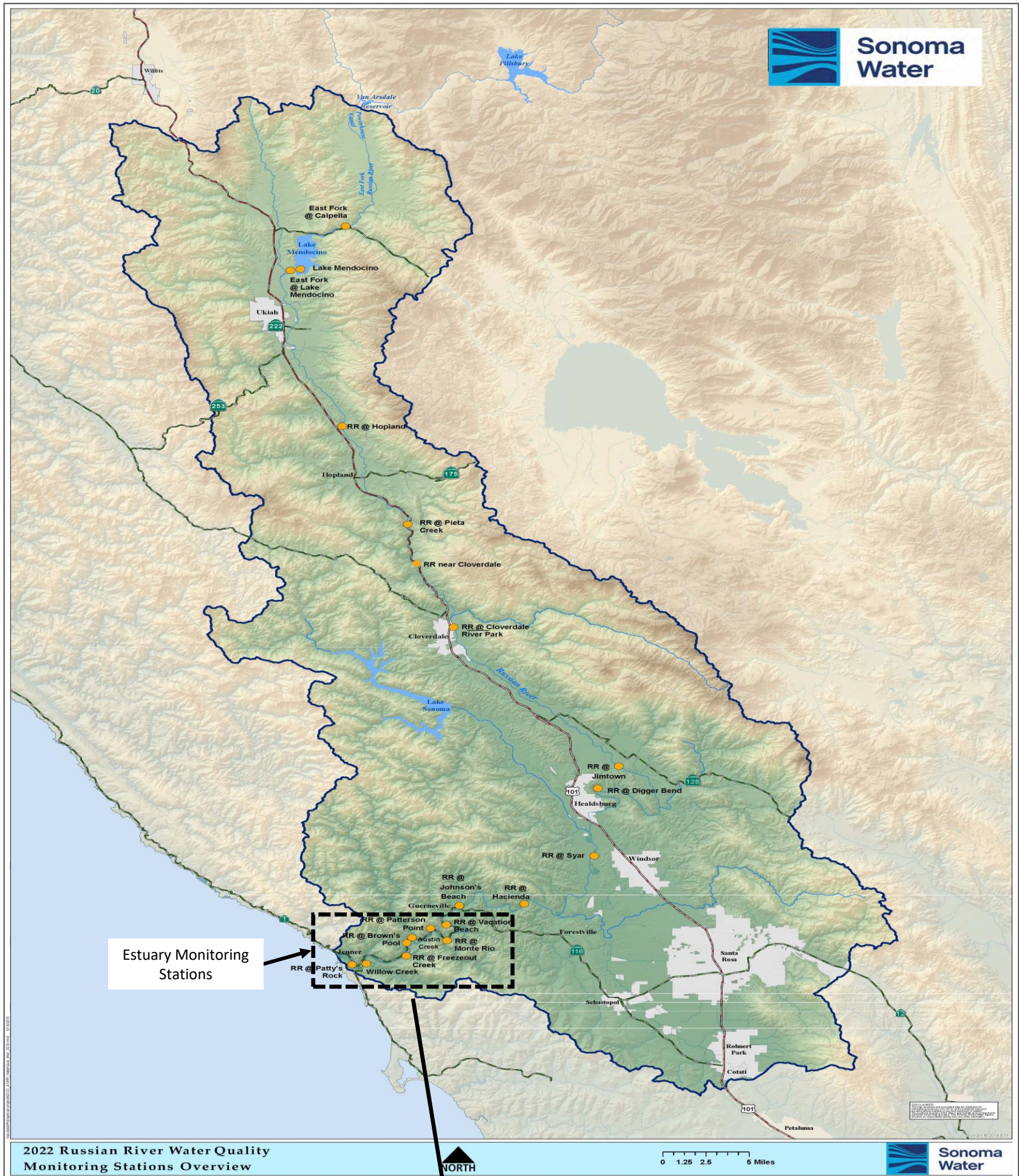


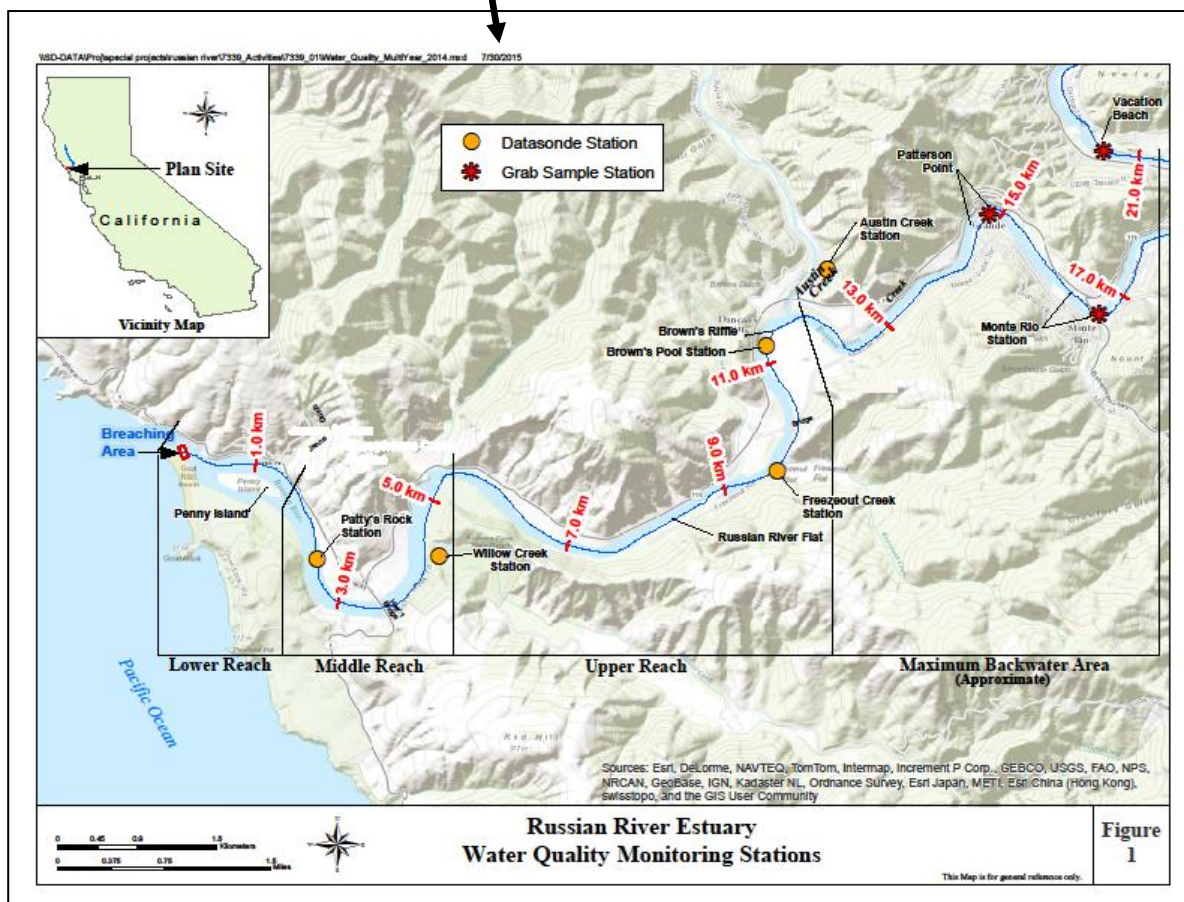


Sonoma Water

State Water Resources Control Board Temporary Urgency Change Order (6/17/2022) Russian River Water Quality Report October 21 – October 27, 2022



