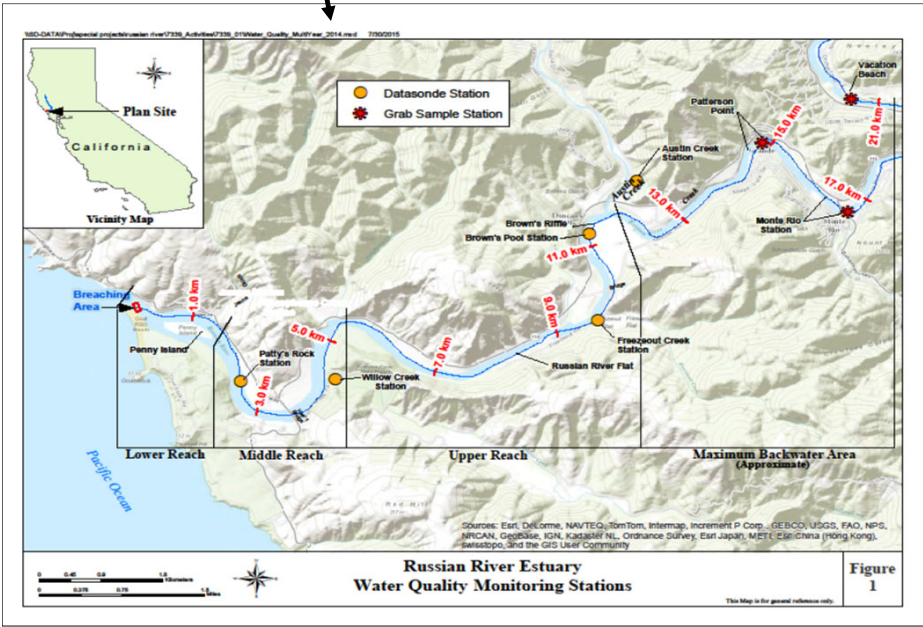
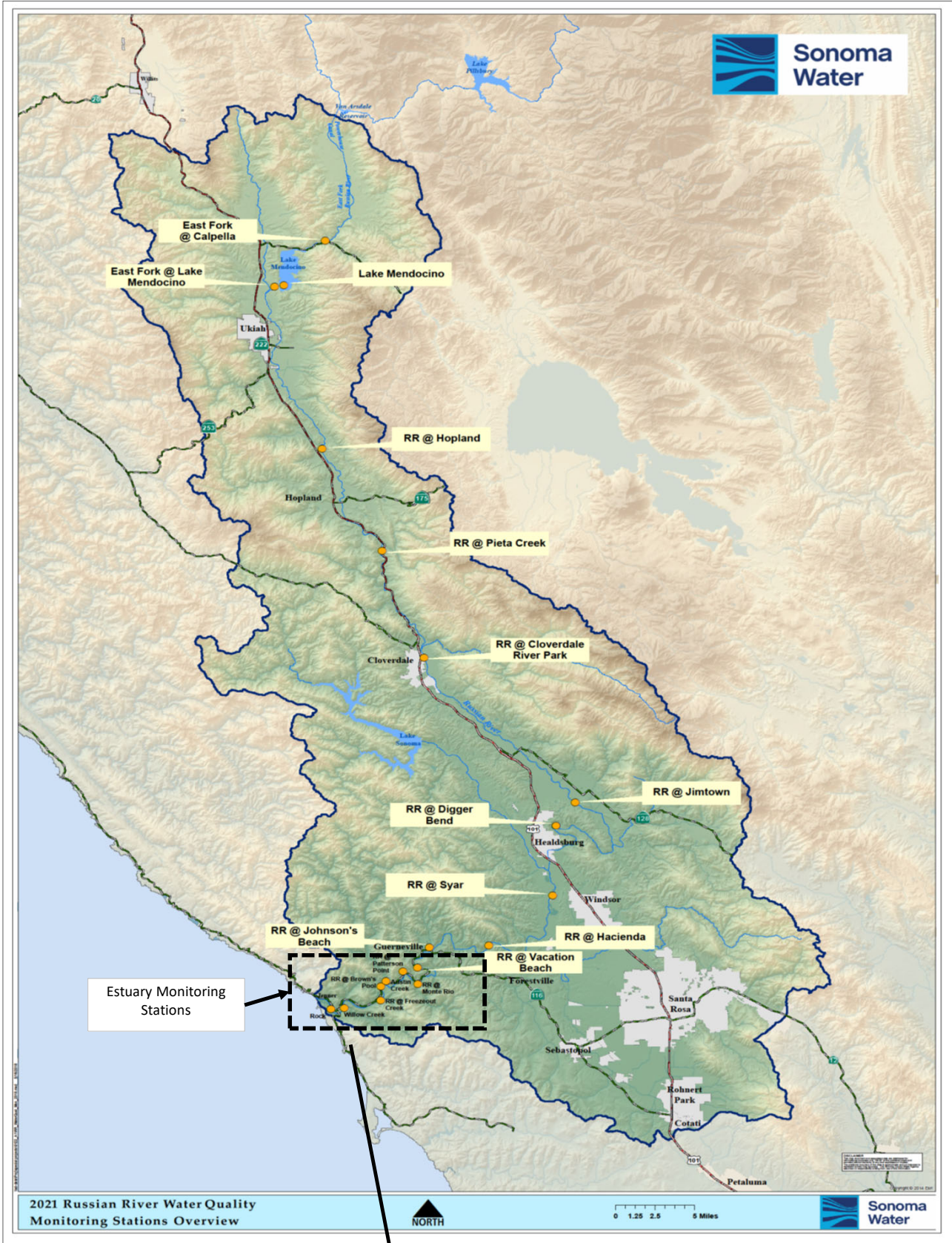




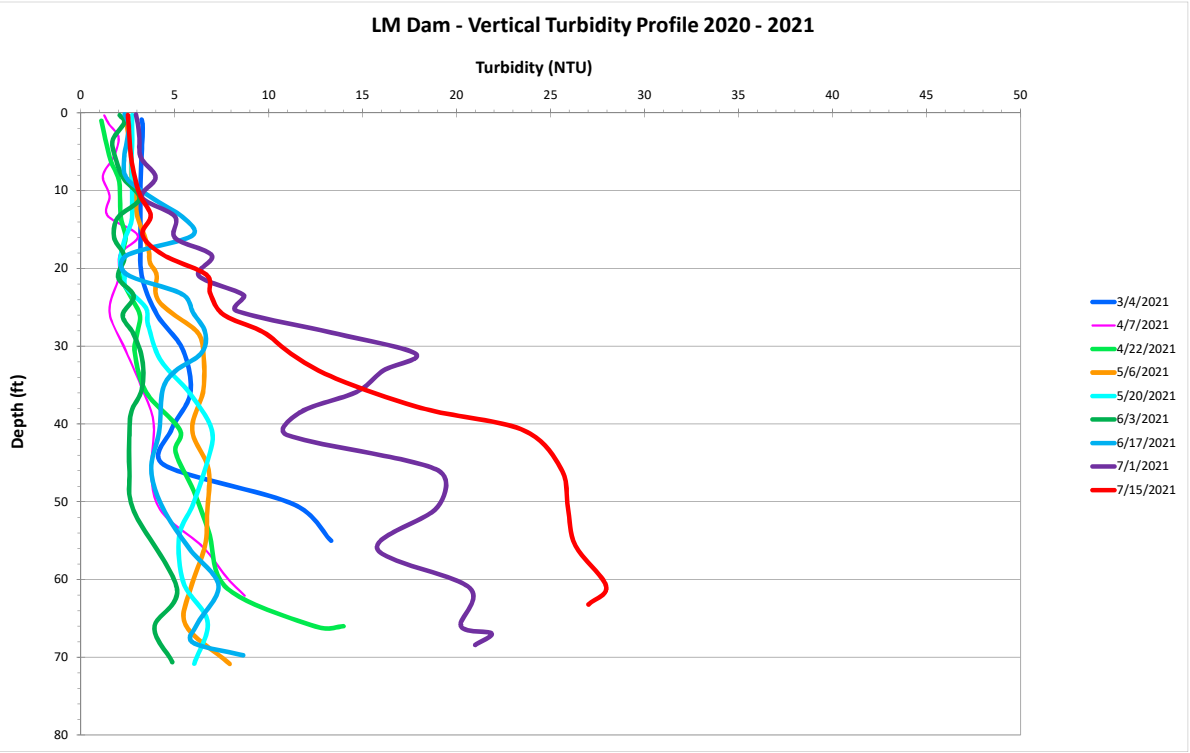
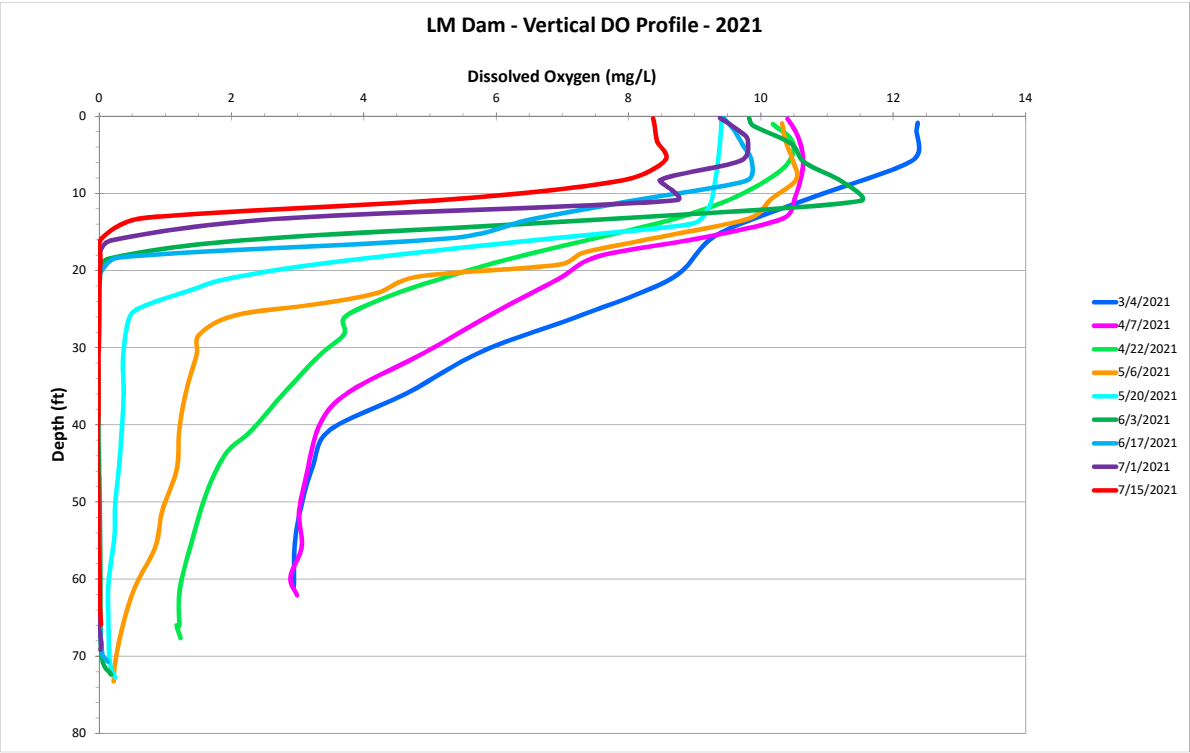
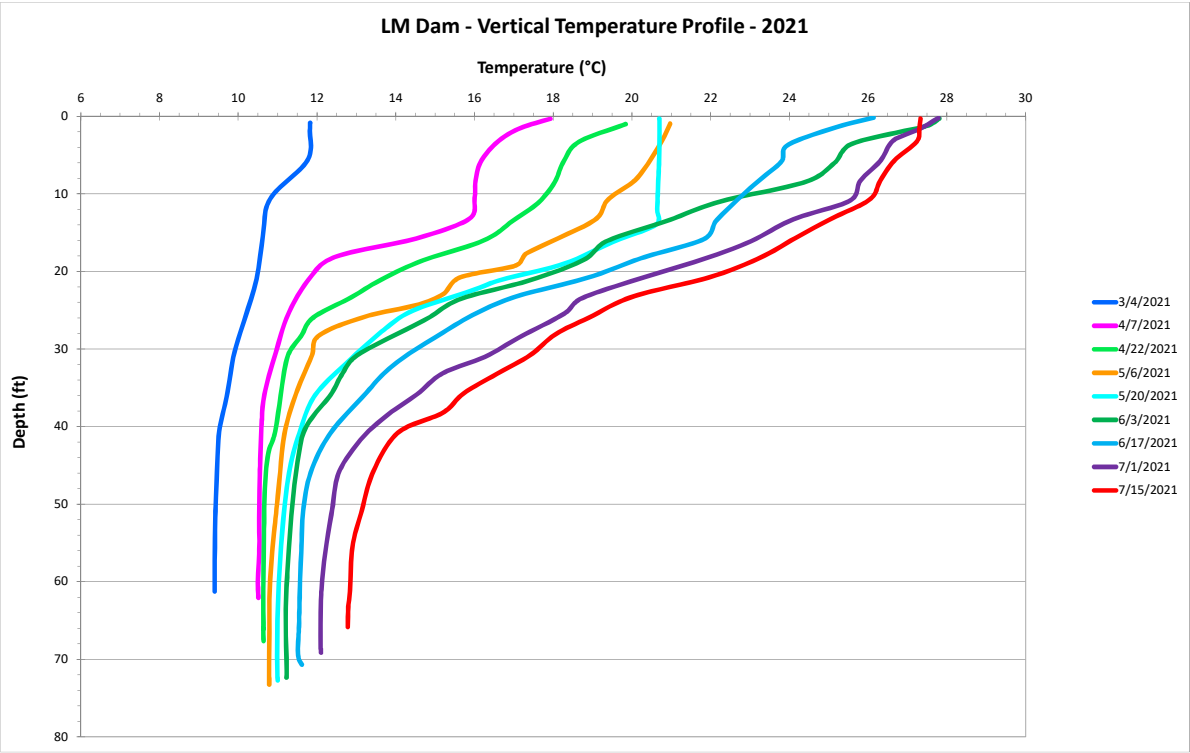
Sonoma
Water

State Water Resources Control Board
Temporary Urgency Change Order (6/14/2021)
Russian River Water Quality Report
July 16, 2021 - July 22, 2021

Prepared as a requirement of the Order approving Sonoma Water's Petition for Temporary Urgency Change in Permits 12947A, 12949, 12950, and 16596 (Applications 12919A, 15736, 15737, and 19351).



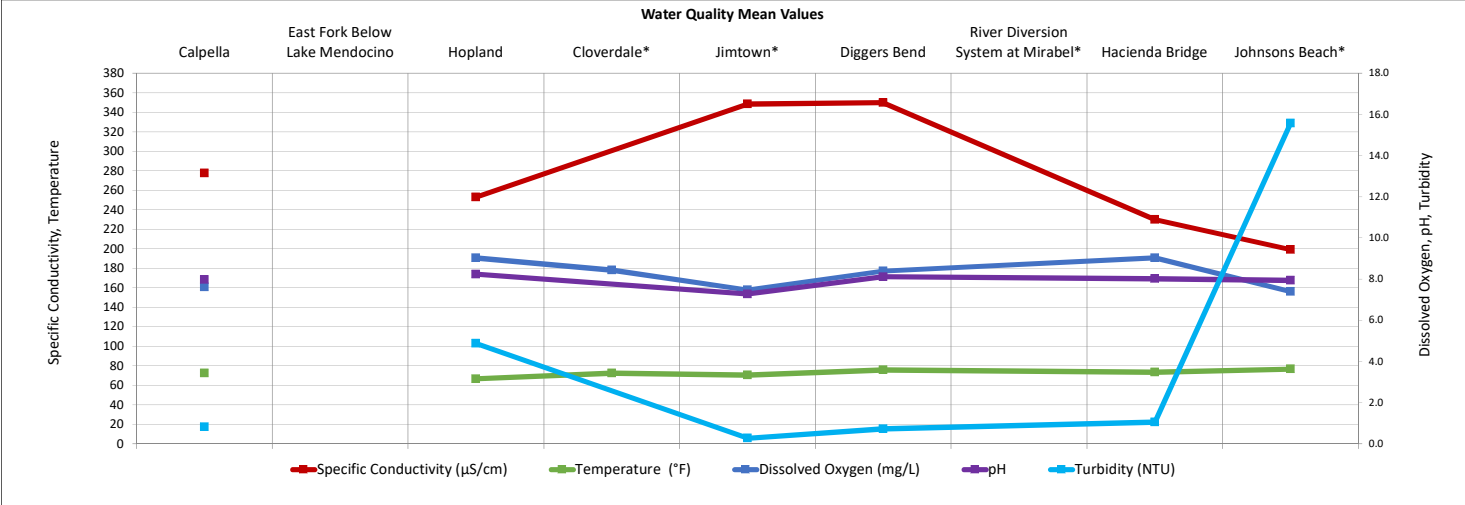
Lake Mendocino Water Quality Vertical Profiles (March 4 - July 22, 2021)
Provisional Data Subject to Revision



Russian River Water Quality Sondes (July 16 - July 22, 2021)
Provisional Data Subject to Revision

