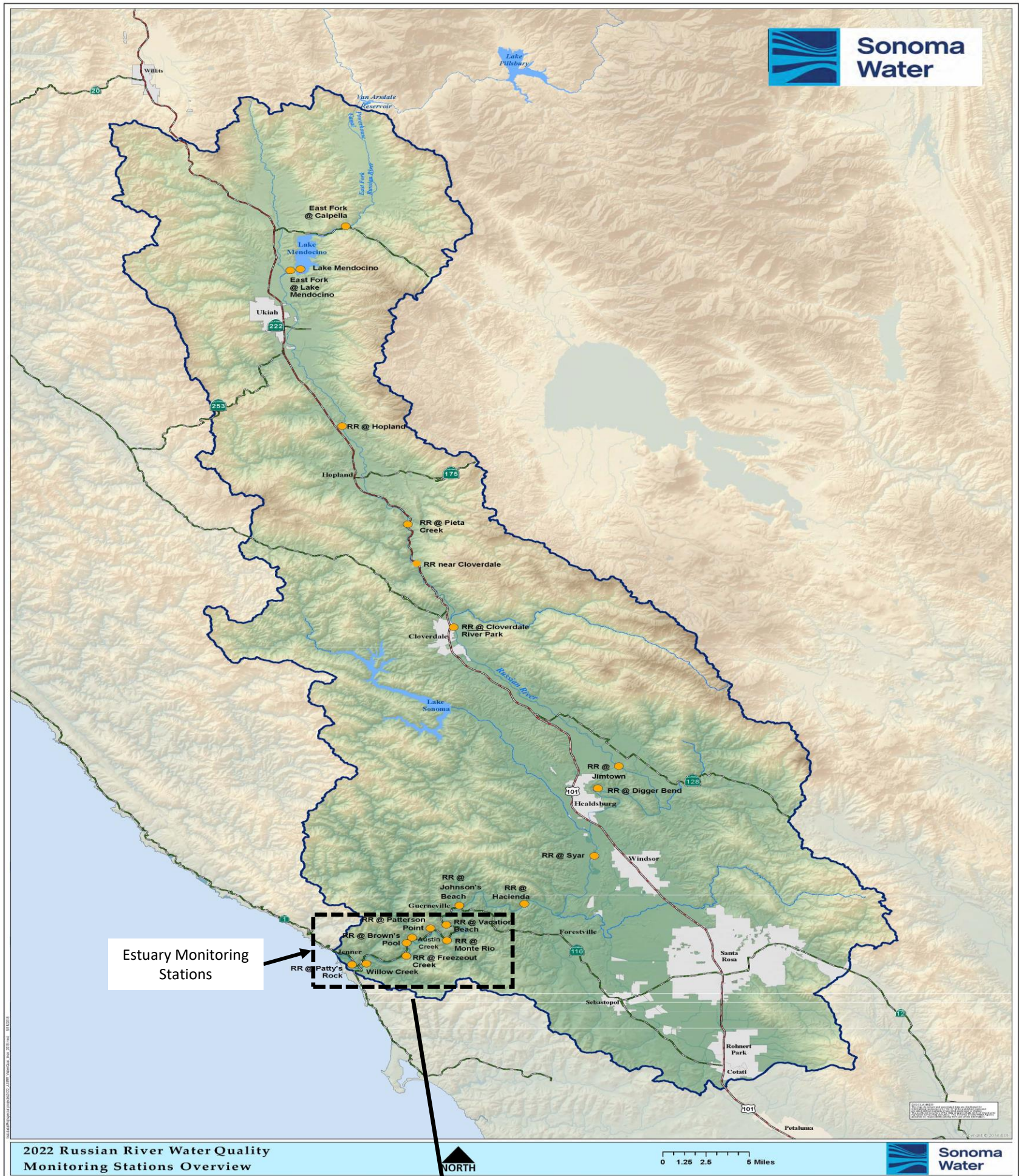


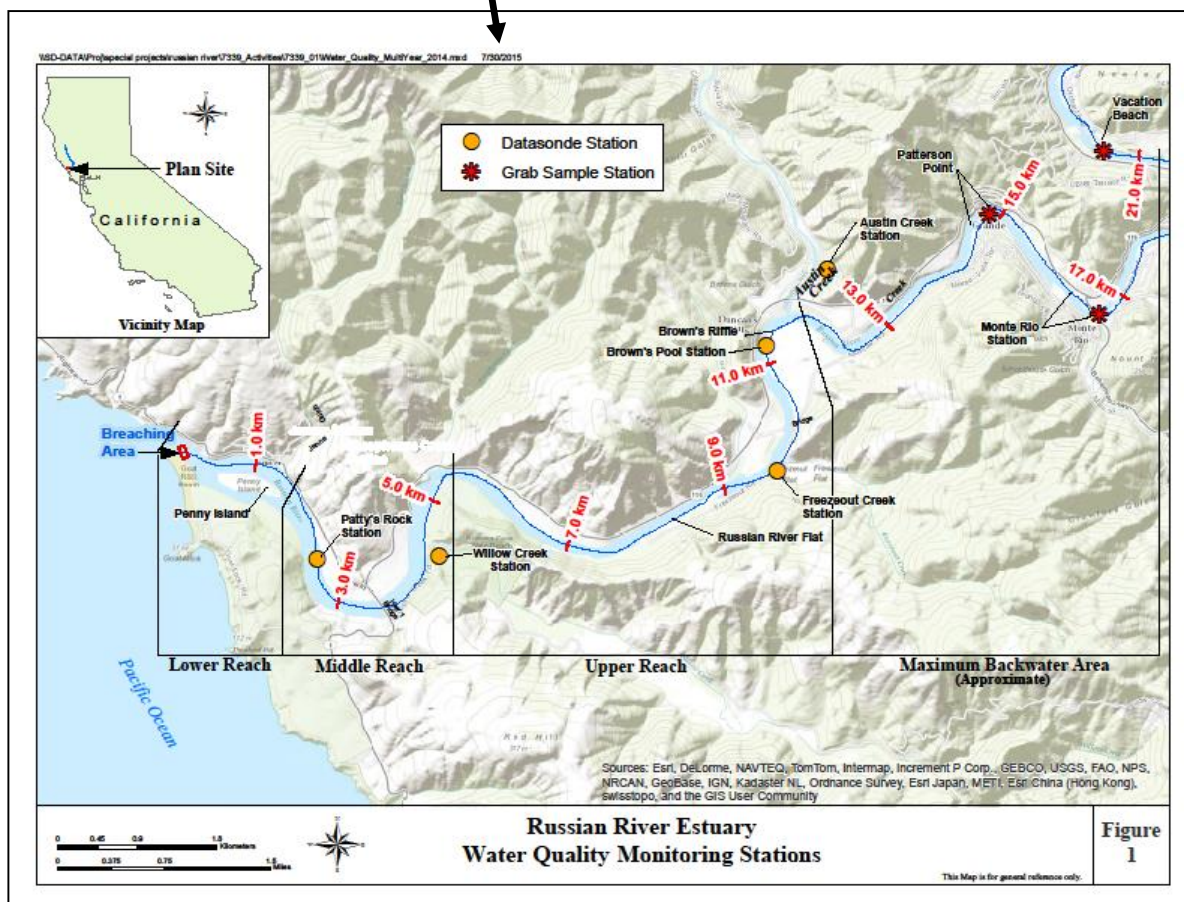


Sonoma Water

State Water Resources Control Board Temporary Urgency Change Order (6/17/2022) Russian River Water Quality Report August 26, 2022 - September 01, 2022



2022 Russian River Water Quality Monitoring Stations Overview

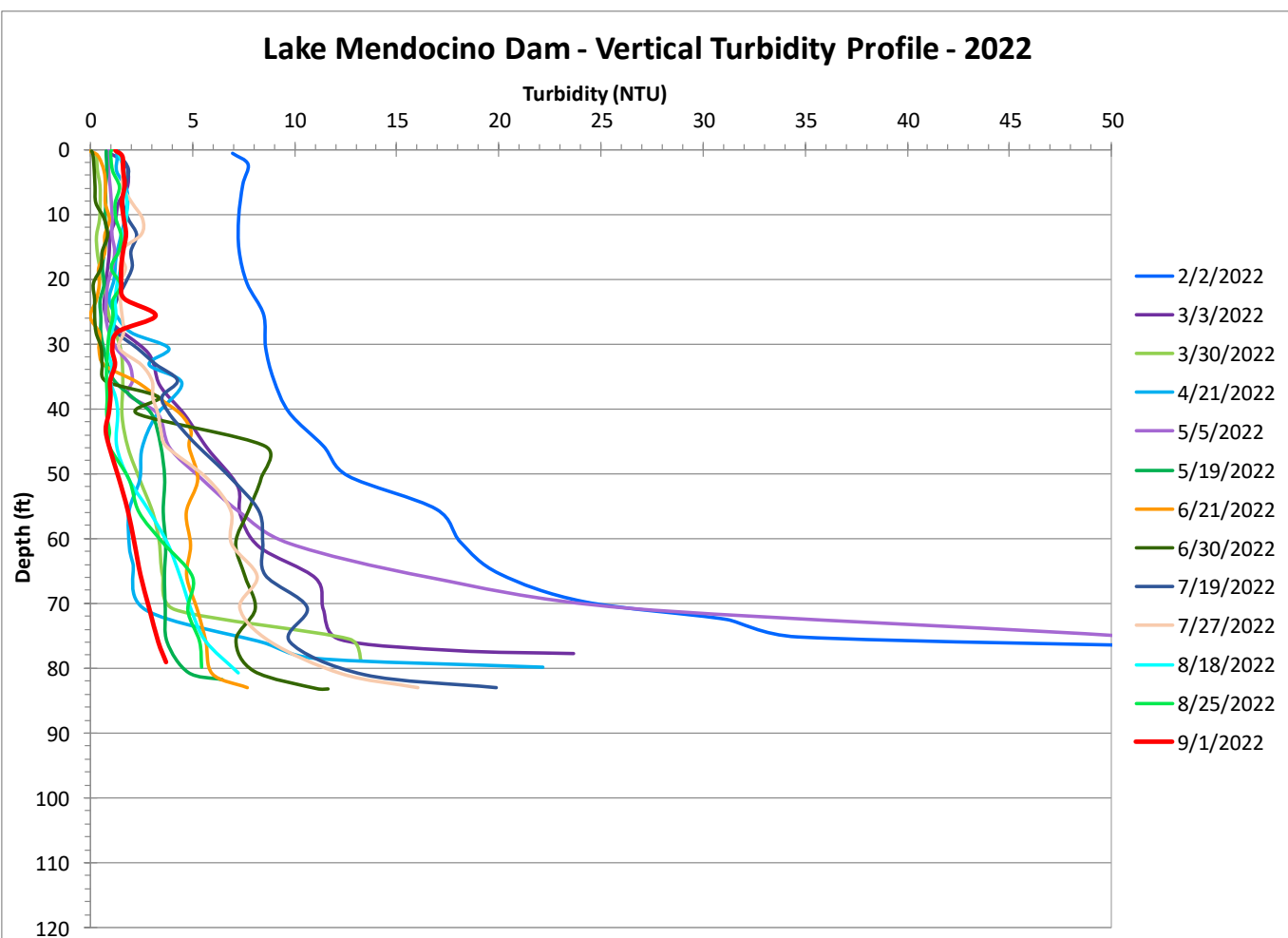
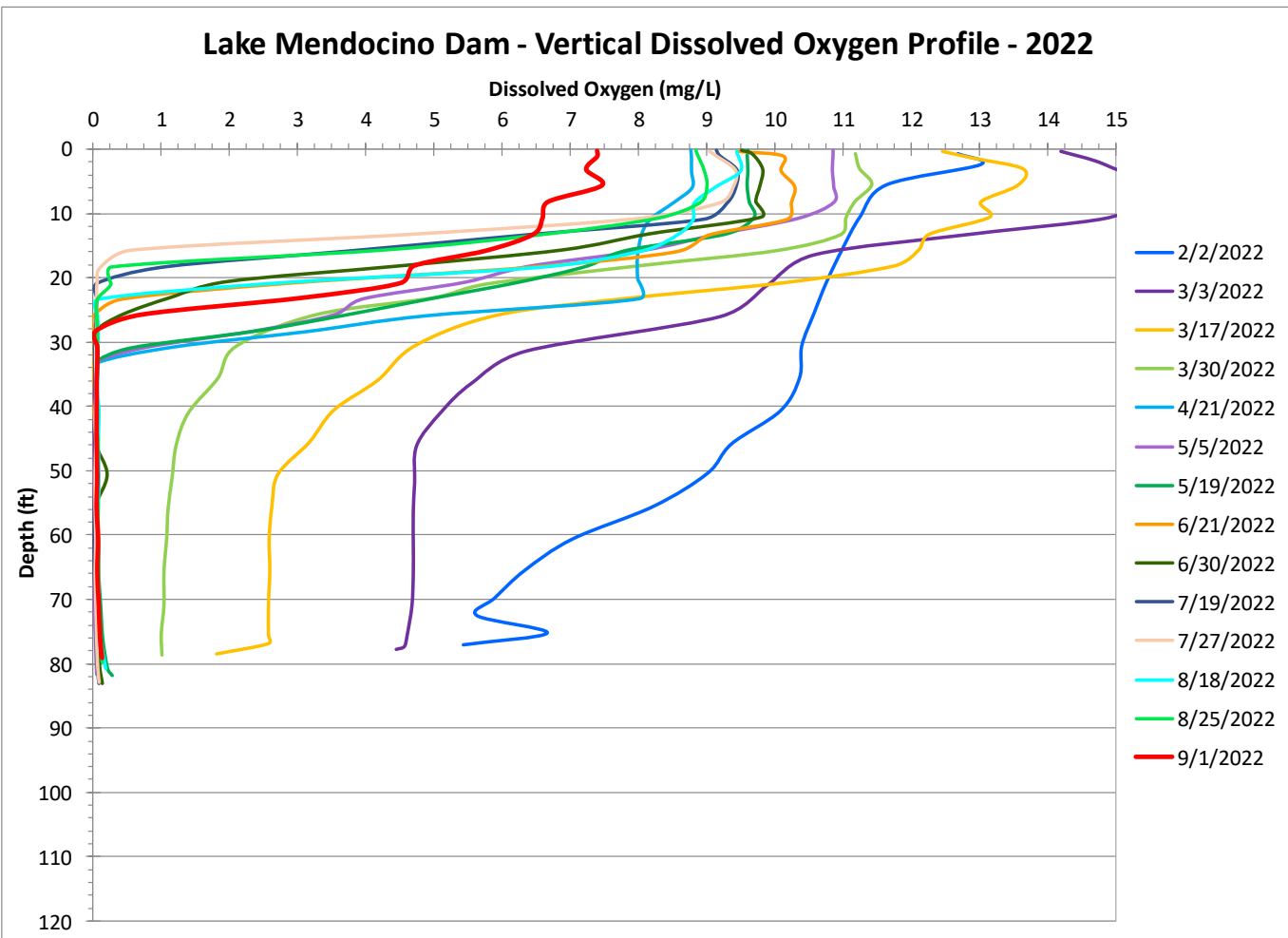
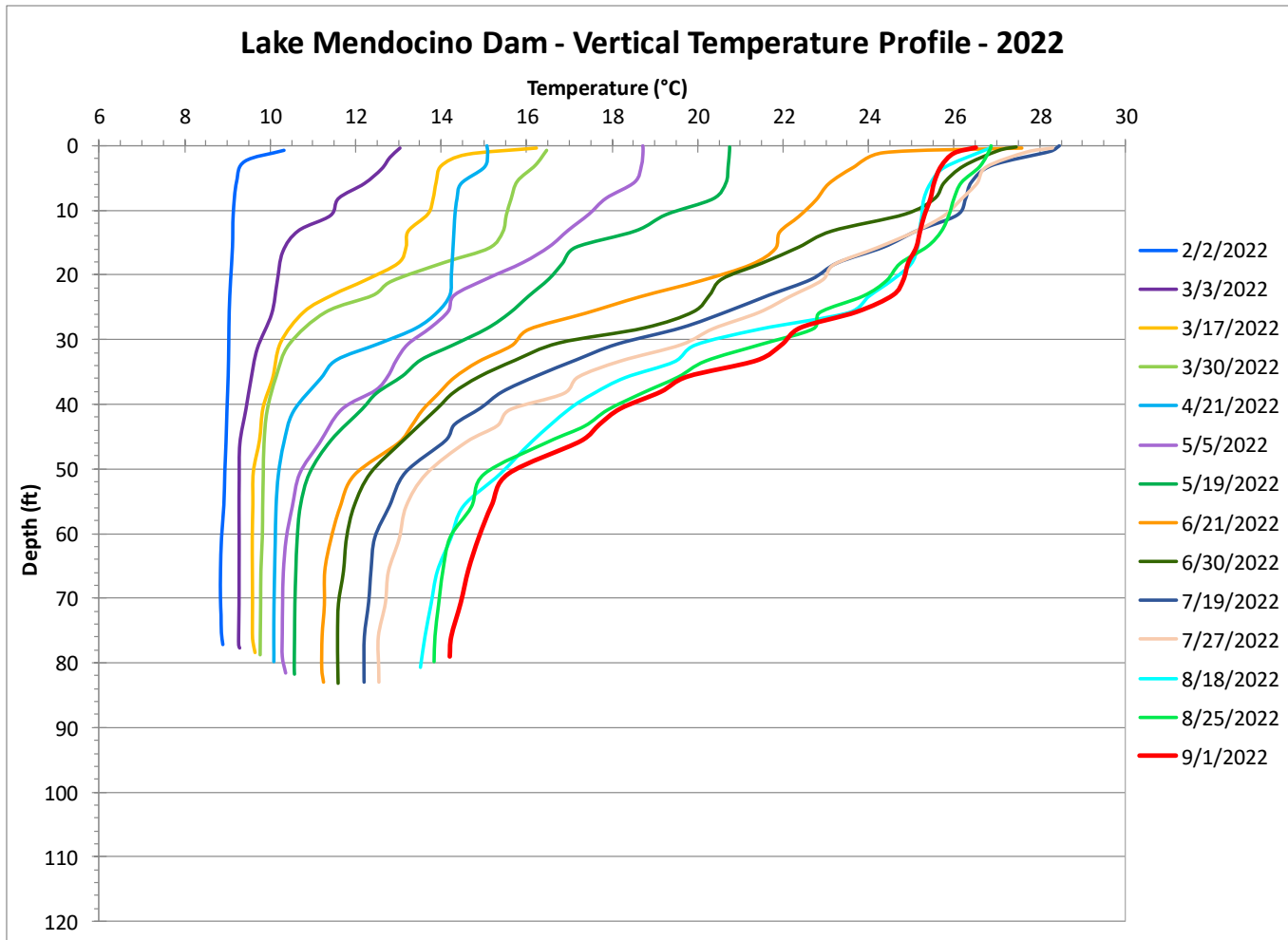


