

**JPOD Pumping – Staff Draft
[For Discussion Purposes]**

The California Department of Fish and Wildlife (CDFW) and the National Marine Fisheries Service (NMFS) Staff believe that under current conditions, authorization from the Executive Director of the State Water Resources Control Board to allow for Joint Point of Diversion (JPOD) Stage 1 diversion of Water at Banks Pumping Plant (D-1641, Conditions 1.b.(2), page 151) will not have a significant adverse effect on the environment, so long as diversions adhere to the existing federal biological opinions and state consistency determinations.

However, additional information and clarification is needed to confirm that JPOD Stage 1 diversions to recover export reductions taken to benefit fish are warranted and appropriate (D-1641, Conditions 1.b.(1).c, page 151). We believe that this additional information and clarification would also serve to better inform future requests to divert under JPOD Stage 1 or 2.

Actions Taken to Benefit Fish: The USBR has requested JPOD Stage 1 diversions to “recover export reductions taken to benefit fish” in the summer of 2016. We are unclear if a reduction in reservoir releases to benefit fish directly results in an export reduction and therefore qualifies for JPOD Stage 1 pumping, since the USBR did not actually forego exporting any water. Clarification from the USBR or SWRCB on what actions qualify as “export reductions taken to benefit fish” under JPOD Stage 1 is needed.

Additionally, the USBR provided information describing the Jan-Jun 2016 Delta Operations Controlling Factors. What were not included were the controlling factors for the months (Jun-Sep), which are the months that the USBR used to calculate an export loss due to fish benefits. Clarification as to what the Net-Delta Outflow Index was during this time, as compared to the D-1641 requirements, will help provide the additional information need to determine if the loss in exports was actually due to fish benefits, WQ, or some other factor.

Export Recovery Accounting: The USBR provided the following table to document the foregone exports.

2016	Actual Keswick Release	Keswick Base Operation Release	Actual CVP Pumping	Pumping under Keswick Base Operation	Change to Shasta Storage	Lost CVP Pumping
	cfs	cfs	TAF	TAF	TAF	TAF
Jun	8,500	9,500	64	100	60	36
Jul	10,300	12,000	59	130	105	71
Aug	10,500	10,600	161	244	6	83
Sep	8,900	9,200	227	250	18	23

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Clarification from the USBR as to what “Keswick Base Operation Release” is would be helpful in determining what export loss may have occurred, especially given that the “Actual Keswick Release” was based on [NMFS June 28, 2016](#) concurrence of the USBR Temperature Management Plan.

Additionally, the April update to the [2016 Drought Contingency Plan](#) (addendum 3) identified the following scheduled releases from Keswick under the 50% and 90% hydrology.

50%

MONTHLY AVERAGE RELEASES (CFS)									
RESERVOIRS	2016								
	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
Trinity	340	240	470	4680	2530	1100	860	870	370
Sacramento	3250	7450	5000	8000	9000	10500	10000	9000	6900
American	3100	9950	3150	4400	4000	4750	3200	2000	2000
Feather	950	1800	3750	1050	2100	8500	8550	7400	4350
Stanislaus	200	210	1060	1010	250	150	150	150	580

90%

MONTHLY AVERAGE RELEASES (CFS)									
RESERVOIRS	2016								
	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
Trinity	340	240	540	4680	2530	1100	730	740	370
Sacramento	3250	7450	5000	6500	9000	11500	10000	8500	6500
American	3100	9950	3150	2000	4500	4500	3250	1750	1500
Feather	950	1800	1250	1050	1800	8350	8150	7950	4700
Stanislaus	200	210	1060	1010	250	150	150	150	580

Following similar logic, the April Update and NMFS June concurrence letter also included Sacramento scheduled releases and export operations for September and October 2016. The information package that the USBR submitted with their request did not include similar information for this timeframe. A cursory review of CDEC data (Table 1) shows that the monthly average of the mean daily Keswick (KWK) flows were both above and below scheduled release plans. We believe that when evaluating actions to benefit fisheries the accounting should consider all factors, which includes the full year of operations, in-Delta conditions, storage losses and gains, as well as export reductions.

Table 1. CDEC Monthly Average KWK Flow (cfs)

Month	Monthly Average KWK Outflow (CFS)
September	8886
October	6693
November	5067

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Fall 2016 Drought Preparedness Plan, November 2016-January 2017

**October 1 - 50% HYDROLOGY
END OF MONTH STORAGES (TAF)**

RESERVOIRS	2016		2017
	NOVEMBER	DECEMBER	JANUARY
Trinity	891	929	994
Shasta	2667	2764	3014
Folsom	335	373	416
Oroville	1375	1389	1562
New Melones	498	525	562

**October 1 - 90% HYDROLOGY
END OF MONTH STORAGES (TAF)**

RESERVOIRS	2016		2017
	NOVEMBER	DECEMBER	JANUARY
Trinity	912	896	903
Shasta	2475	2439	2558
Folsom	266	259	258
Oroville	1248	994	1021
New Melones	473	480	486

MONTHLY AVERAGE RELEASES (CFS)

RESERVOIRS	2016		2017
	NOVEMBER	DECEMBER	JANUARY
Trinity	300	300	300
Sacramento	5500	5500	5500
American	1250	1250	1750
Feather	2450	1750	1750
Stanislaus	200	200	200

MONTHLY AVERAGE RELEASES (CFS)

RESERVOIRS	2016		2017
	NOVEMBER	DECEMBER	JANUARY
Trinity	300	300	300
Sacramento	5500	5000	4250
American	1000	1000	1000
Feather	2450	1350	1750
Stanislaus	200	200	210

DELTA SUMMARY (CFS)

	2016		2017
	NOVEMBER	DECEMBER	JANUARY
Rio Vista Flows	7300	12950	14050
Sac River at Freepport	12600	15700	18850
SJ River at Vernalis	1900	2050	2100
Computed Outflow	5050	9650	20000
Combined Project Pumping	10150	9650	4700

DELTA SUMMARY (CFS)

	2016		2017
	NOVEMBER	DECEMBER	JANUARY
Rio Vista Flows	5700	10250	10600
Sac River at Freepport	10450	12550	12600
SJ River at Vernalis	1350	1450	1800
Computed Outflow	5000	5000	9200
Combined Project Pumping	6350	8750	4550

Fisheries Protection Plan: D-1641 also allows for Stage 2 JPOD pumping which requires the development and approval of an operations plan to protect fish and wildlife (Fisheries Protection Plan). Through recent discussions with the USBR it has come to our attention that the [Fisheries Protection Plan](#) was last updated in 2006 and may need updating to ensure its consistency with existing regulatory requirements and current monitoring activities. Should future requests be made to export under Stage 2, we believe that the USBR and DWR would need to update the Fisheries Protection Plan. Both CDFW and NMFS are willing to participate in the review and approval of an updated Fisheries Protection Plan.