January 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 January 2020 Seasonal Forecast is based include actual water supply conditions as of January 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 Below Normal for the Sacramento Valley and Below Normal for the San Joaquin Valley.
- Wetter hydrology (50%) based on the January 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	11384	23240	1522	2700	3497	2033	27689	23515
Feb	21036	38230	1992	5250	3807	2521	45702	40869
Mar	16937	31414	1992	4364	2492	1661	37996	34408
Apr	6218	15512	1268	3462	807	706	20443	17843
May	1789	12051	930	3936	813	716	17113	13435
Jun	-1513	11798	692	1445	2050	437	14128	7805
Jul	-3253	20411	264	1252	4391	6684	22126	6497
Aug	-1952	18817	273	1106	4391	6684	20400	5301
Sep	1176	16318	386	1193	4403	6672	18103	4410
Oct	-407	10653	210	1903	4391	1830	12967	5008
Nov	1477	10925	260	1661	3071	3902	13054	4993
Dec	2228	11157	160	1675	2570	2000	13209	7824

90% Exceedance

- The Water Year classification will be Dry for the Sacramento Valley and Dry for the San Joaquin Valley.
- Drier hydrology (90%) based on the January 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	6505	15499	244	2114	3399	1968	18084	13217
Feb	7302	14603	505	1704	2712	1791	17042	13243
Mar	5700	13224	704	1498	1612	1059	15652	12920
Apr	504	9898	410	1765	800	303	12274	9751
May	-2440	8668	293	1935	813	325	11094	7700
Jun	-4874	10898	186	1630	1513	504	12907	7096
Jul	-5855	11954	124	1675	4098	358	13951	5003
Aug	-3415	11092	114	1691	3578	935	13101	4645
Sep	504	10672	169	1546	4403	1462	12593	4116
Oct	-407	8599	210	1545	3301	569	10556	4996
Nov	1477	9230	260	1292	2366	2558	10990	5005
Dec	2228	8977	160	1220	1480	1594	10574	6711

Summary of Results

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 700 us/cm while bromide is around 0.2 to 0.4 mg/l. The EC and bromide begin to increase around August, peak around October, and then stay around the same range for the remainder of the forecast period. A similar pattern can be seen in the bromide results.

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

- After August, inflows into the Delta begin to decrease which leads to a degradation in water quality in the 50% exceedance case. Inflows in the Delta increase around the month of October which leads to an improvement in water quality in 50% exceedance case.