Russian River Estuary Water Quality Monitoring Stations

Figure 1

Lake Mendocino Water Quality Vertical Profiles (February 2 – September 1, 2022)

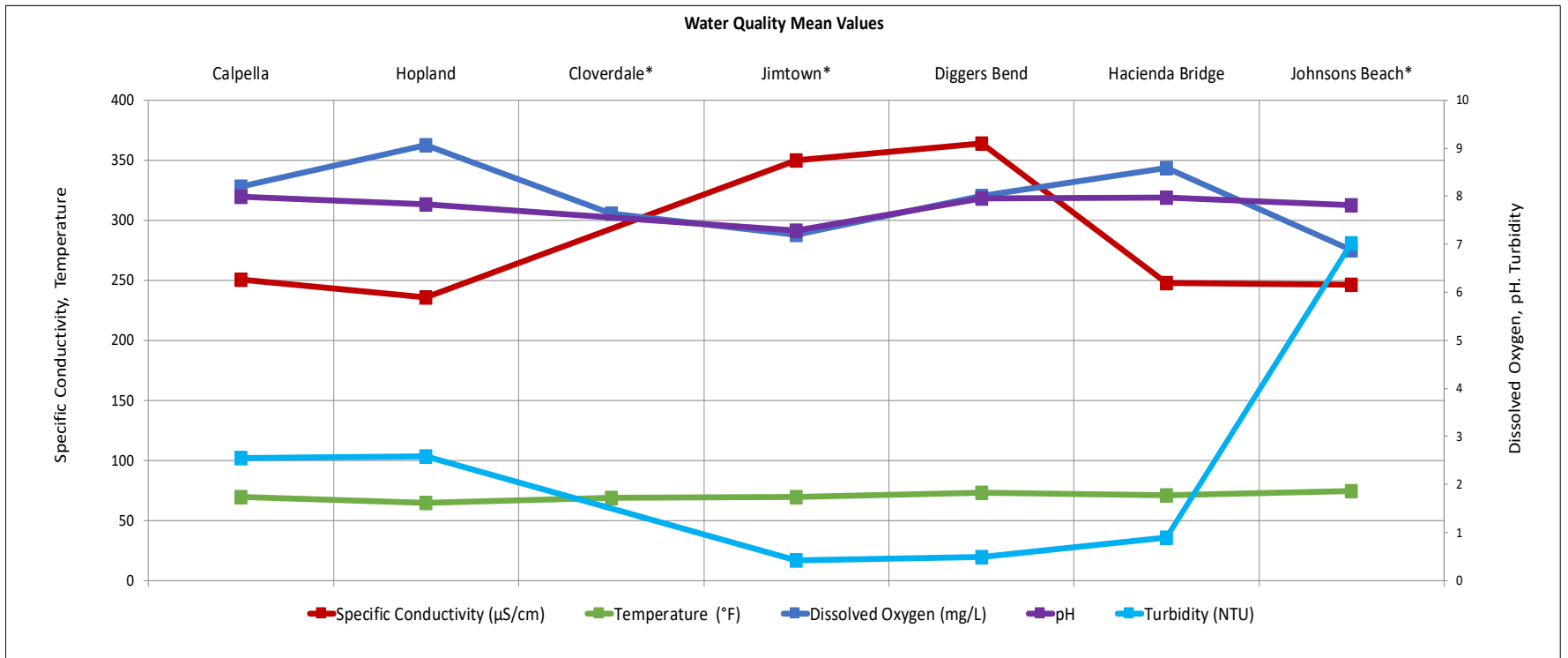
Provisional Data Subject to Revision



Russian River Water Quality Sondes August 26, 2022 - September 01, 2022
Provisional Data Subject to Revision

Parameter		Calpella	Hopland	Cloverdale*	Jimtown*	Diggers Bend	River Diversion System at Mirabel*	Hacienda Bridge	Johnsons Beach*
		USGS 11461500	USGS 11462500	USGS 11463000	USGS 11463682	USGS 11463980	SCWA	USGS 11467000	SCWA
Temperature (°F)	Min	65.1	60.6	65.7	65.7	69.1		68.7	71.6
	Max	73.9	68.4	73.2	73.2	77.7		73.9	77.7
	Mean	69.6	64.7	69.1	69.4	73.3		71.2	74.6
Specific Conductivity (µS/cm)	Min	242.0	231.0		345.0	356.0		242.0	128.2
	Max	265.0	238.0		357.0	373.0		258.0	272.3
	Mean	250.6	236.1		350.1	364.2		247.6	246.5
Dissolved Oxygen (mg/L)	Min	7.4	7.5	5.3	4.9	5.5		7.8	3.2
	Max	9.7	11.5	11.0	11.0	10.9		9.2	8.7
	Mean	8.2	9.1	7.6	7.2	8.0		8.6	6.9
Dissolved Oxygen (% Saturation)	Min	82.6	78.1	58.1	53.5	63.3		88.7	37.2
	Max	109.4	124.4	125.6	127.3	131.5		105.5	101.7
	Mean	91.9	96.3	85.2	80.9	93.8		97.9	81.3
pH	Min	7.7	7.5		7.1	7.7		7.8	7.5
	Max	8.3	8.4		7.5	8.3		8.2	8.1
	Mean	8.0	7.8		7.3	8.0		8.0	7.8
Turbidity (NTU)	Min	0.8	1.5		0.1	0.2		0.3	-0.8
	Max	4.2	4.3		0.9	1.1		2.0	120.4
	Mean	2.6	2.6		0.4	0.5		0.9	7.0

*Station operated seasonally

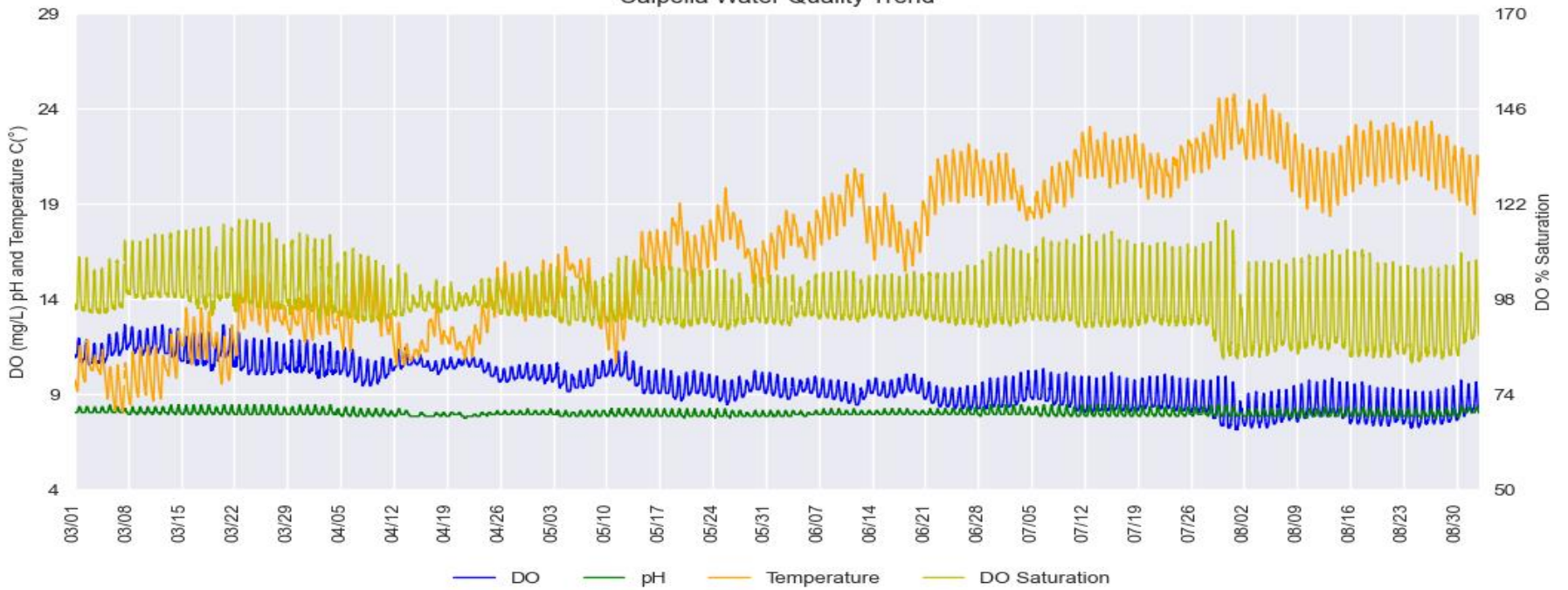


Russian River Water Quality (March 01, 2022 - September 01, 2022)