2022 Russian River Water Quality Monitoring Stations Overview

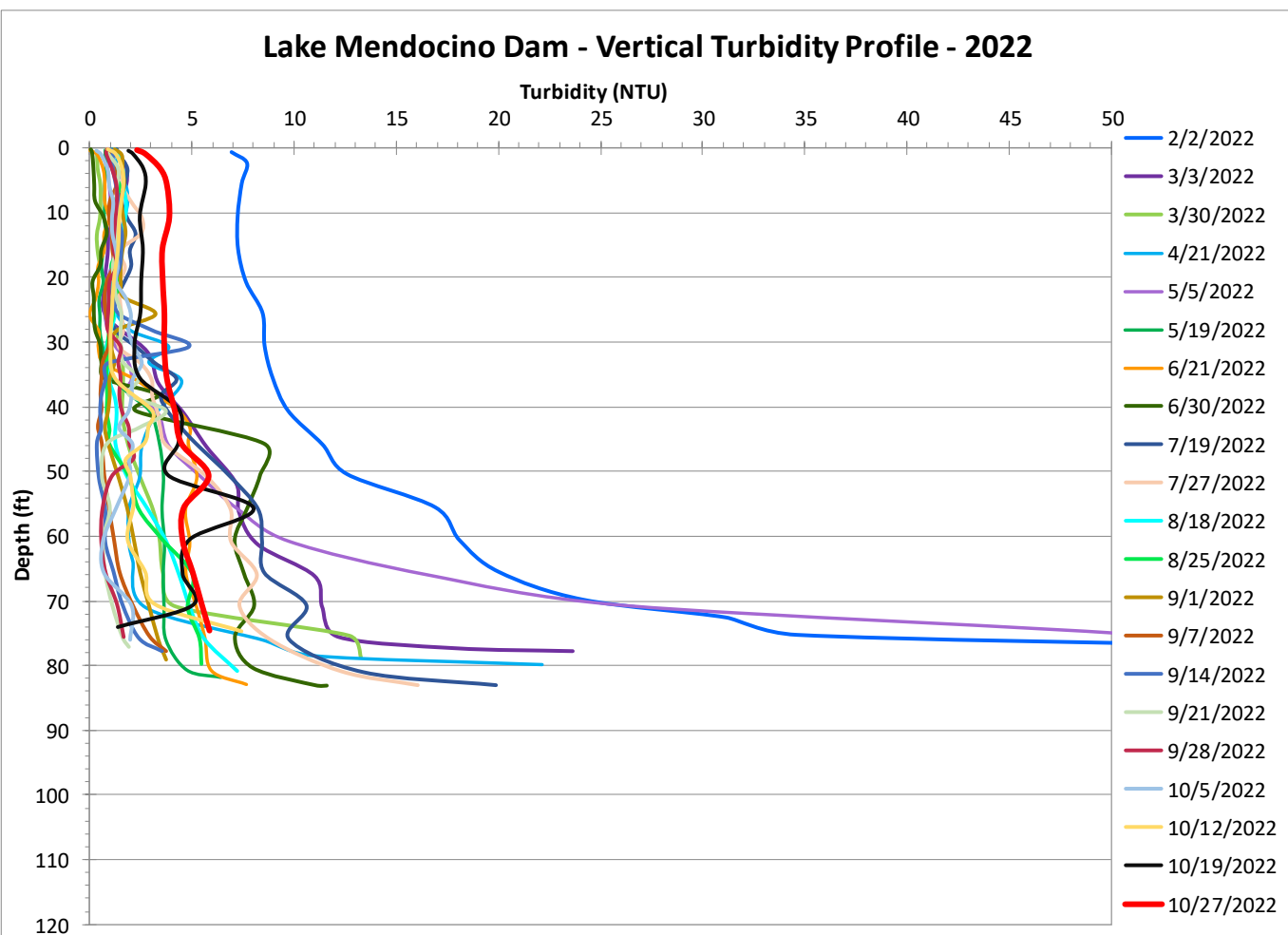
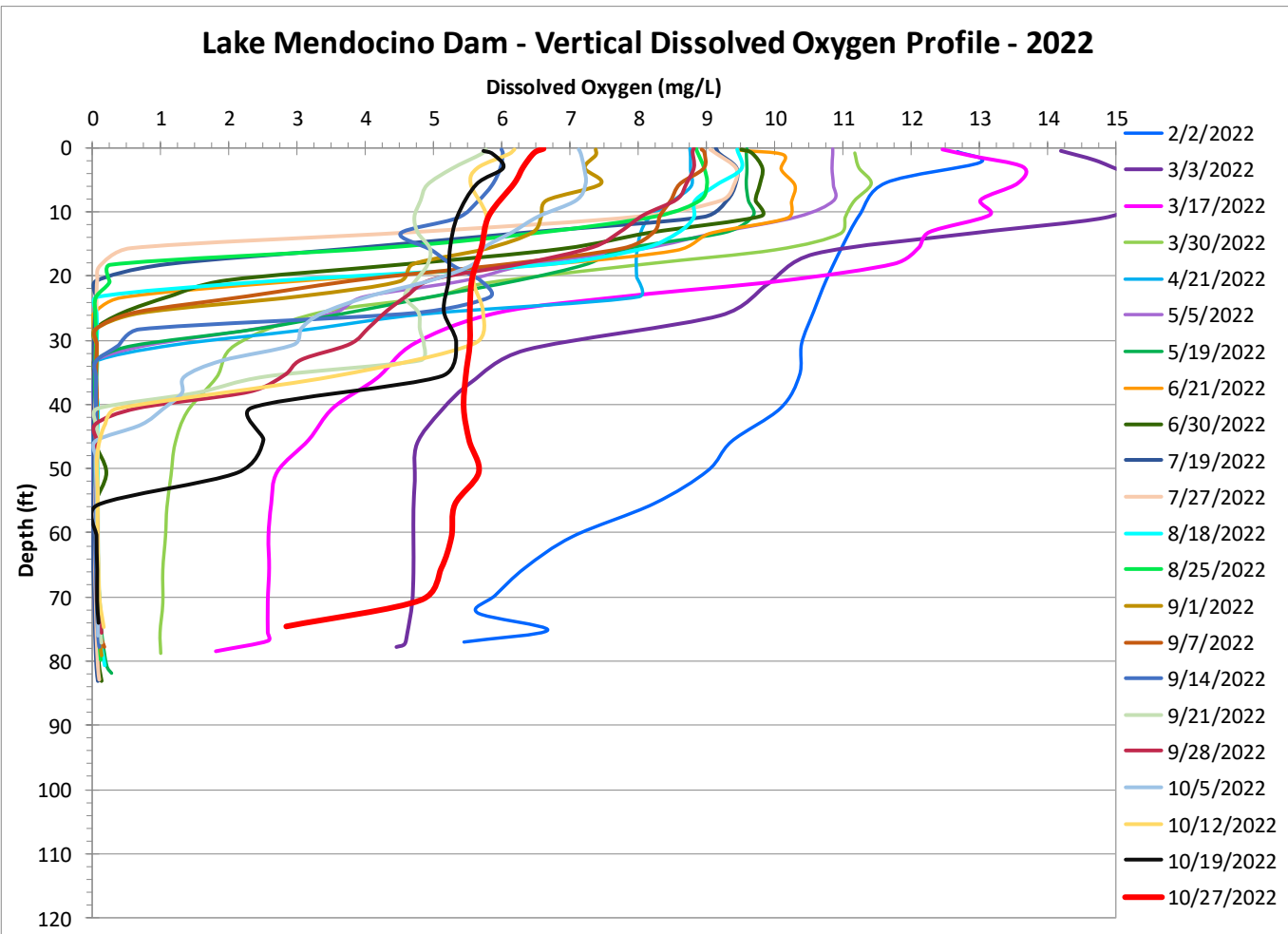
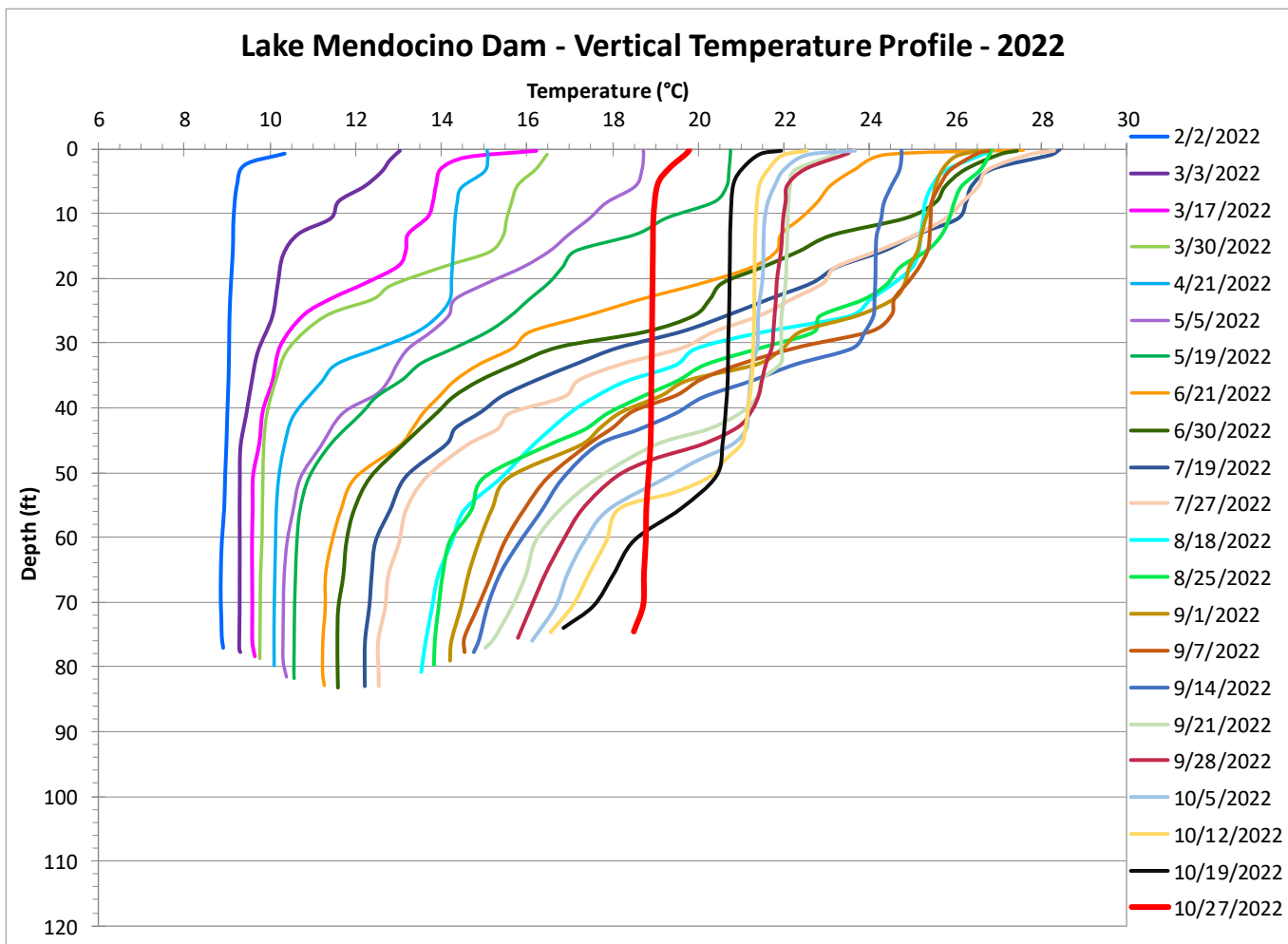


Russian River Estuary Water Quality Monitoring Stations

Figure 1

Lake Mendocino Water Quality Vertical Profiles (February 2 – October 27, 2022)

Provisional Data Subject to Revision

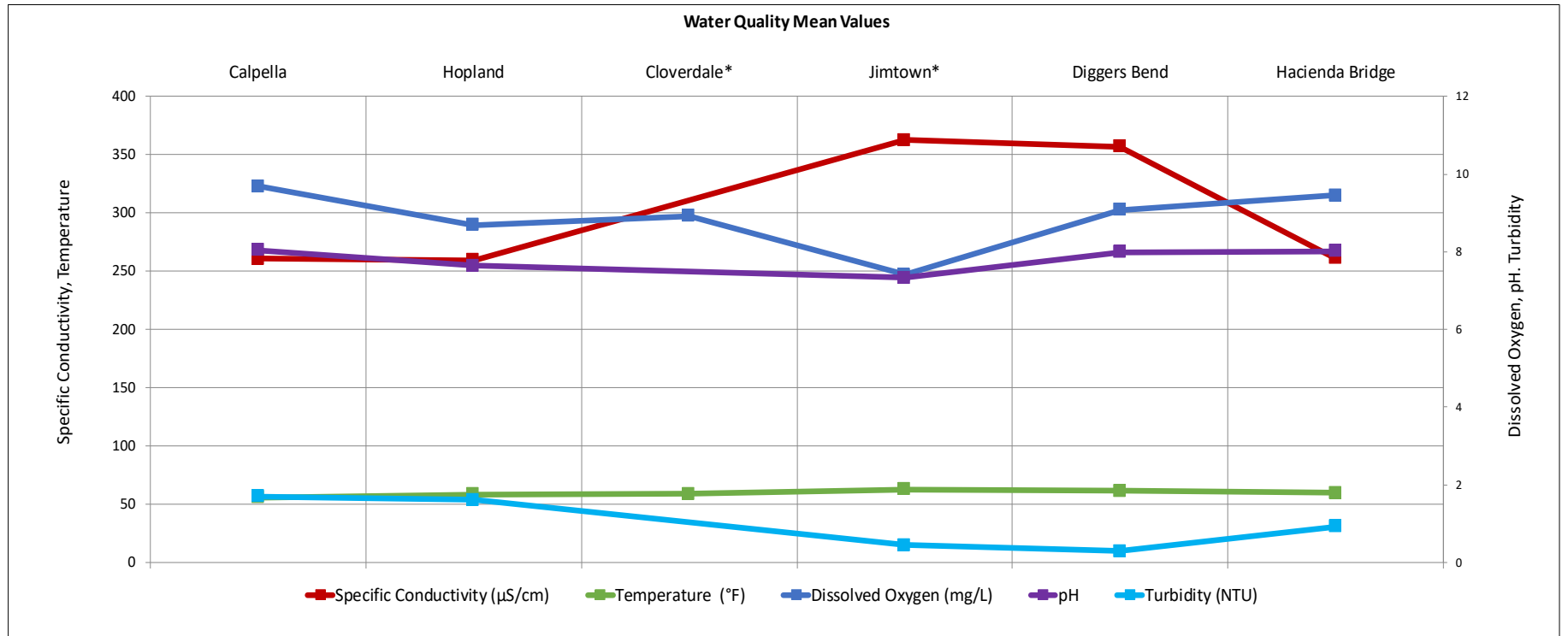


Russian River Water Quality Sondes (October 21, 2022 – October 27, 2022)

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	50.7	54.7	54.5	59.0	57.4		57.0	
	Max	59.9	61.9	62.2	65.1	64.9		63.1	
	Mean	55.5	58.4	58.5	62.5	61.5		59.7	
Specific Conductivity (µS/cm)	Min	247.0	255.0		361.0	355.0		259.0	
	Max	273.0	267.0		364.0	359.0		267.0	
	Mean	260.5	259.3		362.4	357.1		261.3	
Dissolved Oxygen (mg/L)	Min	8.9	7.5	6.9	6.1	7.4		8.6	
	Max	10.7	9.7	11.4	9.6	10.7		10.1	
	Mean	9.7	8.7	8.9	7.4	9.1		9.5	
Dissolved Oxygen (% Saturation)	Min	86.5	75.8	69.6	63.1	76.6		84.2	
	Max	100.8	96.7	112.8	99.8	111.4		103.7	
	Mean	91.9	85.5	88.1	76.6	92.8		94.6	
pH	Min	8.0	7.5		7.3	7.8		7.8	
	Max	8.2	7.8		7.4	8.2		8.2	
	Mean	8.0	7.6		7.3	8.0		8.0	
Turbidity (NTU)	Min	1.0	1.1		0.2	0.1		0.6	
	Max	3.3	2.5		1.0	1.0		1.7	
	Mean	1.7	1.6		0.4	0.3		0.9	

