

# Tomoka Marsh Aquatic Preserve

## SEACAR Water Quality Analysis

Last compiled on 18 March, 2025

### Contents

<b>Indicators</b>	<b>2</b>
Nutrients . . . . .	2
Total Nitrogen - Discrete . . . . .	2
Total Phosphorus - Discrete . . . . .	4
Water Quality . . . . .	6
Dissolved Oxygen - Discrete . . . . .	6
Dissolved Oxygen - Continuous . . . . .	8
Dissolved Oxygen Saturation - Discrete . . . . .	10
Dissolved Oxygen Saturation - Continuous . . . . .	12
Salinity - Discrete . . . . .	14
Salinity - Continuous . . . . .	16
Water Temperature - Discrete . . . . .	18
Water Temperature - Continuous . . . . .	20
pH - Discrete . . . . .	22
pH - Continuous . . . . .	24
Water Clarity . . . . .	26
Turbidity - Discrete . . . . .	26
Turbidity - Continuous . . . . .	28
Total Suspended Solids - Discrete . . . . .	30
Chlorophyll a, Uncorrected for Pheophytin - Discrete . . . . .	32
Chlorophyll a, Corrected for Pheophytin - Discrete . . . . .	34
Secchi Depth - Discrete . . . . .	36
Colored Dissolved Organic Matter - Discrete . . . . .	38

# Indicators

## Nutrients

### Total Nitrogen - Discrete

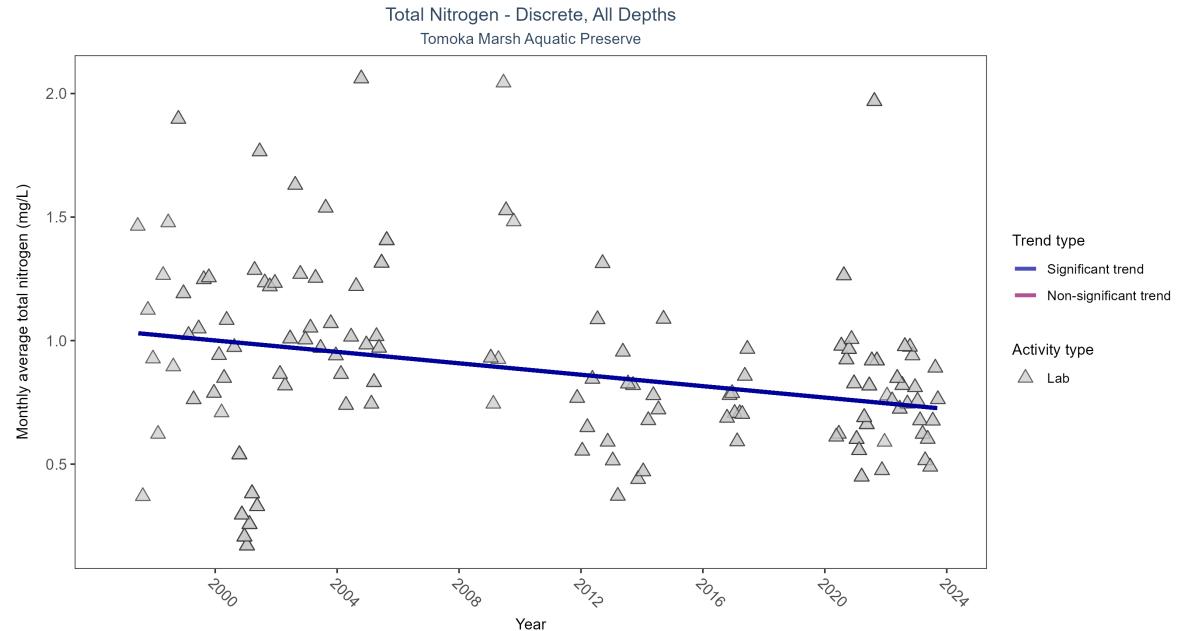
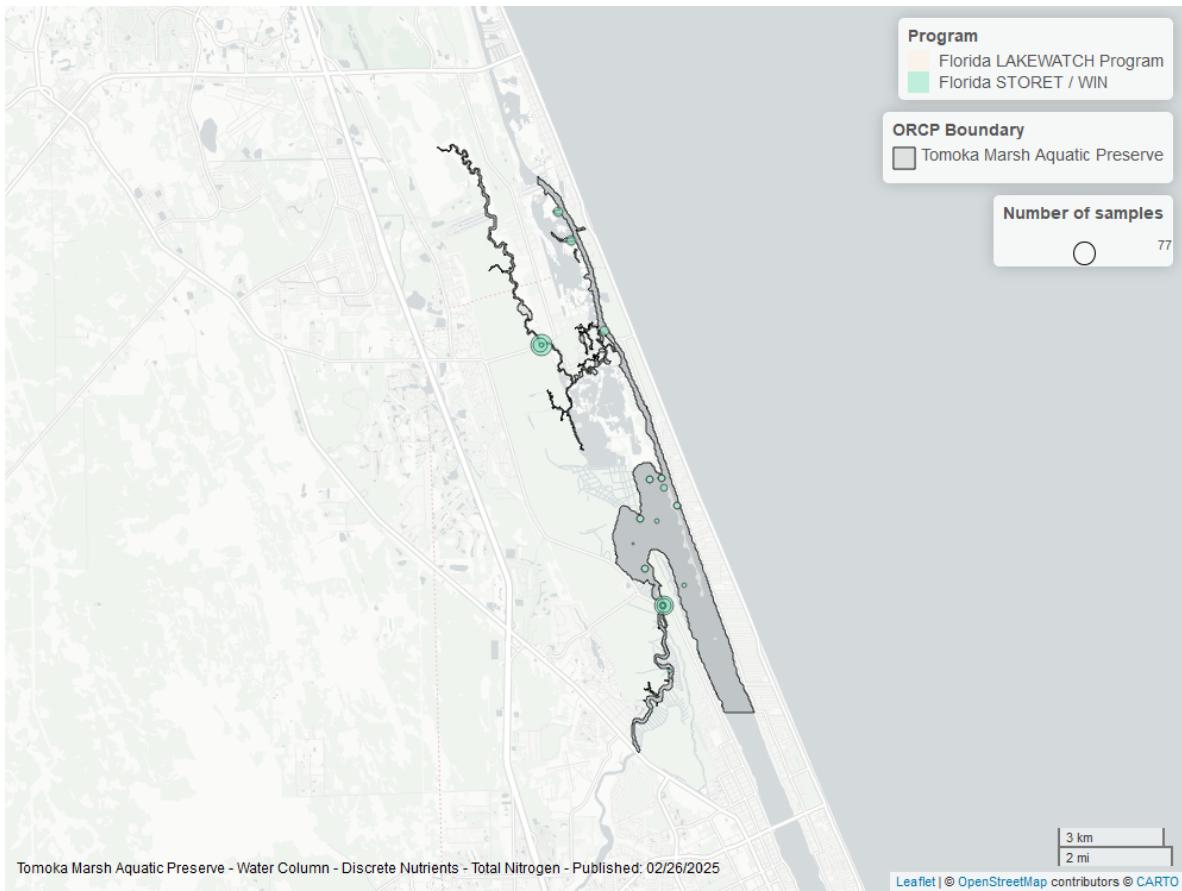


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	382	20	1997 - 2023	0.7927	-0.22098	1.03521	-0.01156	0.00088913579094146552497107683



## Total Phosphorus - Discrete

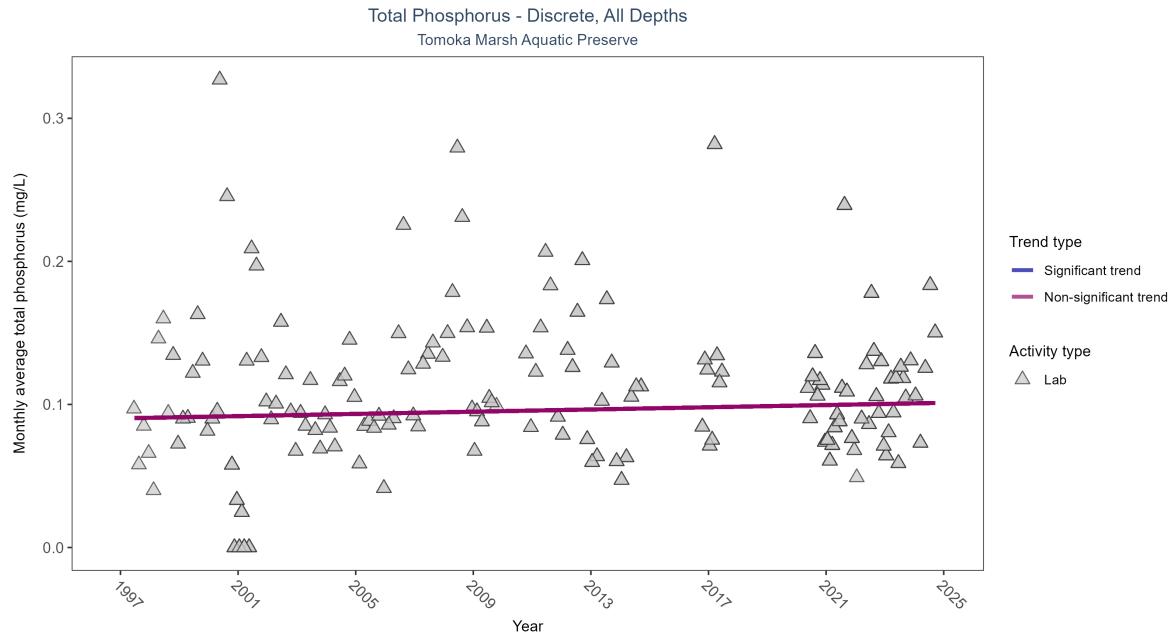


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	671	25	1997 - 2024	0.099	0.0711	0.09026	0.00039	0.45312600028266791785114264712319709360599517822265625000000000000



## Water Quality

### Dissolved Oxygen - Discrete

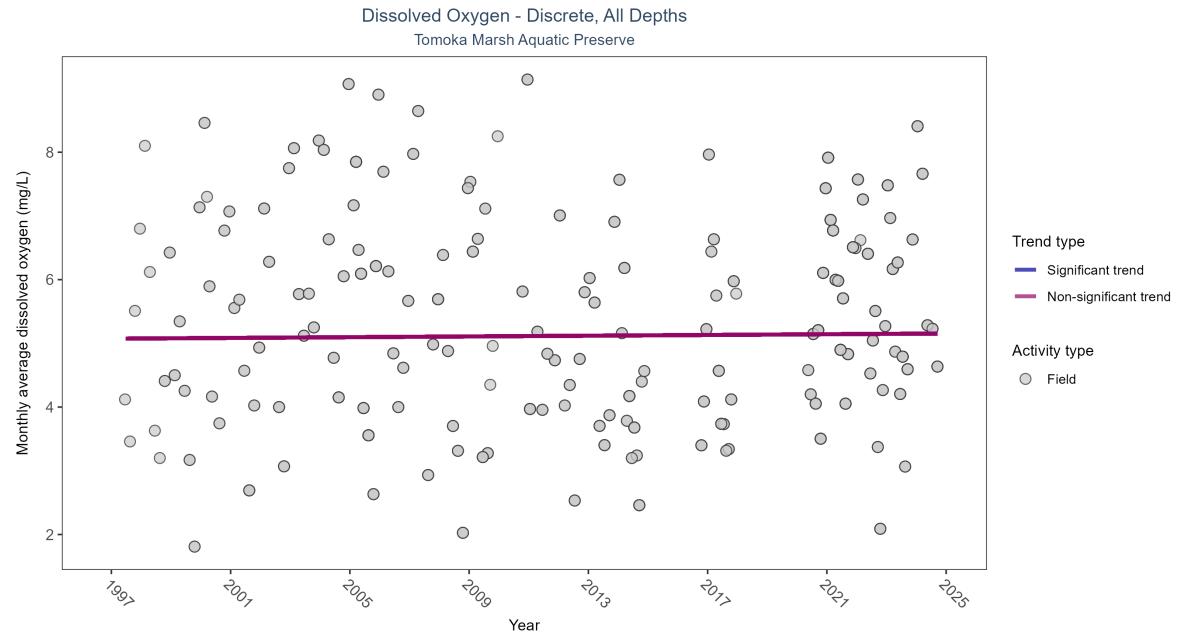


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	686	25	1997 - 2024	5.41	0.05542	5.07345	0.0029	0.80253138328074114



