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**BEFORE THE**

**CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**

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| HEARING IN THE MATTER OF CALIFORNIA DEPARTMENT OF WATER RESOURCES AND UNITED STATES BUREAU OF RECLAMATION REQUEST FOR A CHANGE IN POINT OF DIVERSION FOR CALIFORNIA WATER FIX | **WRITTEN TESTIMONY OF THOMAS STOKELY – ADAPTIVE MANAGEMENT (REVISED)**<br><br>**(Part 2 Rebuttal)** |

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## A. INTRODUCTION AND BACKGROUND

My name is Thomas Stokely. I am presenting this rebuttal testimony on behalf of Local Agencies of the North Delta ("LAND"), San Joaquin County, and Sacramento County in this evidentiary hearing before the State Water Resources Control Board ("State Water Board") concerning the petition to change the point of diversion for the California WaterFix ("CWF" or "Delta Tunnels") for the State Water Project ("SWP") and federal Central Valley Project ("CVP"), as specified in the licenses and permits of the US Bureau of Reclamation ("USBR") and the California Department of Water Resources ("DWR").

I have previously testified in this Hearing. My statement of qualifications was provided in Exhibit PCFFA-88, as modified by my testimony on March 27, 2018. (March 27, 2018 Hearing Transcript, page 32, lines 3 to 8; see also LAND-267 [updated Statement of Qualifications.) My PowerPoint for this testimony is LAND-268. This rebuttal testimony responds to the assertions by DWR witnesses Christopher Earle (DWR-1014 and DWR-1072) and Marin Greenwood (DWR-1012 and DWR-1029) that due to adaptive management, Petitioners' proposed project (CWF H3+) will be reasonably protective of fish and wildlife. (DWR-1012, pp. 4:7–17; 3:21–4:2; 24:7–12; 25:19–26:2; 27:1–3; 38:20–23; 40:5–10; 44:12–20; 46:22–47:11; 49:13–17 & fn. 60; DWR-1014, pp. 4:14–20; 4:28–5:7; 8:18–27; see also Hearing Transcripts, February 22, 2018, pp. 60–62, 146–147; March 5, 2018, pp. 110–114, 116–118, 120–128, 132–138, 142–145; March 9, 2018, pp. 96–100, 113–119 [cross examination regarding adaptive management].) Earle and Greenwood's testimony refers to the proposed Adaptive Management Program for the CWF and Current Biological Opinions on the Coordinated Operations of the Central Valley and State Water Projects ("Delta Tunnels AMP"). (See SWRCB-107, Att. 5; see also SWRCB-102, SWRCB-104, Appendix 3.H, SWRCB-105, SWRCB-106, SWRCB-108, SWRCB-110 and SWRCB-111.)

The Delta Tunnels AMP is a planning process that DWR, USBR, National Marine Fisheries Service ("NMFS"), United States Fish and Wildlife Service ("USFWS"), and California Department of Fish and Wildlife ("CDFW") propose to undertake to address ecological uncertainties associated with management of the proposed Delta Tunnels as part

of the CVP and SWP. (SWRCB 107, Att. 5, p. 3.) According to Petitioners, the Delta Tunnels AMP will establish the Interagency Implementation Coordination Group ("IICG"), which will oversee the development and implementation of the Delta Tunnels AMP. The IICG will be composed of representatives of USBR, USFWS, NMFS, DWR, CDFW, a federal water contractor, and a state water contractor. According to Petitioners, the Delta Tunnels AMP will apply science to address the effectiveness of management actions and address physical and biological uncertainties related to these actions.

My testimony focuses on the serious deficiencies in the proposed Delta Tunnels AMP as a future decision-making structure and the unacceptably high likelihood that it will fail to achieve its stated objectives. My critique of the proposed Delta Tunnels AMP is based largely on my experience with the failure of the Trinity River Restoration Program's ("TRRP") Adaptive Environmental Assessment and Management ("AEAM") Program established by the 2000 Trinity River Record of Decision ("Trinity ROD") (PCFFA-98). I will compare the AEAM's Program structure to the Delta Tunnels AMP, using elements identified by the Delta Independent Science Board ("DISB") and others as critical to a successful adaptive management program. The failures of the AEAM Program—and the causes underlying those failures—are well documented. In my opinion, the proposed Delta Tunnels AMP and the AEAM Program share critically important deficiencies. In particular, (1) they both have fatally flawed decision-making processes with built in conflicts of interest; (2) neither plan encourages meaningful stakeholder and public support and participation in decision making; and (3) both plans mistakenly rely on an assumption of unlimited dedicated funding to implement adaptive management.

