City of
SACRAMENTO
Department of Utilities

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130161:BL:EC

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SUBJECT: CITY OF SACRAMENTO COMMENTS ON FIRST DRAFT OF THE DELTA SCIENCE PLAN

The City of Sacramento (Sacramento) appreciates the opportunity to provide comments on the First Draft Delta Science Plan. Sacramento supports the co-equal goals of restoring the ecological health of the Delta and creating a reliable water supply for California. As both a water supply agency and permitted stormwater and combined sewer system discharger, Sacramento is very concerned with the health of the Delta and its tributary watersheds. The Delta and tributary watershed resources must be sustained and protected for current and future generations. Sacramento is a steward of water quality in the region, applying practical cost effective solutions to water pollution and encouraging environmentally balanced and sustainable regional and watershed-wide solutions developed through collaborative stakeholder processes.

Since the late 1980's Sacramento has collected monitoring data and performed receiving water investigations in the Delta and the areas just upstream in the Sacramento River Watershed. Through the Sacramento Stormwater Quality Partnership we participate in the Coordinated Monitoring Program (CMP) and other programs in support of permits and source water protection. Sacramento acted as a Steering Committee member for the Delta Regional Monitoring Program (RMP) and continues representation at all meetings.

Sacramento appreciates the Delta Stewardship Council's commitment to prepare a Delta Science Plan that builds an open and collaborative science community. We support development of Delta science in a "bottom-up" fashion that is inclusive, transparent, and pragmatic. The Delta Science Plan and the Delta Science Program must provide the leadership and accountability to bring the needed change.

While we feel the First Draft Delta Science Plan is a good start to improve the state of scientific discourse and understanding and are encouraged by many of the concepts discussed, we have several suggestions for improvements and clarifications. The comments are focused in the following five areas:

- Role of local municipal agencies
- Governance and legal authority
- Conflict of interests
- Bay Delta Conservation Plan and Delta Plan monitoring commitments
- Timeline

Role of Local Municipal Agencies

Sacramento is one of the largest municipalities in close proximity to the Delta and is just upstream from the proposed Bay Delta Conservation Program diversion tunnels. There are dozens of other local agencies within and immediately adjacent to the Delta that are directly affected by Delta water quality and health. Without a clear and meaningful role in Delta science, local municipalities will not be able to effectively contribute our local understanding of systems managed within our jurisdictions that affect Delta water quality. In our experience working within stakeholder groups (e.g., Central Valley Drinking Water Policy, Delta Methylmercury TMDL, watershed protection programs, etc.), participation in these processes builds a common understanding of the science essential for good public policy. While not all local agencies may have the resources to actively participate, the Delta Science Plan should specifically allow review by Sacramento and other local agencies and provide for local agencies' representation within the Delta Science Program.

The First Draft Delta Science Plan acknowledges local agencies in several places, but there are no clearly stated roles or direct opportunities for review, active

participation, or leadership in the Delta Science Plan. The First Draft Delta Science Plan suggests that a "bottom-up" approach is key, yet describes a "top-down" approach in most every key aspect. In the attachment to this letter, we have provided a number of examples where the role of local agencies is ambiguous or unnecessarily reduced. Fundamentally, local participation is critical to the success of adaptively manage the water resources and environment within and around the region.

We request that the Delta Science Plan include a discussion of the role of local agencies and how we would actively contribute to and guide scientific investigations in the Delta. An organization chart or schematic that shows relationships for development, review, and decision making on all work products would be useful. For example, Figure 4.6-1 of the First Draft Delta Science Plan does not include local agencies. We agree that a local agency liaison with the Delta Science Program would be helpful for adaptive review management, and would request additional advocacy support from within the Delta Science Program for coordination, opportunities for efficiencies and collaborative efforts, and syntheses of work products.

Governance and Legal Authority

The Delta Science Plan should provide an organizational and decision making structure that can endure through the years as a public science resource and authority. The First Draft Delta Science Plan states that it is intended as a bottom-up approach; however, the ultimate authority of the Lead Scientist and references throughout the document to "decision makers" do not naturally lead to a bottom-up approach. We acknowledge the challenge in efficiently leading larger and diverse stakeholder groups. A true bottom-up approach requires significant collaboration from the larger stakeholder group, and does not necessarily exclude, and surely requires, input and review by the Independent Science Board or National Research Council. The Delta Science Program would need strong leadership to facilitate this group approach to productively engage participants.