*Station operated seasonally

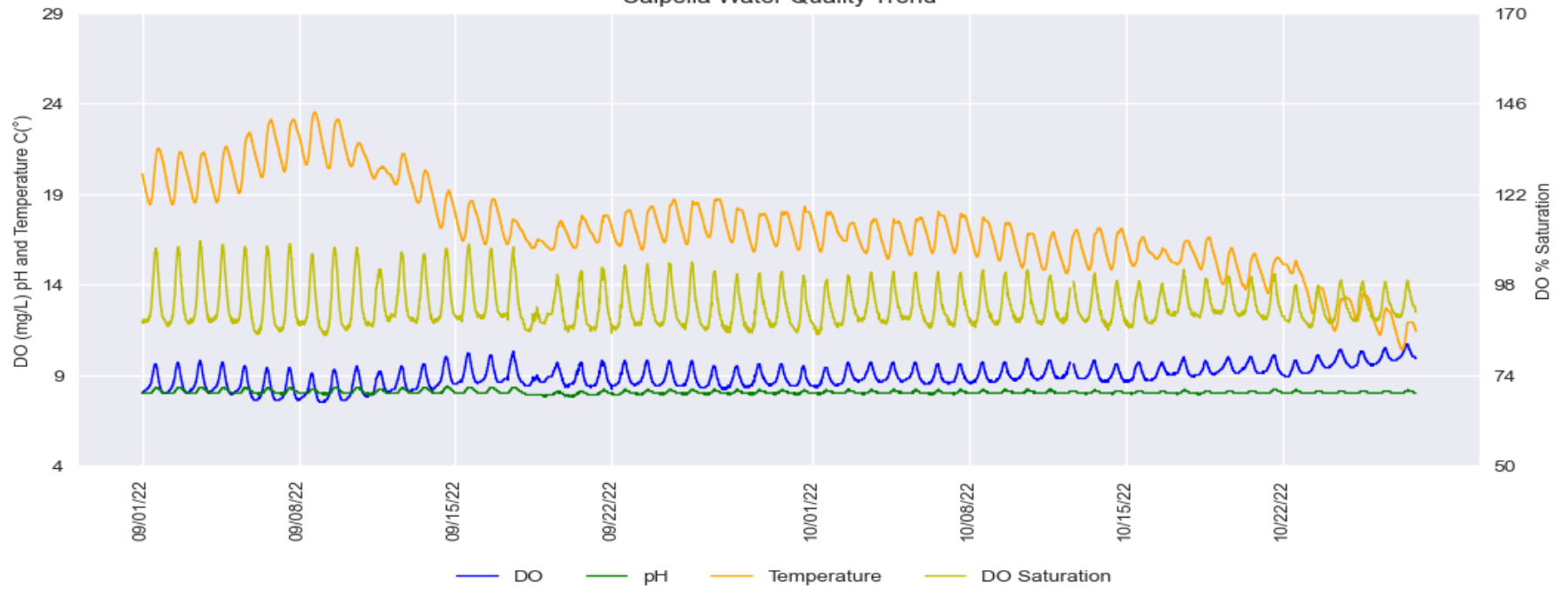


Russian River Water Quality September 01, 2022 - October 27, 2022

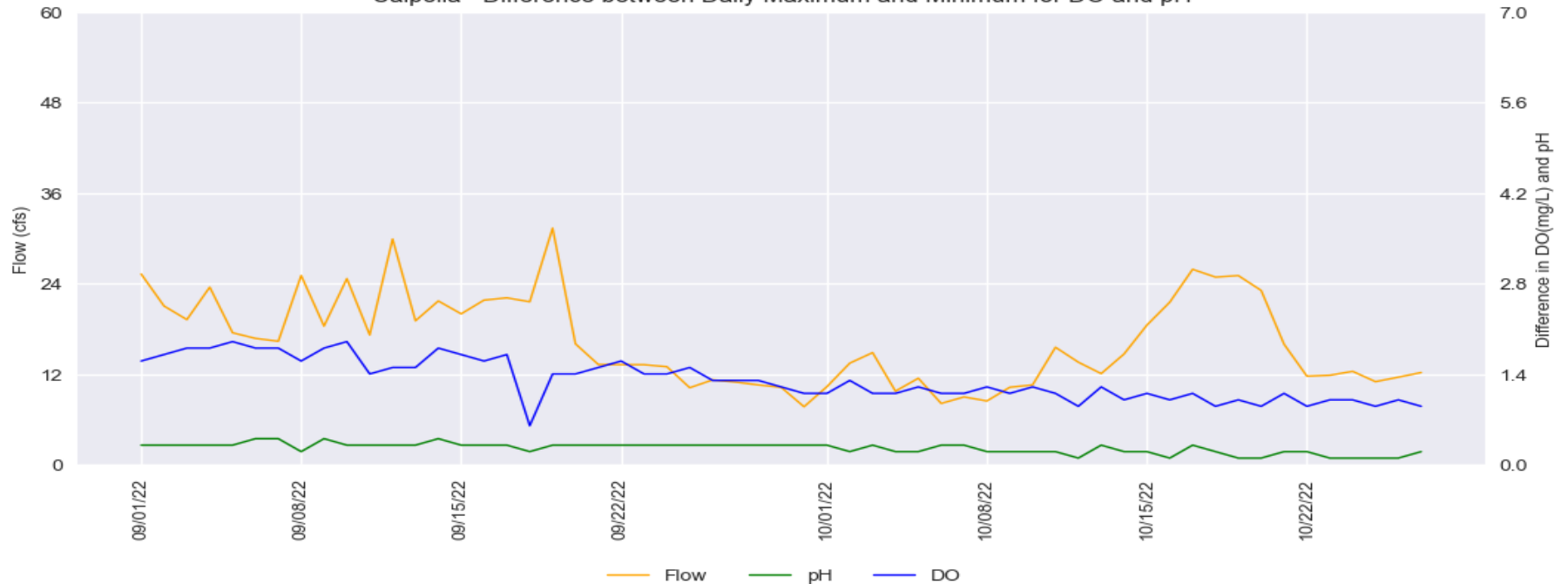
Provisional Data Subject to Revision

Calpella (East Fork Russian River)

