



September 27, 2017

via email

Hearing Chair Tam Doduc  
Hearing Officer Felicia Marcus  
State Water Resources Control Board  
1001 I Street  
Sacramento, California 95814

**Re: Objection to Petitioner's September 8, 2017 response to the August 31, 2017 Hearing ruling and request for additional information**

Dear Hearing Officers,

The August 31, 2017 WaterFix hearing ruling stated, “[t]o eliminate any confusion concerning petitioners’ current proposal, we direct the petitioners to provide an updated summary of operating criteria that makes explicit whether particular criteria are proposed conditions of operation or are set forth solely as modeling assumptions.” (p. 7.) Deirdre Des Jardins, principal at California Water Research (California Water Research) thanks the Hearing Officers for this direction.

However, California Water Research objects to the Petitioners’ September 8, 2017 response to the direction by the Hearing Officers in the August 31, 2017 WaterFix hearing ruling as not providing sufficient information about potential long term operations under the proposed permit terms. In addition, Reclamation appears to have additional information about Reclamation’s potential participation in the WaterFix project, which was not disclosed on September 8, 2017. California Water Research requests that the Hearing Officers require further responses from Petitioners, as detailed below.

1. Insufficient information about the Record of Decision

The Hearing Officers’ August 31, 2017 ruling, denying requests for a continuance of the WaterFix Hearing, stated in part, “Reclamation has offered no indication that the ROD will contain additional details about Reclamation’s participation in the project or operational criteria.” (p. 4.) On September 19, 2017, the Board of Westlands Water District voted 7-1 to not participate in the WaterFix project, based on the project making water supplies “unaffordable.” (Westlands’ September 20, 2017 Statement on the California WaterFix, p. 1.) California Water Research requests that the Hearing Officers require Reclamation to clarify whether the Record of Decision on the WaterFix EIS may have additional information about Reclamation’s participation in the WaterFix project, and about operational criteria for the project.

## 2. Long-term operations

The original decisions issuing the permits for diversions in the Delta by the Central Valley Project and State Water Project were made half a century ago.<sup>1</sup> This Board's decision on the Petition for Change in Point of Diversion, could govern project operations for another 50-100 years. There are basic modes for the joint operation of the proposed North Delta diversions with the existing South Delta diversions, documented in a table of Operations Diversions Categories on p. 6-43 in the 2010 Draft Report of the Initial Analysis & Optimization of the Pipeline/Tunnel Option ("2010 Draft Initial Analysis report," Exhibit DDJ-141.) The draft table is excerpted and attached to this filing in Exhibit A.

The table of Operations Diversions Categories in the 2010 Draft Initial Analysis report defines basic operational modes for joint use of the new and existing facilities, including whether the new North Delta diversions are used instead of the South Delta facilities, in alternation with the South Delta diversions, or simultaneously with the South Delta diversions. These modes of joint operation are fundamental to the Change Petition. California Water Research requests that the Hearing Officers require the Petitioners to update the draft table of Operations Diversions Categories on p. 6-43 and provide it for the hearing as a supplement to the September 8, 2017 filing describing operations.

The 2010 Draft Initial Analysis report also had a table with estimates of the expected frequency of use of the different Operations Diversions Categories, based on the modeling (p. 6-44.) The draft table is also excerpted and attached to this filing in Exhibit A. California Water Research requests that the Hearing Officers require that the Petitioners provide an updated table with ranges of the expected frequency of the different operational categories, and particular indicate how those frequencies might change if Reclamation's participation in the project changes. California Water Research also requests that the Petitioners be required to clarify whether the preferential use of South Delta diversions in the summer, assumed in the CALSIM modeling submitted in Part 1, is a modeling assumption.

Sincerely,



Deirdre Des Jardins  
Principal, California Water Research

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<sup>1</sup> Decision 990, granting the permits to the U.S. Bureau of Reclamation for the Central Valley Project diversions on the Sacramento River and in the Delta, was issued in 1961. (Decision 990, Exhibit DDJ-98, p. 1.) Decision 1275, granting the permits to the California Department of Water Resources for the State Water Projects on the Feather River and in the Delta, was issued in 1967. (Decision 1275, Exhibit DDJ-95, p. 1.)