The San Francisco Estuary Institute's (SFEI) Aquatics Science Center and the Southern California Coastal Water Research Project are organized and implemented

as science institutions that are well regarded by the local stakeholders and throughout California. These programs are examples of science programs that serve a number of purposes for many different stakeholders that should be more closely modeled for the Delta Science Plan, even if it requires creation of a new entity (e.g., the Aquatic Science Center for SFEI).

The Public Policy Institute of California (PPIC) April 2013 report "Integrated Management of Delta Stressors" called for integrated science through creation of a Delta science joint powers authority (JPA), involving regulators and regulated parties and the Delta Science Program. Under the PPIC proposal, the Delta Science Program would oversee Delta science for the JPA. Also noted in the PPIC report, the Delta Science Program serves as the coordinator of Delta science, but notes the Delta Science Program does not have the mandate, authority, or budget to take on integration of Delta Science. The PPIC report (April 2013, Figure 2, page 58) clearly shows the proposed organizational change. By contrast, the review structure in Figure 4.6-1 of the First Draft Delta Science Plan does not appear to change the existing top-down science review process.

The Delta Science Program may be the correct group to bring all the stakeholders together, yet it should fully integrate stakeholders into a clear and transparent science-based program. If there are administrative and legal constraints to how the Delta Science Program could administer a JPA, alternate JPA structures should be considered.

We request that the Delta Science Program create a joint powers authority (JPA) that includes local agencies. This JPA would bring the resources of state, federal, and local agencies to more efficiently use monitoring and other technical resources, allow transparent and directed scientific investigations, and allow peer review by the Lead Scientist, the Independent Science Board, and the National Research Council, as needed.

Conflict of Interest Policy

There is a lack of process or guidelines for identifying a potential conflict of interest for any scientist put on a team. There are complex relationships within the Delta science community, and appearances of conflicts of interest may result in unnecessary controversy that could weaken acceptance of technical expertise. Developing a clear conflict of interest policy would support transparency in Delta science without unnecessarily excluding leaders and scientists.

We recommend following the National Academy of Science policy regarding conflict of interest and procedures for anyone to claim a conflict of interest. This policy can be reviewed at http://www.nationalacademies.org/coi/.

Bay Delta Conservation Plan and Delta Plan Monitoring Commitments

The First Draft of the Delta Science Plan does not propose any specific collection of data related to projects that are part of the Delta Plan, such as the Bay Delta Conservation Plan (BDCP). The proponents of the Bay Delta Conservation Plan should be required to collect sufficient data to support the Delta Reform Act co-equal goals for the term of that project. For example, the current administrative draft of the Bay Delta Conservation Plan includes only a very small budgetary commitment to monitor methylmercury in restoration wetlands. However, the scope of possible impacts to a wide range of constituents and overall water quality is much more expansive.

A more comprehensive and specific monitoring and assessment plan should be included in the Bay Delta Conservation Plan. The Bay Delta Conservation Plan and Delta Plan also refer to the Delta Science Plan to lead adaptive management, without providing specifics on the monitoring and assessment approach or plans to improve and verify modeling results. The magnitude of the proposed monitoring and assessment plan should be proportionate to the size, importance, duration, and complexity of the project. If the BDCP and other projects under the Delta Plan are not the appropriate place for descriptions of the detailed future impact assessments, the Delta Science Plan should provide a commitment to perform the

integrated assessments as part of a larger program or a more focused ongoing program for the term of the BDCP. For example, the Consultant Administrative Draft BDCP Environmental Impact Report/Environmental Impact Statement identifies changes in water quality at downstream locations, but does not commit to future studies to assess the accuracy of the model and how these changes might impact beneficial uses at locations other than drinking water intakes.

It is recommended that the Delta Science Plan include specific examples of how "adaptive management" and other proposed changes required by the Delta Plan and the BDCP will be assessed by the Delta Stewardship Council or within the Delta Science Plan. This may include a commitment to help fund the Delta Regional Monitoring Program and Delta Science Program to perform this work in an open and transparent manner.

Timeline

We recognize the need to advance the Delta Science Plan and not get delayed in process discussions. However, the proposed schedule for the second (August 2013) and final (September 2013) drafts of the Delta Science Plan does not allow adequate time for review and thoughtful discussion.