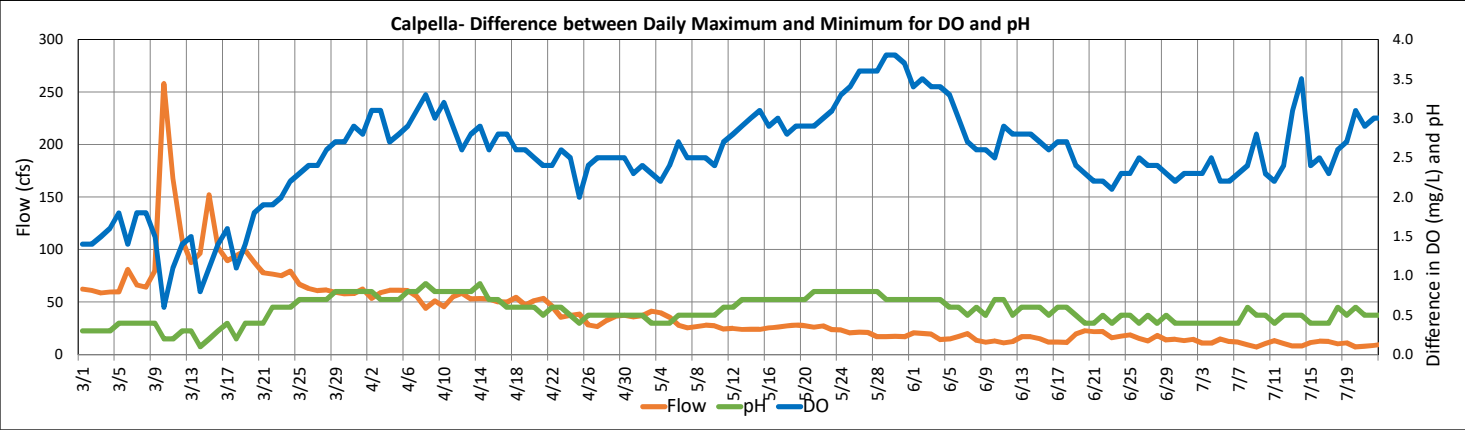
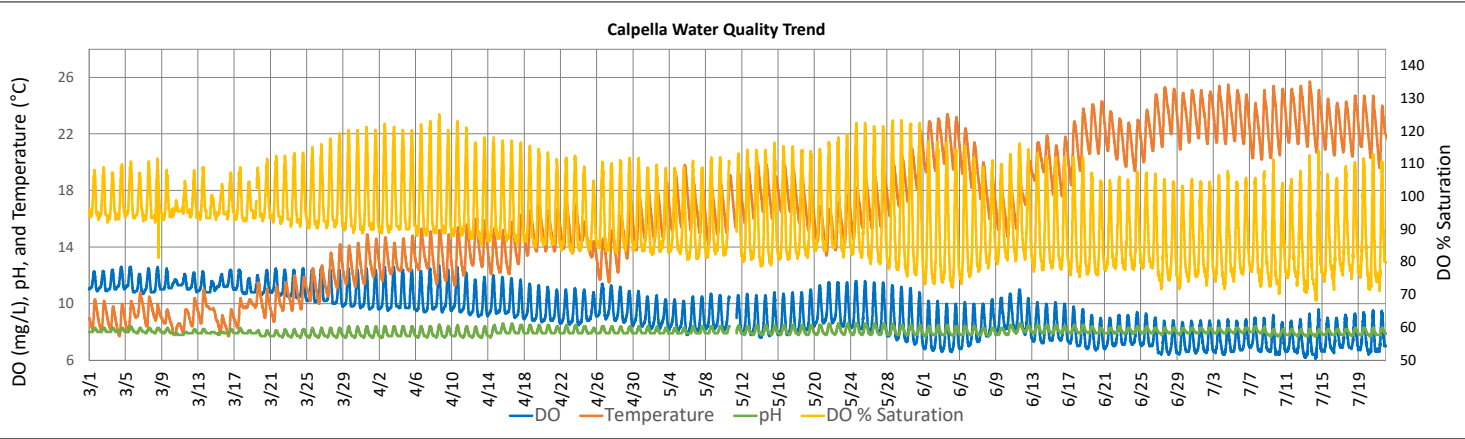
Parameter		Calpella	East Fork Below Lake Mendocino	Hopland	Cloverdale*	Jimtown*	Diggers Bend	River Diversion System at Mirabel*	Hacienda Bridge	Johnsons Beach*
		USGS 11461500	SCWA	USGS 11462500	USGS 11463200	USGS 11463682	USGS 11463980	SCWA	USGS 11467000	SCWA
Temperature (°F)	Min	67.3		62.4	67.6	65.8	70.3		70.0	73.8
	Max	76.5		70.5	76.6	75.4	81.1		77.0	79.0
	Mean	72.3		66.7	72.4	70.5	75.8		73.3	76.5
Specific Conductivity (µS/cm)	Min	267		248		346	347		225	132.6
	Max	297		256		350	354		235	210.2
	Mean	278		253		348	350		230	199.1
Dissolved Oxygen (mg/L)	Min	6.4		6.8	7.2	4.8	6.1		8.3	2.9
	Max	9.7		12.1	10.2	10.8	11.0		10.2	9.5
	Mean	7.6		9.0	8.4	7.5	8.4		9.0	7.4
Dissolved Oxygen (% Saturation)	Min	69		69	78	51	68		93	33.7
	Max	115		136	121	128	138		123	117.6
	Mean	87		97	97	84	100		103	87.8
pH	Min	7.7		7.7		7.1	7.8		7.9	7.6
	Max	8.3		8.9		7.5	8.4		8.2	8.3
	Mean	8.0		8.2		7.3	8.1		8.0	7.9
Turbidity (NTU)	Min	0.3		4.0		0.0	0.3		0.5	0.0
	Max	2.9		8.3		0.8	2.2		1.8	581.3
	Mean	0.8		4.9		0.3	0.7		1.0	15.6

*Station operated seasonally



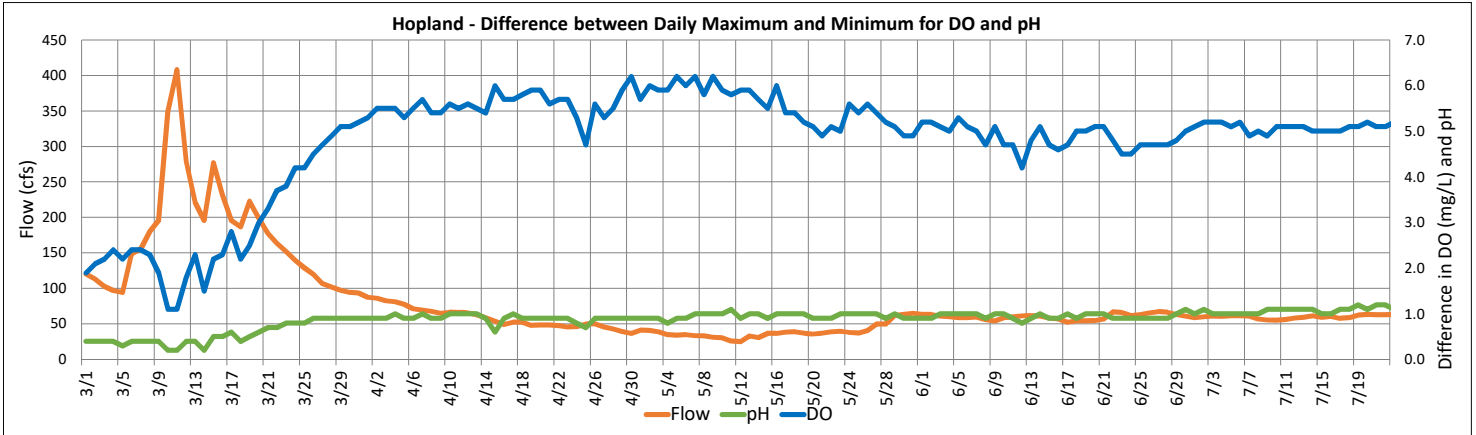
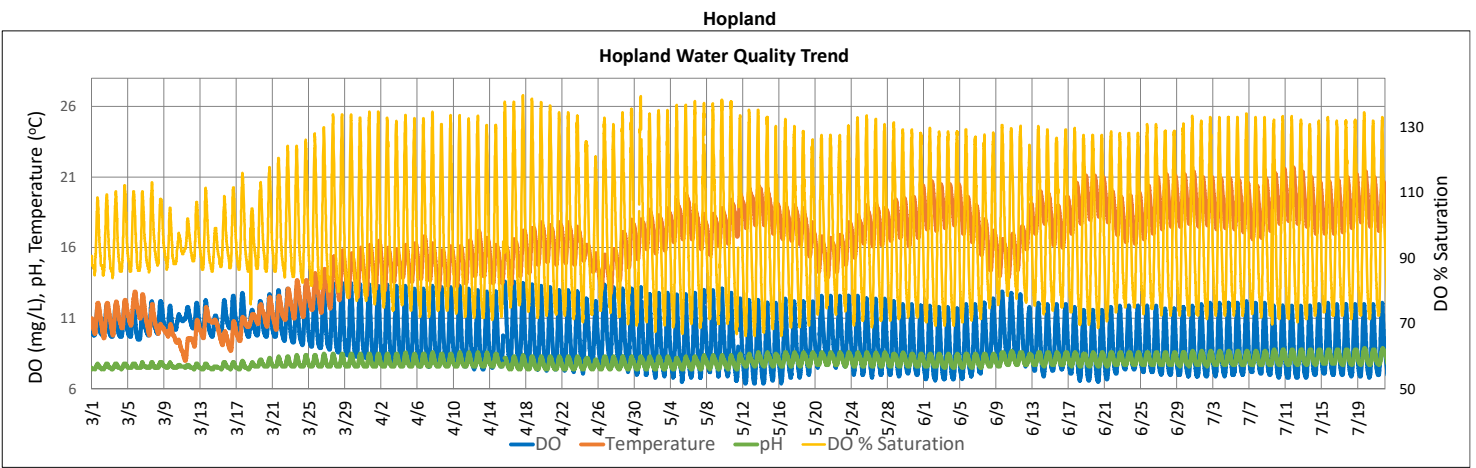
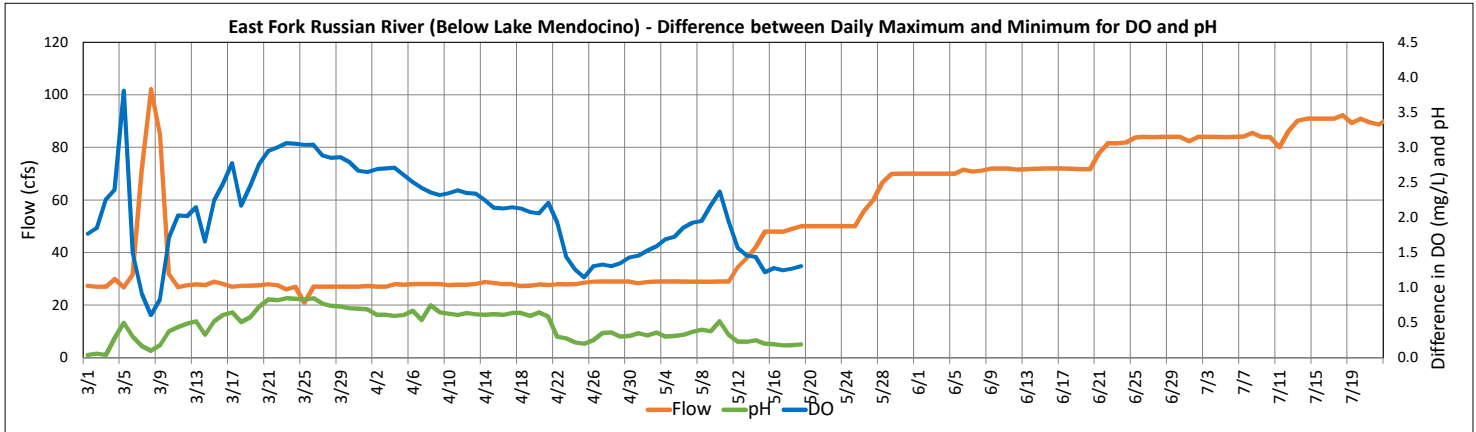
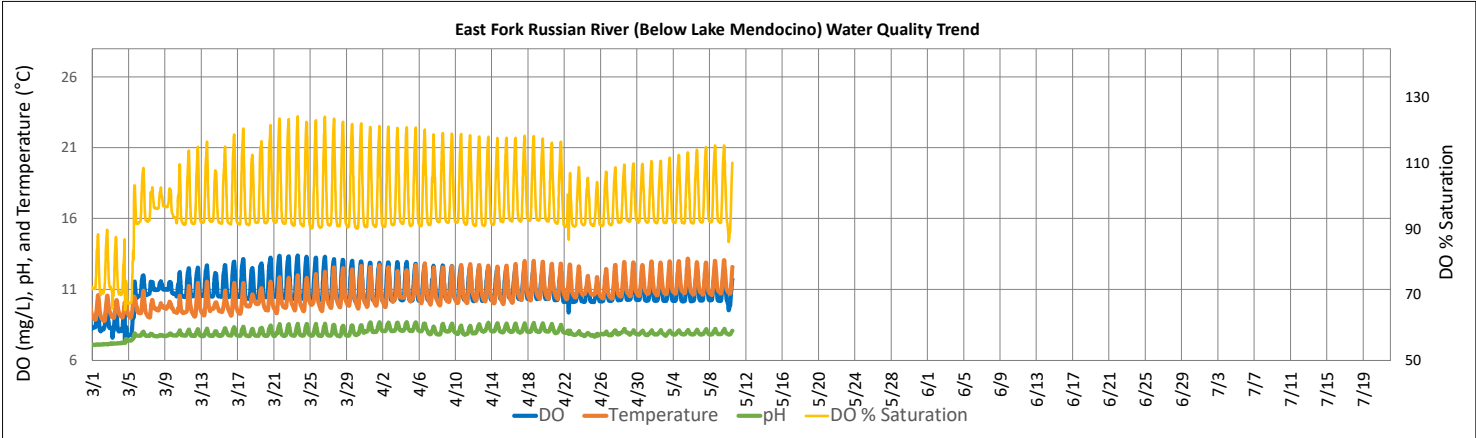
Russian River Water Quality Sonde Data (March 1 - July 22, 2021)
Provisional Data Subject to Revision

Calpella (East Fork Russian River)



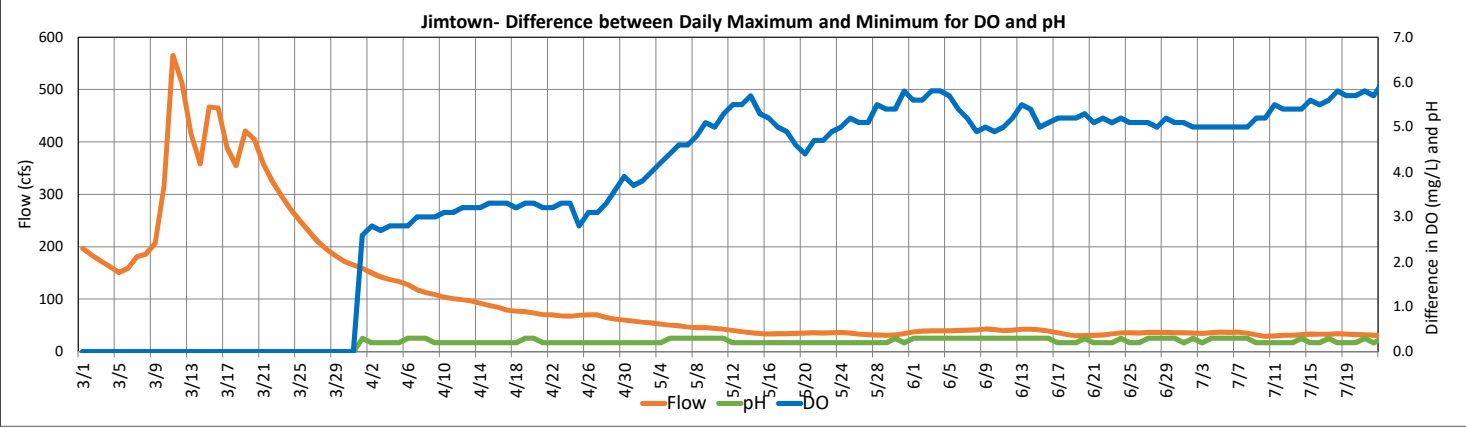
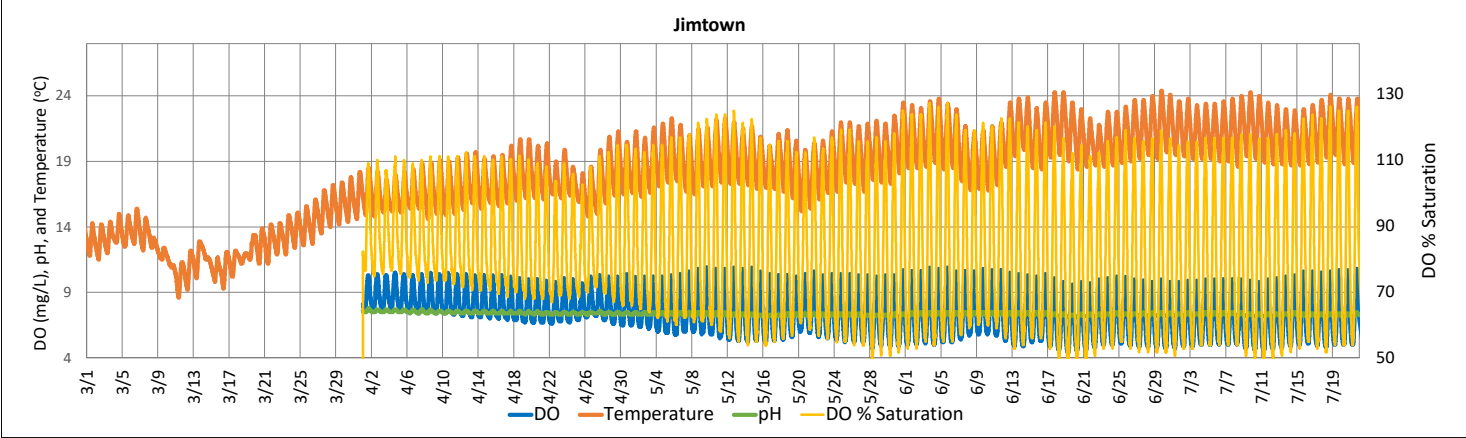
Russian River Water Quality Sonde Data (March 1 - July 22, 2021)
Provisional Data Subject to Revision

East Fork Russian River (Below Lake Mendocino)

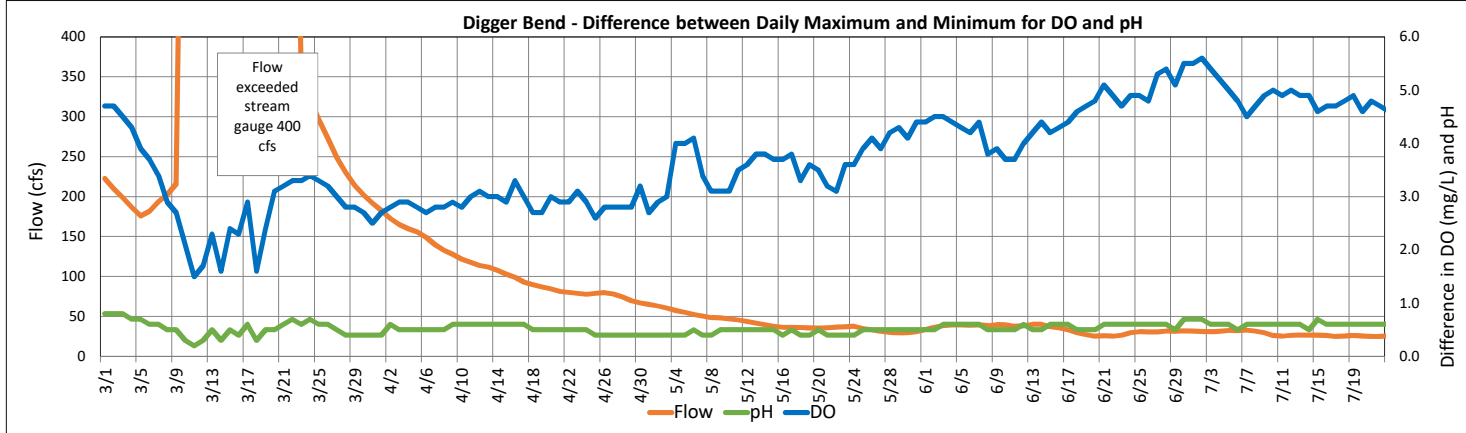
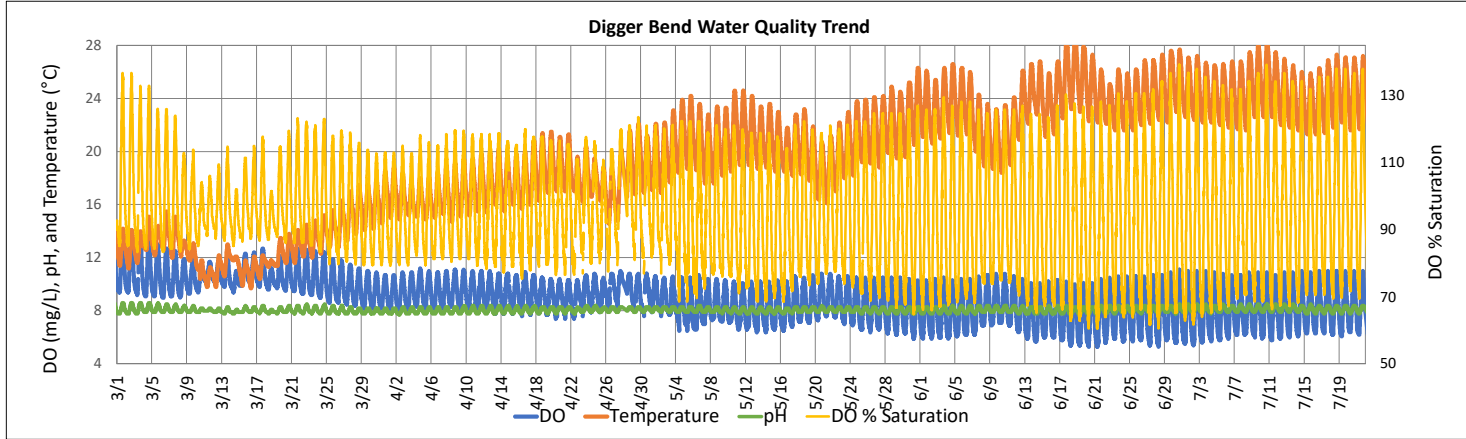


