

# Terra Ceia 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

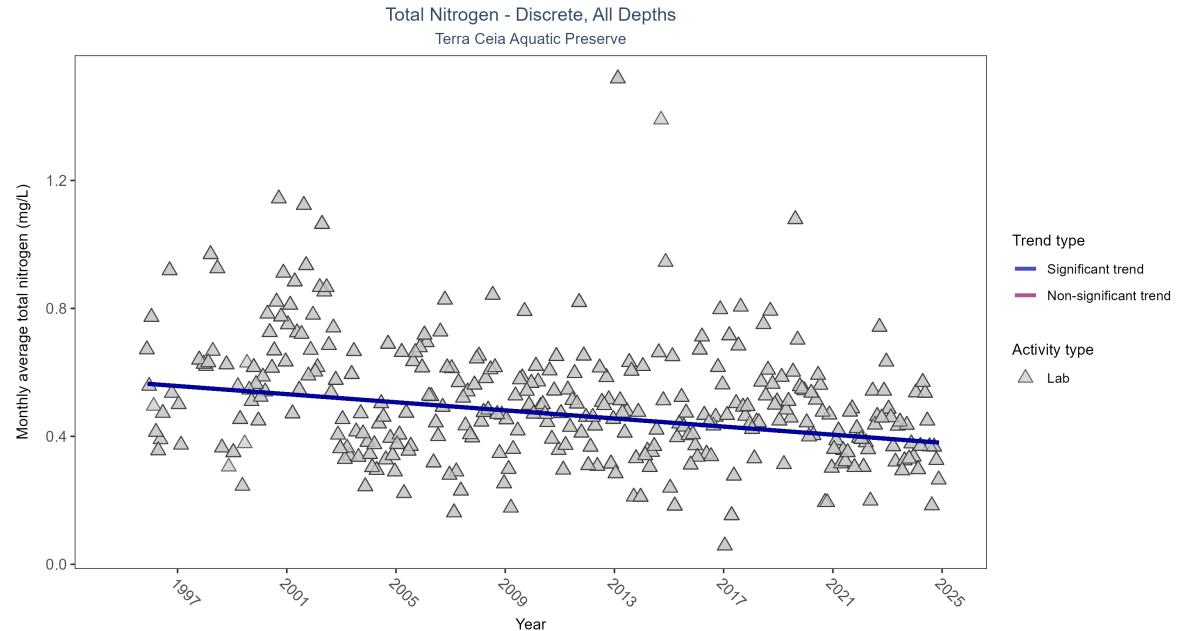
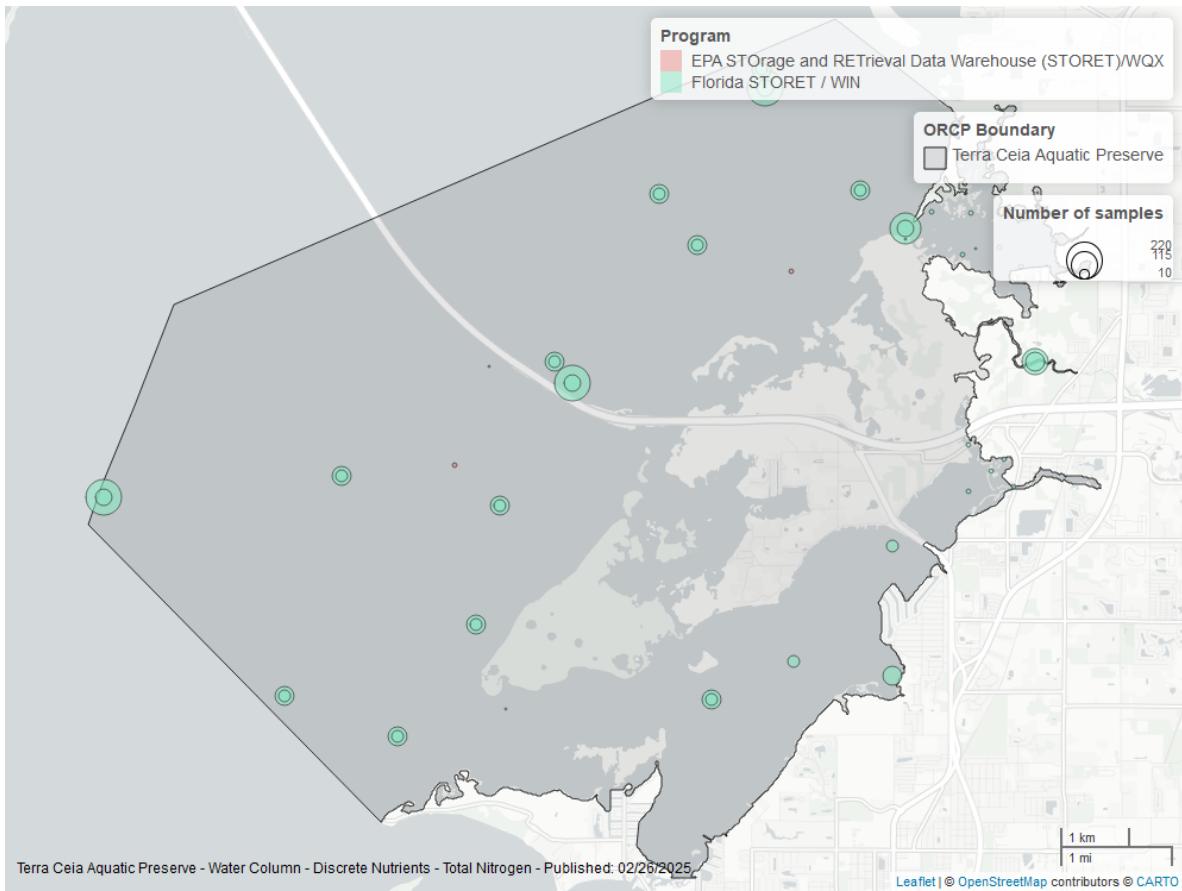


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

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	2343	30	1995 - 2024	0.381	-0.22252	0.56998	-0.00634	0.00000001017756625534452486663



## Total Phosphorus - Discrete

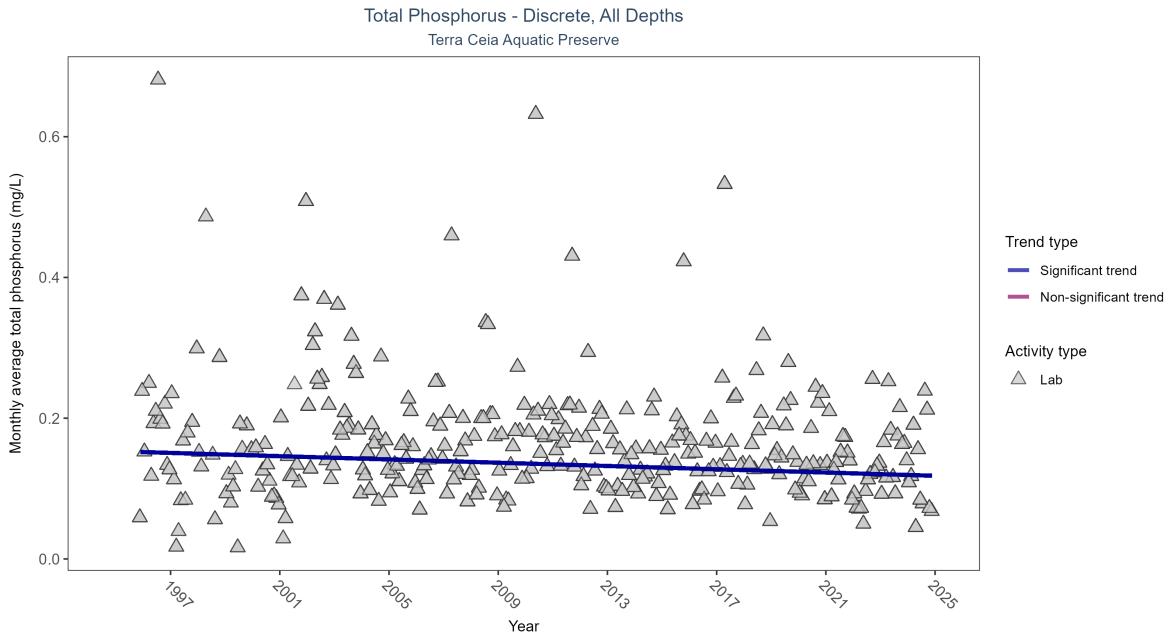
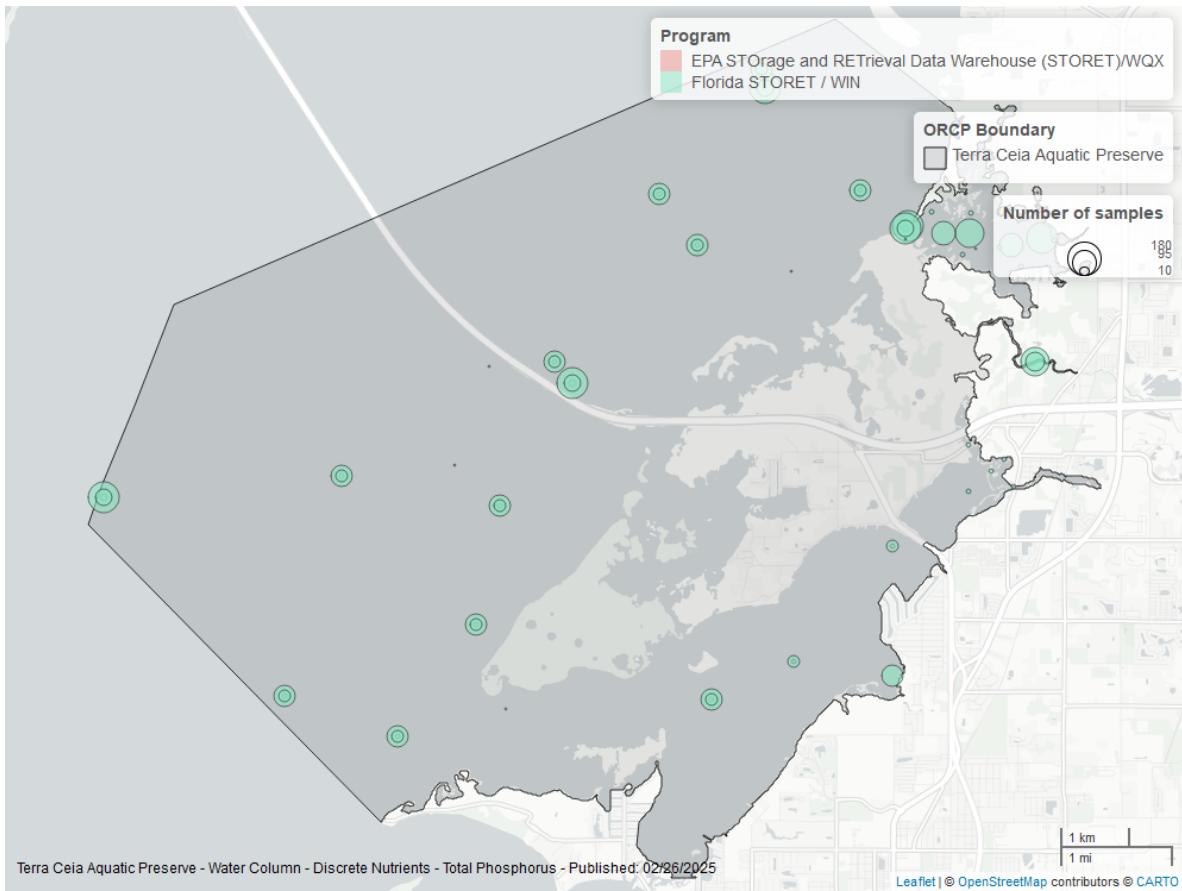


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	3134	30	1995 - 2024	0.11	-0.11246	0.15299	-0.00116	0.00311304371957138838536427449810162215726450085639953613281250000