I conclude that for many of the same reasons the AEAM Program has failed, the Delta Tunnels AMP, as currently proposed, is very unlikely to succeed in achieving its objectives. As I will explain, one need look no further than the adaptive management recommendations of the DISB to understand why these deficiencies in the two plans undermine those objectives. (SWRCB-51.) Moreover, the Department of the Interior's own adaptive management guidelines underscore some of the serious deficiencies in the Delta Tunnels

AMP. (LAND-244.) Although the Delta Tunnels AMP, as proposed, would not be implemented as a decision-making structure until many years from now, the Petition depends on the unfounded assumption that the proposed Delta Tunnels AMP will succeed, in order to satisfy Petitioners' burden of proving that the Petition will not result in injury to legal users of water or unreasonable adverse effects to fish and wildlife. For the reasons I describe, the Delta Tunnels AMP is unlikely to succeed.

Petitioners have deferred critical decisions on a vast range of key operational challenges the Delta Tunnels will face for implementation of the Delta Tunnels AMP. As proposed, the Delta Tunnels AMP does not include safeguards that would ensure that changes in operations developed under the AMP will not result in injury to public trust resources, especially fish and wildlife, or to other legal uses and users of water. In my opinion, the plan's critical deficiencies—including the lack of a meaningful opportunity for stakeholders (both water users and environmental) to participate in the adaptive management process, the absence of dependable and flexible financing, and the lack of clear and enforceable conflict-of-interest provisions—are fatal to the Delta Tunnels AMP, as proposed, and thus should result in denial of the Petition.

**B. TRINITY RIVER ADAPTIVE MANAGEMENT EXPERIENCE**

My experience with the AEAM Program predates the Trinity ROD. In 1988, as an employee of the Trinity County Planning Department, I began working to restore the Trinity River's fisheries through funding provided by the Trinity River Basin Fish and Wildlife Management Program authorized by PL 98-541 (PCFFA-92). I ran a small fishery restoration grant program and took minutes and acted as the administrative assistant for the chairman of the Technical Coordinating Committee of the Trinity River Task Force. Through the small grant program, combined with other funding sources, I oversaw many on-the-ground fishery restoration projects, development of new reservoir and river temperature models, as well as various other projects and studies.

From 1994 through 2003, I represented Trinity County as the CEQA lead agency for the NEPA/CEQA documents (an EIS/EIR and a supplemental/recirculated draft EIS/EIR) that

led to the Trinity ROD, which included the AEAM Program, as described in Appendix C from the Trinity ROD (LAND-269) and the 2000 Biological Opinion by the National Marine Fisheries Service (PCFFA-109).

Following adoption of the Trinity ROD in 2000, I acted as Trinity County's CEQA lead agency representative for the Trinity River Bridges EIR/EA to replace four undersized bridges and a culvert on the Trinity River. I also acted as the CEQA lead agency representative for the Indian Creek Rehabilitation Site EIR/EA. I was Trinity County's alternate representative on the Trinity Management Council ("TMC"), which was established under the Trinity ROD as a board of directors for the TRRP. I was a co-author of the 2004 "Trinity Management Council Subcommittee Trinity River Restoration Program Evaluation Final Report". (LAND-270).

In January 2012, former Interior Secretary Salazar appointed me as a member of the Trinity Adaptive Management Working Group ("TAMWG"), representing commercial salmon fishing interests. I was reappointed by former Interior Secretary Sally Jewell in March 2015. My appointment expired in March 2018 but the TAMWG was effectively disbanded, i.e., declared "administratively inactive" by the Interior Department in November 2018 (LAND-271), thereby ending all formal public participation in the TRRP. The TAMWG was the federal advisory committee established as part of the Trinity ROD to provide a venue for stakeholder input to the TMC concerning the implementation of the TRRP (LAND-269, Trinity ROD, Append. C.) The USFWS managed the TAMWG and provided member travel expenses, a paid note-taker, and a "Designated Federal Officer" to oversee the group.

