A. INTRODUCTION

Antioch appreciates that the hearing officers have delayed the start of Part 2 of the current California WaterFix ("CWF" or "Delta Tunnels") water rights hearing in order to address concerns raised by the parties as to certain matters, including potential ex parte communications. Antioch respectfully requests that the Board also use this delay time to further consider additional issues that we believe may necessitate substantial changes to the hearing schedule to address the following:

1. The current WaterFix proposed project for Part 2 (CWF H3+) is different from the version of the project discussed and analyzed in Part 1 (Alternative 4A, Scenarios H3 and H4), and different from the H3+ scenario analyzed in the Biological
Assessment (BA H3+). The use of a wholly new model scenario should trigger additional hearings on the new or differing potential injuries to legal users of water, e.g., through a Part 1c (Petitioners) and Part 1d (other legal users of water).

2. The California Department of Water Resources (DWR) is now considering phasing the Delta Tunnels project, such that the first stage would consist of two intakes and a single tunnel. The environmental impacts and the impacts to legal users of water of this modified capacity project have not been analyzed and disclosed. The hearing should be stayed indefinitely until DWR fully commits to a concrete project description and design (single or twin tunnel), and if a single tunnel project is proposed, the hearing should be stayed until a new single-tunnel project is fully analyzed and modeled for any adverse impacts to legal water users, the public trust and the public interest.

B. DISCUSSION

1. The proposed project submitted for Part 2 is different than for Part 1

   The Petitioners testified in Part 1 of this hearing that the WaterFix proposed project is “Alternative 4A with operations criteria H3 and H4.” (See e.g., DWR-1028, Slide 6.) In fact, there are significant differences between the operations of the project proposed in Part 2 (CWF H3+) and operations of the project proposed in Part 1 (H3 and

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1 Scenario BA H3+ has not been introduced into evidence for the State Water Board’s WaterFix Water Right Change Petition proceedings.

2 See page 1 of the DWR’s Scope of Work https://caleprocure.ca.gov/pages/Events-BS3/event-bid-comments.aspx: “DWR is in the process of evaluating different ways of implementing the CWF including possible construction in stages, with the first stage consisting of two North Delta intakes instead of three, and one main tunnel instead of two. The second stage of construction would complete the facilities as approved at a subsequent time.”
Table 1. Proposed operations for NAA, H3, H4, BA H3+, and CWF H3+ scenarios.  

<table>
<thead>
<tr>
<th>Combined Flow in Old and Middle River (OMR)</th>
<th>No Action Alternative (NAA)</th>
<th>H3</th>
<th>H4</th>
<th>BA H3+</th>
<th>CWF H3+</th>
</tr>
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<tbody>
<tr>
<td>FWS BiOp (Dec 2008) NMFS BiOp (Jun 2009)</td>
<td>New proposed OMR criteria (DWR-515 Table 3) or same as the NAA, whichever results in less negative OMR flows.</td>
<td>Same as H3</td>
<td>Same as H3</td>
<td>October and November: Same as NAA Other months: Same as H3</td>
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| Delta Outflow Index | SWRCB D-1641 and USFWS BiOp (Dec 2008) Fall X2 Requirement | Same as NAA | Same as NAA: In addition, enhanced spring Delta outflow required during the Mar-May period. Mar-May average outflow requirement is determined based on 90% forecast of Mar-May Eight River Index (8RI). | March, April, May: Operational criteria from the 2008 USFWS BiOp and 2009 NMFS BiOp. The San Joaquin River i-e ratio will be used to constrain Apr-May total Delta exports to meet March–May Delta outflow targets. | March, April, May: 2008 USFWS BiOp and 2009 NMFS BiOp operations, including current climate conditions. March: 8RI outflow targets to the extent possible without exports falling below 1,500 cfs. April and May: Same as BA H3+ criteria except restrictions apply only up to a maximum outflow target of 44,500 cfs. |

3 “As in H3 and H4, the BA H3+ included new OMR flow requirements and south Delta export restrictions during October and November compared to NAA. In the CWF H3+ Scenario, these OMR flow requirements and the south Delta export restrictions were removed.” DWR-1016, p.6:2-5.