## Water Quality

### Dissolved Oxygen - Discrete

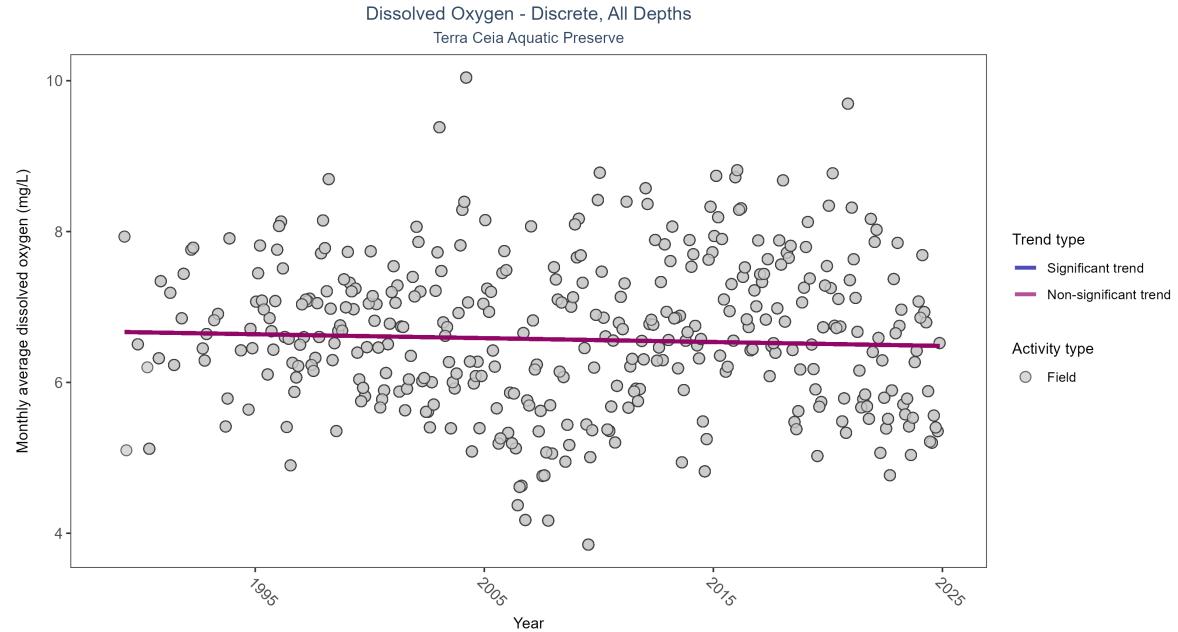
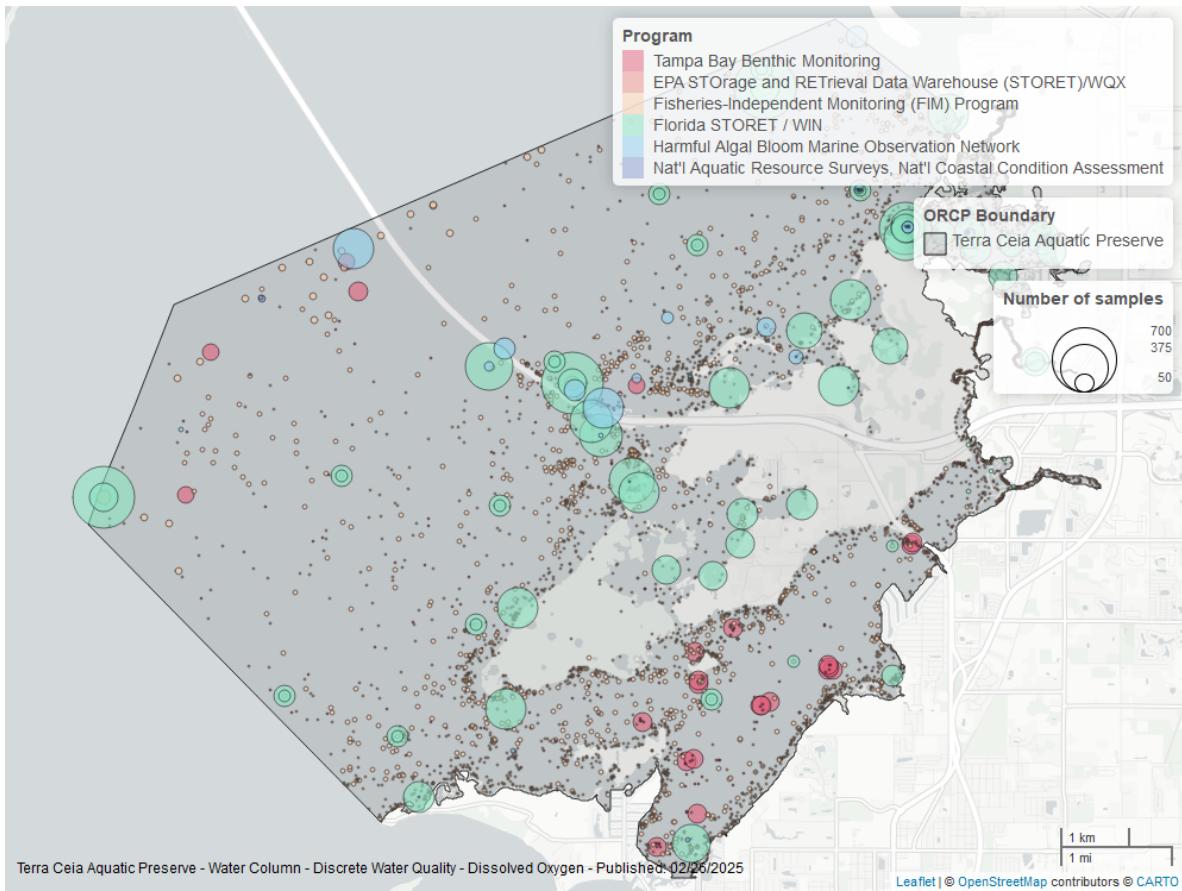


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

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	24588	36	1989 - 2024	6.53	-0.04249	6.66926	-0.00515	0.23064680507743285



## Dissolved Oxygen - Continuous

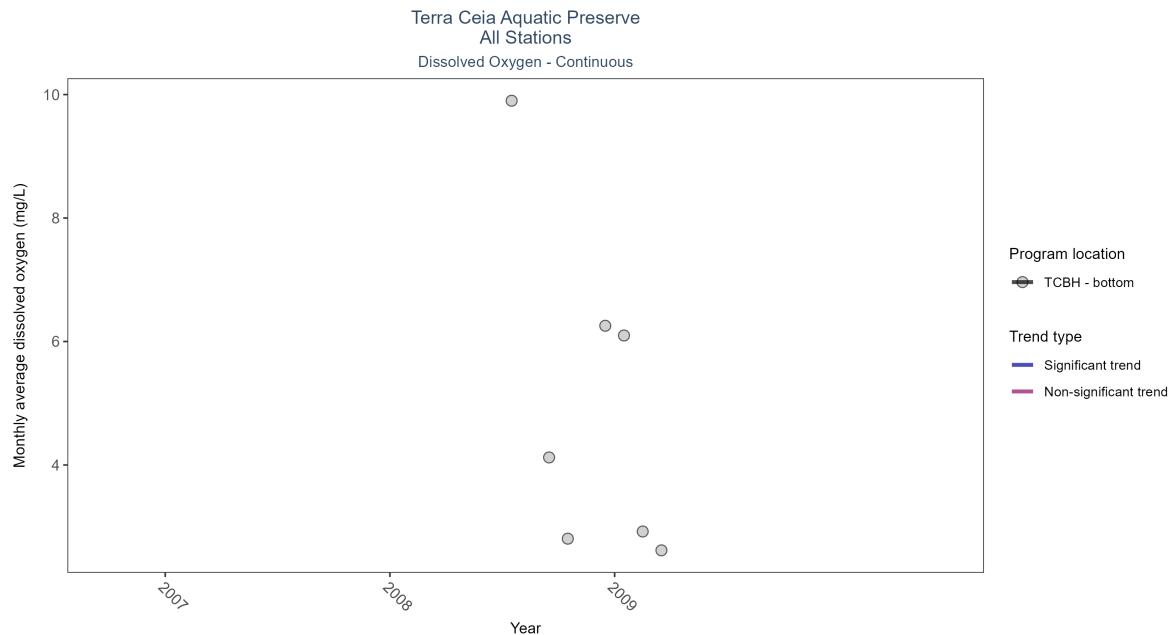
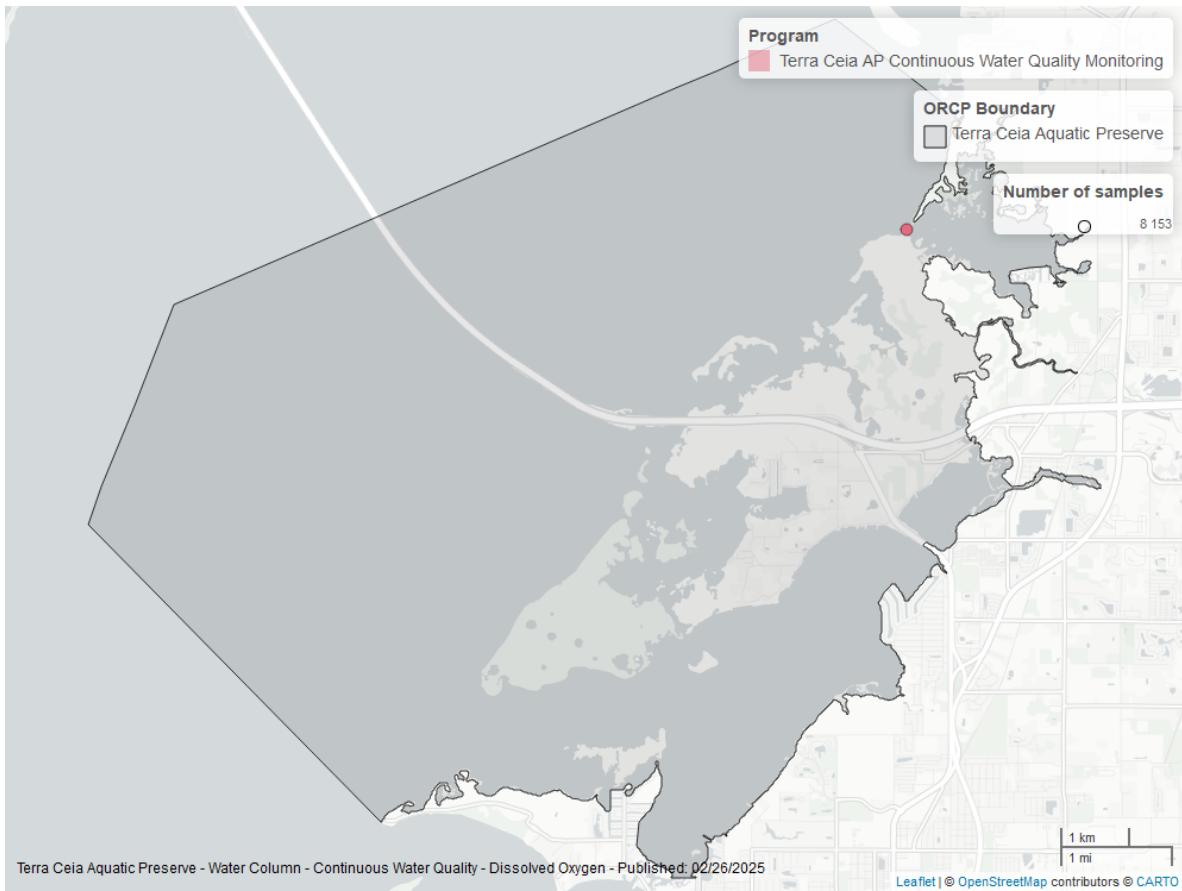


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TCBH	Insufficient data to calculate trend	8153	2	2008 - 2009	4.2	-	-	-	NA



## Dissolved Oxygen Saturation - Discrete

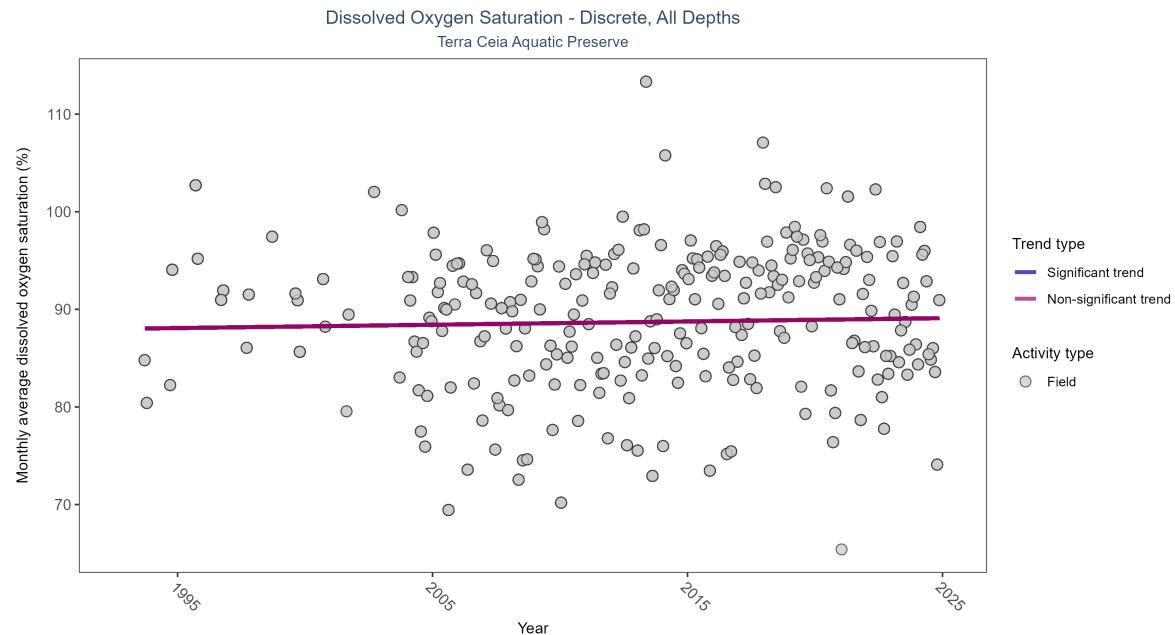
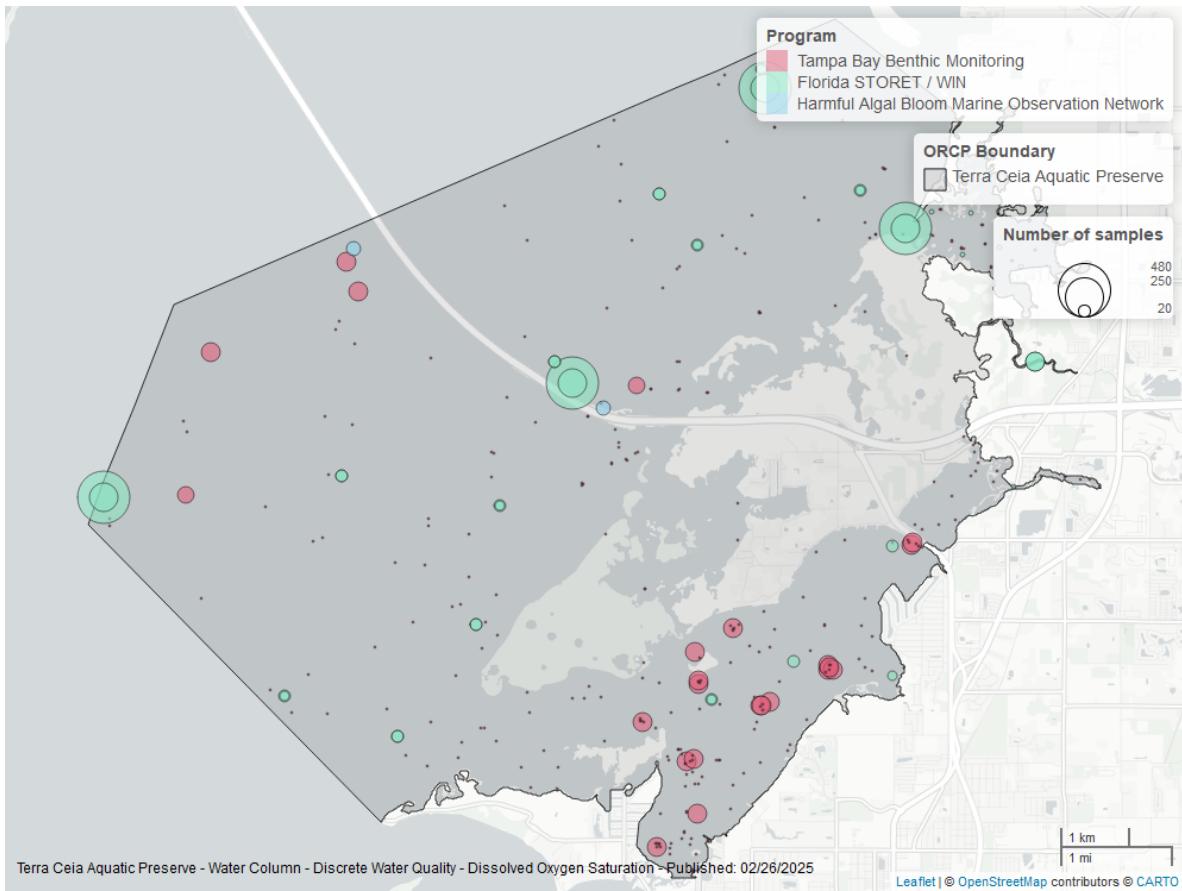