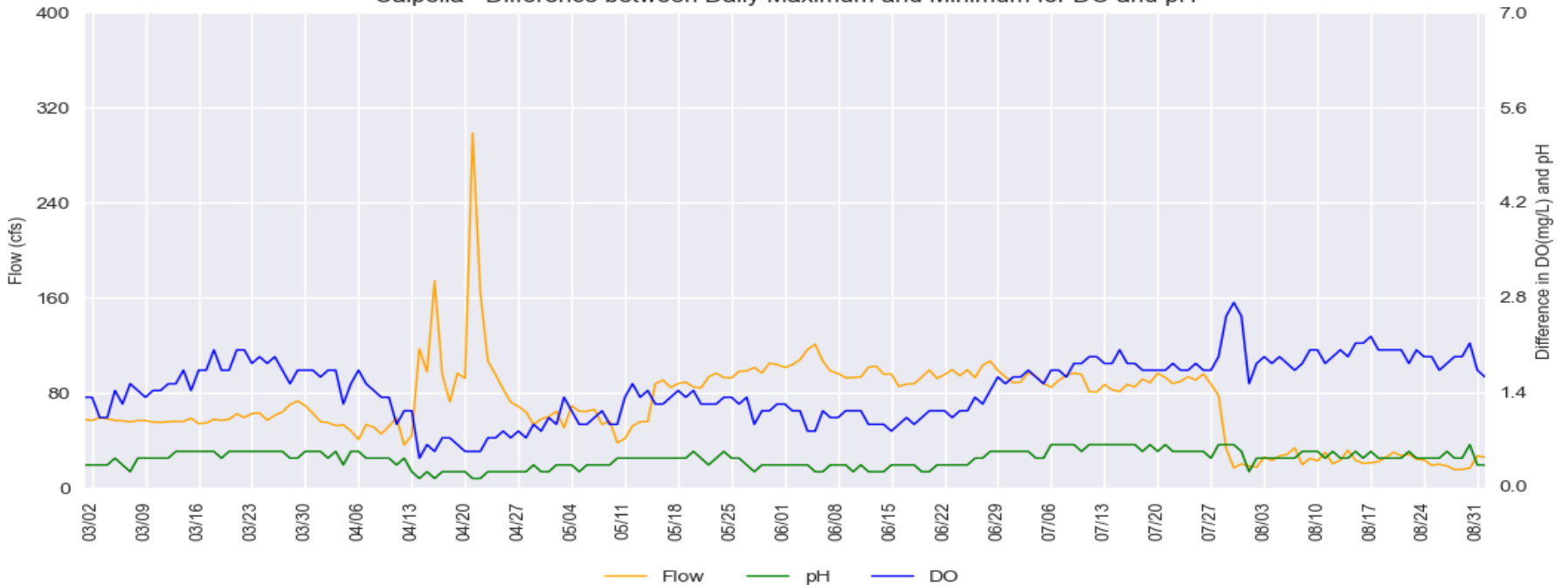
Provisional Data Subject to Revision

Calpella (East Fork Russian River)

Calpella Water Quality Trend



Calpella - Difference between Daily Maximum and Minimum for DO and pH

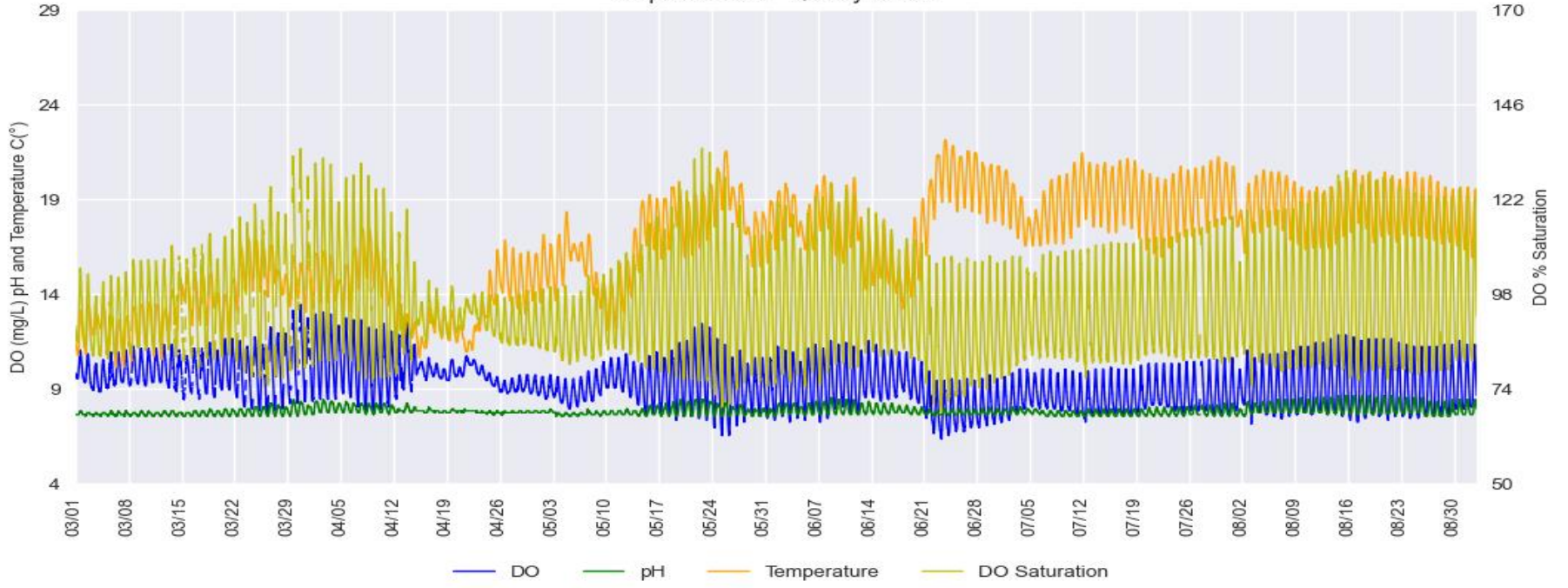


Russian River Water Quality (March 01, 2022 - September 01, 2022)