The failures of the AEAM Program have been well documented since 2004. That documentation includes the 2004 "Trinity Management Council Subcommittee Trinity River Restoration Program Evaluation Final Report" (LAND-270), the 2008 CDR Associates "Trinity River Situation Assessment" (LAND-272), the June 2016 letter by the California Advisory Committee on Salmon and Steelhead Trout (LAND-273), and the TRRP Science Advisory Board's Phase I review (LAND-274, Buffington et al. 2014). Two reports have been issued by Headwaters Corporation under that contract with Reclamation, including a 2017 "Summary Report on Trinity River Restoration Program Goals and Objectives Including Components of

Governance and Adaptive Management" (LAND-278) and the 2017 "Summary of Trinity River Restoration Program Interviews Final Report to the Trinity River Restoration Program" (LAND-279).

## C. KEY PRINCIPLES APPLICABLE TO ADAPTIVE MANAGEMENT

In preparing my testimony, I carefully considered the August 2015 draft report of the DISB, "Adaptive Management in the Sacramento-San Joaquin Delta, How Is It Used and How Can It Be Improved," which developed the following recommendations to improve adaptive management in the Delta:

1. Create a Delta Adaptive Management Team (AMT)
2. Support adaptive management with funding that is dependable yet flexible.
3. Monitor.
4. Capitalize on unplanned experiments.
5. Use selected restoration sites to test adaptive-management and monitoring protocols.
6. Integrate science and regulations to enhance flexibility.
7. Recognize where adaptive management is not appropriate.
8. If the impediments to conducting adaptive management are insurmountable, revisit or revise the mandates.

(SWRCB-51, pp. 2–4, 35–39.)

In this testimony, I will evaluate the proposed Delta Tunnels AMP, focusing on the first three DISB recommendations and applying the lessons learned from the AEAM Program's adaptive management experience. Using the first three DISB recommendations as an analytical lens, I will also give my professional opinion about how likely the Delta Tunnels AMP is to succeed at implementing adaptive management and achieving its stated objectives. I will also opine on the suitability of the Delta Tunnels AMP for addressing CWF operation and mitigation assumptions for spring outflows (SWRCB-107, Att. 5, pp. 60–64, SWRCB-111, pp. 2-21 to 2-22 [mitigation for longfin smelt]), fall X2 outflows (SWRCB-107, Att. 5, pp. 60–64), farmland loss (SWRCB-111, pp. 2-41 to 2-44), and water quality impacts such as selenium (SWRCB-111, pp. 3-75 to 3-76), salinity, and Microcystis (SWRCB-111, pp. 2-13 to 2-14).

**Trinity River Adaptive Management Comparison to DISB Recommendations**

Similar to the DISB's methodology used to assess adaptive management in the Delta, Headwaters Corporation conducted a series of written and oral interviews in 2017 with TRRP

participants for the report, "Summary of Trinity River Restoration Program Interviews. Final Report to the Trinity River Restoration Program," hereafter, the "Headwaters Report." (LAND-279.) Before applying the Trinity River lessons, the DISB recommendations, and the Headwaters Report to the proposed Delta Tunnels AMP, it is useful to examine the failures of the AEAM Program using the DISB recommendations and Headwaters Report. The findings in the Headwaters Report and pertinent sections of the DISB's recommendations are set forth below:

**DISB Recommendation 1. Create A Delta Adaptive Management Team.**

> The AMT should be composed of individuals who are knowledgeable and skilled in all phases of adaptive management. These individuals may be drawn from agencies, non-governmental organizations, universities, or other sources, but all will be dedicated, full-time members of the Team who operate independently of state or federal agencies. The Team will work closely with those who plan, implement, or oversee management actions in the Delta. Strong leadership will be required to foster the mutual trust and respect among scientists, managers, stakeholders, decision-makers, and agencies that are needed to design and conduct coordinated adaptive management and navigate the tangled web of Delta interests.

(SWRCB-51, p. 36.)