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	5033	32	1993 - 2024	89.9	0.04899	88.01305	0.03384	0.5992995552292650351944303110940381884574890136718750000000000000000000000000000



## Dissolved Oxygen Saturation - Continuous

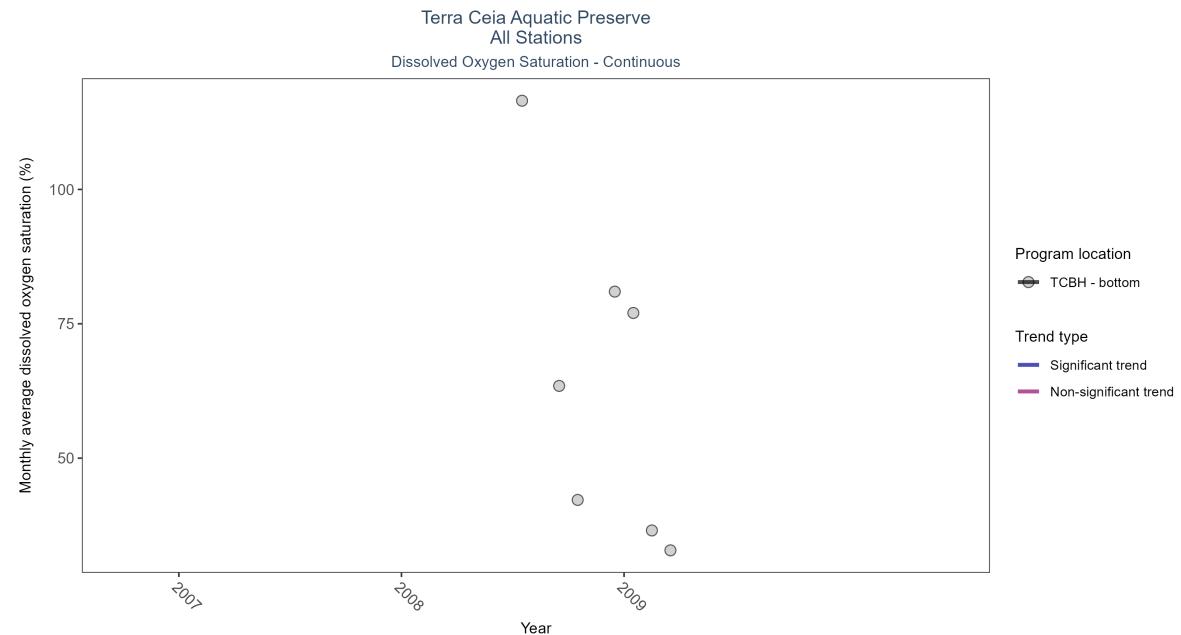
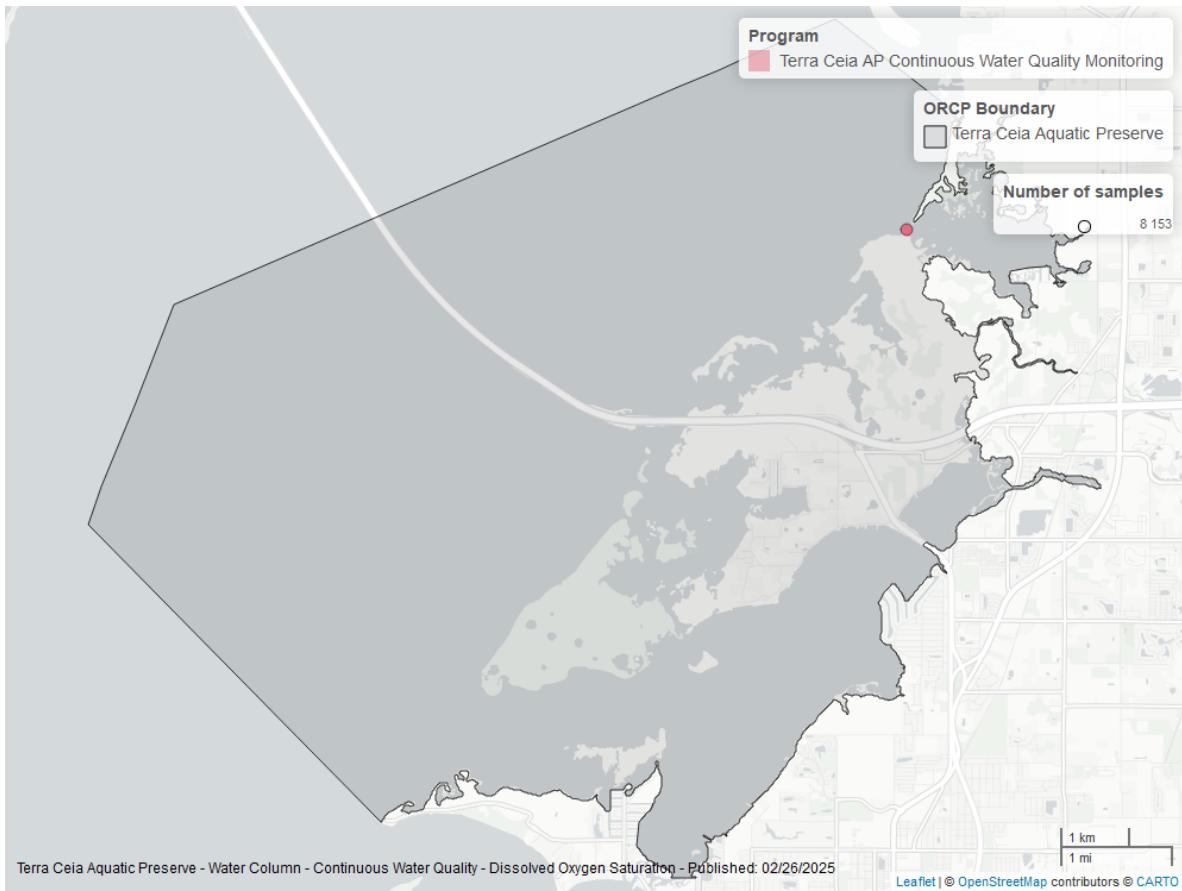


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TCBH	Insufficient data to calculate trend	8153	2	2008 - 2009	59.5	-	-	-	NA



## Salinity - Discrete

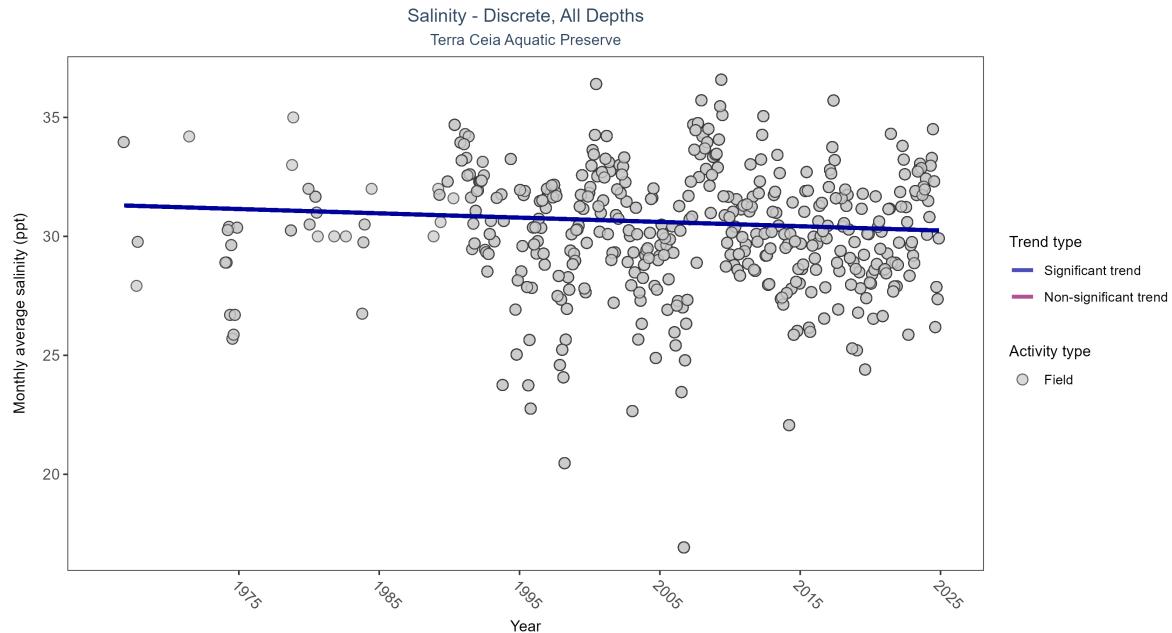
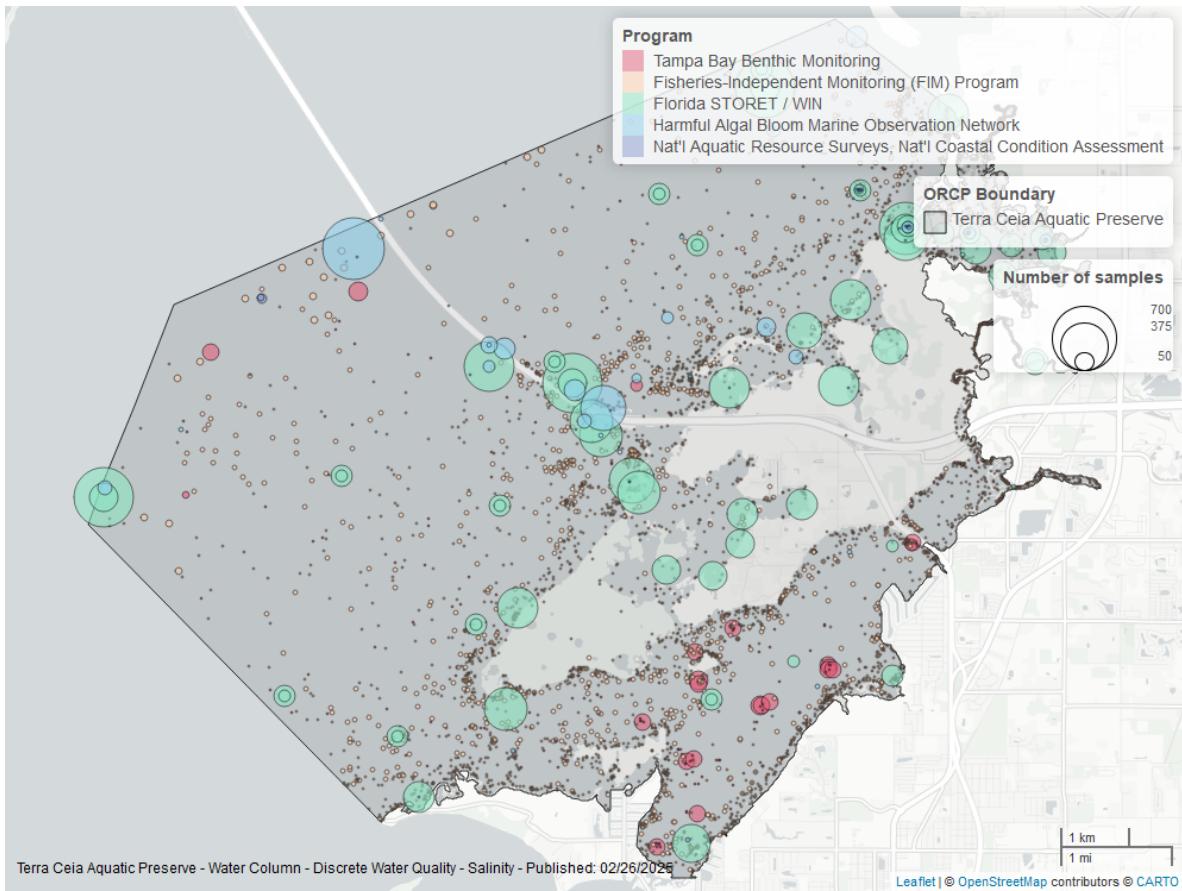