Russian River Water Quality Sonde Data (March 1 - July 22, 2021)
Provisional Data Subject to Revision

Jimtown Water Quality

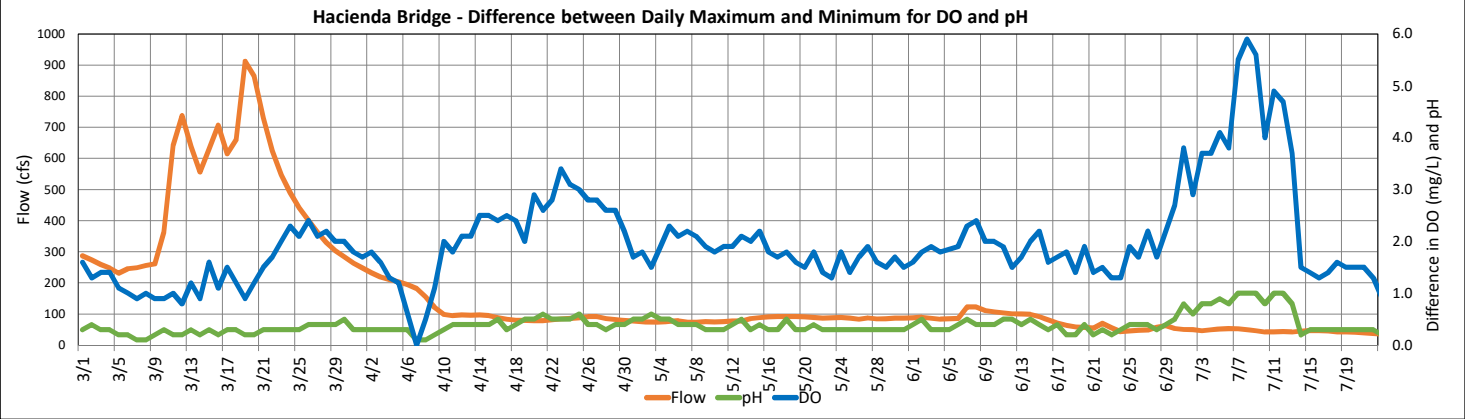
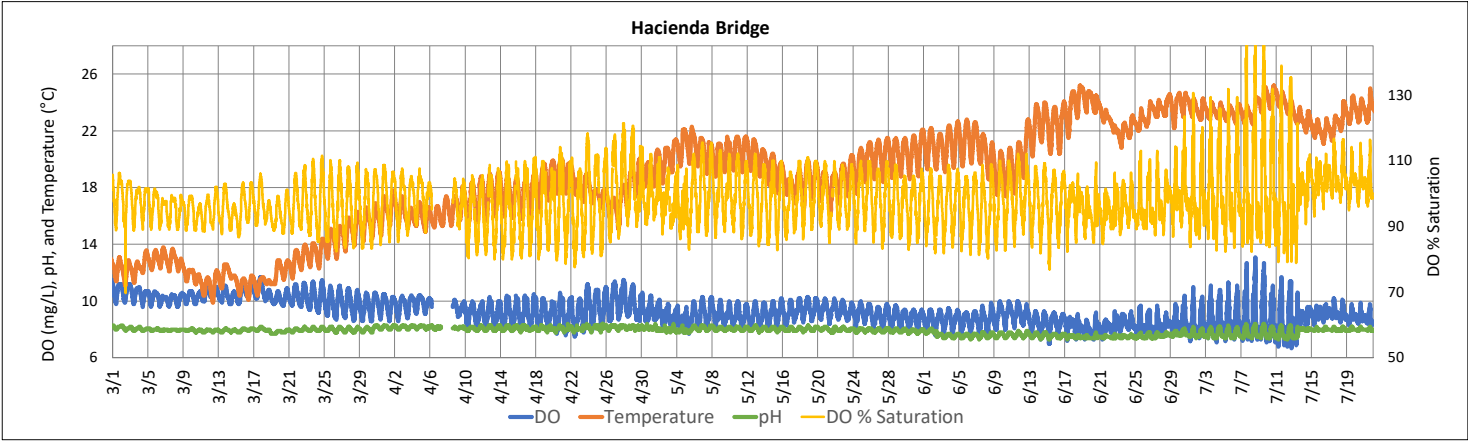


Digger Bend

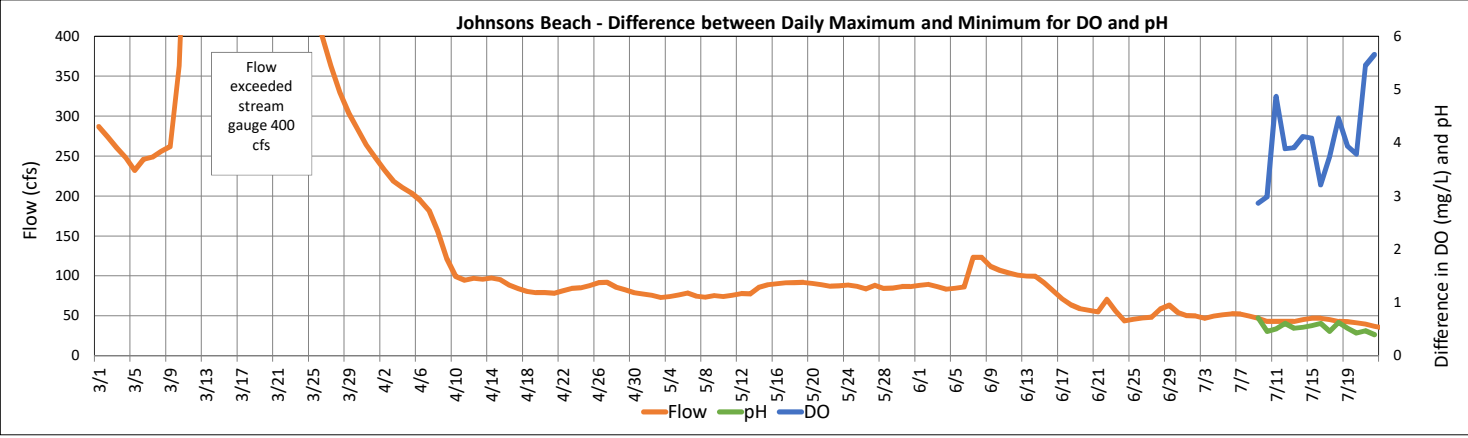
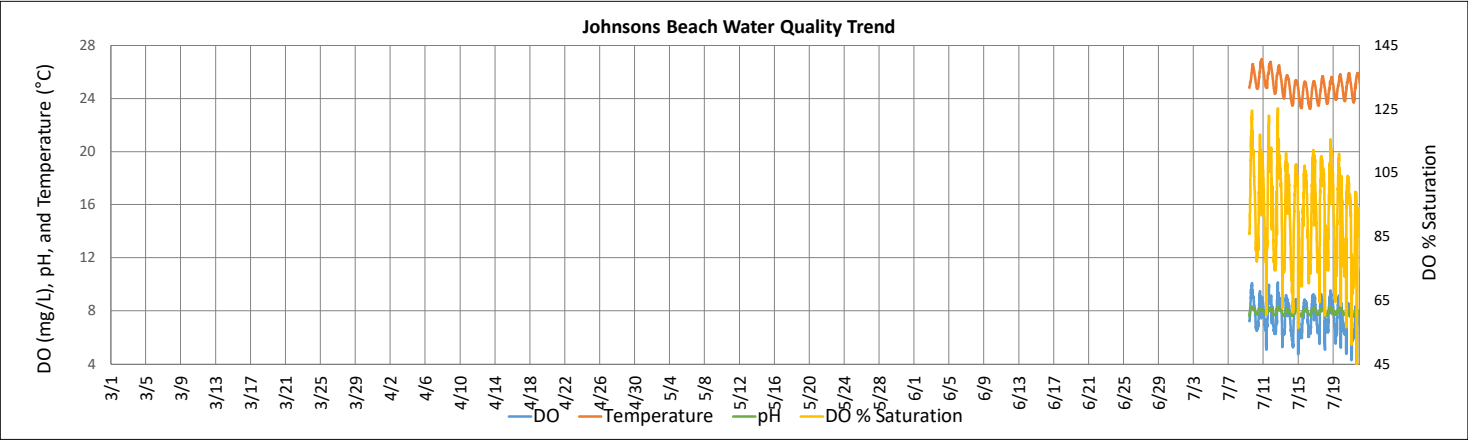


Russian River Water Quality Sonde Data (March 1 - July 22, 2021)
Provisional Data Subject to Revision

Hacienda Bridge Water Quality

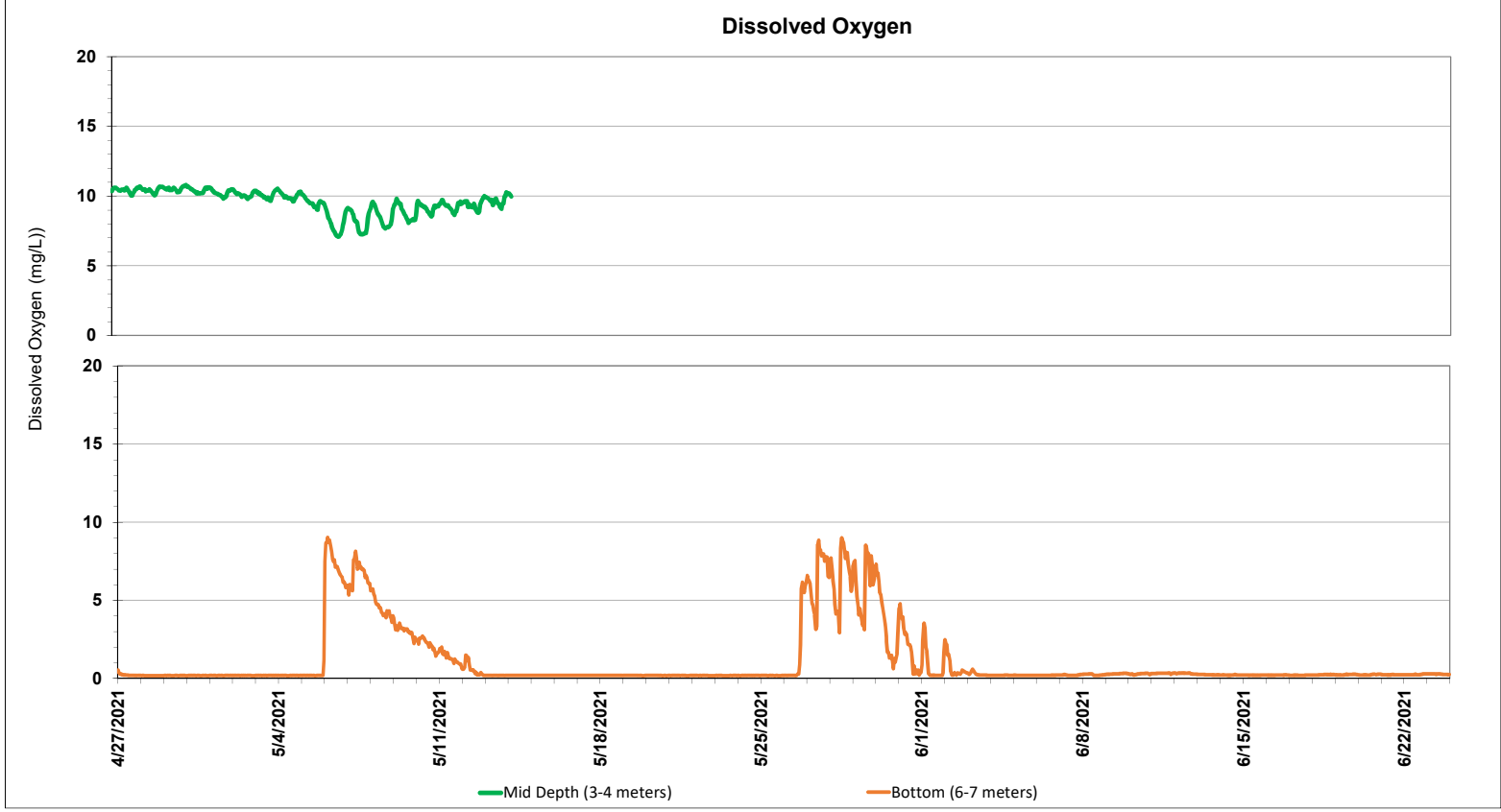
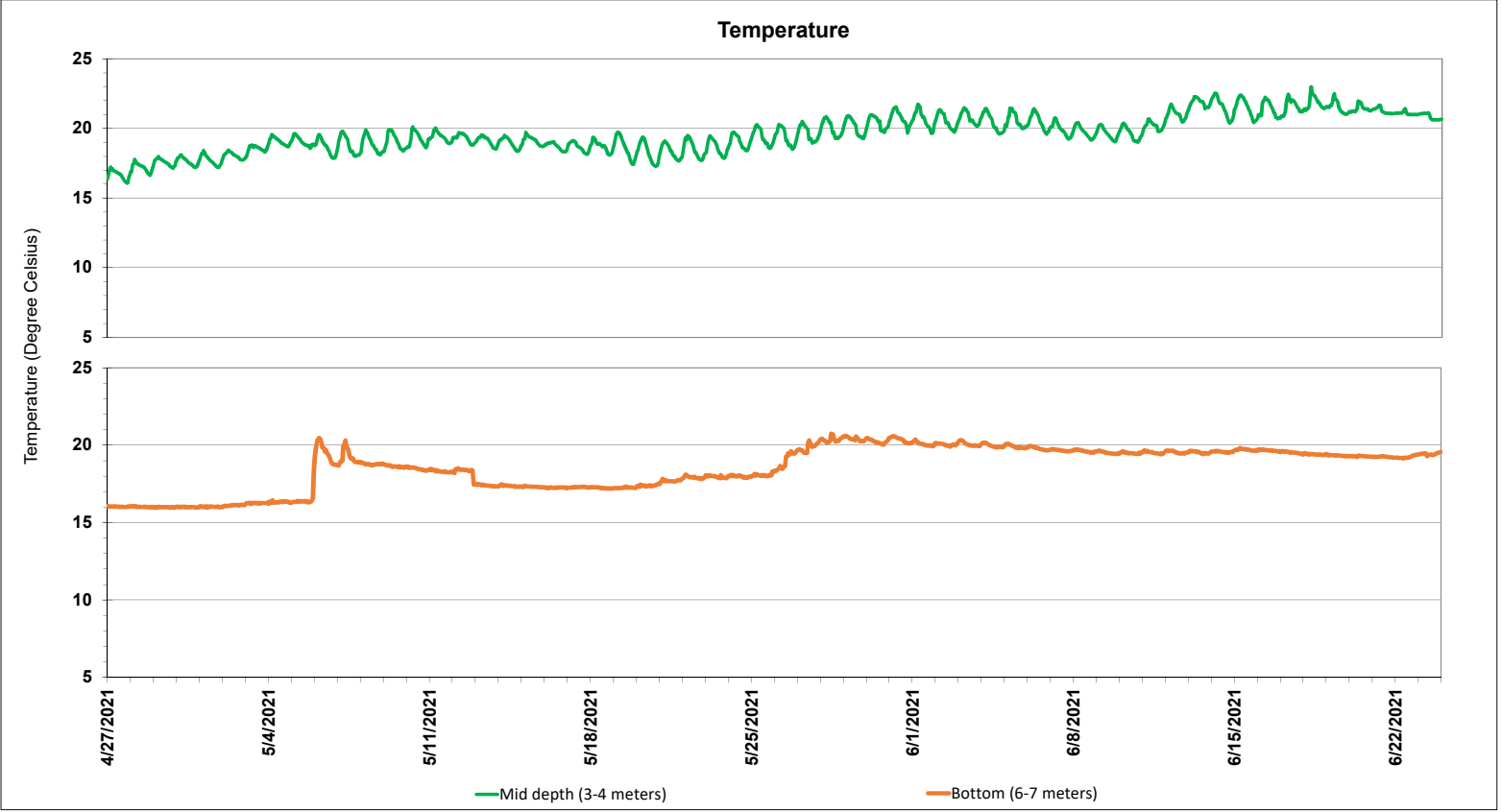


