

## March 2017 Seasonal Forecast

### Barrier Assumptions

- The Middle River barrier is installed from June 1<sup>st</sup>, 2017 to November 20<sup>th</sup>, 2017
- The Old River at Tracy barrier is installed from June 4<sup>th</sup>, 2017 to November 12<sup>th</sup>, 2017
- The Grant Line Canal barrier is installed from June 18<sup>th</sup>, 2017 to November 4<sup>th</sup>, 2017
- The HORB is installed from June 4<sup>th</sup>, 2017 to November 12<sup>th</sup>, 2017.

### Hydrology Assumptions

The water allocations studies upon which this March 2017 Seasonal Forecast is based include actual water supply conditions as of March 1, 2017. The Water Year classification will be Wet for both the Sacramento Valley and the San Joaquin Valley. The hydrology data for the forecast were taken from a planning tool, and real time changes in operations have occurred since these studies were completed. Two scenarios were run under the following hydrologic assumptions:

#### 50% Exceedence (90% Fall)

- Wetter hydrology (50%) based on the May 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.
- Sacramento Valley Index was 37.1 and the San Joaquin Valley Index was 13.9.

Table 1: Assumptions for 50% Exceedence

	Sacramento River		East Side Steams CFS	San Joaquin River at Vernalis CFS	Jones PP CFS	Banks PP CFS	Delta Inflow CFS	NDOI CFS
	Accretions CFS	Freeport CFS						
Jan	61394	112527	10490	13564	3773	7741	136807	127309
Feb	61886	194464	14747	29332	3979	7058	238781	232731
Mar	14657	59510	7394	24428	2117	928	91557	88921
Apr	26049	57725	4902	22587	2723	773	85414	80853
May	11710	41600	2944	20443	2553	2553	65184	57795
Jun	5546	34574	1749	10705	3605	3613	47221	36096
Jul	-1138	18931	942	4342	4586	6635	24414	8559
Aug	-1138	18687	643	2716	4586	6440	22250	7073
Sep	2353	20066	933	2403	4571	1176	23608	15089
Oct	-407	17402	210	2033	2895	2456	19847	12734
Nov	1477	14332	260	1426	1712	705	16226	12735
Dec	2228	11449	160	1447	4586	2732	13274	4996
Avg.	15385	50106	3781	11286	3474	3568	65382	57074

90% Exceedence (90% Fall)

- Drier hydrology (90%) based on the May 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.
- Sacramento Valley Index was 34.1 and the San Joaquin Valley Index was 12.8.

Table 2: Assumptions for 90% Exceedence

	Sacramento River		East Side Steams CFS	San Joaquin River at Vernalis CFS	Jones PP CFS	Banks PP CFS	Delta Inflow CFS	NDOI CFS
	Accretions CFS	Freeport CFS						
Jan	61394	112527	10490	13564	3773	7741	136807	127309
Feb	61886	194464	14747	29332	3979	7058	238781	232731
Mar	14657	54999	7394	24428	2068	928	87046	83830
Apr	11764	35111	4448	22587	2134	773	62347	58037
May	5692	29970	2704	20443	2553	2553	53314	45795
Jun	1681	26191	1636	10705	3605	3613	38725	27566
Jul	-2114	17142	856	4342	4586	4847	22539	8467
Aug	-1626	16979	602	2716	4586	4733	20501	7025
Sep	1849	19721	869	2403	2706	2033	23199	15614
Oct	-407	16182	210	2033	2277	1854	18627	12734
Nov	1477	14332	260	1426	1410	1007	16226	12735
Dec	2228	10262	160	1447	2635	2488	12087	6004
Avg.	13207	45657	3698	11286	3026	3302	60850	53154

Summary of Results

EC and Bromide at Checks 2, 13, 41, and Silverwood Lake

- The 50% and 90% exceedence follow a similar trend for most of the forecast period. The values in the 90% exceedence scenario peak higher, with most of the difference occurring after the month of August.

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

- The degradation of water quality in the month of December in the 50% scenario is most likely due to the combination of higher pumping and lower Delta outflow when compared to the 90% exceedence scenario.