Table 7: Seasonal Kendall-Tau Results for - Salinity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
All	Significantly decreasing trend	24810	48	1966 - 2024	30.6	-0.06746	31.31304	-0.01811	0.04329342445522527810242152668251947034150362015



## Salinity - Continuous

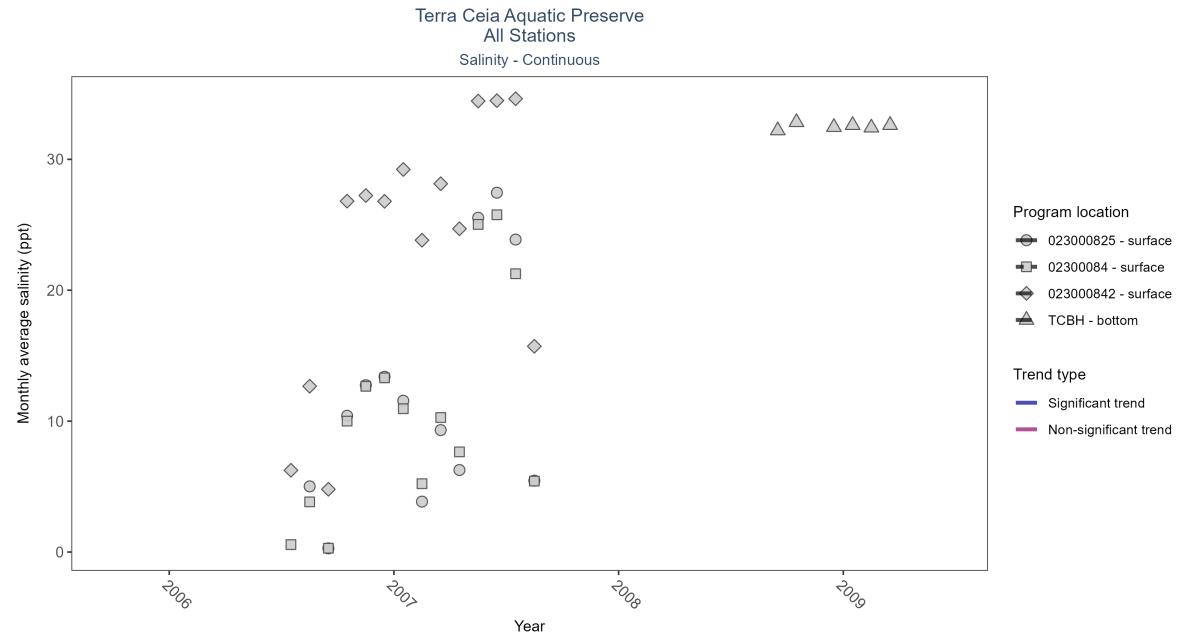
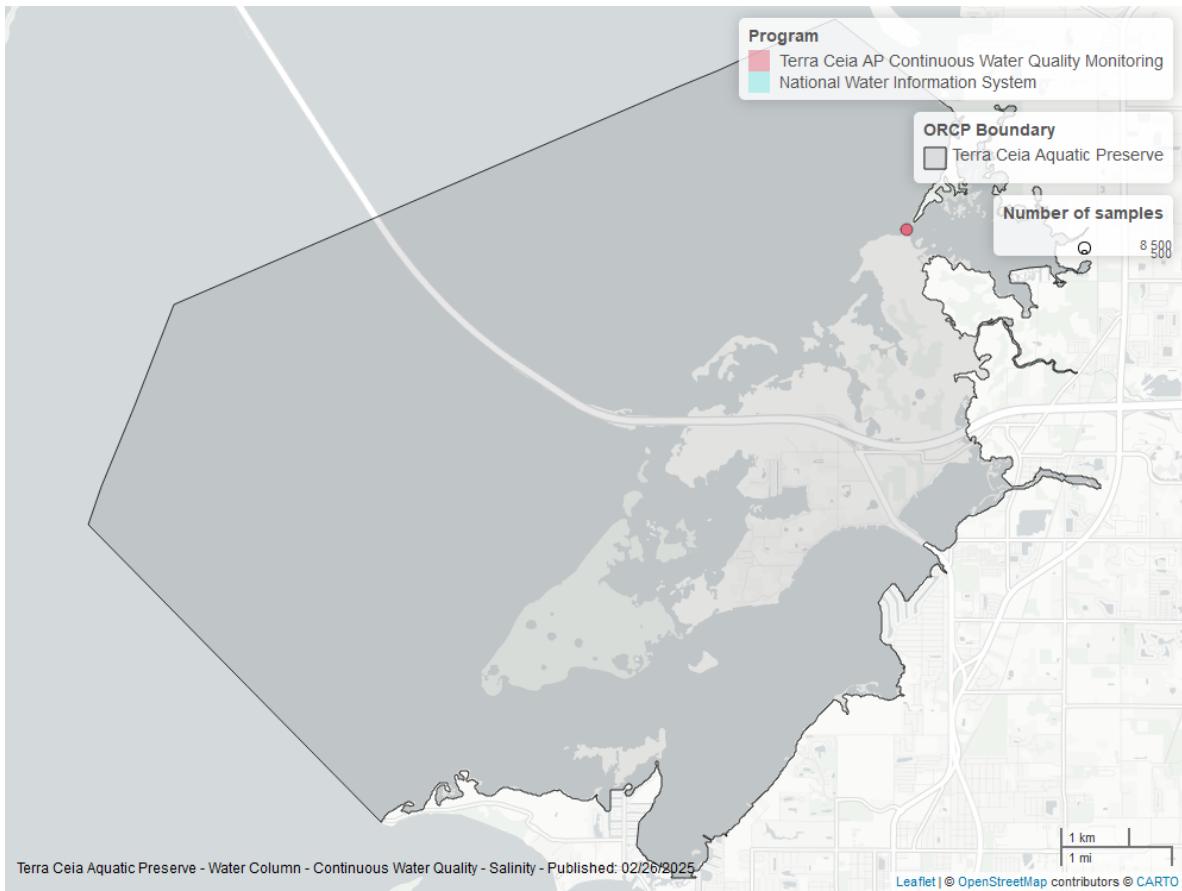


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
023000825	Insufficient data to calculate trend	645	2	2006 - 2007	12.0	-	-	-	NA
02300084	Insufficient data to calculate trend	696	2	2006 - 2007	11.0	-	-	-	NA
023000842	Insufficient data to calculate trend	578	2	2006 - 2007	28.0	-	-	-	NA
TCBH	Insufficient data to calculate trend	8304	2	2008 - 2009	32.6	-	-	-	NA



## Water Temperature - Discrete

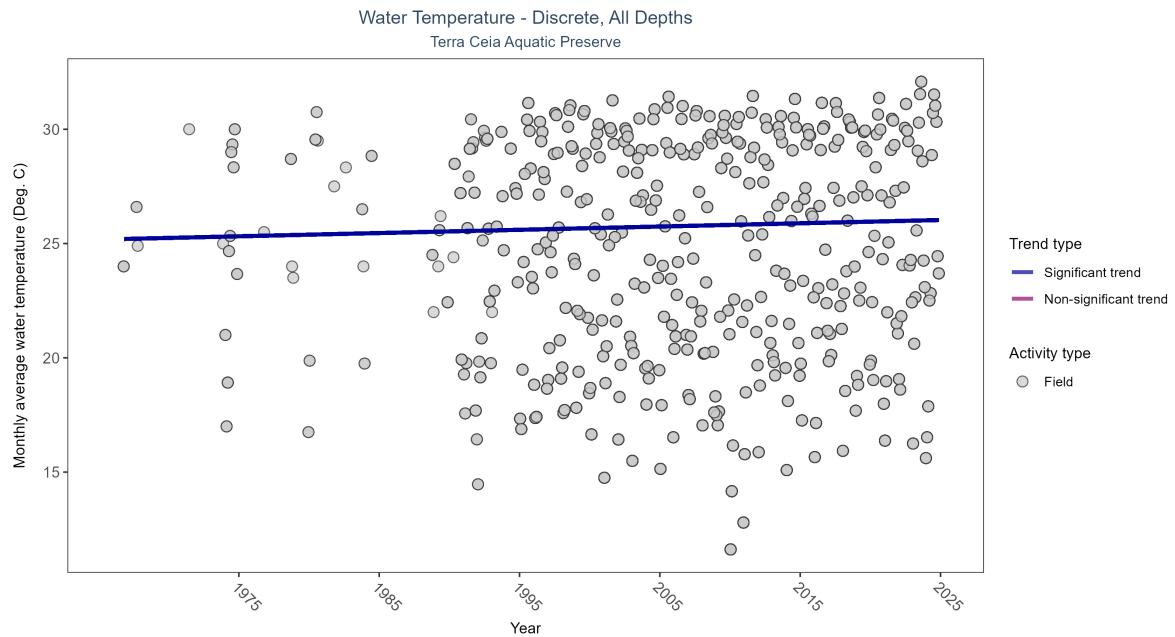
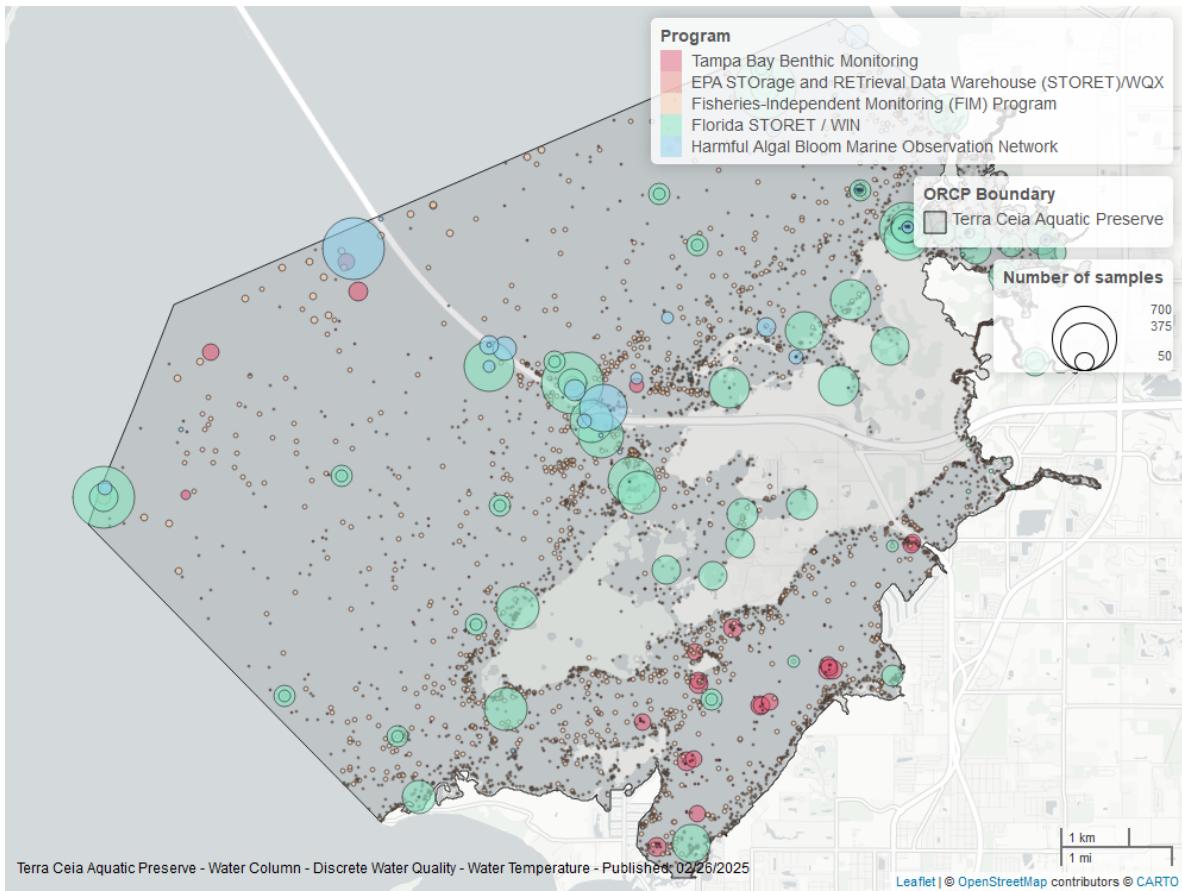


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

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	25741	50	1966 - 2024	26.7	0.09284	25.18823	0.01425	0.008029135912274254