## Dissolved Oxygen - Continuous

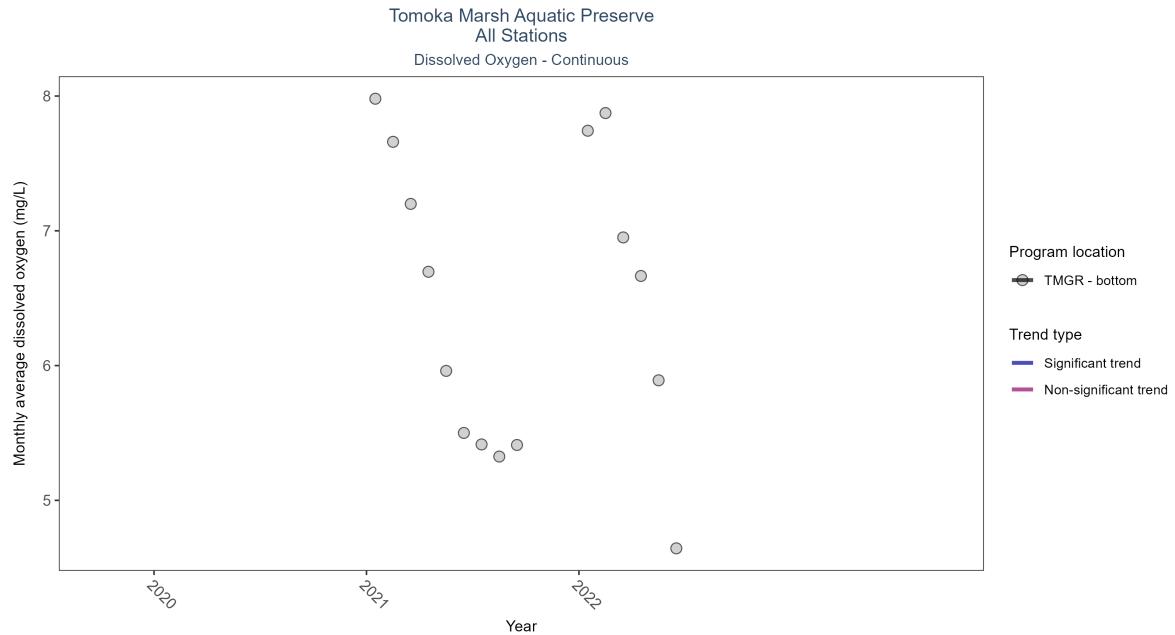
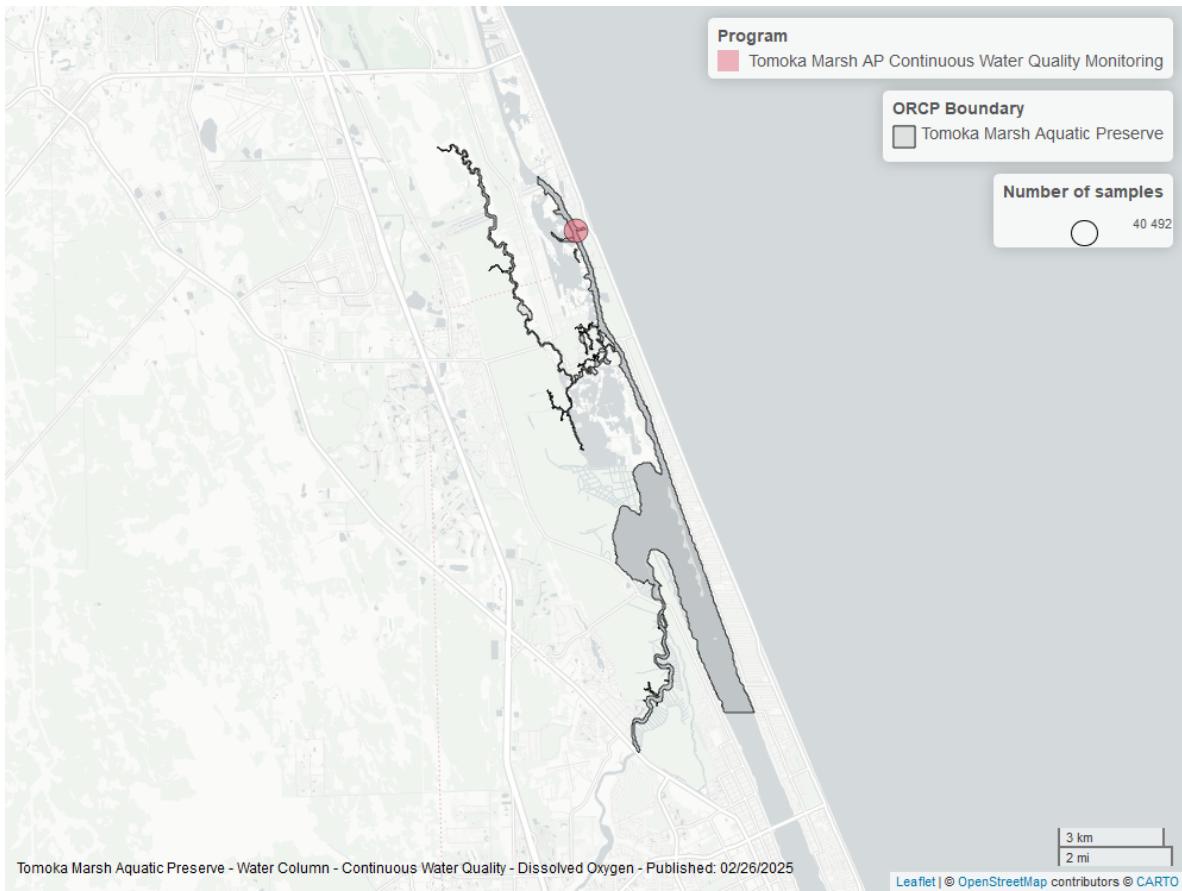


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TMGR	Insufficient data to calculate trend	40492	2	2021 - 2022	6.5	-	-	-	NA



## Dissolved Oxygen Saturation - Discrete

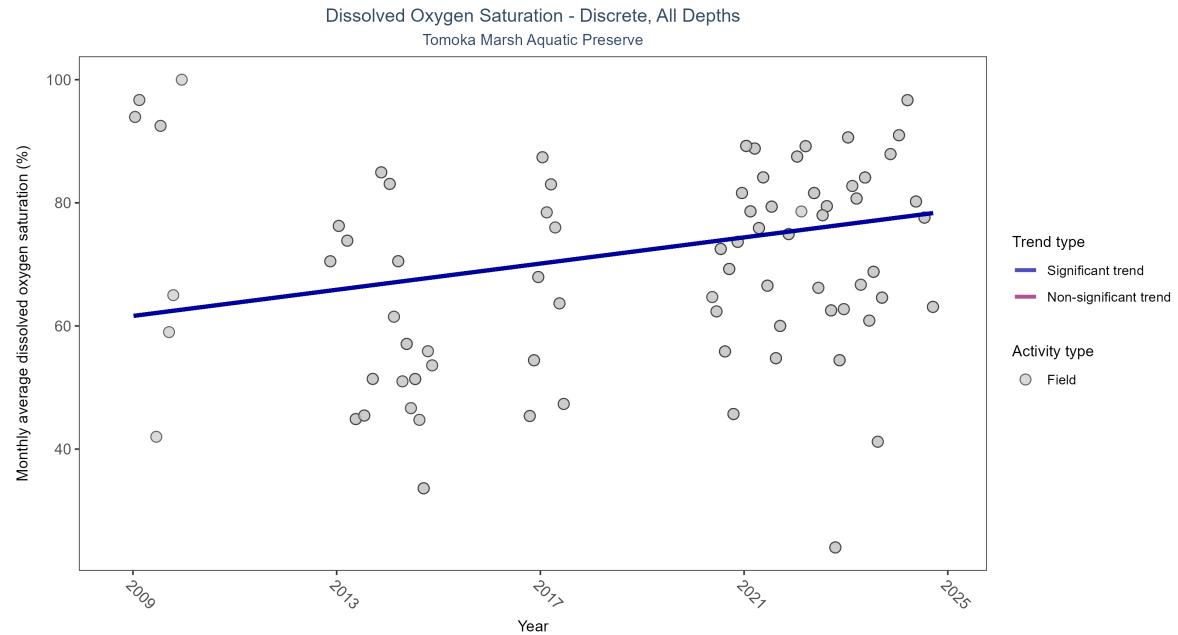
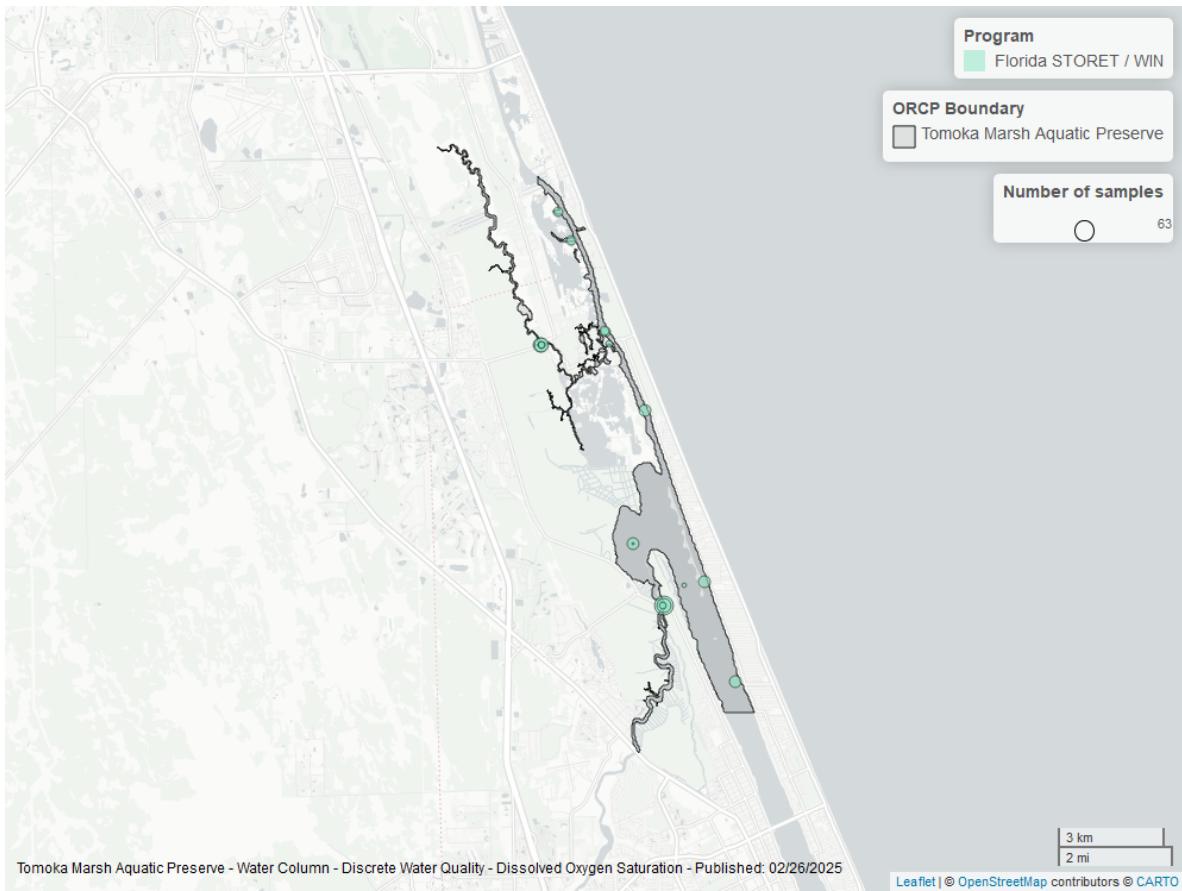