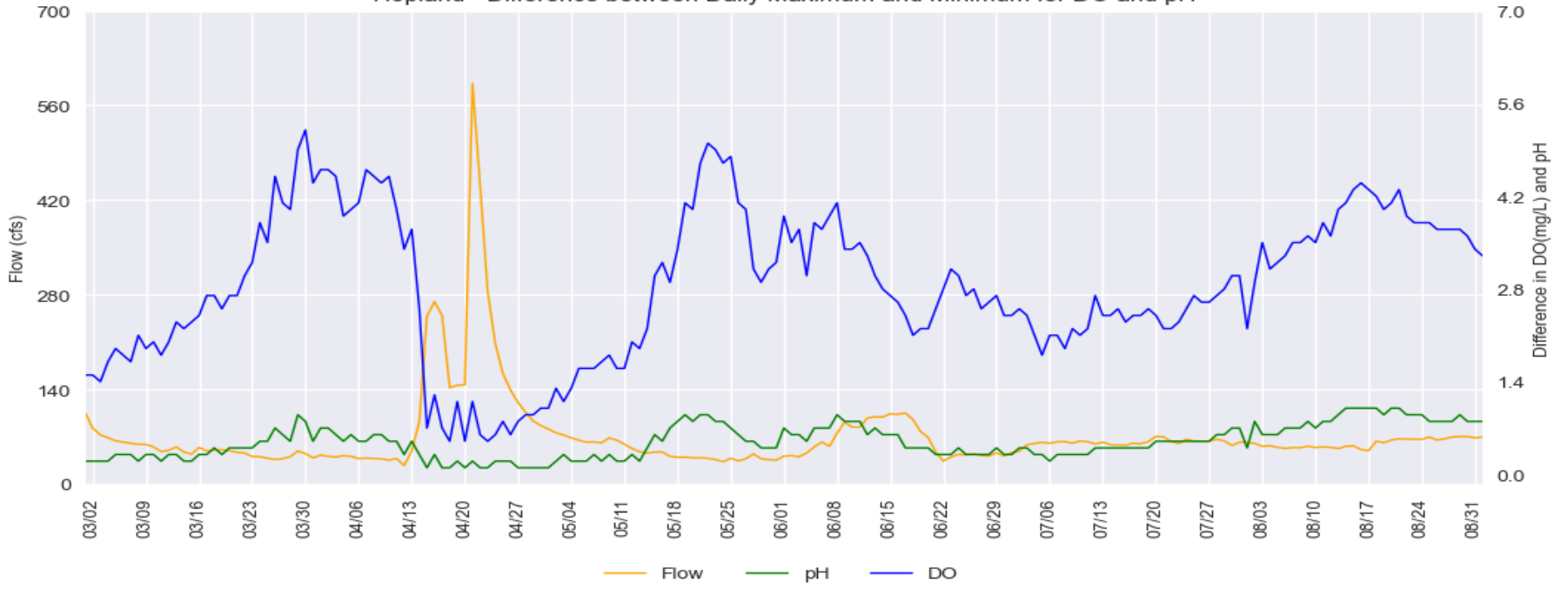
Provisional Data Subject to Revision

Hopland

Hopland Water Quality Trend

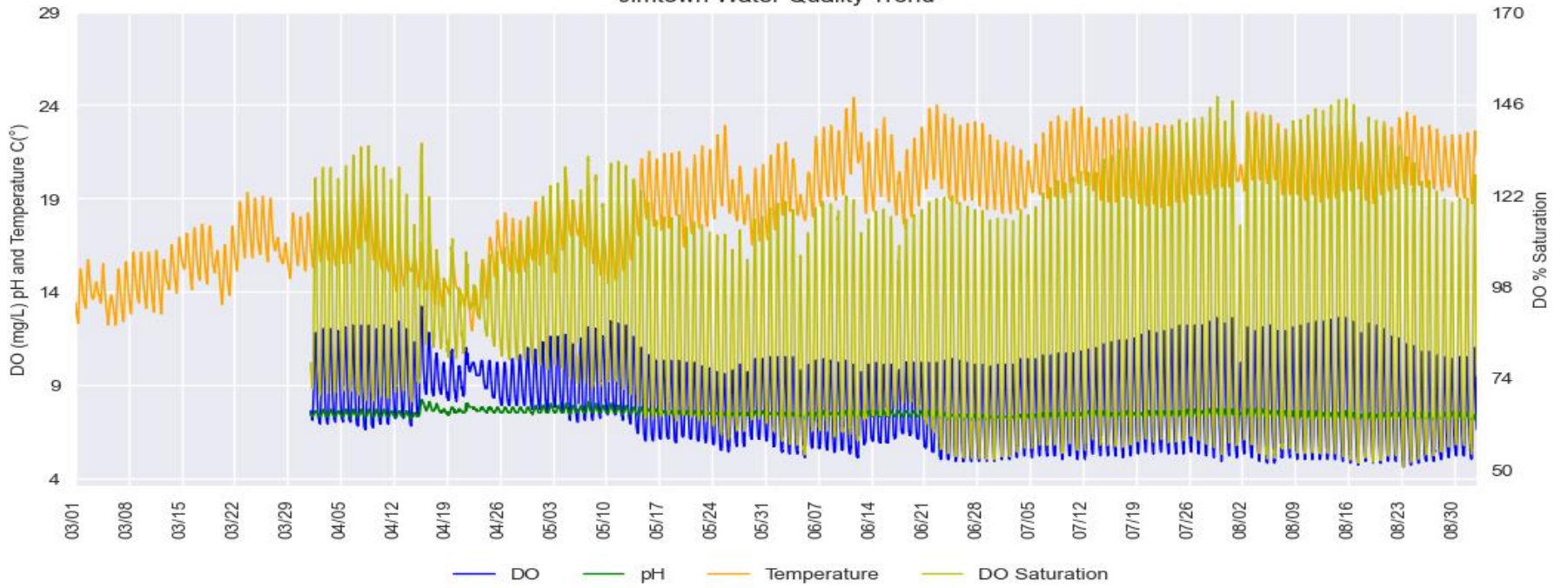


Hopland - Difference between Daily Maximum and Minimum for DO and pH

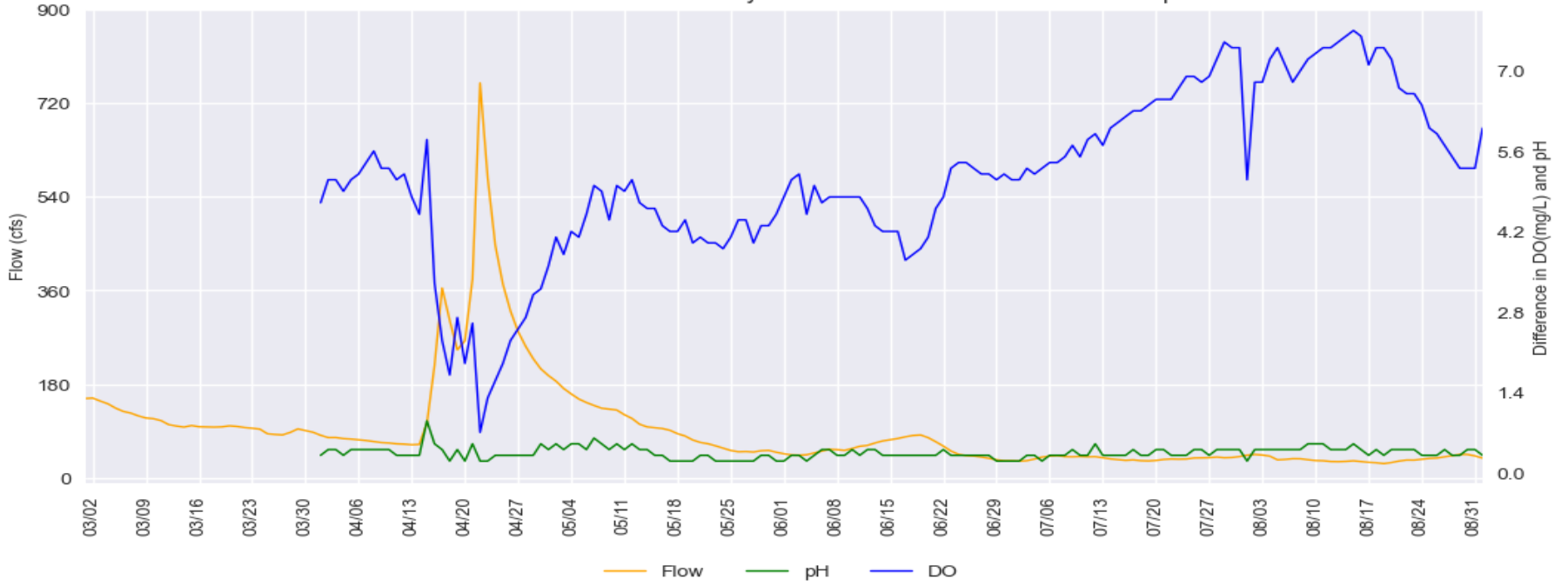


Jimtown

Jimtown Water Quality Trend



Jimtown - Difference between Daily Maximum and Minimum for DO and pH

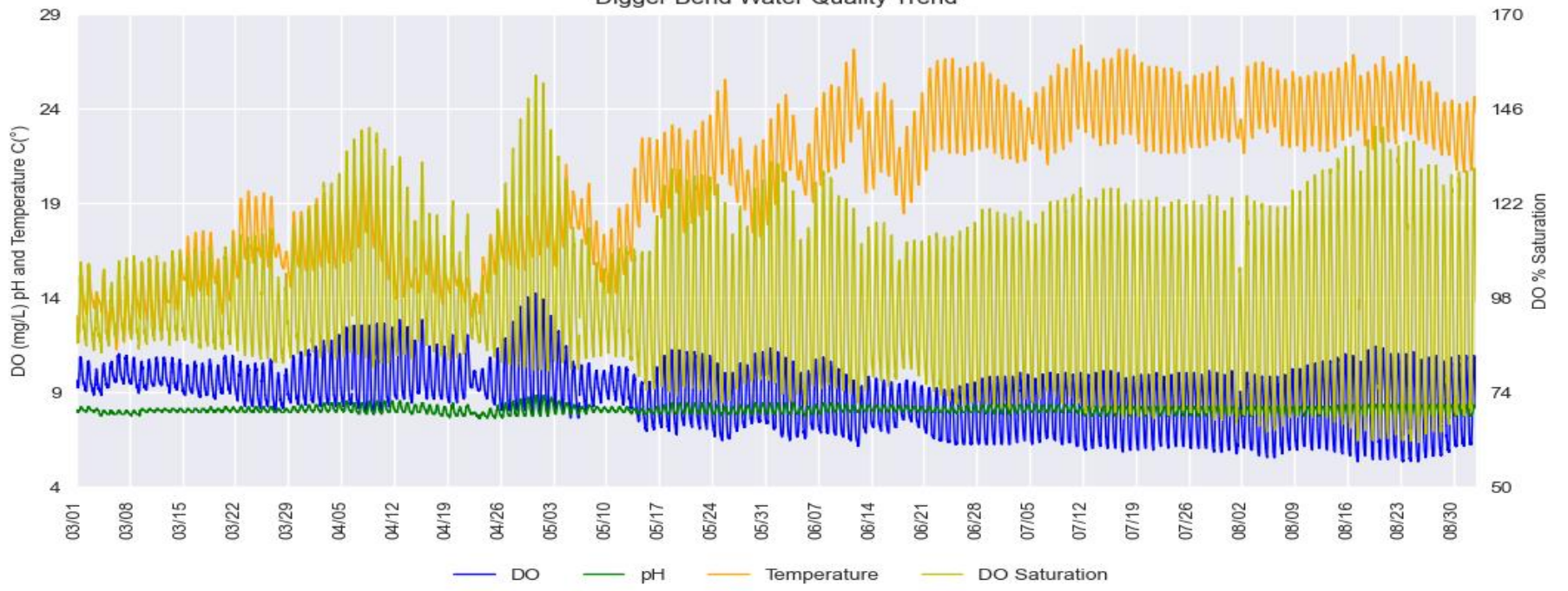


Russian River Water Quality (March 01, 2022 - September 01, 2022)