## Water Temperature - Continuous

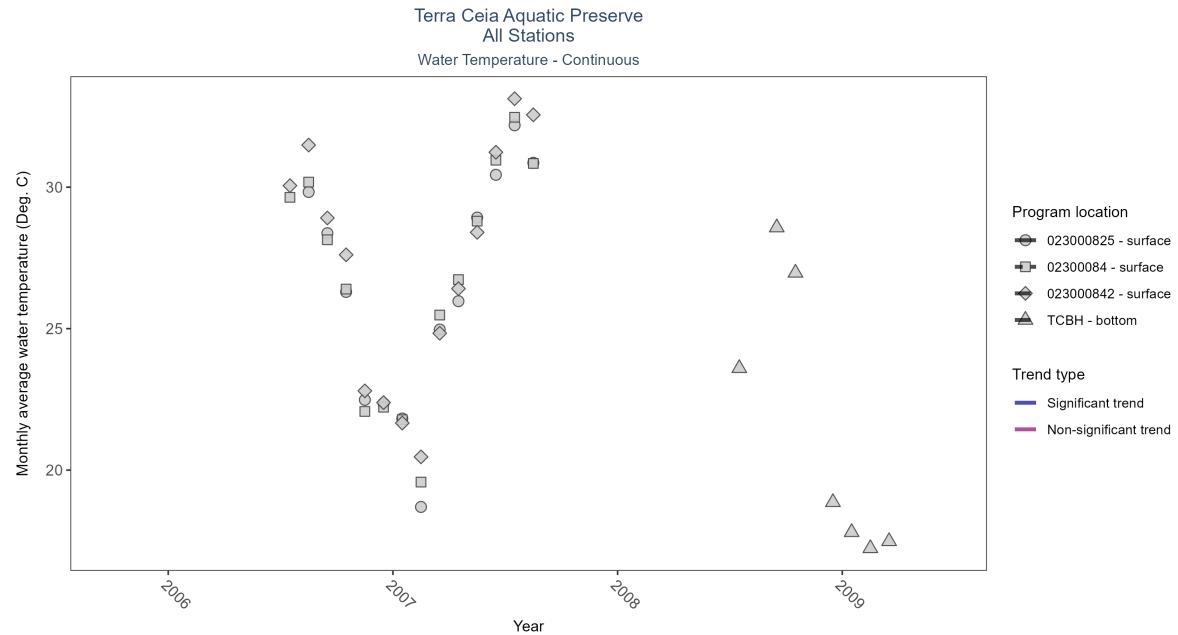
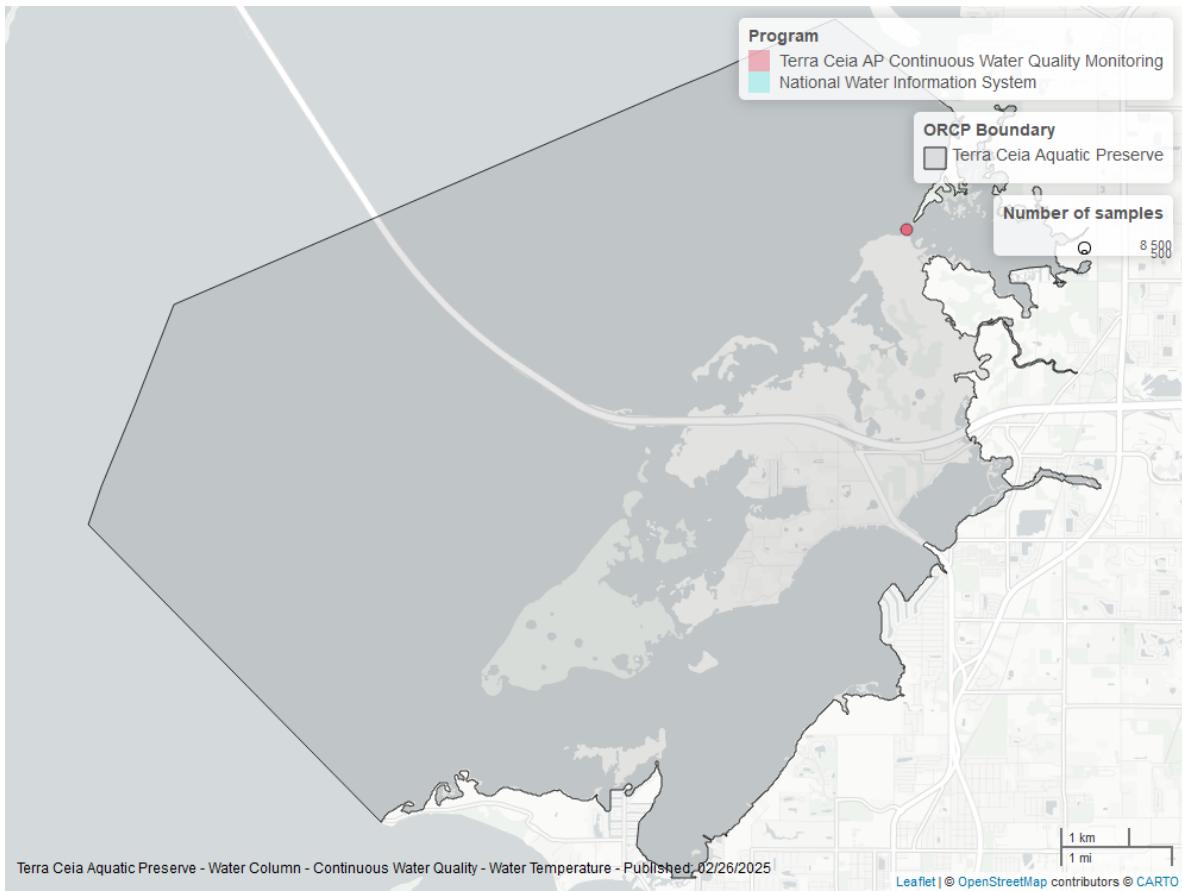


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
023000825	Insufficient data to calculate trend	659	2	2006 - 2007	26.6	-	-	-	NA
02300084	Insufficient data to calculate trend	717	2	2006 - 2007	27.5	-	-	-	NA
023000842	Insufficient data to calculate trend	571	2	2006 - 2007	27.7	-	-	-	NA
TCBH	Insufficient data to calculate trend	8305	2	2008 - 2009	20.0	-	-	-	NA



## pH - Discrete

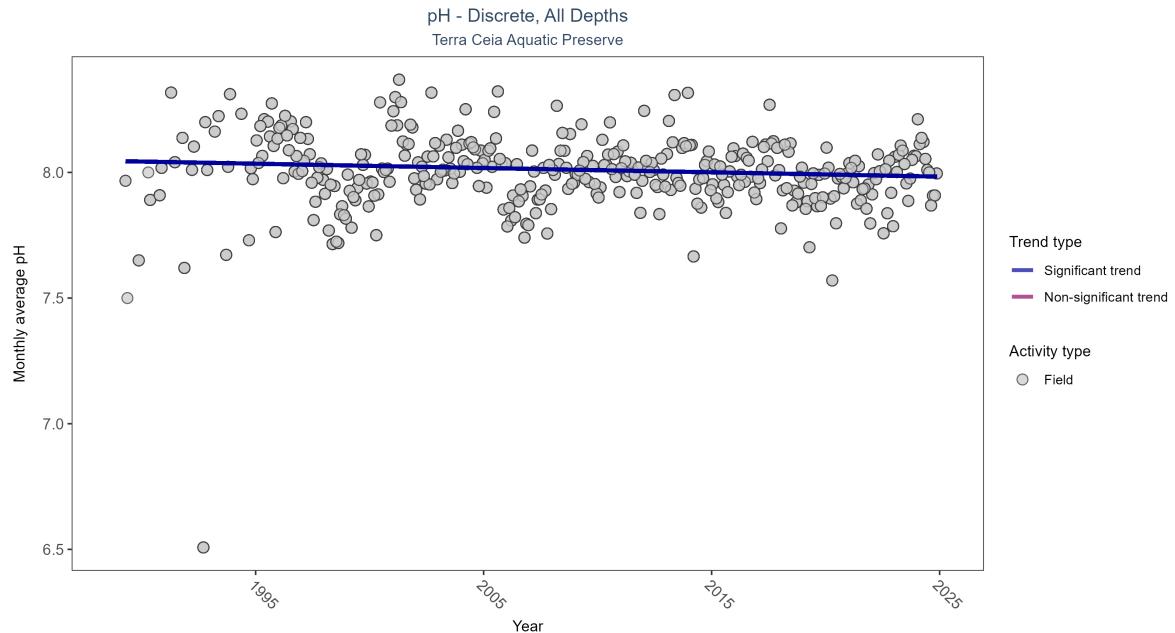
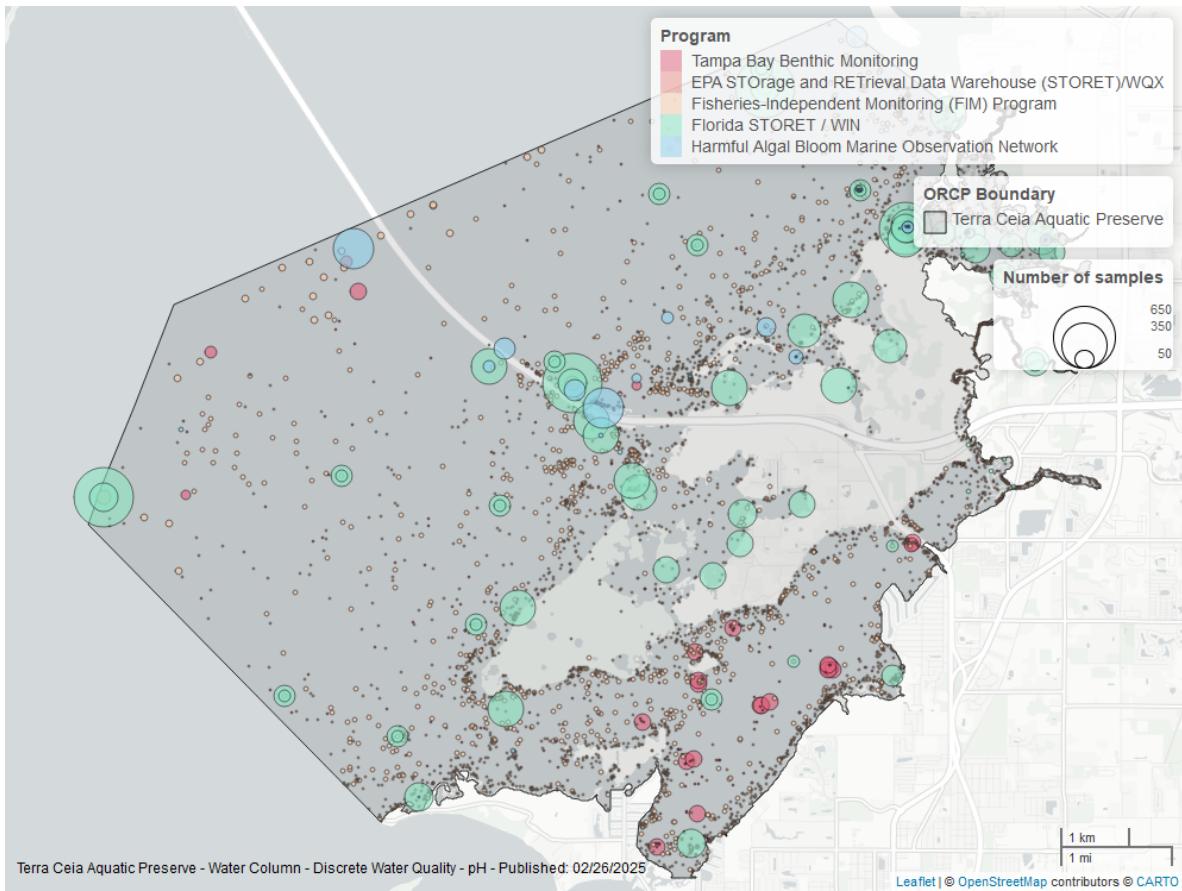


Table 11: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	22811	36	1989 - 2024	8	-0.09519	8.04497	-0.00172	0.0099003119949028876856100822578100389764