The Headwaters Report clearly identified the AEAM Program's shortcomings with respect to the DISB's teamwork recommendation:

> Interviewees indicated there is limited TRRP identity. People identify themselves as working for their specific agency/entity and not for the TRRP. There is little sense of team or collaborative spirit within the program.
>
> Several interviewees pointed to a lack of continuity in leadership as a problem for the TRRP. There is no consistent TRRP vision/plan so each new agency head brings their own interests and focus to the program, some of which frequently are not consistent with the TRRP goal. [¶] . . . [¶]
>
> Regarding the role of the federal agencies in staffing the TRRP, some interviewees focused on staff in the Weaverville office as being the unit that should be transferred to an independent entity, like the USGS or a private contractor. Another option would be to continue to house TRRP staff from different agencies/entities but that the Executive Director (ED) should have direct supervisory authority over all TRRP staff housed at that office. There was no clear model described that was viewed as a way to overcome seeming internal difficulty in the relationship between Reclamation TRRP staff and Service TRRP staff. [¶] . . . [¶]

> Several interviewees viewed the DOI agencies (Reclamation and Service) as having a great deal of animosity towards each other and not working together effectively. The Memorandum of Understanding (MOU) between Reclamation and the Service expired over a year ago and a revision has not been signed by either agency. Some interviewees felt finalizing this MOU was critical because it outlines how the Executive Director, Science Coordinator, and Implementation Branch Chief will work together as a staff leadership team for the TRRP. Many interviewees described a feeling of distrust of the Tribes by other TRRP partners. Interviewees viewed the two Tribes as not getting along which translates into difficulties at the TMC level.

(LAND-279, pp. 7–8.)

The TRRP's lack of an effective independent team was not otherwise saved by a strong framework that was less subject to the vagaries of individual personalities and interests. On the issue of a framework, the TRRP Science Advisory Board, in its Phase I review (LAND-274, Buffington et al 2014), identified serious frailties of the AEAM Program. These included:

- Lack of integration of program activities and data collection (p. 343);
- Lack of formal hypothesis testing (p. 343); and
- Lack of a formal adaptive management framework (p. 343 ["A formal adaptive management framework is needed, as called for in the ROD (USDOI 2000), to better structure and integrate Program activities and to increase the defensibility and transparency of management actions."]).

**DISB Recommendation 2. Support adaptive management with funding that is dependable yet flexible.**

> Adaptive management in the Delta will not become a reality unless the paucity and unpredictability of funding to support critical stages of the process are remedied. Radical approaches to funding adaptive management are needed. The past and present piecemeal approaches will not provide the long-term support needed to reach the "adapt" part of the process, without which there is only a business-as-usual management approach.

(SWRCB-51, pp. 37-38)

**DISB Recommendation 3. Monitor.**

> Monitoring the right things, at the right times, and in the right places, is essential. Without it, there is no way to know whether management actions are moving

> toward the desired goal or toward a different, less desirable, outcome. Designing monitoring protocols to fit the magnitude of management actions and the timing of important ecosystem processes would make the value of adaptive management more readily apparent. Developing an institutionalized regional approach to monitoring could also help to coordinate actions among projects and facilitate the collection, analysis, and synthesis of data that are compatible across projects.

(SWRCB-51, p. 38.)

Funding and monitoring for adaptive management are integrally linked. The DISB noted this conflict:

> Where they are not accorded a high priority, adaptive management and monitoring activities are likely to languish when funds are tight. Moreover, available funds often come in pulses, making it difficult to sustain the monitoring, data analysis, and evaluation that are essential to doing adaptive management.

(SWRCB-51, p. 2.)

The TRRP has had a long-standing conflict between funding for monitoring of adult salmon populations and adaptive management monitoring. Adaptive Management monitoring was consistently shortchanged in order to fund other projects such as adult weirs and redd surveys.

On the tension between funding and monitoring in the AEAM Program, the Headwaters Report stated:

> TRRP science is viewed by many as being a lower priority in the budget than construction projects. Many interviewees described science (or adaptive management) as receiving what is left over in the budget after construction projects are funded. The TRRP was described as data rich but information poor. For example, there is a belief that the TRRP is creating more habitat for fish and producing more juvenile fish, but there are no reports showing these results and making these connections. [¶] . . . [¶]
>
> This was a significant concern noted by nearly all interviewees [on conflicts of interest]. Interviewees stated that TMC members are voting on budgets that benefit their agencies/entities in staffing, construction projects, and monitoring and see this as a significant conflict of interest. . . . [T]here was significant concern raised by multiple interviewees that this conflict of interest in the budget, how money is allocated to projects, and how decisions are made about this allocation is a potential fatal flaw for the TRRP.

(LAND-279, pp. 8–9.)