Johnsons Beach

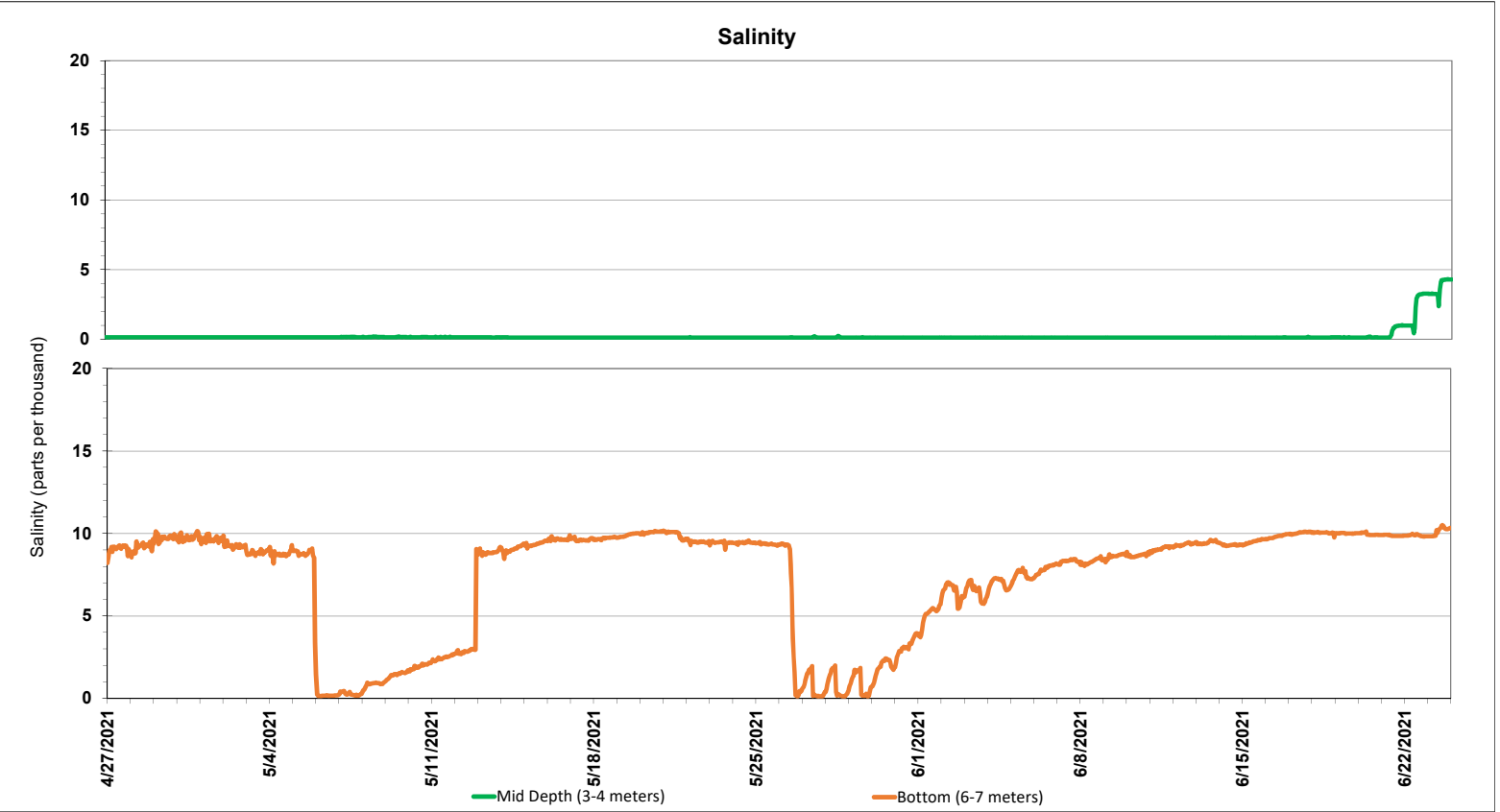
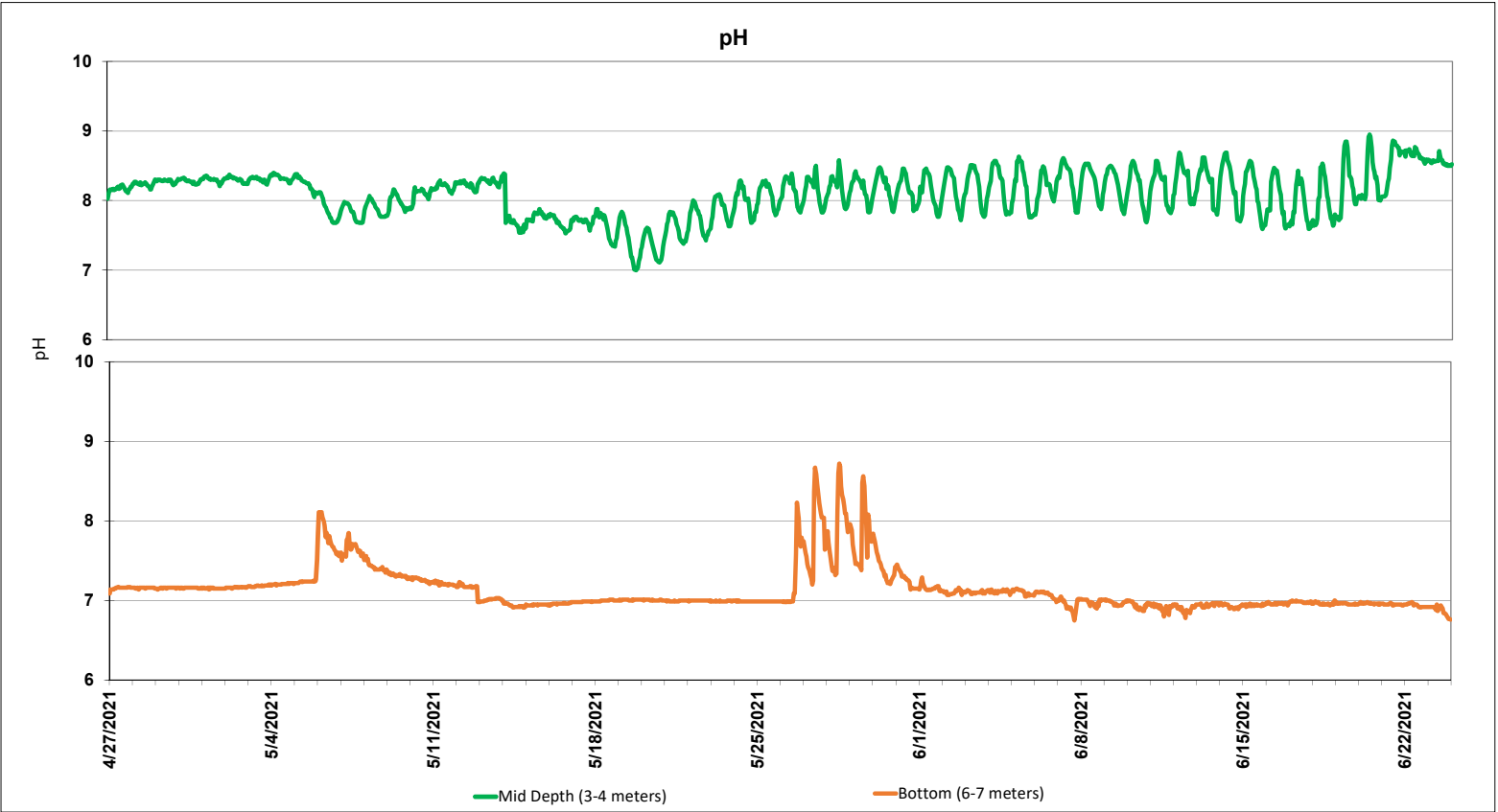


Russian River Water Quality Sonde Data - Estuary (April 27 - July 22, 2021)
Provisional Data Subject to Revision

Russian River at Freezeout Creek Water Quality

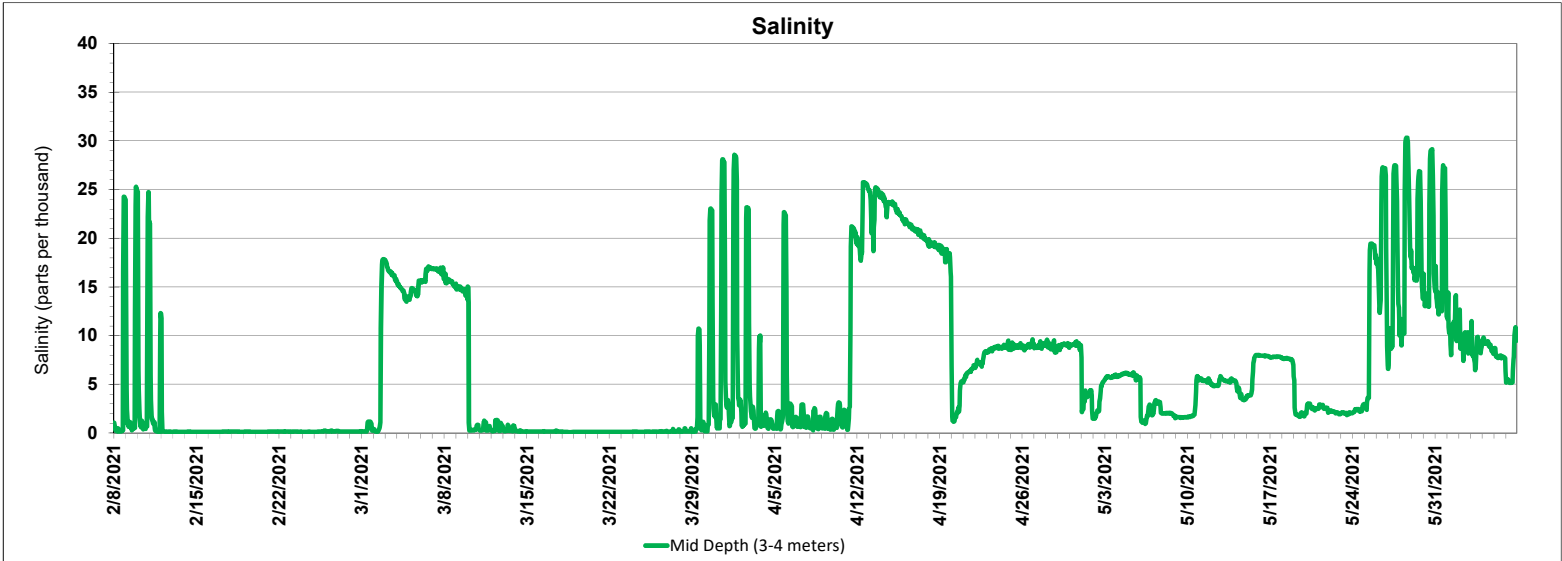
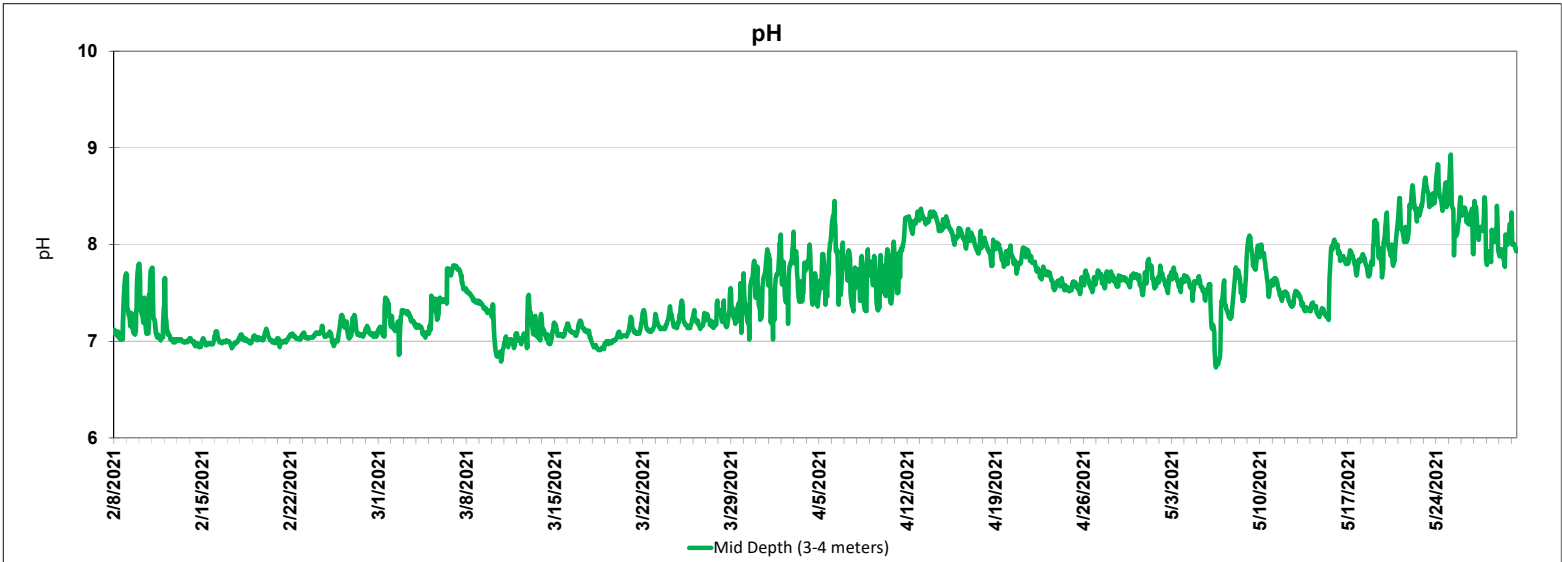
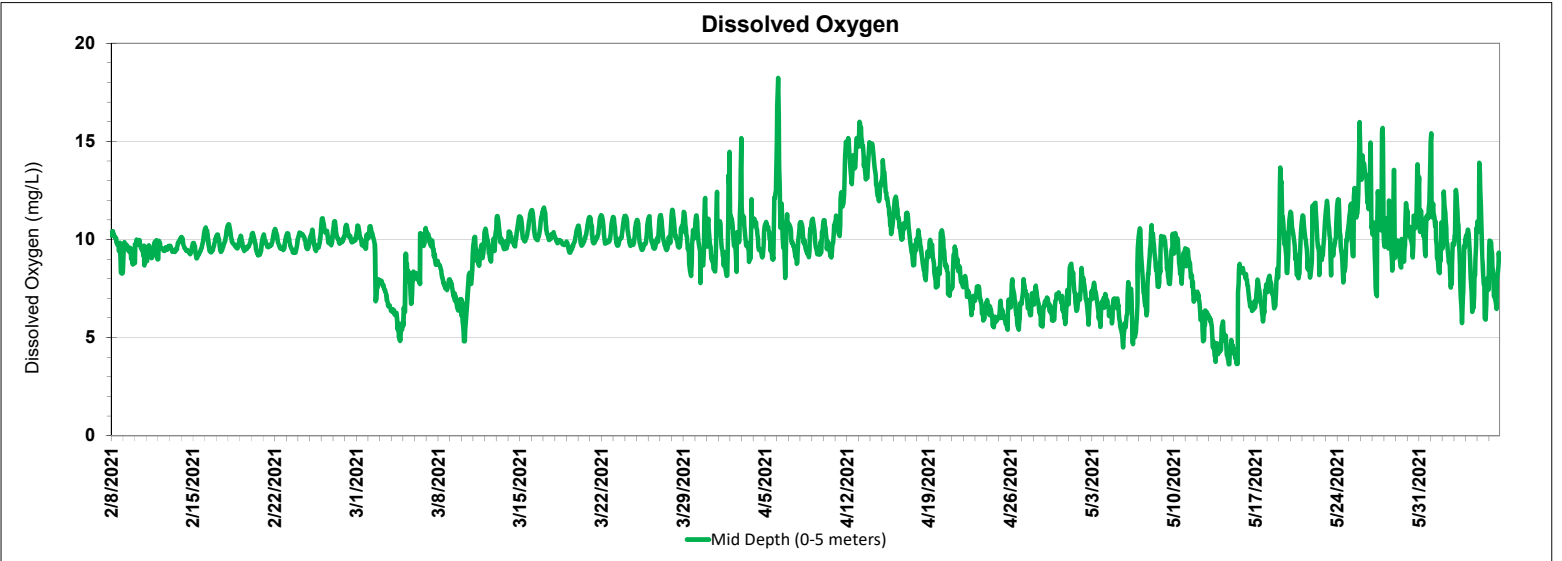
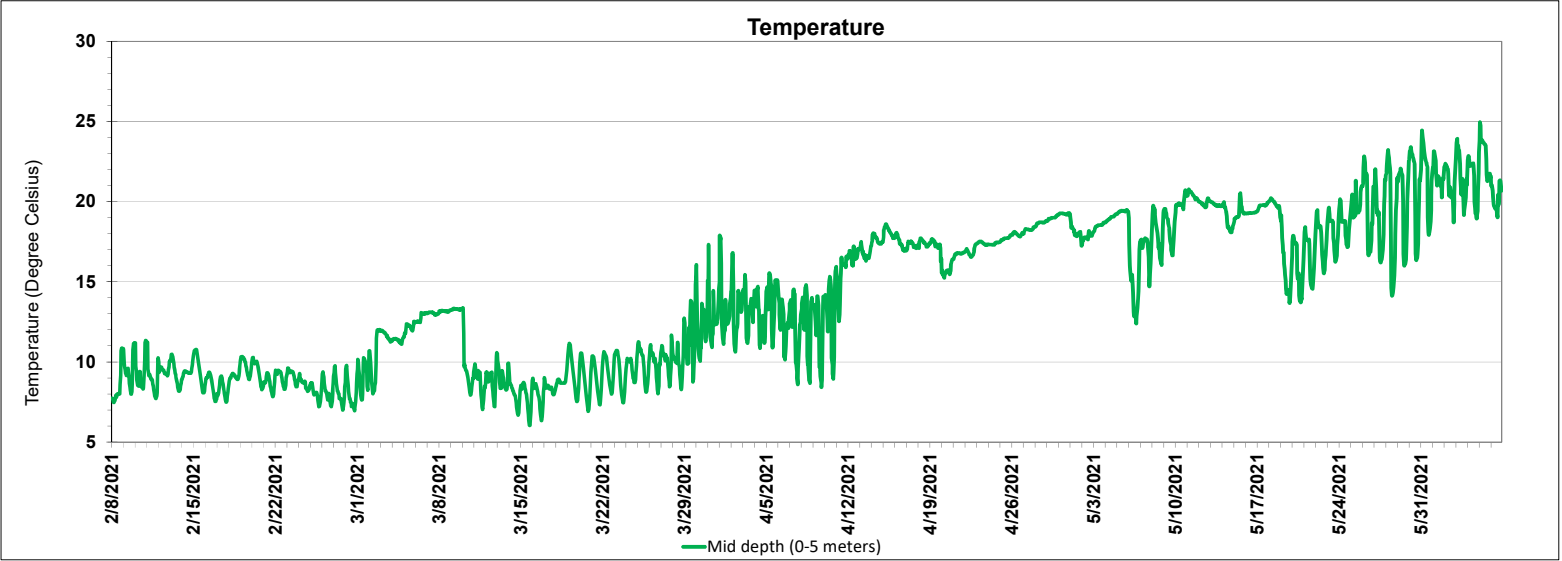


Russian River Water Quality Sonde Data - Estuary (April 27 - July 22, 2021)
Provisional Data Subject to Revision
Russian River at Freezeout Creek Water Quality



