflects a commonly held gestalt about how the estuary’s aquatic ecosystems operate, and notwithstanding the odd use of the term “refuge,” such benefits from the positioning of X2 in the estuary are not supported by available scientific information. Furthermore, it disregards differences in the life histories and behaviors of distinct native species. In contrast, evidence exists that restoration of the adjacent marshlands could bring a reversal of declining trends in several of the estuary’s desired native fishes.

A shift in the mean spatial position of the estuary’s low salinity zone surely would have disrupted pre-settlement aquatic systems. But, those systems no longer exist ecologically intact; invasive animal and plant species dominate, surviving native species are embedded in reconstructed communities, and the physical template upon which the Delta ecosystems occur would be absolutely unrecognizable to the settlers of central California. It is actually not known how the contemporary ranges and locations of desired fishes, their food resources, or other biotic attributes of their habitats are affected by the position and extent of the low salinity. What is clear is that population dynamics of the flagship species for conservation planning in the Delta, the delta smelt, show no sign of either positive or negative effects from varying salinity across the species’ broad distribution in the estuary.

In addition, the description of desired native fishes and their relationships with the location of the low-salinity zone in the estuary (page 216) seems unhelpful. Furthermore, the ecologically incorrect

use of the redundant, non sequitur term “suitable low-salinity habitat” in reference to delta smelt should be stricken. The survival and recovery of delta smelt are challenged by multiple environmental stressors on unidirectional trajectories – dwindling food availability, escalating contaminant loads, overwhelming numbers of predatory invasive fish species to name a few – that are compromising the extent and quality of the fish’s habitat. Climate change acting on Delta outflow, in concert with other hydrological phenomena, is not on the short list of threats to the embattled native fishes on the estuary – none are at risk of extinction due to increasing location-specific salinity increases.

Move beyond platitudes in the discussion of adaptive management

The presentation in Appendix A is marked less by what it presents -- an almost textbook recitation of the purposes and conceptual elements of adaptive management -- than by what it does not present. The draft Delta Plan does not explain how the Council intends to encourage the resource management agencies that operate in the estuary to engage in adaptive management. Every independent science advisory panel that has been engaged to review the programmatic approaches of CalFed and those that have followed have pleaded for adaptive management in the Delta sans success.

The citations in the appendix offer a partial look back to a near decade and a half of programmatic reviews by science panels and CalFed’s own independent science boards, which have literally begged for a programmatic sea change in Delta planning and implementation to an adaptive management template. There is not a single concept presented in the appendix that has not been formally presented before in greater detail in advisory documents. Nearly every point in the draft Delta Plan right down to Figure A-1 itself was described in a step-down narrative accompanying the very same illustration in the first outside science advisors review of the then-proposed CalFed effort in 1999 (contributors to which subsequently formed the first ISB).

Maybe it is the vague initial step in the adaptive management sequence -- “defining and redefining the problem” -- that appears to let the agencies off the adaptive management hook. If so, the Delta Plan needs to be unequivocal – every regulatory determination, every proposed management action, every new listing or delisting of a species, every recovery planning effort, every restoration project needs to be drawn through the adaptive management decision support matrix in Figure A-1. To that end, the figure needs to be an explicit contract with a new way of doing resource management. We strongly encourage the Council to replace figure A-1 with the figure attached as Exhibit 1 to send a clear message that the DSC understands adaptive management and intends for Delta policies, management, and science to commit to its rules and practices.

It is hard to understand why an explanation of the intent to use adaptive management in the Delta Plan is not accompanied by a detailed description of its governance, communications pathways, and means of linking science and management. But, two examples from far flung places, equally under-explained, are offered as ostensible examples of where the Council intends to go with adaptive management in action. Neither of the programs confronts a fraction of the environmental challenge that faces the Council. Their invocation only confirms the obvious; that CalFed failed to deliver as promised, and next steps in the Delta are steps long ago promised, and previously delivered elsewhere.

Describe the authority and planned activities of the Delta Plan Interagency Implementation Committee

The Council has correctly identified one of the major challenges in managing the Delta: the multitude of federal, State and local agencies involved with different, and sometimes, conflicting regulatory authority and missions. The Council can play a critical role in coordinating the activities of those various agencies as it relates to implementation of the Delta Plan and other regulatory actions that impact the Delta. While the draft Delta Plan does identify many of the key regulatory agencies and sets out some very laudable goals for the Implementation Committee, additional detail and structure is required to ensure that the necessary coordination occur and be effective. The Delta Plan should specify specific procedures for the Implementation Committee and should start immediately identifying key areas that require additional coordination of agency activities in the Delta. In addition, the Interagency Implementation Committee should also include, as appropriate, local agencies and funding partners that have a role in the Delta. The lack of cohesive federal and State policy on the Delta has plagued the system for far too long and the Council has an opportunity, through the Delta Plan Interagency Implementation Committee, to ensure accountability and promote coordination among the various entities with a role to play in implementing the Delta Plan to meet the co-equal goals set forth in the Delta Reform Act.

