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DELTA STEWARDSHIP COUNCIL

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March 18, 2015

Jacob McQuirk, P.E.
Supervising Engineer
California Department of Water Resources, Bay-Delta Office
P.O. Box 942836
Sacramento, CA 94236

RE: Emergency Drought Barriers Project – Initial Study/ Proposed Mitigated Negative Declaration

Dear Mr. McQuirk:

The Delta Stewardship Council (Council) staff appreciates the opportunity to comment on the Initial Study/ Mitigated Negative Declaration (IS/MND) for the Emergency Drought Barriers Project (EDB Project) being prepared by the Department of Water Resources (DWR). Established by the Sacramento-San Joaquin Delta Reform Act of 2009 (SBX7 1), the Council is an independent state agency charged with furthering California's coequal goals for the Delta through the adoption and implementation of the Delta Plan and its regulatory portions of which became effective on September 1, 2013. As stated in the Delta Reform Act of 2009, the State has "'Coequal goals' (which) means two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place" (Water Code § 85054).

The Council acknowledges that the State is in a multi-year drought and the scenario is grim for any immediate relief for the State and the Delta. Based on the EDB Project's description and subsequent meetings with DWR executive management and staff, the Council understands that this project is an action to be taken by the State and DWR that is reserved for more dire circumstances regarding water supply and delivery as well as Delta flows. The Council appreciates DWR's efforts during this challenging multi-year drought and staff is appreciative of the various discussions we have had with DWR regarding the EDB Project.

The project description in the EDB Project's IS/MND proposes to construct channel barriers up to three times over a ten year span at three locations in the Delta, at Sutter Slough, Steamboat Slough, and False River to protect water quality by impeding salinity intrusion into the Delta. By the nature and location of the proposed action, the EDB Project is within the jurisdiction of

the Delta Stewardship Council and the state's Delta Plan and may be a covered action. Consequently, Council staff has included below a preliminary list of Delta Plan regulatory policies that may be implicated by this project. If DWR determines that the EDB Project is a covered action, it would need to provide detailed findings of consistency with these and any other relevant policies in a certification filed with the Council.

ER P1 policy (23 CCR Section 5005), ***Delta Flow Objectives***, which states that "The State Water Resources Control Board's Bay Delta Water Quality Control Plan flow objectives shall be used to determine consistency with the Delta Plan" because the project could impede and/ or alter Delta flows that are subject to meeting the Bay Delta Water Quality Control Plan flow objectives.

ER P5 policy (23 CCR Section 5009), ***Avoid Introductions of and Habitat Improvements for Invasive Nonnative Species***, maybe implicated by the EDB Project because the Project may change or alter the ecology of fish and plant species in the project areas, "The potential for new introductions of or improved habitat conditions for nonnative invasive species, stripped bass, or bass must be fully considered and avoided or mitigated in a way that appropriately protects the ecosystem." Alternating flow through the channel may induce and colonize invasive plant species, such as *Egeria densa (Brazilian water weed)* and/ or water hyacinth, which could infest Delta channels. The barriers may also create new habitat for predatory fish (See Biological Resources comment 3 below).

DP P2 policy (23 CCR Section 5011), ***Respect Local Land Use When Siting Water or Flood Facilities or Restoring Habitats***, reflects one of the Delta Plan's charges to protect the California Delta as an evolving place by siting project improvements/ facilities to avoid or reduce conflicts with existing uses when feasible and consider comments from local agencies and the Delta Protection Commission. The EDB Project may affect land owners, tenants, and their existing uses when the project improvements/ facilities are implemented because the barriers would not only be impediments to the usage or navigation of the Delta channels, but also may lead to changes in salinity and impact water quality for in Delta water users (See Land Use and Planning comment below).

RR P3 policy (23 CCR Section 5014), ***Protect Floodways***, states that no encroachment shall be allowed or constructed in a floodway, unless it can be demonstrated by appropriate analysis that the encroachment will not unduly impede the free flow of water in the floodway or jeopardize public safety. The EDB Project triggers this policy since the EDB Project's primary objective is to protect water quality of exported water by impeding the flow of salinity through the Delta. DWR has modeled that this objective will be accomplished by blocking specific river channels with temporary rock barriers. Additionally, the EDB Project managers should consult with the Central Valley Flood Protection Board (CVFPB) to ensure that the proposed activities conform to the CVFPB's encroachment enforcement process and are in compliance with relevant State codes, regulations, and requirements.