The Headwaters questionnaire asked about the overall health of the TRRP and received a negative response that several respondents felt was a result of the following problems:

- The culture of the overall TRRP was described as “a meeting culture” not a “doing culture”.
- TRRP leadership was frequently described as “lacking”.
- The lack of a strategic plan and common vision for the TRRP is viewed as a significant impediment to progress on the goals and objectives.
- The TRRP is viewed as lacking transparency. Issues are decided behind closed doors, quid pro quo deals are struck between partners, and any negative or unexpected outcomes regarding construction projects or monitoring are suppressed.
- Staff turnover at the Bureau of Reclamation and the U.S. Fish and Wildlife Service is viewed as a significant issue that contributes to the lack of a consistent vision/mission of the TRRP.

(LAND-279, p. 4, lines 124–132)

In summary, while touted originally as a model adaptive management and environmental management program, the Trinity River AEAM Program is not implementing adaptive management in a manner that the DISB recommends and the authors of the Trinity ROD envisioned. This failure is well documented by the fact that USBR has committed significant financial resources for the TRRP “program refinement” contract with the Headwaters Corporation. Past recommendations such as those found in the 2008 CDR Situation Assessment Report (LAND-272) have been largely ignored, and more money is being spent to come up with solutions that likely won’t be implemented.

## D. THE PROPOSED DELTA TUNNELS AMP WILL LIKELY FAIL DUE TO THE SAME PROBLEMS THAT CONTRIBUTED TO THE AEAM PROGRAM FAILURE

### 1. There are No Assurances for a Strong, Cooperative and Complete Adaptive Management Team

According to the DISB, an effective Delta Tunnels adaptive management program requires an adaptive management team with strong leadership and full time committed members with a strong sense of trust. (SWRCB-51, p. 36.) With agencies having different missions, conflicts often arise as agencies focus on priorities aligned with their agency

mission rather than the goals and objectives (mission) of an interagency program. This creates dysfunction, hinders implementation and limits the potential for success of interagency collaborative efforts at adaptive management such as the TRRP and that being proposed for the Delta Tunnels by the DISB.

The proposed Delta Tunnels AMP structure includes the same five agencies that are all members of the TMC. The USFWS, USBR, NMFS, DWR and CDFW all are members of the TMC and would also be members of the proposed IICG, along with San Luis-Delta Mendota Water Authority ("SLDMWA") and the State Water Contractors ("SWC"). (SWRCB-107, Att. 5, p. 10.) These entities are not independent. They are the same parties that will plan, implement, and oversee management actions coming out of the Delta Tunnels AMP process. While water contractors with an interest in diverting as much water as possible from the new intakes would be included, nowhere in the Delta Tunnels AMP process is there an opportunity for meaningful input from in-Delta governments, water users, landowners, fishermen, environmentalists, upstream water users, or other stakeholders whose interests would be affected by those same diversions.

The DOI's Adaptive Management and Overview Slide Show (LAND-276, p.~~slide~~ 4, slide 15) identifies set-up phase one as "Stakeholders as Partners". Other authors consistently cite public participation as an essential feature of a successful adaptive management program.

A key failure of the Trinity AEAM Program is that DOI did not follow its own recommendations. Broad stakeholder participation was not included, and the TRRP stakeholders that were included were never treated as partners. The TAMWG was mis-named as the "Trinity Adaptive Management Working Group." Yet, the TAMWG was simply a federal advisory committee without a vote at the TMC, where the decisions are actually made. Originally, the TAMWG chairman was not a member of the TMC, but, following the 2008 CDR Situation Assessment (LAND-272), the TAMWG chairman was granted a membership on the TMC, albeit a non-voting one. This lack of public support and partnership among stakeholders has led to dysfunction within the AEAM Program.

The death of stakeholder involvement in the TRRP came with the dissolution of the TAMWG in November 2017 by DOI. DOI was dishonest in its explanation of why the TAMWG was disbanded. (LAND-271.) Interior said that a written justification for the group to continue had not been submitted, but in fact it had occurred, according to a FOIA response to the *Eureka Times Standard*. (LAND-271) This lack of candor by a member of the key decision making body is indicative of the protectionist mentality that interviewees have said is pervasive among the agencies, where concern for agency budgets and projects appears to have been more important than a collaborative, science-driven process.

