

# St. Andrews State Park Aquatic Preserve

## SEACAR Water Quality Analysis

Last compiled on 06 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 Saturation - Discrete . . . . .	8
Salinity - Discrete . . . . .	10
Water Temperature - Discrete . . . . .	12
pH - Discrete . . . . .	14
Water Clarity . . . . .	16
Turbidity - Discrete . . . . .	16
Total Suspended Solids - Discrete . . . . .	18
Chlorophyll a, Uncorrected for Pheophytin - Discrete . . . . .	20
Chlorophyll a, Corrected for Pheophytin - Discrete . . . . .	22
Secchi Depth - Discrete . . . . .	24
Colored Dissolved Organic Matter - Discrete . . . . .	26

# Indicators

## Nutrients

### Total Nitrogen - Discrete

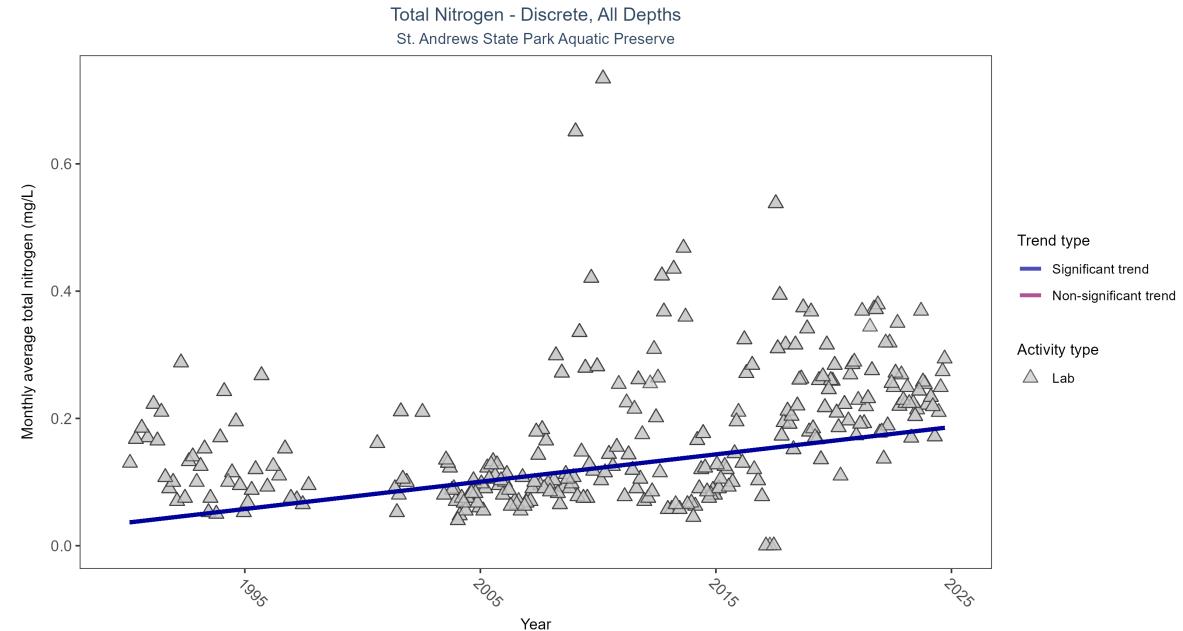
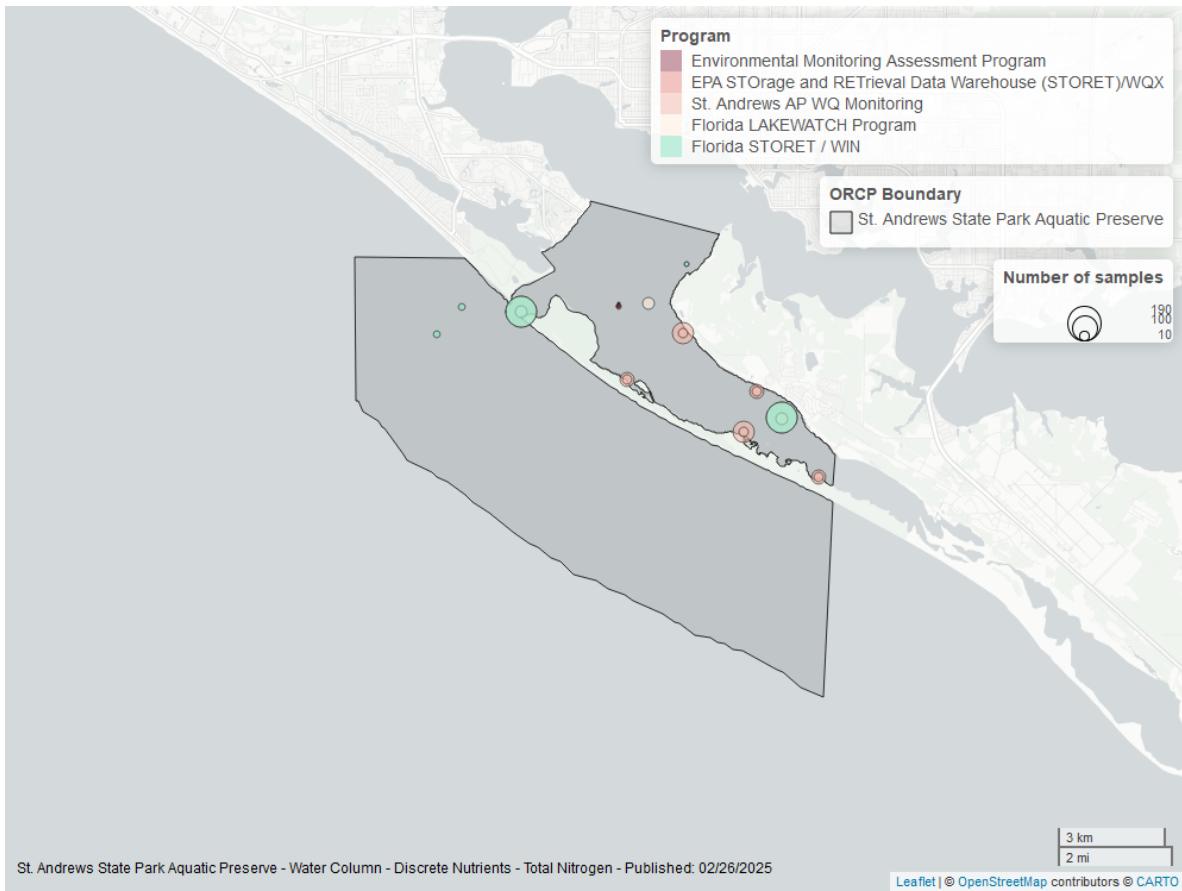


