



Sonoma Water

# State Water Resources Control Board Temporary Urgency Change Order (6/14/2021) Russian River Water Quality Report September 3, 2021 - September 9, 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).

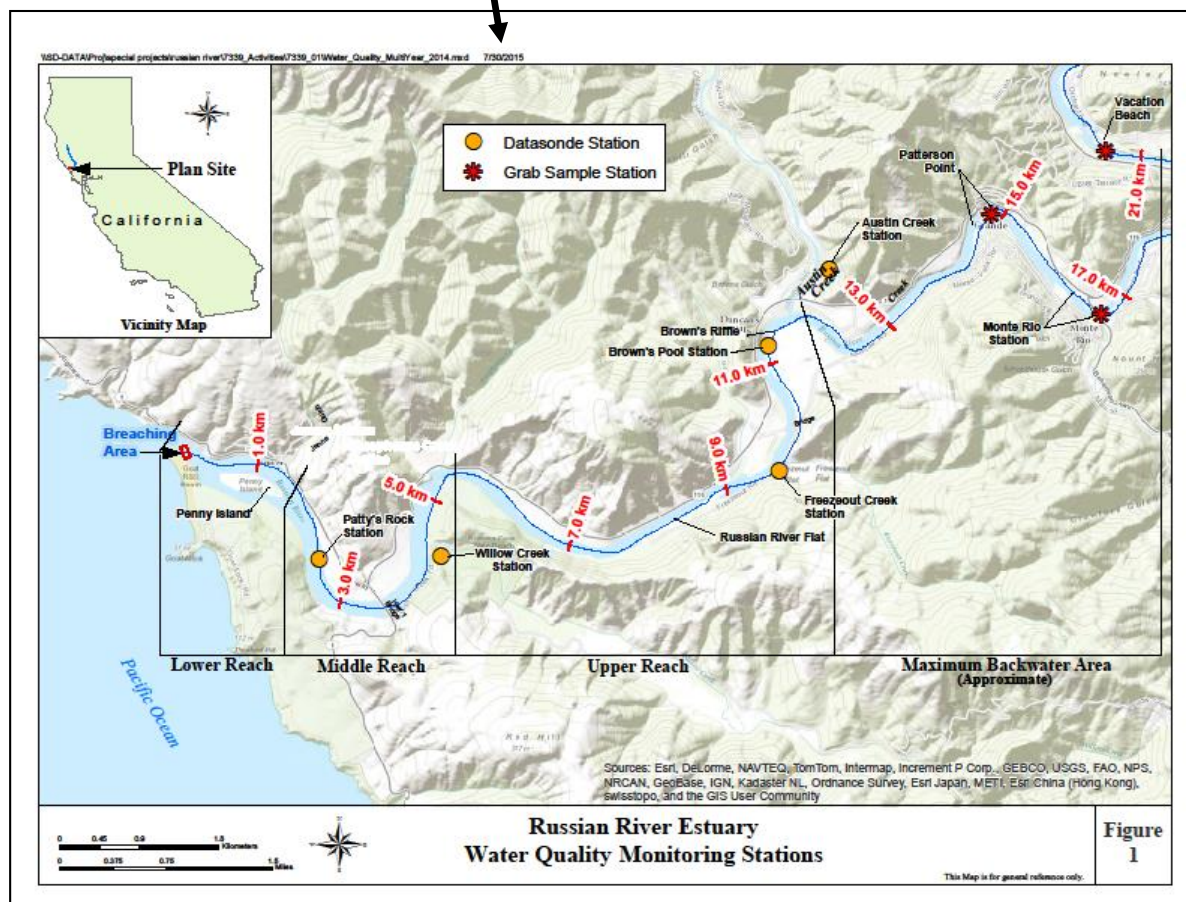
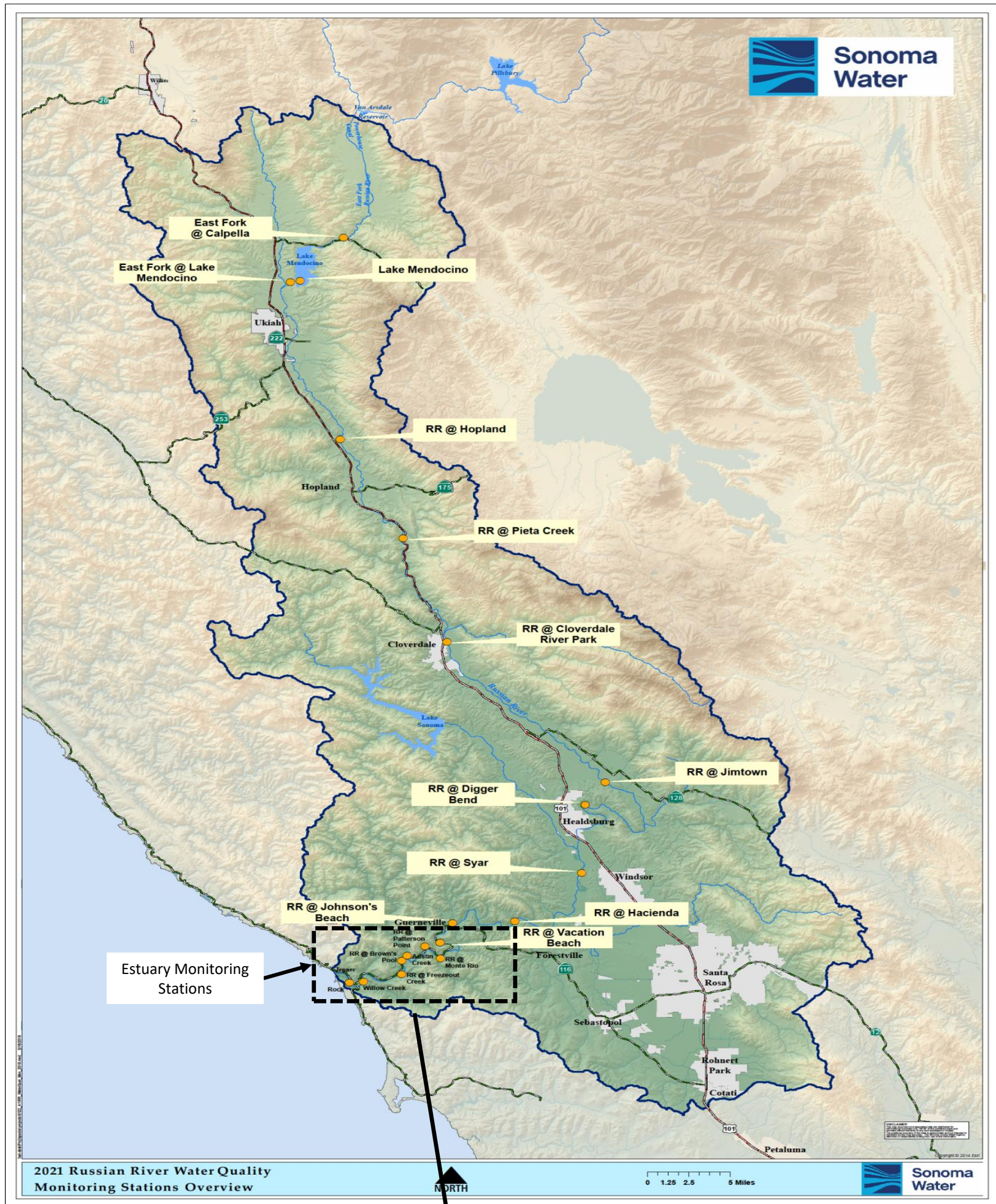
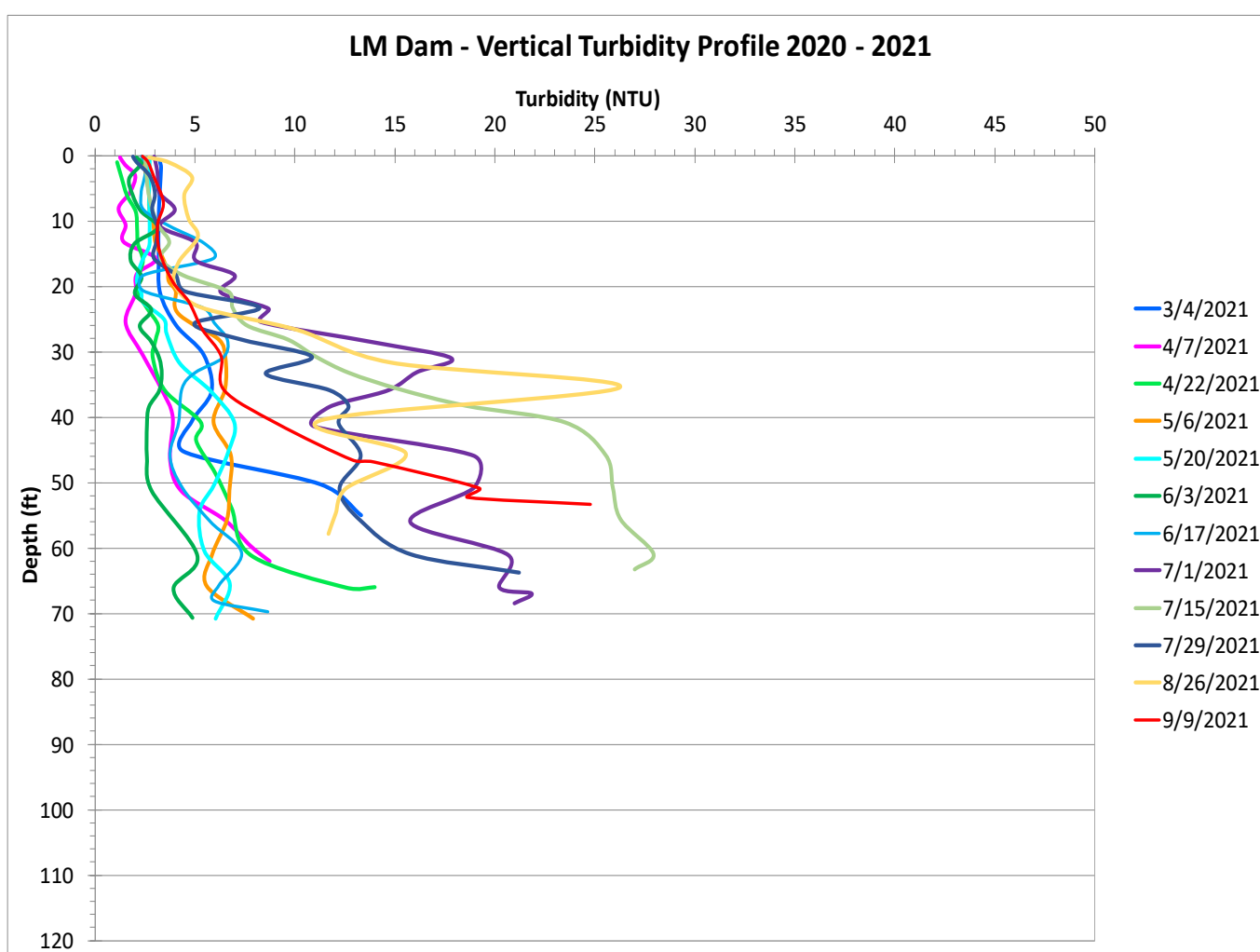
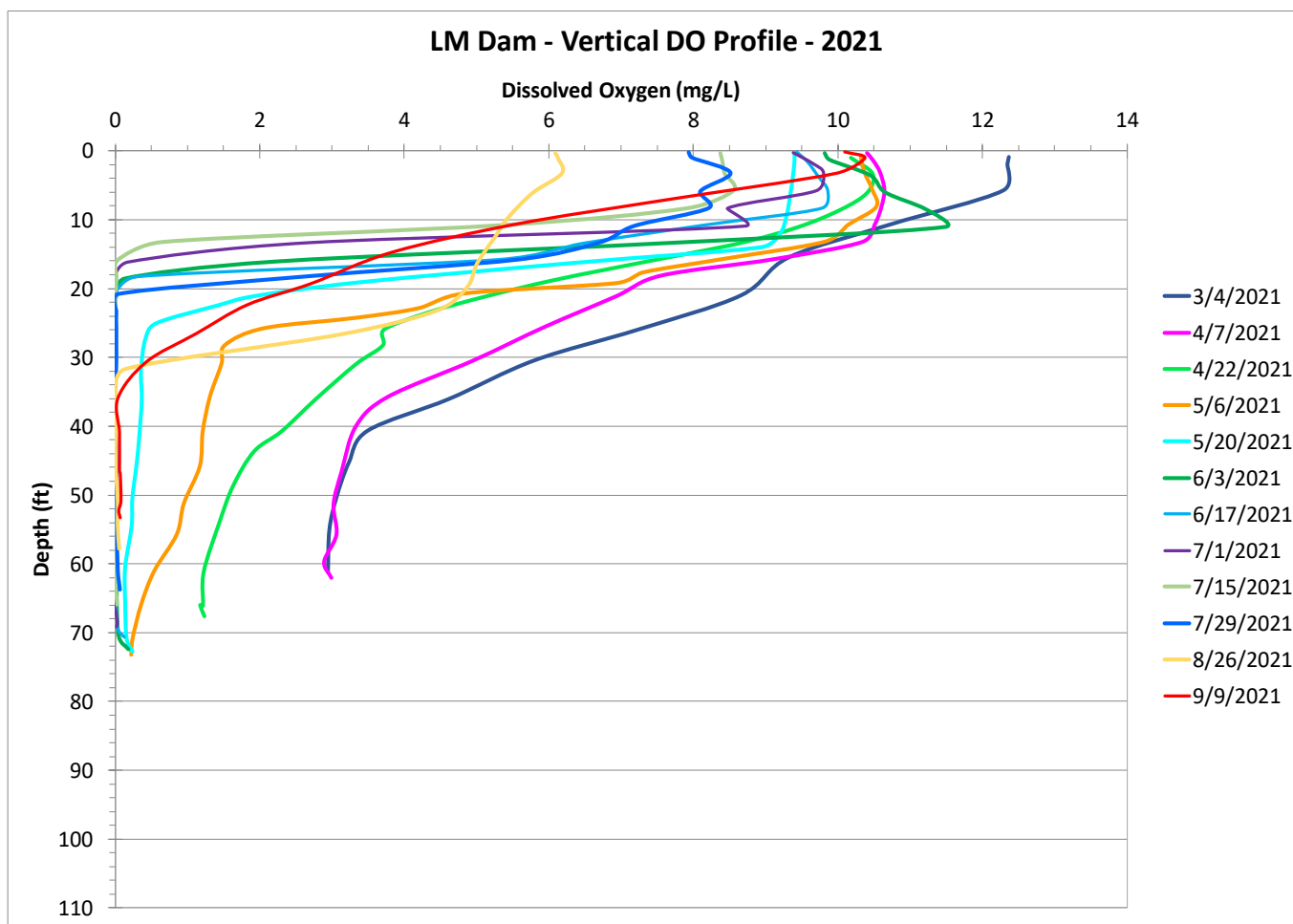
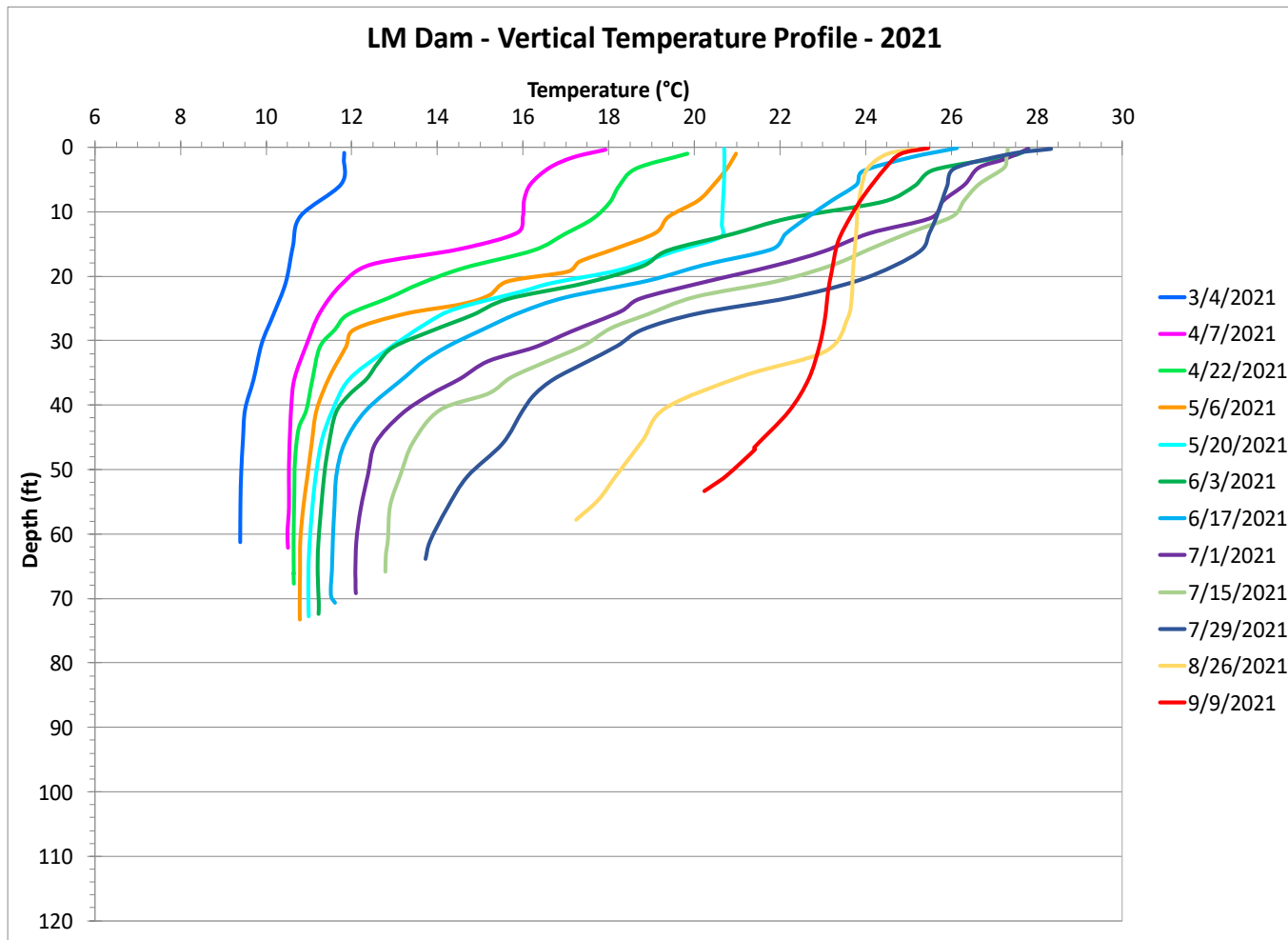


Figure 1

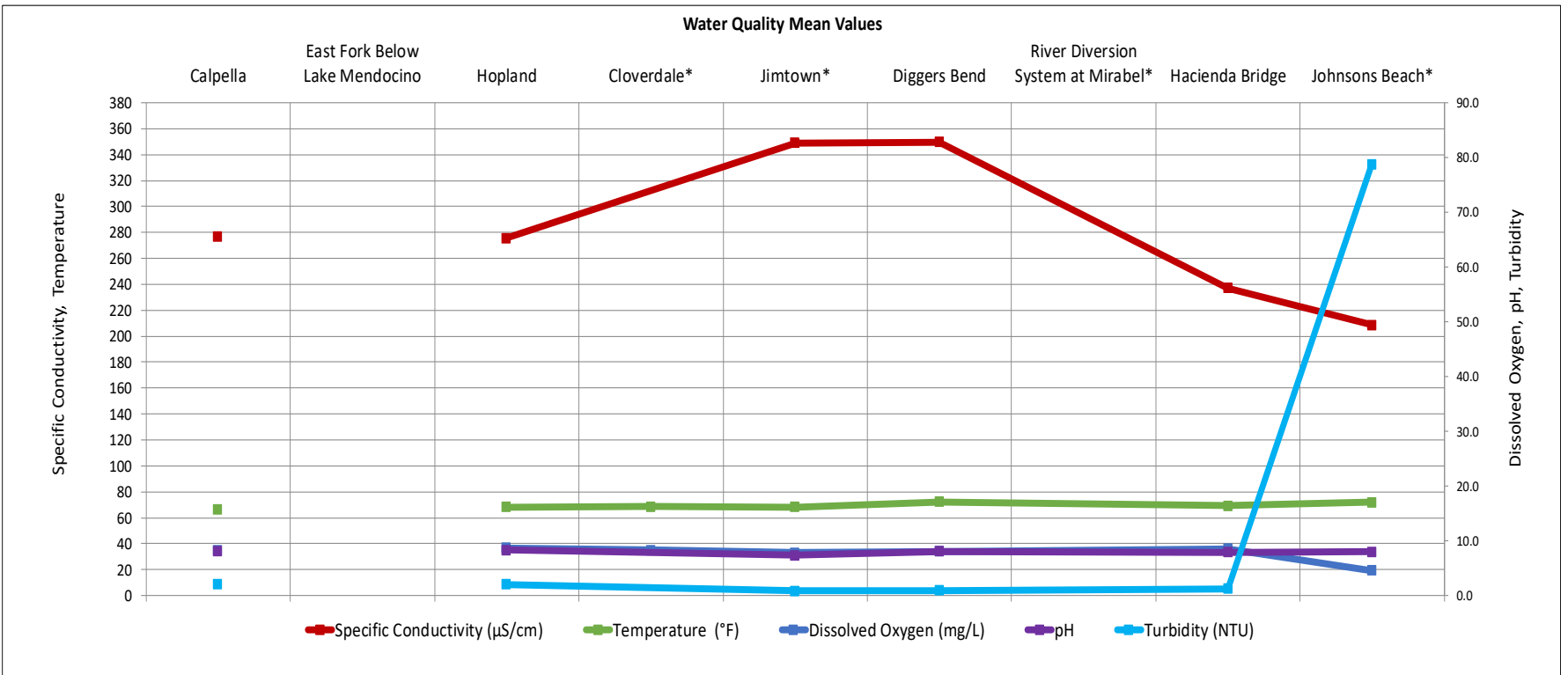
Lake Mendocino Water Quality Vertical Profiles (March 4 - September 9, 2021)  
Provisional Data Subject to Revision