## pH - Continuous

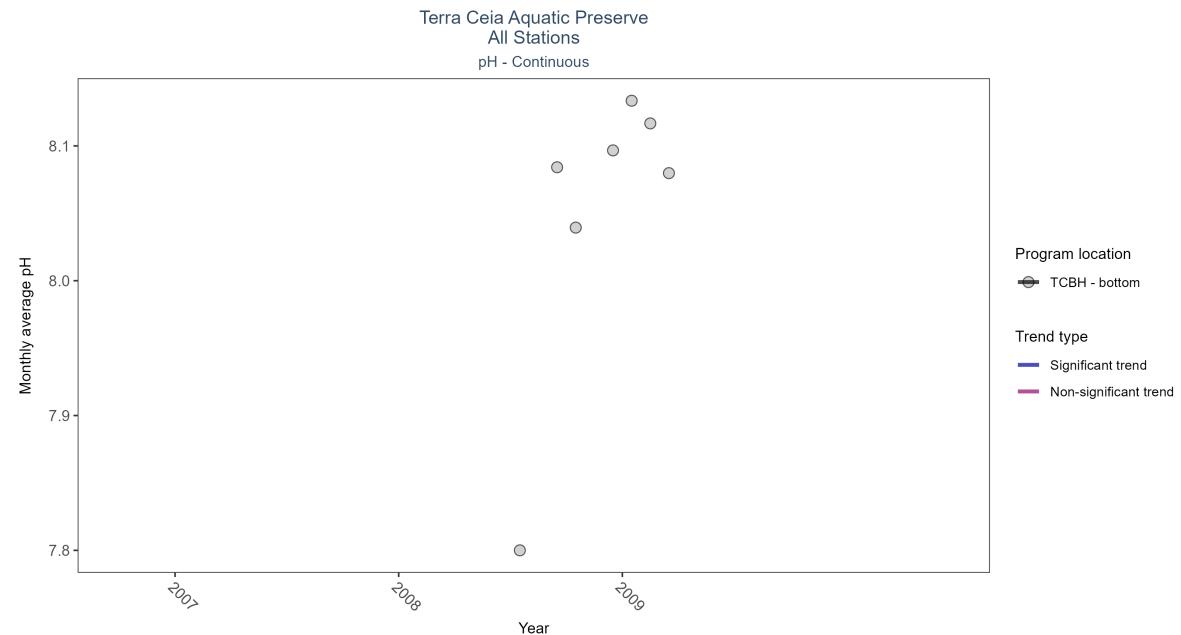
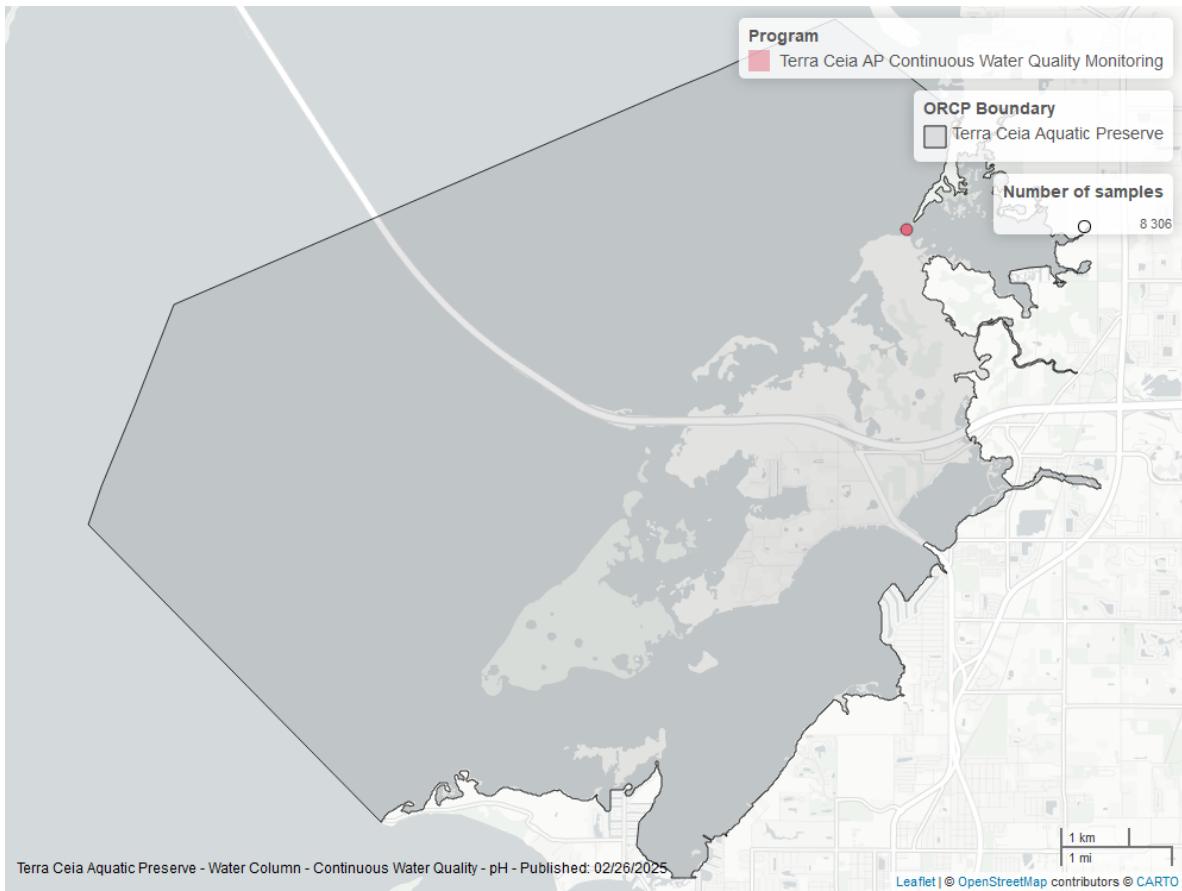


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TCBH	Insufficient data to calculate trend	8306	2	2008 - 2009	8.1	-	-	-	NA



## Water Clarity

### Turbidity - Discrete

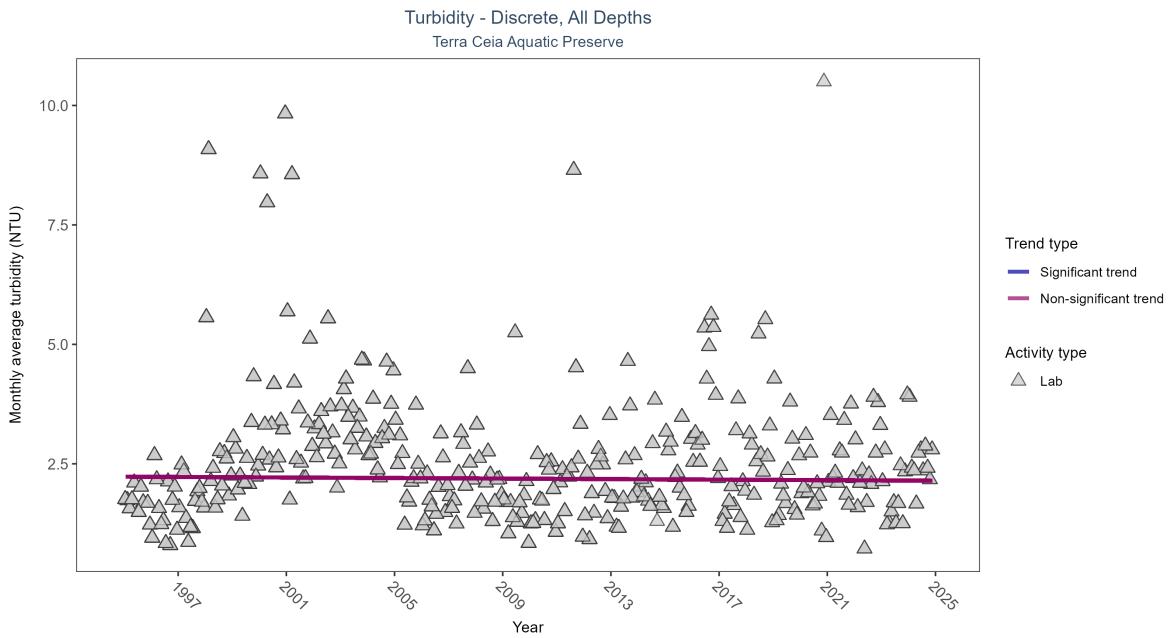
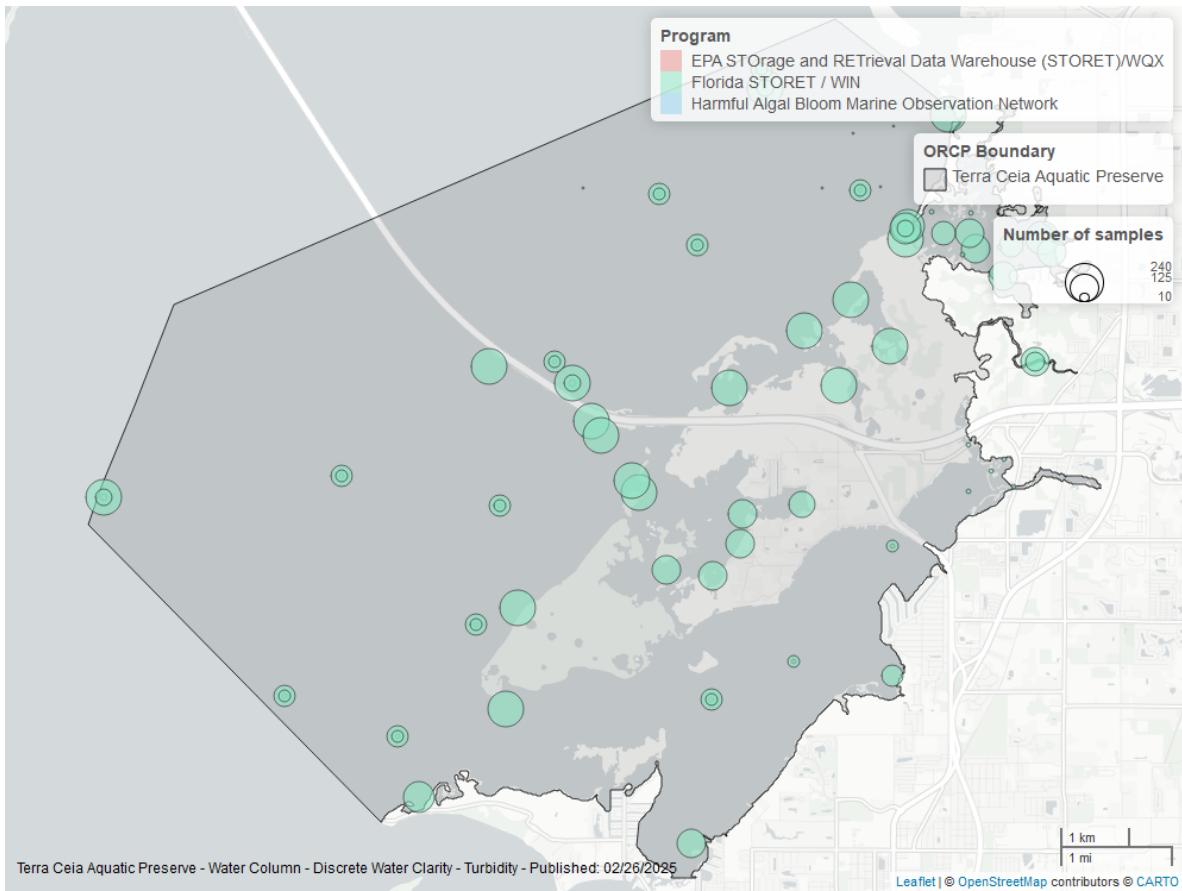


Table 13: Seasonal Kendall-Tau Results for - Turbidity

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	8031	30	1995 - 2024	1.9	-0.02215	2.22967	-0.00278	0.56988748065770367113



## Turbidity - Continuous

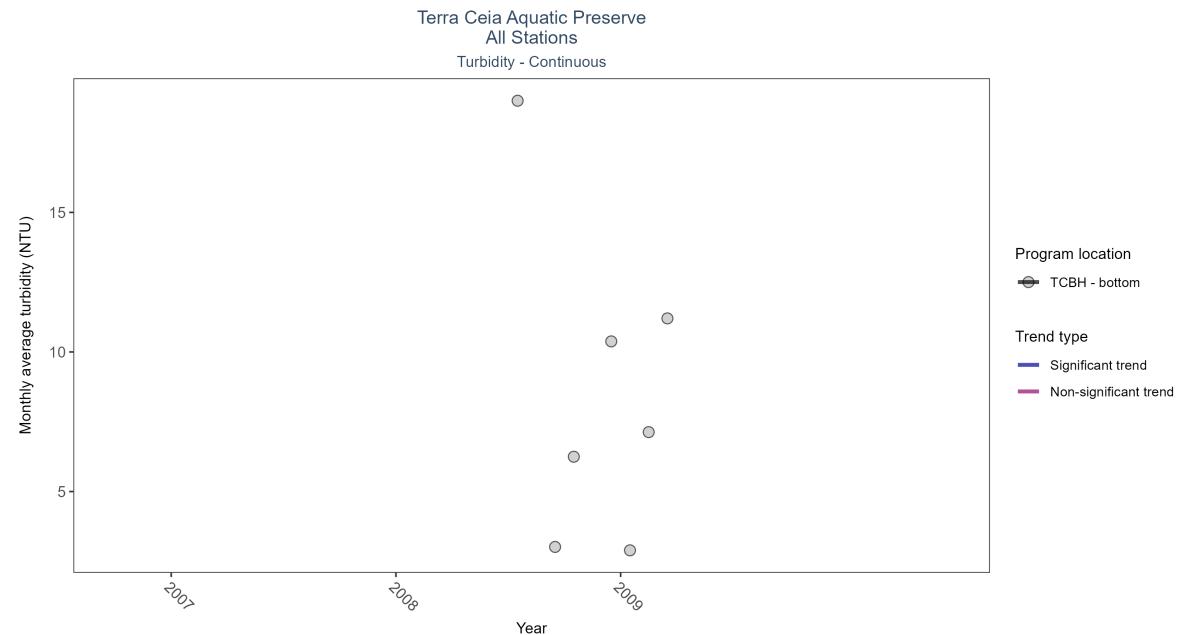
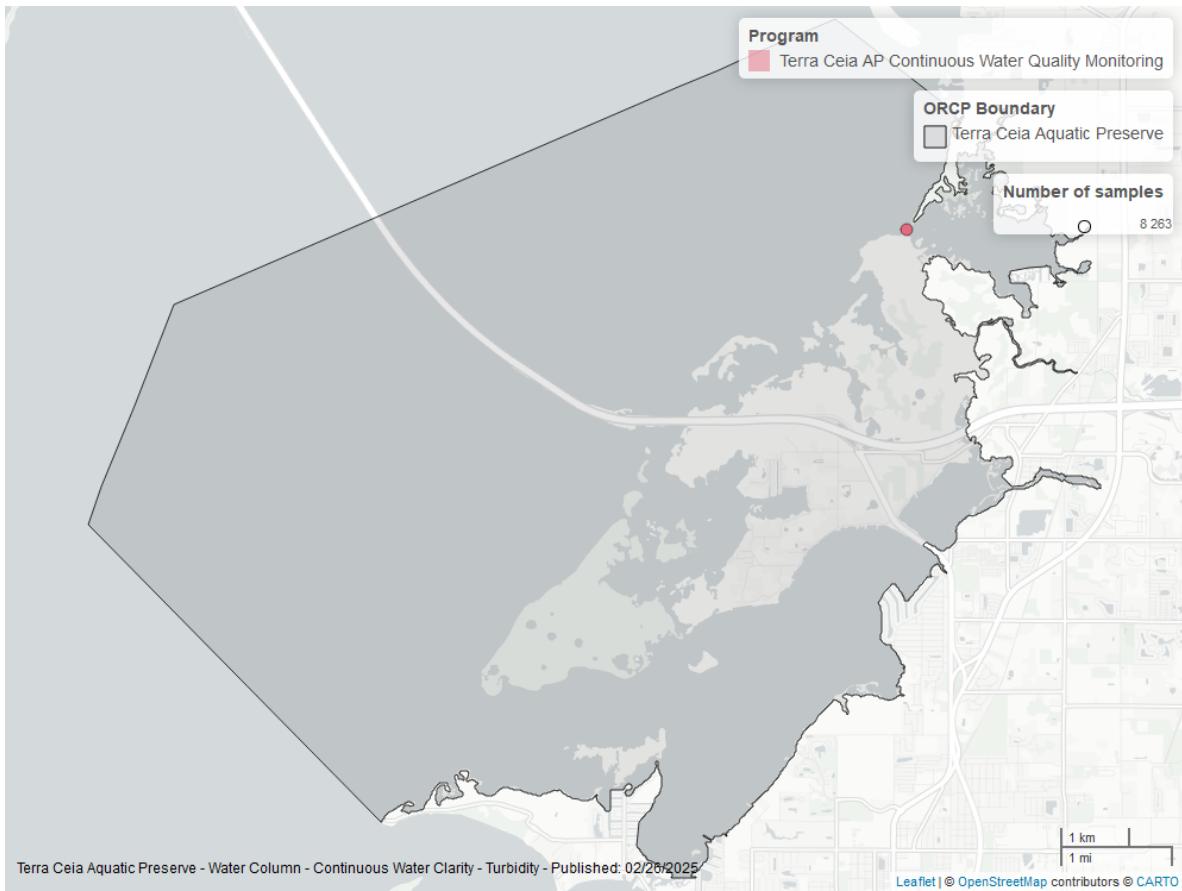