We recommend extending the timeline at least three months and include outreach to interested parties to discuss details of the Delta Science Plan and its implementation.

We are encouraged by the Delta Science Programs efforts to support the co-equal goals of habitat restoration and water supply reliability and to directly address weaknesses in the existing and proposed approaches to adaptively manage the Delta systems. Attached to this letter are comments on specific items in the First Draft Delta Science Plan that support the general points in this letter.

Sacramento has participated in Delta science for more than twenty years and has invested millions of dollars in efforts to characterize and understand the influence of our urban area and control measures on the Delta and its tributary watershed. We are encouraged by progress within the Delta Regional Monitoring Program in

developing governance, a technical advisory committee, and priority research areas. We look forward to cooperating with the Delta Science Committee and to strengthen our understanding of Delta water quality and quantity. If you have any questions on these comments please contact me at (916) 808-1434 or bbusath@cityofsacramento.org.

Yours truly,

Bill Busath
Engineering & Water Resources Manager

Cc: Dave Brent, Director
Joe Robinson, Senior Deputy City Attorney
Jim Peifer, Supervising Engineer
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CITY OF SACRAMENTO SPECIFIC COMMENTS AND REFERENCES

The following specific comments, provided in the requested format, are intended address Sacramento's general comments. Review of future drafts of the Delta Science Plan will consider more detail as it is presented.

1. Page iii, untitled table of "Audiences and Uses of the Plan"

The table does not clearly identify local Delta municipal agencies as a specific audience, but rather includes more generic terms such as "Delta managers" and "Delta water and environmental stakeholders"; this may include local agencies, however it still reinforces the top-down and one-way approach that is proposed (i.e., "audience" suggests passive participation. The table only shows what the Delta Science Plan gives the audience rather than how the audience can contribute to Delta science). Furthermore, it is not clear if the audience includes entities outside of the legal definition of the Delta. *It is recommended that the table include how each of the audiences participates in the Delta Science Plan as well as examples of types of entities that are members of the audience, perhaps as a separate table.*

2. Page 2, line 35

The proposed "Science Synthesis Team" is intended as the "single, overarching team" to identify and recommend research priorities. If the Delta Science Plan intends to support bottom-up collaborative approaches, support by the Science Synthesis Team could be represented at the Delta Regional Monitoring Program as a Steering Committee Member. On the one hand, the First Draft of the Delta Science Plan suggests that it will support "bottom up" collaborative science (page 1, line 33); however, as described, the Science Synthesis Team would establish priorities without direct participation from other stakeholders. *We request that this section include a discussion of the make-up of the Science Synthesis Team as well as the intended process that will be used to engage other local agencies and other groups performing similar work.*

3. Page 1, lines 22 through 25

The First Draft Delta Science Plan refers to the Delta Plan recommendations to "address, among other items, effective governance for science in the Delta, strategies for addressing uncertainty and conflicting scientific information, the prioritization of research, near-term science needs and financial needs to support science. It is therefore integral to the success of the Delta Plan and achievement of the coequal goals." *We request that the Delta Science Plan include specific references to the process and formal structures and standards whereby meaningful input, stakeholder inclusiveness, and open scientific and technical discourse will be assured.*

4. Page 3, lines 4 through 9

Examples of the science leaders are limited to the current science entities (i.e., Interagency Ecological Program) intended to assess the impact of water exports and the yet to be formed Science Synthesis Team. To truly improve the acceptance and usefulness of a Delta Science, fundamental changes are needed to incorporate all interested stakeholders to contribute to Delta Science and identify how expert input from stakeholders would be incorporated into policy. National Pollutant Discharge Elimination System (NPDES) discharge permits are frequently the first regulations impacted by changes in Policy, and Sacramento has "Policy-Science" experts with much to contribute. *We request that the described "Policy-Science Team" should include a discussion of the types of "agency leaders" that will be included, and that it allows for inclusion of "Policy-Science" experts from local agencies.*

5. Page 3, lines 20 through 31

The Delta Science Plan is described as "meeting the basic needs of science programs and scientists" and describes several components of the support that would be provided. While the component are useful, in order for them to be meaningful there must be wide "buy-in" of these components from the wide range of stakeholders. *It is recommended that this section be modified to better explain the level of*

cooperation that is expected, and how the Delta Stewardship Council will support and facilitate regional participation.