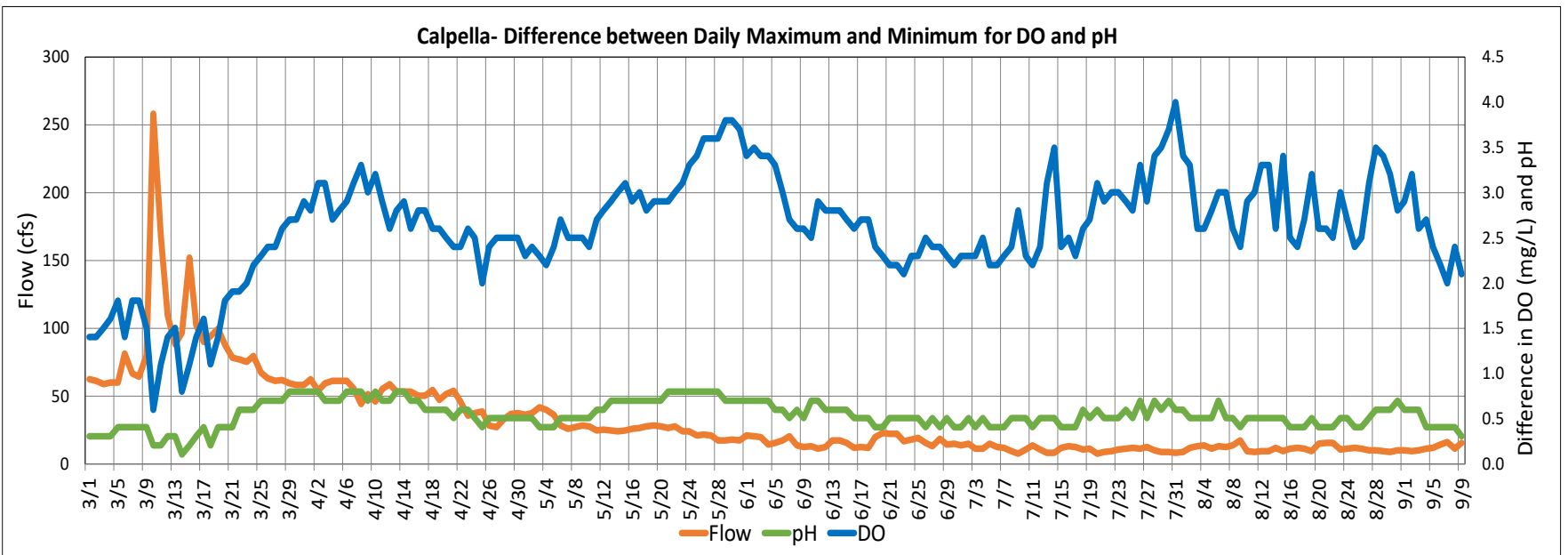
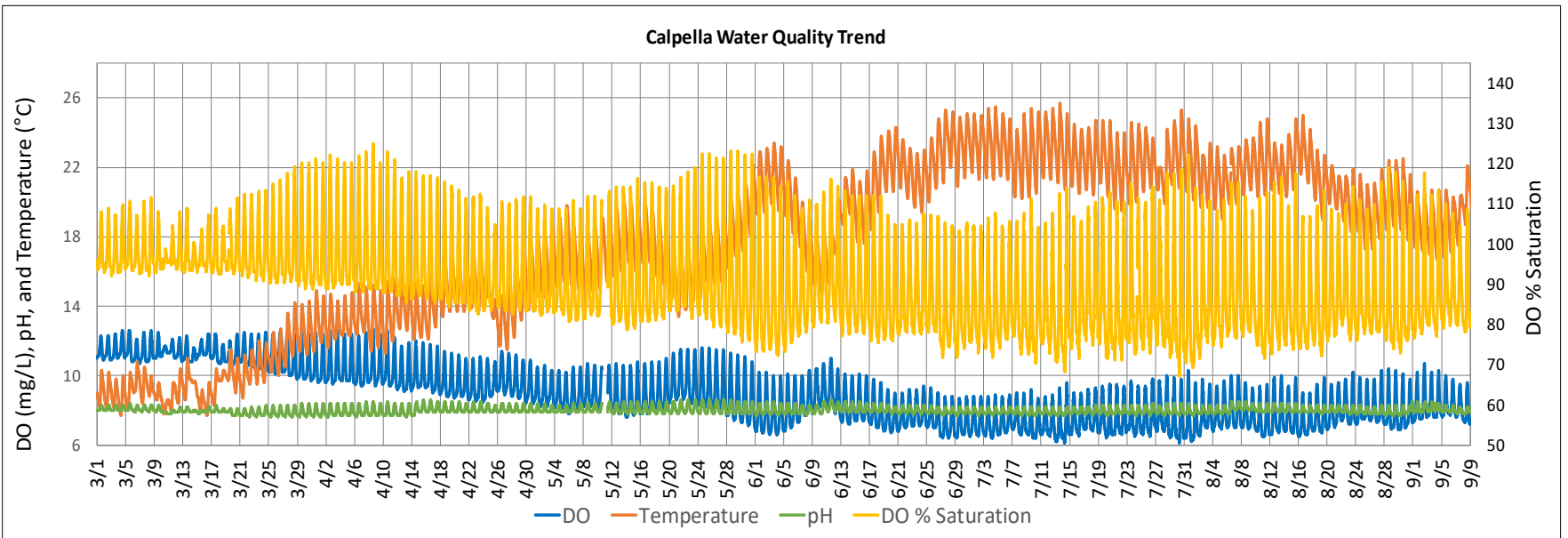
## Russian River Water Quality Sondes (September 3 - September 9, 2021) Provisional Data Subject to Revision

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	62.1		64.0	65.1	64.2	67.6		66.2	69.5
	Max	71.8		72.3	72.1	72.5	77.7		73.4	74.1
	Mean	66.7		68.1	68.6	68.3	72.3		69.2	72.1
Specific Conductivity (µS/cm)	Min	264		189		347	345		234	143
	Max	290		283		354	352		245	220
	Mean	277		276		349	350		237	208
Dissolved Oxygen (mg/L)	Min	7.2		5.6	7.2	4.3	6.0		7.5	0.9
	Max	10.3		13.0	9.9	12.5	10.7		9.5	10.5
	Mean	8.2		8.7	8.3	7.8	8.1		8.5	4.6
Dissolved Oxygen (% Saturation)	Min	73		58	76	45	65		81	10
	Max	118		149	113	143	130		111	122
	Mean	89		95	92	86	93		94	52
pH	Min	7.8		7.7		7.2	7.8		7.7	7.6
	Max	8.5		8.9		7.7	8.4		8.2	8.5
	Mean	8.0		8.3		7.4	8.1		7.9	8.0
Turbidity (NTU)	Min	0.8		1.4		0.4	0.2		0.8	6.4
	Max	6.6		10.5		1.5	1.9		3.9	271.7
	Mean	2.0		2.0		0.9	0.9		1.3	78.8

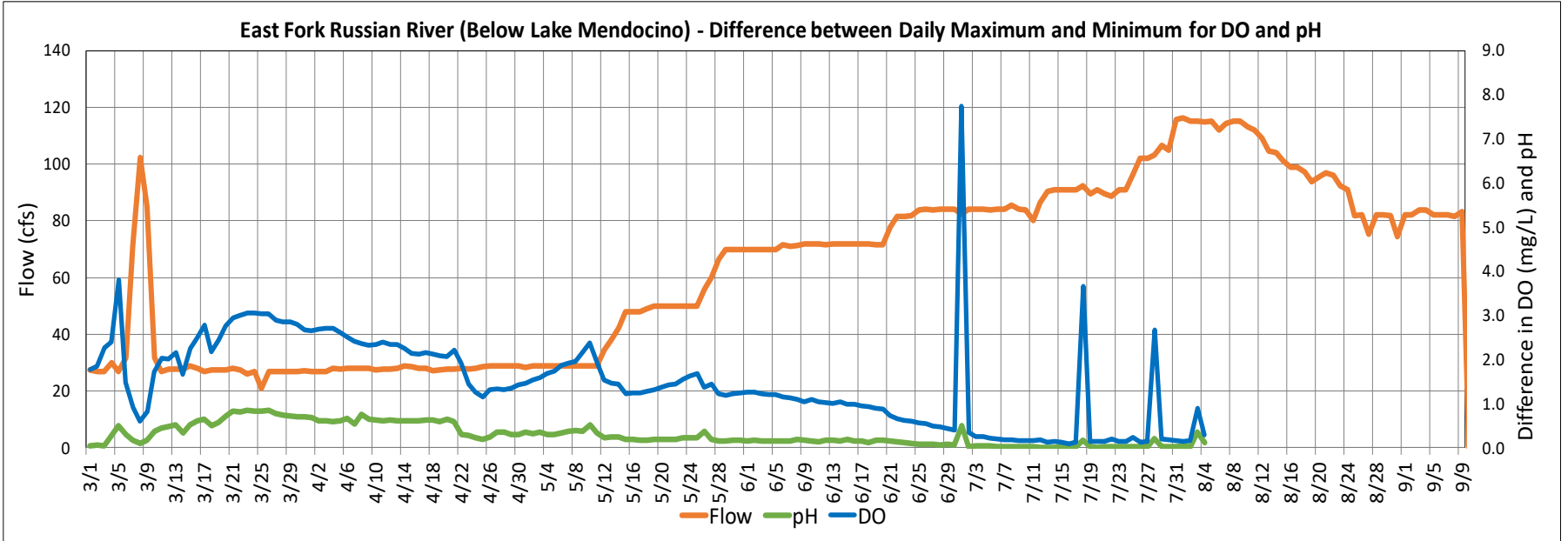
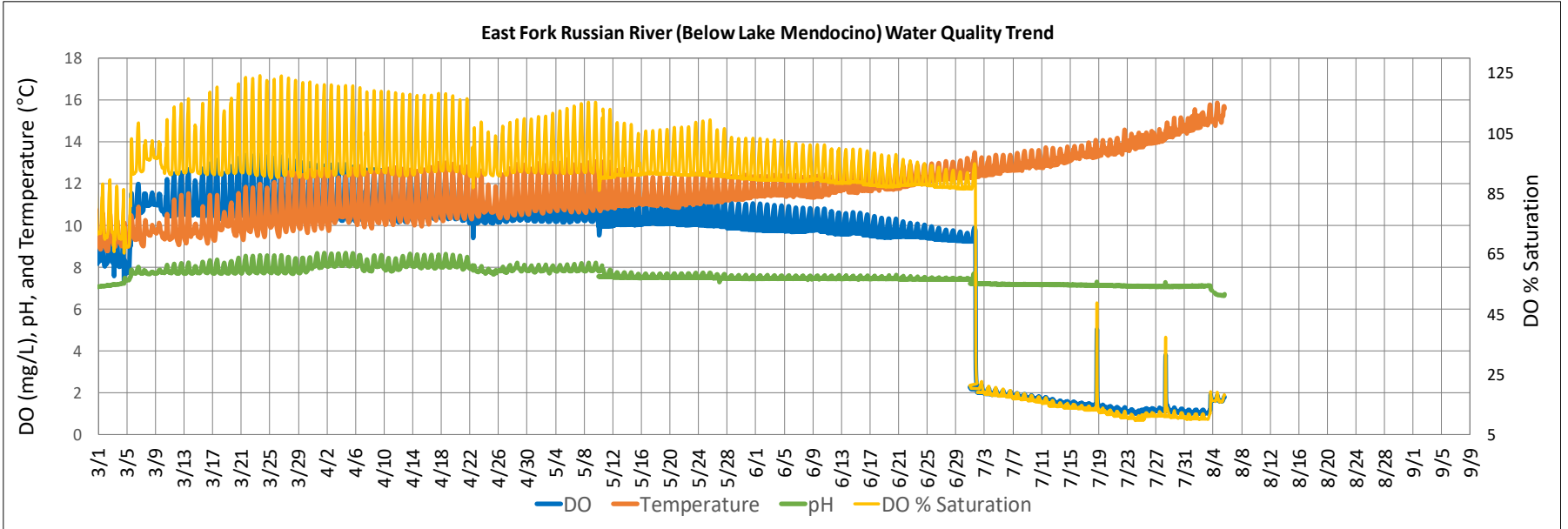
\*Station operated seasonally



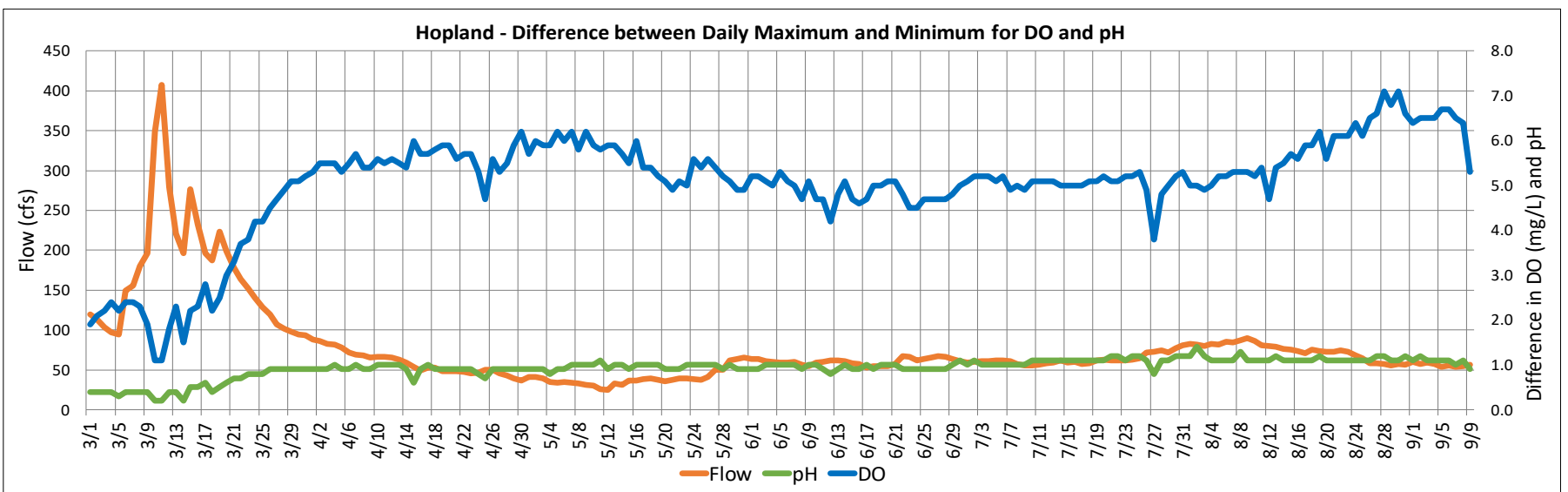
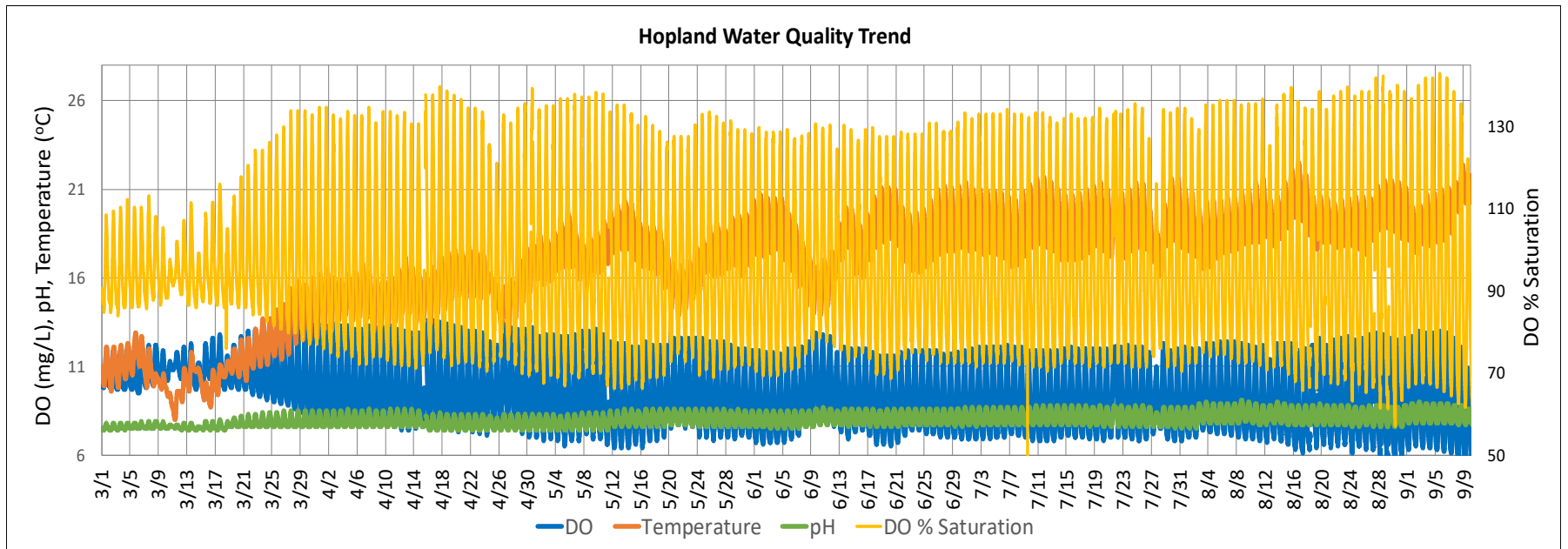
## Russian River Water Quality Sonde Data (March 1 - September 9, 2021) Provisional Data Subject to Revision