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	376	11	2009 - 2024	71.25	0.2315	61.62389	1.06364	0.002224978605485871362146266250192638835869729518890380859375000000000000



## Dissolved Oxygen Saturation - Continuous

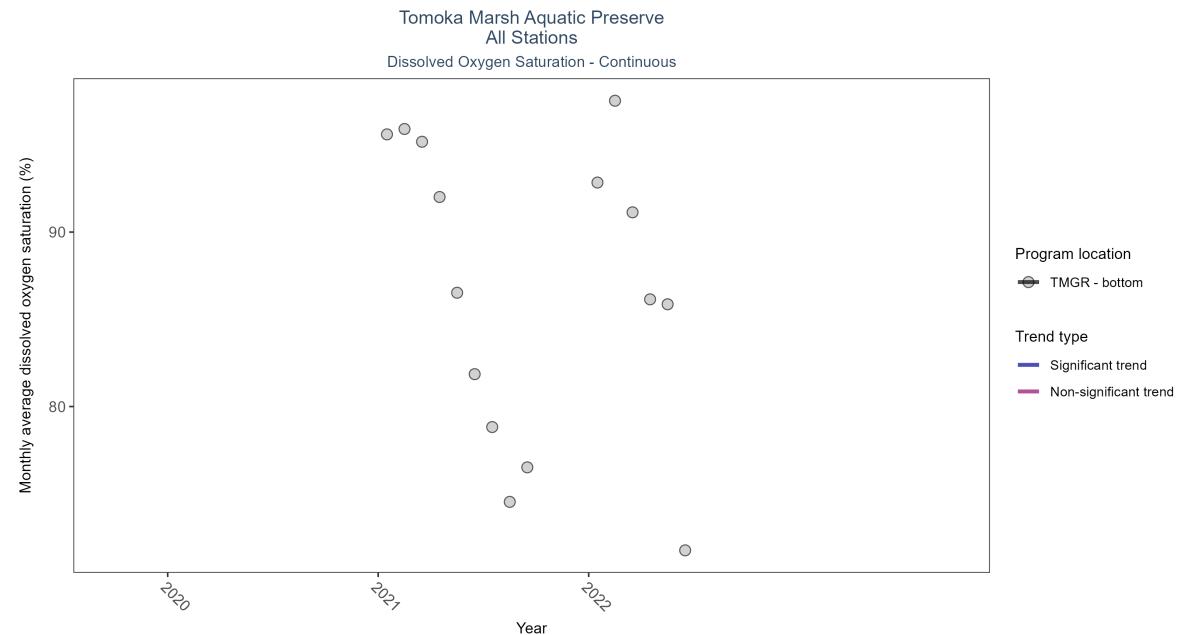
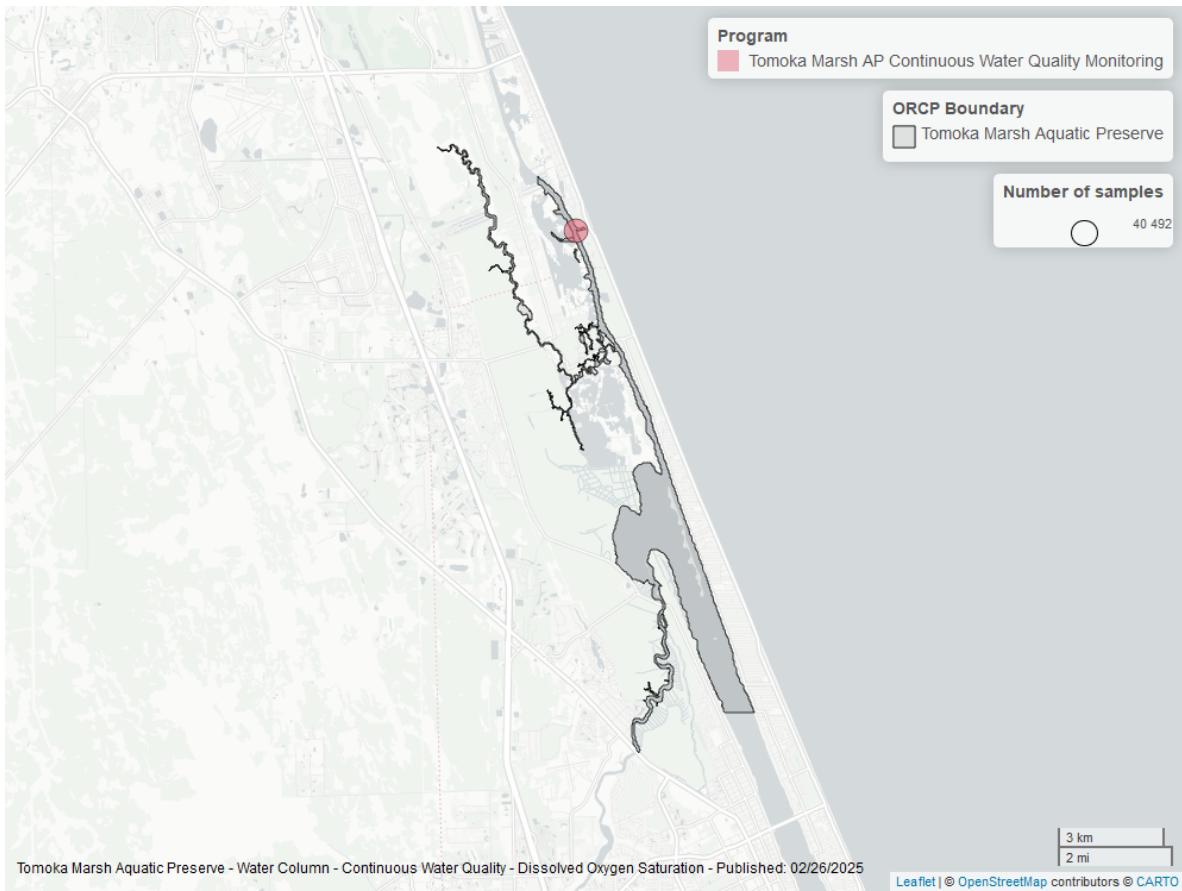


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TMGR	Insufficient data to calculate trend	40492	2	2021 - 2022	88.4	-	-	-	NA



## Salinity - Discrete

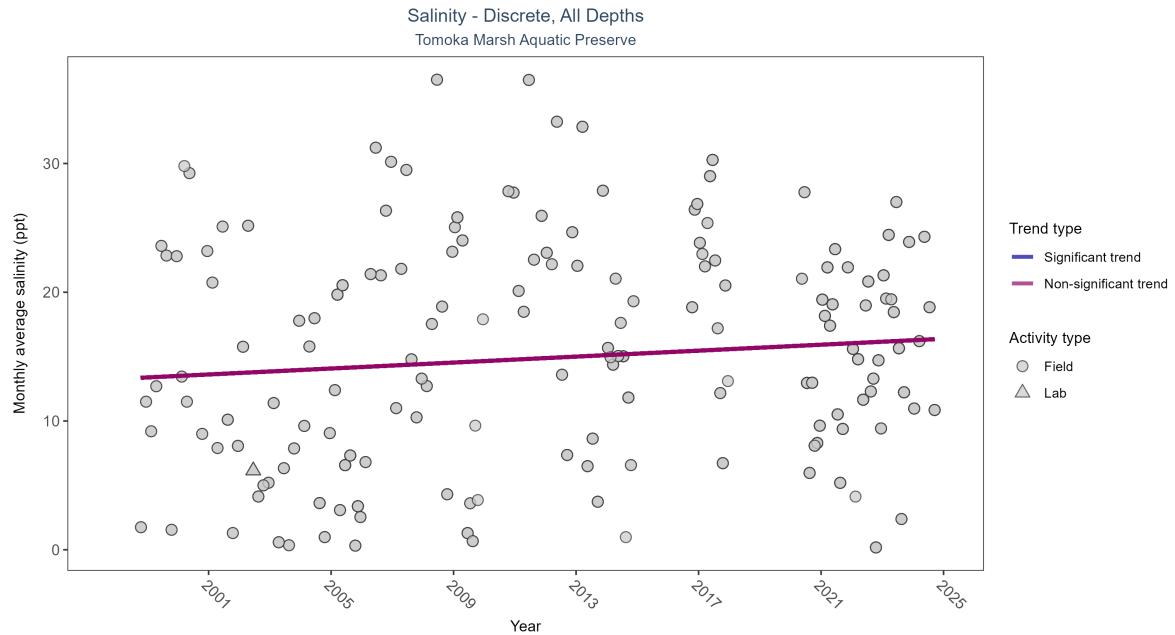
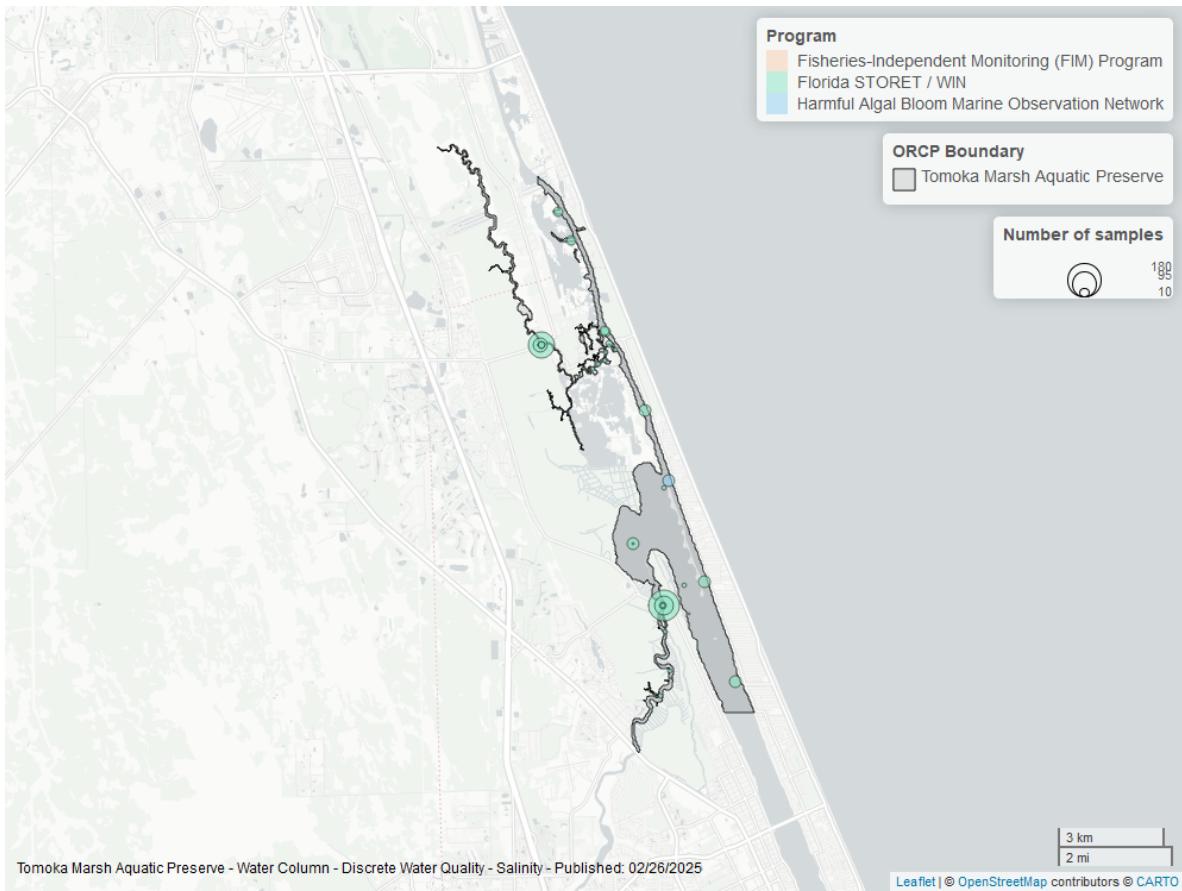