Calpella Water Quality Trend



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

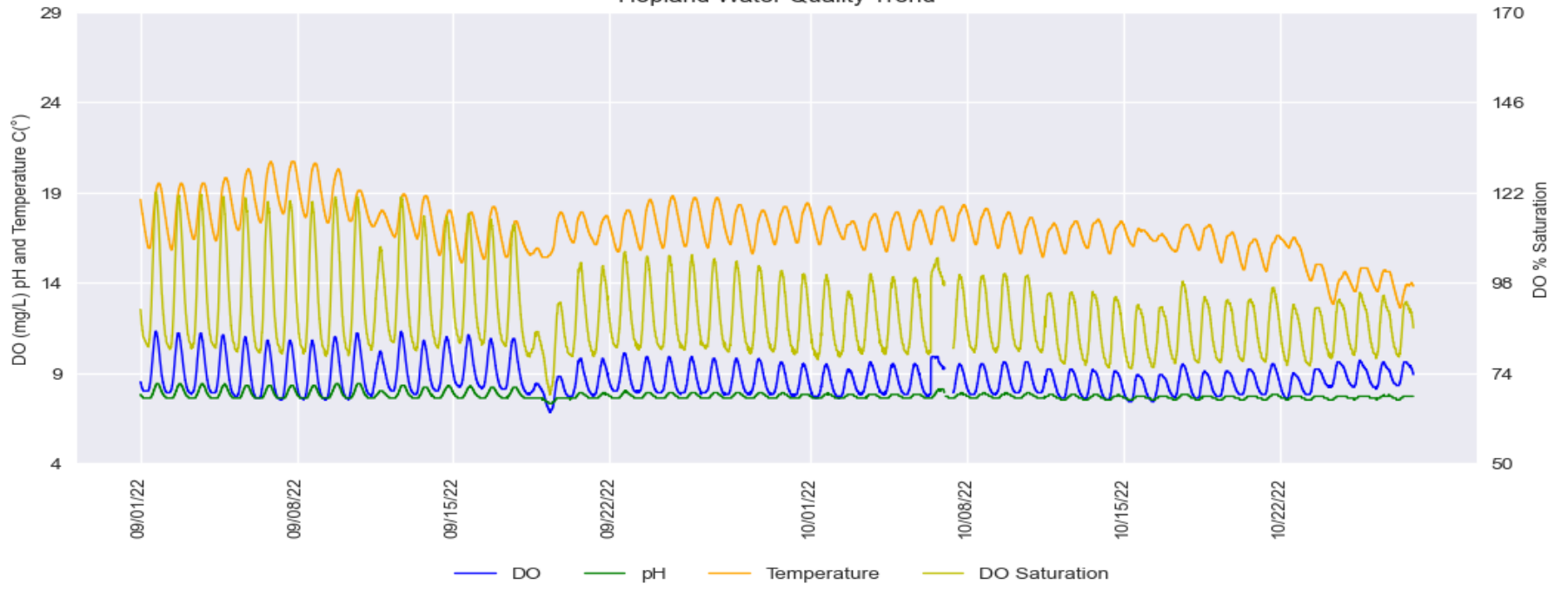


Russian River Water Quality September 01, 2022 - October 27, 2022

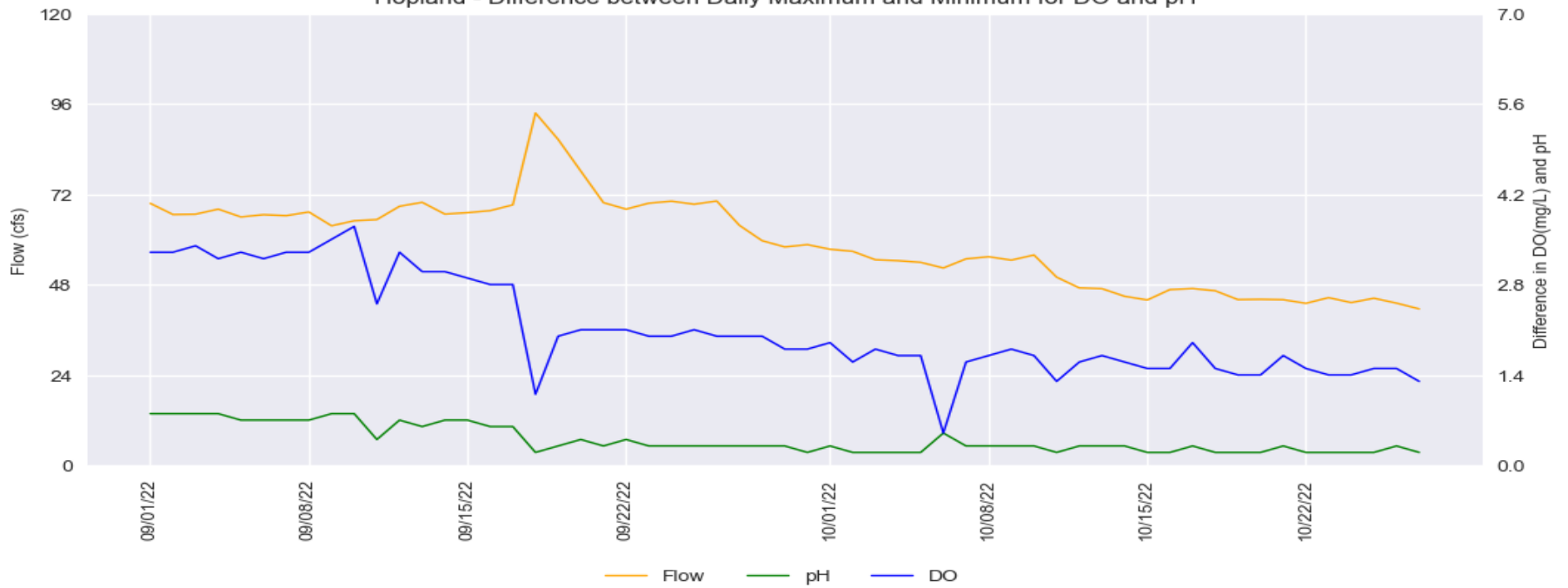
Provisional Data Subject to Revision

Hopland

Hopland Water Quality Trend

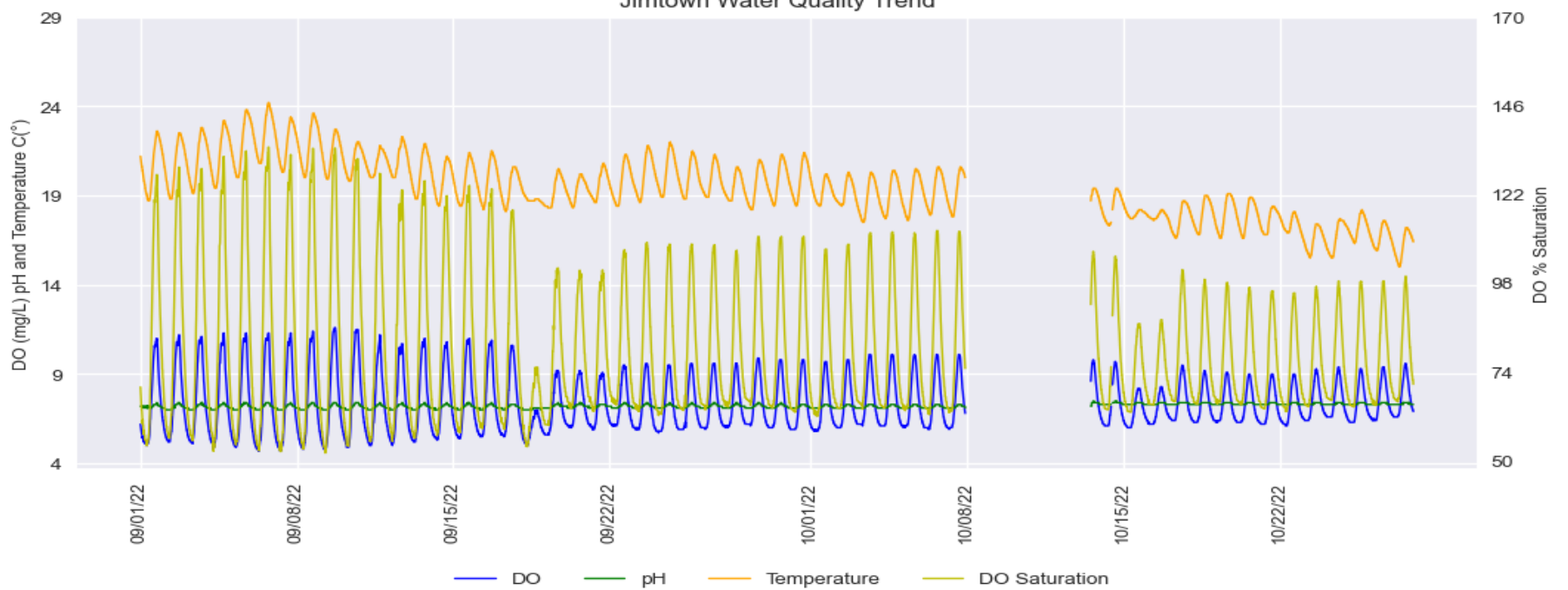


Hopland - Difference between Daily Maximum and Minimum for DO and pH

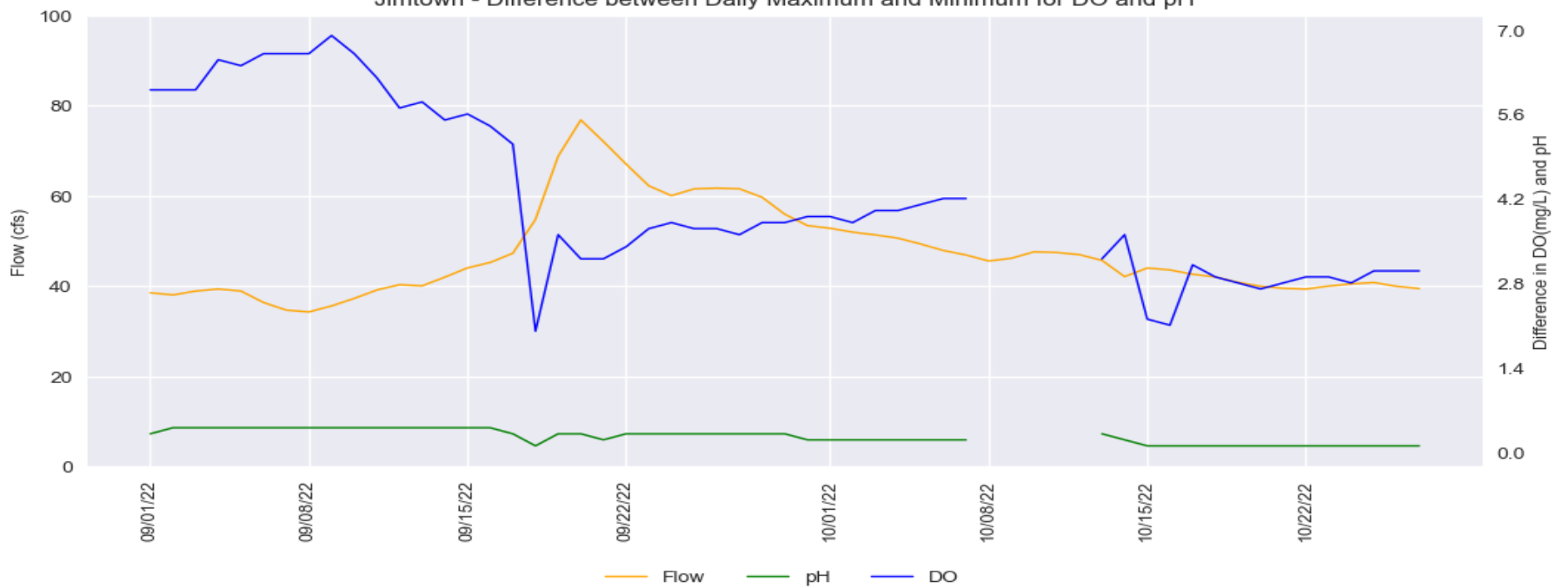


Jimtown

Jimtown Water Quality Trend



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

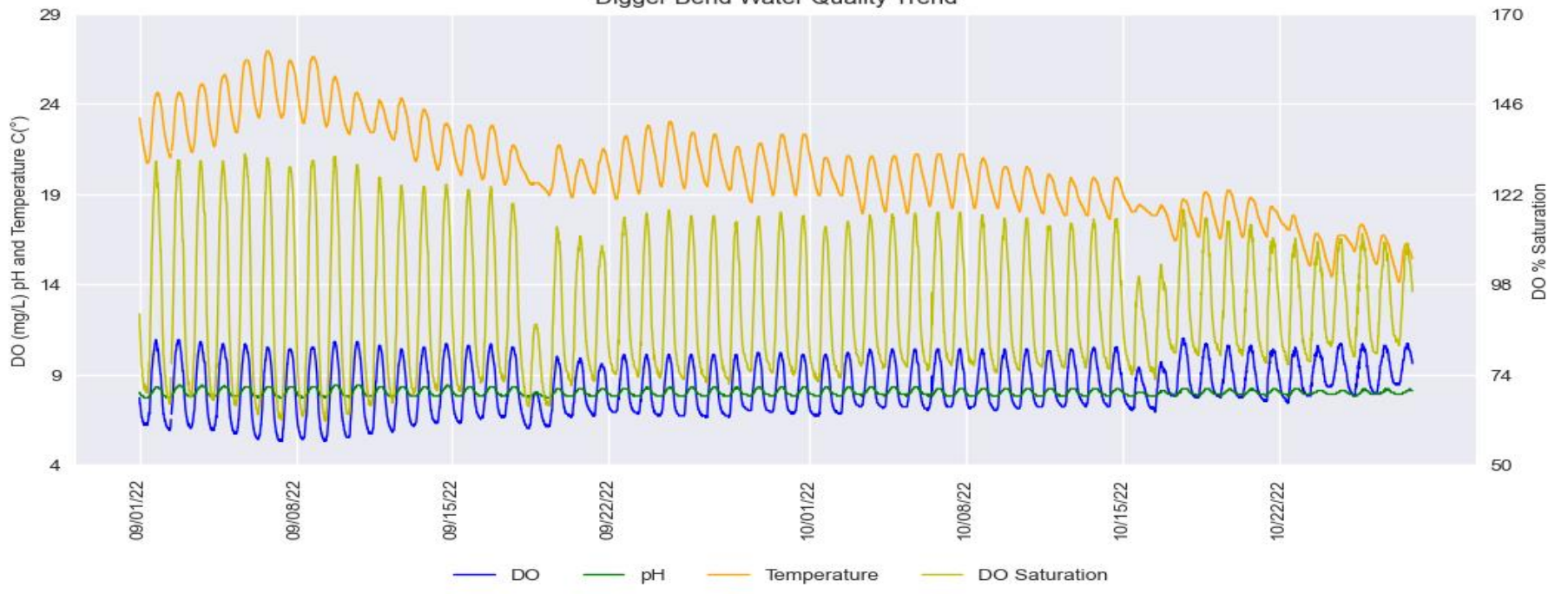