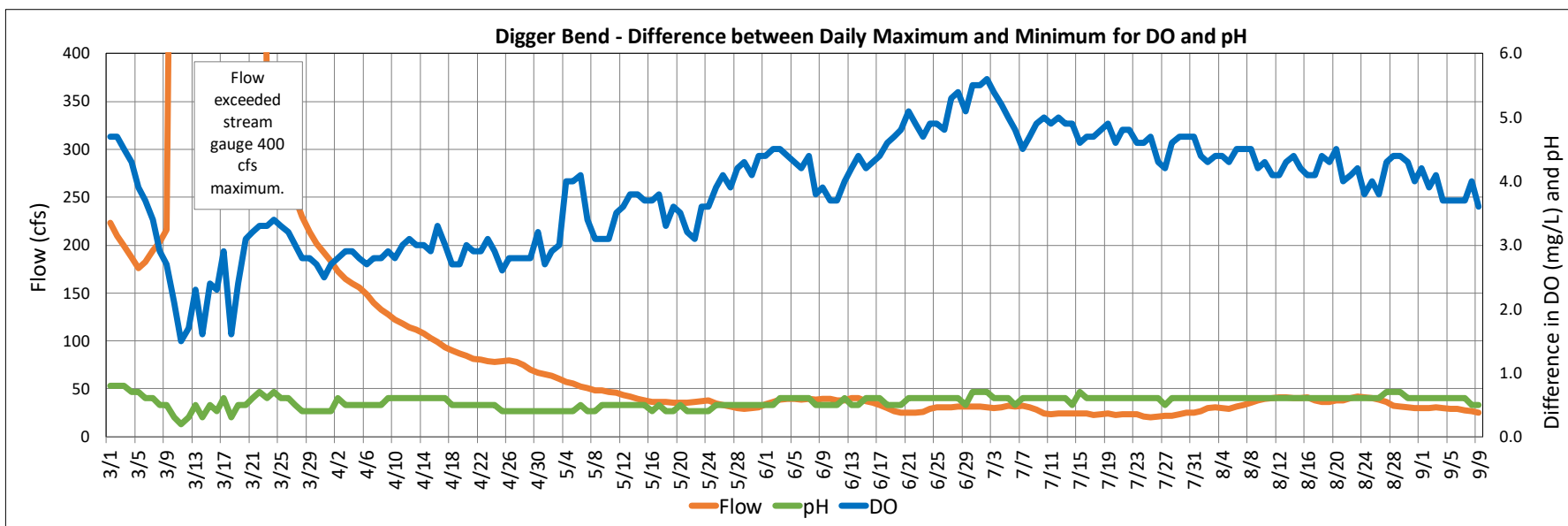
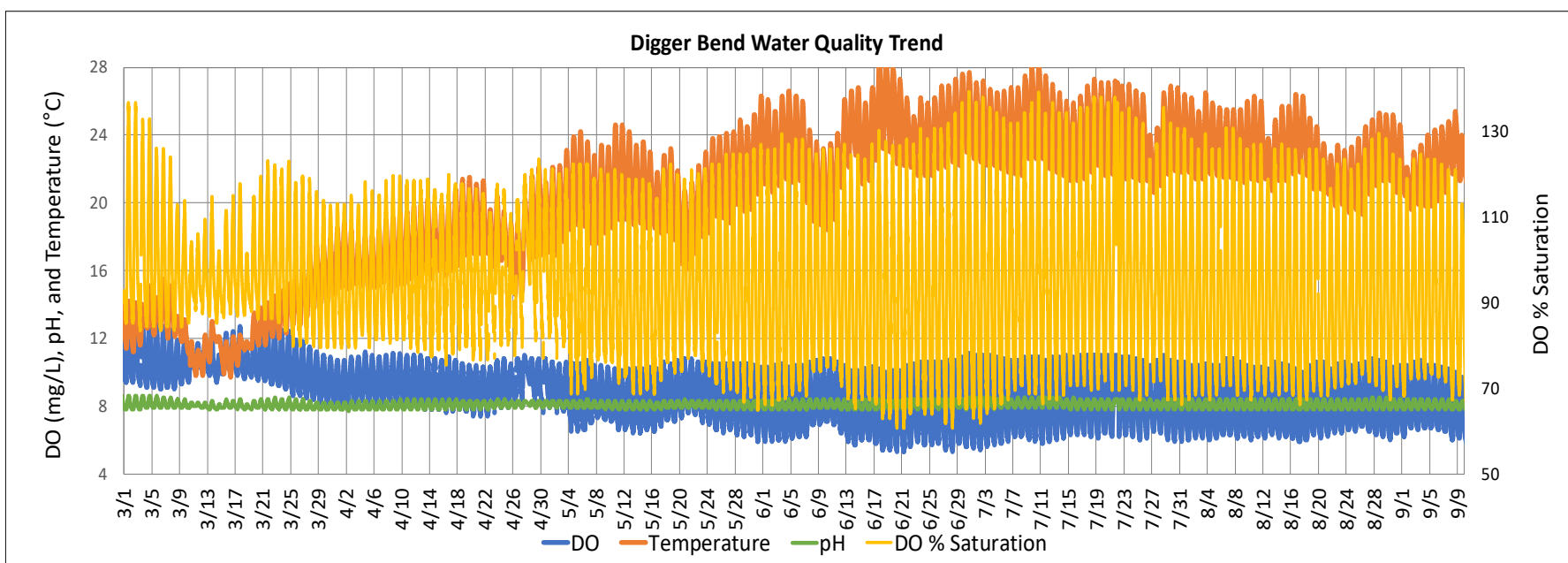
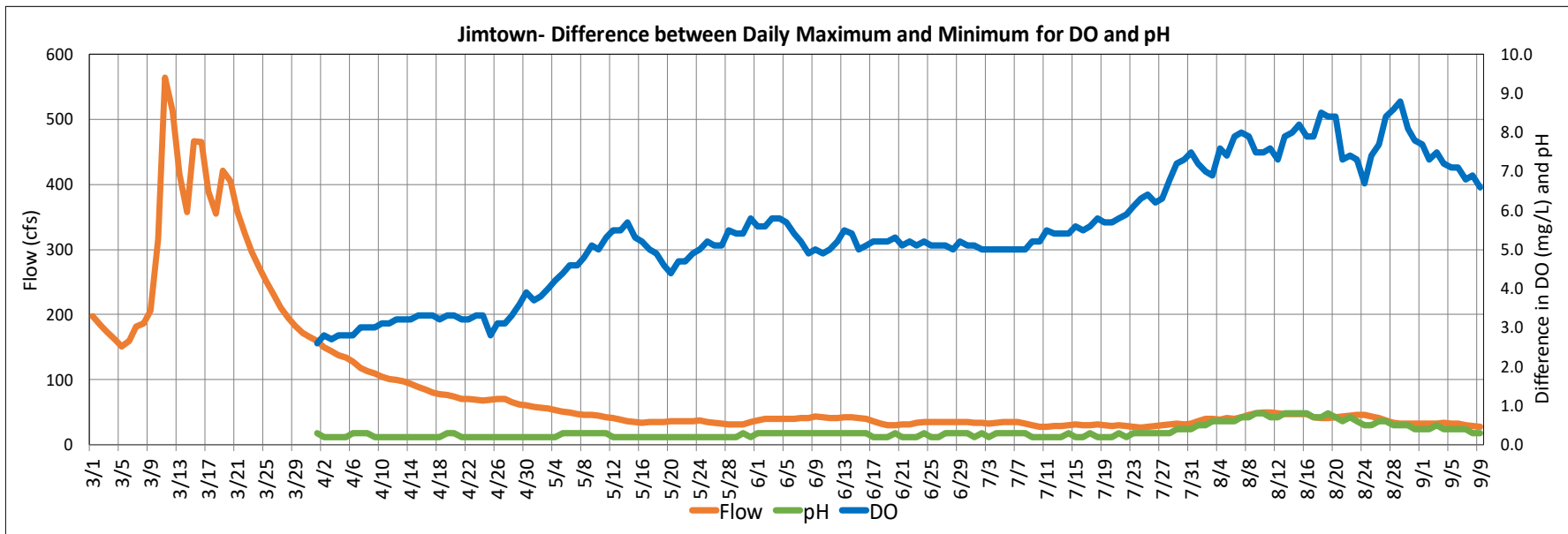
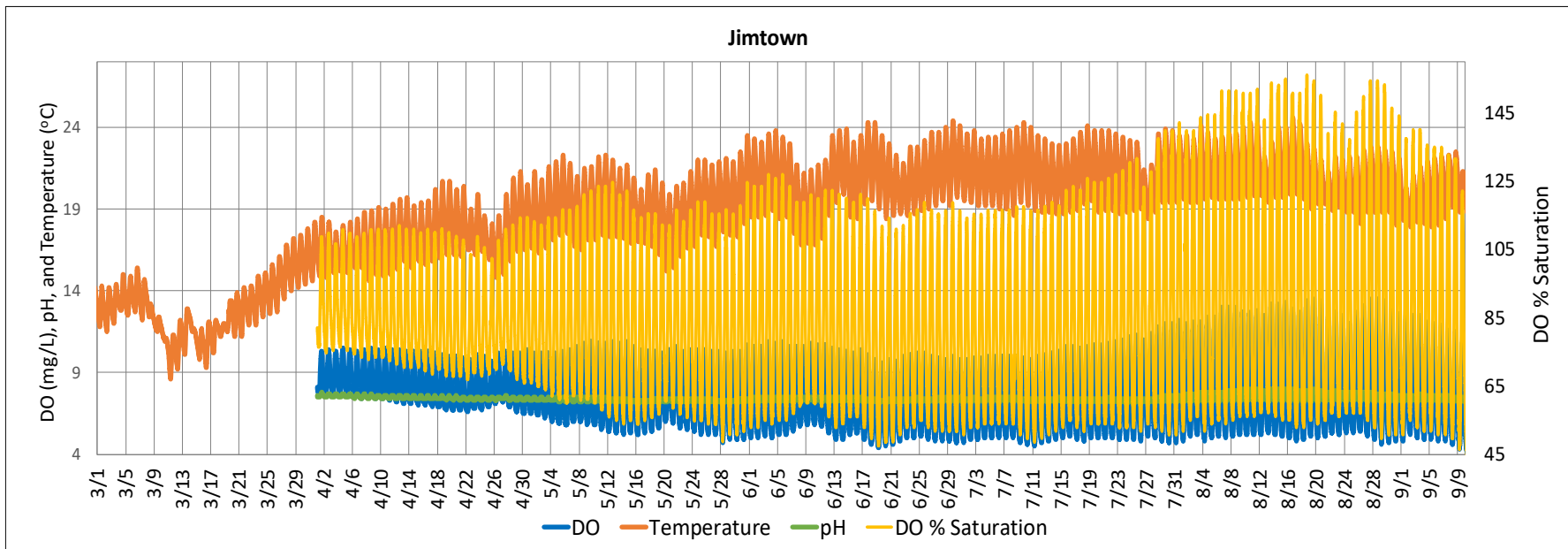
**Russian River Water Quality Sonde Data (March 1 - September 9, 2021)**  
**Provisional Data Subject to Revision**



**Hopland**



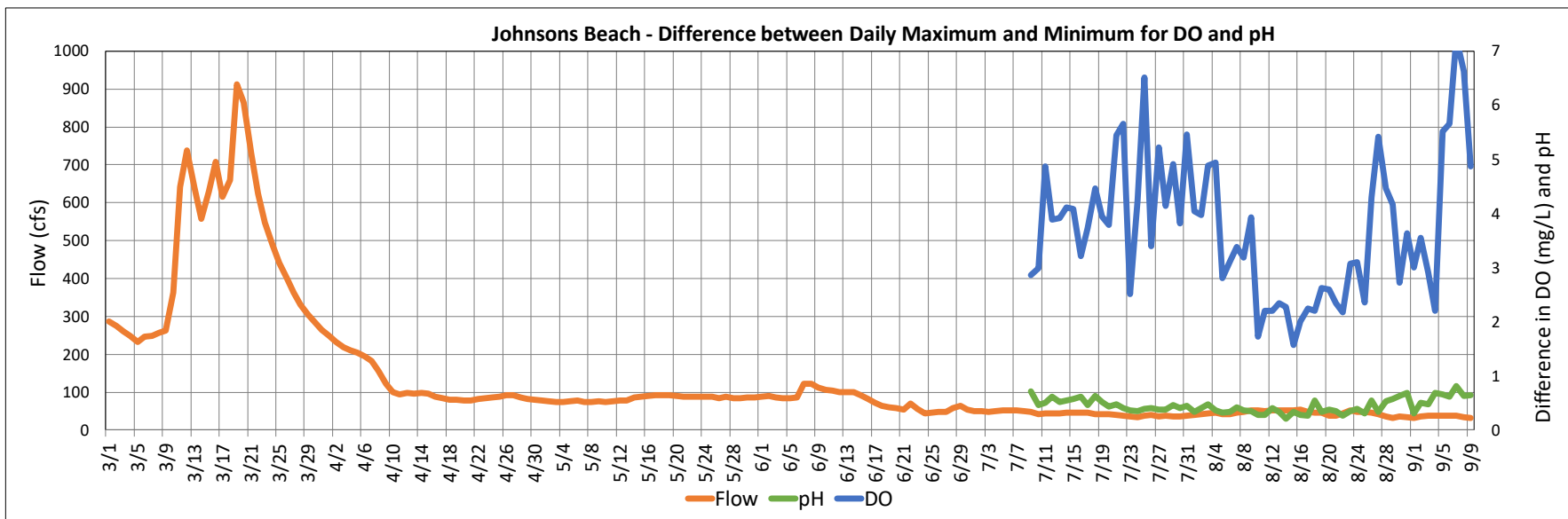
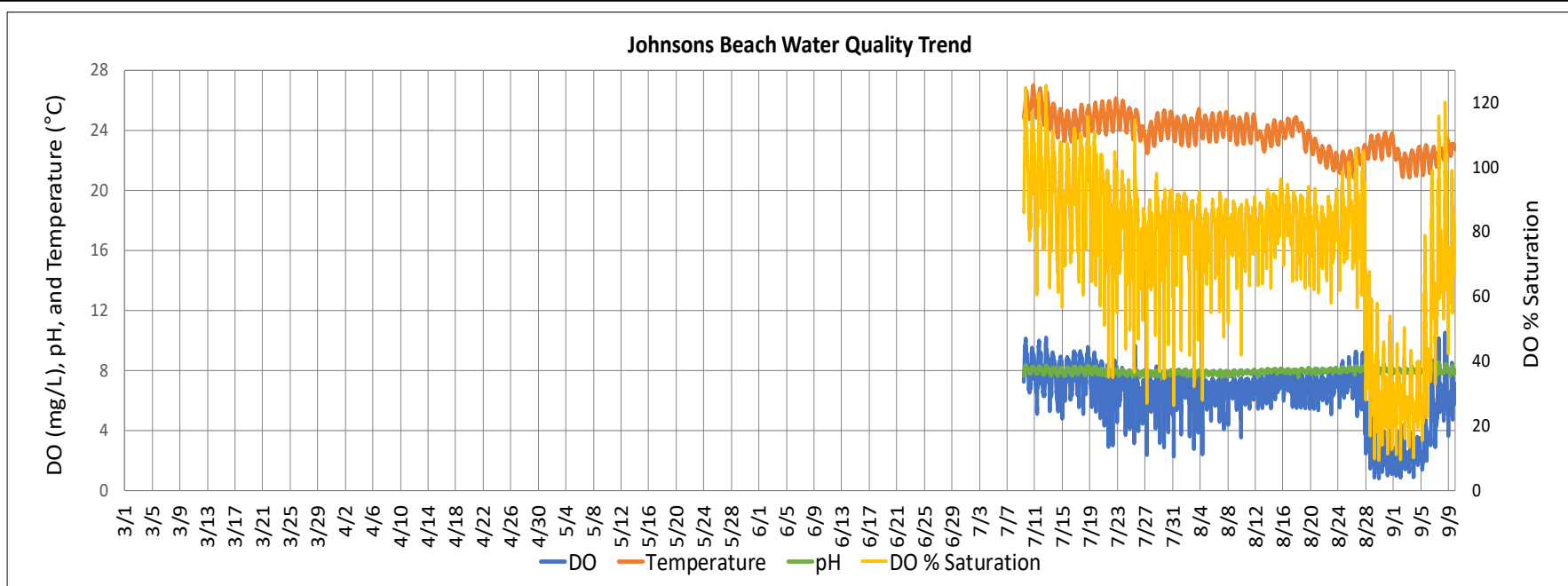
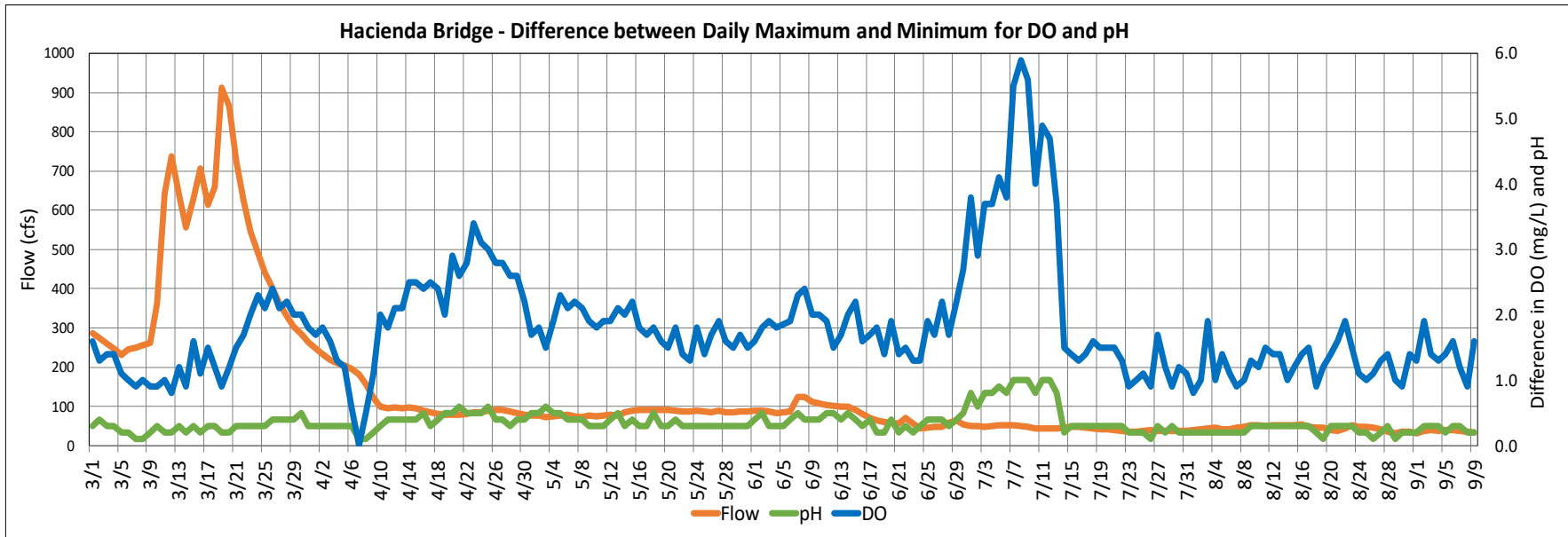
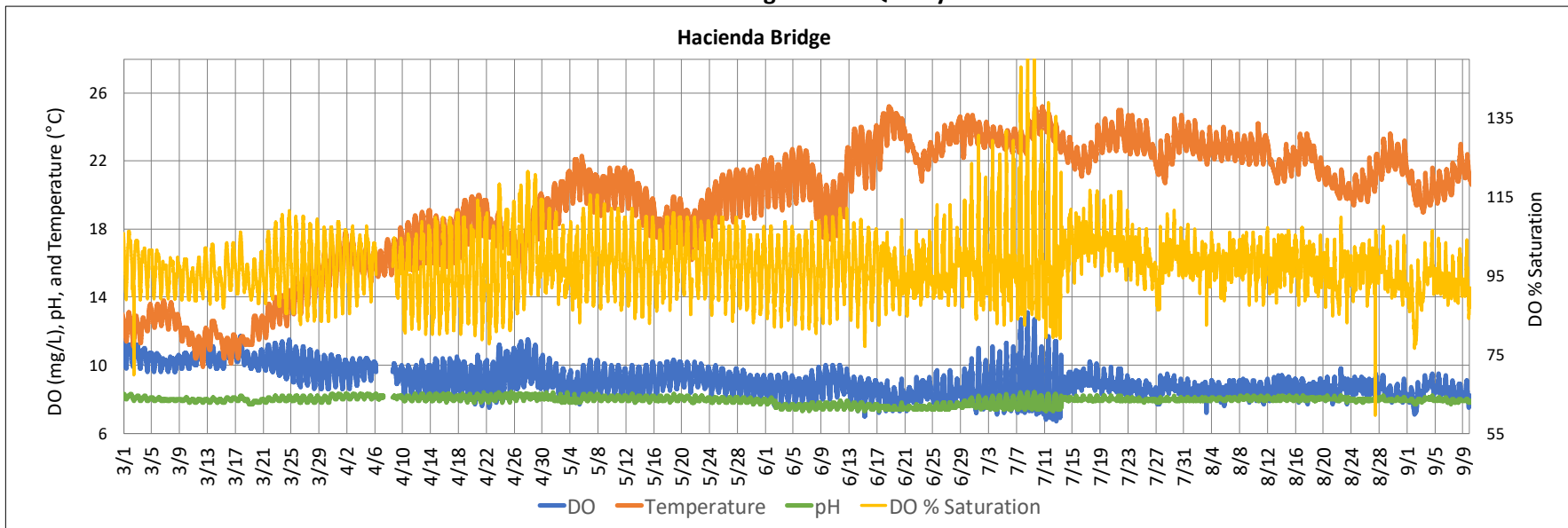
**Russian River Water Quality Sonde Data (March 1 - September 9, 2021)**  
 Provisional Data Subject to Revision