Similar to the AEAM Program, key stakeholders are excluded from the Delta Tunnels AMP. Such exclusion will mean that key concerns are similarly not considered in the Delta Tunnels AMP process. Based on my extensive experience with the TRRP, it is my opinion that the outcome of the Delta Tunnels AMP is likely to be similar to that of the TRRP. In fact, it appears more likely that the Delta Tunnels AMP could suffer from the same protectionist mentality because the majority of IICG members have a vested interest in increased Delta exports (BOR, DWR, SWC and SLDMWA), and the Collaborative Science and Adaptive Management Program ("CSAMP") policy group (LAND-268, slide 25) currently does not represent important interests like Delta agriculture or local public agencies, and it only includes one representative of in-Delta and upstream water users.

**2. Dependable and Flexible Funding Is Not Assured**

The DISB also recommends that there be "dependable yet flexible" funding for the proposed Delta Tunnels AMP and that the right kind of monitoring be funded. (SWRCB-51, p. 3.) As mentioned previously, funding and monitoring are linked. With respect to monitoring within an adaptive management program, the DISB has said:

> Monitoring the right things, at the right times, and in the right places, is essential. Without monitoring, little is learned and success (or failure) cannot be evaluated. Designing monitoring protocols to fit management actions and the timing of important ecosystem processes will make the value of adaptive management more readily apparent.

(SWRCB-51, p. 3.)

The DISB identified the conflict between funding for historic monitoring and adaptive management monitoring:

> Thus, adaptive management is often viewed as an unfunded mandate. We believe that people and programs generally want to, and try to, practice adaptive management, but without dedicated and reliable funding they are reluctant to do so at the expense of existing projects and programs.

(SWRCB-51, p.29)

The DISB, in its evaluation of Delta adaptive management (SWRCB-51, p. 12), found inadequate funding to be the most common response from Delta adaptive management participants:

> The strongest, most uniform response we received, however, was disagreement with the statement that "Monitoring is adequately funded to support adaptive management." This concern will emerge often in this report; we consider it further in Section VI.

The Delta Tunnels AMP (SWRCB-107, Att. 5, p. 4) acknowledges that "significant" funding is necessary:

> Success of the adaptive management process outlined within this Framework **hinges upon significant new investments in related research**, monitoring and modeling that build on existing efforts. These investments will address key uncertainties related to water operations and threatened and endangered species that have been raised in a number of different venues . . .

(*Emphasis added*)

The Draft Adaptive Management Framework for the Delta Tunnels further addressed the tension between institutional capacity and funding:

> The key issue is whether existing efforts, individually and collectively, have enough capacity both in terms of staff capacity and senior researcher capacity, and have stable funding to ensure a long-term scientific basis to support successful adaptive management decision making that is relevant to project operations now and in the future.

(SWRCB-104, Append. 3H, p. 3.)

The TRRP had a remarkably stable and generous budget, averaging around $15 million/year for several years. In my opinion, the TRRP had more than adequate funding to implement an effective fishery restoration and adaptive management program. However, the

problem lies with the decision-making process of the TMC. There was also a great deal of controversy about how to allocate the funds. There are no conflict of interest requirements for TMC members, who are able to vote on funding for their own agency/tribal programs and projects. Exacerbating that problem, there are many long-standing fishery monitoring projects that have received funding instead of high priority adaptive management monitoring needs.

I am not aware of a reliable funding source for the proposed Delta Tunnels AMP having been identified. (SWRCB-107, Att. 5, p. 36.) The proponents are having problems raising all the funds necessary to construct the project, the project is nowhere near final design, and there are as yet many serious unknowns. (See, e.g., SDWA-265, pp. 15–16.) As of the writing of this testimony, a secured funding source to construct the entire project described in the Petition (including the SWP/CVP split described therein) has not been identified in Hearing evidence. (See, e.g., SDWA-265, pp. 15–16, SDWA-315.)

The failure of Petitioners to demonstrate sufficient funding is a fatal flaw of the Delta Tunnels AMP. Petitioners have failed to provide evidence that there will be a firm commitment of sufficient resources or staff for adaptive management, and therefore it is reasonable to assume adaptive management will be stymied, as it has been for the TRRP.

My experience with the old and new TRRP is that when unforeseen construction, operation or maintenance funding needs arise, the science and restoration funding will be cut to pay for it. The same is likely for the Delta Tunnels. Moreover, without more detail about the Delta Tunnels AMP scope, it will not be possible to demonstrate compliance with the Water Code section 85089 requirement that funding for all mitigation and management be in place prior to construction:

> Construction of a new Delta conveyance facility shall not be initiated until the persons or entities that contract to receive water from the State Water Project and the federal Central Valley Project or a joint powers authority representing those entities have made arrangements or entered into contracts to pay for both of the following:
>
> > (a) The costs of the environmental review, planning, design, construction, mitigation, including mitigation required pursuant to Division 13 (commencing with Section 21000 of the Public Resources Code) required

but for the construction, operation, and maintenance of any new Delta water conveyance facility.