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
TCBH	Insufficient data to calculate trend	8263	2	2008 - 2009		2	-	-	NA



## Total Suspended Solids - Discrete

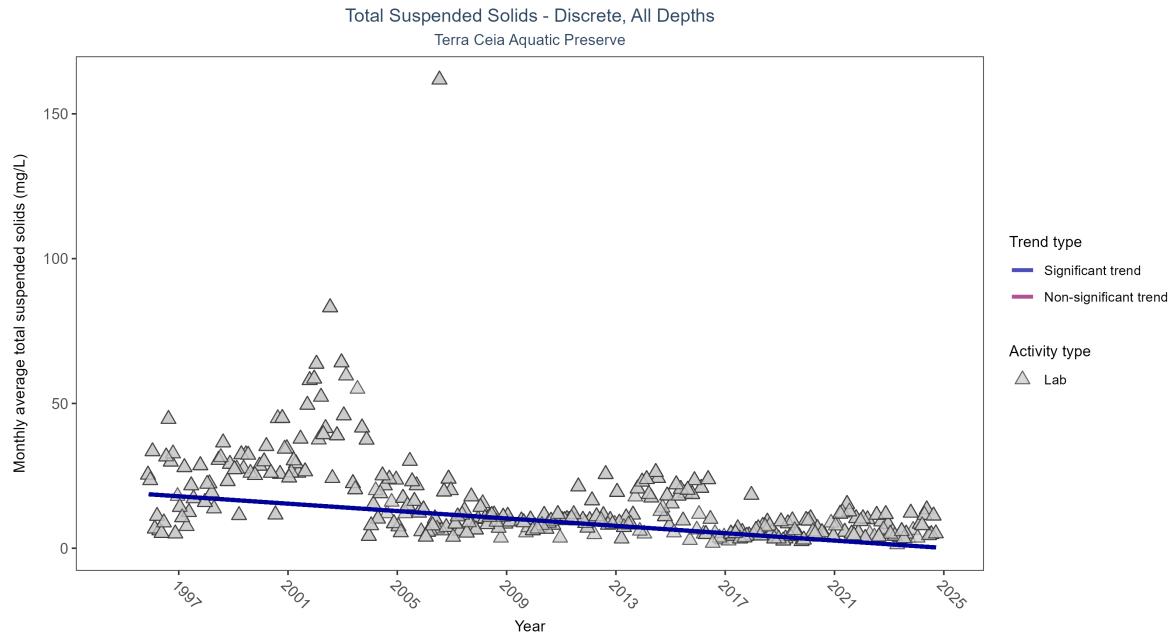
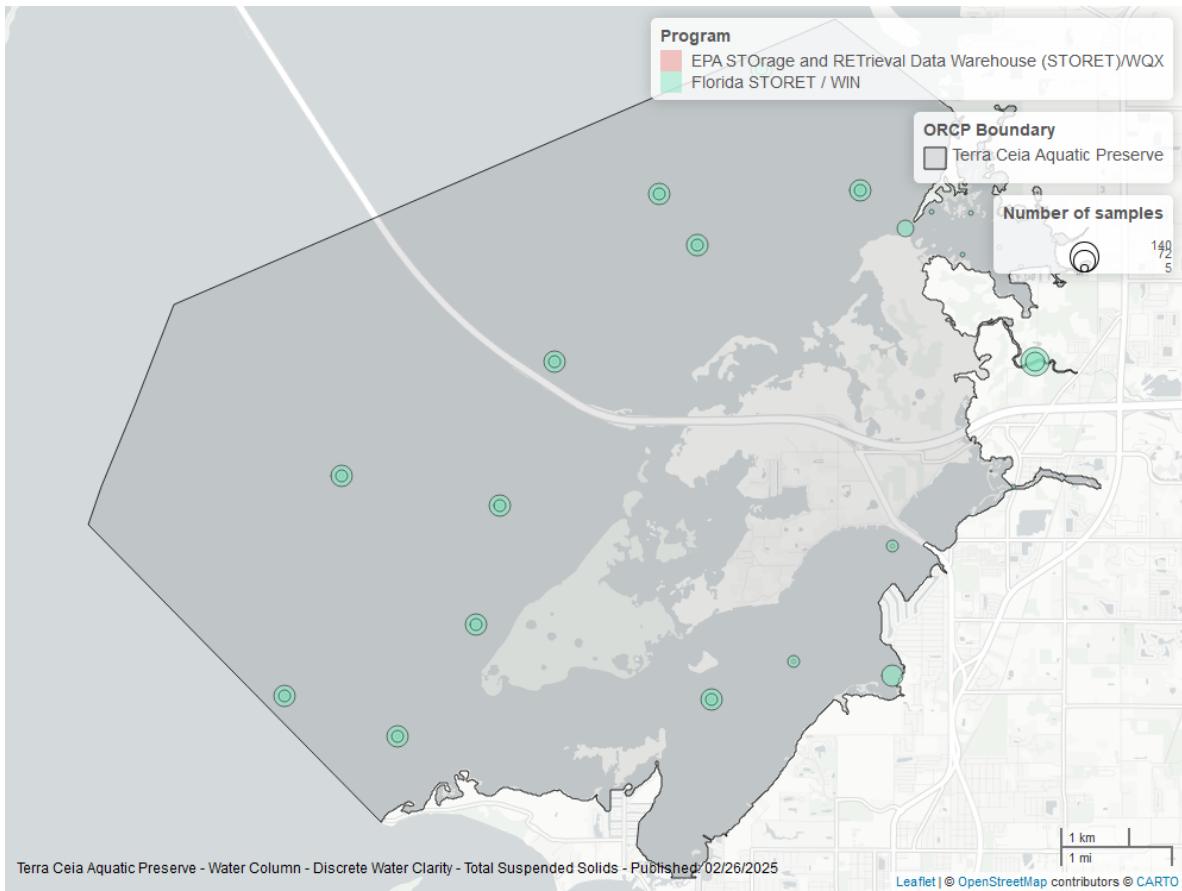


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	1661	30	1995 - 2024	10.6	-0.43743	19.21194	-0.63731	0.000000000000000000000000000000003318423



## Chlorophyll a, Uncorrected for Pheophytin - Discrete

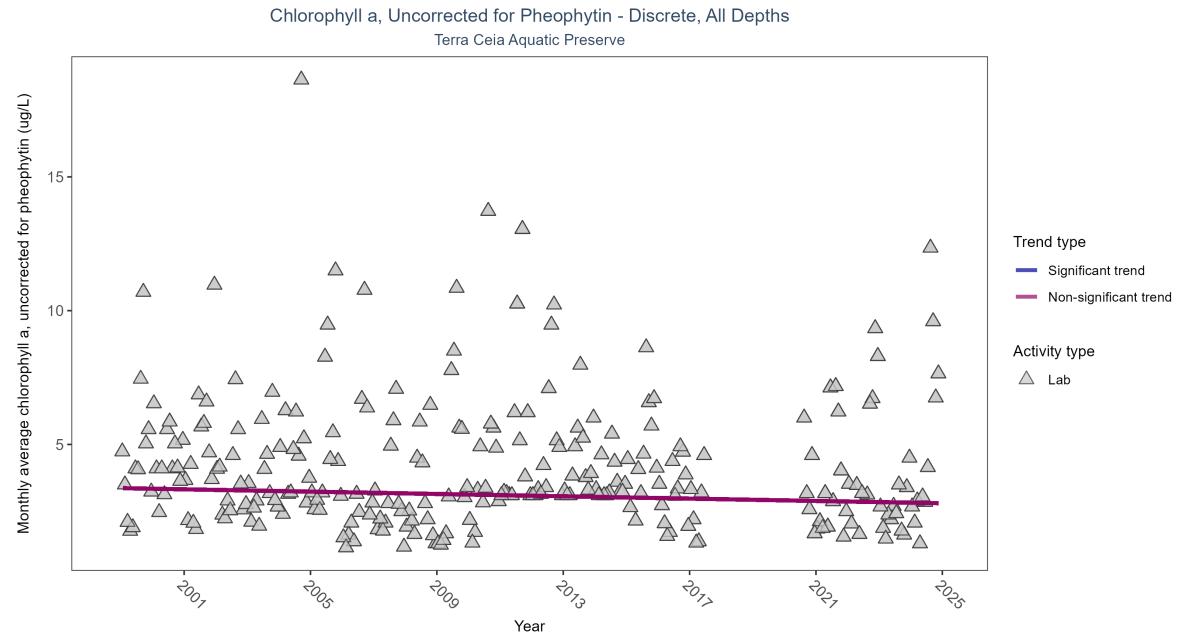
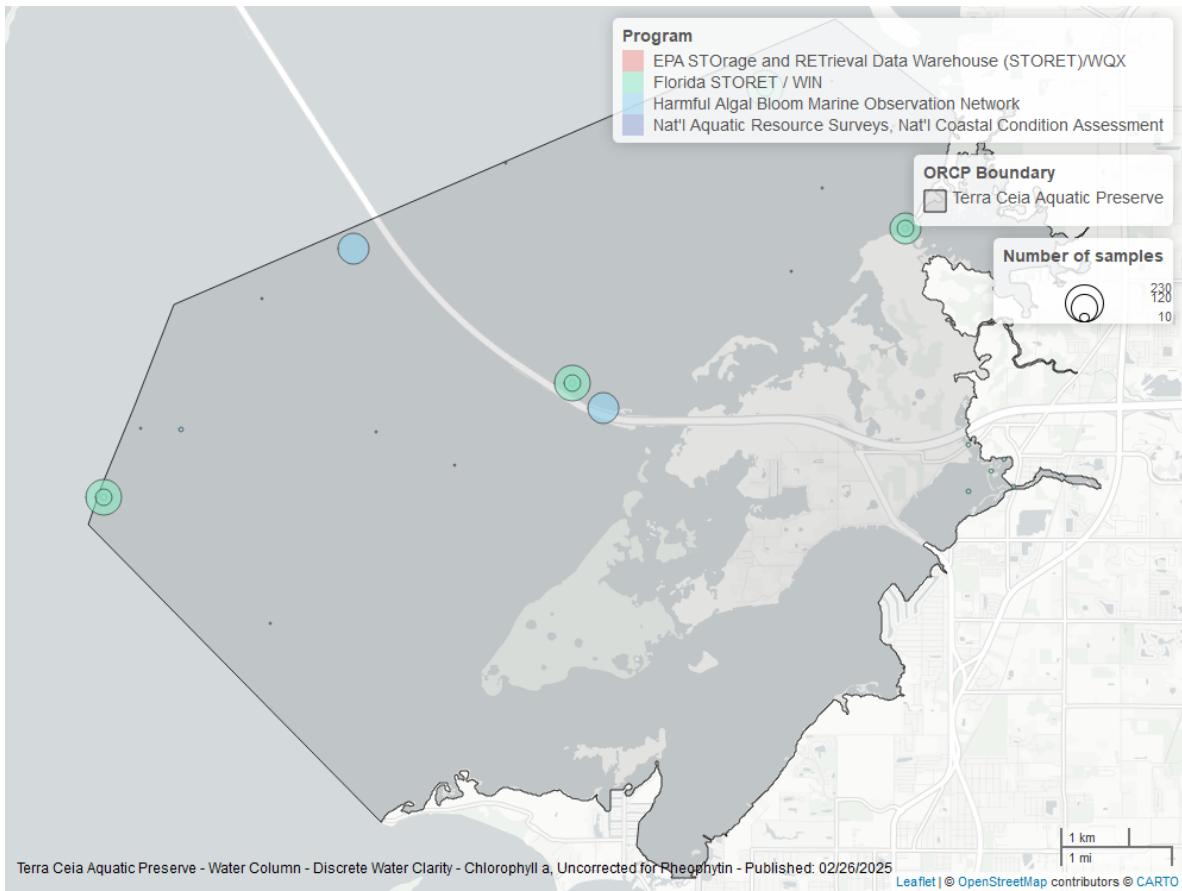


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P	
Lab	No significant trend	1092	24	1999 - 2024		3.2	-0.08102	3.36562	-0.02171	0.06712629508753795160025390