Table 7: Seasonal Kendall-Tau Results for - Salinity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
All	No significant trend	664	24	1998 - 2024	16.115	0.04553	13.267	0.11556	0.30815741513312266963708907496766187250614166260



## Salinity - Continuous

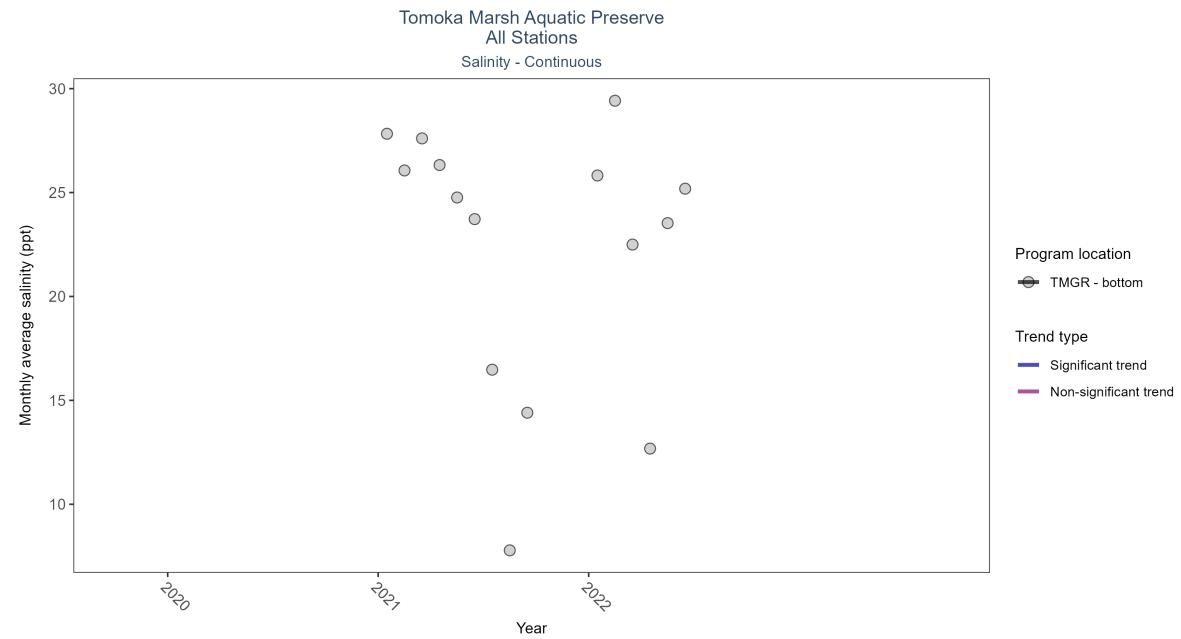
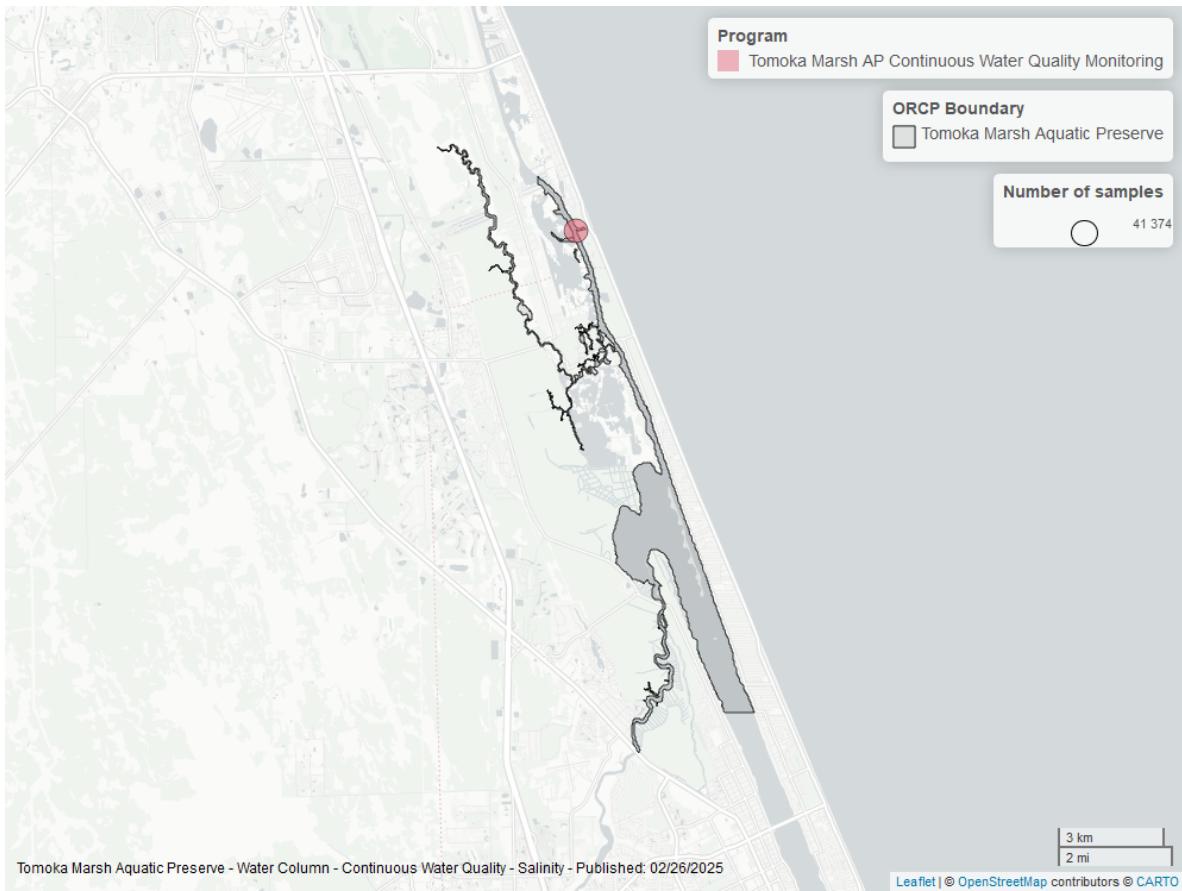


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TMGR	Insufficient data to calculate trend	41374	2	2021 - 2022	23.3	-	-	-	NA



## Water Temperature - Discrete

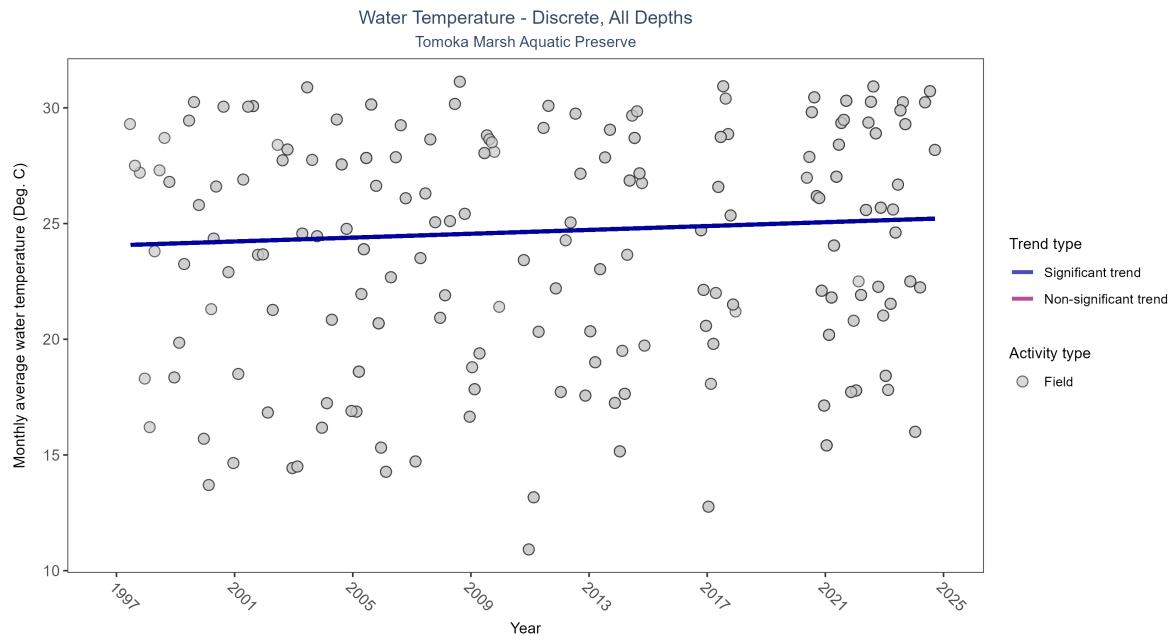


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	702	25	1997 - 2024	25.014	0.15682	24.05857	0.04167	0.017515756299354583