Reflect the intent of the Delta Reform Act regarding reduced reliance on the Delta

A fundamental problem with the draft Delta Plan's interpretation of section 85021 of the Delta Reform Act, which is reflected throughout the draft, is the failure to be consistent with the actual language of the statute regarding reduced reliance. The draft Delta Plan fails to recognize that many agencies in the Delta and Delta watershed, as well as some agencies outside the Delta watershed, do not have other water supplies and therefore cannot reduce their reliance on existing water supplies. In addition, the metric included in the draft Delta Plan fails to acknowledge that the specific language in section 85021 of the Delta Reform Act establishes a statewide policy to "reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation and water use efficiency" through improved "regional self-reliance," as opposed to reduced reliance by individual water agencies. This latter point is particularly crucial, given that the Legislature enacted section 85021 in conjunction with a water bond that would fund State-wide water management activities. The draft Delta Plan should be revised so that references to section 85021 reflect the intent of the Legislature that efforts should continue to be pursued to increase investment in measures that improve regional water self-reliance and reduce reliance on the Delta in meeting California's future water supply needs. WR P1 should be converted into a recommendation and revised so that it does not focus on individual agencies' actions and makes clear that following State law is sufficient to meet the intent of section 85021.

Exclude from consistency review all short-term water transfers

As recognized in WR R15 of the draft Delta Plan, water transfers should be encouraged and are an important tool to efficiently manage the State's water supply. Language in the draft Delta Plan would subject certain short-term water transfers to the Council consistency review process, which would likely render such transfers infeasible based on the timing required to comply with that process and the short window to effectuate such transfers. The language in the prior draft of the

Delta Plan, which exempts all one-year transfers from the consistency review process, should be reinstated.

Acknowledge the recent contributions of the National Research Council

The National Research Council's Committee on Sustainable Water and Environmental Management in the California Bay-Delta ("NRC") released its third and final report earlier this year. The report, titled *Sustainable Water and Environmental Management in the California Bay-Delta* makes a number of important points that should be taken into account as the Council finalizes and implements the Delta Plan.

- The NRC report acknowledges that there is a suite of stressors affecting species and processes in the ecosystem in complex and interactive ways: "Only a synthetic, integrated, analytical approach to understanding the effects of suites of environmental factors on the ecosystem and its components is likely to provide important and useful insights that can lead to enhancement of the Delta ecosystem and its species" (p. 6).
- Climate change and levee failure pose significant challenges in the Delta and human-induced changes to the Bay-Delta to date will not allow the return to historical conditions: "Resources managers dealing with the Delta need to determine the degree of 'restoration' achievable through intervention and adaptation. The Delta as it existed before large-scale alteration by humans cannot be recreated" (p. 10). Therefore, the NRC report focuses on guiding the ecosystem toward desirable states, as opposed to large-scale restoration to some past condition.
- Institutional reform should be implemented as one facet of the overall effort to address water and environmental management in the Delta. The NRC report also contends that water management in the Delta has been reactive and singular rather than proactive and comprehensive, which is a fair criticism of past efforts, although the Bay Delta Conservation Plan is clearly an attempt to be more proactive and comprehensive in terms of addressing the Delta's challenges (p. 171).

Clarify the role of the Delta Watermaster

The Delta Reform Act provides clear direction for the Delta Watermaster: monitoring and enforcement related to in-Delta water rights (Cal. Water Code, § 85230). Rather than suggest expanding the Watermaster's authority to the entire Delta watershed and beyond, which is inconsistent with the Delta Reform Act, the draft Delta Plan should be revised to include a timeline for completion of the Watermaster's assessment of potential illegal water diversions in the Delta and implementation of an action plan for addressing those illegal diversions.

Delete reference to a new Delta Water Delivery Predictability Index

Development of a Delta Water Delivery Predictability Index would be duplicative of information that is already available, including the State Water Project Reliability Reports prepared biannually by the Department of Water Resources, the State Water Resources Control Board water rights permits, and the biological opinions prepared for operation of the Central Valley Project and State Water

Project. This concept should be vetted considerably more in light of the already available information and analysis before it is contemplated for inclusion in the Delta Plan.