## Russian River Water Quality Sonde Data (March 1 - September 9, 2021)

Provisional Data Subject to Revision

Hacienda Bridge Water Quality

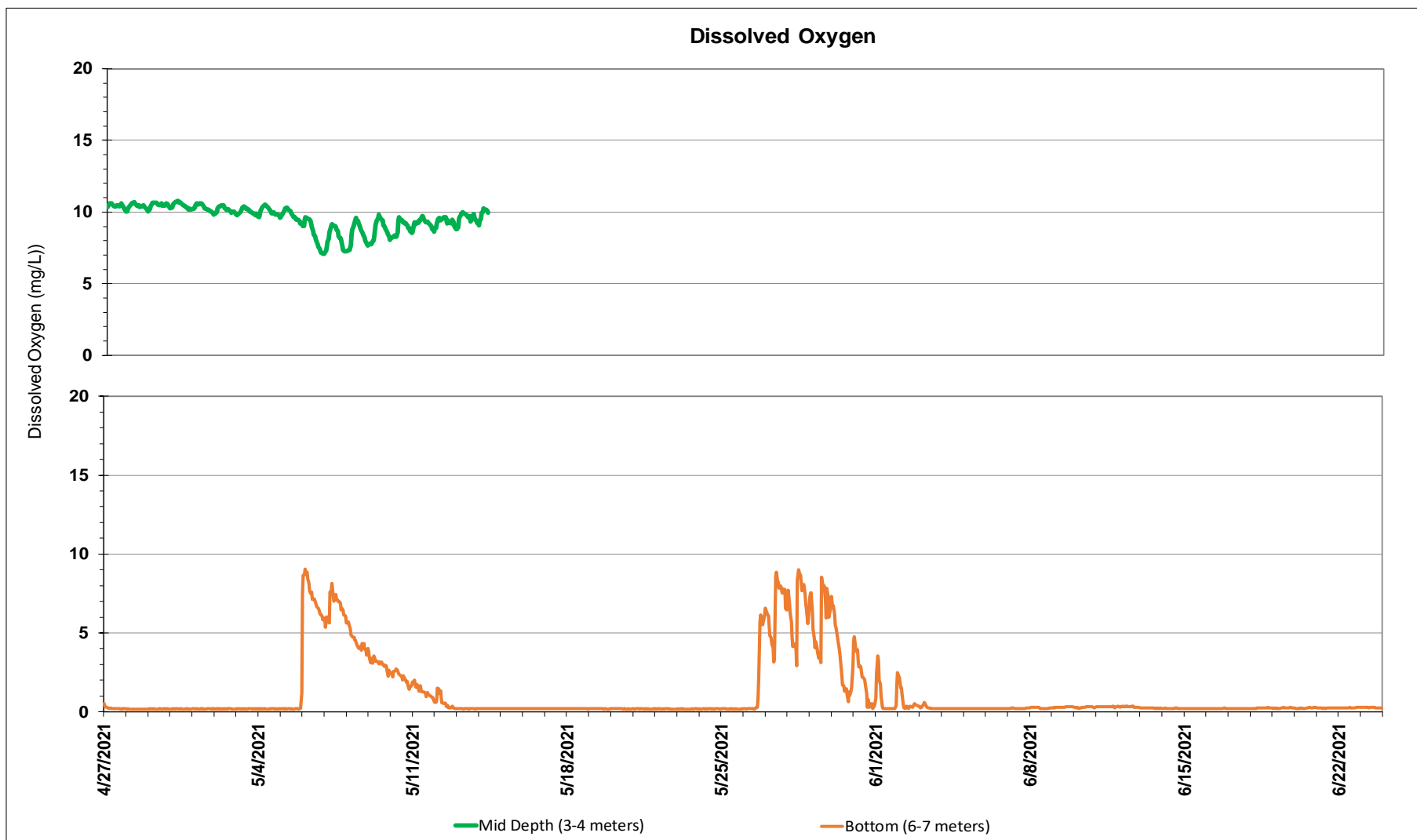
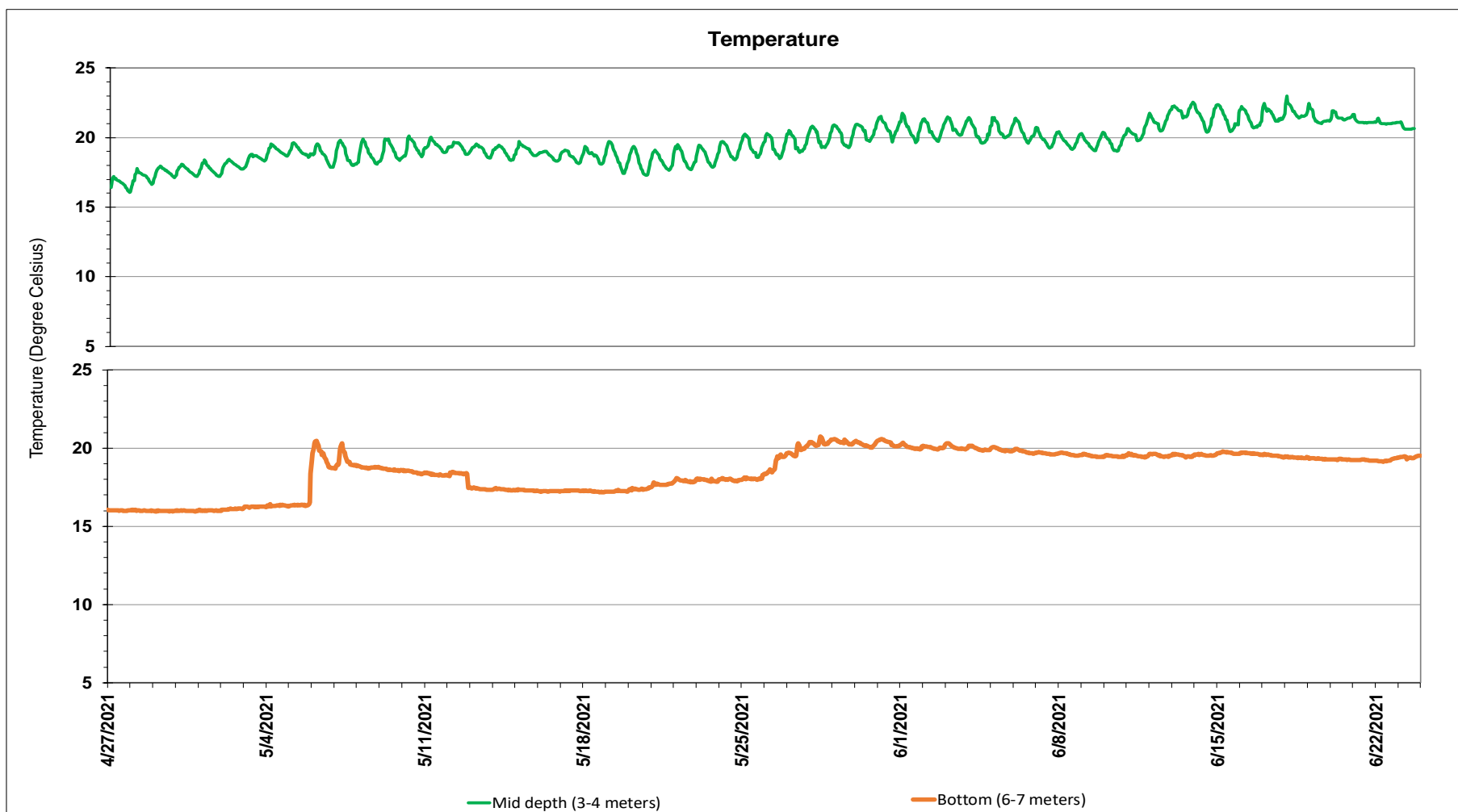


note: Flow at Johnsons Beach is plotted using data collected at Hacienda Bridge.

Russian River Water Quality Sonde Data - Estuary (April 27 - September 9, 2021)

Provisional Data Subject to Revision

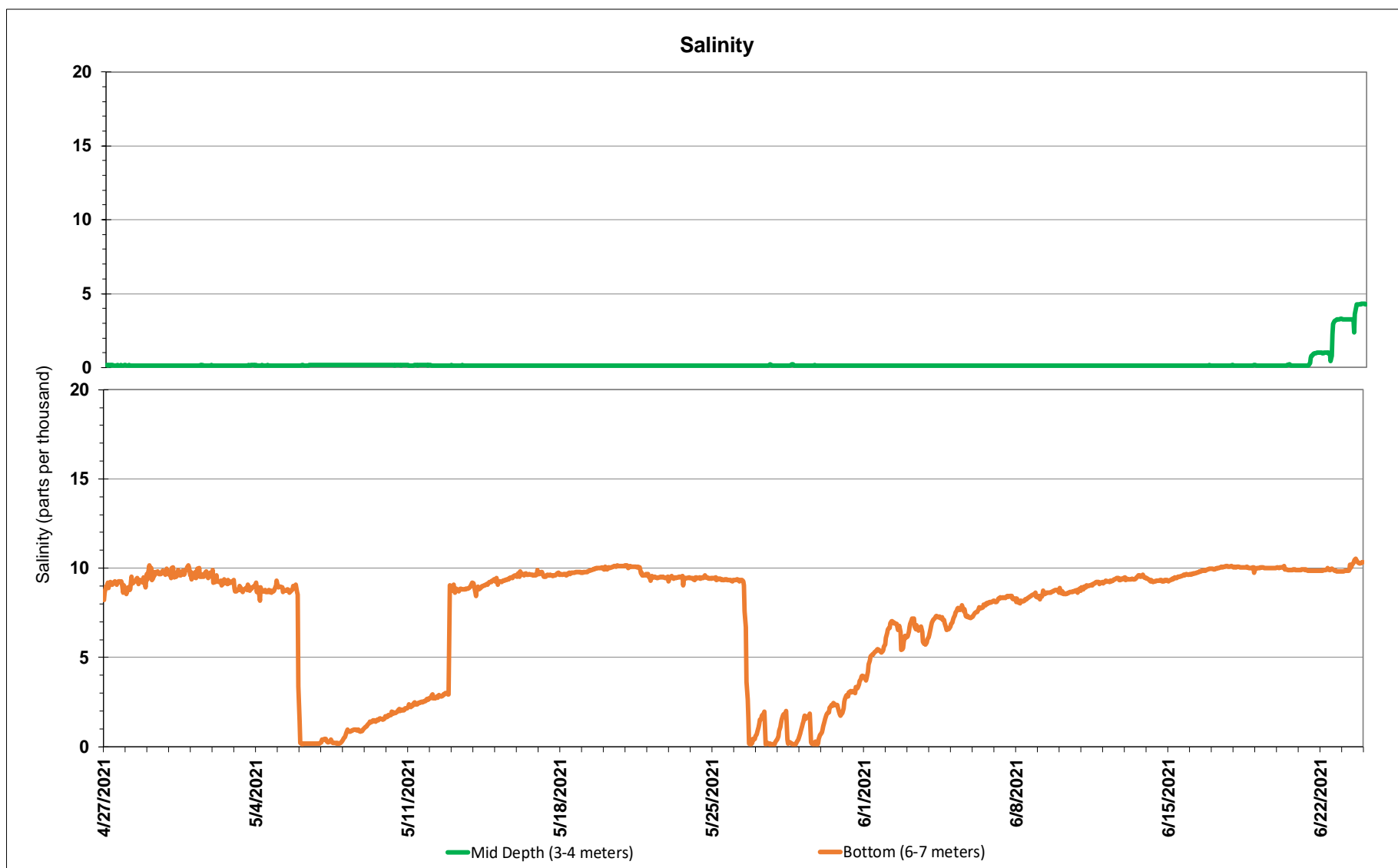
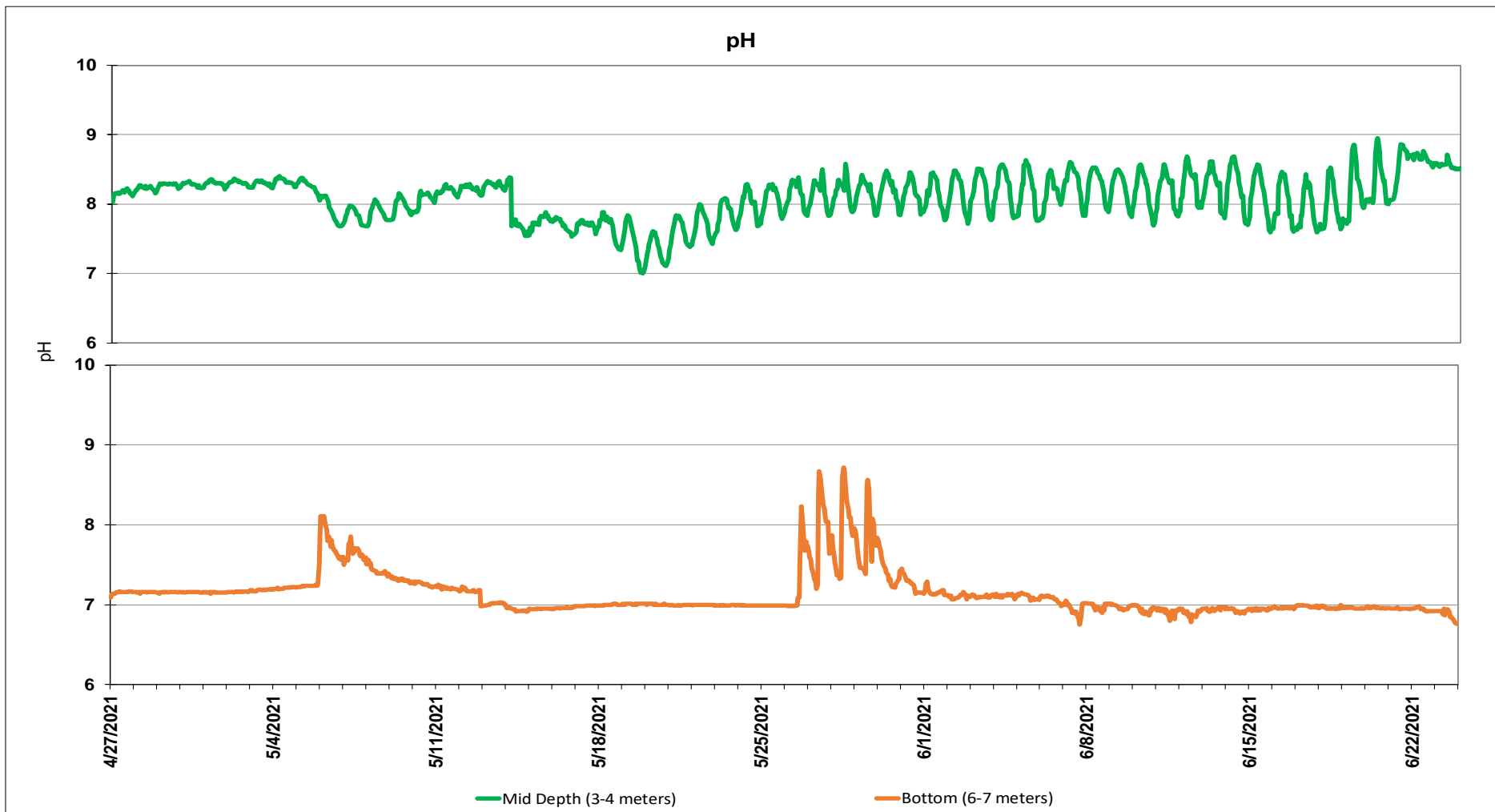
Russian River at Freezeout Creek Water Quality



Russian River Water Quality Sonde Data - Estuary (April 27 - September 9, 2021)

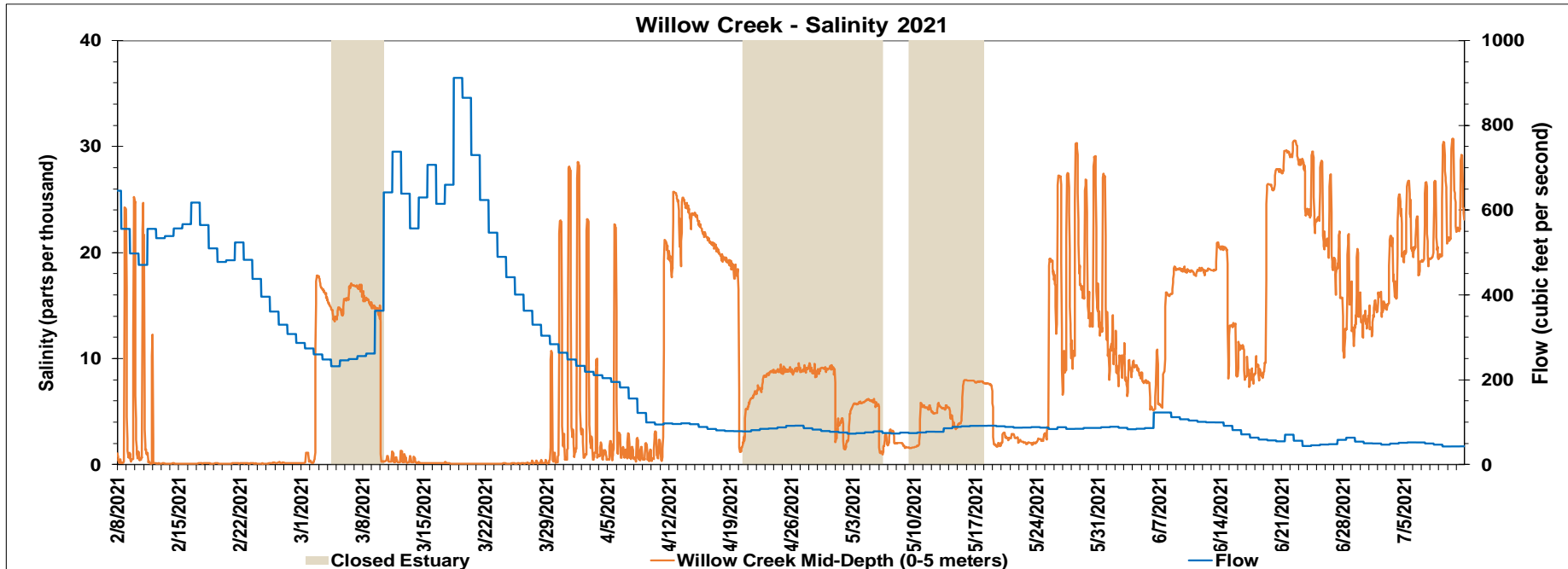
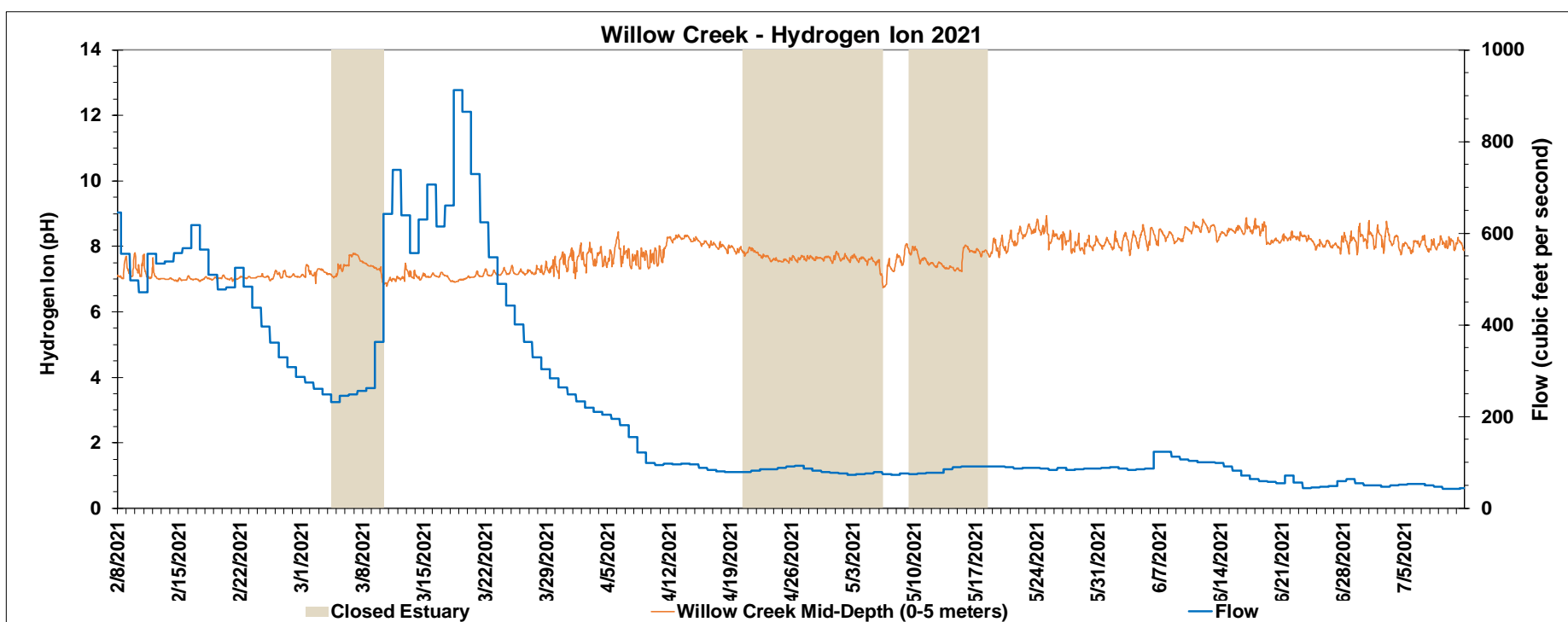
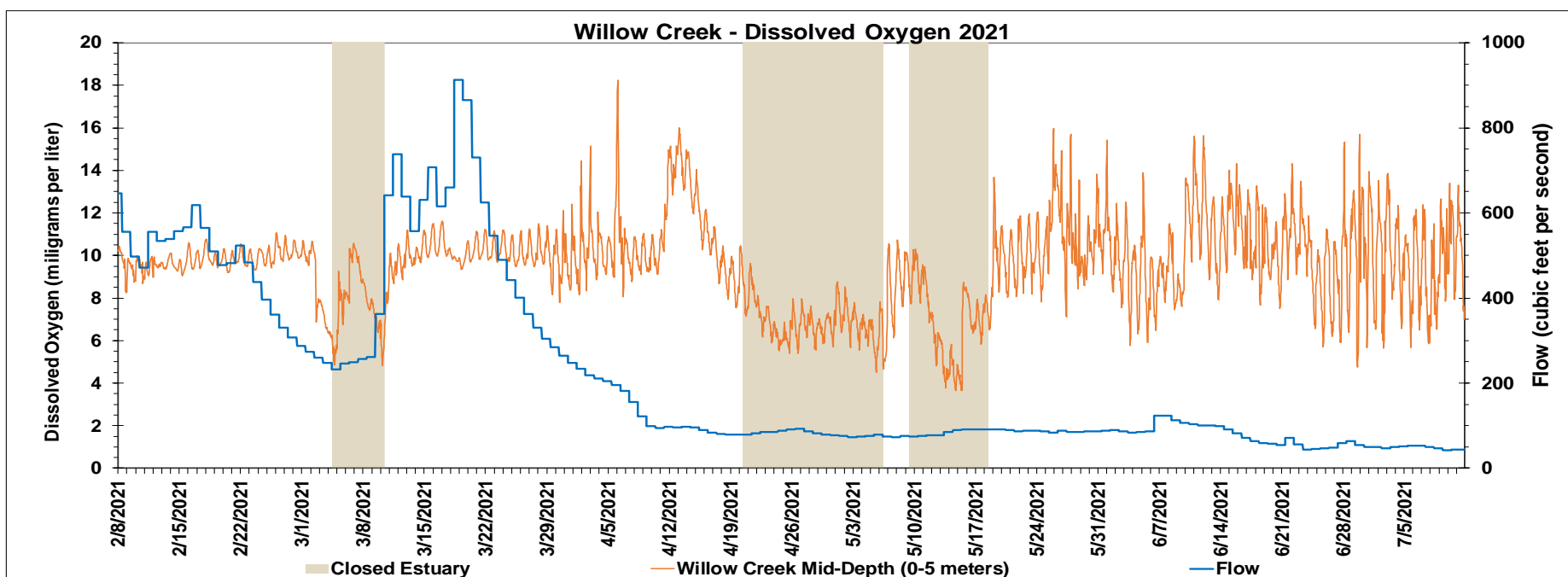
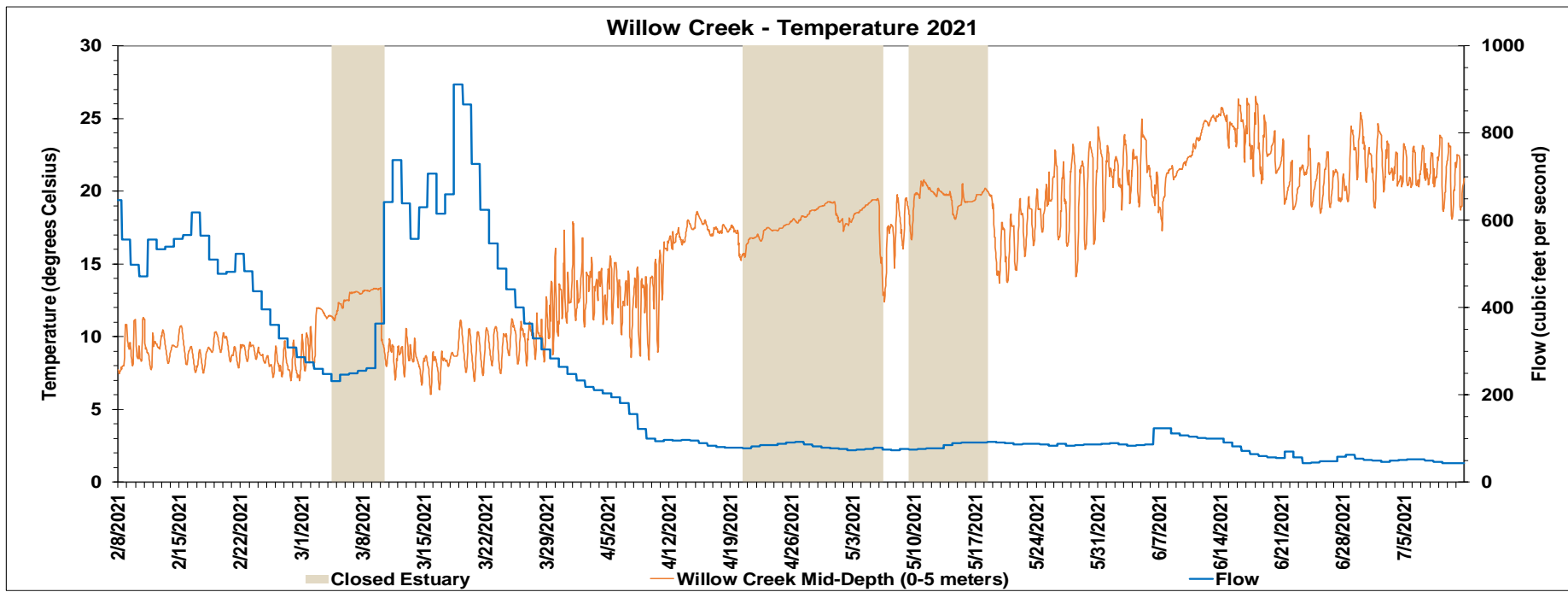
Provisional Data Subject to Revision