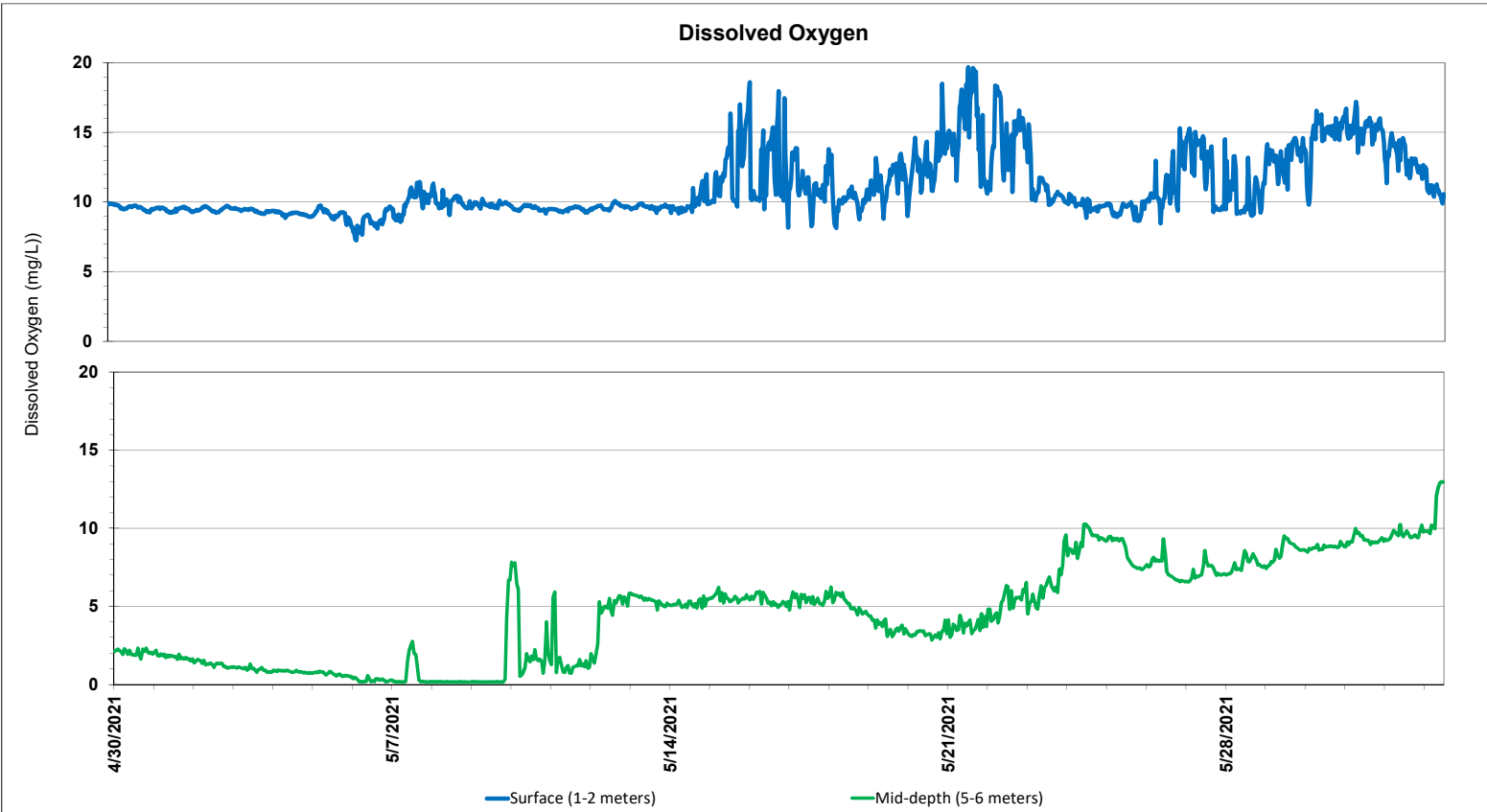
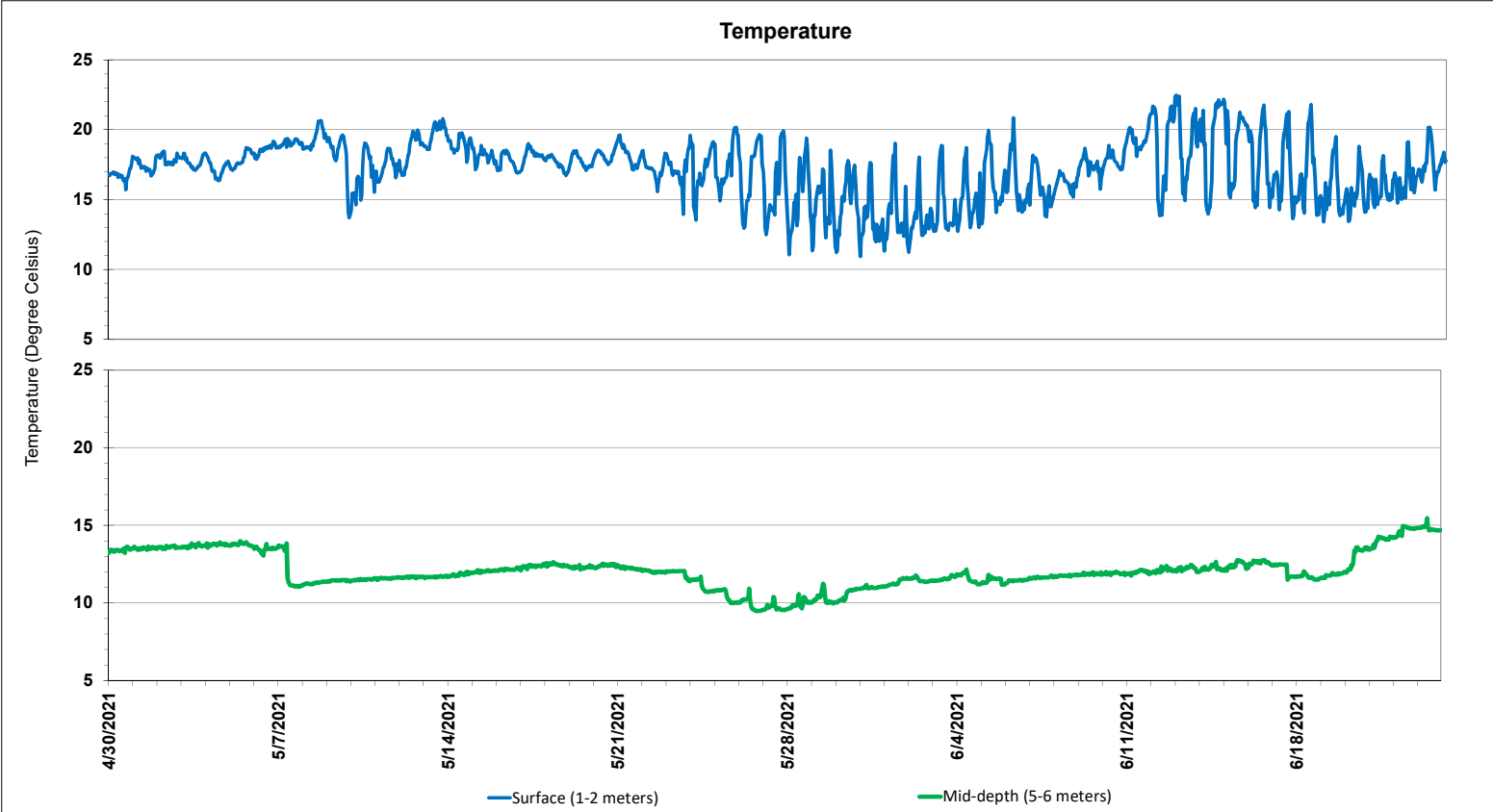
Russian River Water Quality Sonde Data - Estuary (February 28 - July 22, 2021)
Provisional Data Subject to Revision

Willow Creek Water Quality



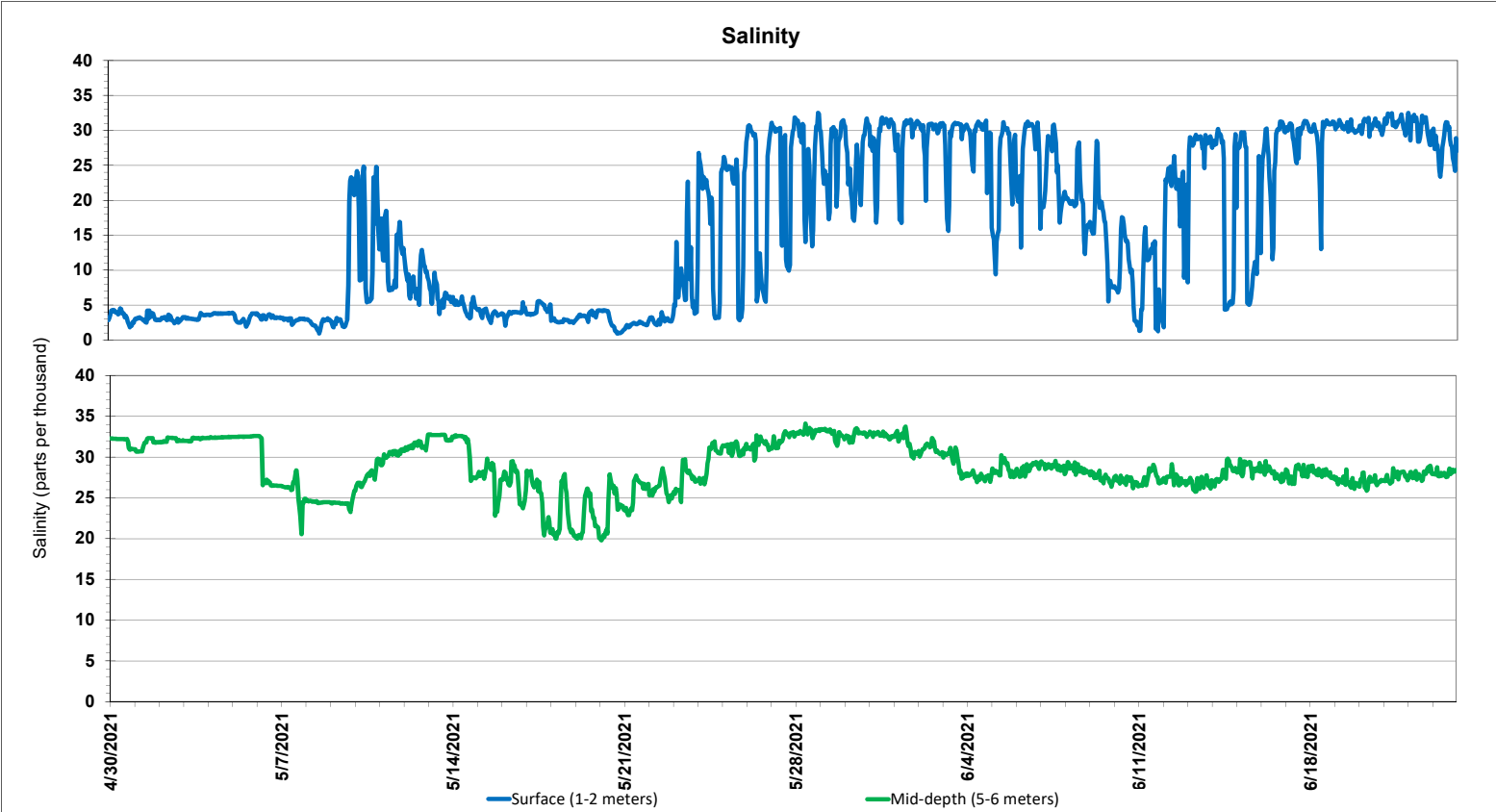
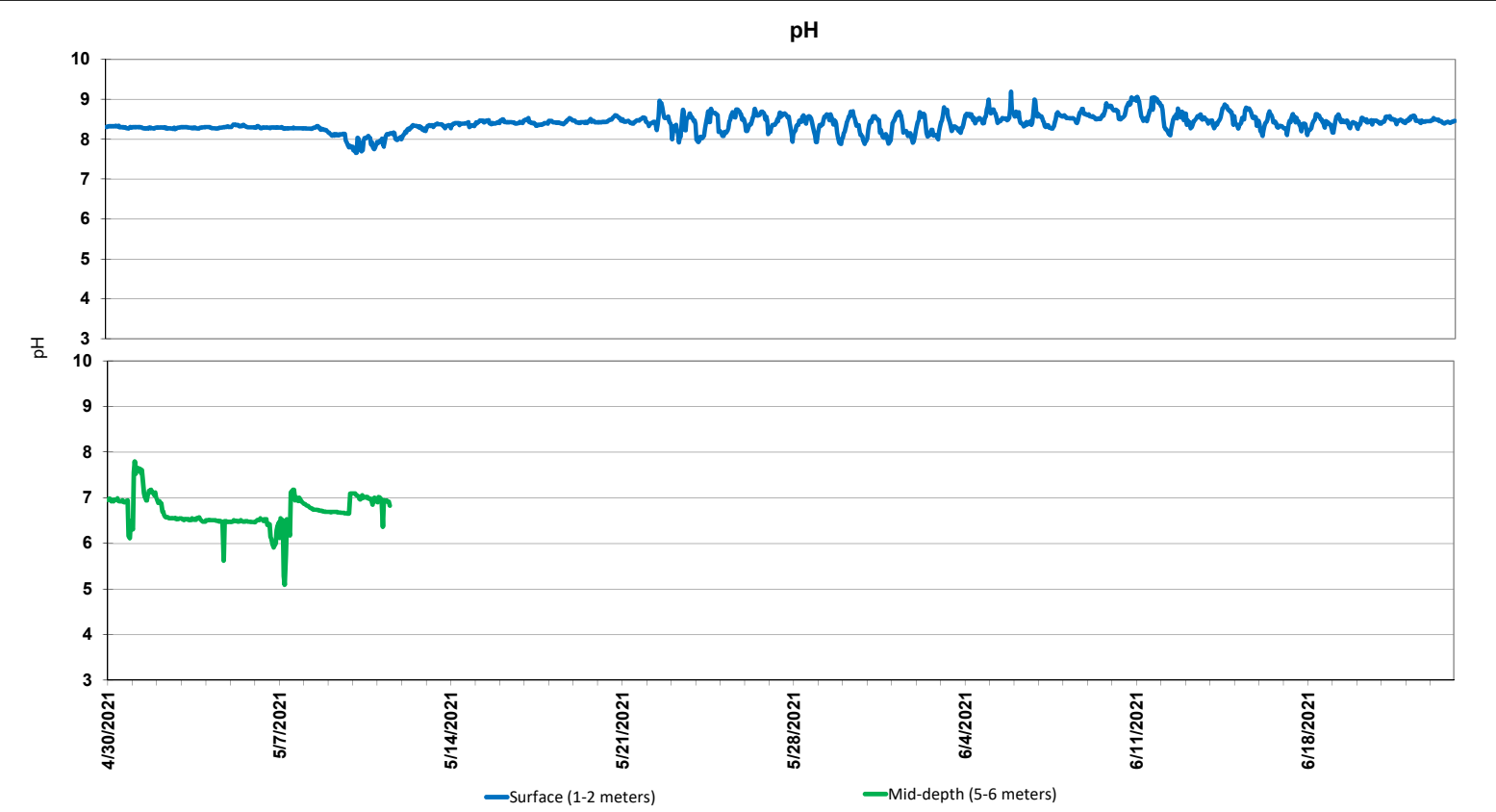
Russian River Water Quality Sonde Data - Estuary (April 27 - July 22, 2021)
Provisional Data Subject to Revision

Russian River at Patty's Rock Water Quality



Russian River Water Quality Sonde Data - Estuary (April 27 - July 22, 2021)
Provisional Data Subject to Revision

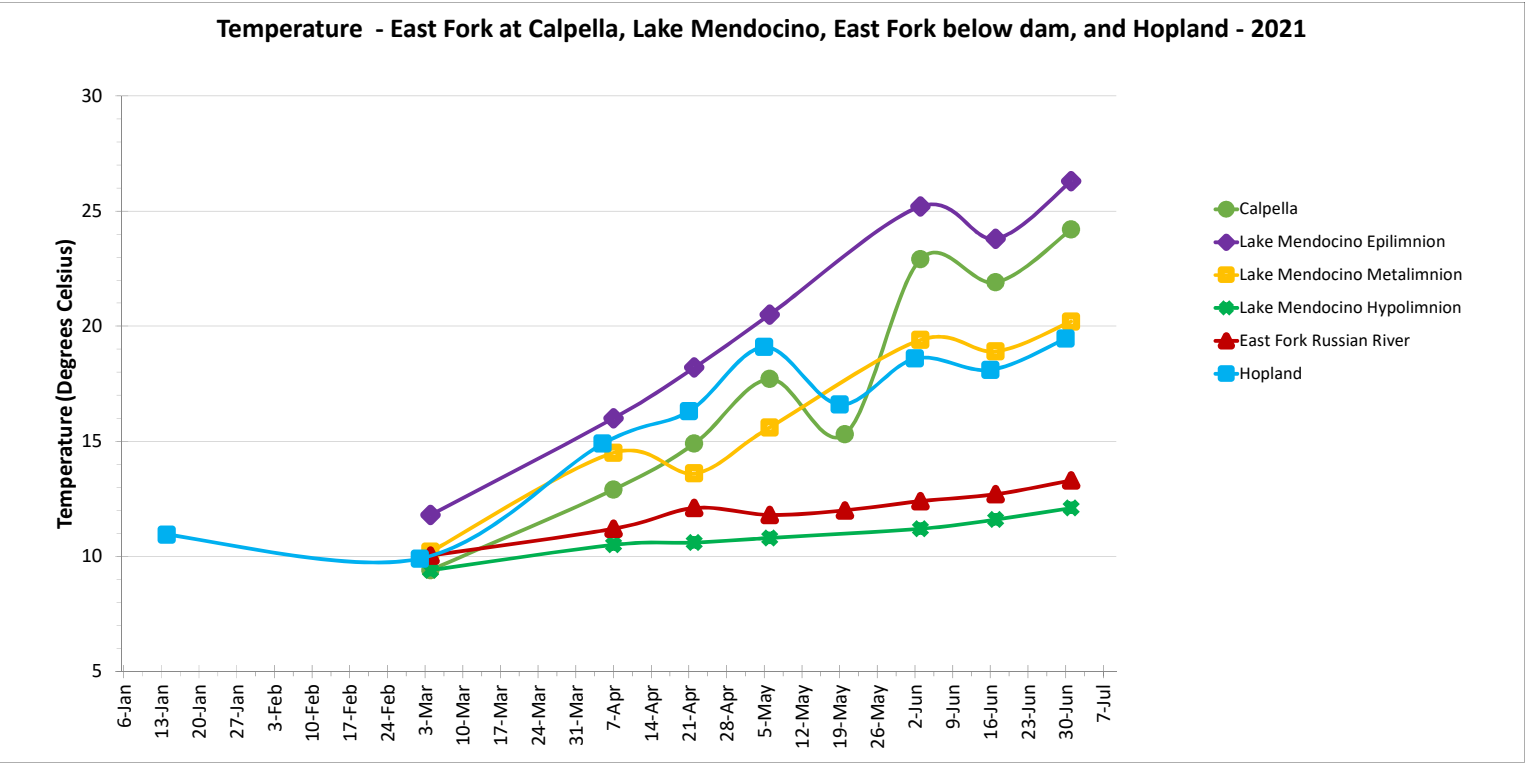
Russian River at Patty's Rock Water Quality



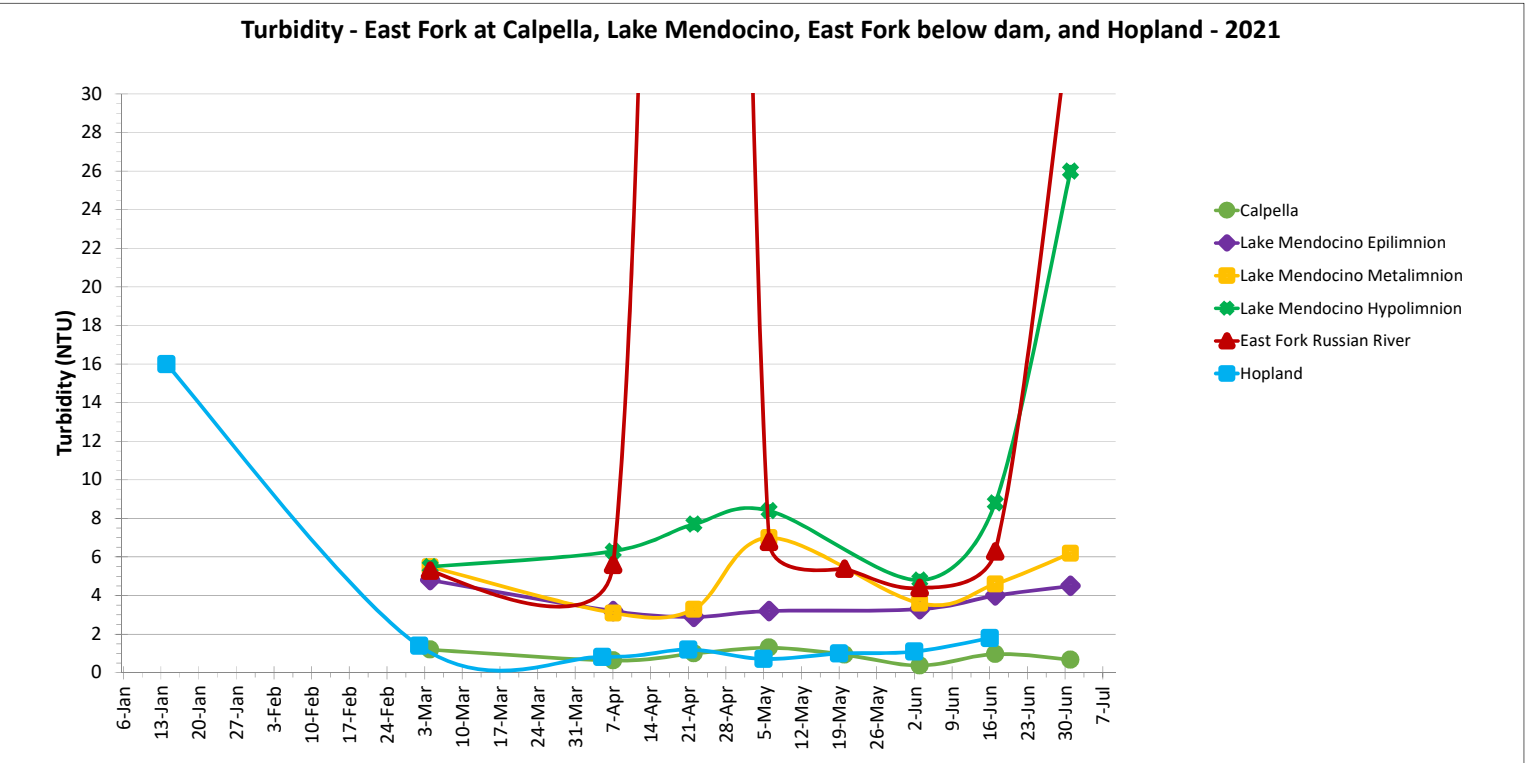
Russian River Water Quality Grab Samples (January 14 - July 22, 2021)
Provisional Data Subject to Revision