G P1 policy (23 CCR Section 5002), ***Detailed Findings to Establish Consistency with the Delta Plan***, requires that the State agency, prior to initiating the project, self-certify consistency with the Delta Plan, per Water Code Section 85225. The Certification of Consistency is electronically submitted and would address any germane Delta Plan regulatory policies with detailed findings demonstrating compliance or to explain that the project, although not consistent with each of the policies, is nevertheless consistent with the Delta Plan because, as a whole, it will still contribute to the overall achievement of the coequal goals. Specific requirements under **G P1** include:

- Since the EDB Project is subject to CEQA, it must also include applicable feasible mitigation measures under the Delta Plan's Programmatic EIR (certified on May 17, 2013) or substitute mitigation measures that are equal to or more effective to the Programmatic EIR mitigation measures. For example, the proposed project is expected to involve in-channel construction. The Delta Plan's Programmatic EIR mitigation measures related to in-channel construction should be considered (e.g. Mitigation Measures 3-1, *Violate any Water Quality Standards or Waste Discharge Requirements or Substantially Degrade Water Quality*) and adopted if no EDB Project specific mitigation measure is equal or more effective.

- The EDB Project must document the use of best available science described in Appendix 1A of the Delta Plan regulations (http://deltacouncil.ca.gov/sites/default/files/documents/files/FinalRegText_appendices_07262013.pdf). Essentially best available science means the use of the best information and data, specific to the decision being made and the time frame available for making that decision, to assist management and policy decisions. The process and information used should be clearly documented and effectively communicated to foster improved understanding and decision making.

- GP 1 calls for water management projects to include adequate provisions for continued implementation of adaptive management, appropriate to the scope of the action. This requirement can be satisfied through the development of an adaptive management plan that is consistent with the framework described in Appendix 1B of the Delta Plan along with documentation of adequate resources to implement the proposed adaptive management process.

In reviewing the EDB Project's IS/MND, Council staff also submits the following comments for review and consideration for DWR to implement as it prepares findings for the EDB Project's final mitigated negative declaration:

Biological Resources

- **How would the EDB Project address potential impacts to juvenile salmonids due to proposed EDB Project facility installation and operational timing?** The proposed EDB Project's time schedule for installation (from as early as May 7 for West False River and May 22 for Sutter and Steamboat sloughs) and for final removal (November 1 for Sutter and Steamboat sloughs and November 15 for the West False River site) could align with the time frame of young juvenile salmonids traveling through the Delta and alter their natural paths through the Delta and out towards the SF Bay and eventually out to sea. If the EDB Project facilities remain in place at Sutter and Steamboat sloughs until November 1st, then there is a potential to affect juvenile winter-run Chinook salmon which enter the Delta starting in October. The IS/MND proposes mitigation measure BIO-1, Conduct Real-Time Monitoring and Adjust Construction Activities Accordingly, which discusses field surveys at locations in the Delta to help assess the status of in-Delta anadromous fish. The mitigation measure states that DWR will informally consult with wildlife agencies regarding the collected data, but it is unclear what types of actions that DWR could take during either construction or operation to minimize potential impacts. The Council suggests consulting with the California Department of Fish and Wildlife, National Marine Fisheries, and the US Fish and Wildlife Service to develop a plan to address potential impacts during installation and operation of the EDB Project facilities. The Council also suggests coordination with wildlife agencies to investigate altering or minimizing the time when the EDB Project facilities are placed and in operation which could reduce the potential impacts on juvenile salmon migration conditions.

- **The IS/MND discusses measures to monitor fish passage through the proposed facilities via culverts, mitigation measure BIO-3. How would the EDB Project use the monitoring and data to develop specific measurements and criteria for an adaptive management plan?** The IS/MND discusses several potential issues that could arise from construction and operation of the EDB Project facilities, including delaying or preventing upstream passage for adult anadromous fish. The IS/MND states in mitigation measure BIO-3 that DWR will construct a pad at culvert openings, construct a slope down to the channel bed, and use DIDSON cameras to monitor whether adult fish are experiencing migration delays due to the EDB Project facilities. The IS/MND also states mitigation measure BIO-5 which proposes monitoring criteria for turbidity. The Council recognizes that DWR has these proposed mitigation measures, but they stop short of describing the actions that DWR will take as it collects this data and uses it to evaluate possible impacts. The Council suggests the development of an adaptive management plan which cites and identifies conceptual models, testable hypotheses, and management triggers to determine whether construction and operation of the EDB Project facilities would have adverse impacts on habitat for listed fish species and how to alter such construction and operation. The proposed adaptive management plan should develop specific triggers to identify when a change in management operations needs to occur to address an ongoing problem (e.g.,

determine what constitutes a substantial delay in adult anadromous fish migration, and specify at which point a change in operations, such as opening all four of the culverts, should be considered). In the Delta Plan, Appendix C, *Adaptive Management and the Delta Plan*, a description is presented with a three-phase adaptive management framework that could assist DWR in the development of the EDB Project's adaptive management plan. In addition, it is unclear how proposed best management practices (BMP's) would be effective to minimize potential impacts unless the BMP's are developed in a project management plan and subject for review.