6. Page 5, Box 1-1 Vision

The First Draft Delta Science Plan provides a vision statement based on the concept of "One Delta, One Science". While the sentiment might be well intended, a vision for Delta science should be collaborative with room for reasonable discussion and differences of opinion. Focusing on "one science" may be counterproductive to the collaborative approach where productive discussion should be focused on improving these relationships and establishing a framework to meet the co-equal goals. *We request the use of "One Science" also introduce the concept that from the efforts of many the Delta Science Plan appropriately evaluate a clear understanding of what is the common ground understanding, where uncertainties merits further evaluation, and where the uncertainties are not significant or relevant to protection of beneficial uses.*

7. Page 5, Lines 18 through 34, Figure 1-1

The First Draft Delta Science Plan refers to itself in numerous locations, including Figure 1-1, as "a shared vision and living strategic framework". While the vision statement can reasonably be aspirational, a Delta Science Strategy or framework should provide more than just expected end products. *We request that the starting point for the framework be better described and that the process for iteratively modifying the framework be included in the Delta Science Plan. The framework should allow defined opportunities for input on decision making and opportunities for local agencies to contribute.*

8. Page 6, Lines 7 through 10

The First Draft Delta Science Plan discusses the physical area to which it applies, with "flexible" language regarding coverage to tributary watershed areas outside of the legal definition of the Delta. *While we understand that it is difficult to limit the geographic areas for future investigations, we request that the Delta Science Plan*

provide a process to incorporate tributary areas, when applicable, so that stakeholders have adequate notice to participate in studies and research within and around their jurisdictions or areas of interest.

9. Page 9, inset box "Efforts to Build On"

The inset box omits a number of ongoing or completed programs that included stakeholder groups and technical research within the Delta and the Delta watershed. *We request additional consideration for groups such as the Central Valley Drinking Water Policy Group, CV-SALTS and the Delta Regional Monitoring Program as additional open and transparent science, policy, and planning efforts to build on.*

10. Page 12, lines 21 through 24

The description of Policy-Science Team ("Directors of federal and State agencies and science leaders") excludes local agencies (municipal) participation. *It is recommended that this team, if formed, be more inclusive to local agencies and other stakeholders.*

11. Page 13, lines 24 through 25

The First Draft Delta Science Plan suggests that the Science Synthesis Team would be selected by the Delta Lead Scientist as members of the science community rather than representation of agencies or institutions. *We recommend development of a more formal process that is able to evaluate conflicts of interest such as the policy used by the National Academy of Sciences (http://www.nationalacademies.org/coi/).*

12. Page 14, lines 1 through 7

The First Draft Delta Science Plan states that the Focused Synthesis Teams will be selected by the Science Synthesis team and approved by the Delta Lead Scientist (also see comment No. 11). While we understand the need to make selections of the best available scientists, there should be an open and transparent process for these selections so that there are no perceptions of political or strategic selections. *We*

recommend that the Focused Synthesis Teams be selected from an established scientific entity such as the Delta Regional Monitoring Program Technical Advisory Committee, the Aquatic Science Center, the Independent Science Board, or the National Research Council that pose no conflicts of interest and are vetted through an established process.

13. Page 18, Box 3-2; Pages 29 and 30, Section 4.4 Shared Modeling

Use of conceptual models is promoted by the First Draft Delta Science Plan, however, there are computational models that are readily available, are proven to function, and provide more specific detail on quantitative impacts. Smaller scale conceptual models may be needed as initial development of specific ecosystem processes are evaluated (e.g., species specific exposure models) based on outputs from developed computational models. Qualitative outputs from conceptual models are not nearly as helpful as reliable quantitative outputs in developing "unbiased" assessments.

Several groups such as CV-SALTS and the Central Valley Drinking Water Policy Workgroup have developed large scale modeling platforms. The Central Valley Drinking Water Policy Workgroup used a combination of widely accepted models (WARMF, CALSIMM II, and DSM2) to model the system in combination with source control and beneficial use models (drinking water treatment). These were the foundation to develop a common understanding and develop a synthesis understanding of any current and potential future impacts on drinking water in the Delta. This same approach could be broadened to other beneficial uses and general Delta health. These platforms and tools for common understanding should be some of the specific components of the Delta Science Plan.