Lake Mendocino to Hopland Water Quality

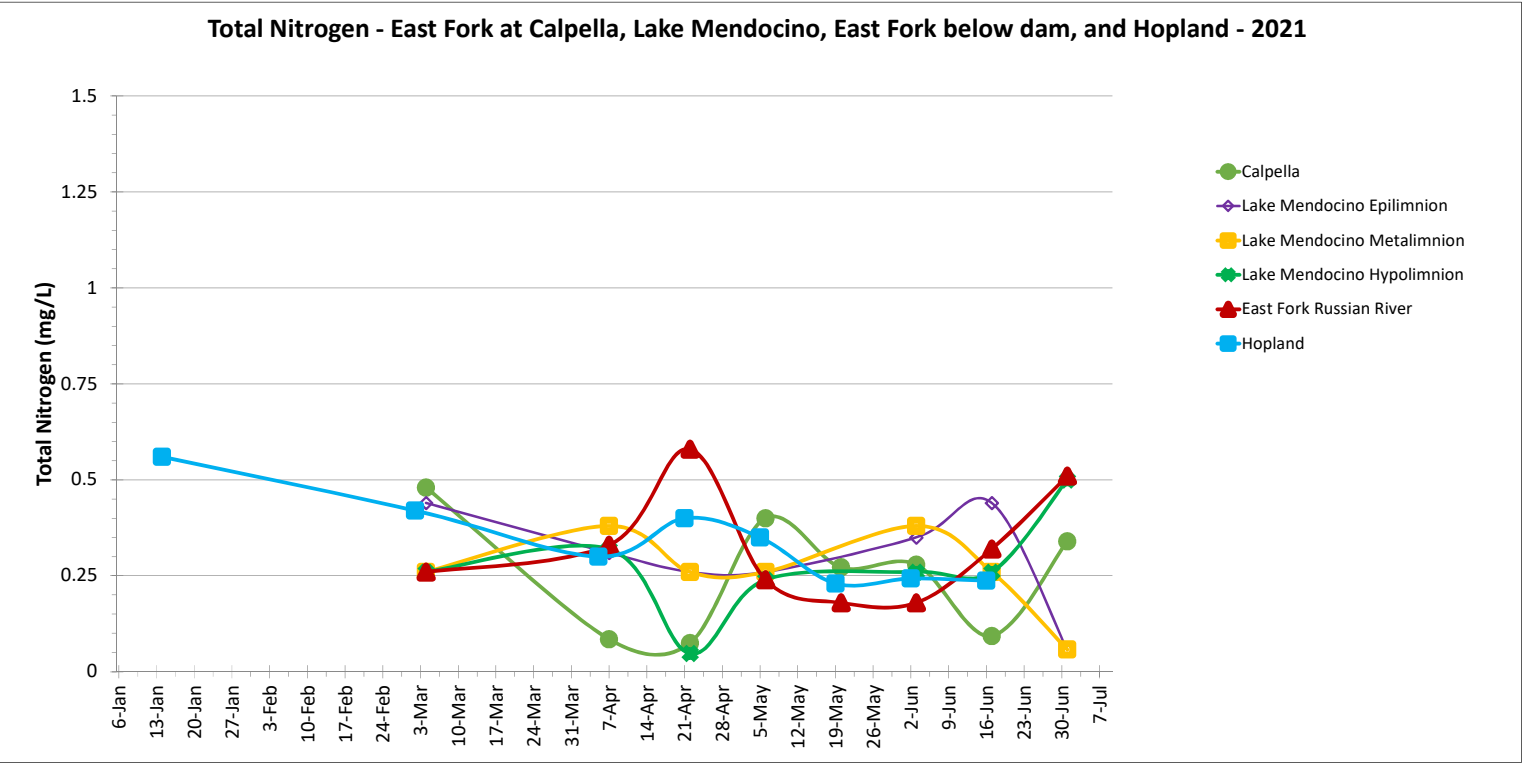
Temperature - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021



Turbidity - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021



Total Nitrogen - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021

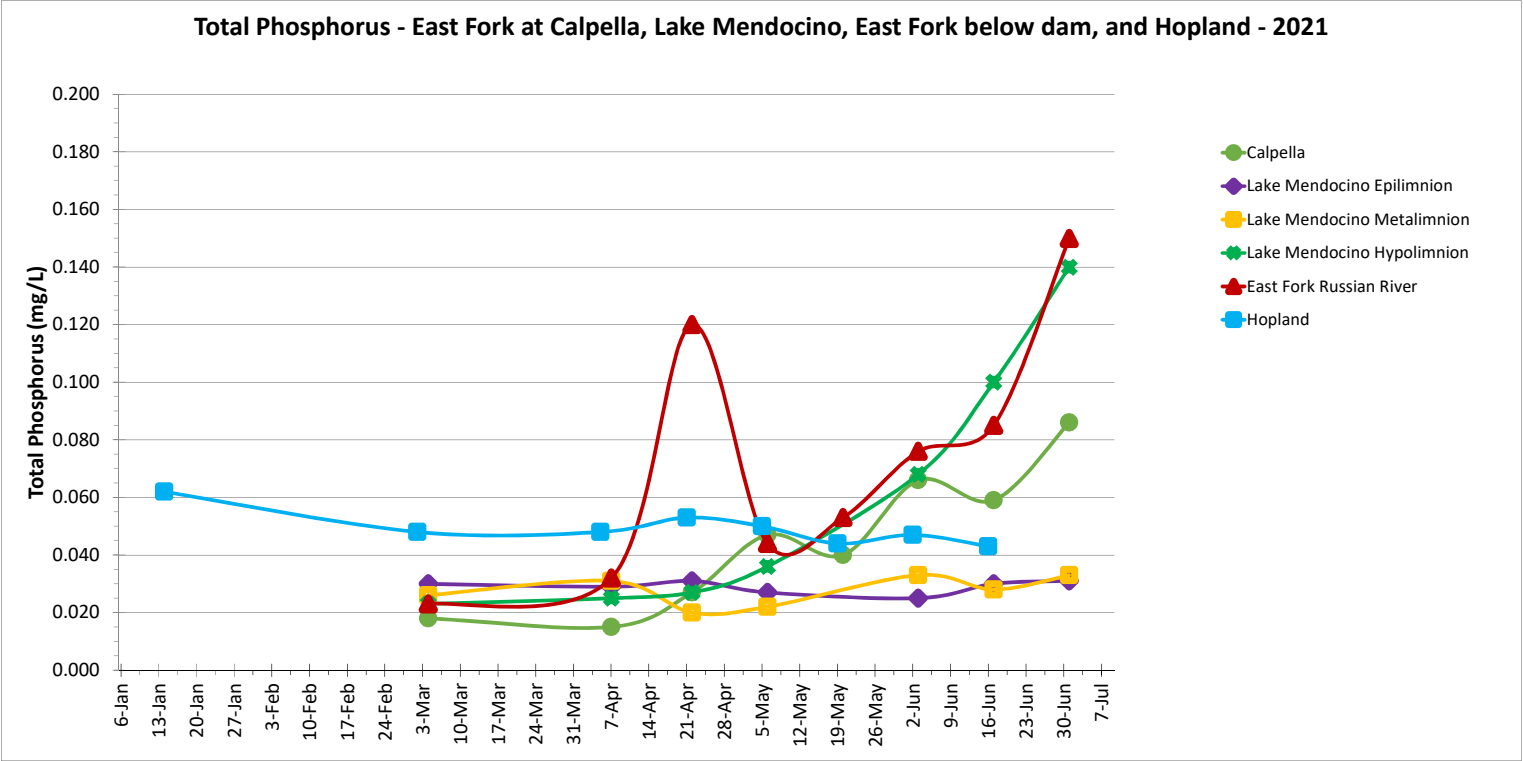


*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

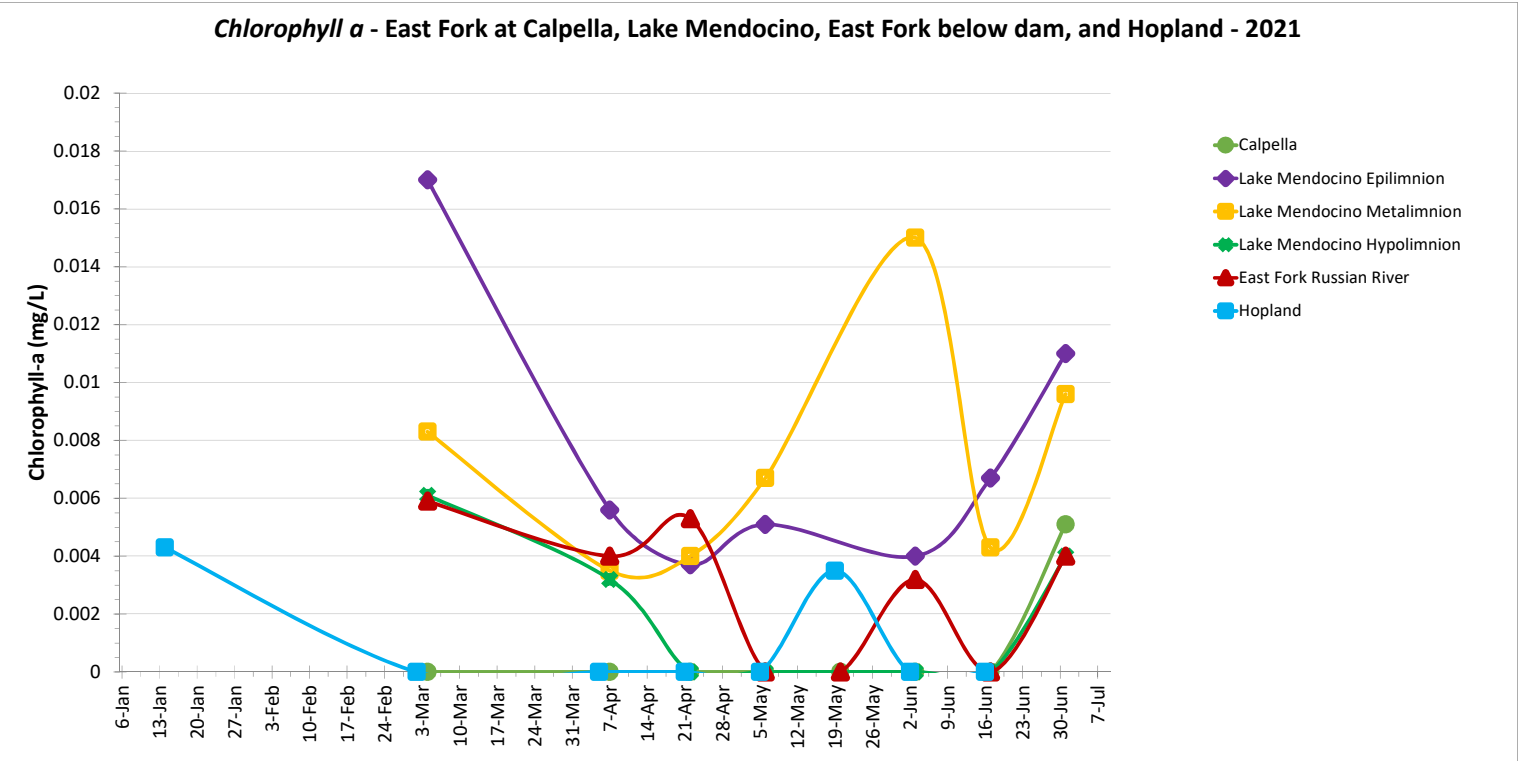
Russian River Water Quality Grab Samples (January 14 - July 22, 2021)
Provisional Data Subject to Revision

Lake Mendocino to Hopland Water Quality

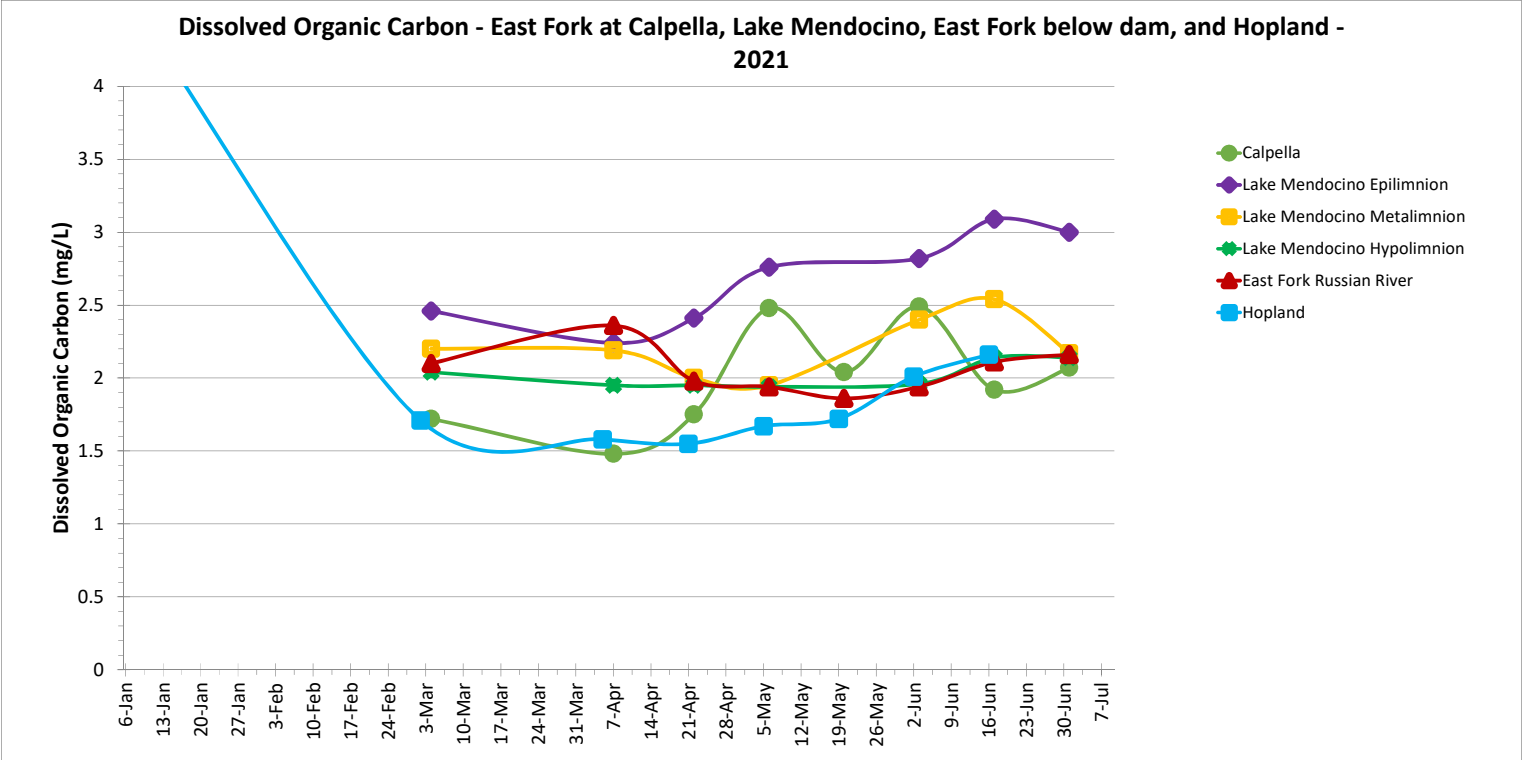
Total Phosphorus - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021



Chlorophyll a - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021



Dissolved Organic Carbon - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021

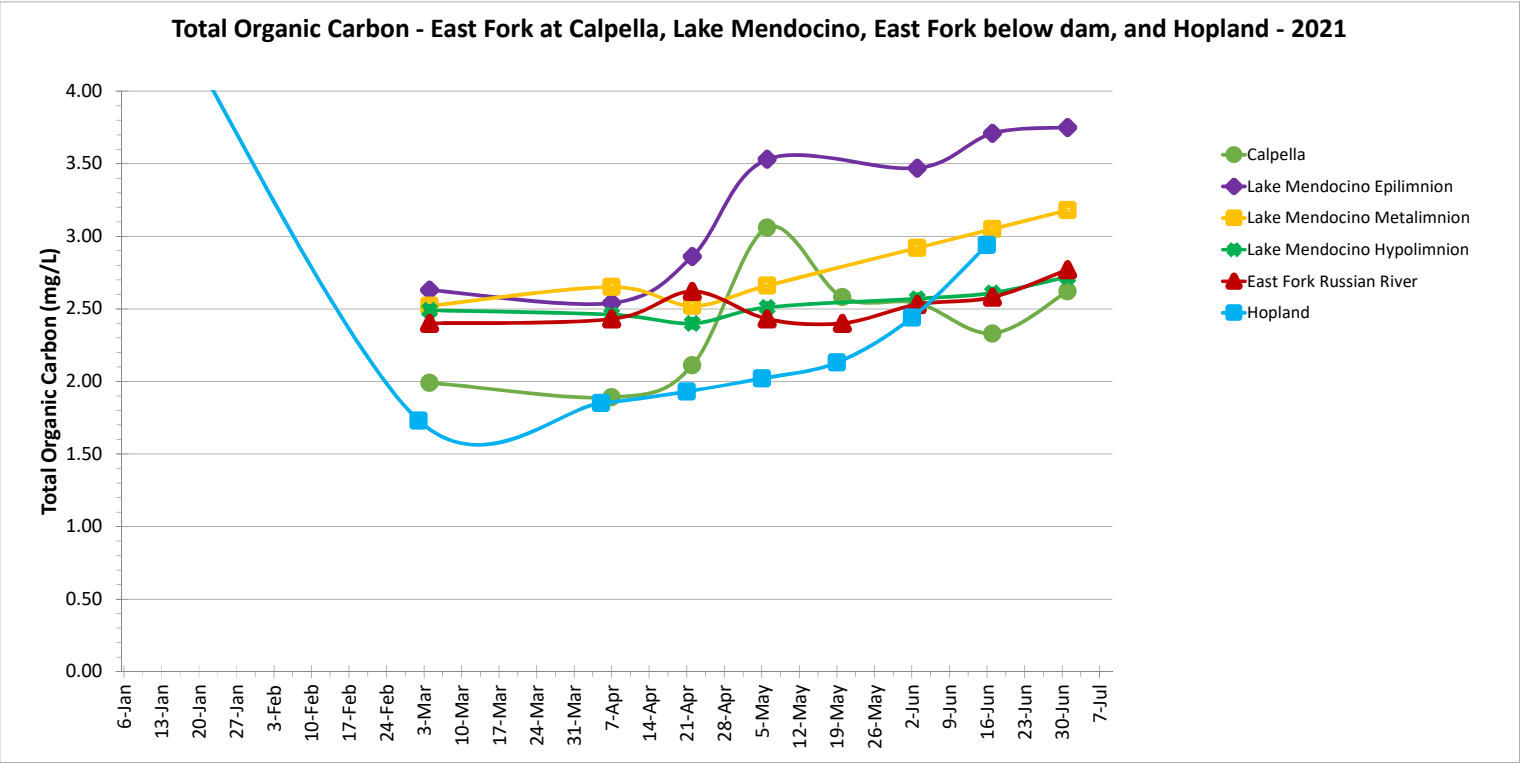


*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

Russian River Water Quality Grab Samples (January 14 - July 22, 2021)
Provisional Data Subject to Revision