## Water Temperature - Continuous

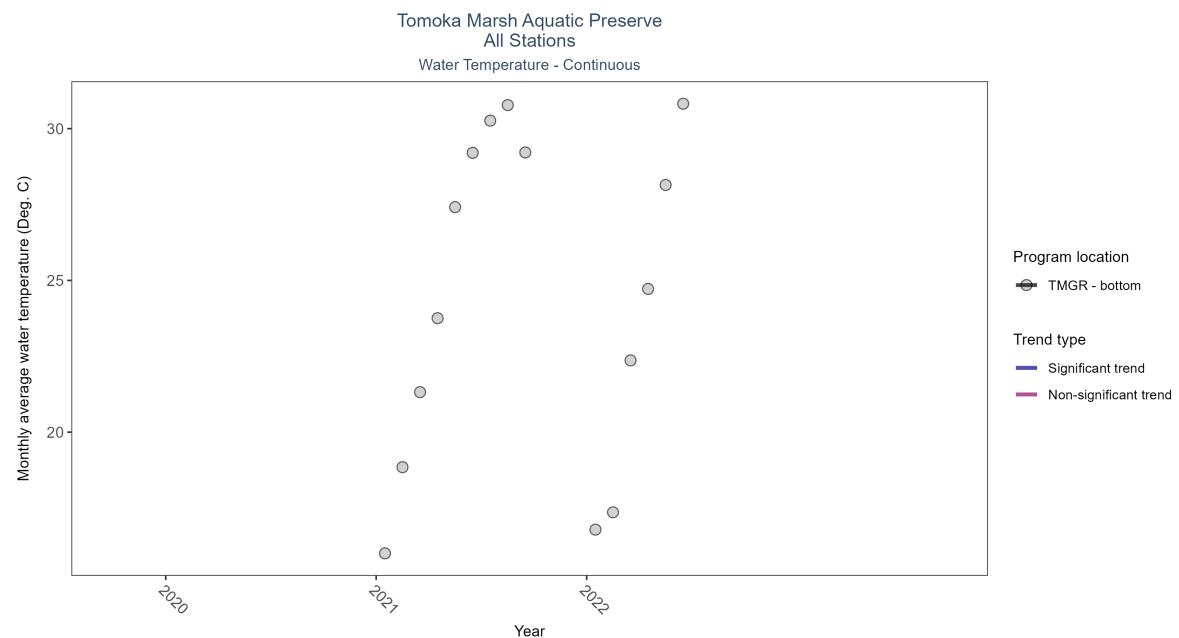
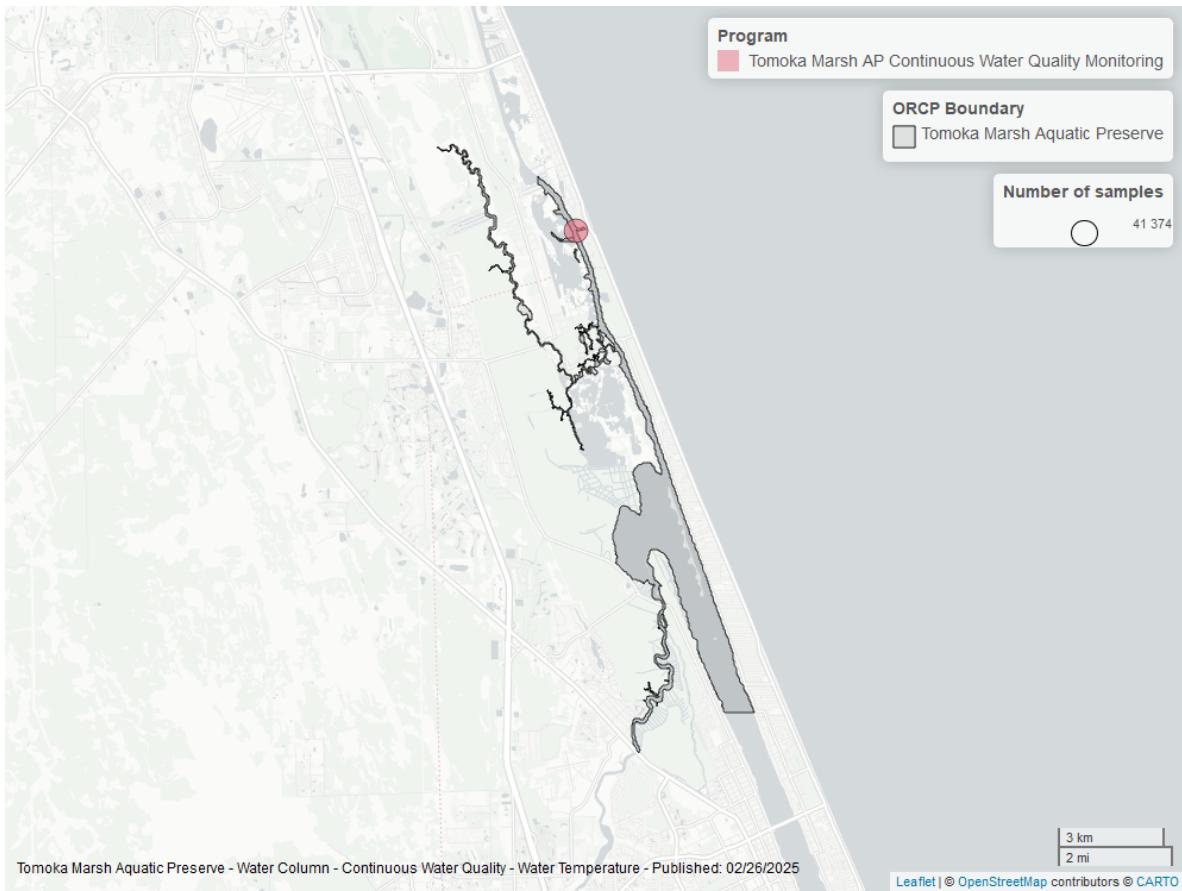


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TMGR	Insufficient data to calculate trend	41374	2	2021 - 2022	25.5	-	-	-	NA



## pH - Discrete

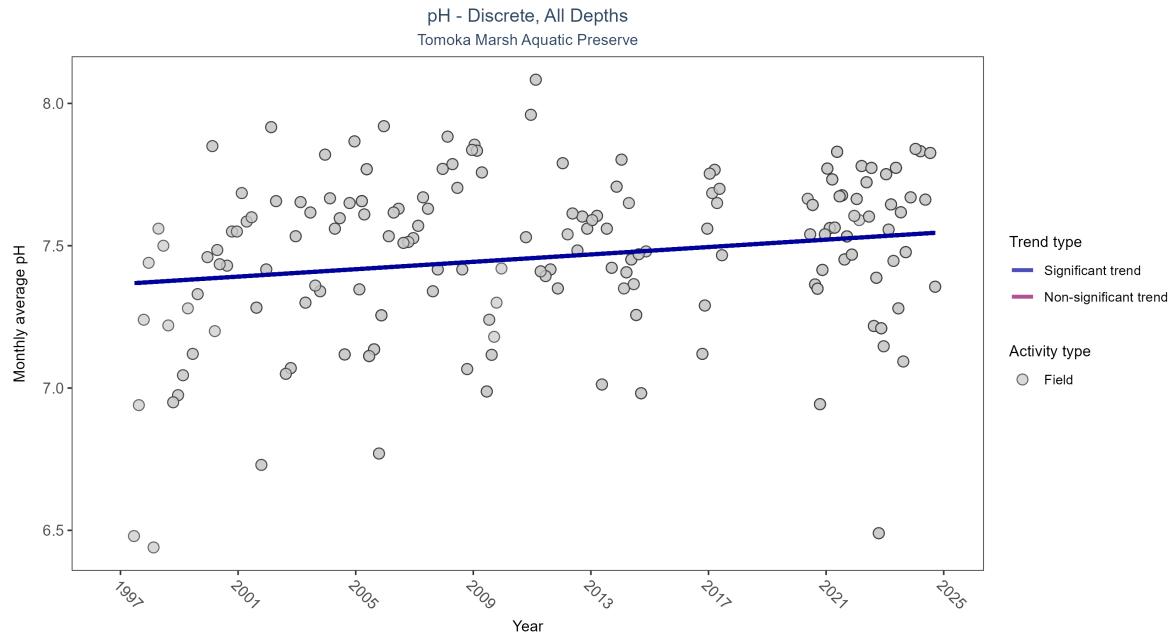


Table 11: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	675	25	1997 - 2024	7.54	0.17317	7.36556	0.00649	0.00885794095685465618372766982702160021290



## pH - Continuous

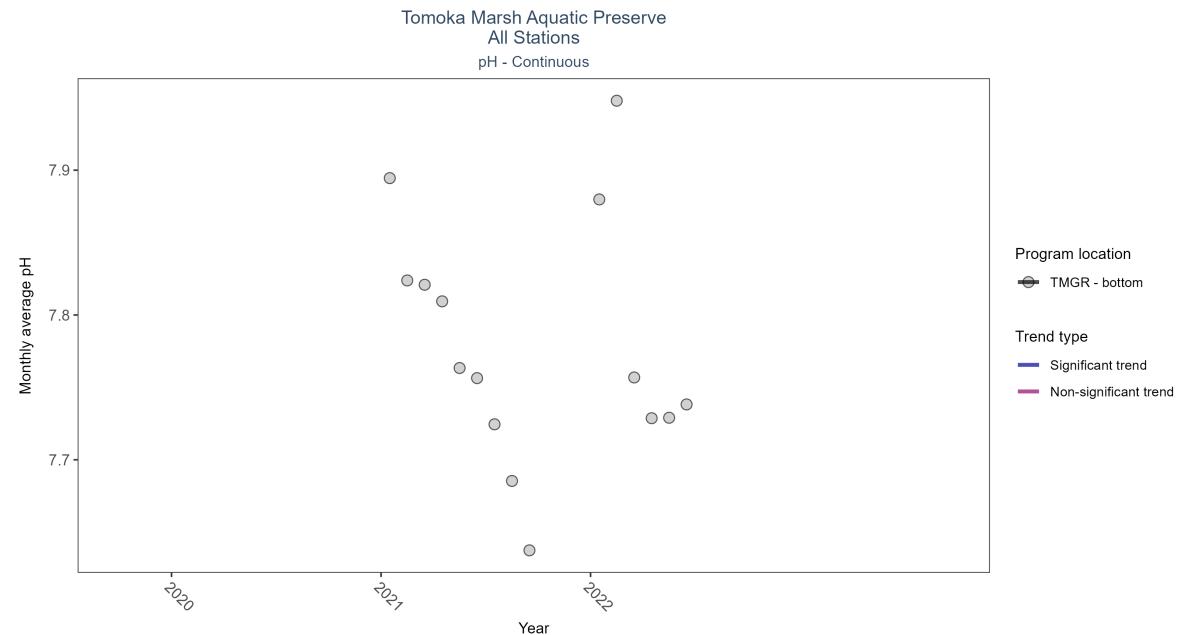
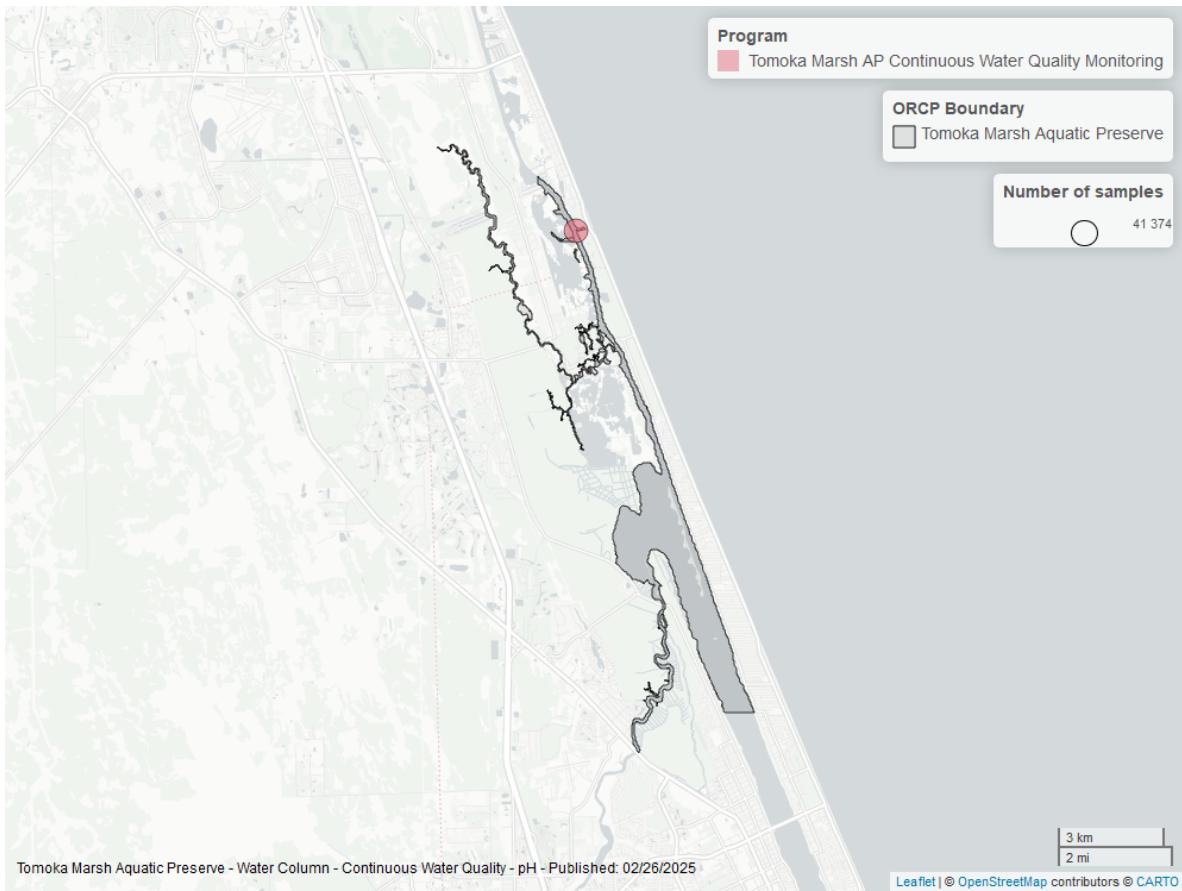