How would the EDB Project address the effects of reduced flows which could potentially lead to increased water temperature and residence time and thus potentially provide favorable conditions to establish pervasive invasive aquatic vegetation (IAV)? Mitigation measure BIO-6 discusses the development of a water quality plan to assess the effects of the proposed project on flow and water quality for the central and north Delta, but does not include effects in the western Delta where DWR modeling has reflected potential water quality issues. The mitigation measure is not clear on what possible actions the EDB Project would take based upon the collected and evaluated data. Additionally, water temperature and residence time conditions may encourage the establishment and proliferation of IAV such as water hyacinth and Brazilian waterweed (*Egeria densa*). The IS/MND does not mention the potential of the EDB Project for possible impacts of facilitating infestations of IAV, which can have deleterious impacts on water quality (e.g., potential reduction in dissolved oxygen), fish habitat (e.g., reduced open water habitat, enhanced ambush habitat for predatory nonnative fish), and recreational boating opportunities. The Council urges coordination with the California State Parks Division of Boating and Waterways' Aquatic Weed Control Program and the wildlife agencies to further evaluate this potential impact and to develop mitigation measures.

- **How would the EDB Project address potential increase of cover habitat for non-native predatory fish such as striped bass and largemouth bass?** Based on previous studies in the Sacramento River and the Delta, artificial in-water structures such as rock barriers and pilings attract predatory fish by creating ambush cover for non-native predatory fish. Such structures also create hydrodynamic eddies that can disorient juvenile fish and under those conditions may attract and enhance the foraging success for non-native fish predators. Mitigation measure BIO-3 discusses the monitoring effectiveness of the culvert system to pass anadromous fish. It is not clear if the mitigation measure also addresses the potential impact of increased cover habitat for predatory fish and a plan to mitigate for such potential impacts. The Council urges further evaluation of these potential impacts and coordination with wildlife agencies on possible additional mitigation measures.

Hydrology and Water Quality

- **The IS/MND describes recently modeled possible impacts to the western Delta. How would the EDB Project address modeled salinity impacts to the western Delta and specifically to North Bay Aqueduct and how will those impacts be mitigated for the Barker Slough Pumping Plant?** At a public meeting in Clarksburg (February 12, 2015), DWR presented results of modeling for salinity at Barker Slough during an extremely dry year. The results showed an increase of salinity levels up to approximately 400 microsiemens at Barker Slough which could impact water quality for the North Bay Aqueduct feed by the Barker Slough Pumping Plant as a result of the proposed 3 barrier sites scenario. Additionally, in the IS/MND's appendix C, *the DSM2 Modeling of Tidal Flows and Salinity*, it states that the DSM2 model reflects the False River barrier "...would reduce tidal flows in the San Joaquin River at Jersey Point (by about 10 percent) and redirect some of this tidal flow to the Sacramento River..." The redirect of tidal flow to the Sacramento River may cause the water quality to change, specifically salinity, in the Western Delta and possibly affect in-Delta water users. Mitigation measure BIO-6 discusses the development of a water quality plan, but it is not clear if it will address this issue or develop an adaptive management plan. The Council encourages the development of a water quality plan that includes an adaptive management plan. The Council also suggests further consultation with the State Water Resources Control Board to evaluate modeled impacts. The IS/MND should address the modeled impacts to the State Water Project facility and possible impacts to in-Delta water users in the western Delta. Possible mitigation measures could include modified operations and temporary modification to water quality standards at the Barker Slough Pumping Plant.

Land Use and Planning

- **How would the EDB Project address transparency regarding the selection of barrier locations in the Delta?** On page 2-1 the IS/MND directs readers to the Draft Emergency Barriers Report (DWR 2009) regarding the selection of the proposed barrier locations. The purpose of the 2009 report is to present "...a summary and conceptual-planning level analysis of potential temporary emergency barriers that could be installed in the Delta to mitigate the effects of drought conditions on water quality." But the report also states, "The purpose for this report is to serve as a basis for further evaluation and analysis of potential temporary emergency barriers for determining possible recommended alternatives after considering all potential impacts and benefits." The Council suggests DWR to consider additional language in the IS/MND regarding the selection process for the final barrier locations (e.g. why other locations were not selected or why more locations were not included). The discussion should also include DWR's coordination efforts to minimize impacts to local, in-Delta water users. To further coordination efforts with entities in the Delta, the Council suggests coordination with the Delta Protection Commission and the 5 Delta Counties.

Again, Council staff appreciates the opportunity to comment on the EDB Project's IS/MND and for previous discussions with DWR regarding this project. We look forward to working with DWR and EDB Project managers as this action moves forward.

If you have any questions or would like to discuss the comments presented here, please feel free to contact me or my staff, Anthony Navasero at Anthony.Navasero@deltacouncil.ca.gov or (916) 445-5471.

Sincerely,

Cindy Messer

Cindy Messer
Deputy Executive Officer