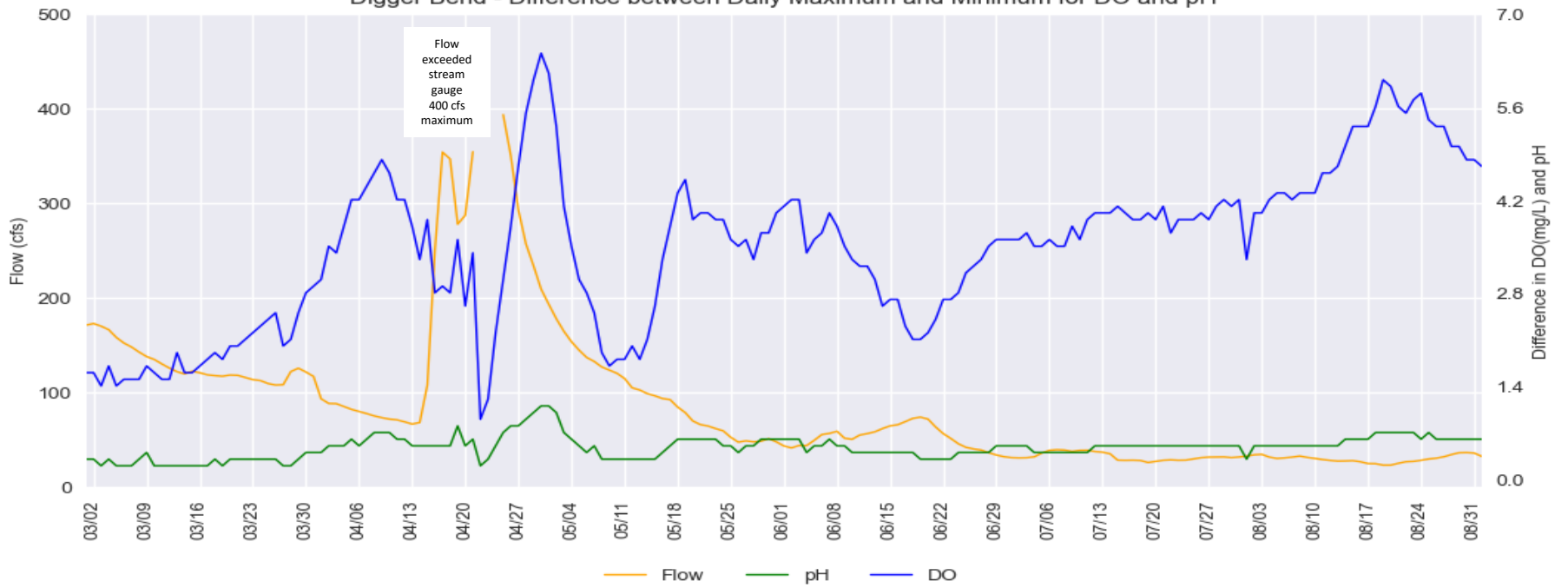
Provisional Data Subject to Revision

Digger Bend

Digger Bend Water Quality Trend

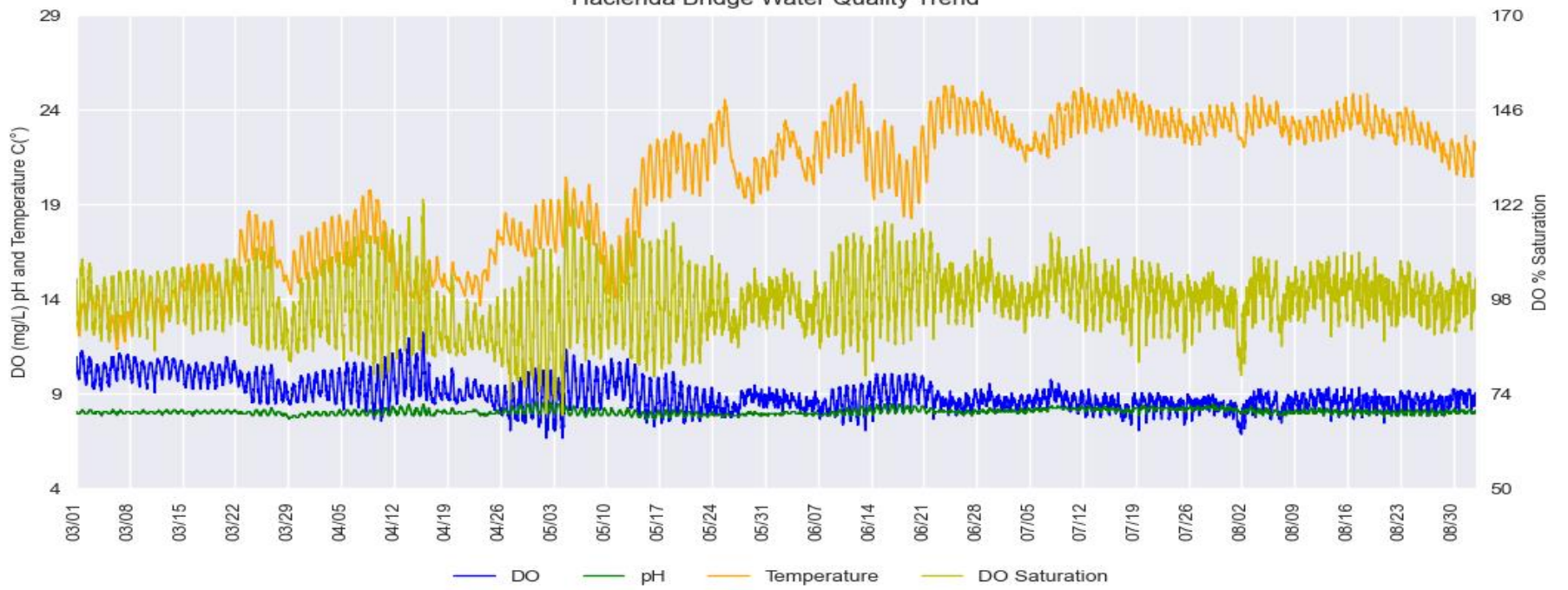


Digger Bend - Difference between Daily Maximum and Minimum for DO and pH

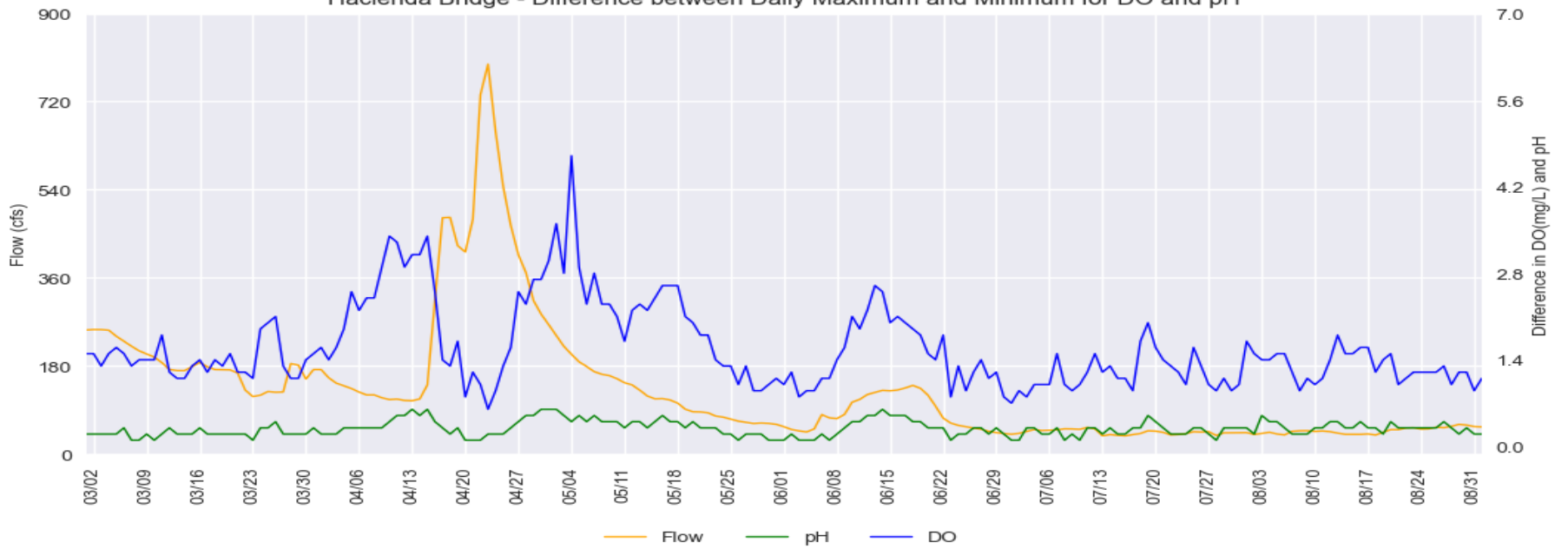


Hacienda Bridge

Hacienda Bridge Water Quality Trend



Hacienda Bridge - Difference between Daily Maximum and Minimum for DO and pH

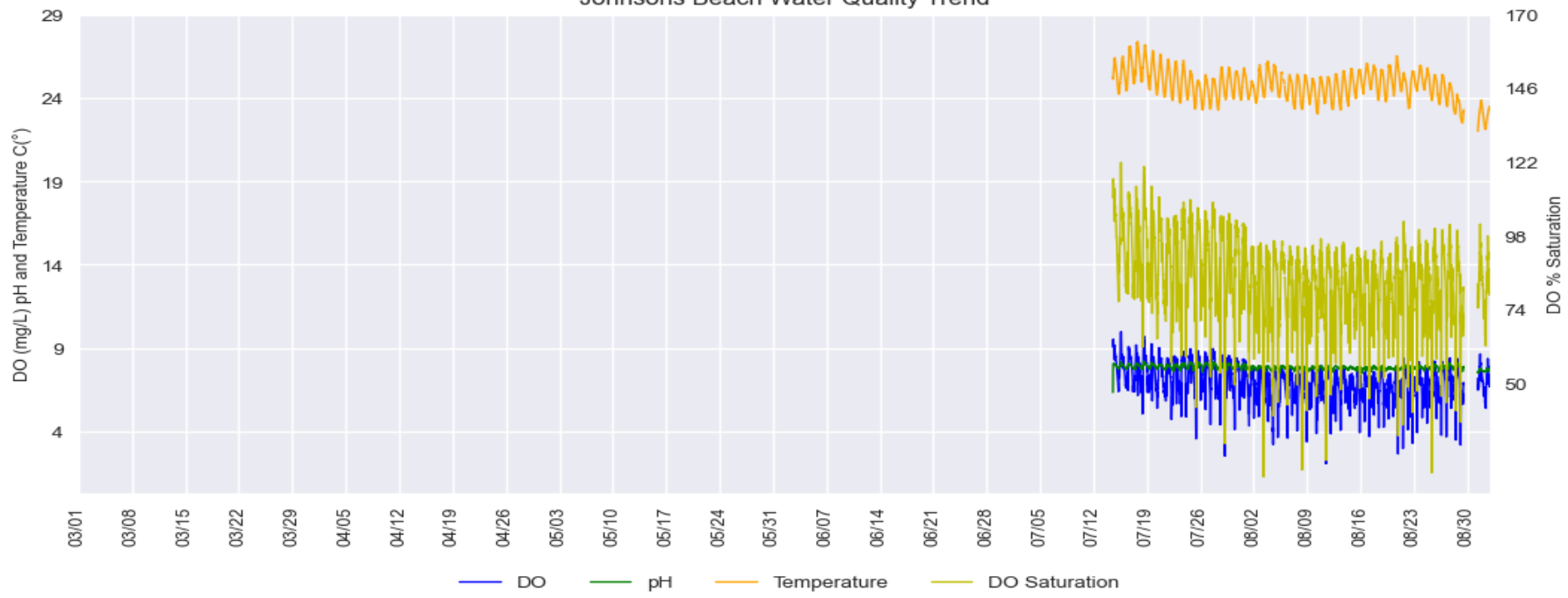


Russian River Water Quality (March 01, 2022 - September 01, 2022)