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TMGR	Insufficient data to calculate trend	41374	2	2021 - 2022	7.8	-	-	-	NA



## Water Clarity

### Turbidity - Discrete

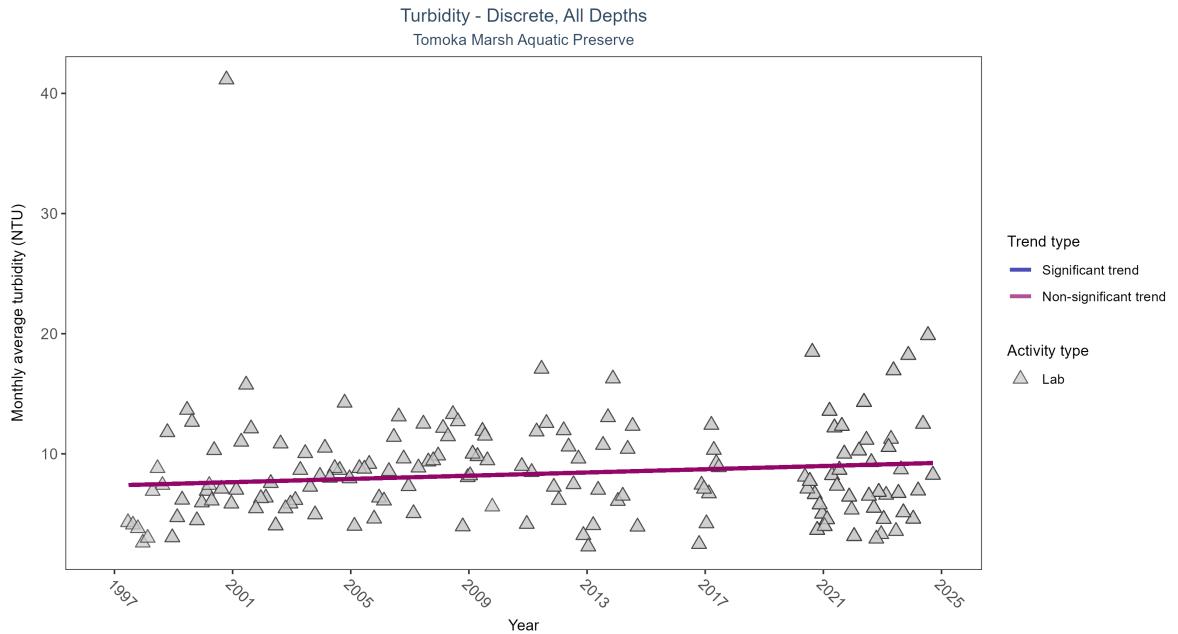
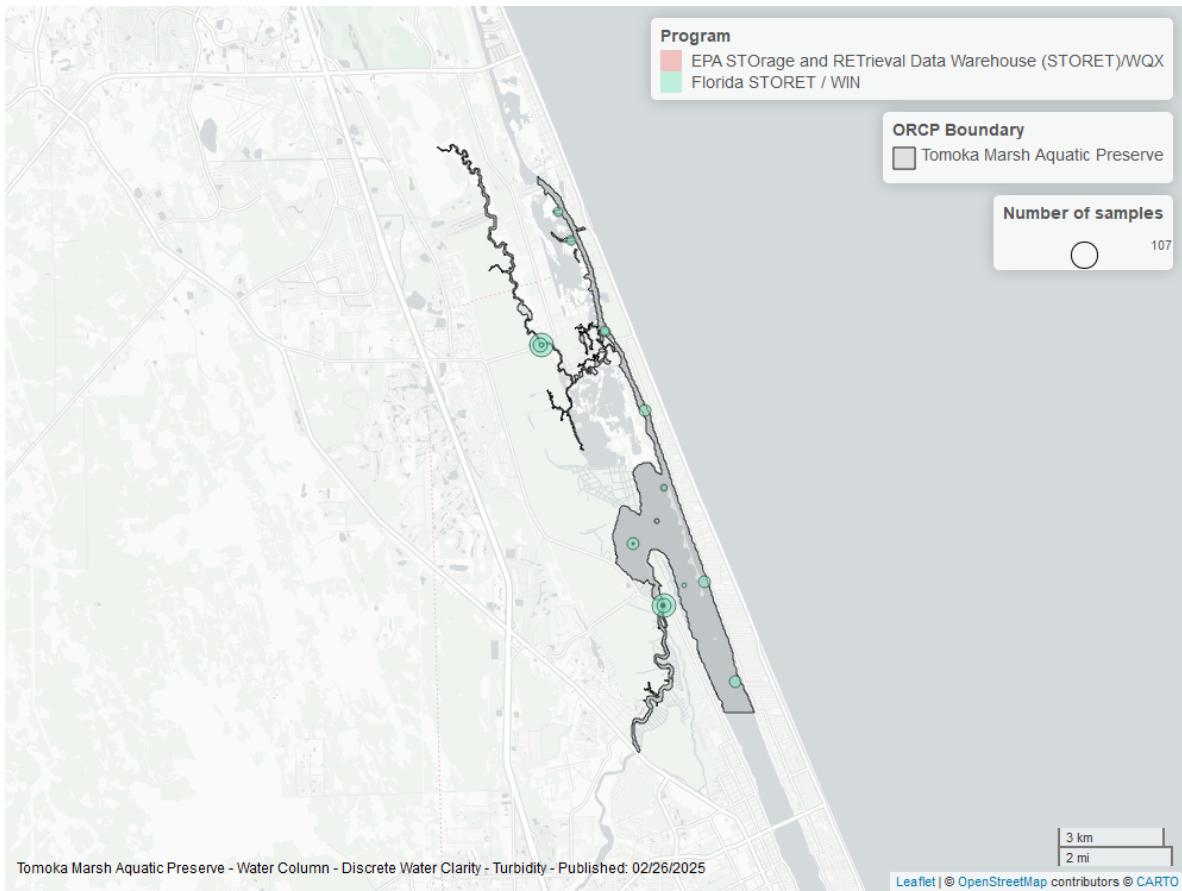


Table 13: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	468	25	1997 - 2024	7.34098	0.08996	7.37283	0.06721	0.11427136007141848462



## Turbidity - Continuous

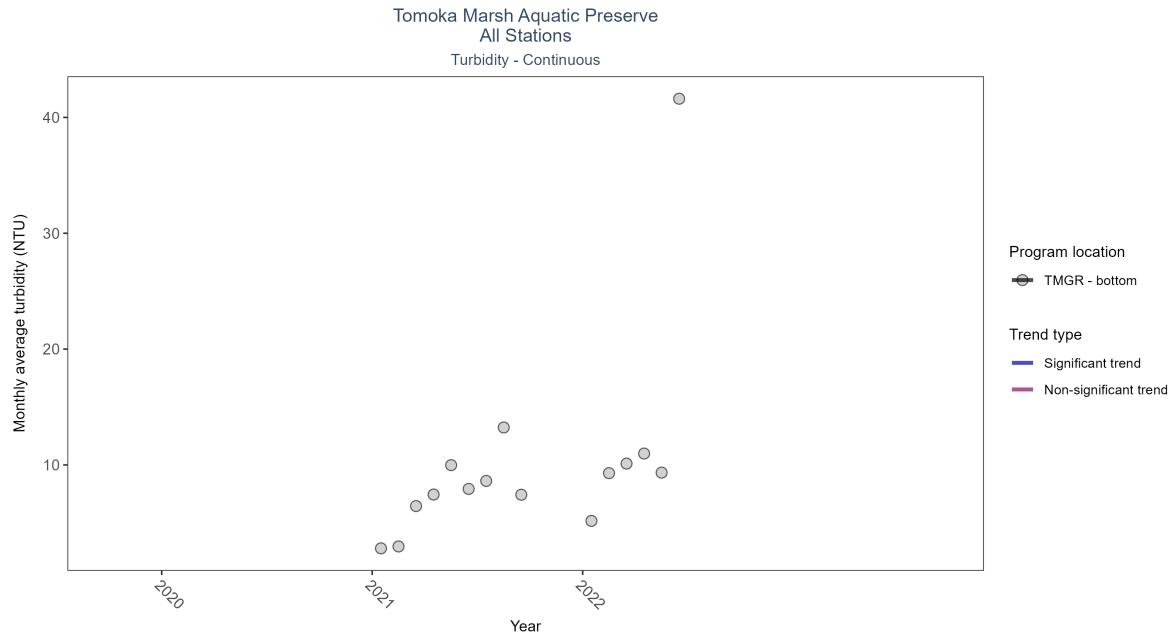
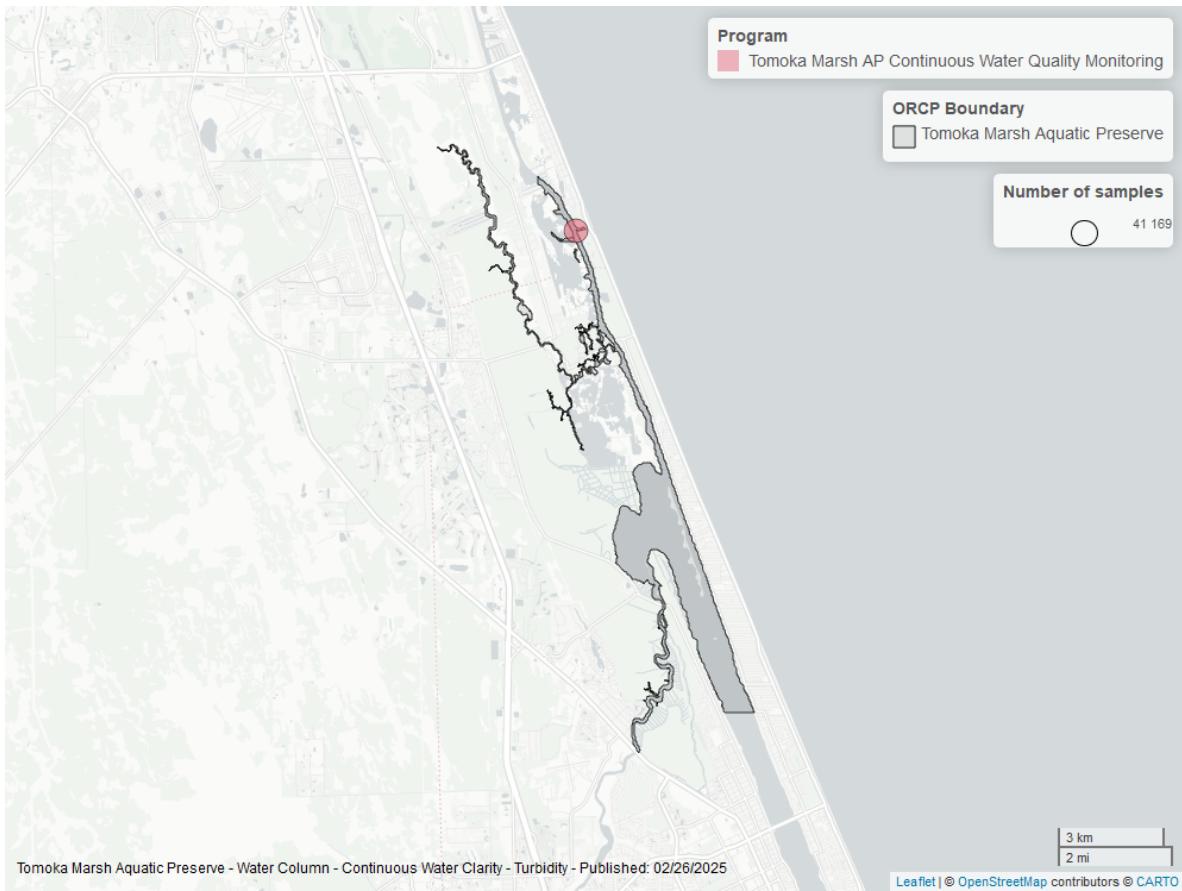