Conclusion

The Delta Plan provides the Council with a unique opportunity to steer a different course and improve the integration of science into resource management decision-making and implement a comprehensive plan for the Delta for the benefit of the people that depend on the Delta as well as the native species and natural communities of the Delta. To do so, the Council must learn from the failures of those institutions that preceded it, including CalFed and the Interagency Ecological Program. This requires strength and leadership. The Coalition urges the Council to show such strength and leadership and make appropriate changes to the current draft before finalizing the Delta Plan.

Sincerely,

A handwritten signature in black ink, appearing to read 'William D. Phillimore', with a stylized flourish at the end.

William D. Phillimore
Board Member

Attachments

Exhibit 1

Figure 2. Decision-making process integrating adaptive management

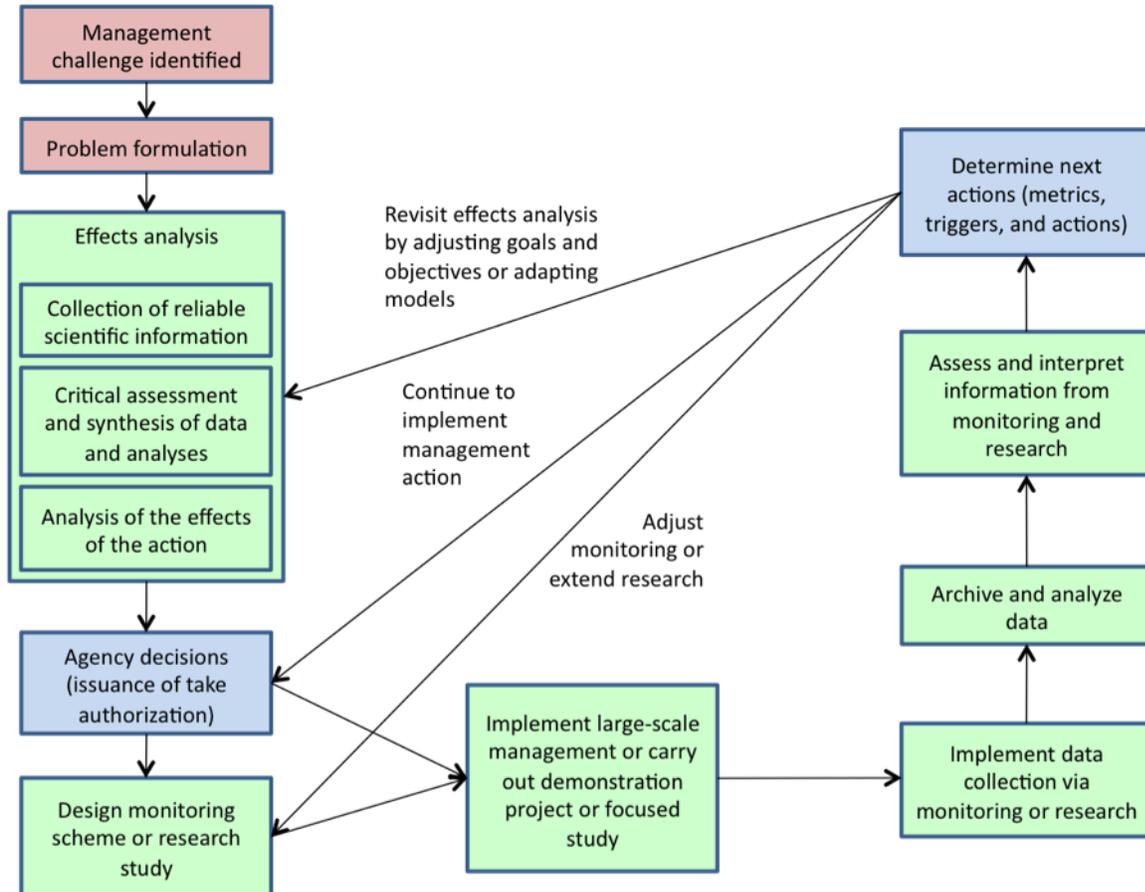


Exhibit 2 – References

Hilborn, R. and M. Mangel. 1997. *The ecological detective: confronting models with data*. Princeton University Press. Princeton, NJ.

National Research Council. 2010. *A Scientific Assessment of Alternatives for Reducing Water Management Effects on Threatened and Endangered Fishes in California's Bay-Delta*. National Academies Press. Washington D.C.

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National Research Council. 2012. *Sustainable Water and Environmental Management in the California Bay-Delta*. National Academies Press. Washington D.C.

Noon, B.R., Lamberson, R.H., Boyce, M.S. and L.L. Irwin. 1999. Population viability analysis: a primer on its principal technical concepts. *Ecological Stewardship* (eds R. C. Szaro, N.C. Johnson, W.T. Sexton & A.J. Malk), Vol. II, pp. 87–134. Elsevier Science, Oxford, UK.

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