Russian River at Freezeout Creek Water Quality





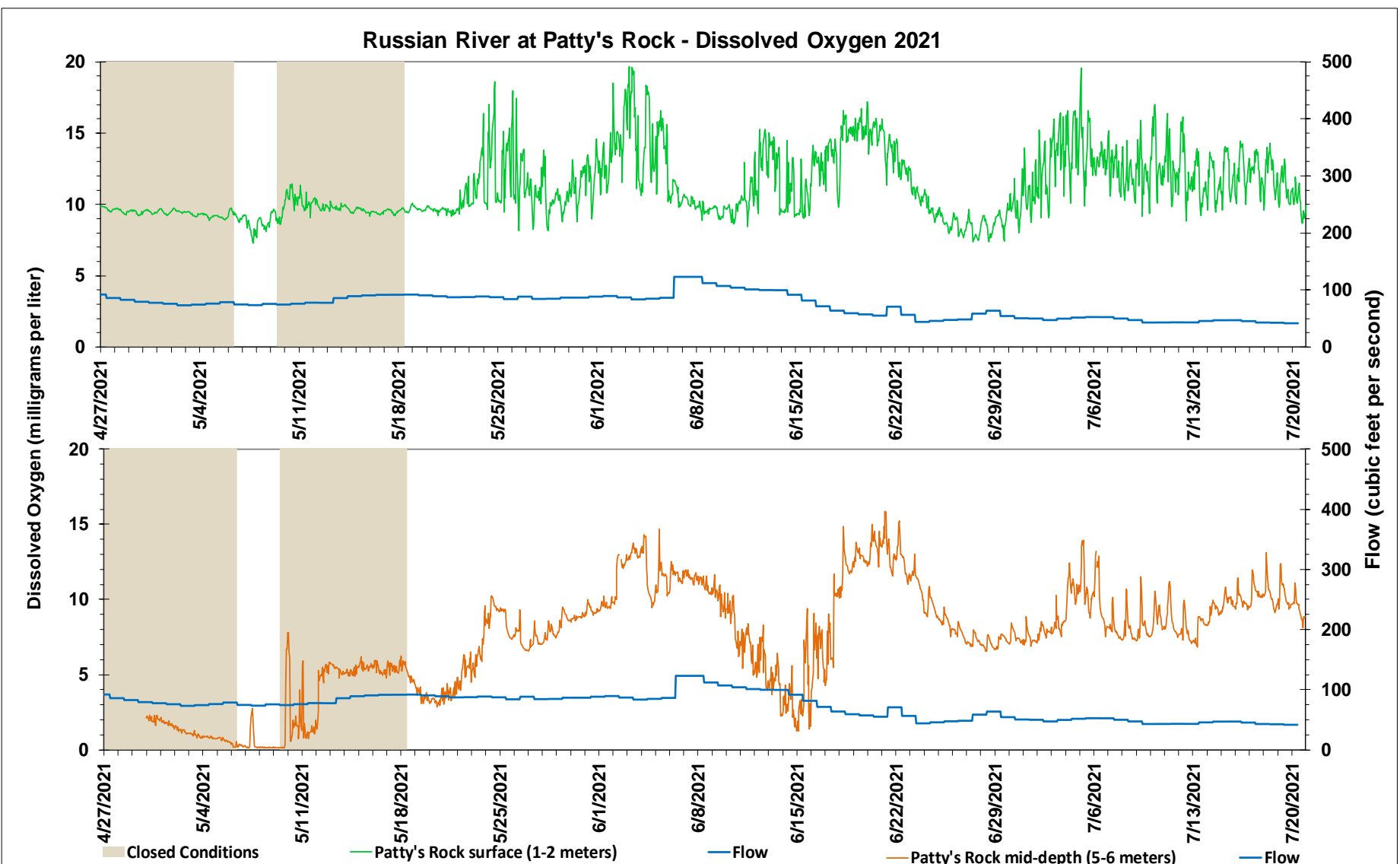
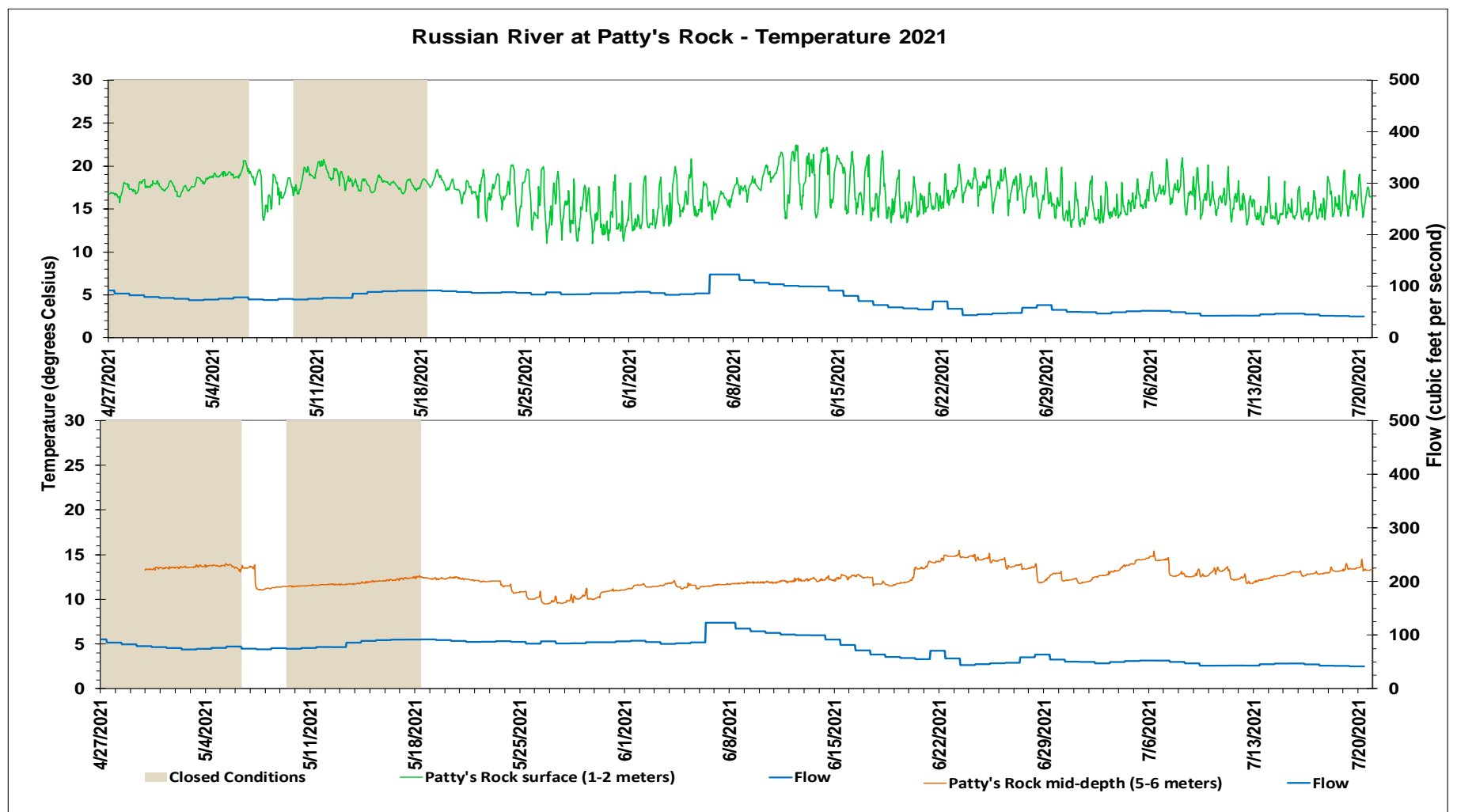
Russian River Water Quality Sonde Data - Estuary (February 28 - September 9, 2021)  
Provisional Data Subject to Revision  
Willow Creek Water Quality



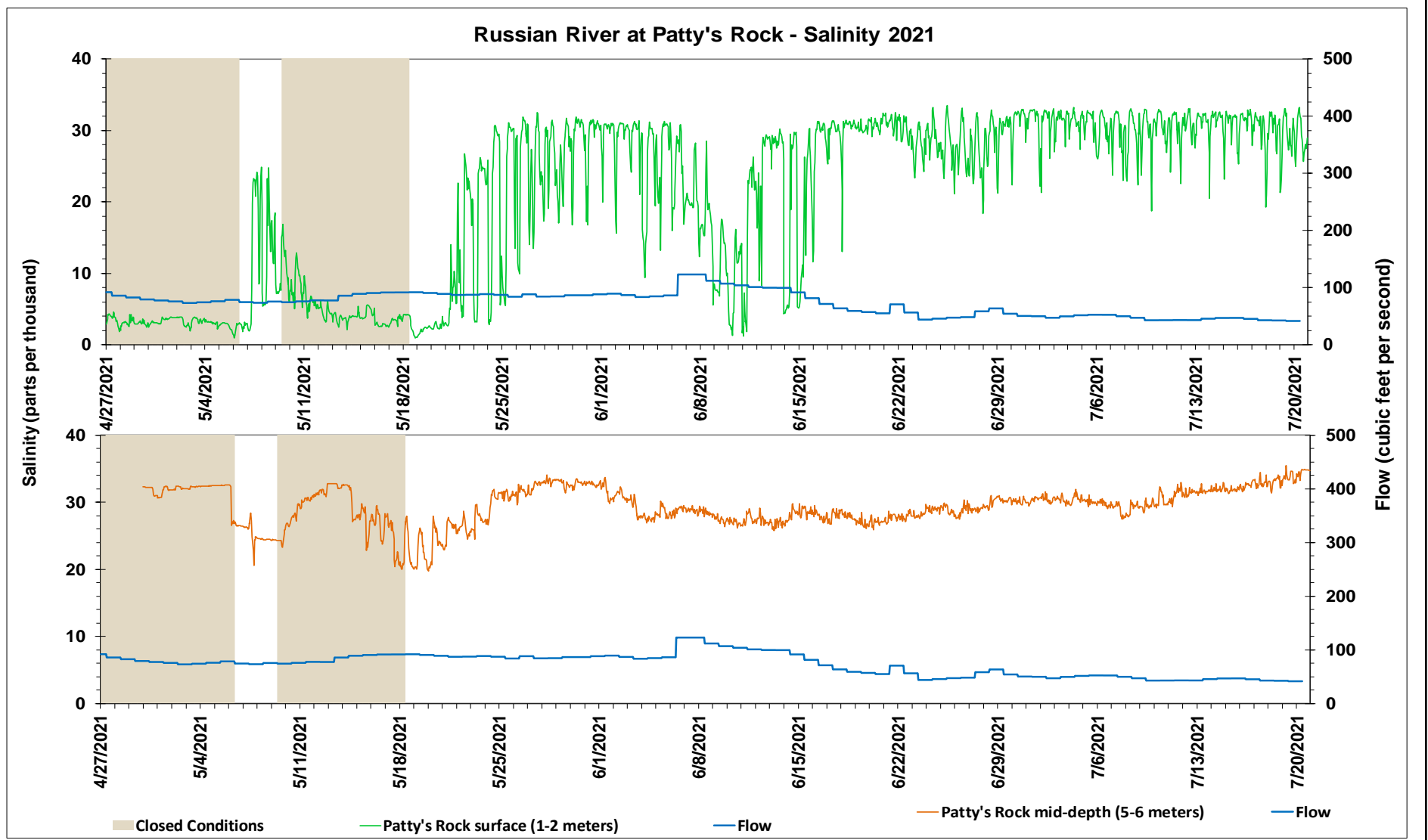
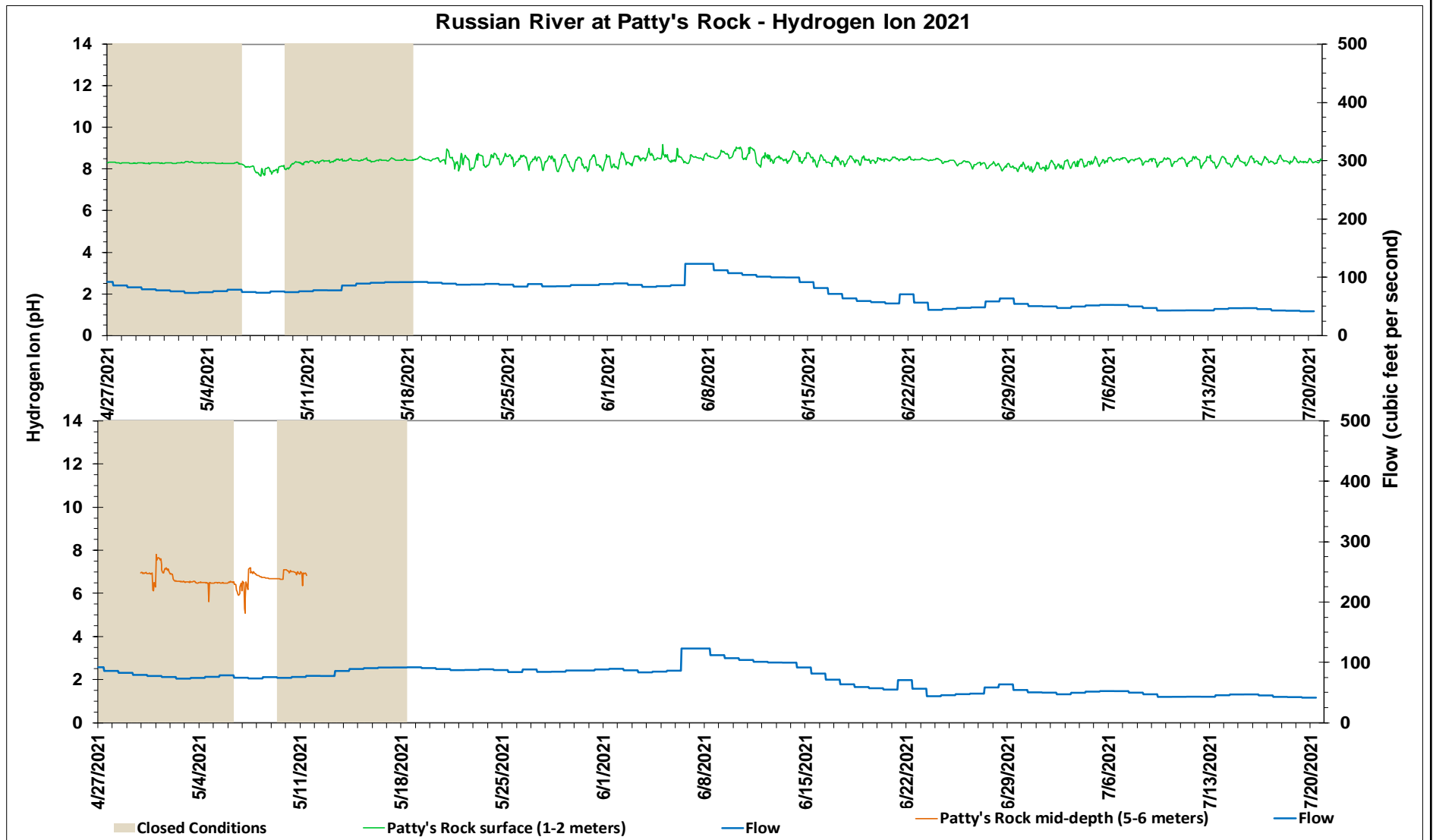
Russian River Water Quality Sonde Data - Estuary (April 27 - September 9, 2021)

