

## April 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 April 2017 Seasonal Forecast is based include actual water supply conditions as of April 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 May 1st Water Supply Index (WSI) until September with historical hydrology 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 37.2 and the San Joaquin Valley Index was 13.9.

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	7058	238781	232731
Mar	31528	77860	6970	28516	3680	1644	113571	108800
Apr	23528	56198	4917	22704	1311	3949	84020	77694
May	9595	39244	2952	21321	4082	4570	63714	52780
Jun	4033	30485	1753	11865	3899	3916	44295	32573
Jul	-1138	21256	945	7205	4586	6635	29605	13750
Aug	-1138	19061	644	4245	4586	6424	24154	8994
Sep	2353	21158	935	4285	4571	6638	26584	12604
Oct	439	16442	650	4668	4586	3415	21962	12198
Nov	3390	17672	889	1930	4565	4716	20698	10344
Dec	4554	12084	358	2033	3090	2911	14691	7731
Avg.	16702	51538	3854	12639	3892	4968	68240	58126

90% Exceedence

- Drier hydrology (90%) based on the May 1st Water Supply Index (WSI) until September with historical hydrology 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 35.4 and the San Joaquin Valley Index was 13.2.

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	7058	238781	232731
Mar	31528	77860	6970	28516	3680	1644	113571	108800
Apr	16806	43010	4645	21444	1311	3949	69299	62637
May	6505	33352	2808	18166	2277	2277	54524	47558
Jun	1681	25679	1685	7663	2714	2723	35220	25842
Jul	-1952	20183	894	4798	4586	6635	26073	10212
Aug	-1626	19565	620	4001	4586	6652	24389	8994
Sep	1849	21192	897	4033	4235	6638	26328	12608
Oct	439	13417	650	3692	3529	472	17961	12198
Nov	3390	13292	889	1930	4431	2652	16318	8162
Dec	4554	12572	358	2033	2960	2732	15179	8528
Avg.	15538	48926	3804	11598	3505	4264	64538	55465

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 June – July and October – November periods than the 50% does. These peaks mostly likely occur because of increased pumping in June and October in the 90% exceedence.

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 of approximately 50 us/cm EC occurring at various points in the year.