March 2020 Seasonal Forecast

Barrier Assumptions

- The Middle River barrier is installed from May 10th, 2020 to November 15th, 2020
- The Old River at Tracy barrier is installed from May 20th, 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 water allocations studies upon which this March 2020 Seasonal Forecast is based include actual water supply conditions as of March 1, 2020. 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 Critical for the San Joaquin Valley.
- 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 2019 USFWS BiOp for Delta Smelt, 2019 NMFS BiOp for Salmonids and 2020 DFW Incidental Take Permit Application.

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	7058	16117	537	2196	4163	2147	19076	13215
Feb	5320	13421	452	2191	1669	1930	16294	13365
Mar	3257	12002	691	1954	2508	1287	14873	11643
Apr	-336	9478	402	1983	807	471	12065	9700
May	-3090	8961	288	2017	813	699	11463	7824
Jun	-5042	11125	183	941	1227	319	12443	7104
Jul	-6180	13011	122	781	4300	309	14113	5002
Aug	-3578	11807	112	748	3968	309	12872	4644
Sep	504	10655	166	857	4301	840	11883	4196
Oct	-407	8701	210	1691	2846	1269	10804	4994
Nov	1477	8827	260	1393	2014	2601	10688	5008
Dec	2228	8701	160	1350	1350	1610	10428	6674

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 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 2019 USFWS BiOp for Delta Smelt, 2019 NMFS BiOp for Salmonids and 2020 DFW Incidental Take Permit Application.

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	7058	16117	537	2196	4163	2147	19076	13215
Feb	5320	13421	452	2191	1669	1930	16294	13365
Mar	1629	10374	490	1954	2508	1124	13043	9350
Apr	-2017	8688	284	1479	800	303	10652	8129
May	-3903	8953	205	1626	813	309	10982	7600
Jun	-5378	11024	130	672	807	303	12020	7101
Jul	-6505	10270	88	683	1415	301	11240	5005
Aug	-3903	10278	82	602	2309	301	11166	4601
Sep	0	9512	117	723	3563	311	10558	4072
Oct	-407	8603	210	1691	2846	1171	10707	4999
Nov	1477	8827	260	1393	2316	2316	10688	4995
Dec	2228	7823	160	1350	813	1675	9550	6271

Summary of Results

The 50% exceedance and 90% exceedance forecasts track closer than they did in February due increasing certainty as hydrology forecasts become solidified.

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

- The EC outputs for the 50% and 90% exceedance range from approximately 400 us/cm to 600 us/cm while bromide is around 0.2 to 0.4 mg/l. The EC and bromide begin to increase around September, and peak around December.

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

- After September, inflows into the Delta begin to decrease which leads to a degradation in water quality in the 50% and 90% exceedance case. Similar to the aqueduct locations described above, water quality tracks very closely in both forecasts