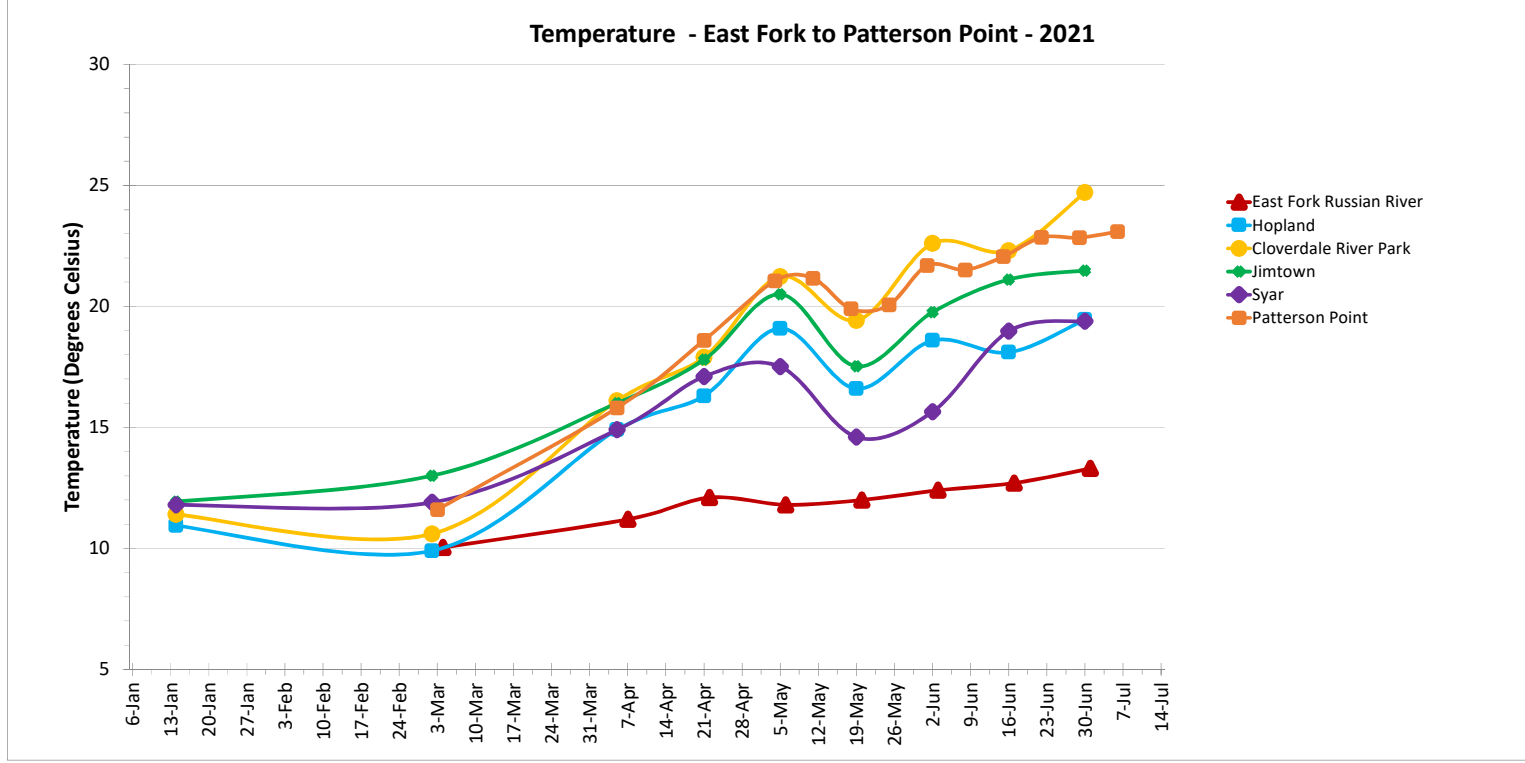
Lake Mendocino to Hopland Water Quality

Total Organic Carbon - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021

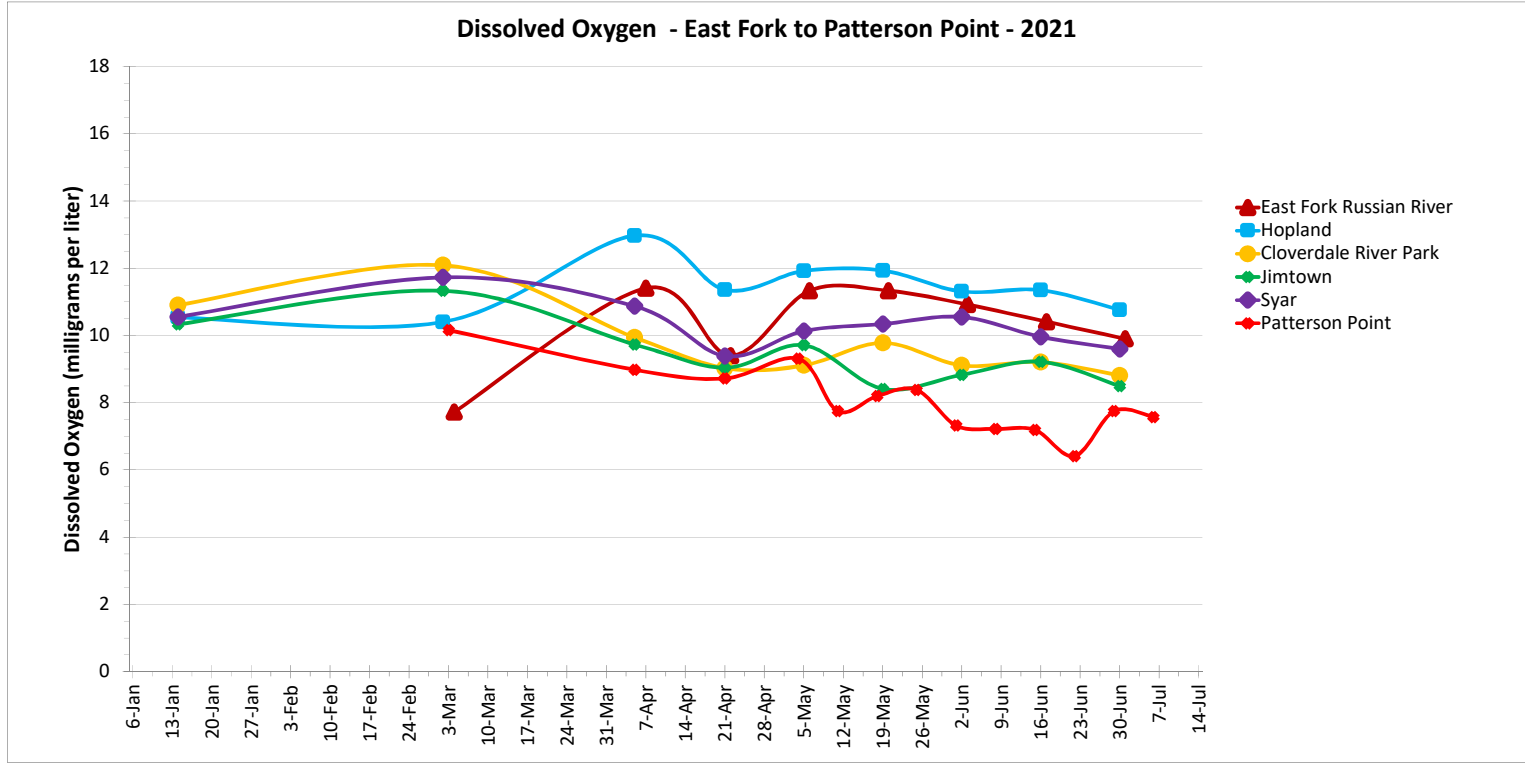


East Fork (below Lake Mendocino) to Patterson Water Quality

Temperature - East Fork to Patterson Point - 2021



Dissolved Oxygen - East Fork to Patterson Point - 2021

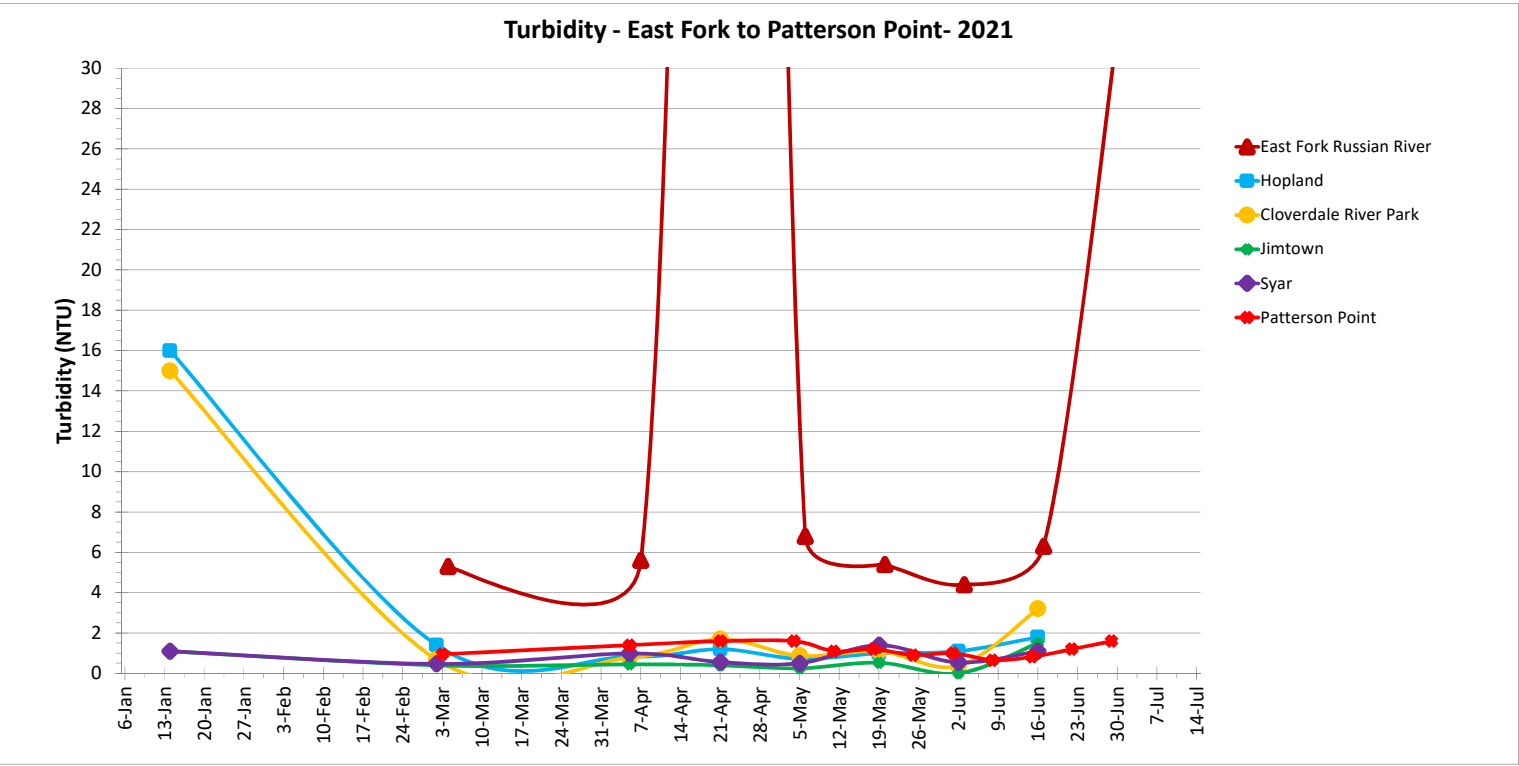


*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

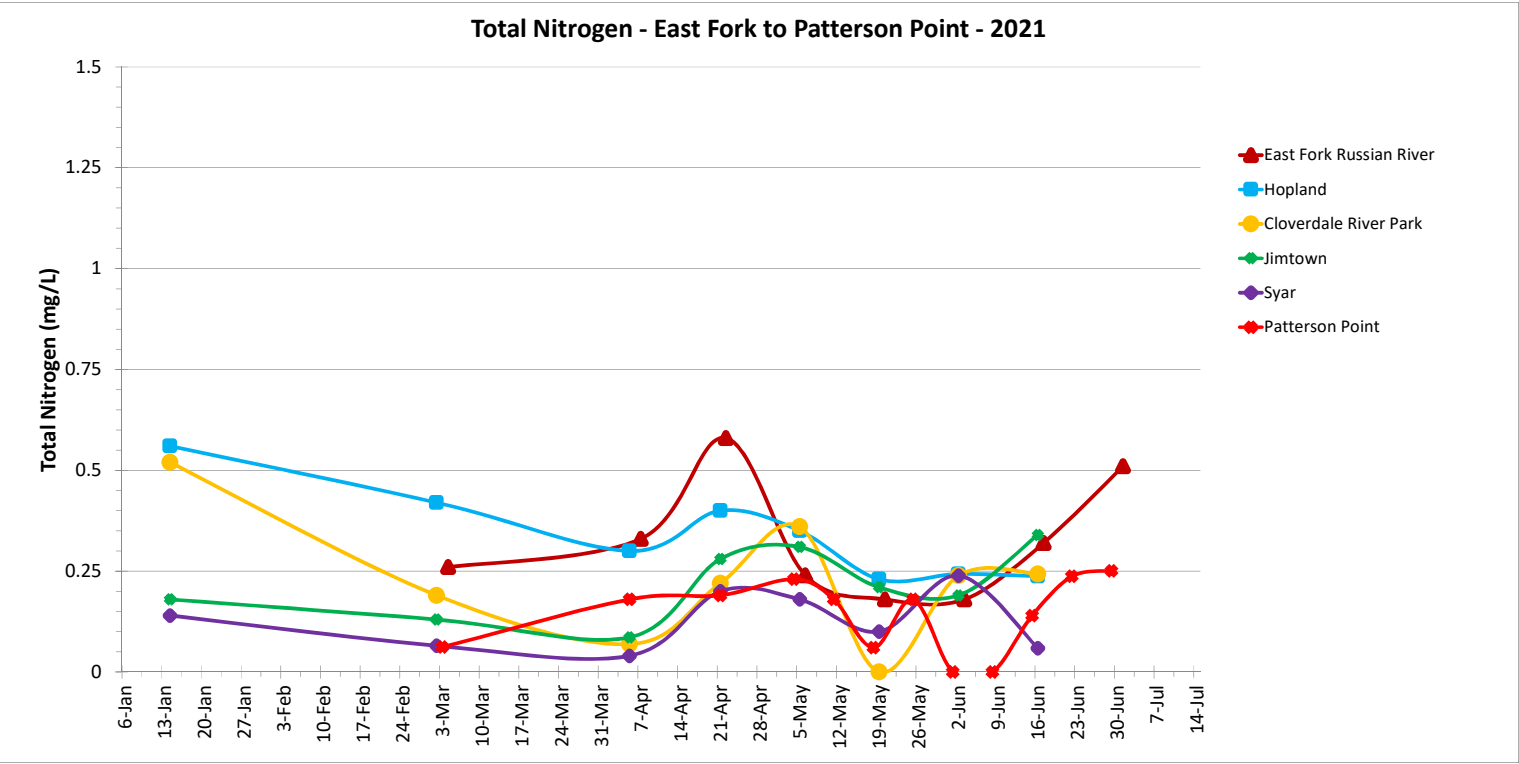
Russian River Water Quality Grab Samples (January 14 - July 22, 2021)
Provisional Data Subject to Revision

East Fork (below Lake Mendocino) to Patterson Point Water Quality

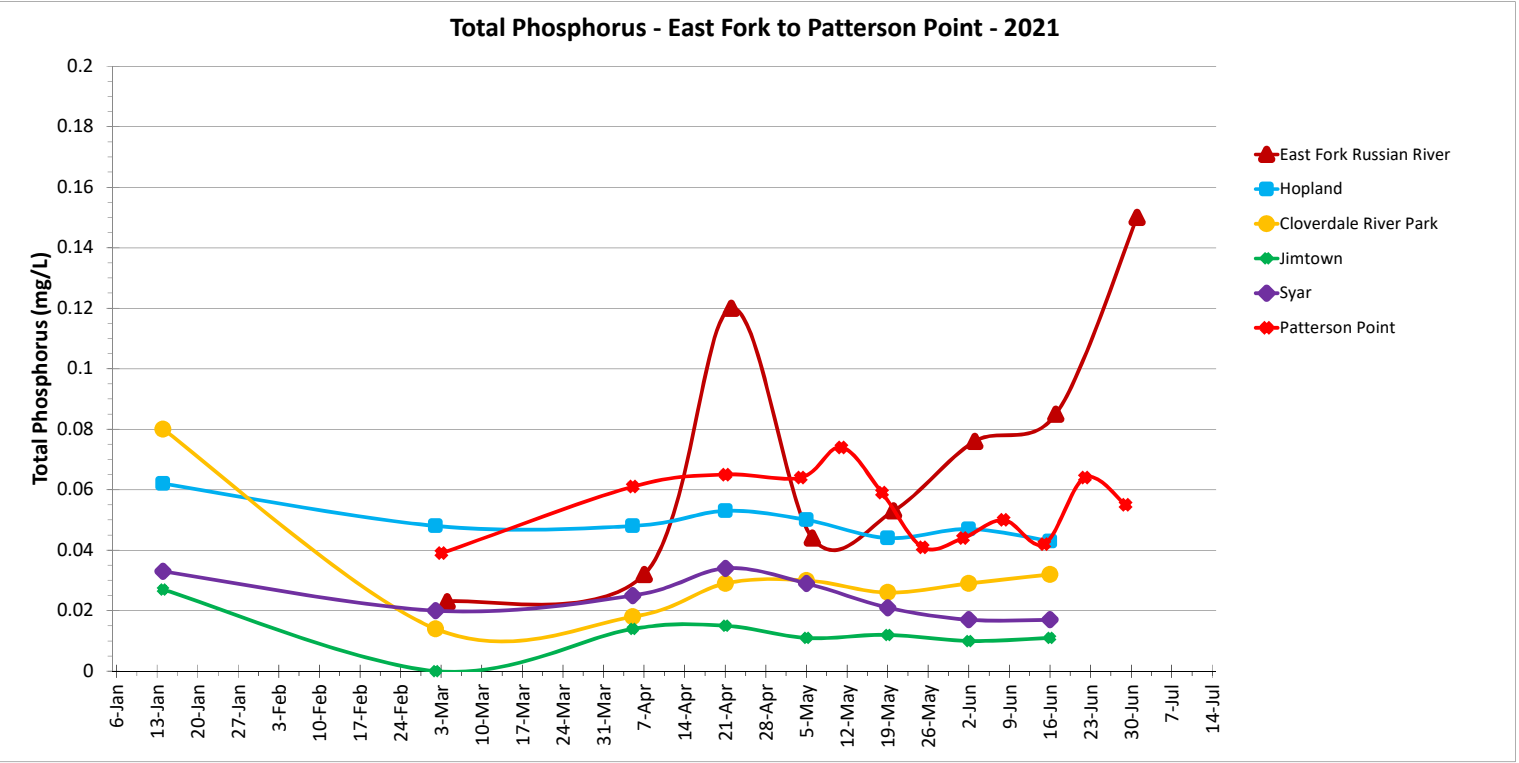
Turbidity - East Fork to Patterson Point- 2021