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	1139	33	1990 - 2024	0.18	0.3394	0.0362	0.00429	0.0000



## Total Phosphorus - Discrete

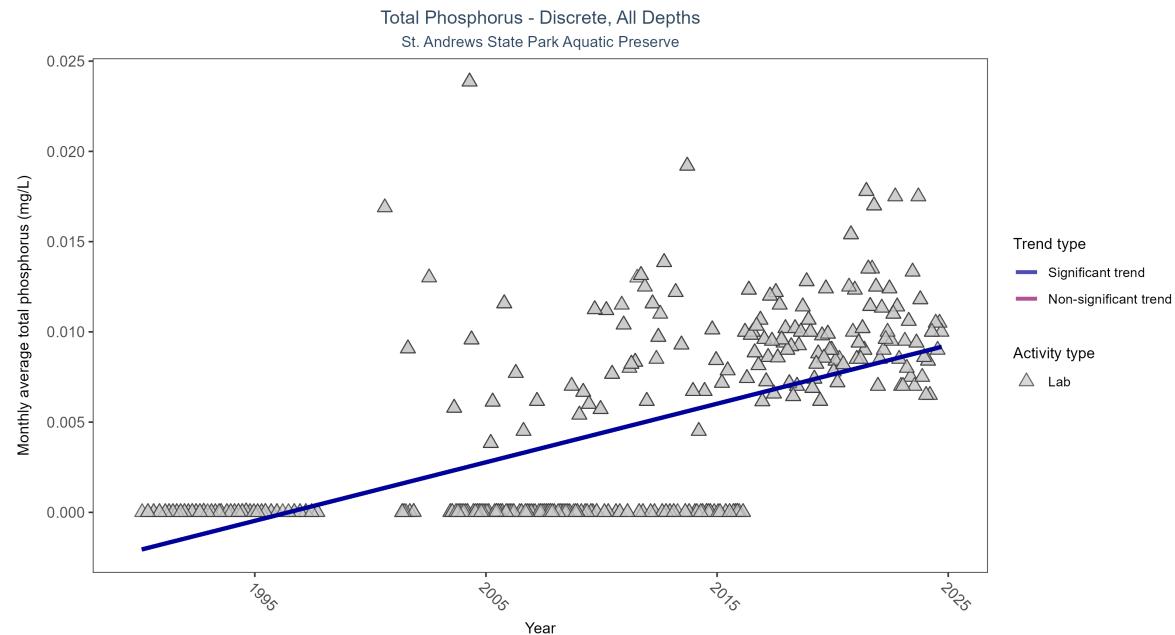
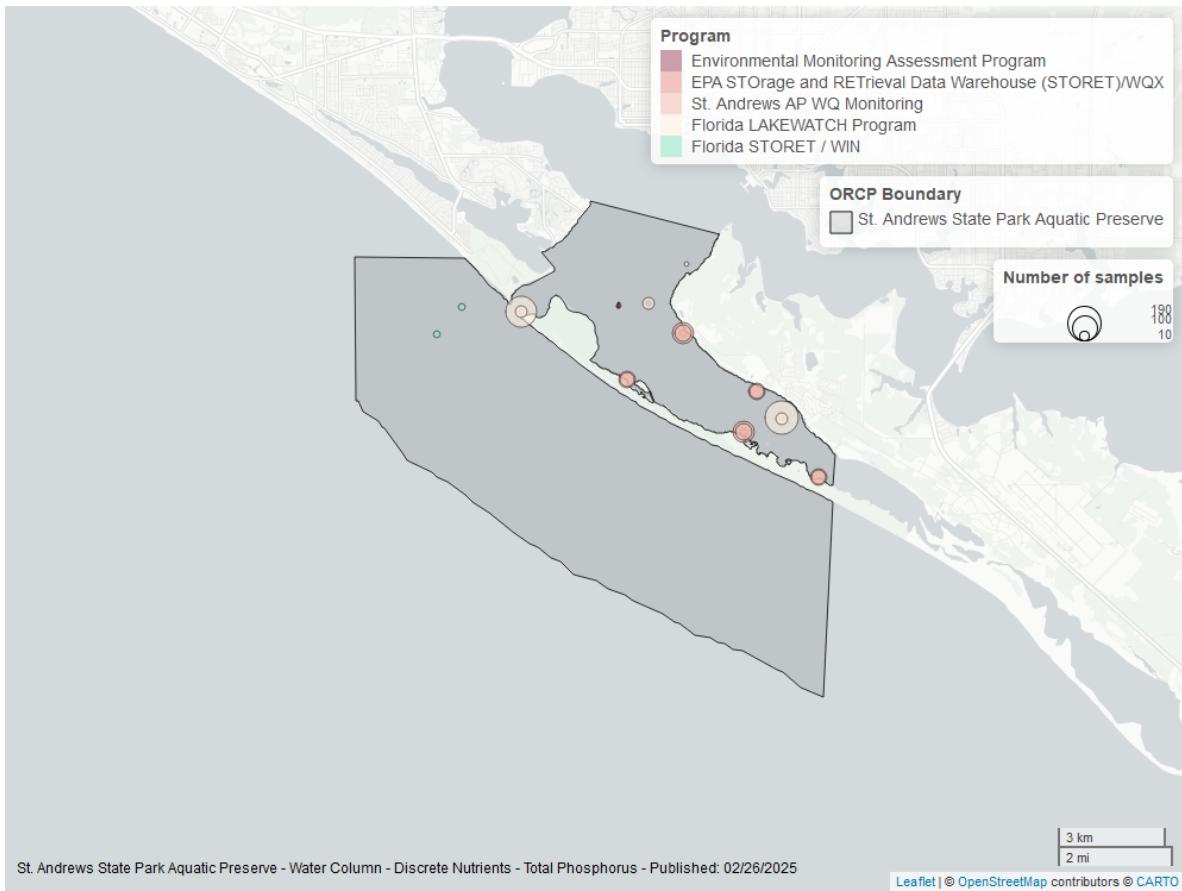


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	983	33	1990 - 2024	0.008	0.4635	-0.00209	0.00032	0.0000