Provisional Data Subject to Revision

Russian River at Patty's Rock Water Quality

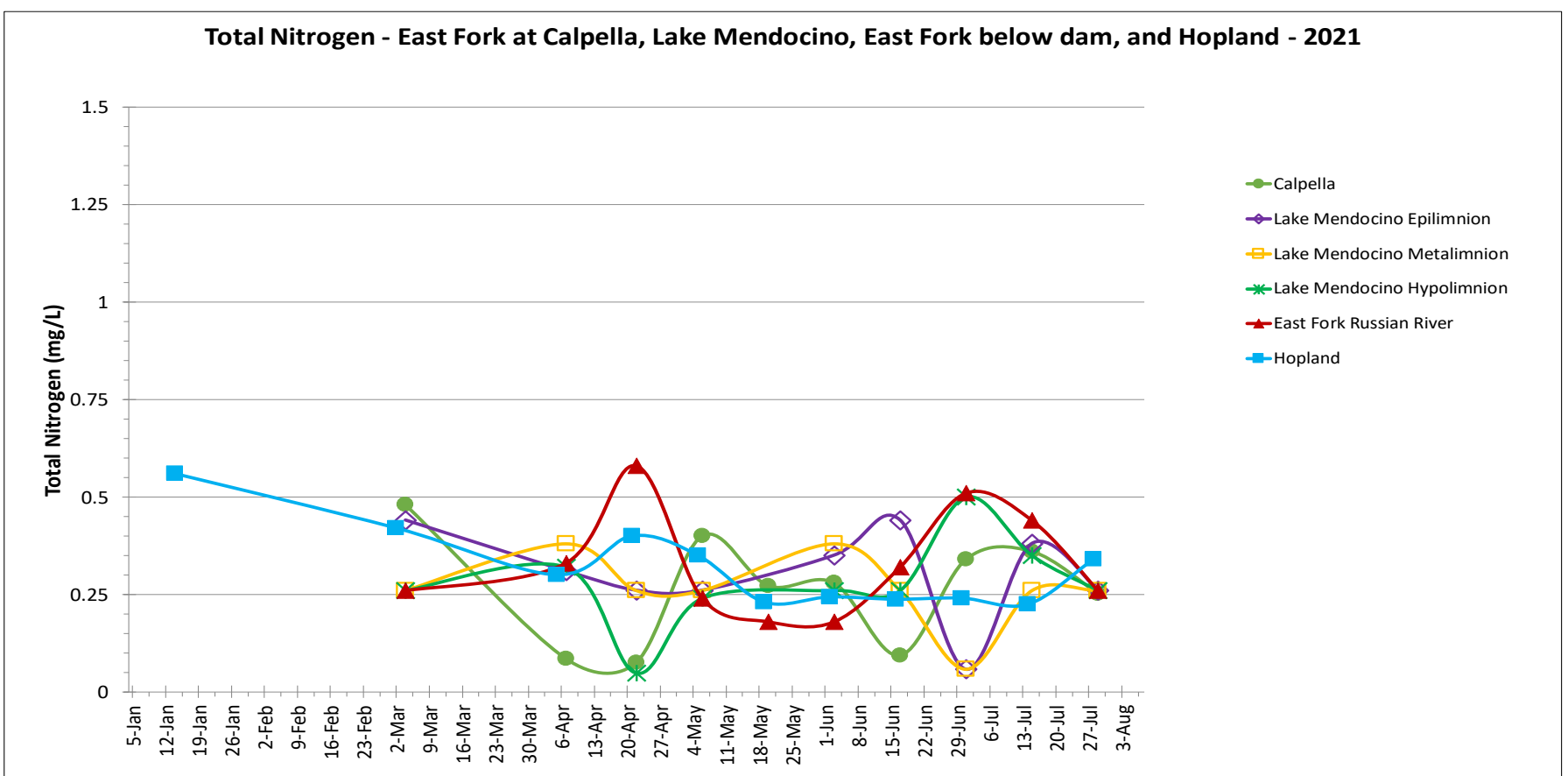
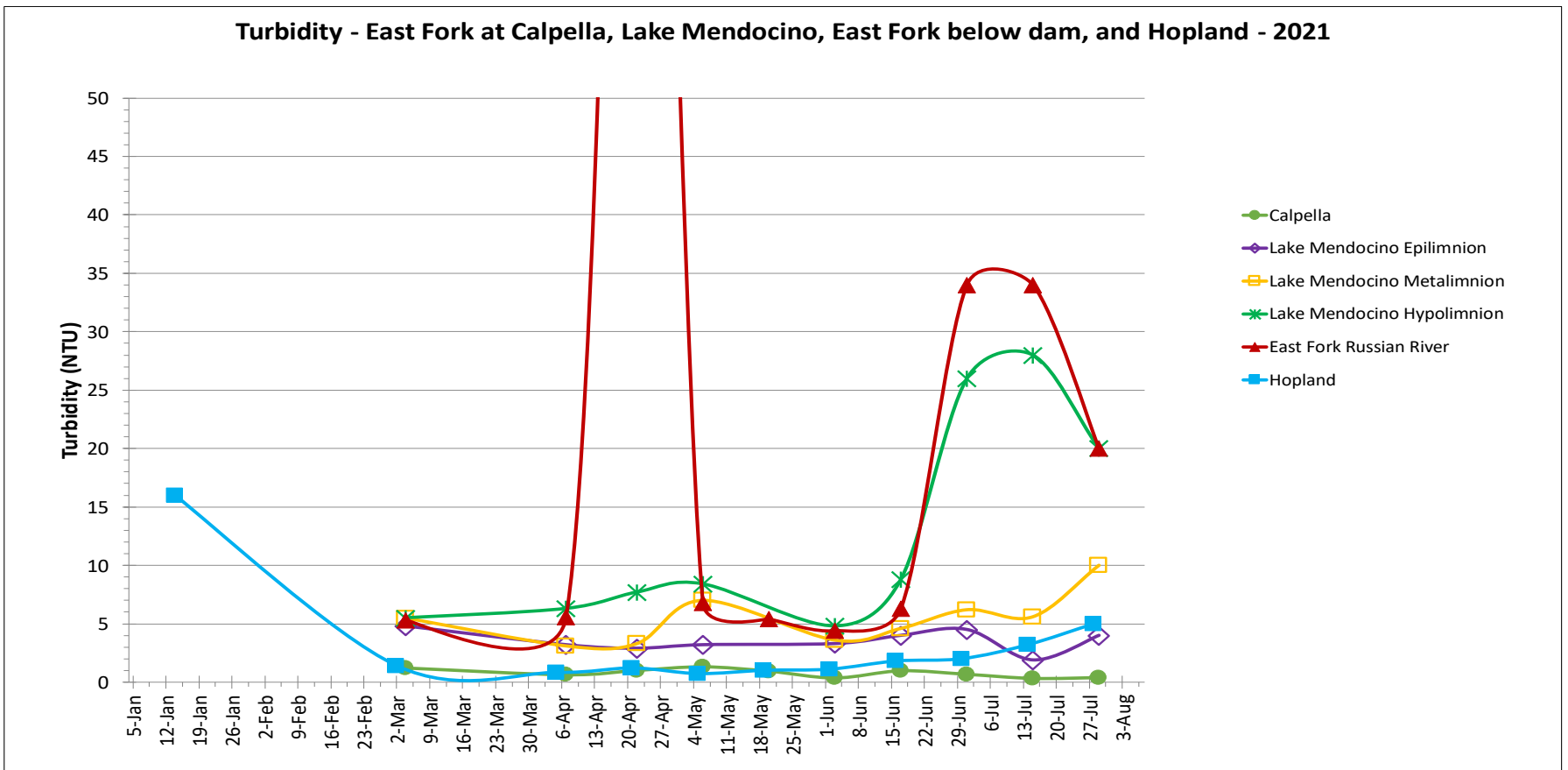
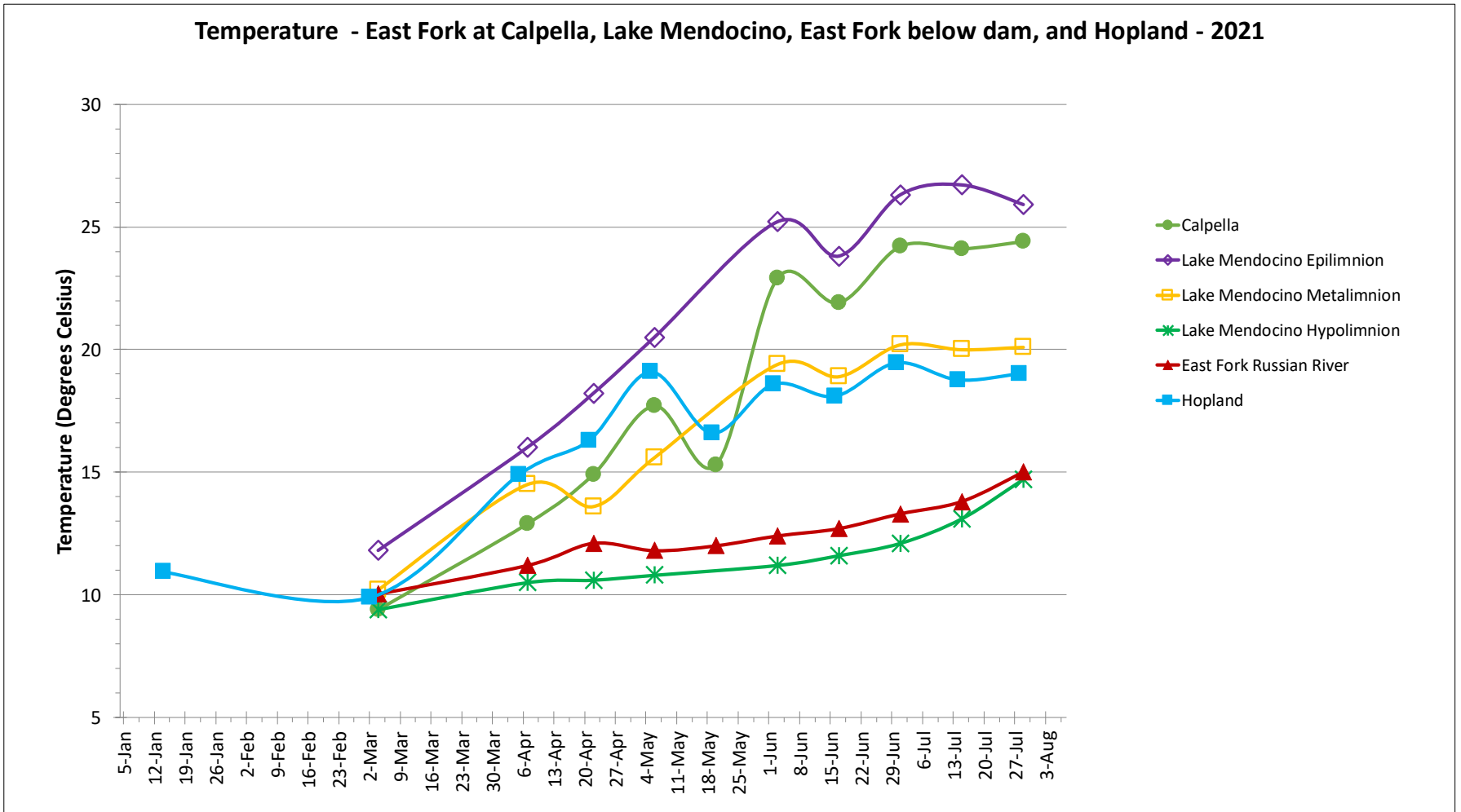


Russian River Water Quality Sonde Data - Estuary (April 27 - September 9, 2021)  
Provisional Data Subject to Revision  
Russian River at Patty's Rock Water Quality



**Russian River Water Quality Grab Samples (January 14 - September 9, 2021)**  
**Provisional Data Subject to Revision**

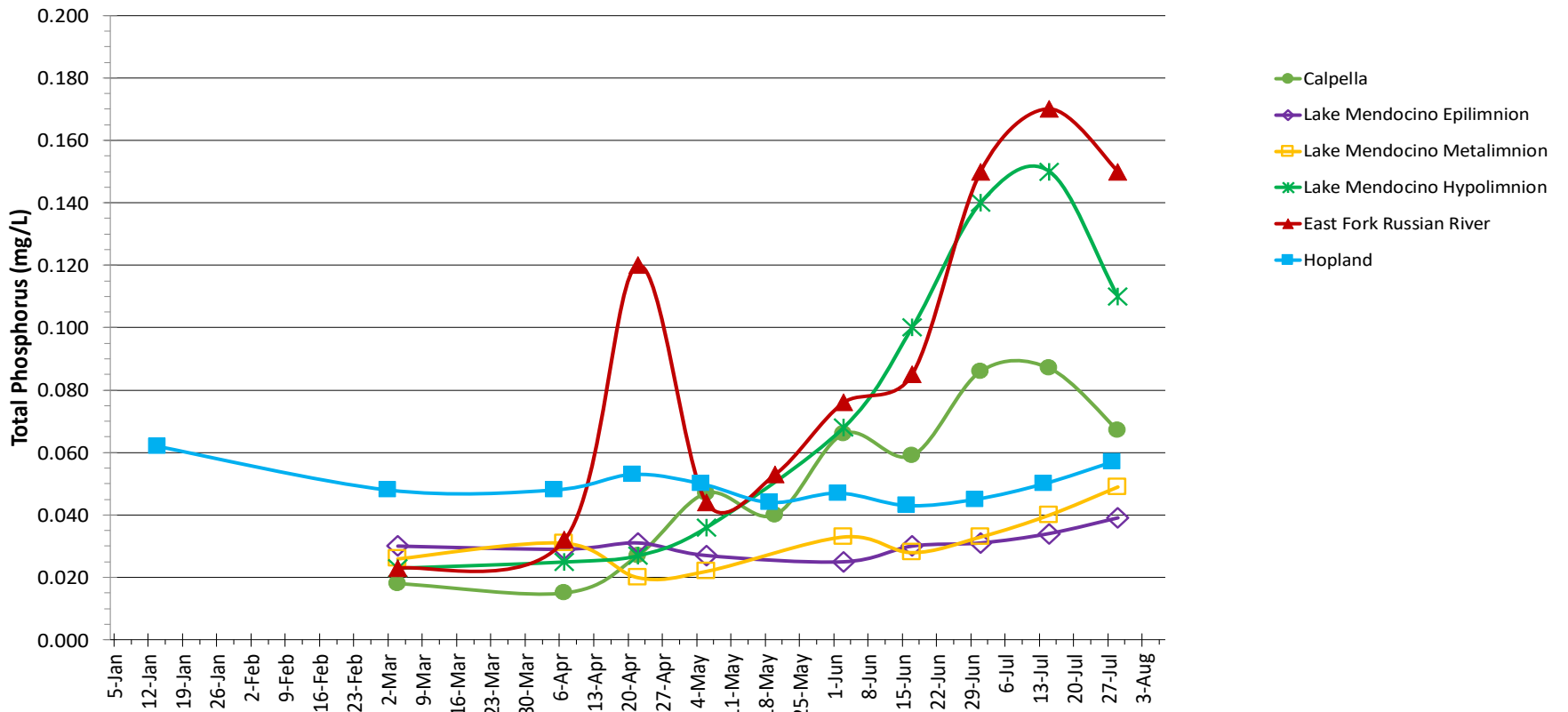
**Lake Mendocino to Hopland Water Quality**



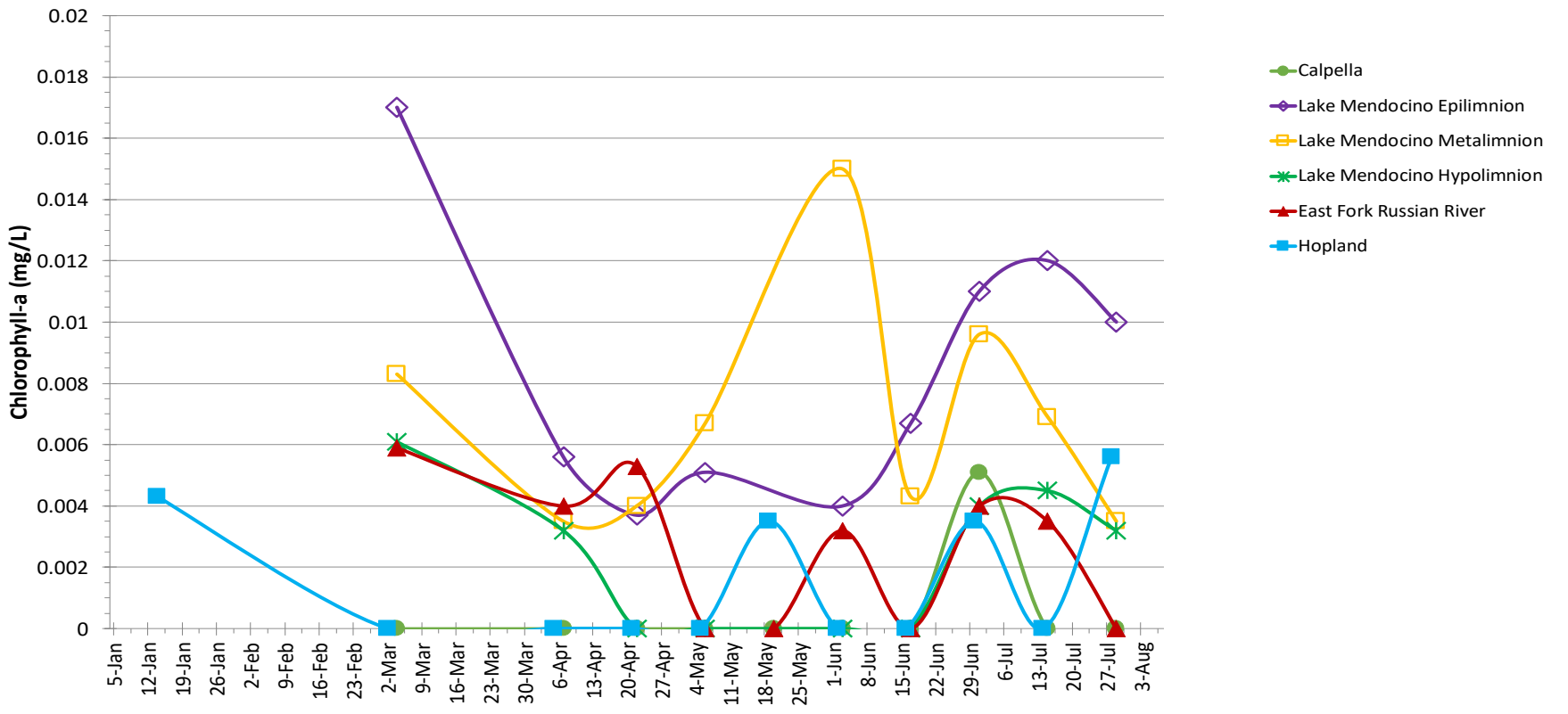
\*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

**Russian River Water Quality Grab Samples (January 14 - September 9, 2021)**  
 Provisional Data Subject to Revision  
 Lake Mendocino to Hopland Water Quality

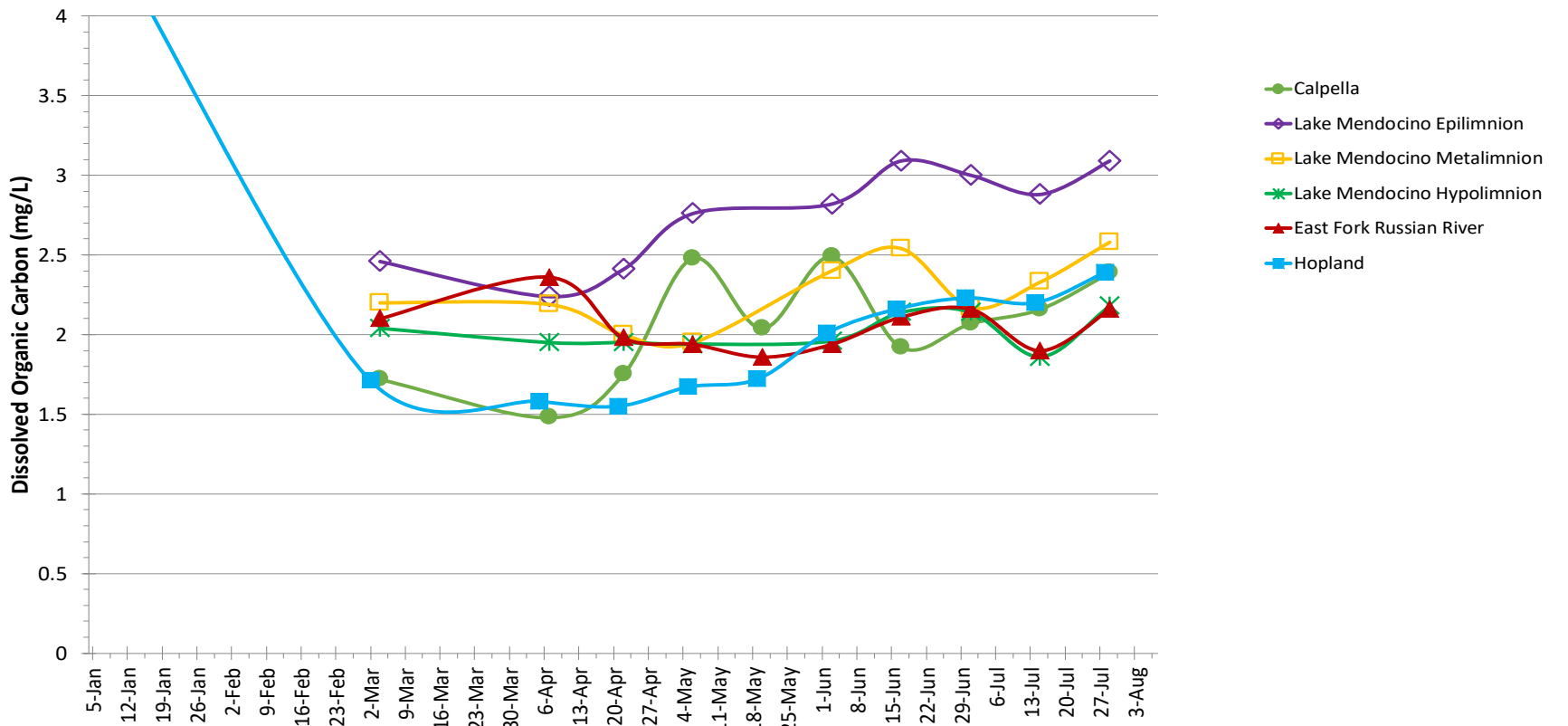
**Total Phosphorus - East Fork at Calpella, Lake Mendocino, East Fork below dam, and Hopland - 2021**