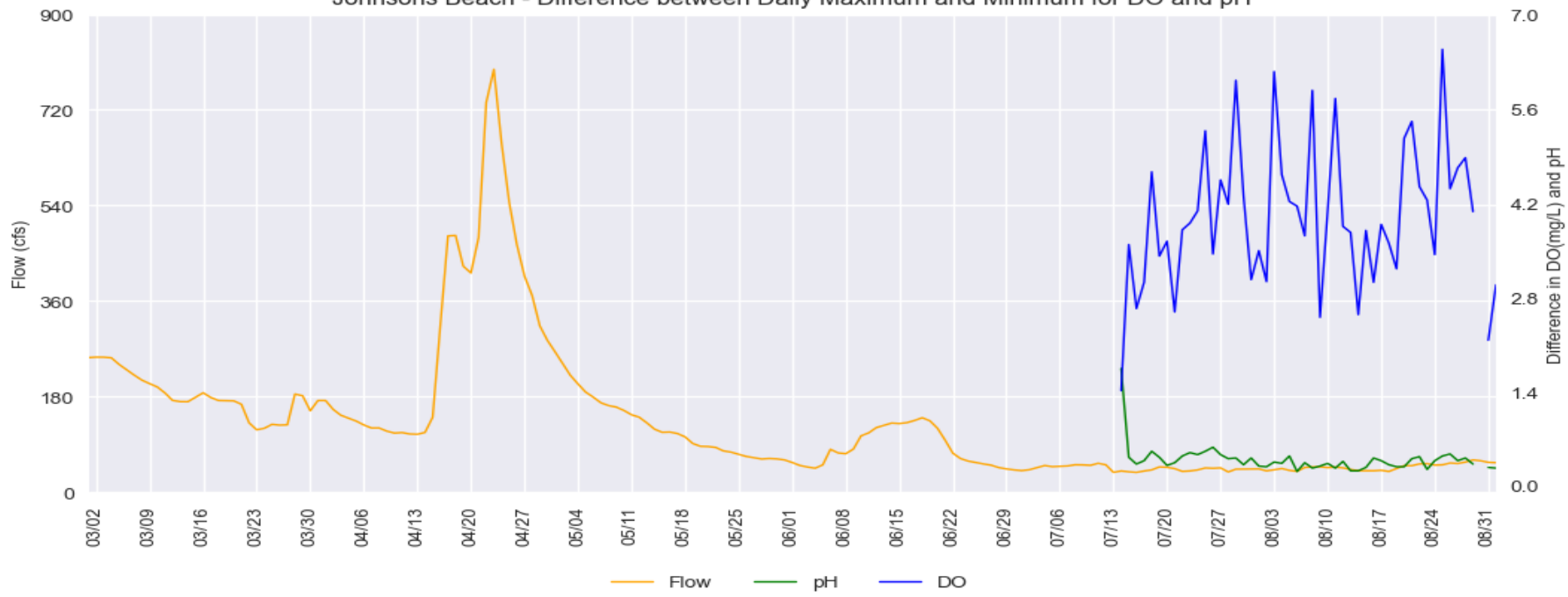
Provisional Data Subject to Revision

Johnsons Beach

Johnsons Beach Water Quality Trend

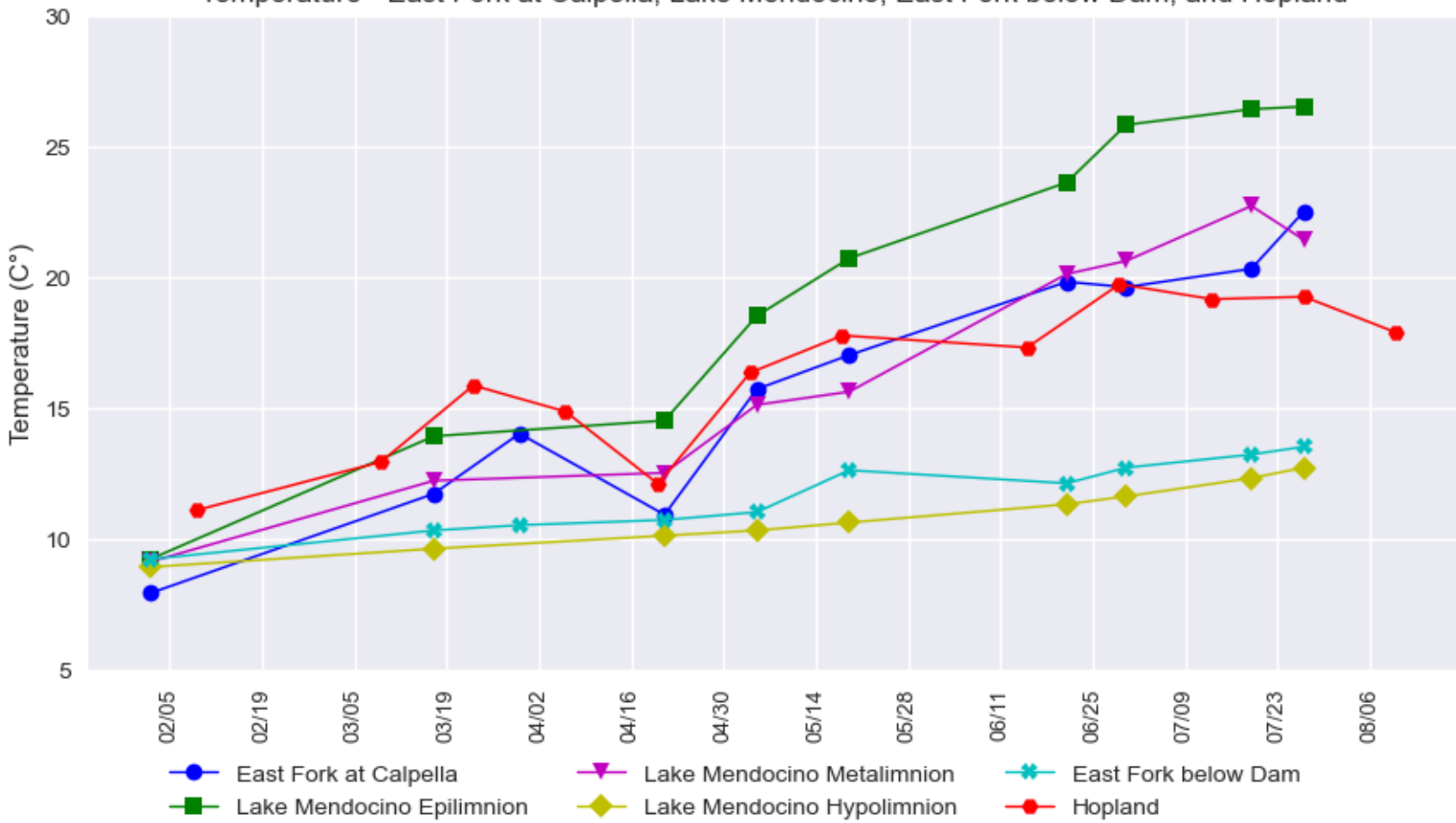


Johnsons Beach - Difference between Daily Maximum and Minimum for DO and pH

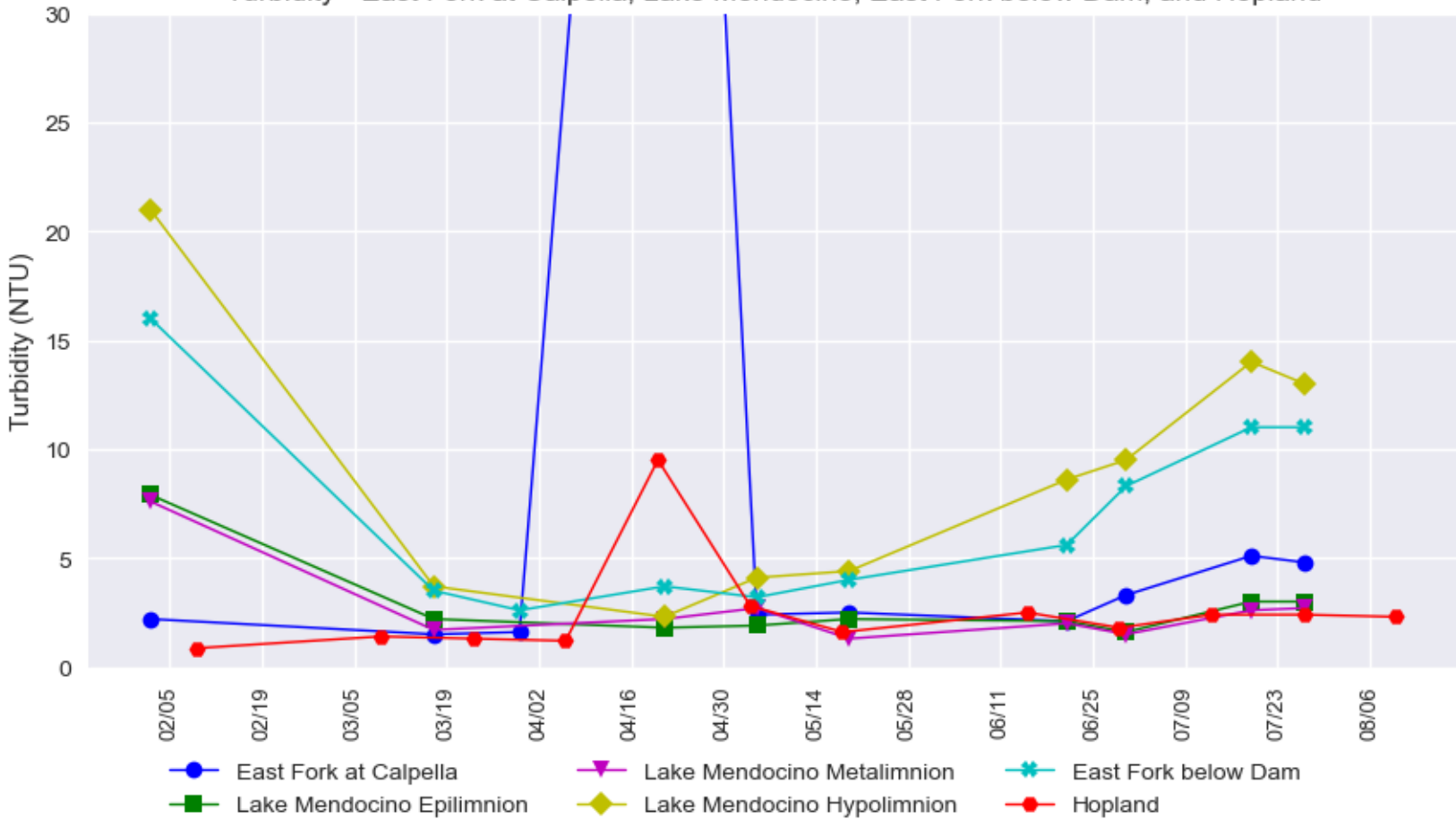


Lake Mendocino to Hopland Water Quality

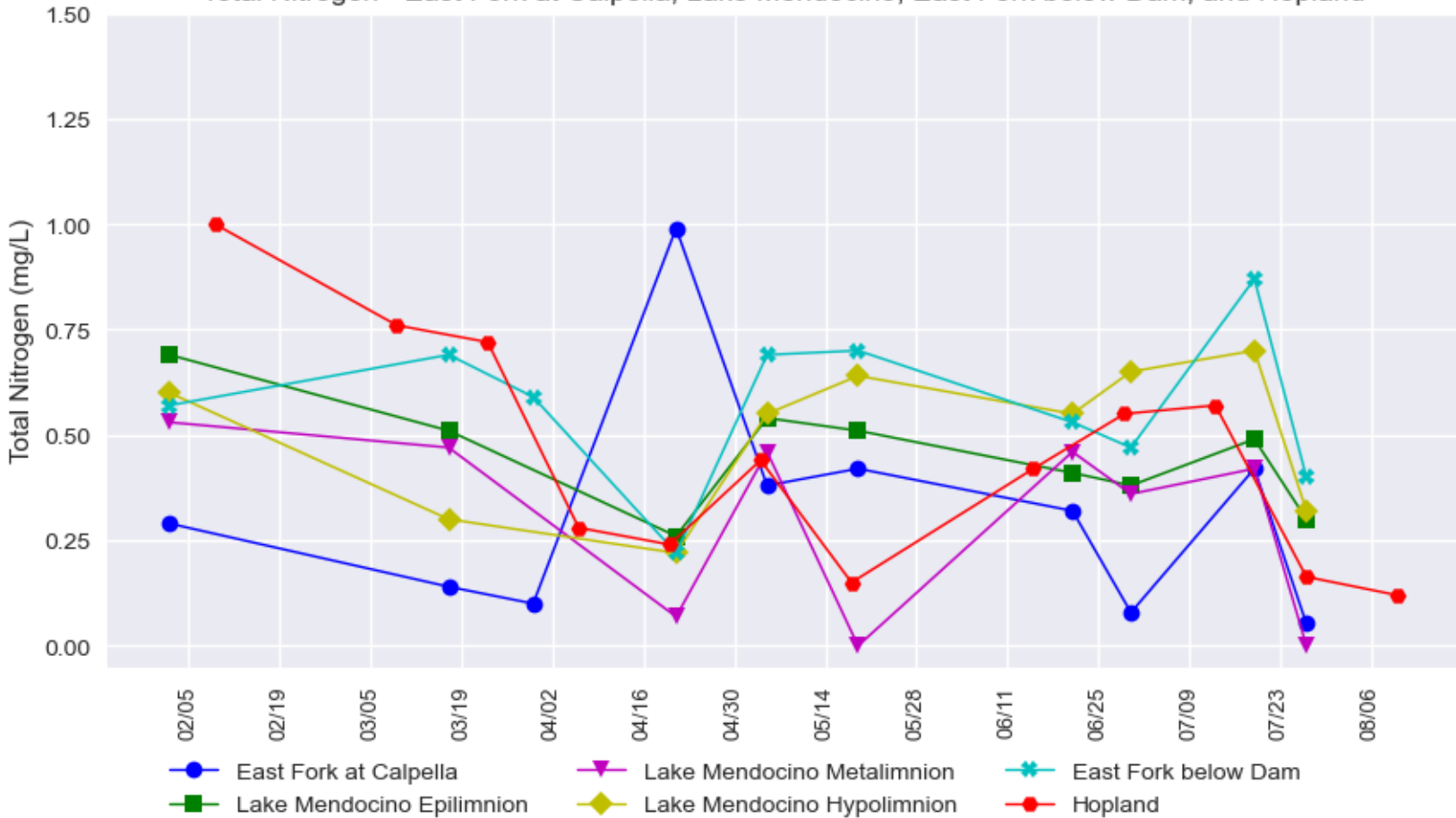
Temperature - East Fork at Calpella, Lake Mendocino, East Fork below Dam, and Hopland



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



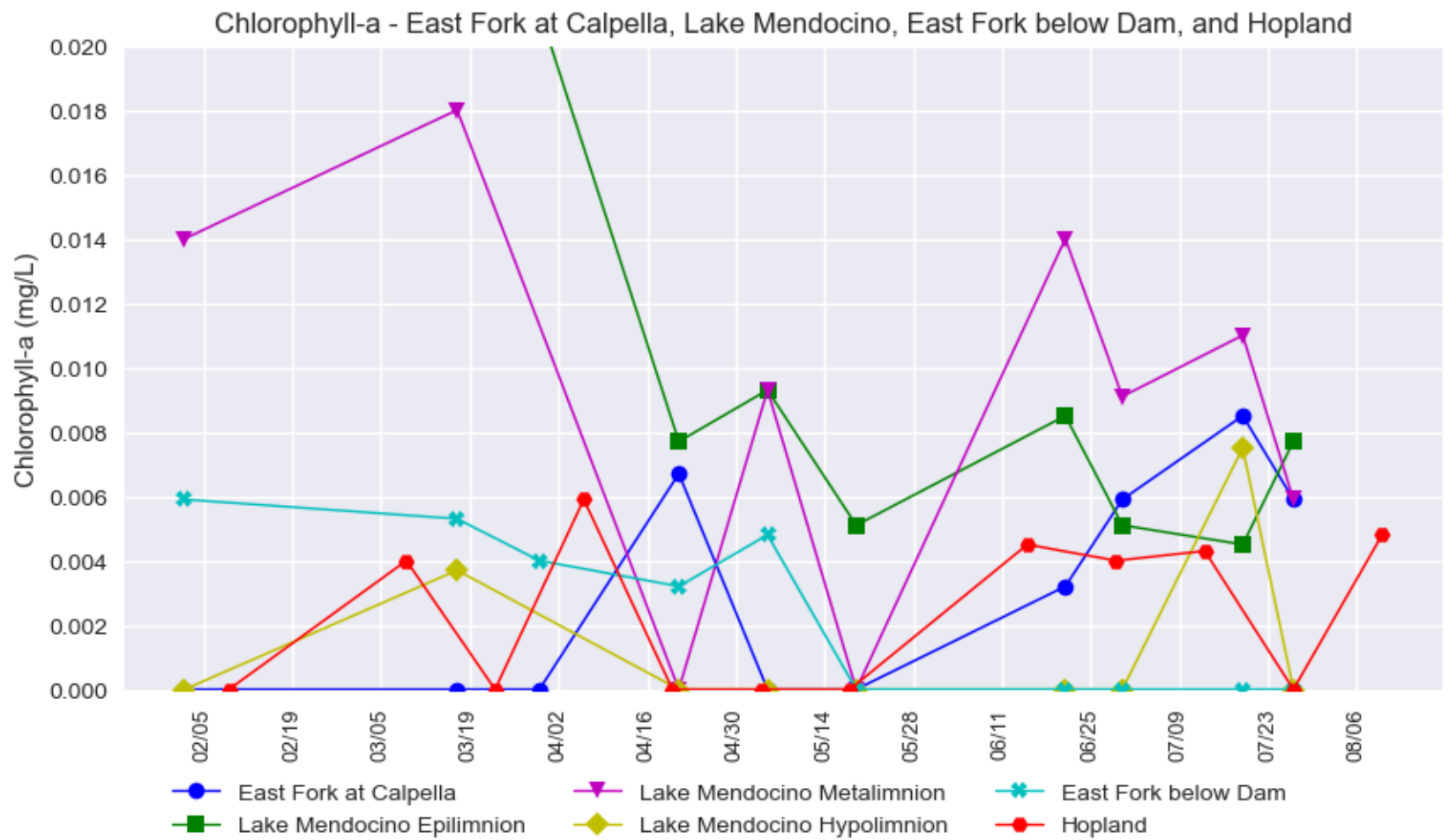
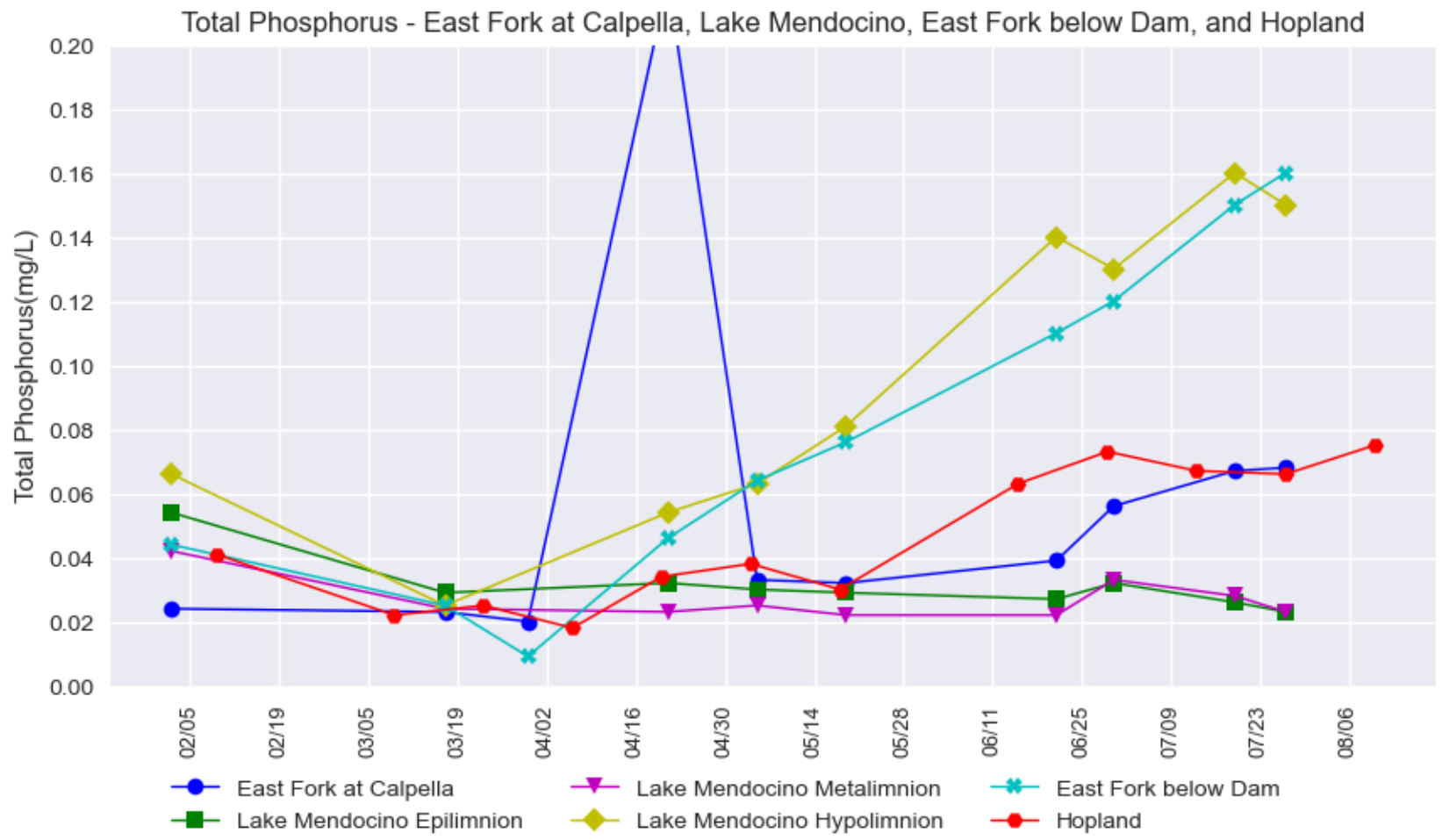
Total Nitrogen - East Fork at Calpella, Lake Mendocino, East Fork below Dam, and Hopland



*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 (February 02 - August 10, 2022)