(b) Full mitigation of property tax or assessments levied by local governments or special districts for land used in the construction, location, mitigation, or operation of new Delta conveyance facilities.

Petitioners' failure to assure complete funding for final design and construction (after more than a decade in pursuit of the Delta Tunnels) supports a finding that they are unlikely to secure adequate, dependable funding for adaptive management, as recommended by the DISB. (SWRCB-51, p. 3.) With significant uncertainty surrounding the Delta Tunnels AMP funding, Petitioners cannot meet their burden, and the State Water Board cannot find, that the CWF will not unreasonably impact fish and wildlife and other public trust resources, or that approval of the project would not be contrary to the public interest.

### 3. The Governance Structure, Voting Rules and Failure to Protect Against Conflicts of Interest Pose Significant Problems

The "Agreement for Implementation of an Adaptive Management Program for Project Operations" ("AMP MOU") is a draft agreement that proposes to have the IICG member agencies operate by consensus, with a lengthy non-binding appeal process through establishment of an appeals panel. (SWRCB-107, Att. 5, MOU p. 10.) Some of the specific problems that undermined the AEAM Program are likely to also undermine the Delta Tunnels AMP:

- Voting rules for the IICG have been clearly established as consensus.

I recommend simple majority voting rules for the IICG with expanded membership. Collaboration through consensus or super-majority is wonderful to strive for, but my experience in the case of the TRRP (TRRP/TMC uses super majority), it is often used to coerce a decision that is to one or more member's advantage by withholding a vote on an issue. To remedy the gridlock, the other members feel compelled to "make a decision" that cannot occur without a super majority vote that includes the holdouts who benefit from the final vote. The Delta Tunnels AMP, using consensus instead of super majority like the TRRP, will find itself in a similar situation because of the consensus requirement and an elaborate non-binding appeals process.

- The entity that the IICG recommends take a management action can veto a decision of the IICG, regardless of the IICG vote.

The TRRP has demonstrated that the system operators will act in their best interests and those of their constituencies, irrespective of the opinions of staff at fish and wildlife agencies. The Delta Tunnels AMP and the AMP MOU clearly state that ultimately, each agency (DWR, USBR, NMFS, USFWS, and CDFW) retains the discretion to make decisions whether to implement the operational decisions and other management actions that the IICG might recommend. (SWRCB-107, Att. 5, p. 10, AMP MOU, p. 10.) With respect to the project operators, DWR and USBR, given the significant investments being made by their customers, there will be significant pressure to act in the best interests of their customers, despite the opinions of the fisheries agencies. Based on my experience with the TRRP, the ability of an agency to overrule a recommendation of the IICG after achieving consensus could risk the loss of trust among committee members.

- The lack of conflict of interest rules significantly hinders the likelihood of success for the Delta Tunnels AMP.

In the case of the TRRP, voting members of the TMC can vote to approve no-bid federal contracts for themselves to design, build and monitor restoration projects. This hinders funding for key adaptive management projects because voting members do not want to see their projects defunded for adaptive management projects. Additionally, proposed adaptive management projects may show that the restoration strategy voting members are implementing (and getting paid to do) is ineffective. In the case of the Delta Tunnels, IICG votes could be steered in the direction of funding the regulatory agencies' historical work such as monitoring adult salmon populations for harvest management purposes in exchange for a favorable vote on operations that might harm protected fish and wildlife resources, or water quality. The Delta Tunnels AMP, as proposed, includes no safeguards to prevent this from happening.

- The governance structure is deficient because the IICG does not include essential stakeholders such as in-Delta agencies, water users, environmentalists, environmental justice groups, recreationalists, fishermen and upstream water users.

In the case of the TRRP, key stakeholders were never given a final vote on anything, only advisory votes. Ultimately, public support for the program decreased significantly. Without meaningful mechanisms for stakeholder input, the Delta Tunnels AMP is unlikely to address issues of concern to the public, including Delta water levels and quality for a variety of beneficial in-Delta uses. The issue of conflict of interest is also exacerbated because Reclamation, DWR and the state and federal water contractors make up the majority of IICG voting members.