Total Nitrogen - East Fork to Patterson Point - 2021



Total Phosphorus - East Fork to Patterson Point - 2021

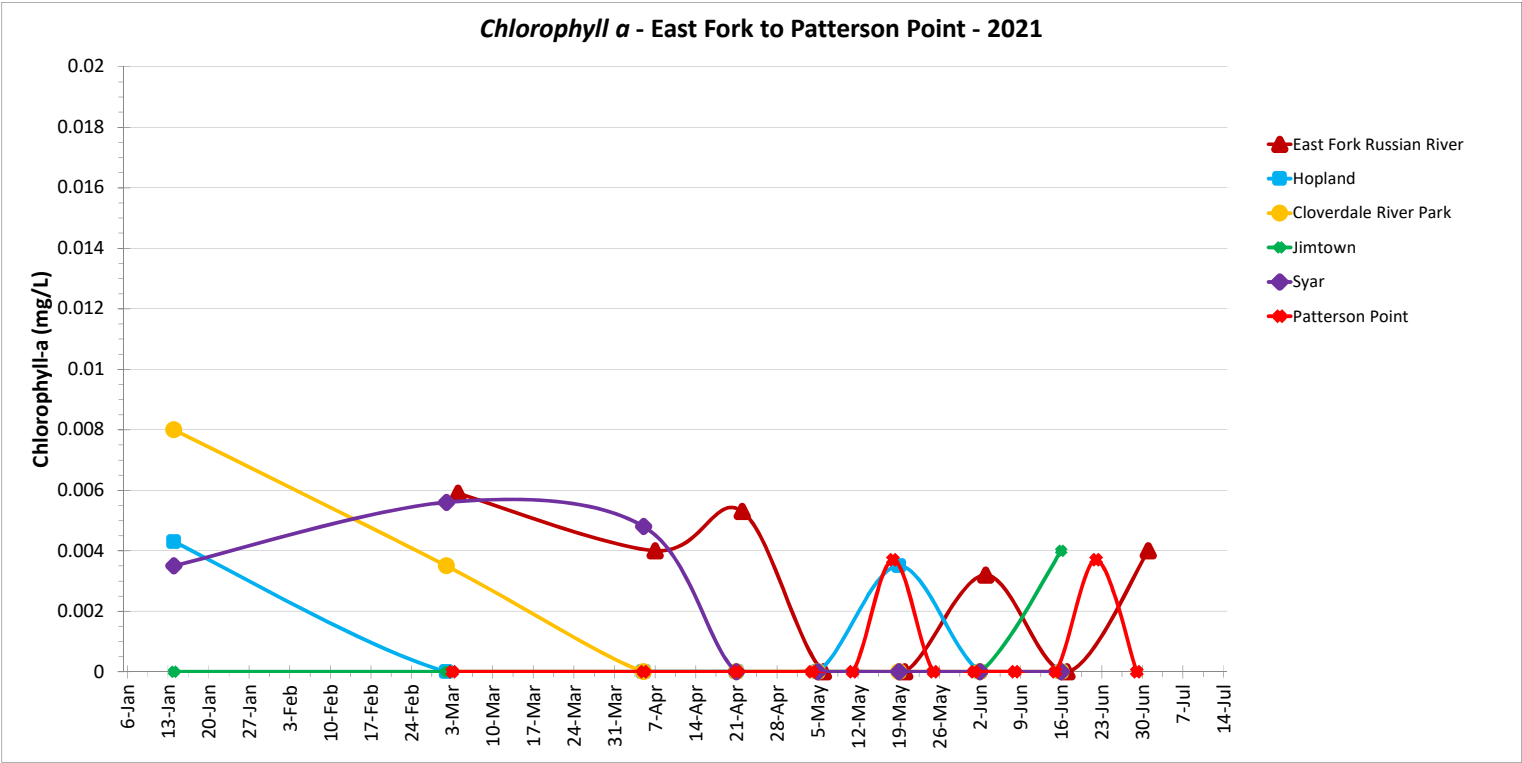


*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

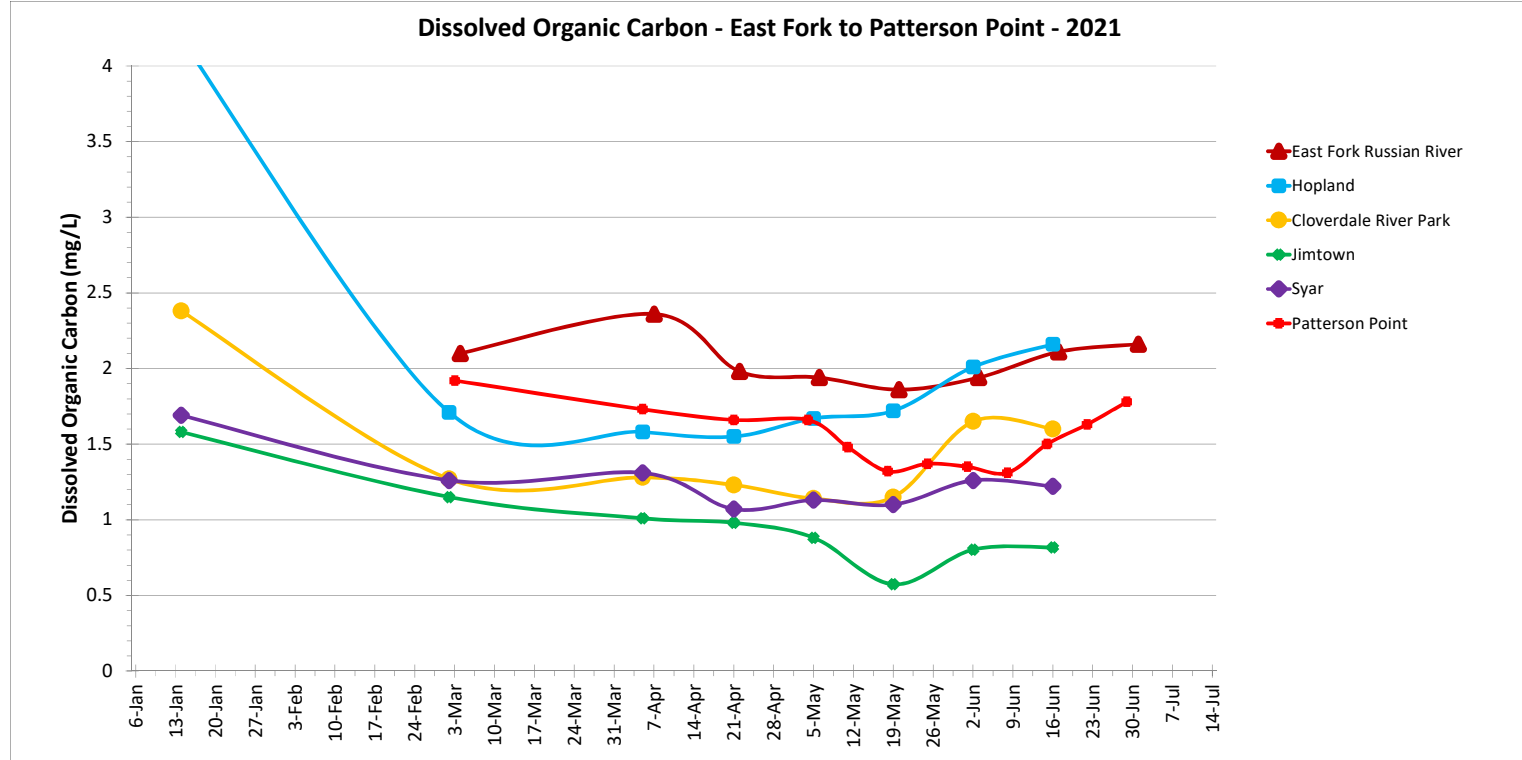
Russian River Water Quality Grab Samples (January 14 - July 22, 2021)
Provisional Data Subject to Revision

East Fork (below Lake Mendocino) to Patterson Point Water Quality

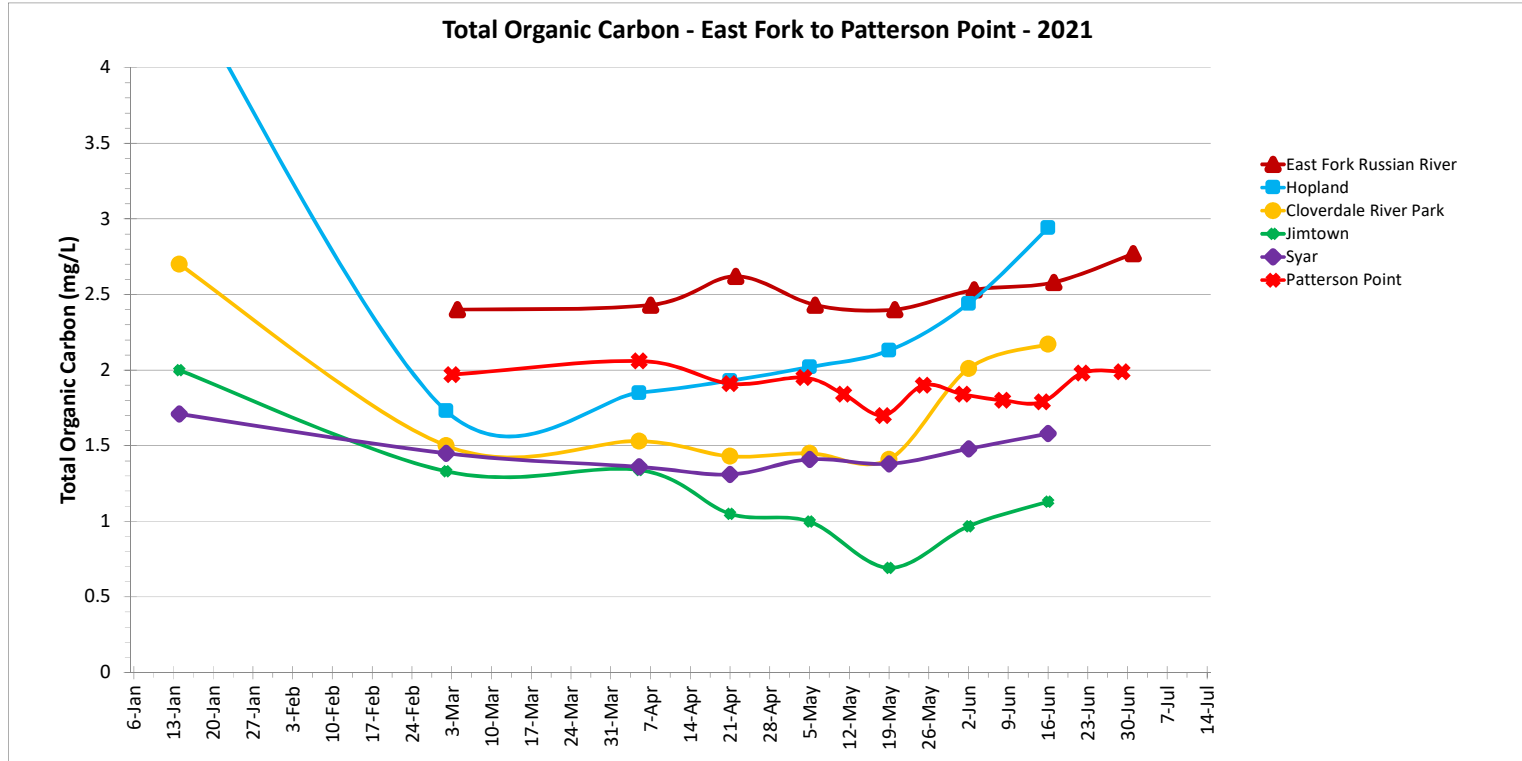
Chlorophyll a - East Fork to Patterson Point - 2021



Dissolved Organic Carbon - East Fork to Patterson Point - 2021



Total Organic Carbon - East Fork to Patterson Point - 2021



*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

Russian River Water Quality Grab Samples (May 4 - June 22, 2021)
Provisional Data Subject to Revision

Russian River Estuary Standard Bacterial Indicators

Parameter***	CDPH Guidance*	Date	Patterson Point	Monte Rio	Vacation Beach
Total Coliforms MPN/100 mL	10,000	5/4/2021	435.2	648.8	816.4
		5/11/2021	1119.9	816.4	1986.3
		5/18/2021	1299.7	1203.3	1203.3
		5/25/2021	456.9	579.4	980.4
		6/1/2021	1046.2	980.4	1553.1
		6/8/2021	1553.1	1732.9	1732.9
		6/15/2021	934.0	1274.0	2187.0
E. Coli MPN/100 mL	235	6/22/2021	1119.0	4611.0	>24196
		5/4/2021	10.9	111.9	5.2
		5/11/2021	9.8	5.2	8.5
		5/18/2021	13.5	14.6	13.2
		5/25/2021	8.6	2.0	12.2
		6/1/2021	12.2	5.2	9.8
		6/8/2021	24.6	12.1	30.9
Enterococcus MPN/100 mL****	61	6/15/2021	10.0	17.3	14.6
		6/22/2021	6.2	73.8	30.5
		5/4/2021	8.4	128.1	4.1
		5/11/2021	4.1	2.0	6.3
		5/18/2021	4.1	4.1	24.3
		5/25/2021	3.0	4.1	6.3
		6/1/2021	5.2	4.1	7.5
		6/8/2021	28.8	21.3	49.5
		6/15/2021	14.8	18.7	8.4
		6/22/2021	8.5	128.1	190.4

*California Department of Public Health (CDPH) Guidance for Fresh Water Beaches - Single Sample Values:
Freshwater beaches include Patterson Point, Monte Rio, and Vacation Beach
Beach posting is recommended when indicator organisms exceed any of the above corresponding levels
**Sample diluted 1:10
***Method Detection Limit for all parameters = 2 MPN/100 mL or 20 MPN/100 mL if sample diluted
****We continue to collect enterococcus data, however it is not a reliable fecal indicator bacteria in freshwater environments and is not being relied upon for posting at freshwater beaches, per SoCo DHS and NCRWQCB.

Russian River Water Quality Grab Samples (March 3 - June 22, 2021)
Provisional Data Subject to Revision

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
	Temperature	-	°C	3/3/2021	11.6	-	-
				4/5/2021	15.8	-	-
				4/21/2021	18.6	-	-
				5/4/2021	21.1	21.6	22.4
				5/11/2021	21.2	22.0	22.4
				5/18/2021	19.9	19.9	19.8
				5/25/2021	20.1	20.6	21.1
				6/1/2021	21.7	22.5	22.6
				6/8/2021	21.5	21.6	20.6
				6/15/2021	22.1	22.7	22.7
Nutrients	Ammonia as N	0.01	mg/L	3/3/2021	ND	-	-
				4/5/2021	ND	-	-
				4/21/2021	ND	-	-
				5/4/2021	ND	ND	ND
				5/11/2021	ND	ND	ND
				5/18/2021	ND	ND	ND
				5/25/2021	ND	ND	ND
				6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
	Nitrate as N	0.03	mg/L	3/3/2021	0.1	-	-
				4/5/2021	ND	-	-
				4/21/2021	0.0	-	-
				5/4/2021	0.1	0.1	ND
				5/11/2021	ND	ND	ND
				5/18/2021	0.1	ND	ND
				5/25/2021	ND	ND	ND
				6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
Nutrients	Nitrite as N	0.03	mg/L	3/3/2021	ND	-	-
				4/5/2021	ND	-	-
				4/21/2021	ND	-	-
				5/4/2021	ND	ND	ND
				5/11/2021	ND	ND	ND
				5/18/2021	ND	ND	ND
				5/25/2021	ND	ND	ND
				6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
	Total Organic Nitrogen as N	0.2	mg/L	3/3/2021	ND	-	-
				4/5/2021	0.180	-	-
				4/21/2021	0.140	-	-
				5/4/2021	0.180	0.260	0.180
				5/11/2021	0.180	ND	0.180
				5/18/2021	ND	ND	0.180
				5/25/2021	0.180	0.180	0.180
				6/1/2021	ND	0.180	0.180
				6/8/2021	ND	ND	ND
				6/15/2021	0.140	0.140	ND
	Total Kjeldahl Nitrogen	0.1	mg/L	3/3/2021	ND	-	-
				4/5/2021	ND	-	-
				4/21/2021	ND	-	-
				5/4/2021	ND	0.260	ND
				5/11/2021	ND	ND	ND
				5/18/2021	ND	ND	ND
				5/25/2021	ND	ND	ND
				6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
	Total Phosphorus	0.02	mg/L	3/3/2021	0.039	-	-
				4/5/2021	0.061	-	-
				4/21/2021	0.065	-	-
				5/4/2021	0.064	0.065	0.050
				5/11/2021	0.074	0.073	0.054
				5/18/2021	0.059	0.051	0.043
				5/25/2021	0.041	0.041	0.037
				6/1/2021	0.044	0.044	0.037
				6/8/2021	0.050	0.045	0.037
				6/15/2021	0.042	0.042	0.035
	Total Orthophosphate	0.02	mg/L	3/3/2021	0.076	-	-
				4/5/2021	0.140	-	-
				4/21/2021	0.170	-	-
				5/4/2021	0.140	0.150	0.110
				5/11/2021	0.170	0.180	0.120
				5/18/2021	0.120	0.130	0.075
				5/25/2021	0.081	0.081	0.069
				6/1/2021	0.100	0.088	0.071
				6/8/2021	0.097	0.089	0.052
				6/15/2021	0.078	0.078	0.053

Russian River Water Quality Grab Samples (March 3 - June 22, 2021)
Provisional Data Subject to Revision

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
Chlorophyll	Chlorophyll A	0.00005	mg/L	3/3/2021	ND	-	-
				4/5/2021	ND	-	-
				4/21/2021	ND	-	-
				5/4/2021	ND	ND	ND
				5/11/2021	ND	ND	0.004
				5/18/2021	0.004	ND	ND
				5/25/2021	ND	ND	ND
				6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	0.004
Carbon	Total Organic Carbon	0.04	mg/L	3/3/2021	1.97	-	-
				4/5/2021	2.06	-	-
				4/21/2021	1.91	-	-
				5/4/2021	1.95	1.87	1.83
				5/11/2021	1.84	1.85	1.74
				5/18/2021	1.70	1.60	1.61
				5/25/2021	1.90	1.78	1.69
				6/1/2021	1.84	1.86	1.84
				6/8/2021	1.80	1.75	1.68
				6/15/2021	1.79	1.85	1.74
	Dissolved Organic Carbon	0.04	mg/L	3/3/2021	1.92	-	-
				4/5/2021	1.73	-	-
				4/21/2021	1.66	-	-
				5/4/2021	1.66	1.54	1.44
				5/11/2021	1.48	1.40	1.66
				5/18/2021	1.32	1.19	1.53
				5/25/2021	1.37	1.25	1.20
				6/1/2021	1.35	1.31	1.59
				6/8/2021	1.31	1.65	1.30
				6/15/2021	1.50	1.42	1.39
Solids	Turbidity	0.02	NTU	3/3/2021	0.95	-	-
				4/5/2021	1.40	-	-
				4/21/2021	1.60	-	-
				5/4/2021	1.60	1.50	2.20
				5/11/2021	1.10	1.00	1.20
				5/18/2021	1.20	1.50	2.10
				5/25/2021	0.91	0.94	1.00
				6/1/2021	1.00	1.60	2.70
				6/8/2021	0.66	1.10	1.00
				6/15/2021	0.82	1.90	1.80
	TDS	4.2	mg/L	3/3/2021	160.00	-	-
				4/5/2021	160.00	-	-
				4/21/2021	170.00	-	-
				5/4/2021	150.00	170.00	140.00
				5/11/2021	150.00	150.00	160.00
				5/18/2021	140.00	1100.00	80.00
				5/25/2021	150.00	140.00	140.00
				6/1/2021	140.00	140.00	140.00
				6/8/2021	130.00	130.00	120.00
				6/15/2021	130.00	140.00	140.00