**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**

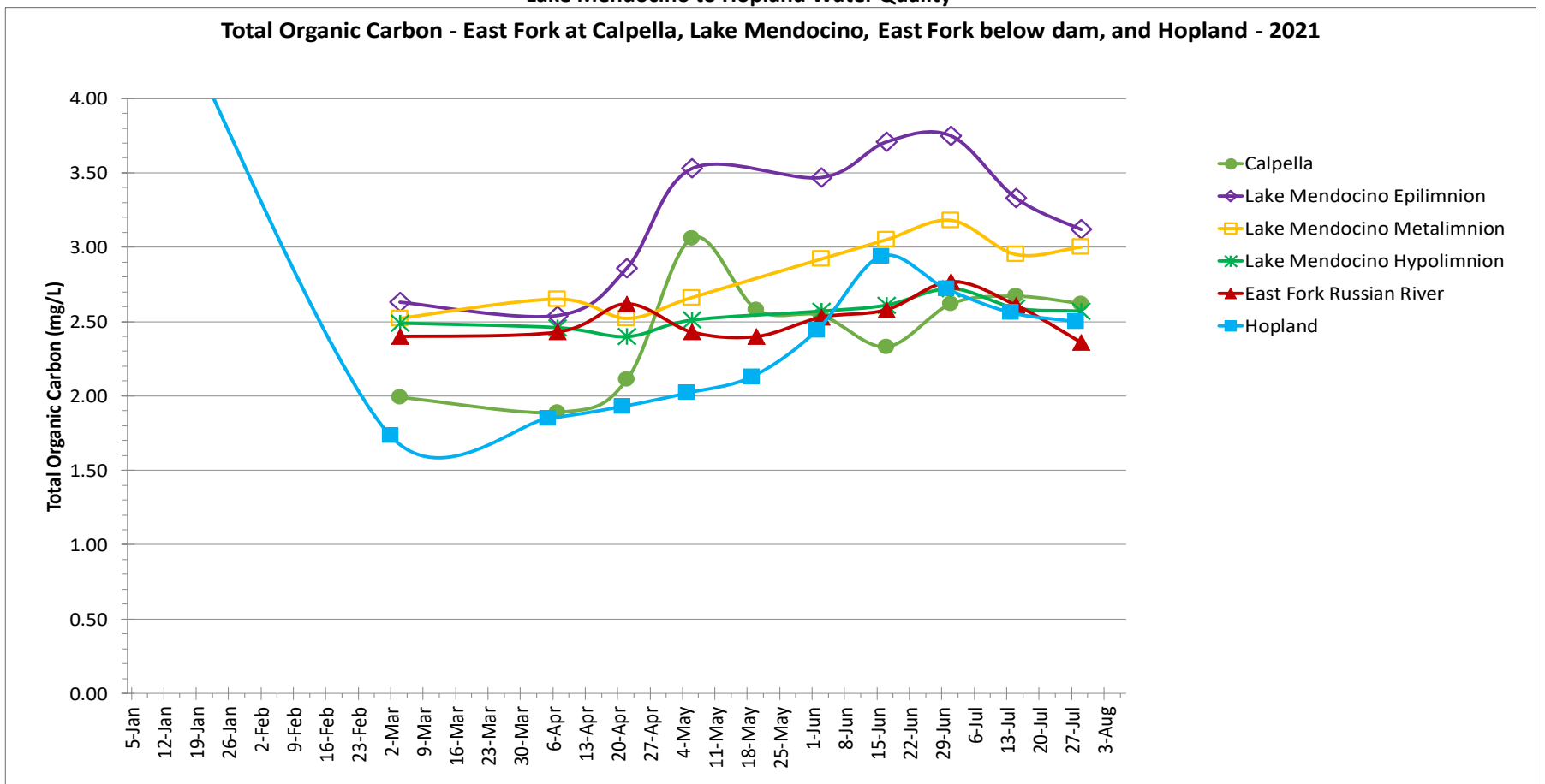


\*Each marker in the plot represents a grab sample. The lines are used to help visualize the data, but do not represent a continuous data measurement.

**Russian River Water Quality Grab Samples (January 14 - September 9, 2021)**  
**Provisional Data Subject to Revision**

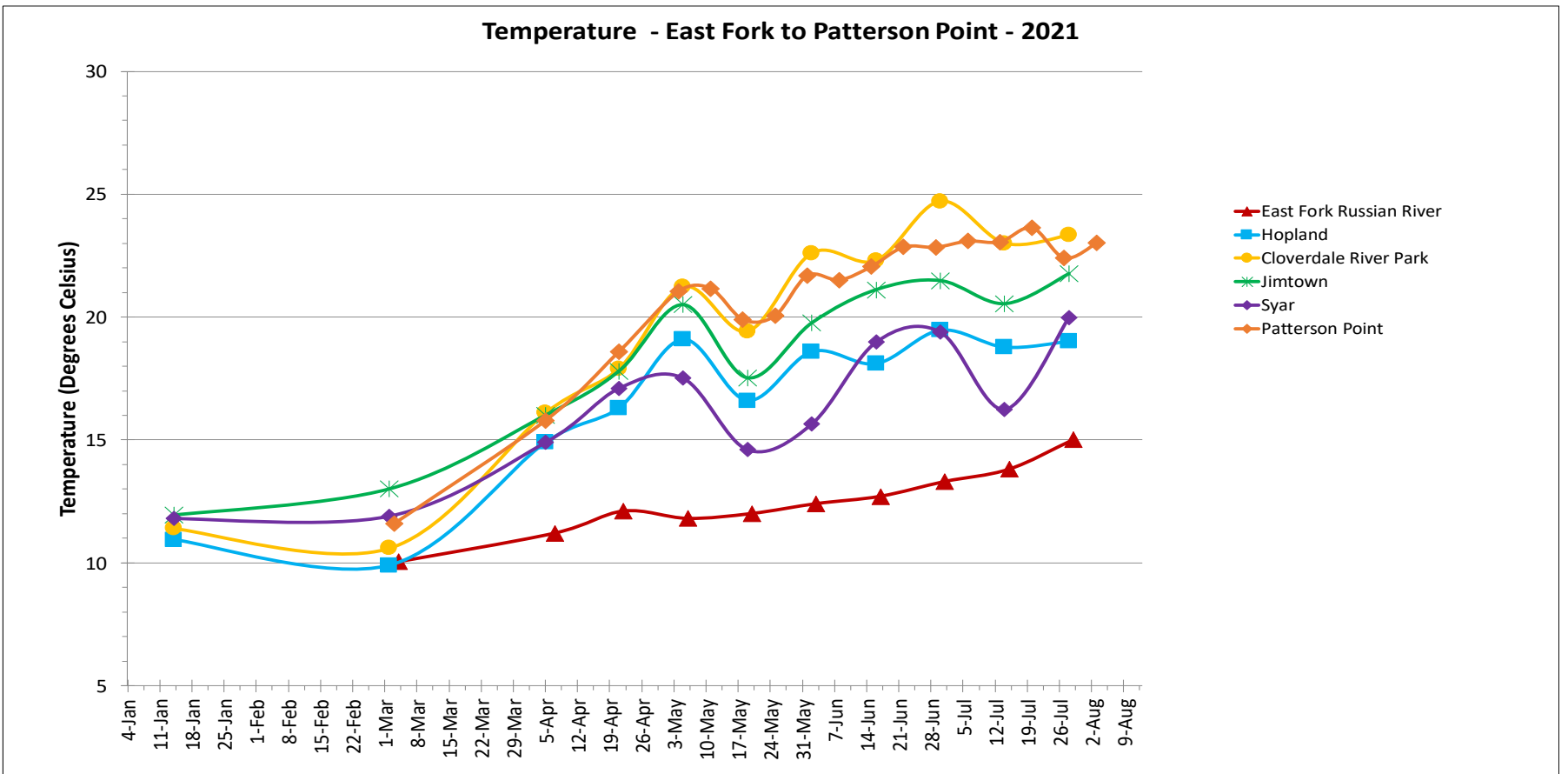
**Lake Mendocino to Hopland Water Quality**

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

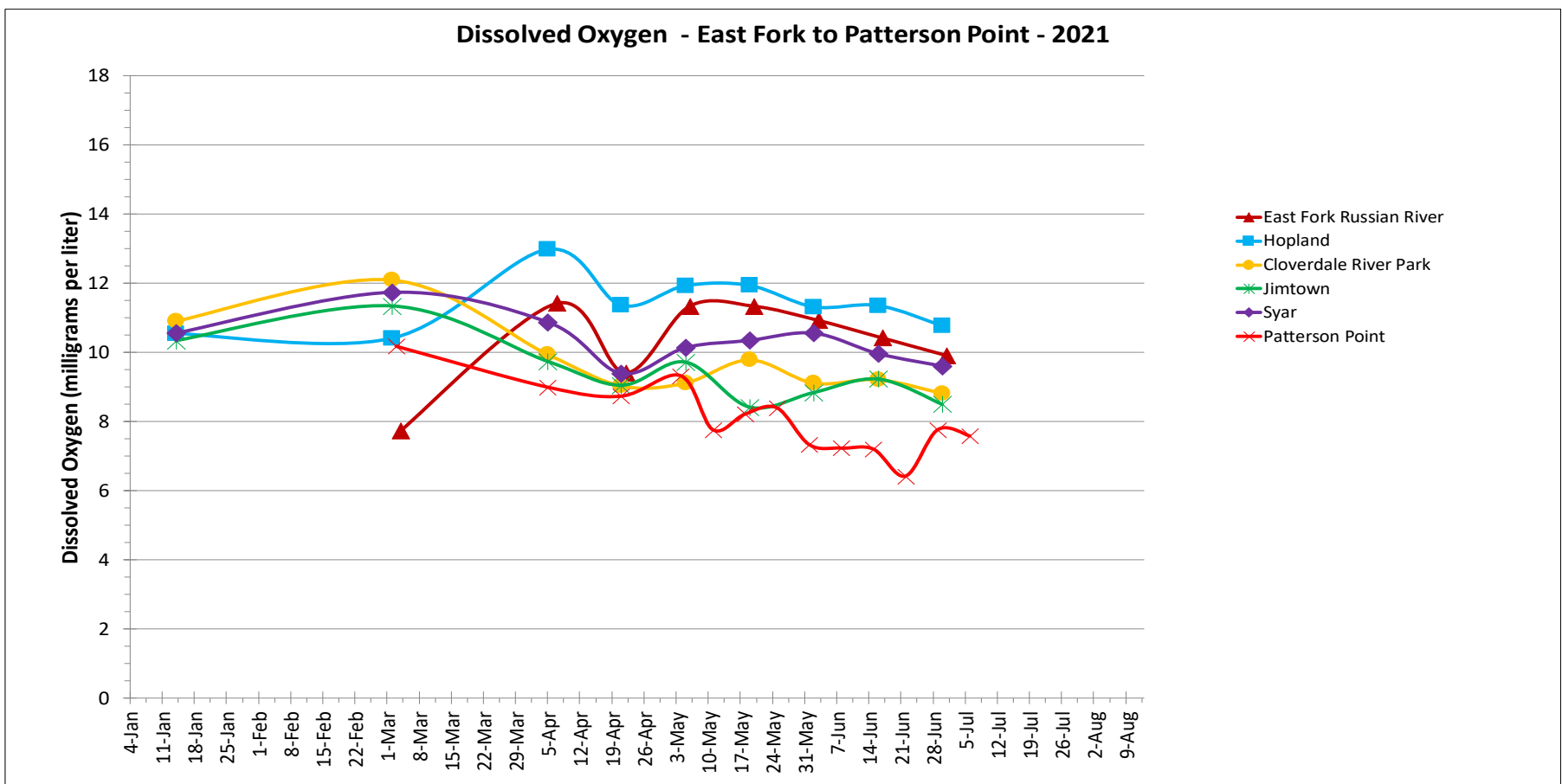


**East Fork (below Lake Mendocino) to Patterson Point Water Quality**

**Temperature (Degrees Celsius) - East Fork to Patterson Point - 2021**



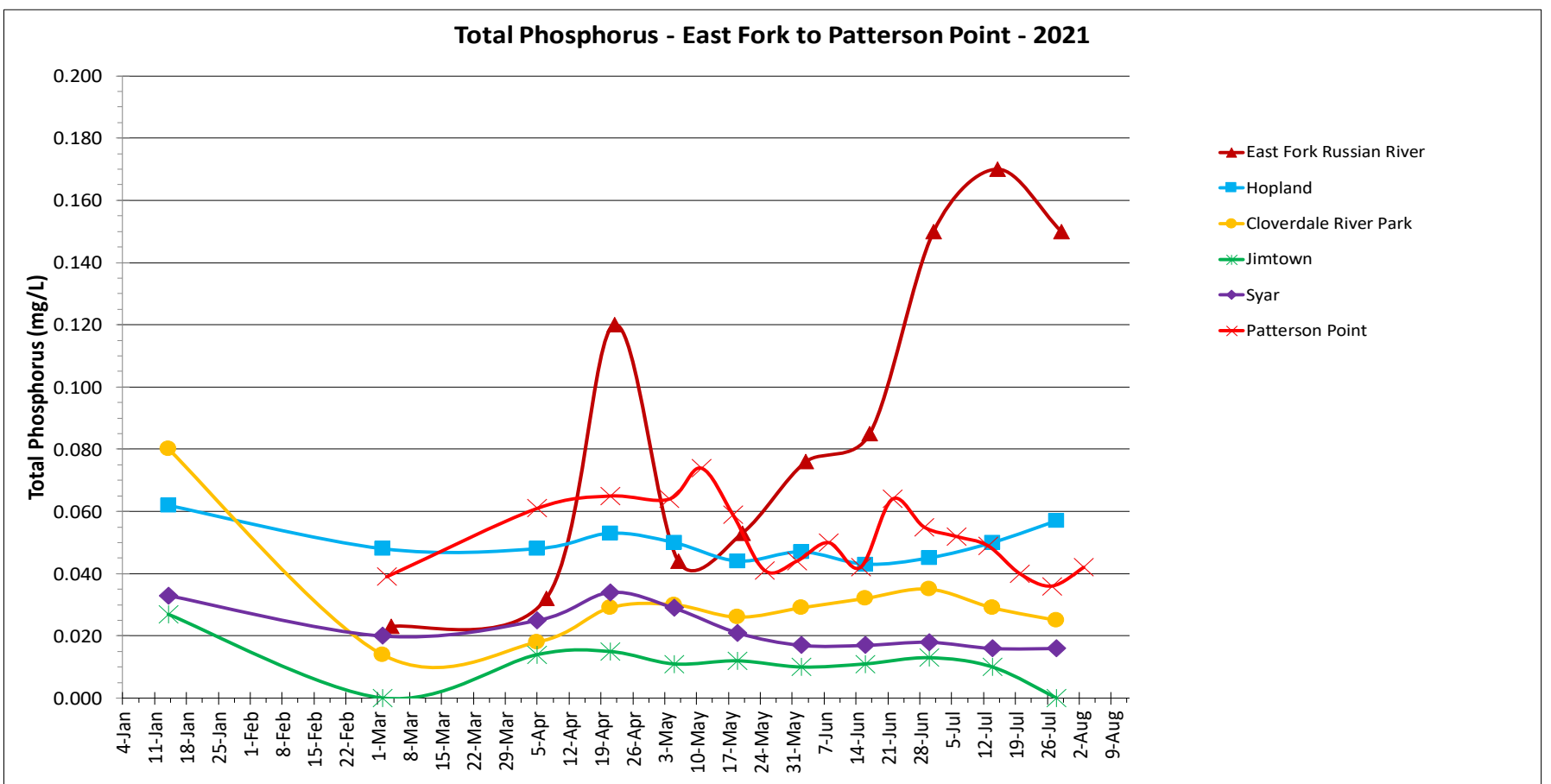
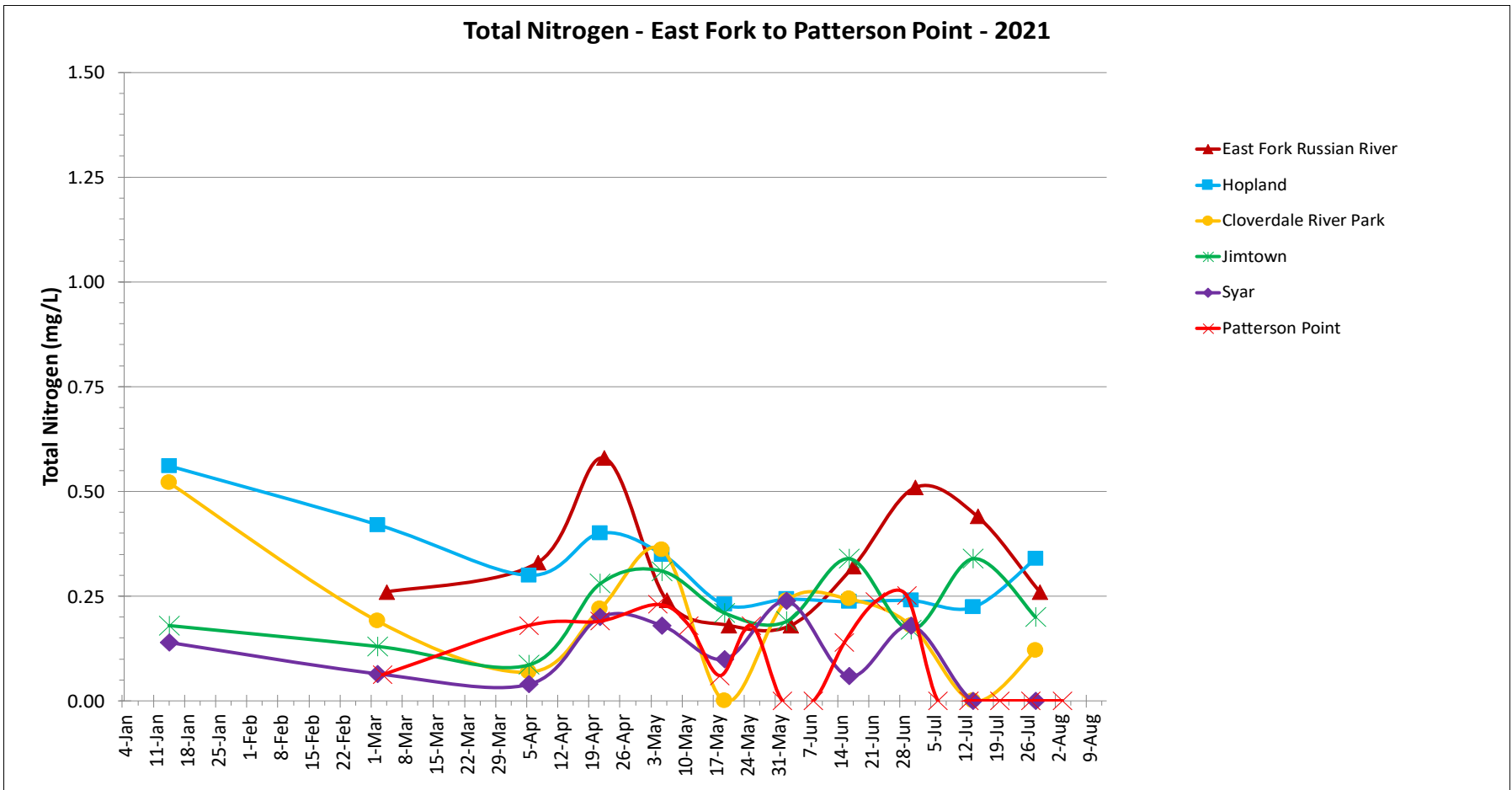
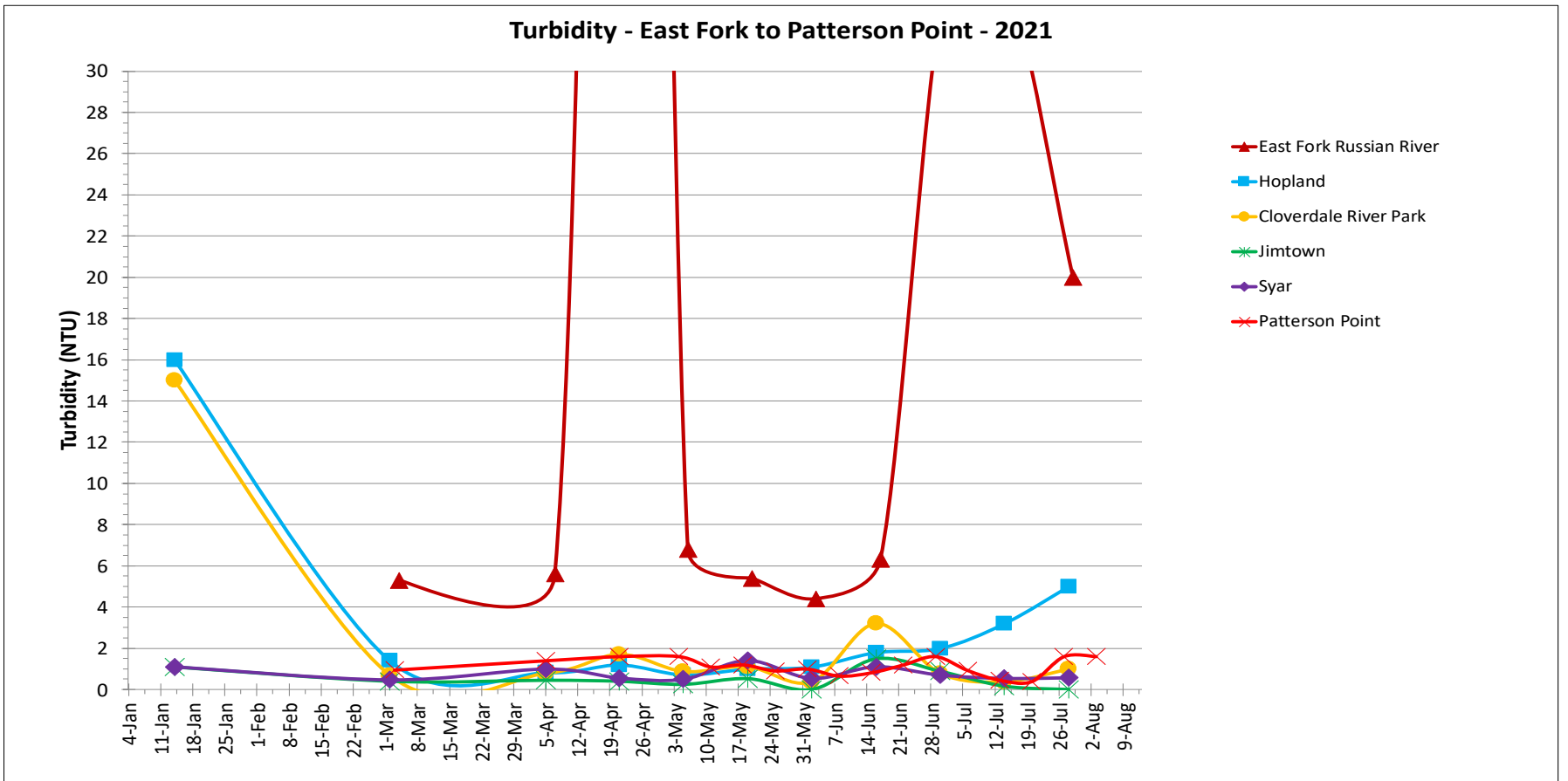
**Dissolved Oxygen (milligrams per liter) - East Fork to Patterson Point - 2021**



