May 2017 Seasonal Forecast

Barrier Assumptions

- The Middle River barrier is not installed.
- The Old River at Tracy barrier is not installed.
- The Grant Line Canal barrier is not installed.
- The HORB is not installed.

Hydrology Assumptions

The water allocations studies upon which this May 2017 Seasonal Forecast is based include actual water supply conditions as of May 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

- Wetter hydrology (50%) based on the June 1st Water Supply Index (WSI) until September with historical hydrology from October of last year to end of May of current year.
- 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 14.9 and the San Joaquin Valley Index was 6.3.

Table 1: Assumptions for 50% Exceedence

	Sacramento River		East Side Streams 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	7328	238781	232731
Mar	31528	77860	6970	28516	3680	1644	113571	108800
Apr	34014	87876	6453	23645	1529	3865	118176	112546
May	14637	50774	3168	20964	4082	4277	75103	64481
Jun	8067	34031	1854	11361	4571	5780	47439	33211
Jul	-325	21598	1023	4798	4586	6684	27617	11737
Aug	-813	20313	681	4001	4586	6684	25199	9848
Sep	2857	22973	992	4033	4571	6672	28205	14268
Oct	439	16312	650	3334	2635	3887	20498	12204
Nov	3390	17604	889	1930	4565	4649	20631	10316
Dec	4554	12572	358	2033	3090	4424	15179	6830
Avg.	18469	55742	4023	12292	3804	5303	72267	62023

90% Exceedence

- Drier hydrology (90%) based on the June 1st Water Supply Index (WSI) until September with historical hydrology from October of last year to end of May of current year.
- 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 14.5 and the San Joaquin Valley Index was 6.0.

Table 2: Assumptions for 90% Exceedence

	Sacramento River		East Side Streams 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	7328	238781	232731
Mar	31528	77860	6970	28516	3680	1644	113571	108800
Apr	34014	87876	6453	23645	1529	3865	118176	112546
May	8945	42220	3080	18215	3383	4277	63712	53659
Jun	3361	27830	1813	11361	4571	5780	41196	26935
Jul	-651	19419	991	3887	4586	6684	24496	8610
Aug	-1138	19581	666	3903	4586	6684	24355	8997
Sep	2521	21511	969	3933	4571	6672	26618	12607
Oct	439	17874	650	3285	4245	3789	22011	12204
Nov	3390	16648	889	1930	4565	4179	19674	9830
Dec	4554	12067	358	2033	2992	2830	14675	8017
Avg.	17520	54156	4006	11967	3872	5123	70339	60187

Summary of Results

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

- The 50% and 90% exceedences follow a similar trend for most of the forecast period.
- The 90% scenario peaks higher during the Aug – Sep period and December than the 50% does for check 2. The 50% scenario peaks higher during the Oct – Nov period than the 90% does for check 2. In case of high Delta Outflow for both scenarios, higher pumping at Banks caused more water flow from the Sacramento River, and thus water quality was a little bit better.

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

- The 50% and 90% both have high Delta inflows and outflows throughout the majority of the forecast. Because of this, the trends for both scenarios are the same with a difference less than 50 us/cm EC occurring at various points in the year.