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TMGR	Insufficient data to calculate trend	41169	2	2021 - 2022		7	-	-	NA



## Total Suspended Solids - Discrete

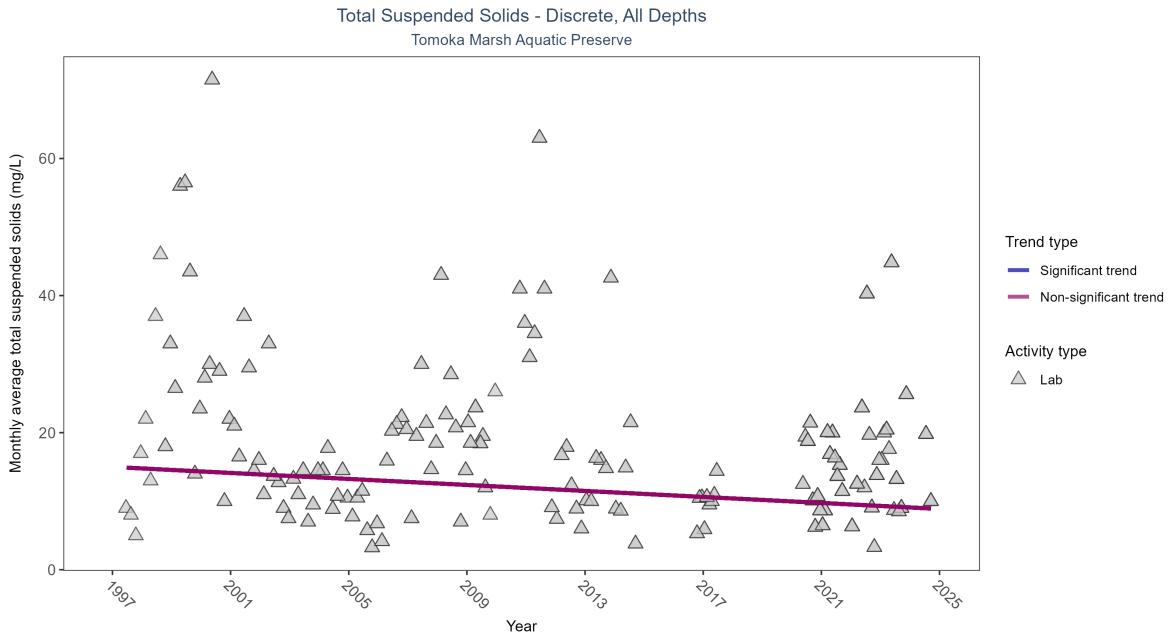
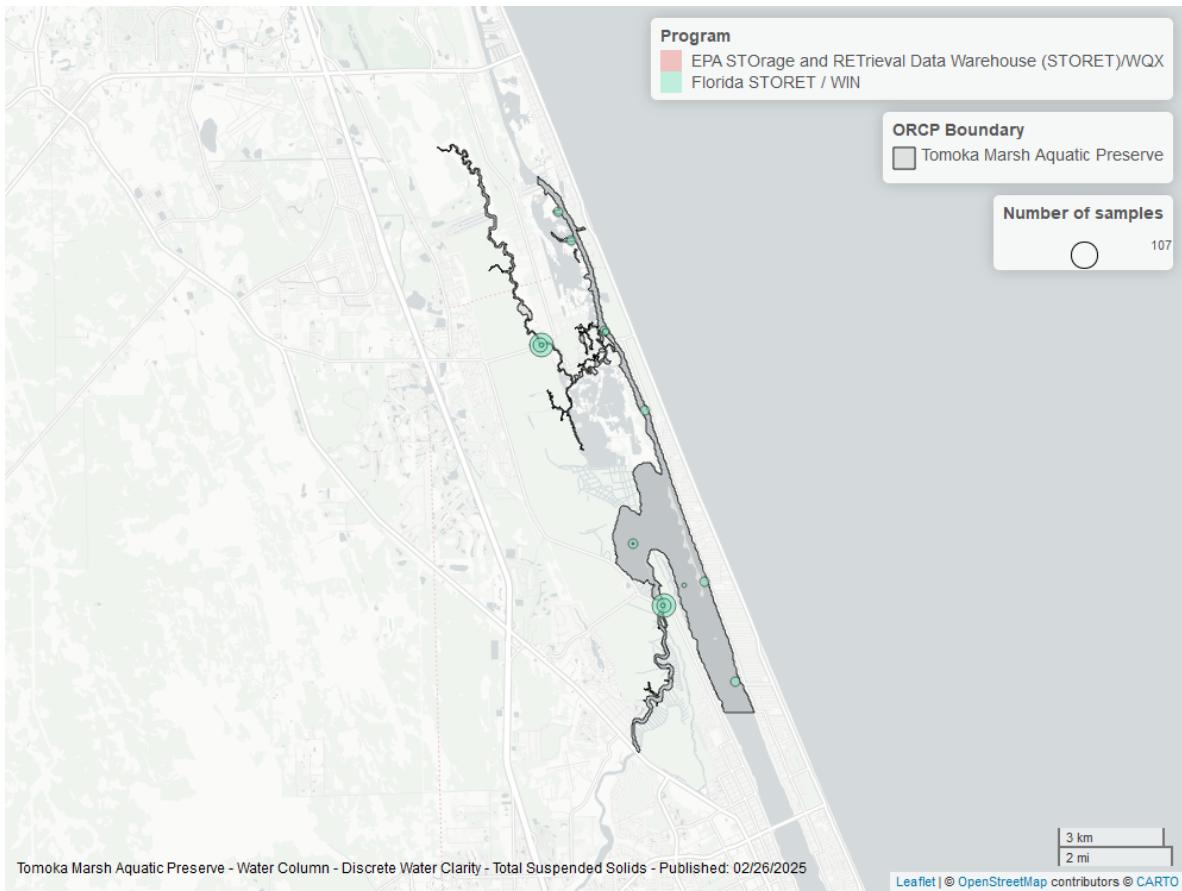


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	421	25	1997 - 2024	14.2	-0.06929	14.99575	-0.21889	0.083199631416948999218519134046801



## Chlorophyll a, Uncorrected for Pheophytin - Discrete

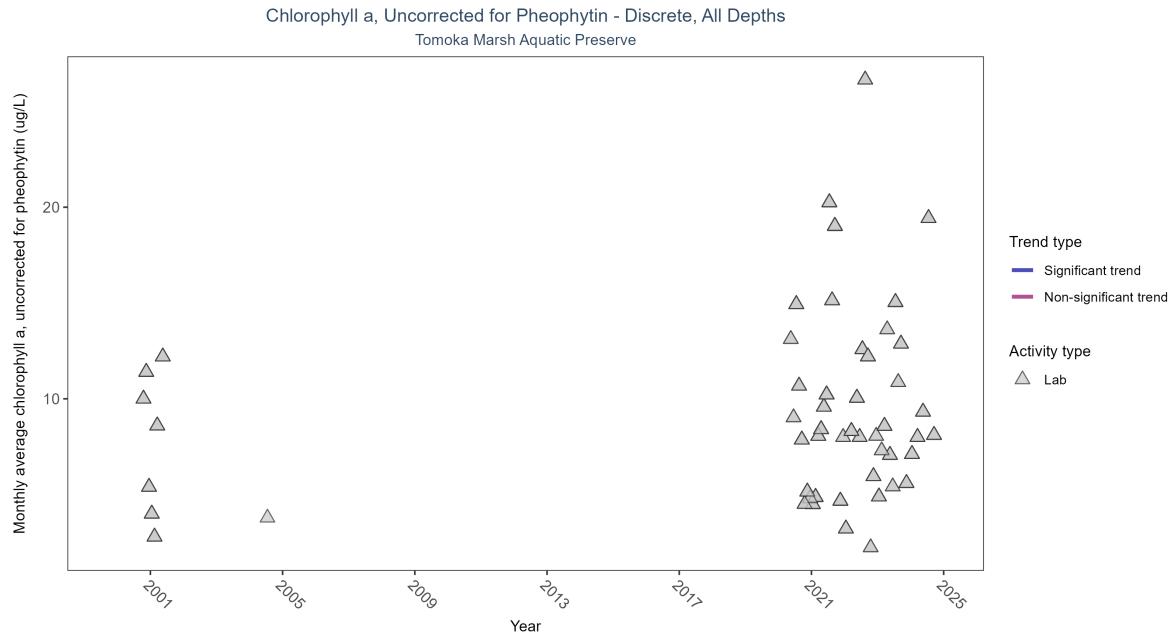
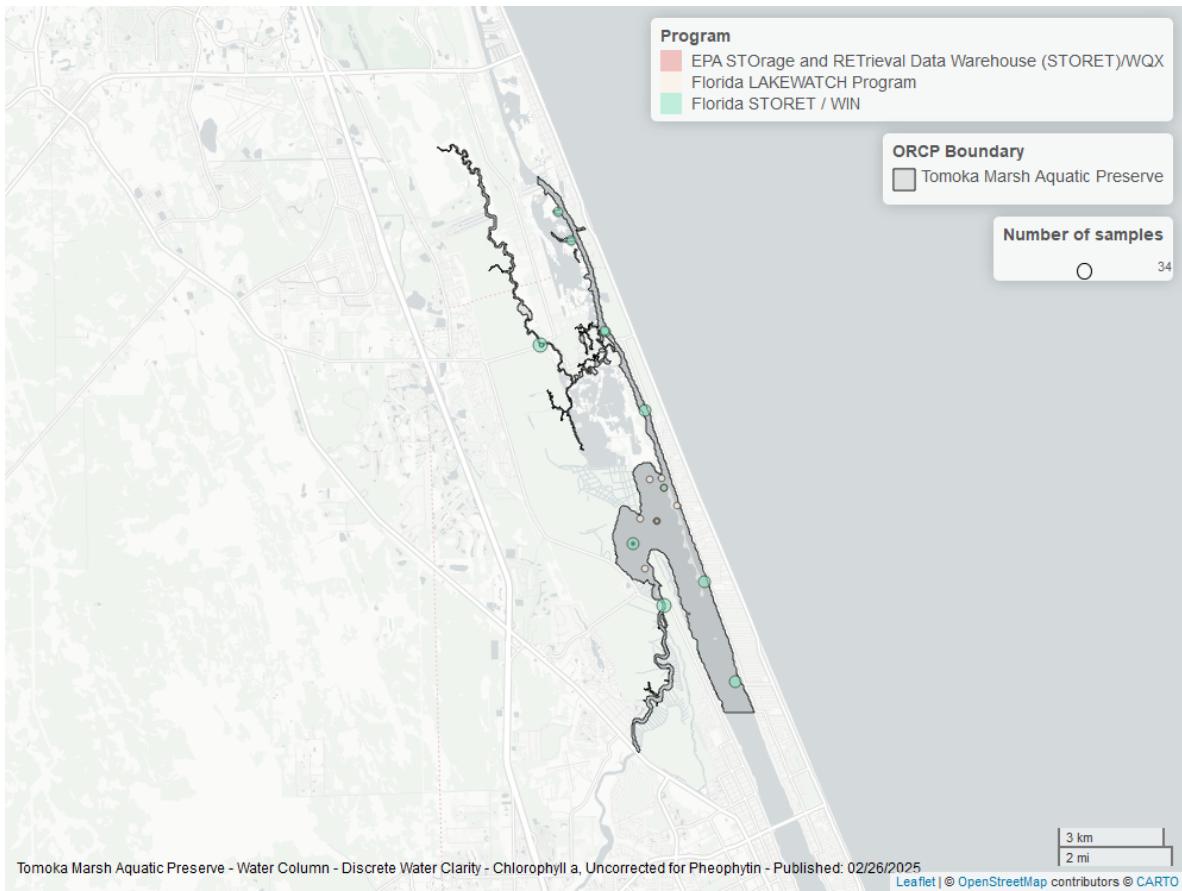