Russian River Water Quality September 01, 2022 - October 27, 2022

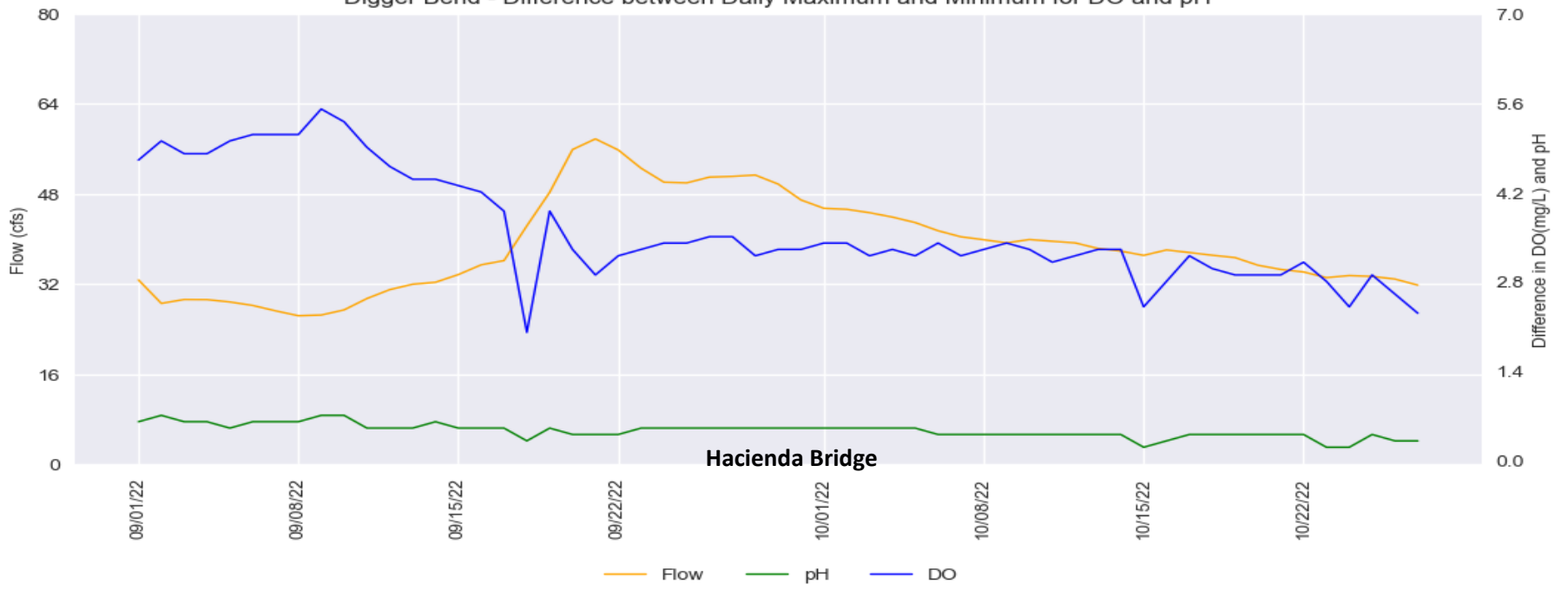
Provisional Data Subject to Revision

Diggers Bend

Digger Bend Water Quality Trend

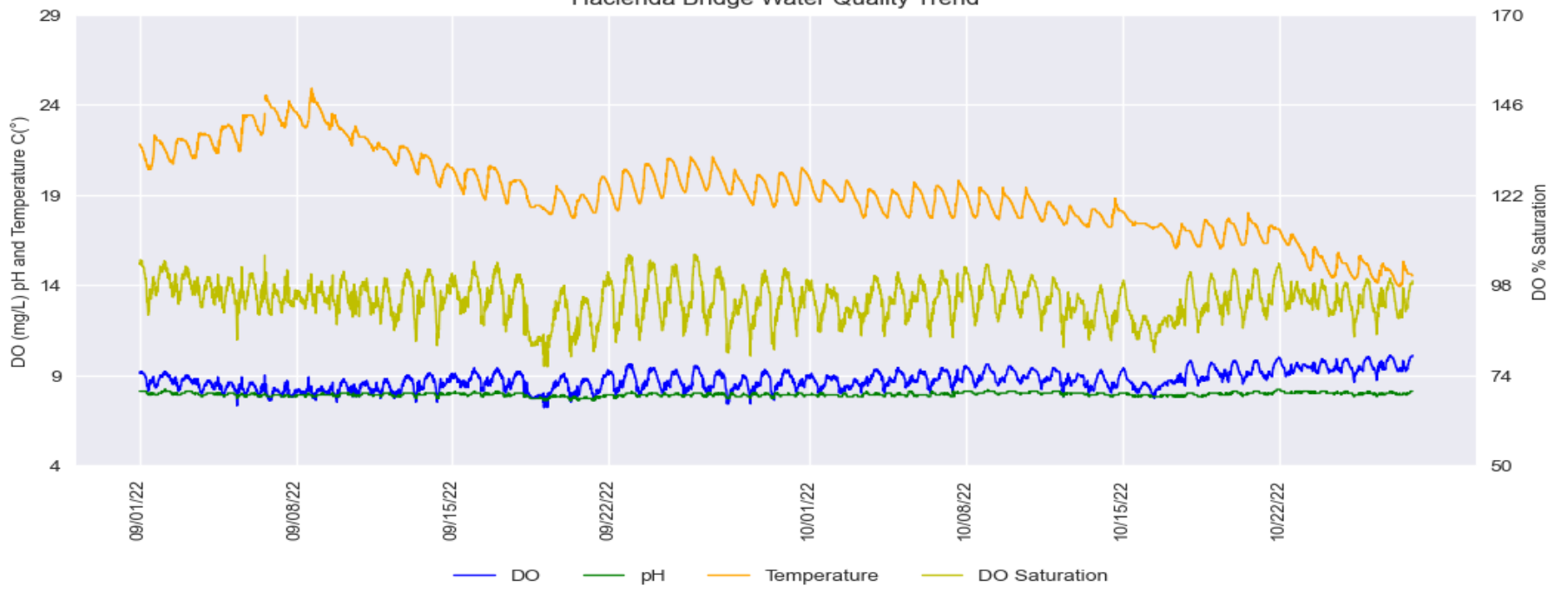


Digger Bend - Difference between Daily Maximum and Minimum for DO and pH

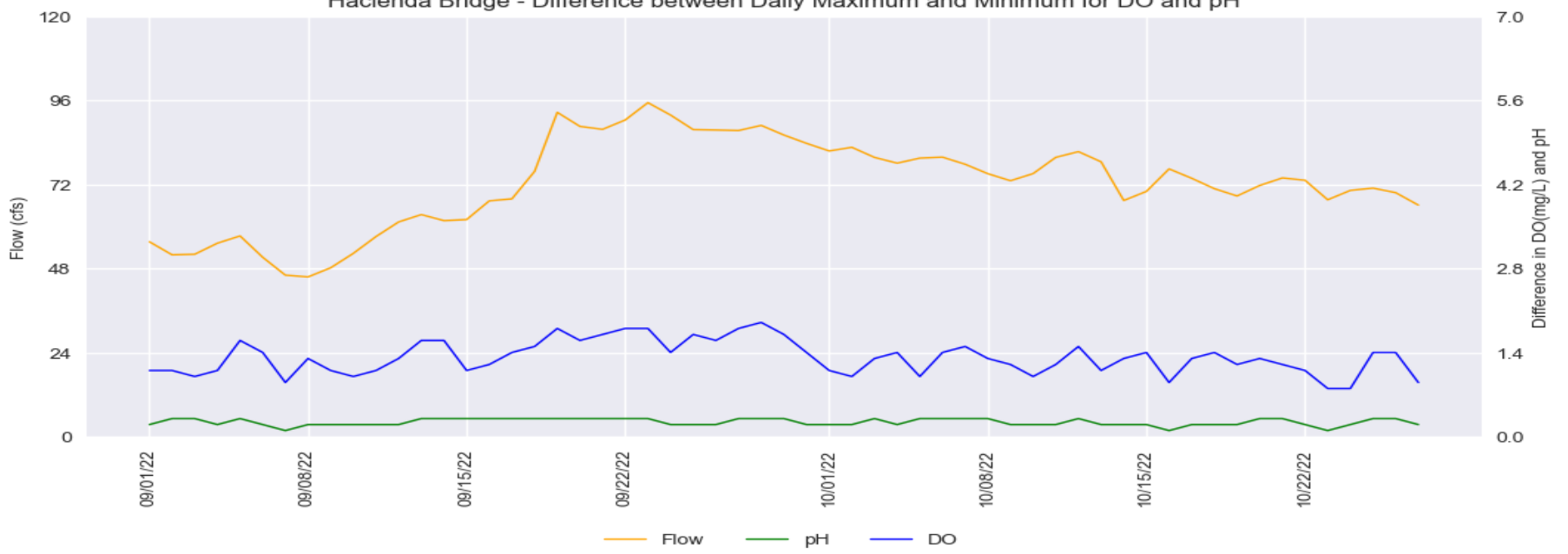


Hacienda Bridge

Hacienda Bridge Water Quality Trend



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

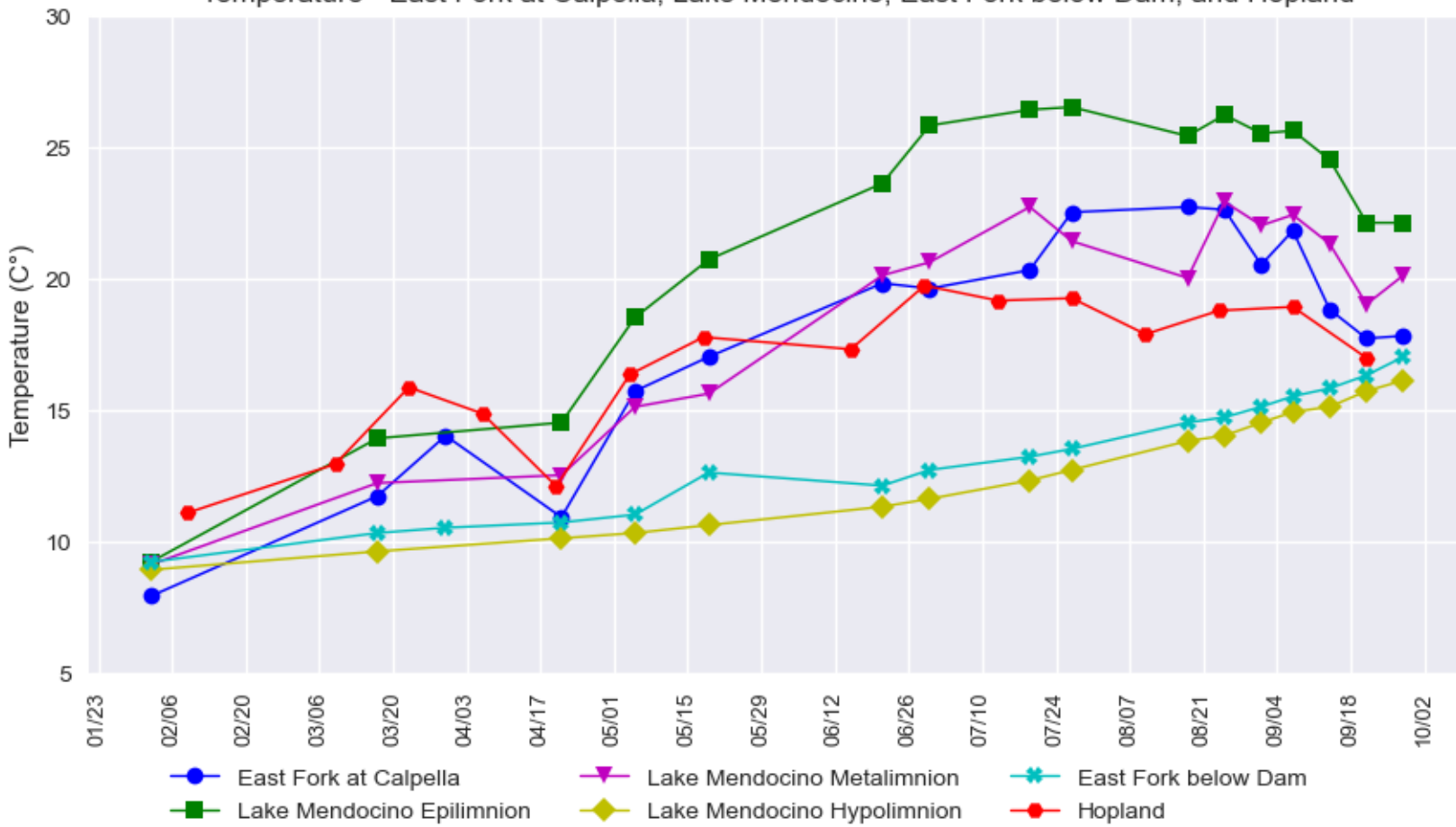


Russian River Water Quality Grab Samples (February 02 - October 04, 2022)

