

April 2020 Seasonal Forecast

Barrier Assumptions

- The Middle River barrier is installed from May 8th, 2020 to November 15th, 2020
- The Old River at Tracy barrier is installed from May 23th, 2020 to November 15th, 2020
- The Grant Line Canal barrier is installed from May 30th, 2020 to November 15th, 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 April 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 April 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: April 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	12712
Feb	5320	13421	452	2191	1669	1930	16294	12033
Mar	3680	12116	782	2117	2638	1889	15240	10489
Apr	5882	13865	807	2134	2118	706	17007	13082
May	-3090	9547	290	1541	813	651	11579	7937
Jun	-4706	11125	184	941	1244	269	12444	7105
Jul	-6017	12816	123	781	4098	260	13918	4997
Aug	-3253	11872	113	748	3464	846	12937	4648
Sep	504	10571	167	857	4000	1034	11801	4197
Oct	-407	8603	210	1691	2553	1423	10707	5008
Nov	1477	8827	260	1393	2031	2601	10688	4995
Dec	2228	8490	160	1350	1236	1626	10216	6564

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 April 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: April 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	12712
Feb	5320	13421	452	2191	1669	1930	16294	12033
Mar	3680	12116	782	2117	2638	1889	15240	10489
Apr	1681	9932	807	2134	2118	706	13074	8813
May	-3741	9205	233	1545	813	260	11180	7798
Jun	-5210	11277	148	672	1076	252	12290	7103
Jul	-6343	11262	100	683	2415	260	12244	5000
Aug	-3741	11222	92	602	3253	268	12119	4611
Sep	168	9814	133	723	3882	269	10876	4079
Oct	-407	8603	210	1691	2838	1138	10707	5008
Nov	1477	8827	260	1393	2316	2316	10688	4995
Dec	2228	7806	160	1350	813	1675	9533	6255

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 600 us/cm while the bromide range is around 0.15 to 0.3 mg/l. Both EC and bromide begin to increase around September, and peak toward the end of December.

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

- Water quality degradation begins in September as Delta inflows begin to decrease. As expected, the 50% and 90% exceedance forecasts track very closely.