

**Appendix 6B4 – Sacramento – San Joaquin Delta Modeling,
Export Loading**

The following results of post-processed output from the DSM2 QUAL and CalSim II models are included for export loading results at key project locations for the following alternatives:

- No Action Alternative 051422
- Alternative 1A 051722
- Alternative 1B 051722
- Alternative 2 051722
- Alternative 3 051722

Section	Output Parameters	Table Numbers
Export Loading	Electroconductivity, Total Dissolved Solids, Chloride, and Bromide for Banks Pumping Plant, Jones Pumping Plant, and Contra Costa Water District Exports	6B4-1a to 6B4-4b

Report formats

- Long-term and dry and critically dry-year average values comparing an alternative against the No Action alternative

DSM2/CALSIM II Export Loading Reporting Metrics
 weighted average of all values of monthly simulation

Table 6B4-1a

Average Export Weighted Water Quality (Average of All Years)	Alternative 1A 051722	No Action 051422	Alternative 1A 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	413.08	409.78	3.30	0.80%
TDS (mg/l)	229.94	228.21	1.73	0.76%
Chloride (mg/l)	67.95	67.06	0.90	1.34%
Bromide (mg/l)	0.2215	0.2184	0.0031	1.40%
Jones PP Exports				
EC (umhos/cm)	464.07	462.87	1.20	0.26%
TDS (mg/l)	258.10	257.47	0.63	0.24%
Chloride (mg/l)	79.62	79.28	0.34	0.42%
Bromide (mg/l)	0.2586	0.2575	0.0011	0.44%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	312.82	312.10	0.72	0.23%
TDS (mg/l)	175.75	175.36	0.39	0.22%
Chloride (mg/l)	42.99	42.83	0.16	0.37%
Bromide (mg/l)	0.1394	0.1389	0.0005	0.39%

Table 6B4-1b

Average Export Weighted Water Quality (Critical and Dry Years)	Alternative 1A 051722	No Action 051422	Alternative 1A 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	553.12	557.59	-4.47	-0.80%
TDS (mg/l)	304.41	306.82	-2.42	-0.79%
Chloride (mg/l)	104.75	105.87	-1.12	-1.06%
Bromide (mg/l)	0.3453	0.3490	-0.0037	-1.05%
Jones PP Exports				
EC (umhos/cm)	582.98	580.32	2.66	0.46%
TDS (mg/l)	320.75	319.31	1.45	0.45%
Chloride (mg/l)	111.87	111.22	0.65	0.58%
Bromide (mg/l)	0.3682	0.3661	0.0021	0.58%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	368.85	367.33	1.53	0.42%
TDS (mg/l)	205.01	204.19	0.82	0.40%
Chloride (mg/l)	58.18	57.80	0.38	0.66%
Bromide (mg/l)	0.1921	0.1909	0.0013	0.66%

Notes:

¹ Increases from the No Action Alternative.

² Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003. Average annual increases are based on average quantities for October 1921 through September 2003.

DSM2/CALSIM II Export Loading Reporting Metrics
 weighted average of all values of monthly simulation

Table 6B4-2a

Average Export Weighted Water Quality (Average of All Years)	Alternative 1B 051722	No Action 051422	Alternative 1B 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	412.92	409.78	3.14	0.77%
TDS (mg/l)	229.86	228.21	1.65	0.72%
Chloride (mg/l)	67.91	67.06	0.86	1.28%
Bromide (mg/l)	0.2214	0.2184	0.0029	1.34%
Jones PP Exports				
EC (umhos/cm)	464.04	462.87	1.17	0.25%
TDS (mg/l)	258.04	257.47	0.57	0.22%
Chloride (mg/l)	79.67	79.28	0.39	0.49%
Bromide (mg/l)	0.2589	0.2575	0.0014	0.55%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	312.92	312.10	0.82	0.26%
TDS (mg/l)	175.79	175.36	0.44	0.25%
Chloride (mg/l)	43.03	42.83	0.20	0.46%
Bromide (mg/l)	0.1396	0.1389	0.0007	0.50%

Table 6B4-2b

Average Export Weighted Water Quality (Critical and Dry Years)	Alternative 1B 051722	No Action 051422	Alternative 1B 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	552.21	557.59	-5.38	-0.96%
TDS (mg/l)	303.91	306.82	-2.91	-0.95%
Chloride (mg/l)	104.52	105.87	-1.35	-1.28%
Bromide (mg/l)	0.3445	0.3490	-0.0044	-1.27%
Jones PP Exports				
EC (umhos/cm)	581.54	580.32	1.21	0.21%
TDS (mg/l)	319.97	319.31	0.67	0.21%
Chloride (mg/l)	111.50	111.22	0.28	0.26%
Bromide (mg/l)	0.3670	0.3661	0.0009	0.25%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	368.65	367.33	1.32	0.36%
TDS (mg/l)	204.90	204.19	0.71	0.35%
Chloride (mg/l)	58.13	57.80	0.33	0.58%
Bromide (mg/l)	0.1920	0.1909	0.0011	0.57%

Notes:

¹ Increases from the No Action Alternative.

² Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003. Average annual increases are based on average quantities for October 1921 through September 2003.

DSM2/CALSIM II Export Loading Reporting Metrics
 weighted average of all values of monthly simulation

Table 6B4-3a

Average Export Weighted Water Quality (Average of All Years)	Alternative 2 051722	No Action 051422	Alternative 2 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	412.06	409.78	2.27	0.56%
TDS (mg/l)	229.39	228.21	1.18	0.52%
Chloride (mg/l)	67.69	67.06	0.63	0.95%
Bromide (mg/l)	0.2206	0.2184	0.0022	1.01%
Jones PP Exports				
EC (umhos/cm)	463.30	462.87	0.43	0.09%
TDS (mg/l)	257.68	257.47	0.21	0.08%
Chloride (mg/l)	79.43	79.28	0.14	0.18%
Bromide (mg/l)	0.2580	0.2575	0.0005	0.20%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	312.48	312.10	0.38	0.12%
TDS (mg/l)	175.56	175.36	0.20	0.12%
Chloride (mg/l)	42.91	42.83	0.08	0.19%
Bromide (mg/l)	0.1392	0.1389	0.0003	0.22%

Table 6B4-3b

Average Export Weighted Water Quality (Critical and Dry Years)	Alternative 2 051722	No Action 051422	Alternative 2 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	550.87	557.59	-6.72	-1.21%
TDS (mg/l)	303.19	306.82	-3.63	-1.18%
Chloride (mg/l)	104.18	105.87	-1.69	-1.59%
Bromide (mg/l)	0.3434	0.3490	-0.0055	-1.59%
Jones PP Exports				
EC (umhos/cm)	581.03	580.32	0.70	0.12%
TDS (mg/l)	319.70	319.31	0.39	0.12%
Chloride (mg/l)	111.37	111.22	0.16	0.14%
Bromide (mg/l)	0.3666	0.3661	0.0005	0.13%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	367.95	367.33	0.63	0.17%
TDS (mg/l)	204.53	204.19	0.34	0.17%
Chloride (mg/l)	57.95	57.80	0.16	0.27%
Bromide (mg/l)	0.1914	0.1909	0.0005	0.27%

Notes:

¹ Increases from the No Action Alternative.

² Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003. Average annual increases are based on average quantities for October 1921 through September 2003.

DSM2/CALSIM II Export Loading Reporting Metrics
 weighted average of all values of monthly simulation

Table 6B4-4a

Average Export Weighted Water Quality (Average of All Years)	Alternative 3 051722	No Action 051422	Alternative 3 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	409.95	409.78	0.16	0.04%
TDS (mg/l)	228.25	228.21	0.04	0.02%
Chloride (mg/l)	67.17	67.06	0.11	0.17%
Bromide (mg/l)	0.2189	0.2184	0.0005	0.22%
Jones PP Exports				
EC (umhos/cm)	463.56	462.87	0.69	0.15%
TDS (mg/l)	257.78	257.47	0.32	0.12%
Chloride (mg/l)	79.54	79.28	0.26	0.33%
Bromide (mg/l)	0.2585	0.2575	0.0010	0.38%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	311.97	312.10	-0.13	-0.04%
TDS (mg/l)	175.30	175.36	-0.06	-0.04%
Chloride (mg/l)	42.78	42.83	-0.05	-0.12%
Bromide (mg/l)	0.1387	0.1389	-0.0002	-0.13%

Table 6B4-4b

Average Export Weighted Water Quality (Critical and Dry Years)	Alternative 3 051722	No Action 051422	Alternative 3 051722 minus No Action 051422	Percent change from No Action 051422
Banks PP Exports				
EC (umhos/cm)	552.82	557.59	-4.78	-0.86%
TDS (mg/l)	304.24	306.82	-2.58	-0.84%
Chloride (mg/l)	104.67	105.87	-1.20	-1.14%
Bromide (mg/l)	0.3450	0.3490	-0.0040	-1.13%
Jones PP Exports				
EC (umhos/cm)	581.26	580.32	0.94	0.16%
TDS (mg/l)	319.80	319.31	0.50	0.16%
Chloride (mg/l)	111.46	111.22	0.25	0.22%
Bromide (mg/l)	0.3669	0.3661	0.0008	0.23%
CCWD Exports (RS, OR and VC)				
EC (umhos/cm)	368.61	367.33	1.28	0.35%
TDS (mg/l)	204.88	204.19	0.69	0.34%
Chloride (mg/l)	58.12	57.80	0.32	0.56%
Bromide (mg/l)	0.1919	0.1909	0.0011	0.55%

Notes:

¹ Increases from the No Action Alternative.

² Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003. Average annual increases are based on average quantities for October 1921 through September 2003.