

## May 2020 Seasonal Forecast

### Barrier Assumptions

- The Middle River barrier is installed from May 8<sup>th</sup>, 2020 to November 15<sup>th</sup>, 2020
- The Old River at Tracy barrier is installed from May 23<sup>th</sup>, 2020 to November 15<sup>th</sup>, 2020
- The Grant Line Canal barrier is installed from May 30<sup>th</sup>, 2020 to November 15<sup>th</sup>, 2020
- The Head of Old River Barrier is not installed.

### Hydrology Assumptions

The hydrology data for this Seasonal Forecast is based on actual operation data for January through April, and the May 2020 water allocations studies for May through December. 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

- The Water Year classification will be Dry for the Sacramento Valley and the San Joaquin Valley.
- Wetter hydrology (50%) based on the May 1 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 2019 USFWS BiOp for Delta Smelt, 2019 NMFS BiOp for Salmonids and 2020 DFW Incidental Take Permit Application.

Table 1: May 2020 Allocation Study (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	7058	16117	537	2196	4163	2147	19076	13215
Feb	5320	13421	452	2191	1669	1930	16294	13365
Mar	3680	12116	782	2117	2638	1905	15240	10489
Apr	2655	12218	1294	1949	1916	706	15662	11854
May	-2440	10067	651	1708	927	634	12622	8935
Jun	-3025	12503	184	1781	3446	319	14662	7105
Jul	-4391	13938	123	829	4180	1407	15089	5001
Aug	-2440	13417	113	797	4261	1667	14531	4653
Sep	840	11613	167	908	4302	1849	12894	4196
Oct	-407	8603	210	1756	2960	1122	10772	4994
Nov	1477	8827	260	1393	2014	2601	10688	5008
Dec	2228	8246	160	1350	813	1919	9972	6446

### 90% Exceedance

- The Water Year classification will be Dry for the Sacramento Valley and Critical for the San Joaquin Valley.
- 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 2019 USFWS BiOp for Delta Smelt, 2019 NMFS BiOp for Salmonids and 2020 DFW Incidental Take Permit Application.

Table 2: May 2020 Allocation Study (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	7058	16117	537	2196	4163	2147	19076	13215
Feb	5320	13421	452	2191	1669	1930	16294	13365
Mar	3680	12116	782	2117	2638	1905	15240	10489
Apr	2655	12218	1294	1949	1916	706	15662	11854
May	-2765	9563	651	1708	927	634	12118	8297
Jun	-4874	12571	166	1513	3227	303	14443	7104
Jul	-5855	12702	111	732	3919	309	13744	4995
Aug	-3253	12149	102	651	4212	309	13106	4630
Sep	504	10201	148	773	4302	311	11328	4103
Oct	-407	8603	210	1691	2838	1171	10707	5008
Nov	1477	8827	260	1393	2316	2316	10688	4995
Dec	2228	7546	160	1350	813	1675	9273	5995

### Summary of Results

In General, the 50% and 90% exceedance hydrology forecasts track closer as we are approaching the dryer season.

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

- The EC outputs for the 50% and 90% exceedance range from approximately 300 us/cm to 520 us/cm while the bromide range is around 0.15 to 0.3 mg/l. As expected, the 50% and 90% exceedance forecasts track very closely.

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

- Water quality degradation begins in July as Delta inflows begin to decrease, and peak around September. Inflows in the Delta increase around the month of October which leads to an improvement in water quality.