Provisional Data Subject to Revision
 Lake Mendocino to Hopland Water Quality



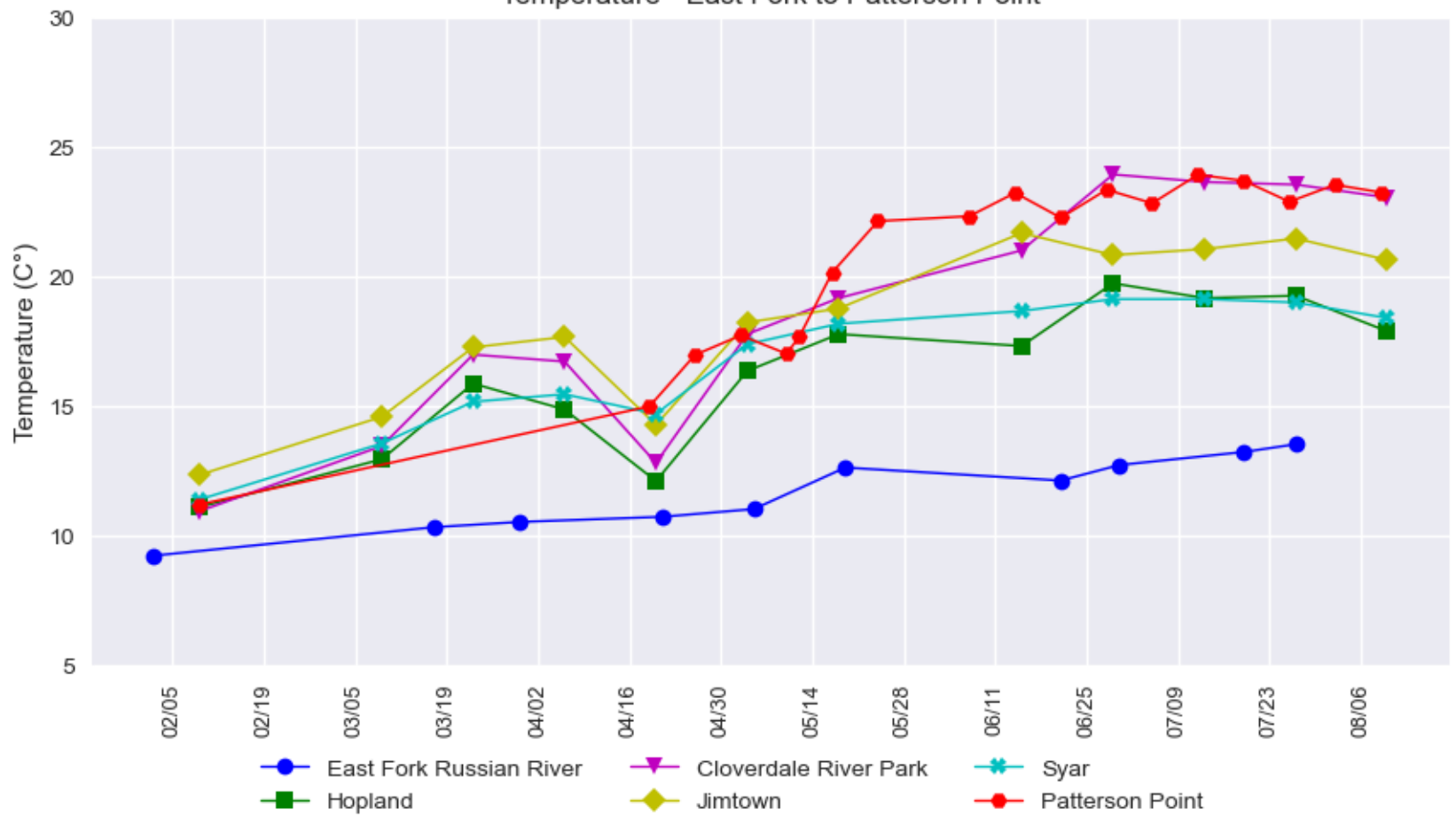
*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

Russian River Water Quality Grab Samples (February 02 - August 10, 2022)

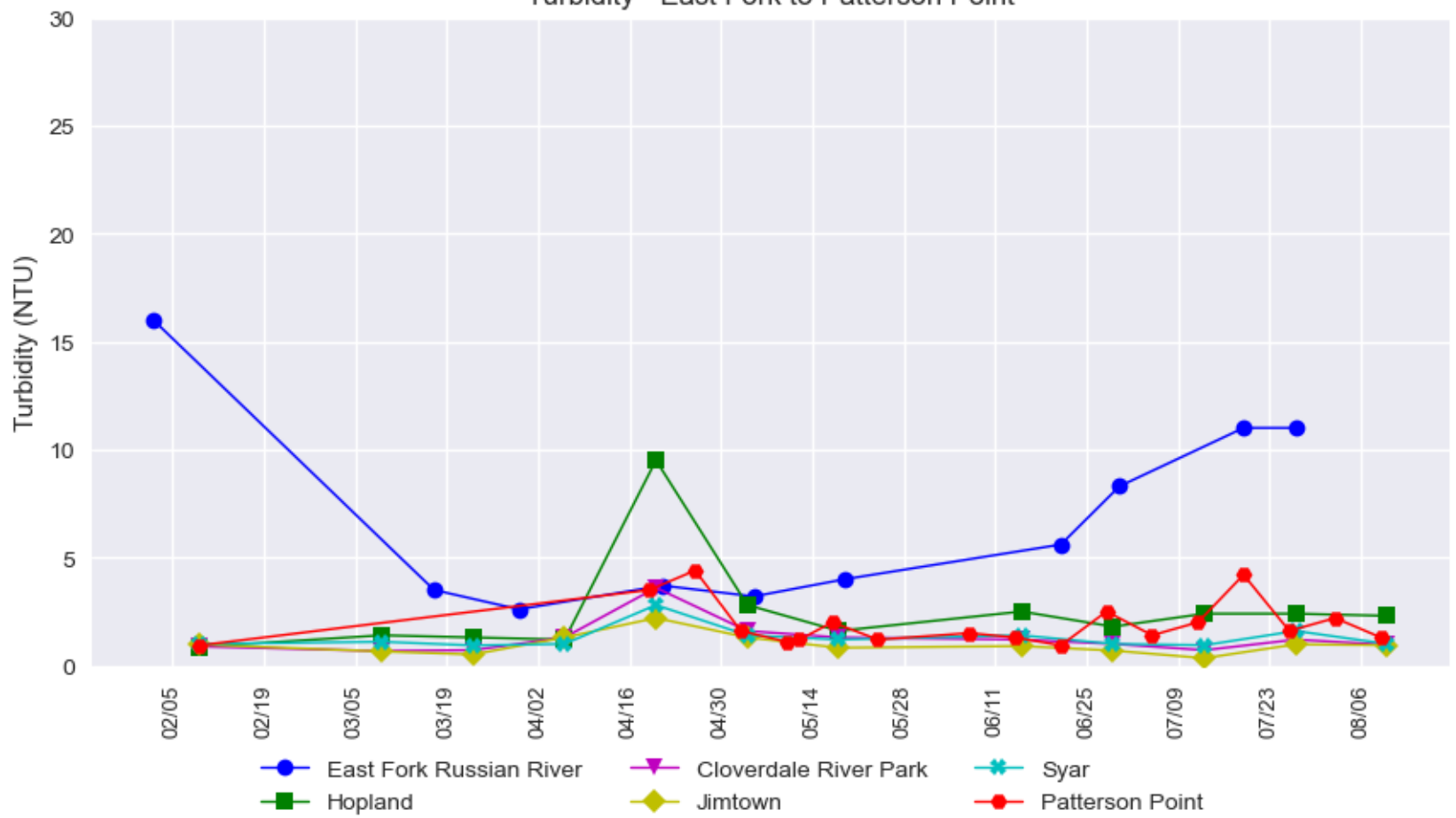
Provisional Data Subject to Revision

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

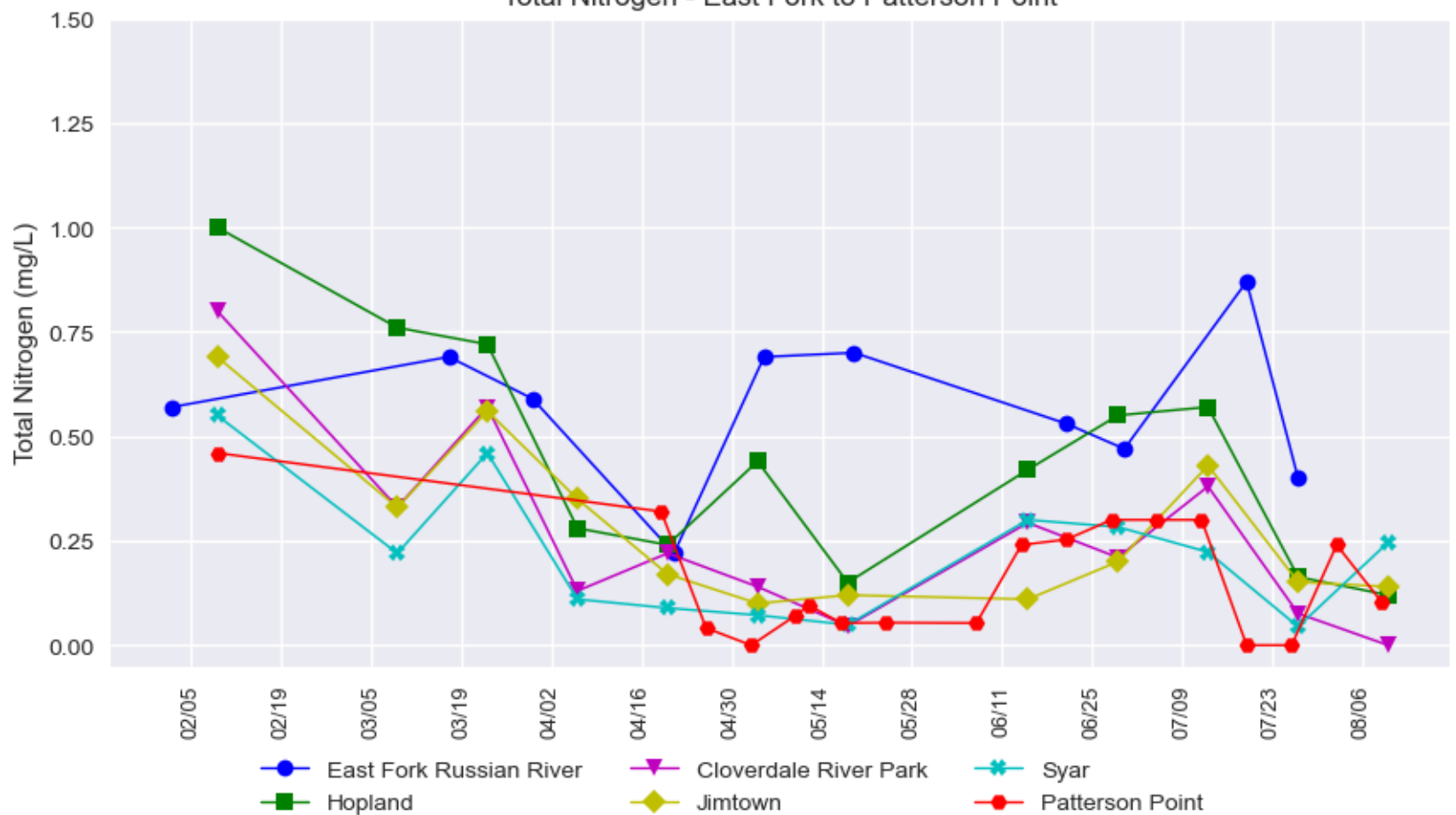
Temperature - East Fork to Patterson Point



Turbidity - East Fork to Patterson Point



Total Nitrogen - East Fork to Patterson Point



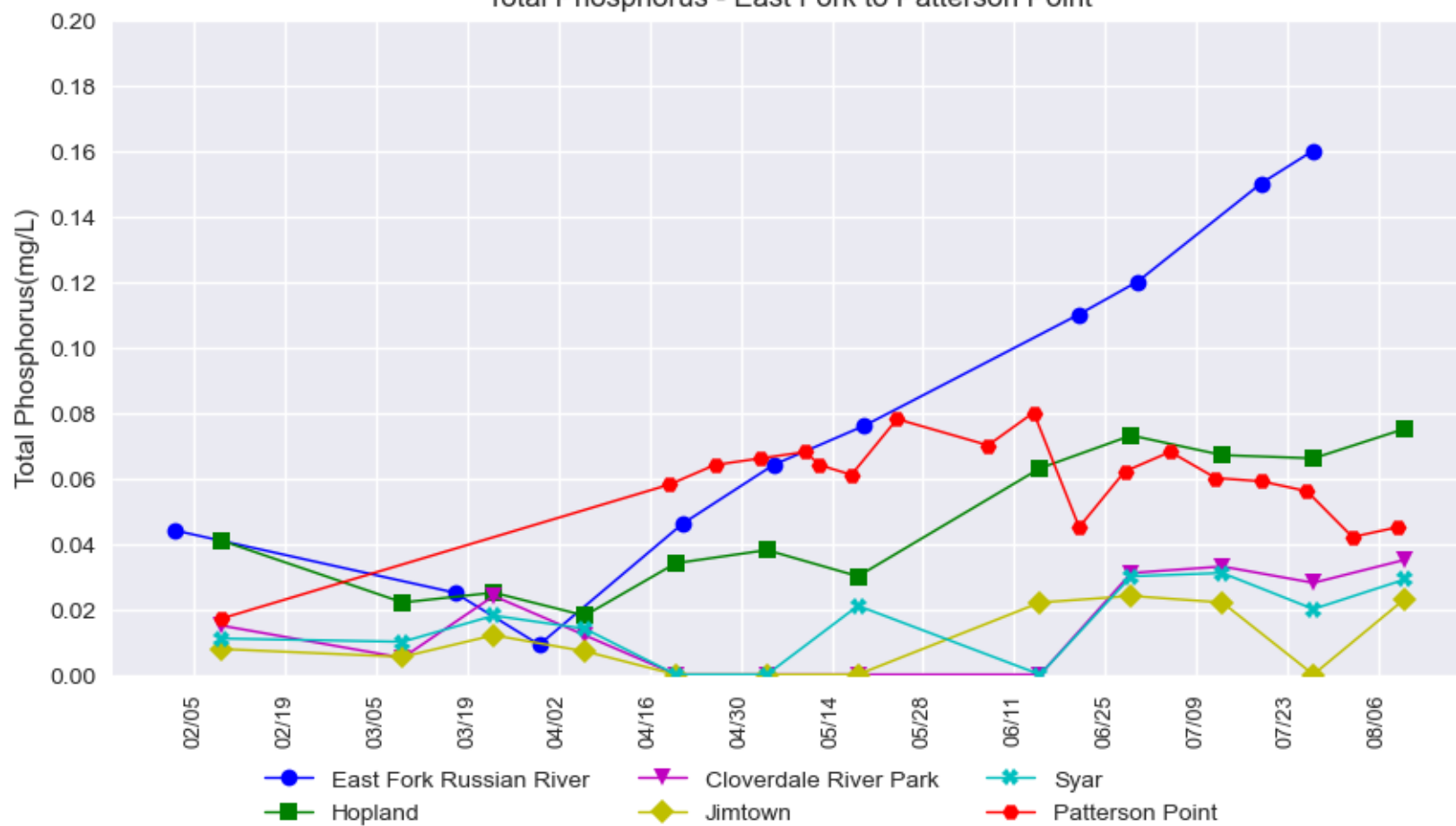
*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