\*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 - September 9, 2021)**  
 Provisional Data Subject to Revision

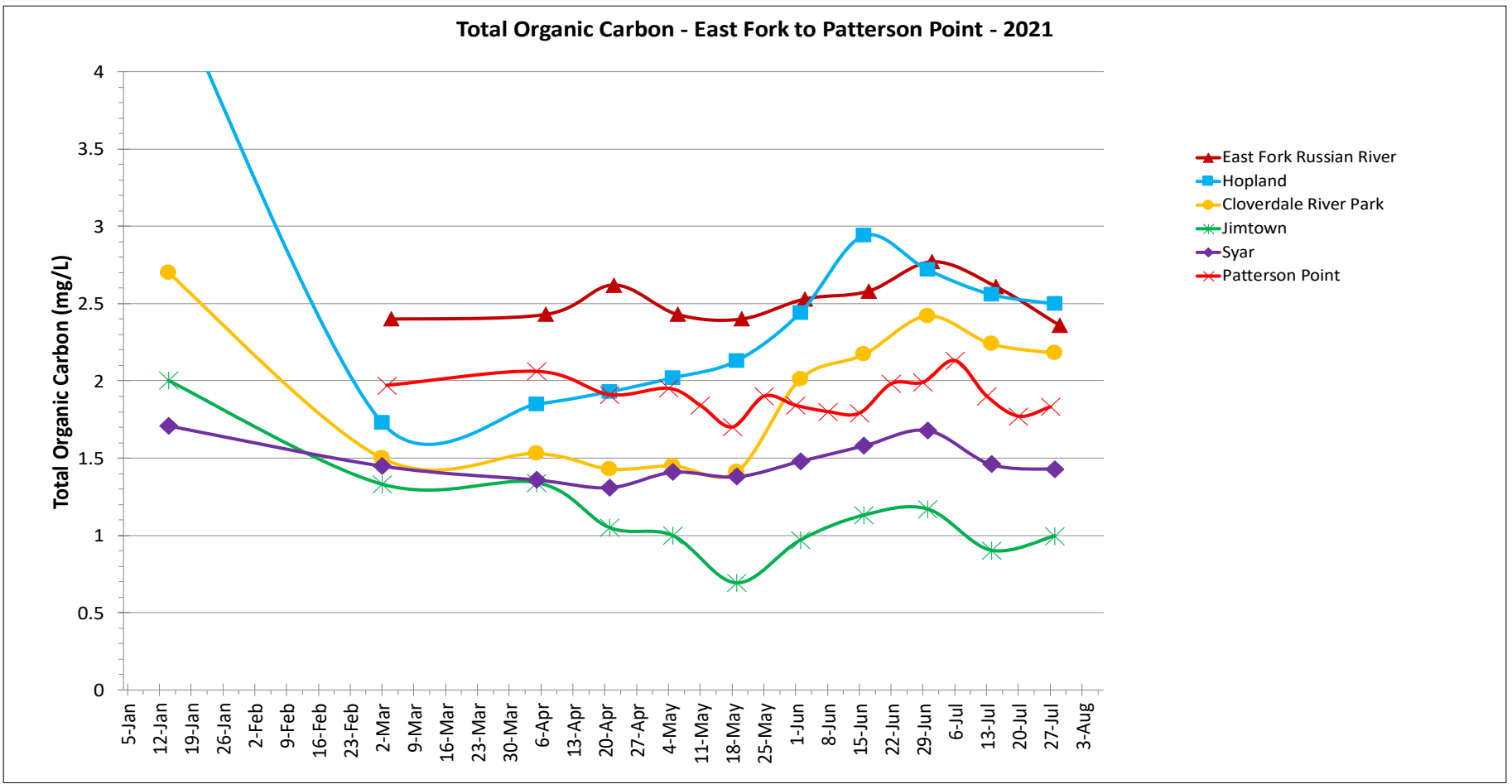
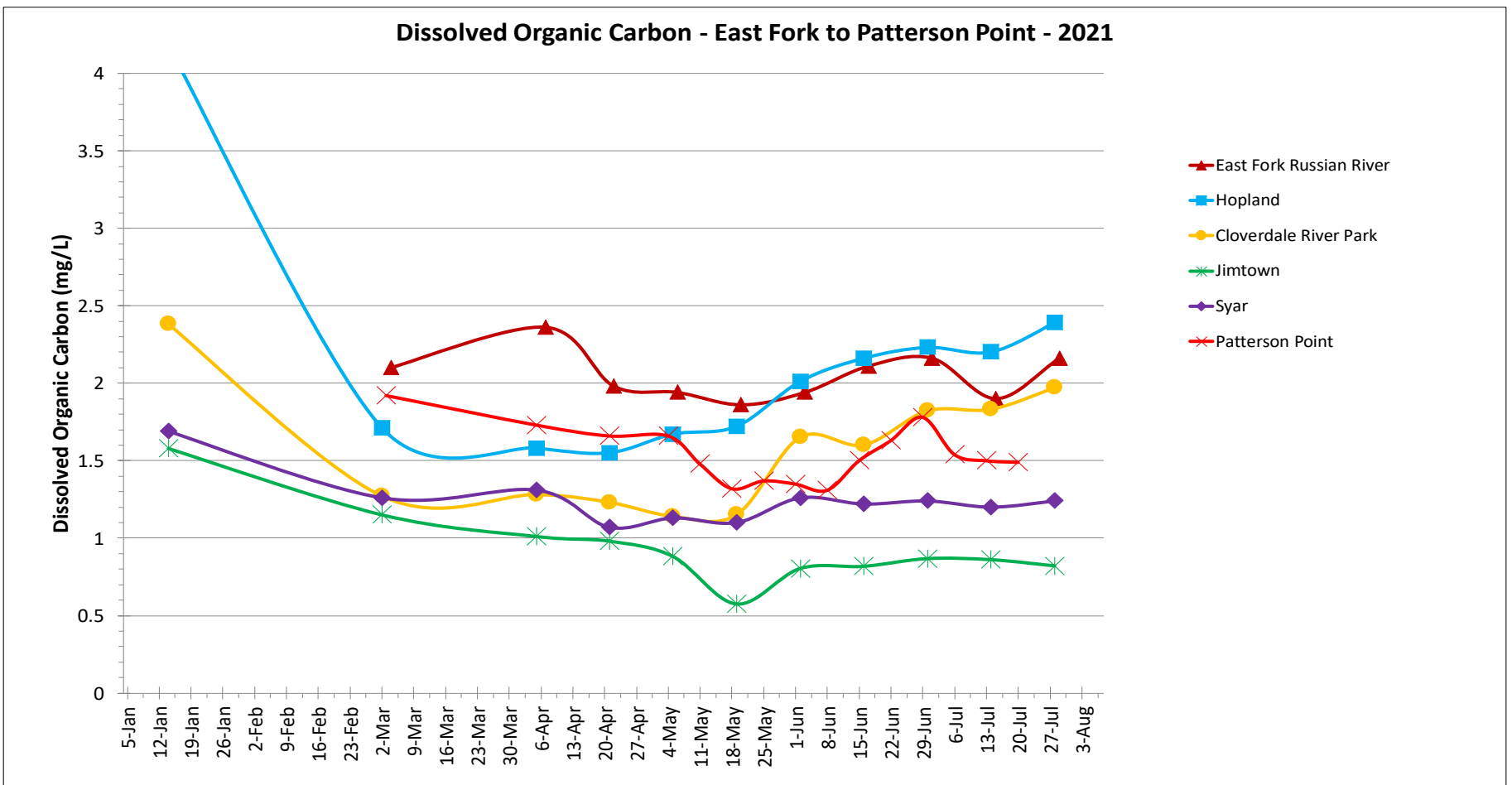
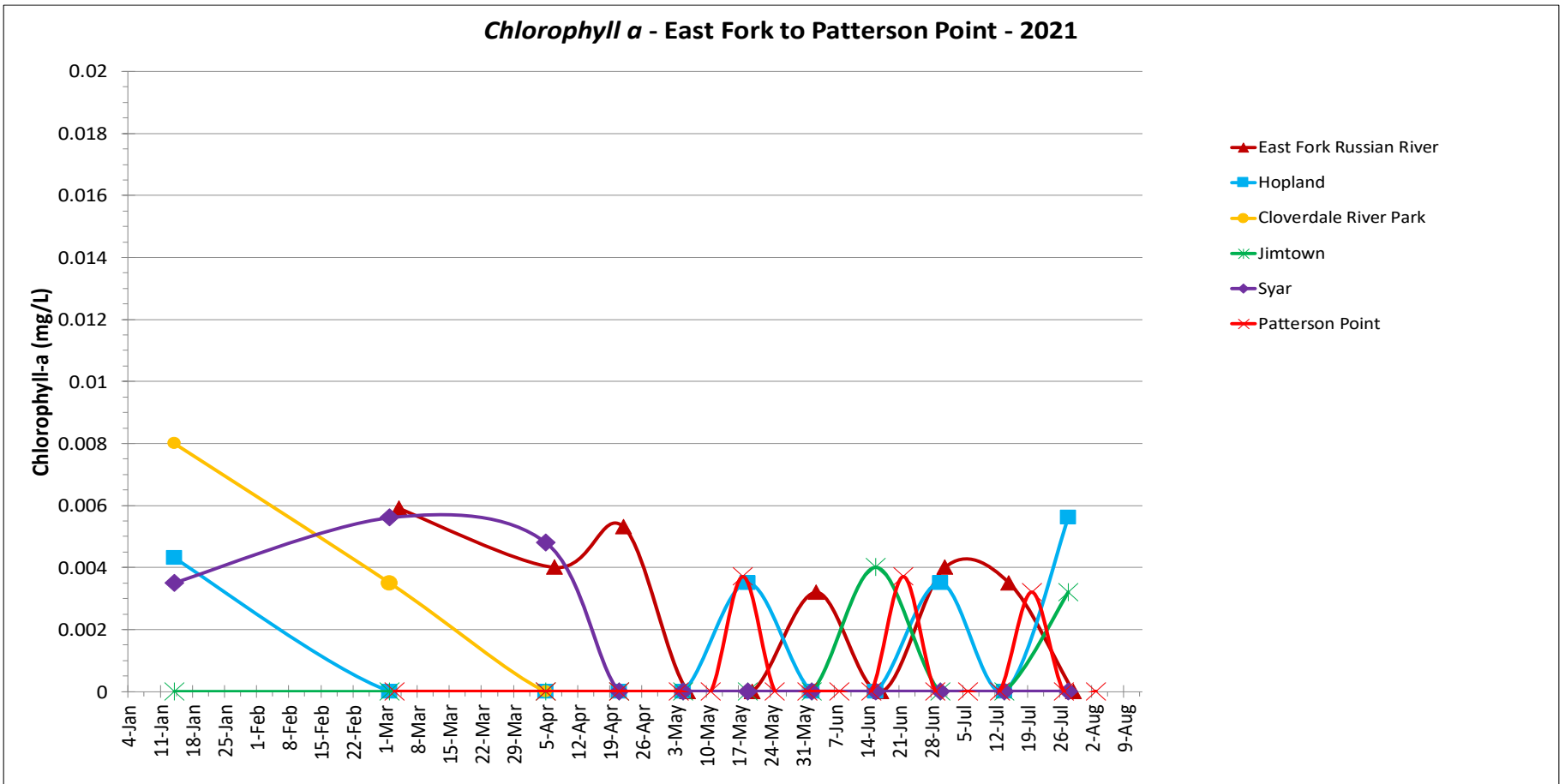
**East Fork (below Lake Mendocino) to Patterson Point Water Quality**



\*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 (January 14 - September 9, 2021)**  
**Provisional Data Subject to Revision**

**East Fork (below Lake Mendocino) to Patterson Point 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 (June 22 - August 10, 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	6/22/2021	1119**	4611**	>24196**
		6/29/2021	1250**	2143**	14136**
		7/6/2021	1553**	1860**	5172**
		7/13/2021	248**	2143**	4352**
		7/20/2021	1935**	2613**	1935**
		7/27/2021	2143**	2098**	2909**
		8/3/2021	1515**	1616**	2014**
		8/10/2021	1439**	1872**	1616**
E. Coli MPN/100 mL	235	6/22/2021	6.2	73.8	30.5
		6/29/2021	12.0	93.2	21.8
		7/6/2021	13.4	24.9	48.7
		7/13/2021	2.0	10.7	13.2
		7/20/2021	1.0	8.4	7.5
		7/27/2021	7.3	5.2	9.7
		8/3/2021	6.3	10.9	67.6
		8/10/2021	4.1	22.8	37.4
Enterococcus MPN/100 mL****	61	6/22/2021	8.5	128.1	190.4
		6/29/2021	29.6	29.5	31.3
		7/6/2021	3.0	7.5	39.9
		7/13/2021	2.0	13.4	31.8
		7/20/2021	5.2	11.0	11.0
		7/27/2021	2.0	13.4	13.2
		8/3/2021	8.5	14.5	22.6
		8/10/2021	10.7	26.2	35.9

\*\*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 (June 1 - August 3, 2021)**  
**Provisional Data Subject to Revision**

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
	Temperature	-	°C	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
				6/22/2021	22.9	23.2	23.4
				6/29/2021	22.8	23.0	23.3
				7/6/2021	23.1	23.2	23.1
				7/13/2021	23.1	23.9	23.2
				7/20/2021	22.8	23.1	23.6
				7/27/2021	22.1	21.9	22.4
				8/3/2021	22.5	22.5	23.0
Nutrients	Ammonia as N	0.01	mg/L	6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
				6/22/2021	ND	ND	ND
				6/29/2021	ND	ND	ND
				7/6/2021	ND	ND	ND
				7/13/2021	ND	ND	ND
				7/20/2021	ND	ND	ND
				7/27/2021	ND	ND	ND
	8/3/2021	ND	ND	ND			
	Nitrate as N	0.03	mg/L	6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
				6/22/2021	0.1	ND	ND
				6/29/2021	0.1	ND	ND
				7/6/2021	ND	ND	0.1
				7/13/2021	ND	ND	ND
				7/20/2021	ND	ND	ND
7/27/2021				ND	ND	ND	
8/3/2021	0.1	ND	ND				
Nutrients	Nitrite as N	0.03	mg/L	6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
				6/22/2021	ND	ND	ND
				6/29/2021	ND	ND	ND
				7/6/2021	ND	ND	ND
				7/13/2021	ND	ND	ND
				7/20/2021	ND	ND	ND
				7/27/2021	ND	ND	ND
	8/3/2021	ND	ND	ND			
	Total Organic Nitrogen as N	0.2	mg/L	6/1/2021	ND	0.180	0.180
				6/8/2021	ND	ND	ND
				6/15/2021	0.140	0.140	ND
				6/22/2021	0.180	0.180	0.180
				6/29/2021	0.180	0.180	0.180
				7/6/2021	0.100	0.100	ND
				7/13/2021	ND	ND	ND
				7/20/2021	0.260	0.350	0.180
				7/27/2021	ND	ND	ND
	8/3/2021	0.180	0.180	0.180			
	Total Kjeldahl Nitrogen	0.1	mg/L	6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	ND
				6/22/2021	ND	ND	ND
				6/29/2021	ND	ND	ND
				7/6/2021	ND	ND	ND
				7/13/2021	ND	ND	ND
				7/20/2021	0.260	0.350	ND
				7/27/2021	ND	ND	ND
	8/3/2021	ND	ND	ND			
	Total Phosphorus	0.02	mg/L	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
				6/22/2021	0.064	0.059	0.041
				6/29/2021	0.055	0.072	0.057
				7/6/2021	0.052	0.051	0.040
7/13/2021				0.049	0.050	0.039	
7/20/2021				0.046	0.046	0.040	
7/27/2021				0.046	0.044	0.036	
8/3/2021	0.045	0.042	0.042				
Total Orthophosphate	0.02	mg/L	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	
			6/22/2021	0.140	0.120	0.073	
			6/29/2021	0.110	0.077	0.100	
			7/6/2021	0.100	0.090	0.074	
			7/13/2021	0.095	0.083	0.066	
			7/20/2021	0.083	0.083	0.063	
			7/27/2021	0.082	0.070	0.054	
8/3/2021	0.097	0.064	0.056				

**Russian River Water Quality Grab Samples (June 1 - August 3, 2021)**  
**Provisional Data Subject to Revision**

Parameter		MDL*	Units	Date	Patterson Point	Monte Rio	Vacation Beach
Chlorophyll	Chlorophyll A	0.00005	mg/L	6/1/2021	ND	ND	ND
				6/8/2021	ND	ND	ND
				6/15/2021	ND	ND	0.004
				6/22/2021	0.004	ND	0.004
				6/29/2021	ND	ND	0.005
				7/6/2021	ND	ND	ND
				7/13/2021	ND	ND	ND
				7/20/2021	0.004	ND	0.003
				7/27/2021	ND	ND	ND
				8/3/2021	0.004	ND	ND
Carbon	Total Organic Carbon	0.04	mg/L	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
				6/22/2021	1.98	2.11	2.16
				6/29/2021	1.99	2.40	2.14
				7/6/2021	2.13	2.03	1.96
				7/13/2021	1.90	1.90	1.94
				7/20/2021	1.85	1.85	1.77
				7/27/2021	1.87	1.90	1.83
	8/3/2021	2.08	2.03	1.84			
	Dissolved Organic Carbon	0.04	mg/L	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
				6/22/2021	1.63	1.59	1.72
				6/29/2021	1.78	1.58	1.57
				7/6/2021	1.54	1.58	1.59
				7/13/2021	1.50	1.59	1.54
				7/20/2021	1.48	1.45	1.49
7/27/2021				1.62	1.58	1.73	
8/3/2021	1.40	1.36	1.33				
Solids	Turbidity	0.02	NTU	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
				6/22/2021	1.20	1.10	1.10
				6/29/2021	1.60	1.60	2.60
				7/6/2021	0.93	0.99	0.66
				7/13/2021	0.46	0.71	0.44
				7/20/2021	0.52	0.85	0.40
				7/27/2021	1.20	2.80	1.60
	8/3/2021	1.10	2.10	1.60			
	TDS	4.2	mg/L	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
				6/22/2021	130.00	130.00	150.00
				6/29/2021	130.00	130.00	130.00
				7/6/2021	140.00	160.00	140.00
				7/13/2021	150.00	140.00	130.00
				7/20/2021	160.00	150.00	140.00
7/27/2021				140.00	140.00	130.00	
8/3/2021	160.00	150.00	140.00				