The proposed public participation element of the Delta Tunnels AMP is to utilize the existing Collaborative Science and Adaptive Management Program ("CSAMP"). (SWRCB-107, Att. 5, pp. 65–66.) This is hardly a model for public participation. The CSAMP policy group's membership is limited to federal and state water management and fisheries agencies, fishing and environmental organizations, and SWP/CVP south-of-Delta water contractors, with only one seat held by in-Delta and upstream water users, respectively. (See LAND-268, slide 25). Many other critically affected interests such as public agencies, upstream water users and Delta agricultural interests would have to be added to the CSAMP policy group in order for it to be truly representative. Also, the CSAMP policy group is similar to the TRRP's TAMWG in that neither group actually gets a final vote on anything. These groups are merely advisory and offer only the illusion of public involvement.

### 4. Petitioners' Proposed Use of Adaptive Management Is Overly Broad and Inappropriate

The DISB, in its report on adaptive management has a seventh recommendation—i.e., "*Recognize where adaptive management is not appropriate*." (SWRCB-51, p. 4.)

The TRRP had some significant advantages over the Delta Tunnels in terms of adaptive management, yet even it has failed to implement an effective adaptive management program. In particular, Trinity River annual instream flow volumes were fixed by water year.

Impacts to landowners along the Trinity River were largely mitigated by funding commitments for new bridges, purchase of homes in the floodplain and replacement or repair of water and sewer systems that would be damaged by higher river flows. Thus, many controversial issues were resolved and not subject to resolution through a consensus-based adaptive management decision-making process.

The Delta Tunnels project proposes to use adaptive management to resolve numerous controversial issues. The Delta Tunnels AMP proposes to use adaptive management to revise the CWF's initial spring outflow and fall X2 criteria. (SWRCB-107, Att. 5, pp. 60–64.) The Delta Tunnels AMP is also proposed for issues that may not be apparent upon review of a description of the Delta Tunnels AMP and its objectives. For example, the Petitioners propose to use adaptive management to mitigate farmland losses and address water quality impacts. (See, e.g., SWRCB-111 at pp. 2-13 to 2-14 [adaptive management to address water quality effects, including EC and Microcystis]; pp. 2-41, 2-44:26-27 [adaptive management as part of adopted mitigation for impacts to farmlands].) At least with respect to the latter two issues, it appears that the Delta Tunnels AMP is being used to defer the adoption of mitigation for significant unmitigated impacts to loss of farmland and water quality impacts, with the result that significant environmental and financial commitments are undefined and unassured.

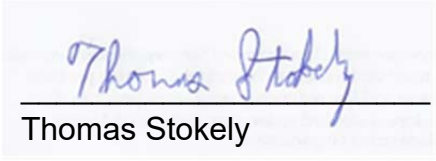
In short, Petitioners' proposal to use adaptive management in this context is overly broad and inappropriate. When such proposed use is combined with their failure to assure sufficient funding, it is clear that Petitioners have failed to demonstrate that the Petition will not unreasonably affect fish and wildlife, or public trust resources, or injure legal users of water, or that it is in the public interest.

**CONCLUSION**

The TRRP was envisioned as a model adaptive management program. It has failed for a number of reasons. Despite having stable and substantial funding, initial strong public support, clearly identified blocks of water for fisheries and regulatory flexibility, the TRRP has not achieved any of its objectives or demonstrated that adaptive management can actually succeed.

The proposed Delta Tunnels adaptive management program is not likely to succeed and is not even appropriate in some areas the Delta Tunnels proponents propose to apply it, such as loss of farmland and impacts to water quality, which is clearly a deferral of mitigation. Important decisions about how much water is dedicated to the environment and how to mitigate significant environmental impacts should not be put off until a later date under the guise of adaptive management. The management structure and operating procedures of the proposed Delta Tunnels AMP make it clear that impasse will be the result of consensus voting rules. The same agencies that have been in charge of the AEAM Program would also be in charge of the Delta Tunnels AMP. If history is any indication, the outcome is likely to be a huge disappointment. Due to its many shortcomings, the Board should not rely on the proposed Delta Tunnels AMP to find that the Petition is reasonably protective of legal users of water, fish and wildlife, the public interest, or public trust resources.

Executed on the 10th day of July, 2018, at Mount Shasta, California.



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