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Insufficient data to calculate trend	310	8	2000 - 2024	8.29278	-	-	-	NA



## Chlorophyll a, Corrected for Pheophytin - Discrete

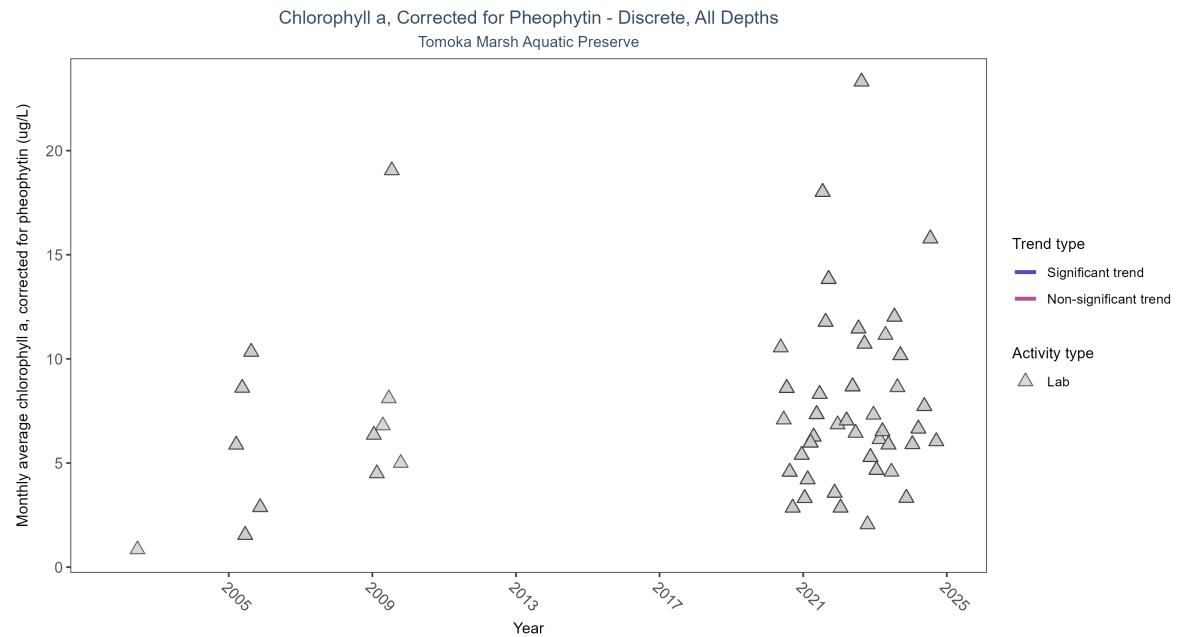
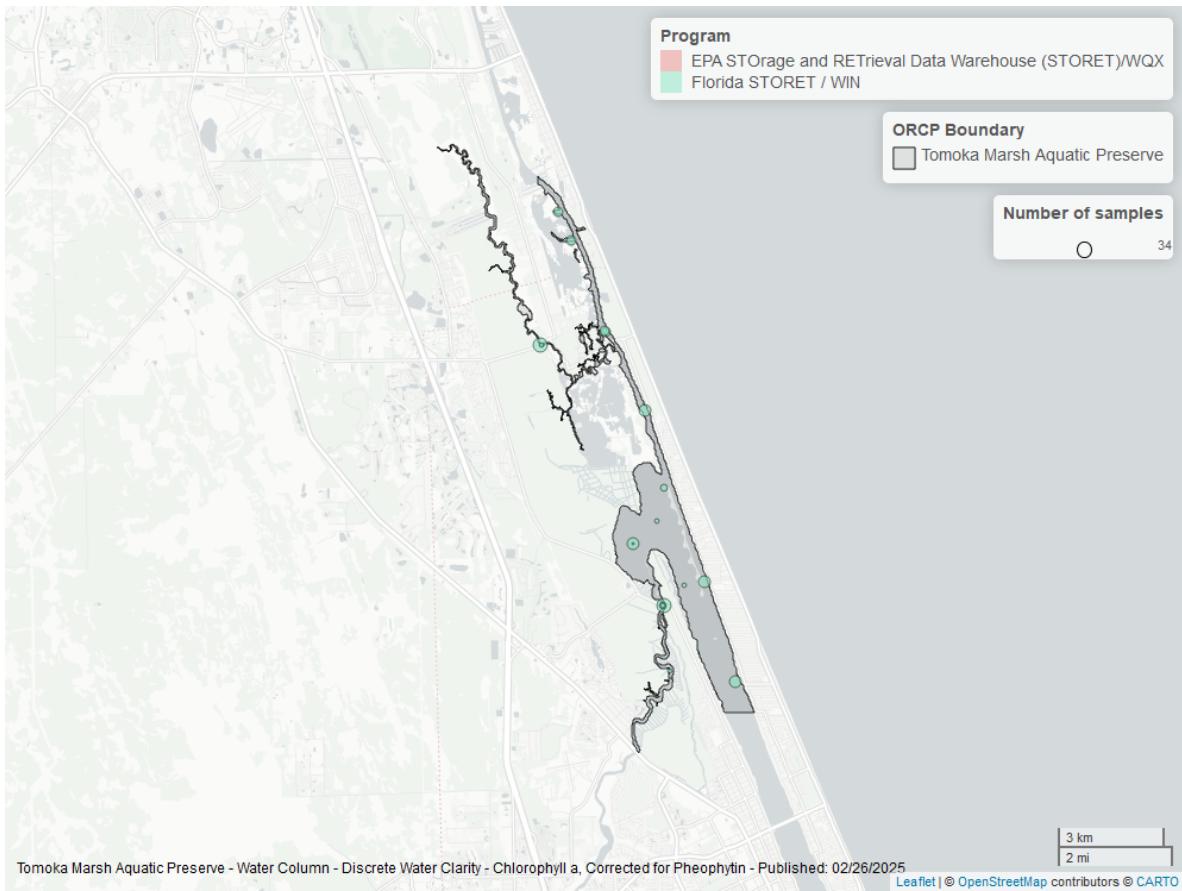


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Insufficient data to calculate trend	262	8	2002 - 2024	6.404	-	-	-	NA



## Secchi Depth - Discrete

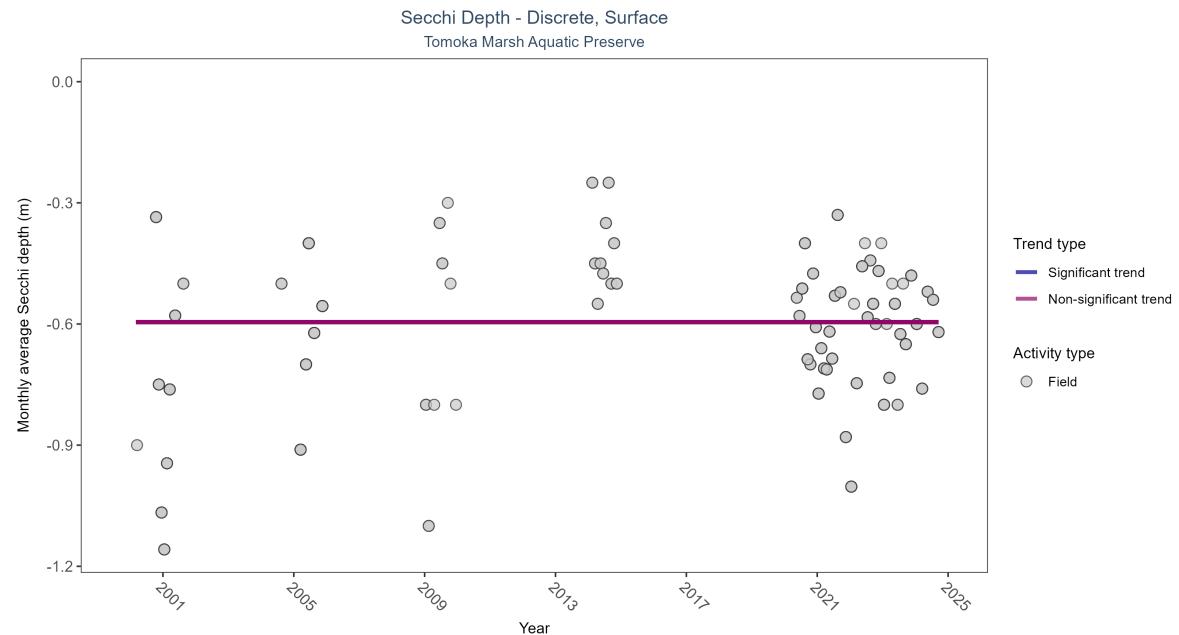


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	343	11	2000 - 2024	-0.6	0.04527	-0.59562	0	0.9255700029473437062677021458512



## Colored Dissolved Organic Matter - Discrete

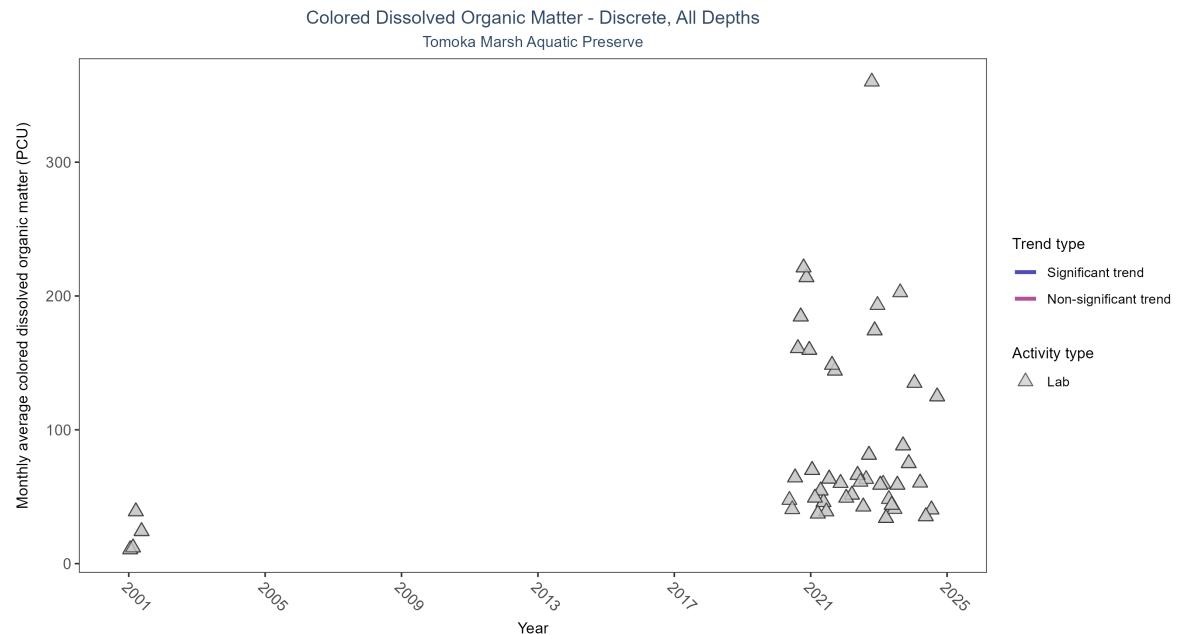


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Insufficient data to calculate trend	248	6	2001 - 2024	54.5773	-	-	-	NA