## Chlorophyll a, Corrected for Pheophytin - Discrete

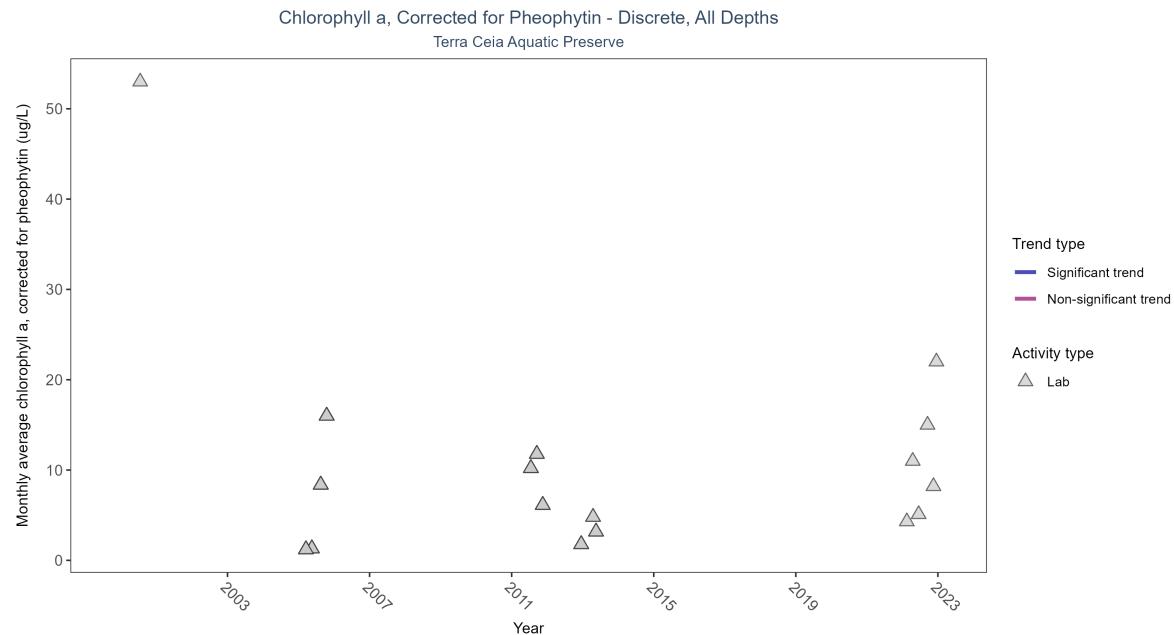
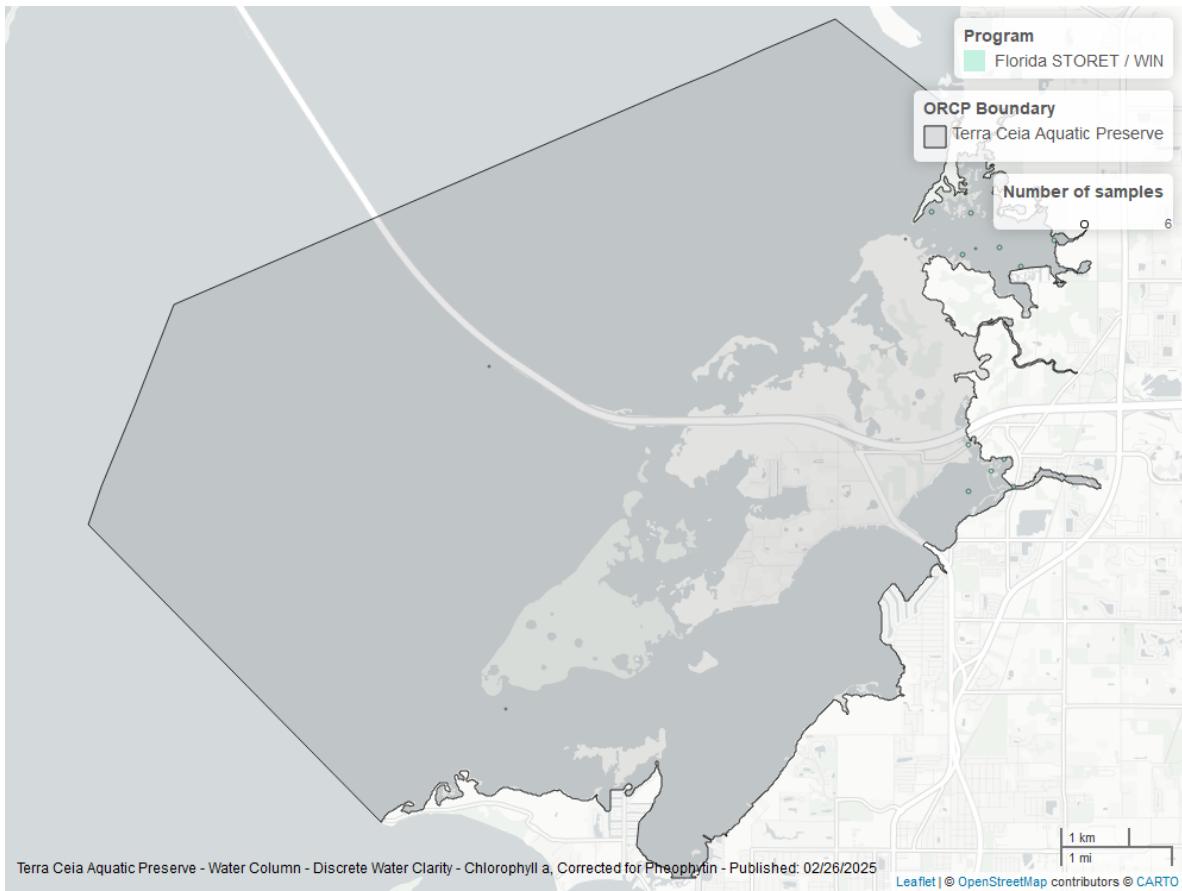


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

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	54	6	2000 - 2022	5.1	-	-	-	NA



## Secchi Depth - Discrete

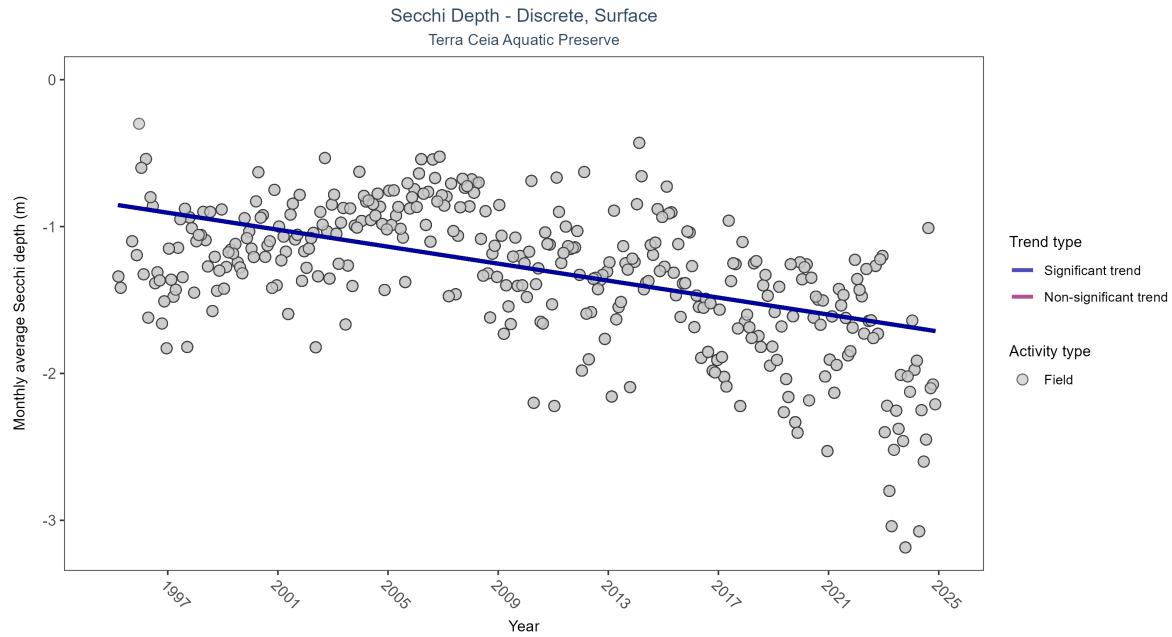
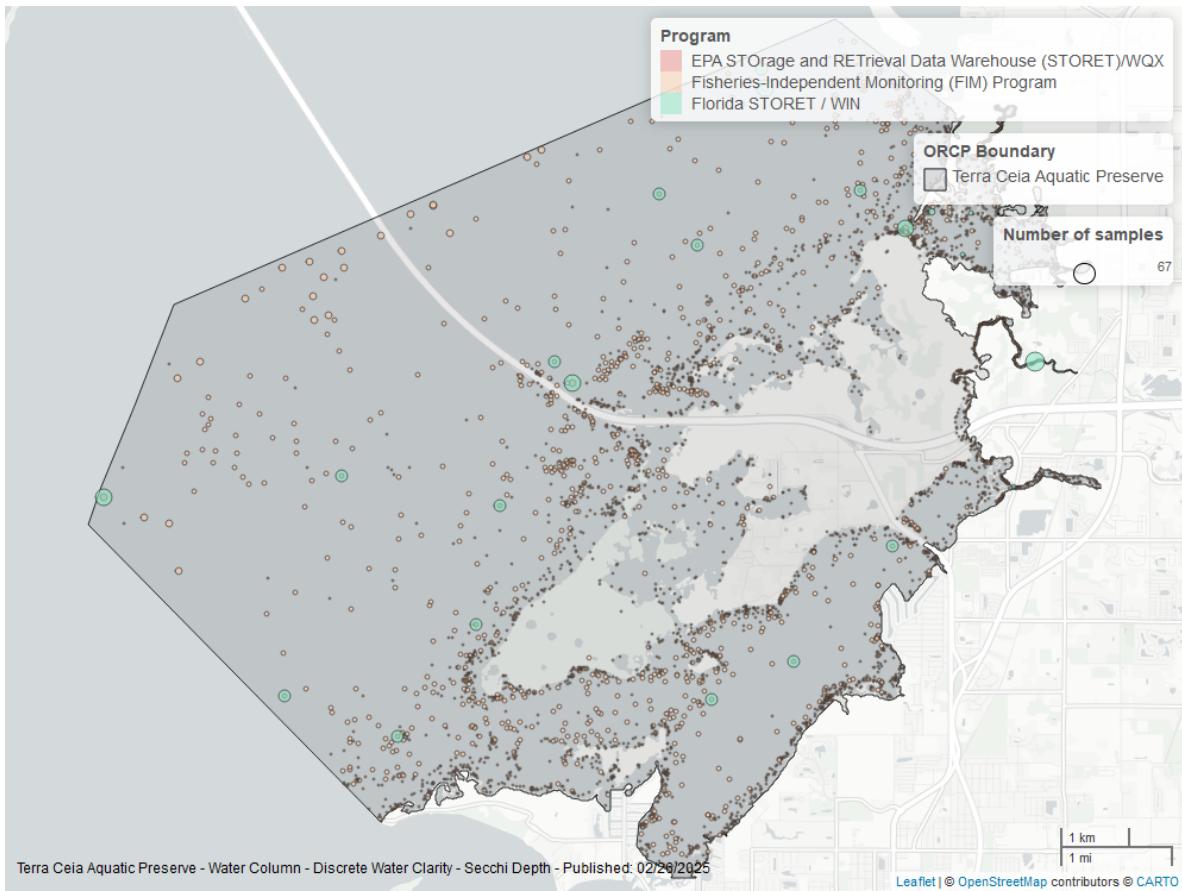


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	9860	30	1995 - 2024	-1	-0.3755	-0.84796	-0.02889	0.00000000000000000000000000000000231491626



## Colored Dissolved Organic Matter - Discrete

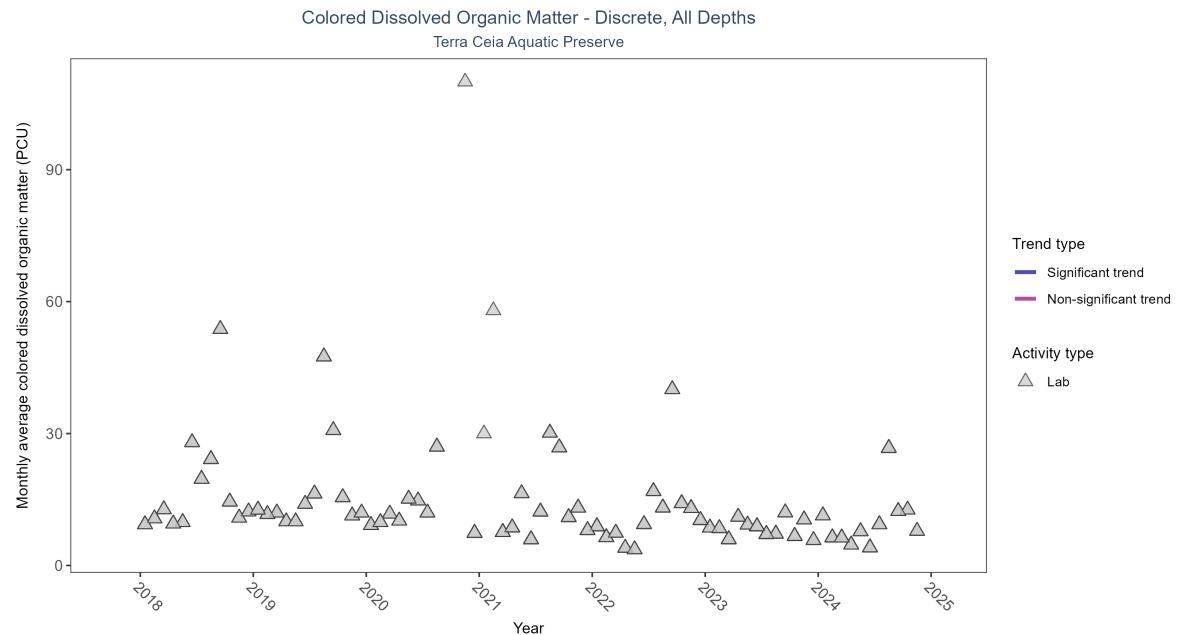


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

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	573	7	2018 - 2024	6	-	-	-	NA