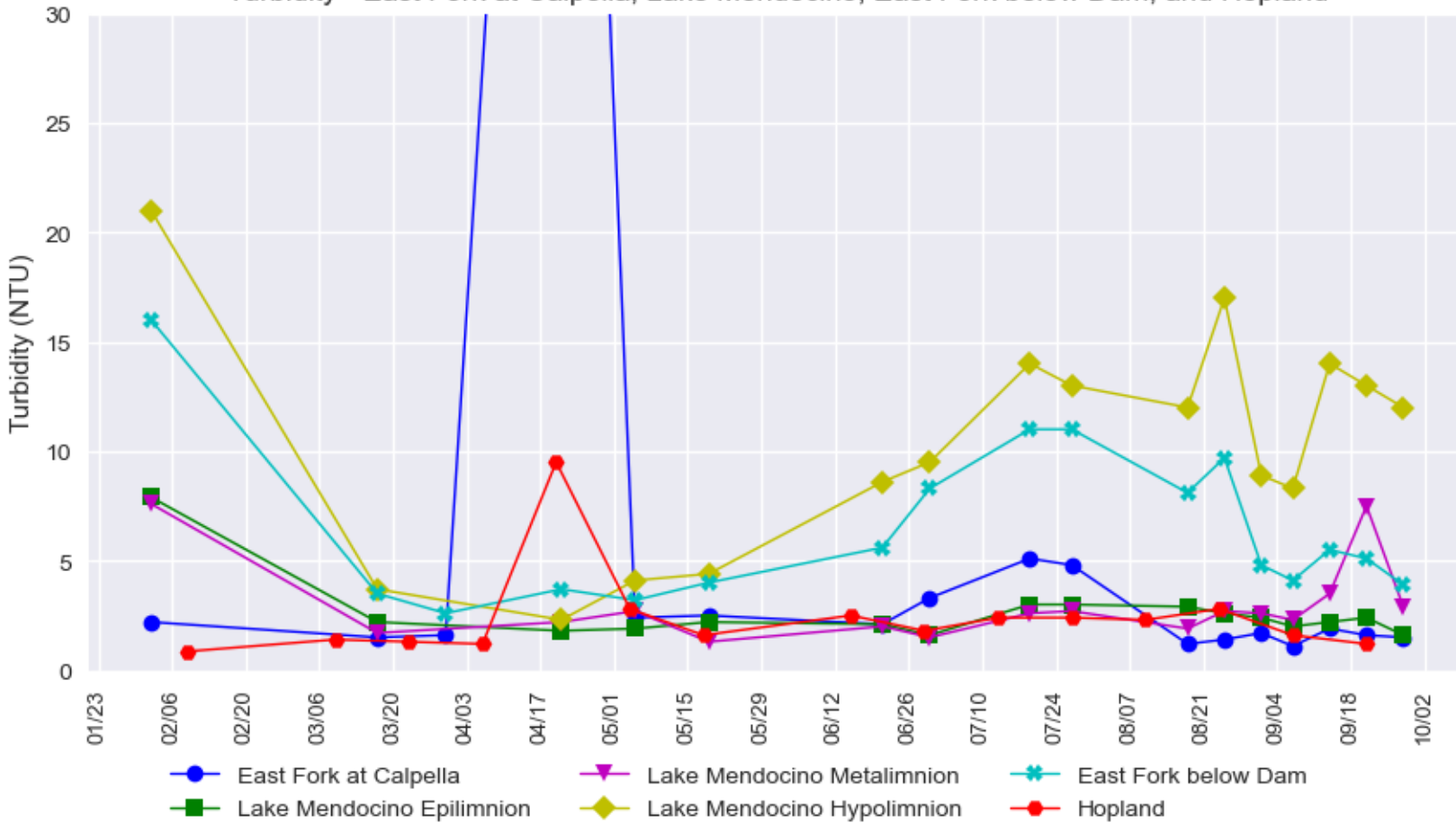
Provisional Data Subject to Revision

Lake Mendocino to Hopland Water Quality

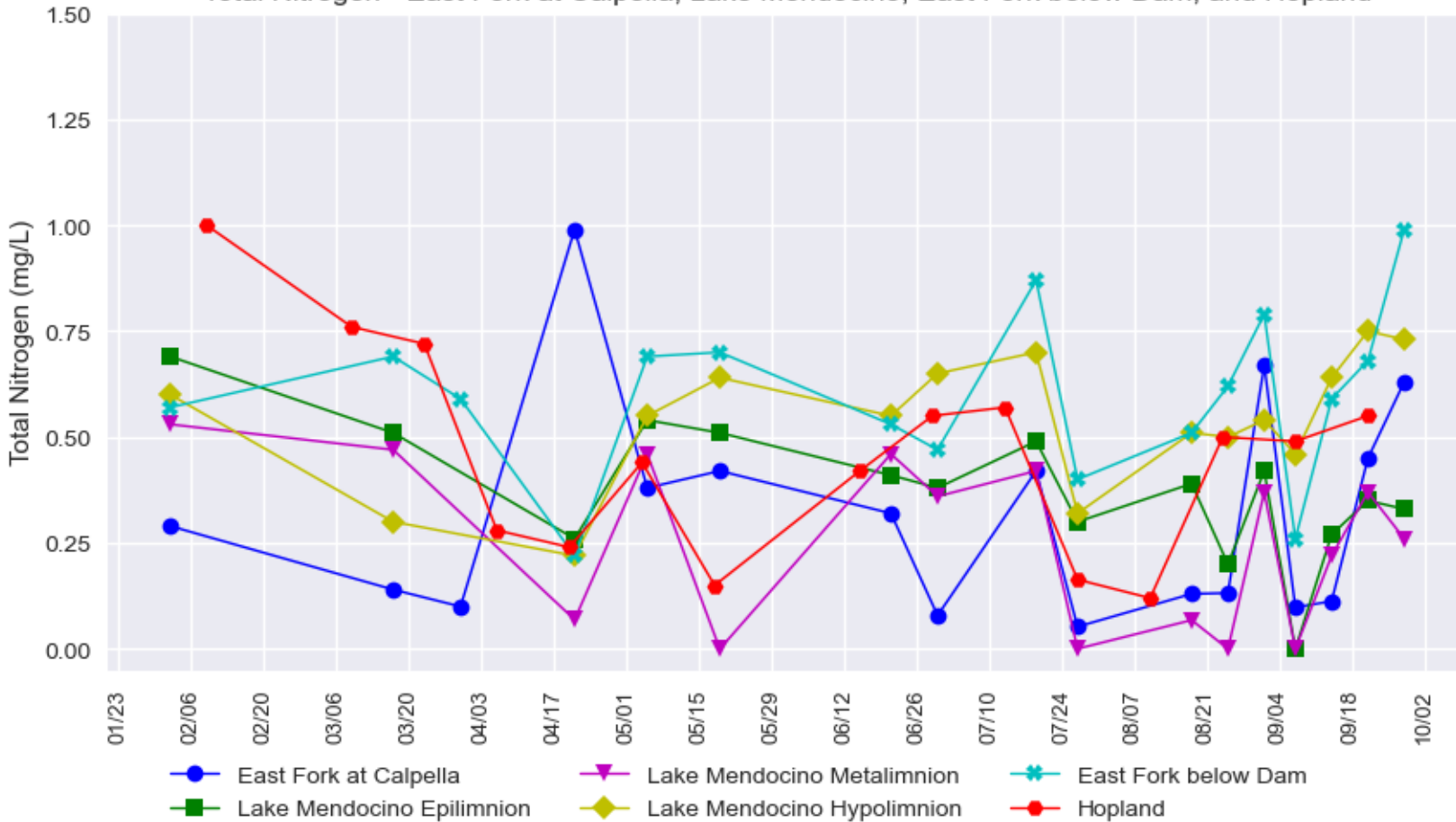
Temperature - East Fork at Calpella, Lake Mendocino, East Fork below Dam, and Hopland



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



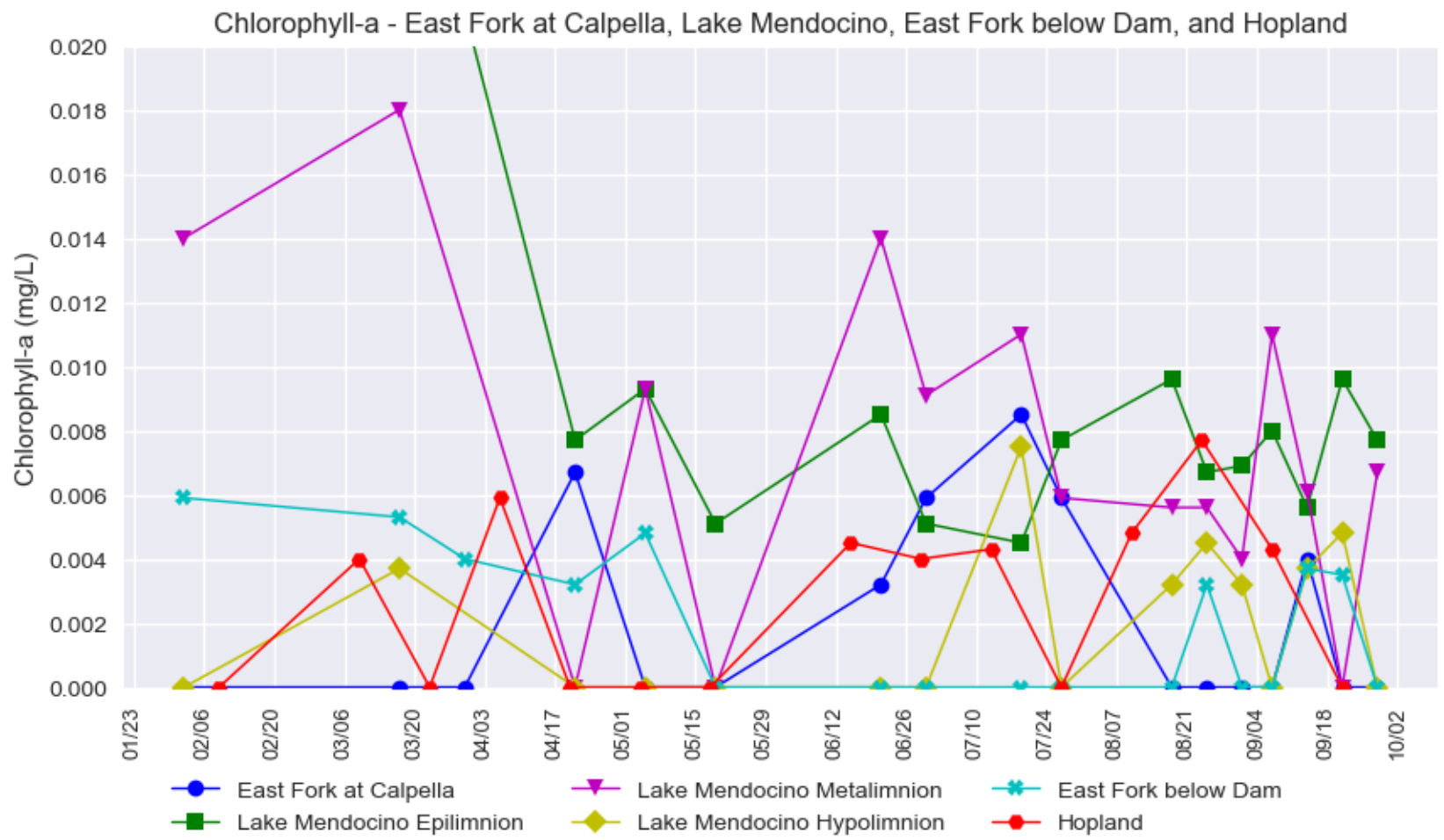
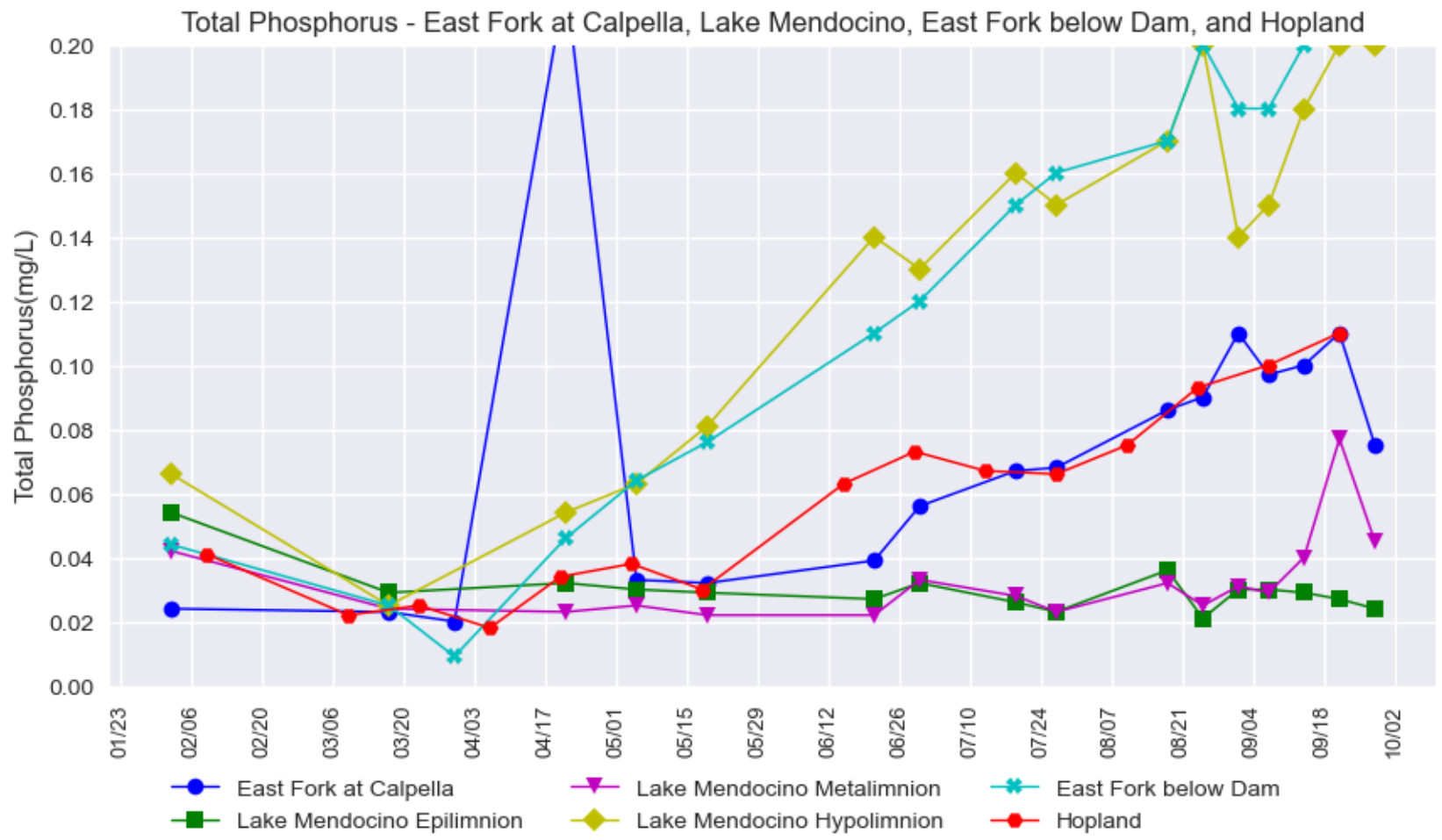
Total Nitrogen - East Fork at Calpella, Lake Mendocino, East Fork below Dam, and Hopland



*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 - October 04, 2022)

Provisional Data Subject to Revision
 Lake Mendocino to Hopland Water Quality



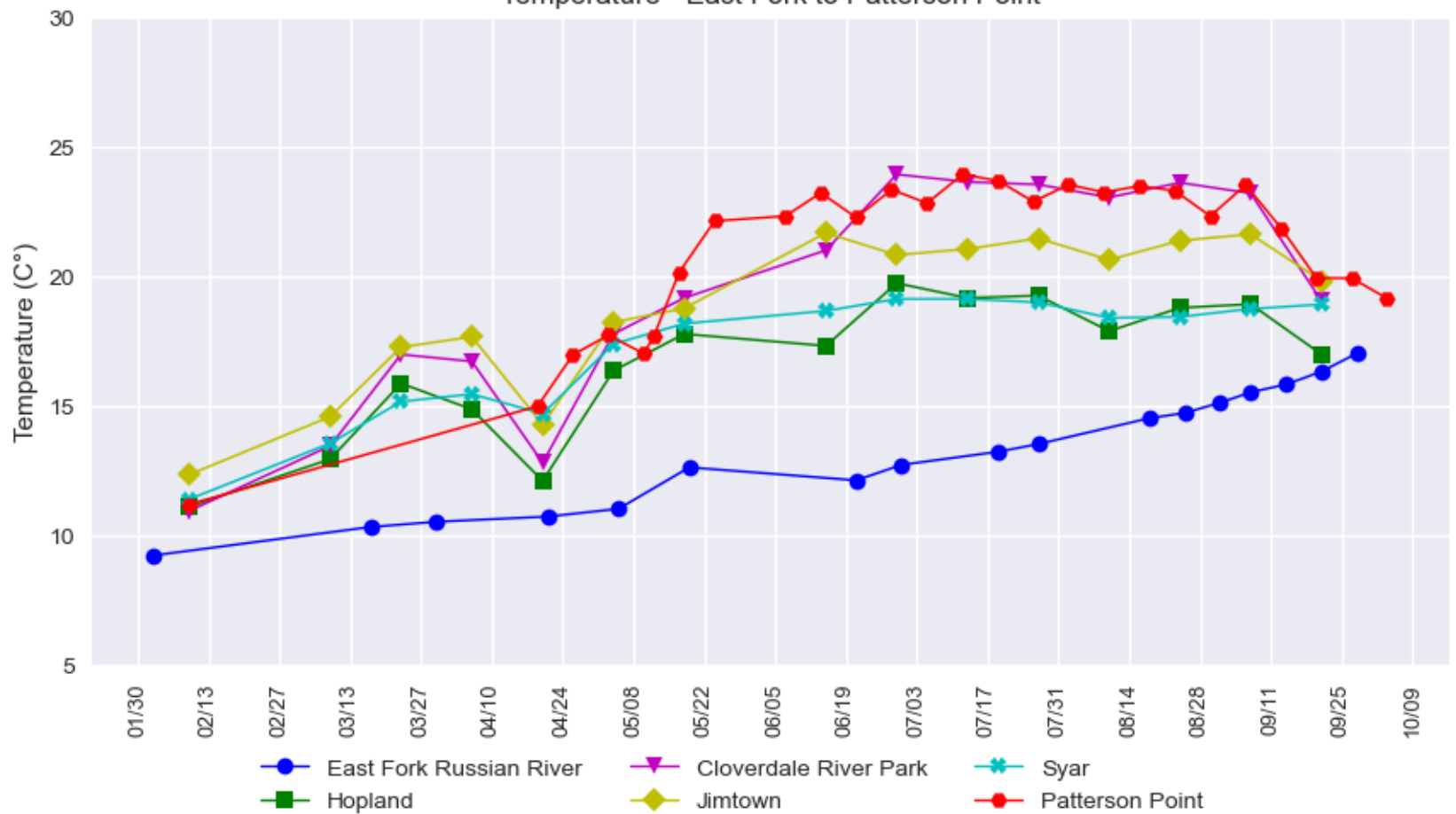
*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

