

February 2016 Seasonal Forecast

Barrier Assumptions

Assumptions were based on preliminary construction dates provided by the Bay-Delta Office.

- The Middle River barrier is installed from March 25th, 2016 to November 20th, 2016
- The Old River at Tracy barrier is installed from March 25th, 2016 to November 4th, 2016
- The Grant Line Canal barrier is installed from April 9th, 2016 to November 4th, 2016
- The HORB is installed from April 1st, 2016 to November 12th, 2016.

Hydrology Assumptions

Two scenarios were run under the following Hydrologic assumptions:

50% Exceedence (90% Fall)

- Wetter hydrology (50%) based on the February 1st Water Supply Index (WSI) until September with historical hydrology (90%) in the fall months (Oct-Dec)
- Operating to meet SWRCB Water Rights Decision 1641 (D-1641) objectives along with moderate export restrictions required under the 2008 USFWS BiOp for Delta Smelt, 2009 NMFS BiOp for Salmonids and 2010 DFG Longfin Incidental Take Permit.
- Projects' exports including the Lower Yuba Accord Component #1 water to both the State Water Project and Central Valley Project.

Table 1: Assumptions for 50% Exceedence

	Sacramento River		East Side Steams	San Joaquin River at Vernalis	Jones PP CFS	Banks PP CFS	NDOI CFS
	Accretions	Freeport					
Jan	26591	31161	862	1485	2358	2228	30631
Feb	12170	20480	2578	1252	2886	2156	20975
Mar	20357	29232	2603	3095	2394	993	32267
Apr	9915	18973	1680	2511	807	639	20943
May	3741	14003	1240	2872	813	634	14682
Jun	-504	13596	950	1074	807	1495	9688
Jul	-2602	19841	330	947	4472	6814	5228
Aug	-1464	18866	350	833	4407	6798	4943
Sep	1513	17074	480	889	4571	6773	4570
Oct	-407	10360	210	1537	4586	1073	4999
Nov	1477	12217	260	1292	4565	3575	5002
Dec	2228	12994	160	1306	4586	4489	5002
Avg.	6084	18233	975	1591	3104	3139	13244

90% Exceedence (90% Fall)

- Drier hydrology (90%) based on the February 1st Water Supply Index (WSI) until September with historical hydrology (90%) in the fall months (Oct-Dec)
- Operating to meet SWRCB Water Rights Decision 1641 (D-1641) objectives along with moderate export restrictions required under the 2008 USFWS BiOp for Delta Smelt, 2009 NMFS BiOp for Salmonids and 2010 DFG Longfin Incidental Take Permit.
- Projects' exports including the Lower Yuba Accord Component #1 water to the State Water Project and Central Valley Project.

Table 2: Assumptions for 90% Exceedence

	Sacramento River		East Side Steams	San Joaquin River at Vernalis	Jones PP CFS	Banks PP CFS	NDOI CFS
	Accretions	Freeport					
Jan	26591	31161	862	1225	2358	2228	30371
Feb	12170	18585	415	1252	2886	2156	16118
Mar	9771	16848	671	1420	1987	586	16506
Apr	2185	11159	390	1300	403	1042	10258
May	-699	9417	280	1262	407	1025	7382
Jun	-3865	11562	180	604	403	1025	7241
Jul	-5188	11433	120	622	943	2602	4207
Aug	-2895	13011	110	540	943	4651	4300
Sep	840	13360	160	654	4571	2840	4170
Oct	-407	7253	210	1529	829	1838	4998
Nov	1477	8089	260	1242	1712	2266	4992
Dec	2228	8018	160	1225	1708	2326	5007
Avg.	3517	13325	318	1073	1596	2049	9629

Summary of Results

EC and Bromide at Checks 13, 14, and Silverwood Lake

- From February 2016 to August 2016, the EC outputs for the 50% and 90% exceedance range from approximately 500 us/cm to 700 us/cm while bromide is around 0.2 to 0.3 mg/l. The EC and bromide begin to increase around September, peak near November, and begin to decrease in December.

EC and Bromide at Check 2

- The EC at Check 2 ranges from 400 us/cm in February to approximately 500 us/cm in May. The EC decrease until mid-July. Water quality begins to degrade in the month of August and EC peaks around October, and then decreases for the remainder of the forecast period. A similar pattern can be seen in the bromide results. This mirrors the estimated Banks pumping during the forecasting period.

Summary of EC Results (continued)

EC and bromide at Old River Locations (Bacon Island and Highway 4)

- After August, inflows into the Delta begin to decrease which leads to a degradation in water quality.
- Inflows into the Delta increase around the month of September which leads to an improvement in water quality in both scenarios.
- In the 50% exceedance case, the higher delta inflow does not offset the increased pumping in November and December. This leads to a degradation of water quality.

EC and Bromide at Export Locations

- The trends at Banks and Jones are similar to what is seen at Bacon Island and Highway 4.