**Table 6-13 Operations Diversion Categories**

Diversion Category			Operating Rules								Remarks
No.	North Delta Diversions	South Delta Diversions	Intakes / Intake Pumping Plant	Intermediate Forebay	Intermediate Pumping Plant / Gravity Bypass	Byron Tract Forebay	Clifton Court Forebay (diversion from Old River)	Delta-Mendota Canal (diversion from Old River)	SWP Export Pumping Plant (Banks)	CVP Export Pumping Plant (Jones)	
1	0 – 15,000 cfs Daily, or Extended Duration	CCF 0 cfs DMC 0 cfs	Pumps On NORMAL	Water Surface Constant Level Water In = Water Out	Flow Pumped = Flow Diverted	Water In = Water Out	Gates Closed	Gates Closed	Flow Pumped from BTF = Diverted Flow Split for SWP/CVP	Flow Pumped from BTF = Diverted Flow Split for SWP/CVP	
2	0 – 15,000 cfs Short-Term Diversion	CCF 0 cfs DMC 0 cfs	Pumps On TIDAL CYCLE	Water Surface Constant Level Water In = Water Out	Flow Pumped = Flow Diverted	Water In = Water Out	Gates Closed	Gates Closed	Flow Pumped from BTF = Diverted Flow Split for SWP/CVP	Flow Pumped from BTF = Diverted Flow Split for SWP/CVP	
3	0 – 15,000 cfs Short-Term Diversion	CCF Tidal DMC 0 cfs	Pumps On TIDAL CYCLE	Water Surface Constant Level Water In = Water Out	Flow Pumped = Flow Diverted	Water In = Water Out	Gates Open at Tidal Periods / Store Water Until Later	Gates Closed	Flow Pumped from BTF = Diverted Flow Split for SWP/CVP	Flow Pumped from BTF = Diverted Flow Split for SWP/CVP	Water stored at CCF is released for export later when North Delta Diversions are reduced such that Banks pumping capacity is not exceeded.
4	0 cfs	CCF Tidal DMC 0 – 4600 cfs	OFF	OFF	OFF	Gates Closed	Gates Open at Tidal Periods	Gates Open	Flow Pumped = Diverted Flow (Diverted Tidally & Stored)	Flow Pumped = Diverted Flow	Same as Current Operation
5	0 – 15,000 cfs	CCF Tidal DMC 0 – 4600 cfs	CURTAIN NORTH DELTA DIVERSIONS?	STORE EXCESS FLOWS AT IFB?	Flow Pumped = Flow Diverted	Water In = Water Out	Gates Open at Tidal Periods / Store Water Until Later	Gates Open	Flow Pumped from BTF = Diverted Flow Split for SWP/CVP	Flow Pumped = Deliveries from BTF & Diversions from Old River	

An attempt was made to identify what percentage of time flow diversions occurred in each operating category. Table 6-14 shows the results of placing every 15 minute data point from the BDCP Dual Operating Scenario described in Section 6.3.1 into each of the categories described in Table 6-13. It shows that the northern diversions occur more frequently during wet years and the southern diversions occur more frequently during dry years. The maximum mismatch between total diversions and export was a nine hour period (April 4, 1986 from 00:45 to 09:30) when 4,560 AF was diverted in excess of what could be exported. This was well within the maximum 53,500 AF capacity of the new forebays and the CER minimum of 7,133 AF identified previously. During discussions with the BDCP modelers, it was learned that the daily maximum diversion capacity is capped at 14,900 cfs, the maximum combined capacity of the export facilities. Since there is more forebay storage available than required by this modeling effort, additional modeling could show the ability to divert more flow when conditions are favorable than to limit diversion to the capacity of the export facilities.

**Table 6-14 Proposed Dual Operating Scenario Percent Occurrence by Diversion Category**

Year	Year Type (DWR)	Diversion Category				
		1	2	3	4	5
1975	Wet	16%	2%	14%	44%	23%
1976	Critical	0%	0%	9%	75%	17%
1977	Critical	0%	0%	0%	95%	5%
1978	Above Normal	23%	5%	13%	45%	14%
1979	Below Normal	3%	1%	14%	60%	22%
1980	Above Normal	17%	8%	0%	55%	21%
1981	Dry	0%	0%	1%	73%	26%
1982	Wet	37%	5%	8%	28%	23%
1983	Wet	60%	22%	1%	8%	9%
1984	Wet	20%	5%	0%	41%	34%
1985	Dry	0%	0%	0%	80%	20%
1986	Wet	16%	0%	10%	60%	13%
1987	Dry	0%	0%	0%	84%	16%
1988	Critical	0%	0%	0%	88%	12%
1989	Dry	1%	0%	5%	77%	18%
1990	Critical	0%	0%	0%	91%	9%
1991	Critical	0%	0%	0%	91%	9%
<b>Average</b>		11%	3%	4%	64%	17%
<b>Wet 1983</b>		60%	22%	1%	8%	9%
<b>Normal 1980</b>		17%	8%	0%	55%	21%
<b>Dry 1989</b>		1%	0%	5%	77%	18%