We request that the Delta Science Plan describe specific computational models that will be used and specifically how the work of these other groups will be considered. For example, the Delta Science Plan should include a survey of available models and the groups that have used them. While no computational model is perfect, a clear understanding of available tools and adaptive management assessment frameworks would be useful.

14. Page 25, lines 29 through 31, Delta Plan and Bay Delta Conservation Program

The First Draft of the Delta Science Plan does not propose any specific collection of data related to projects that are part of the Delta Plan, such as the BDCP. There is a reference to "additional programs soon will be added", which is not clear in explaining the scope of the activities. The BDCP is the largest of the projects within the Delta Plan areas, and monitoring and research requirements for adaptively managing this project should at a minimum describe the expected level of commitment to monitoring and assessments to support adaptive management. Currently the BDCP administrative draft commits only a small amount of funding, relative to the cost of the project, for methylmercury research in restored wetlands. Certainly there are many more monitoring and research projects that are necessary to characterize the impacts of that major project.

Regulated dischargers are required to collect data to assess their potential impacts as well as demonstrate "antidegradation" with proposed changes in operations. If the BDCP and other projects under the Delta Plan are not the appropriate place for descriptions of the detailed future impact assessments, the Delta Science Plan should provide a commitment to perform the integrated assessments for these expected projects.

It is recommended that the Delta Science Plan include specific examples of how "adaptive management" and other proposed changes required by the Delta Plan and the BDCP will be assessed by the Delta Stewardship Council or within the Delta Science Plan.

15. Page 25, Section 4.2 Monitoring and Associated Research

This section describes the need for a "shared strategy for integrated monitoring" and identifies the Delta Regional Monitoring Program, Independent Science Board, and others as "efforts to build on" (text box insert, page 25). The Delta Regional Monitoring Program effort should also be a significant part the Delta Science Plan similar to how SFEI utilizes the San Francisco Bay Regional Monitoring Program, and

this key relationship should be described in such a way that would allow the Delta Regional Monitoring Program to accelerate its progress and receive additional funding to support ongoing monitoring and research activities by the Central Valley Regional Water Quality Control Board and the Aquatic Science Center. Support from State agencies is critical to the long-term success of the Delta Regional Monitoring Program, and the Delta Science Program is in a unique position of facilitating participation of many of the State agencies in coordination with the Central Valley Regional Water Quality Control Board.

We recommended that the Delta Science Plan directly support the Delta Regional Monitoring Program as the primary science and research entity. While there are numerous entities performing monitoring and research, the Delta Regional Monitoring Program has the most participation from a wide range of stakeholders and already has participation from the Aquatic Science Center.

16. Page 31, Section 4.5 Synthesis for System-wide Perspectives, Lines 26 through 31 and lines 34 through 35.

We request that this section acknowledge the work of the Delta Regional Monitoring Program and other working groups like the Central Valley Drinking Water Policy Work group in bringing together policy and science leaders from all interested groups to collect and synthesize data. In the former case much work has been done to build relationships between stakeholders and synthesize many issues of concern, and in the latter case a broad range of stakeholders developed a synthesis product based on monitoring, conceptual models, computational models, and input from technical experts in the field of drinking water treatment. The Drinking Water Policy Workgroup developed a Synthesis Report that includes conclusions and lessons learned from more than ten years of investigations and stakeholder coordination.

17. Page 36, Section 4.7 Communication

A number of outreach and communication programs already exist within the Delta and its watershed such as the Sacramento River Watershed Program (SRWP) and numerous efforts from municipalities including the Sacramento Stormwater Quality Partnership. *We recommend adding in discussion of these programs as well as creating a goal of developing communication tools and platforms for groups to communicate water quality science to both constituents and decision makers in a coherent manner. We also recommend that the Delta Science Plan provide for sharing of key decisions, work products, and all final data to support transparency and collaboration.*

18. Appendix 2: Funding Delta Science

Sacramento already funds monitoring and assessment programs associated with NPDES regulated discharges and other activities. The Delta Regional Monitoring Program has spent considerable time evaluating monitoring efficiencies so that participants can achieve "cost neutrality" with current activities. *Because of the critical importance of the Delta, additional funding of the Delta Science Plan should be considered a cost item of the BDCP and funded through the water delivery beneficiaries or by the State. Ideally, the Delta Science Plan would be able to get full support from other State agencies and interests that have more flexibility with their significant monitoring and assessment budgets, in contrast with NPDES-mandated monitoring programs.*