4 See DWR-1069 for additional detail.
In addition, spring Delta outflow requirements are significantly different for Scenario CWF H3+ as compared to Scenarios H3, H4, and BA H3+. CWF H3+ includes the 2009 NMFS Biological Opinion limits on the ratio of San Joaquin inflow to south Delta exports in March, April, and May, includes additional Delta outflow in March (based on 8RI targets, see DWR-1069 Table 6), and removes restrictions on OMR flows in October or November. As a result of these changes, south of Delta exports for CWF H3+ are significantly different than for scenarios H3 and H4 (see Figure 1). For example, CWF H3+ operations result in about 60 TAF/month of additional south-of-Delta exports during October compared with H3 and H4, and more south-of-Delta exports in other months as well. Scenario H3+ also has significantly less south-of-Delta exports in April and May than Scenarios H3 and H4.
Figure 1. Total SWP and CVP South-of-Delta Exports averaged for each month for water years 1922-2003. The data plotted are from the Biological Assessment No-Action Alternative, Alternative 4A Scenarios H3 and H4, and the new version of the project for Part 2 (CWF H3+). These CALSIM II output data were submitted by the Petitioners in Part 1 and Part 2 of this hearing.

Changes in export flow volumes and locations impact on water quality throughout the Delta. Figure 2, reproduced from DWR-1027 slide 24, shows that chloride concentrations at Contra Costa Canal are significantly higher during the months of October and November for the CWF H3+ scenario than for Scenarios H3 and H4, and somewhat higher in other months as well (October through April). CWF H3+ is also expected to result in higher electrical conductivity (EC) at Prisoner’s Point relative to Scenarios H3 and H4 as a result of “Vernalis water quality and in-Delta discharges.”

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5 Impacts at Antioch are unknown at this point in time because, to the best of our knowledge, DWR did not produce water quality results for Antioch under CWF H3+ operations in their Part 2 case-in-chief.

6 “For Prisoner’s Point (Figure C8), the NAA meets or is less than 0.44 mmhos/cm EC approximately 98% of the time, the BA H3+ meets or is less than 0.44 mmhos/cm EC 90% of the time, and the CWF H3+ meets or is less than the 0.44 mmhos/cm EC approximate 87% of the time. The higher EC for both the NAA and CWF H3+ at Prisoner’s Point is a reflection of the presence of higher EC San Joaquin River water compared to the water from the Sacramento River and the San Francisco Bay.” DWR-1015, p.14:13-18.

7 See DWR-1015, p.14:24-25.
The CWF proposed project for Part 2 (CWF H3+) is substantially different than the proposed project for Part 1 (H3 and H4). Additional, revised supporting documentation for CWF H3+ should be provided as a part of the WaterFix Water Right Change Petition. Specifically, new analyses of flows, water quality, reservoir storage, and temperature impacts should be provided to identify the impacts of the proposed project scenario CWF H3+.

In summary, Scenario CWF H3+ shows significant differences in the timing and magnitude of the salinity impacts relative to Scenarios BA H3+, H3, and H4. Thus, the water quality impacts for Scenario CWF H3+ are expected to be different that the water quality impacts disclosed during Part 1 for Scenarios H3 and H4. The injuries to legal
users of water associated with Scenario CWF H3+ have not been the subject of testimony before the Hearing Officers in Part 1.

The parties that are legal users of water need the opportunity to examine and respond to testimony by the Petitioners on this new project CWF H3+ and to provide their own testimony, which should occur before proceeding with Part 2.

Based on the foregoing, Antioch respectfully requests reconsideration of the Board’s prior ruling that Part 2 of the hearing can proceed without reopening Part 1.

2. Petitioners appear to be considering a new single-tunnel rather than twin-tunnel alternative

DWR appears to be proposing to construct the WaterFix project in two stages and to begin construction and project operation with a single tunnel and a lower export capacity from the North Delta (see Footnote 1 on page 1 above). We understand from news reports that the export capacity of the single-tunnel project is expected to be lower than the export capacity of the two-tunnel WaterFix project defined in Part 1 (e.g., the single-tunnel export capacity may be 4,500 cfs or 6,000 cfs, as compared to a capacity of 9,000 cfs as proposed in Part 1). If less water is exported from the North Delta diversion locations, more water will be diverted from the South Delta pumps, and new operations scenarios will need to be defined to determine how, where, and when water will be exported from the Delta.

As described in Antioch’s Part 1 testimony, the location of exports impacts the distribution of water from different sources within the Delta, which in turn impacts the salinity and quality of water throughout the Delta. For this reason, any new alternative,
including a single-tunnel alternative, needs to be fully modeled, and the environmental impacts of that alternative need to be analyzed and fully disclosed. If Petitioners intend to proceed with a single-tunnel project phase (or with any other substantial project modification), information on project operations and impacts needs to be developed and provided to the Hearing Officers and all parties before proceeding further with either Part 1 or Part 2 of this hearing.

Antioch therefore respectfully recommends and requests that the Board require Petitioners to brief the Hearing Officers and all the parties at the Petitioners’ earliest opportunity regarding the status of this new single tunnel alternative.

Jan. 25, 2018

/s/ MATTHEW EMRICK

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