Russian River Water Quality Grab Samples (February 02 - October 04, 2022)

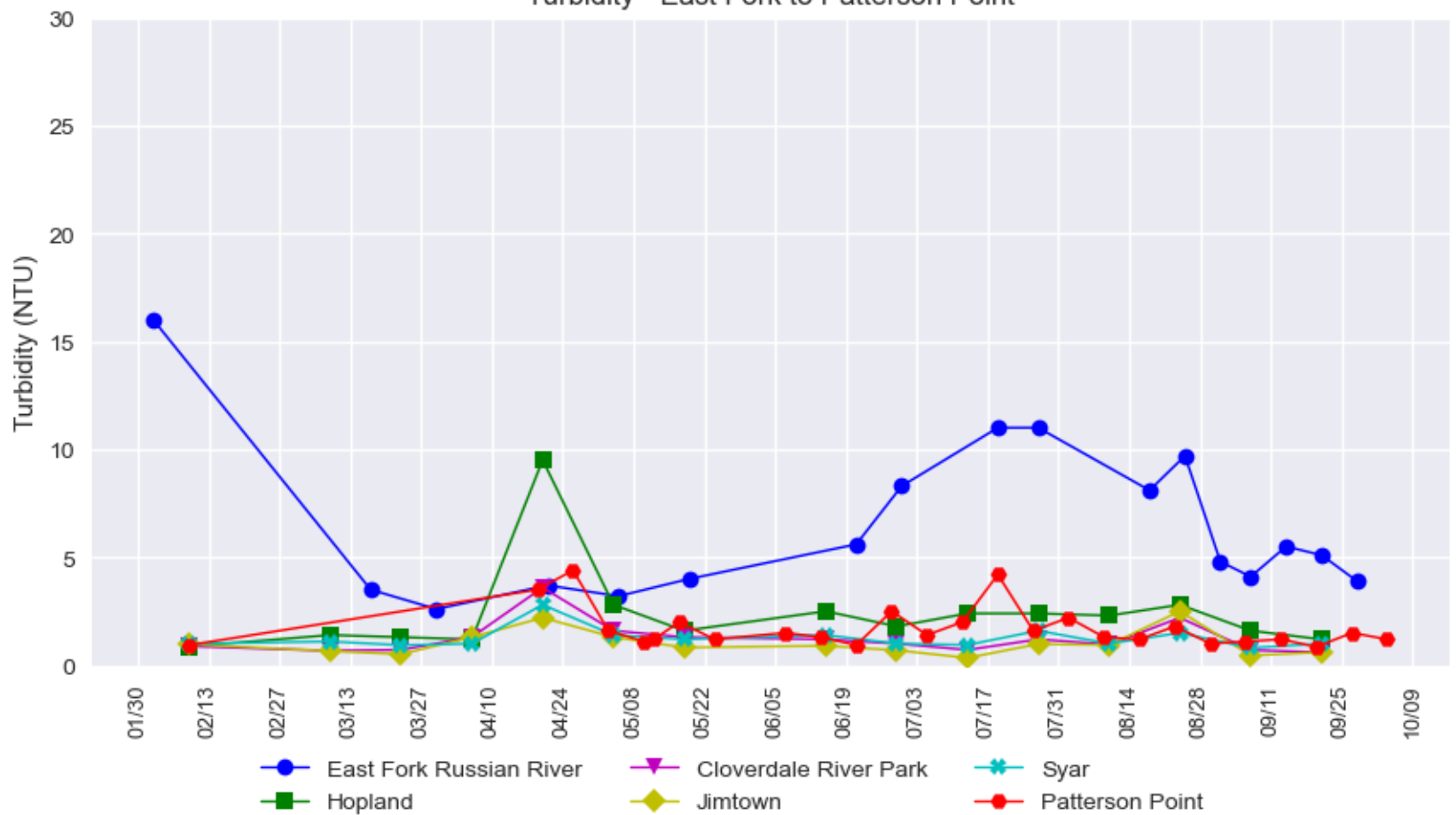
Provisional Data Subject to Revision

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

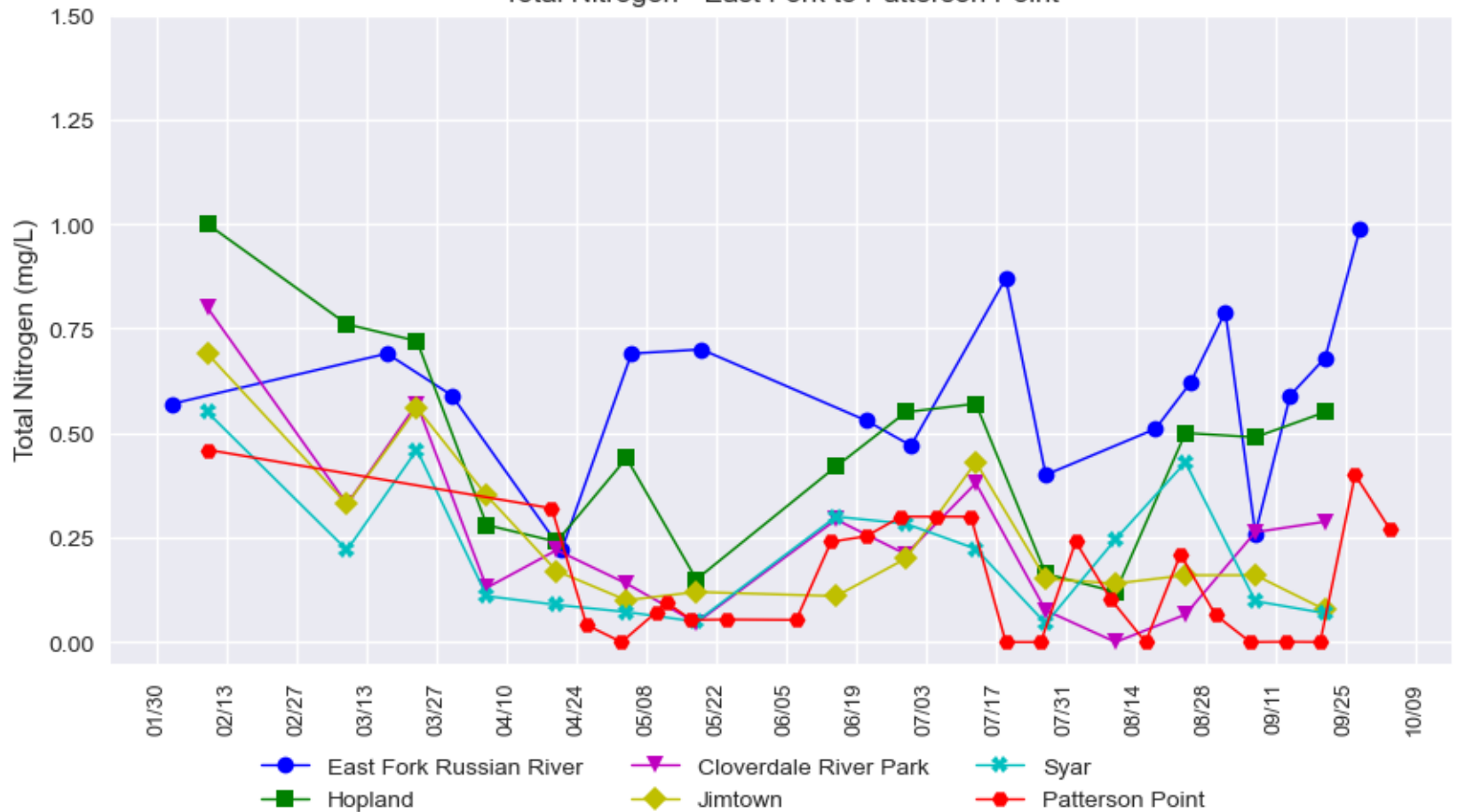
Temperature - East Fork to Patterson Point



Turbidity - East Fork to Patterson Point



Total Nitrogen - East Fork to Patterson Point



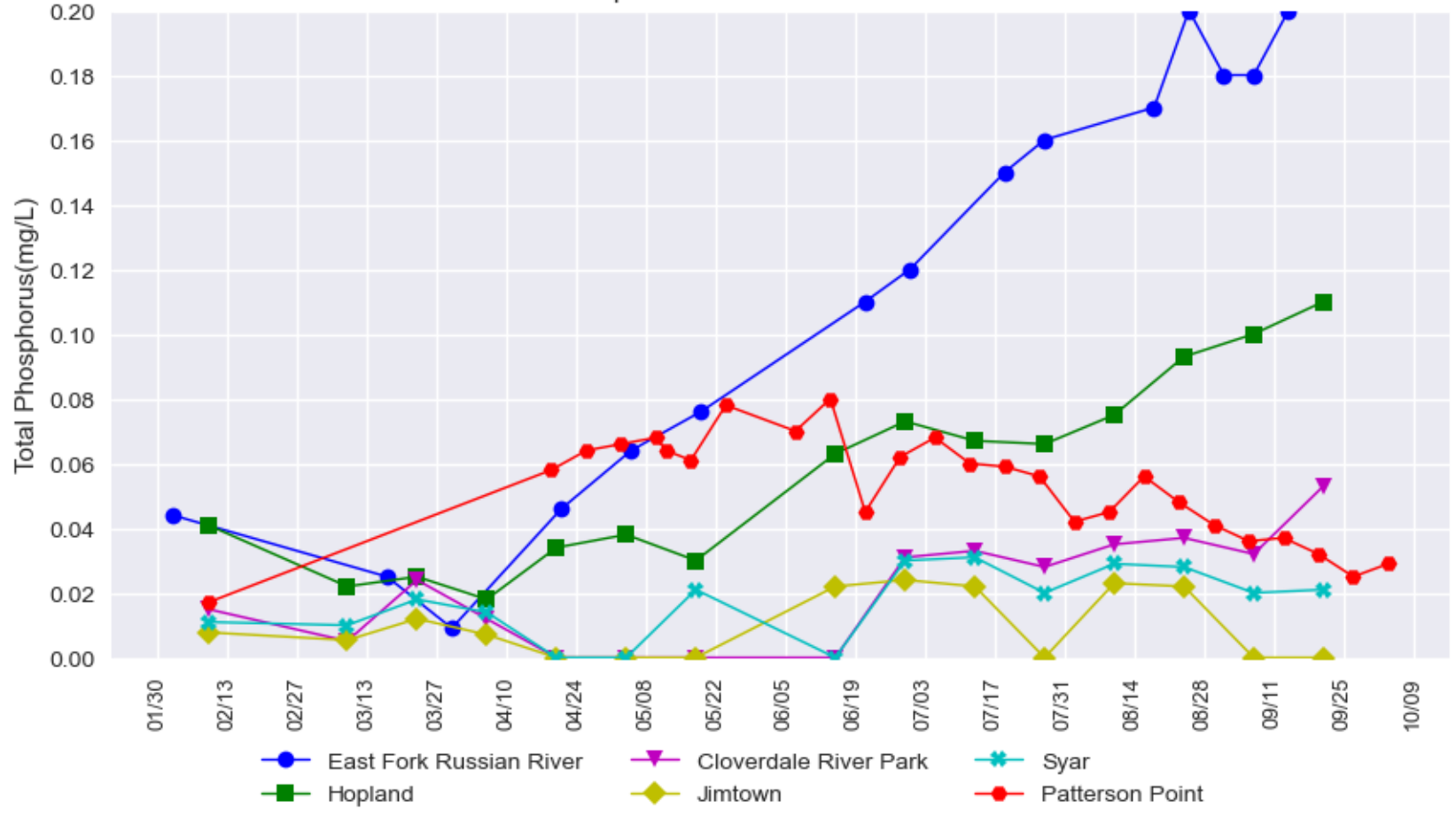
*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