Russian River Water Quality Grab Samples (February 02 - August 10, 2022)

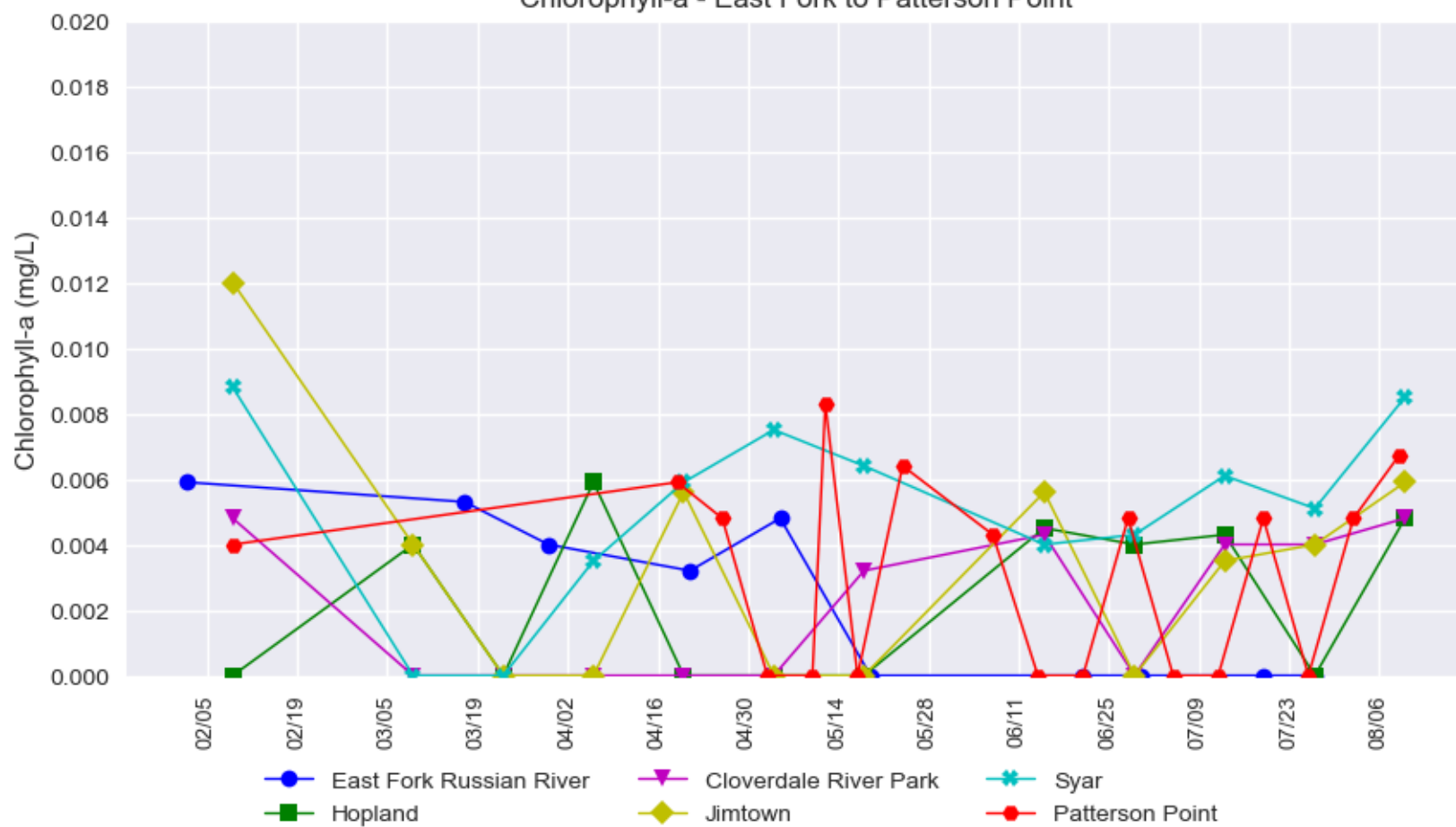
Provisional Data Subject to Revision

East Fork (below Lake Mendocino) to Syar Water Quality

Total Phosphorus - East Fork to Patterson Point



Chlorophyll-a - East Fork to Patterson Point



*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 (June 7 - July 26, 2022)
Provisional Data Subject to Revision

Parameter***	CDPH Guidance*	Date	Patterson Point	Monte Rio	Vacation Beach
Total Coliforms MPN/100 mL	10,000	6/7/2022	1732.9	1299.7	2419.6
		6/14/2022	2419.6	2419.6	2419.6
		6/21/2022	1439**	2064**	11199**
		6/28/2022	1169**	1918**	8664**
		7/5/2022	1299.7	1986.3	2419.6
		7/12/2022	1860**	1989**	5475**
		7/19/2022	1314**	2046**	9208**
		7/26/2022	959**	1670**	31**
E. Coli MPN/100 mL	235	6/7/2022	18.7	18.9	45.7
		6/14/2022	19.9	23.8	63
		6/21/2022	46.4	46.2	60.2
		6/28/2022	6.3	22.8	14.5
		7/5/2022	17.1	38.4	6.3
		7/12/2022	35.9	18.7	17.3
		7/19/2022	41	39.3	13.5
		7/26/2022	23.1	14.6	344.8
Enterococcus MPN/100 mL****	61	6/7/2022	9.8	29.2	13.4
		6/14/2022	30.9	10.8	16
		6/21/2022	52.1	22.6	146.7
		6/28/2022	6.3	9.8	18.5
		7/5/2022	2	21.3	6.3
		7/12/2022	39.9	49.5	7.4
		7/19/2022	63	56.3	41
		7/26/2022	16	44.1	1

*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 (May 17 - July 26, 2022)
Provisional Data Subject to Revision

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
Temperature		-	°C	5/17/2022	20.1	20.4	20.5
				5/24/2022	22.1	22.0	22.7
				6/7/2022	22.3	22.4	22.9
				6/14/2022	23.2	23.7	22.6
				6/21/2022	22.2	22.5	22.3
				6/28/2022	23.3	23.2	23.8
				7/5/2022	22.8	23.0	23.1
				7/12/2022	23.9	23.7	24.5
				7/19/2022	23.7	23.9	24.4
				7/26/2022	22.9	23.1	23.3
Nutrients	Ammonia as N	0.1	mg/L	5/17/2022	ND	ND	ND
				5/24/2022	ND	ND	ND
				6/7/2022	ND	ND	ND
				6/14/2022	ND	ND	ND
				6/21/2022	ND	ND	ND
				6/28/2022	ND	ND	ND
				7/5/2022	ND	ND	ND
				7/12/2022	ND	ND	0.11
				7/19/2022	ND	ND	ND
	7/26/2022	ND	ND	ND			
	Nitrate as N	0.04	mg/L	5/17/2022	0.053	0.053	ND
				5/24/2022	0.054	0.054	0.053
				6/7/2022	0.053	0.055	ND
				6/14/2022	ND	ND	ND
				6/21/2022	0.053	0.054	ND
				6/28/2022	ND	ND	ND
				7/5/2022	ND	ND	ND
				7/12/2022	ND	0.063	ND
7/19/2022				ND	ND	ND	
7/26/2022	ND	ND	ND				
Nutrients	Nitrite as N	0.05	mg/L	5/17/2022	ND	ND	ND
				5/24/2022	ND	ND	ND
				6/7/2022	ND	ND	ND
				6/14/2022	ND	ND	ND
				6/21/2022	ND	ND	ND
				6/28/2022	ND	ND	ND
				7/5/2022	ND	ND	ND
				7/12/2022	ND	ND	ND
				7/19/2022	ND	ND	ND
	7/26/2022	ND	ND	ND			
	Total Organic Nitrogen as N	0.1	mg/L	5/17/2022	ND	ND	ND
				5/24/2022	ND	ND	ND
				6/7/2022	ND	ND	ND
				6/14/2022	0.24	0.20	0.21
				6/21/2022	0.20	ND	ND
				6/28/2022	0.27	ND	ND
				7/5/2022	0.30	0.28	0.28
				7/12/2022	0.30	0.25	ND
				7/19/2022	ND	ND	0.47
	7/26/2022	ND	ND	ND			
	Total Kjeldahl Nitrogen	0.2	mg/L	5/17/2022	ND	ND	ND
				5/24/2022	ND	ND	ND
				6/7/2022	ND	ND	ND
				6/14/2022	0.24	0.2	0.21
				6/21/2022	0.2	ND	ND
				6/28/2022	0.27	ND	0.2
				7/5/2022	0.3	0.28	0.28
				7/12/2022	0.3	0.25	ND
				7/19/2022	ND	ND	0.47
	7/26/2022	ND	ND	ND			
	Total Phosphorus	0.02	mg/L	5/17/2022	0.061	0.065	0.063
				5/24/2022	0.078	0.079	0.070
				6/7/2022	0.070	0.068	0.071
				6/14/2022	0.080	0.073	0.064
				6/21/2022	0.045	0.040	0.036
				6/28/2022	0.062	0.063	0.057
7/5/2022				0.068	0.069	0.060	
7/12/2022				0.060	0.060	0.044	
7/19/2022				0.059	0.058	0.050	
7/26/2022		0.056	0.055	0.048			
Total Orthophosphate		0.03	mg/L	5/17/2022	0.12	0.12	0.17
				5/24/2022	0.18	0.17	0.14
				6/7/2022	0.15	0.15	0.14
				6/14/2022	0.18	0.17	0.13
				6/21/2022	0.081	0.077	0.061
				6/28/2022	0.11	0.12	0.093
				7/5/2022	0.14	0.13	0.11
				7/12/2022	0.12	0.11	0.077
	7/19/2022			0.12	0.11	0.089	
7/26/2022	0.099	0.099	0.076				

Russian River Water Quality Grab Samples (May 17 - July 26, 2022)
Provisional Data Subject to Revision

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
Chlorophyll	Chlorophyll A	0.003	mg/L	5/17/2022	ND	ND	0.0043
				5/24/2022	0.0064	0.0040	0.0051
				6/7/2022	0.0043	ND	0.0035
				6/14/2022	ND	ND	0.0051
				6/21/2022	ND	ND	0.0043
				6/28/2022	0.0048	ND	0.0045
				7/5/2022	ND	0.0043	0.0040
				7/12/2022	ND	ND	0.0040
				7/19/2022	0.0048	0.0045	ND
				7/26/2022	ND	ND	0.0043
Carbon	Total Organic Carbon	0.3	mg/L	5/17/2022	2.20	2.26	2.34
				5/24/2022	2.30	2.33	2.13
				6/7/2022	1.89	1.92	1.94
				6/14/2022	2.48	2.34	2.31
				6/21/2022	2.12	2.24	2.14
				6/28/2022	2.07	2.07	2.15
				7/5/2022	2.09	2.05	2.22
				7/12/2022	2.79	2.62	2.77
				7/19/2022	2.56	2.50	2.56
	7/26/2022	2.52	2.41	2.44			
	Dissolved Organic Carbon	0.2	mg/L	5/17/2022	1.75	1.78	1.80
				5/24/2022	1.94	1.93	1.84
				6/7/2022	1.58	1.61	1.64
				6/14/2022	2.06	1.91	1.88
				6/21/2022	1.94	1.93	2.17
				6/28/2022	1.73	1.77	1.83
				7/5/2022	1.70	1.75	1.72
				7/12/2022	1.99	1.92	1.98
7/19/2022				2.24	1.98	2.07	
7/26/2022	1.99	2.03	2.01				
Solids	Turbidity	0.1	NTU	5/17/2022	2.0	1.4	1.6
				5/24/2022	1.2	1.6	1.5
				6/7/2022	1.5	1.9	1.9
				6/14/2022	1.3	1.8	1.7
				6/21/2022	0.9	1.0	1.3
				6/28/2022	2.5	2.9	3.2
				7/5/2022	1.4	1.8	1.8
				7/12/2022	2.0	1.9	1.7
				7/19/2022	4.2	3.2	1.9
	7/26/2022	1.6	2.1	1.6			
	TDS	10	mg/L	5/17/2022	180	190	170
				5/24/2022	180	200	190
				6/7/2022	190	190	180
				6/14/2022	170	160	160
				6/21/2022	150	180	160
				6/28/2022	170	200	180
				7/5/2022	160	160	160
				7/12/2022	150	150	140
7/19/2022				150	160	150	
7/26/2022	160	150	150				