March 2019 Seasonal Forecast

Barrier Assumptions

- The Middle River barrier is installed from May 15th, 2019 to November 15th, 2019
- The Old River at Tracy barrier is installed from May 15th, 2019 to November 15th, 2019
- The Grant Line Canal barrier is installed from May 15th, 2019 to November 15th, 2019
- The Head of Old River Barrier is not installed either in the Spring or Fall

Hydrology Assumptions

The water allocation studies upon which this March 2019 Seasonal Forecast is based include actual water supply conditions as of March 1, 2019. The Water Year classification will be Wet for the Sacramento Valley and Above Normal for 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% Exceedance

- Wetter hydrology (50%) based on the March 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.

Table 1: Assumptions for 50% Exceedance

	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	24167	31275	1334	1545	3643	2374	34380	29787
Feb	39289	55678	6464	8157	4664	3817	70537	63699
Mar	16285	63562	7328	14657	1873	5684	85772	78833
Apr	21343	39644	2724	10120	1781	1008	52689	49047
May	9595	30461	1792	7601	1350	761	40052	35865
Jun	3865	24553	1209	3167	2151	1328	29122	21890
Jul	-1301	21208	528	1893	4603	6635	23828	8147
Aug	-1301	19500	445	1864	4598	6652	22012	6886
Sep	2185	25544	627	1913	2840	6638	28290	16308
Oct	-407	16117	210	1138	1086	2326	17668	12741
Nov	1477	10220	260	1343	2625	2601	12030	6015
Dec	2228	10978	160	1464	3046	1822	12819	7413
Avg.	9786	29062	1923	4572	2855	3471	35766	28052

90% Exceedance

- Drier hydrology (90%) based on the March 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.

Table 2: Assumptions for 90% Exceedance

	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	24167	31275	1334	1545	3643	2374	34380	28928
Feb	39289	55678	6464	8157	4664	3817	70537	62876
Mar	16285	63562	7328	14657	1873	5684	85772	78203
Apr	12772	25780	2164	5534	1160	605	33679	30726
May	5367	21191	1496	3913	1073	585	26797	22933
Jun	1008	18957	1070	2503	1949	1192	22723	15795
Jul	-1952	21630	422	1438	4603	6635	23690	8004
Aug	-1626	18752	394	1438	4224	6652	20788	6029
Sep	1513	19494	548	1476	4470	6638	21725	8038
Oct	-407	10945	210	1138	1054	2822	12496	7105
Nov	1477	10153	260	1343	2566	2618	11963	5989
Dec	2228	9498	160	1464	2379	1391	11339	7031
Avg.	8344	25576	1821	3717	2805	3418	31324	23471

Summary of Results

Since the February seasonal forecast, substantial precipitation has fallen, upgrading the WSI for the Sacramento Valley Index from Below Normal to Wet. This wetter forecast has both a wetter overall hydrology and higher required Delta outflow. For these reasons the overall quality is substantially fresher than the February forecast.

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

- For these locations, water quality is consistently worse in the 90% exceedance forecast than in the 50% exceedance forecast. This is likely due to drier hydrology and less Delta outflow in the 90% exceedance forecast compared to the 50% exceedance forecast.

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

- Similar to the aqueduct locations described above, water quality is consistently worse in the 90% exceedance forecast compared to the 50% exceedance forecast at the export locations.