Russian River Water Quality Grab Samples (February 02 - October 04, 2022)

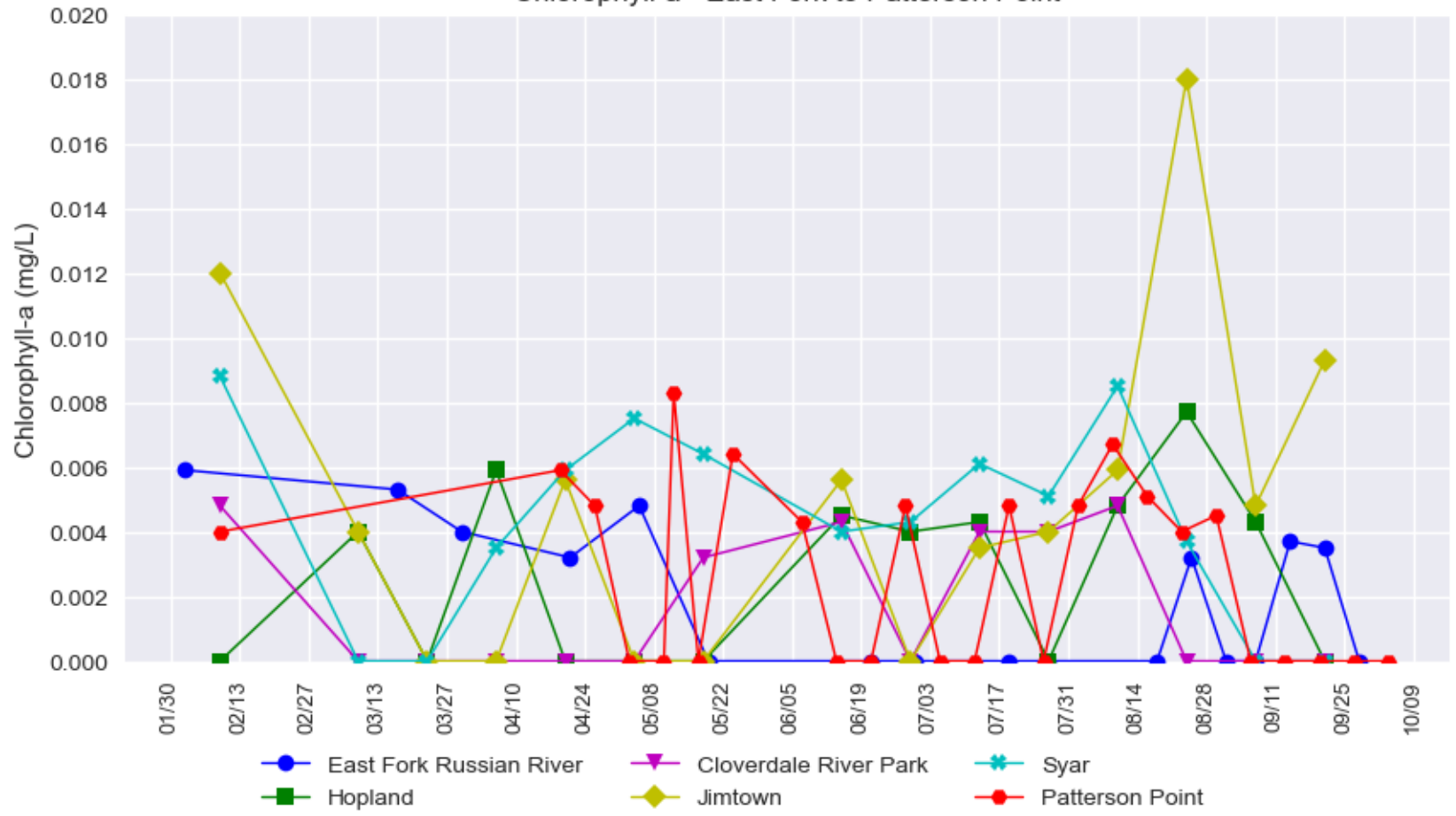
Provisional Data Subject to Revision

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 (August 23 - October 11, 2022)
Provisional Data Subject to Revision**

Parameter***	CDPH Guidance*	Date	Patterson Point	Monte Rio	Vacation Beach
Total Coliforms MPN/100 mL	10,000	8/23/2022	1236**	1500**	1439**
		8/30/2022	1720**	1720**	1956**
		9/6/2022	2014**	2143**	3654**
		9/13/2022	1515**	12997**	3076**
		9/20/2022	3282**	1467**	2098**
		9/27/2022	1850**	2359**	1918**
		10/4/2022	1413.6	980.4	1119.9
		10/11/2022	1732.9	1553.1	1046.2
E. Coli MPN/100 mL	235	8/23/2022	7.5	19.9	13.5
		8/30/2022	12.1	12.2	17.3
		9/6/2022	65.7	30.9	23.1
		9/13/2022	9.7	17.5	63.7
		9/20/2022	58.3	70.6	59.1
		9/27/2022	34.5	51.2	25.6
		10/4/2022	14.4	23.1	12.2
		10/11/2022	41.4	73.3	19.9
Enterococcus MPN/100 mL****	61	8/23/2022	8.6	8.4	4.1
		8/30/2022	3.1	9.7	22.1
		9/6/2022	65.1	7.5	7.5
		9/13/2022	2	7.5	15.5
		9/20/2022	151.5	21.3	25.9
		9/27/2022	60.9	53.7	32.3
		10/4/2022	14.5	12.1	5.2
		10/11/2022	23.8	27.5	22.8

*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 (August 2 - October 4, 2022)
Provisional Data Subject to Revision

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
Temperature	-	°C	8/2/2022	23.11	23.2	23.5	
			8/9/2022	23.22	23.6	23.2	
			8/16/2022	23.46	23.6	24.0	
			8/23/2022	23.28	23.5	23.7	
			8/30/2022	22.3	22.2	22.6	
			9/6/2022	23.5	23.7	24.1	
			9/13/2022	21.84	21.9	22.3	
			9/20/2022	19.91	19.8	19.6	
			9/27/2022	19.9	19.8	19.6	
			10/4/2022	19.12	18.9	19.0	
Nutrients	Ammonia as N	0.1	mg/L	8/2/2022	ND	ND	ND
				8/9/2022	0.12	0.1	0.1
				8/16/2022	ND	ND	ND
				8/23/2022	ND	ND	ND
				8/30/2022	ND	ND	ND
				9/6/2022	ND	ND	ND
				9/13/2022	ND	ND	ND
				9/20/2022	ND	ND	ND
				9/27/2022	ND	ND	ND
	10/4/2022	0.2	0.2	0.2			
	Nitrate as N	0.04	mg/L	8/2/2022	ND	ND	ND
				8/9/2022	ND	ND	ND
				8/16/2022	ND	0.1	ND
				8/23/2022	ND	ND	ND
				8/30/2022	0.065	0.1	0.1
				9/6/2022	ND	ND	ND
				9/13/2022	ND	ND	ND
				9/20/2022	ND	ND	ND
9/27/2022				ND	ND	ND	
10/4/2022	0.066	0.1	0.1				
Nutrients	Nitrite as N	0.05	mg/L	8/2/2022	ND	ND	ND
				8/9/2022	ND	ND	ND
				8/16/2022	ND	ND	ND
				8/23/2022	ND	ND	ND
				8/30/2022	ND	ND	ND
				9/6/2022	ND	ND	ND
				9/13/2022	ND	ND	ND
				9/20/2022	ND	ND	ND
				9/27/2022	ND	ND	ND
				10/4/2022	ND	ND	ND
	Total Organic Nitrogen as N	0.1	mg/L	8/2/2022	ND	ND	0.2
				8/9/2022	ND	ND	ND
				8/16/2022	ND	ND	ND
				8/23/2022	0.21	ND	ND
				8/30/2022	ND	ND	ND
				9/6/2022	ND	ND	ND
				9/13/2022	ND	ND	ND
				9/20/2022	ND	ND	ND
				9/27/2022	0.4	ND	ND
				10/4/2022	ND	ND	ND
	Total Kjeldahl Nitrogen	0.2	mg/L	8/2/2022	ND	ND	0.2
				8/9/2022	ND	ND	ND
				8/16/2022	ND	ND	ND
				8/23/2022	0.21	ND	ND
				8/30/2022	ND	ND	ND
				9/6/2022	ND	ND	ND
				9/13/2022	ND	ND	ND
				9/20/2022	ND	ND	ND
				9/27/2022	0.4	ND	ND
				10/4/2022	ND	ND	ND
	Total Phosphorus	0.02	mg/L	8/2/2022	0.056	0.1	0.0
				8/9/2022	0.06	0.1	0.0
				8/16/2022	0.056	0.1	0.0
				8/23/2022	0.048	0.0	0.0
				8/30/2022	0.041	0.0	0.0
				9/6/2022	0.036	0.0	0.0
9/13/2022				0.037	0.0	0.0	
9/20/2022				0.032	0.0	0.0	
9/27/2022				0.025	0.0	0.0	
10/4/2022				0.029	0.0	0.0	
Total Orthophosphate	0.03	mg/L	8/2/2022	0.11	0.1	0.1	
			8/9/2022	0.093	0.1	0.1	
			8/16/2022	0.079	0.1	0.0	
			8/23/2022	0.077	0.1	0.0	
			8/30/2022	0.071	0.1	0.0	
			9/6/2022	0.053	0.0	ND	
			9/13/2022	0.064	0.1	0.0	
			9/20/2022	0.038	0.0	0.0	
			9/27/2022	0.034	0.0	0.0	
			10/4/2022	0.04	0.0	0.0	

Russian River Water Quality Grab Samples (August 2 - October 4, 2022)
Provisional Data Subject to Revision

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
Chlorophyll	Chlorophyll A	0.003	mg/L	8/2/2022	0.0048	0.0	0.0
				8/9/2022	ND	ND	0.0
				8/16/2022	0.0051	ND	0.0
				8/23/2022	0.004	ND	0.0
				8/30/2022	0.0045	ND	ND
				9/6/2022	ND	ND	0.0
				9/13/2022	ND	0.0	ND
				9/20/2022	ND	ND	ND
				9/27/2022	ND	ND	ND
				10/4/2022	ND	ND	ND
Carbon	Total Organic Carbon	0.3	mg/L	8/2/2022	2.58	2.7	2.7
				8/9/2022	2.43	2.4	2.3
				8/16/2022	2.24	2.3	2.2
				8/23/2022	2.24	2.2	2.2
				8/30/2022	2.07	2.1	2.1
				9/6/2022	2.09	2.0	2.0
				9/13/2022	2.01	2.2	2.1
				9/20/2022	2.17	2.1	2.0
				9/27/2022	2.06	1.9	1.9
	10/4/2022	1.8	1.8	1.8			
	Dissolved Organic Carbon	0.2	mg/L	8/2/2022	2.11	2.3	2.1
				8/9/2022	2.02	2.0	2.0
				8/16/2022	1.91	1.9	2.0
				8/23/2022	1.9	1.9	1.9
				8/30/2022	1.68	1.7	1.7
				9/6/2022	1.75	1.7	1.6
				9/13/2022	1.64	1.8	1.7
				9/20/2022	1.71	1.7	1.6
9/27/2022				1.63	1.6	1.6	
10/4/2022	1.54	1.7	1.5				
Solids	Turbidity	0.1	NTU	8/2/2022	2.1	2.4	2.2
				8/9/2022	1.5	1.3	1.3
				8/16/2022	1.2	1.2	1.8
				8/23/2022	1.8	1.0	0.9
				8/30/2022	1	1.1	1.2
				9/6/2022	1.1	1.0	1.6
				9/13/2022	1.2	1.0	1.1
				9/20/2022	0.85	1.0	1.0
				9/27/2022	1.5	2.3	3.4
	10/4/2022	1.2	1.6	2.2			
	TDS	10	mg/L	8/2/2022	180	170.0	150.0
				8/9/2022	160	160.0	150.0
				8/16/2022	140	140.0	140.0
				8/23/2022	140	160.0	150.0
				8/30/2022	140	130.0	130.0
				9/6/2022	150	140.0	140.0
				9/13/2022	150	150.0	130.0
				9/20/2022	140	120.0	94.0
9/27/2022				170	170.0	170.0	
10/4/2022	160	160.0	170.0				