## Water Quality

### Dissolved Oxygen - Discrete

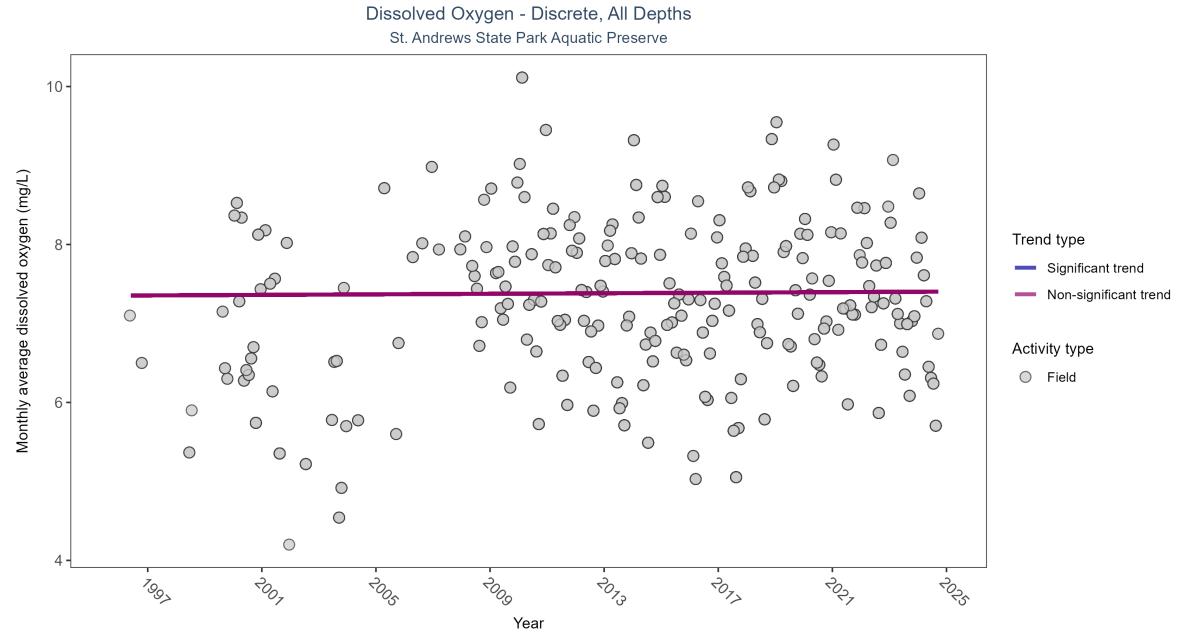
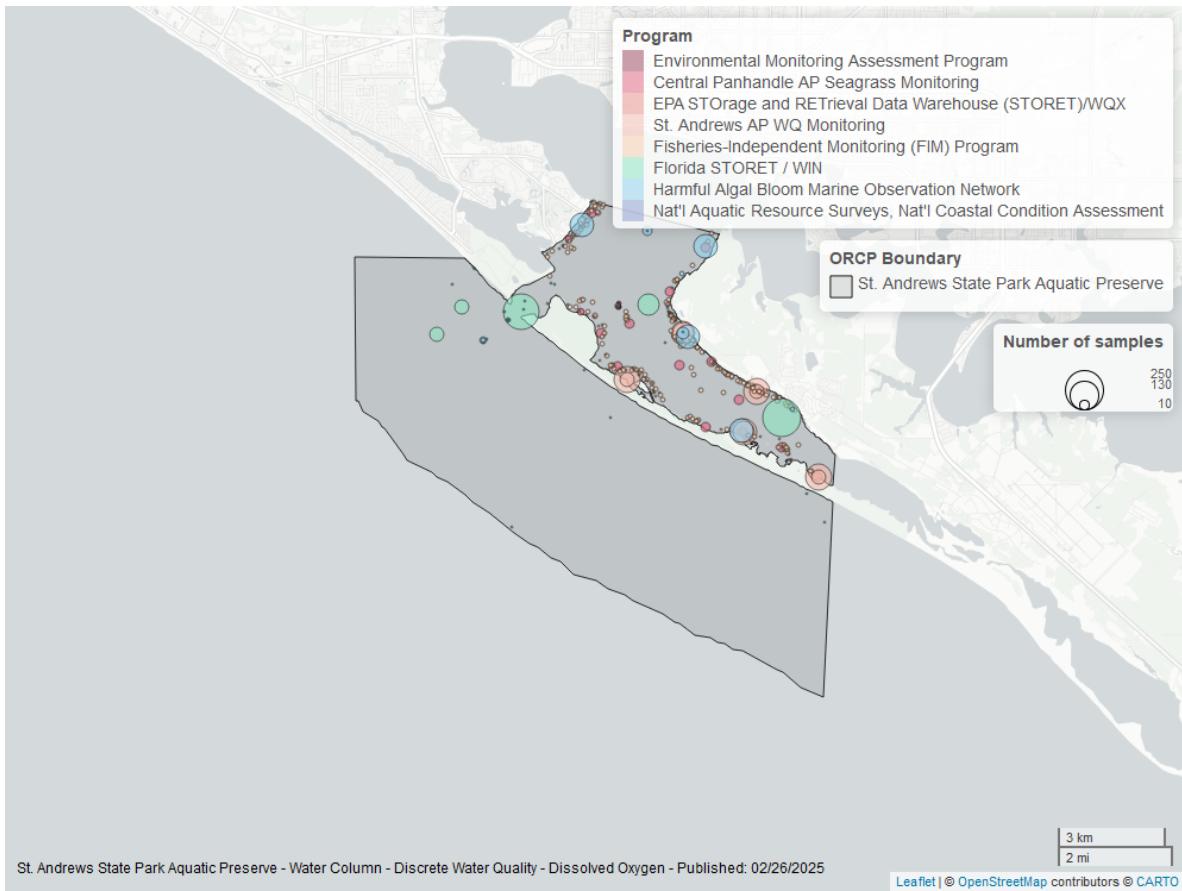


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

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	2840	28	1996 - 2024	7.165	0.0164	7.35328	0.00172	0.7277



## Dissolved Oxygen Saturation - Discrete

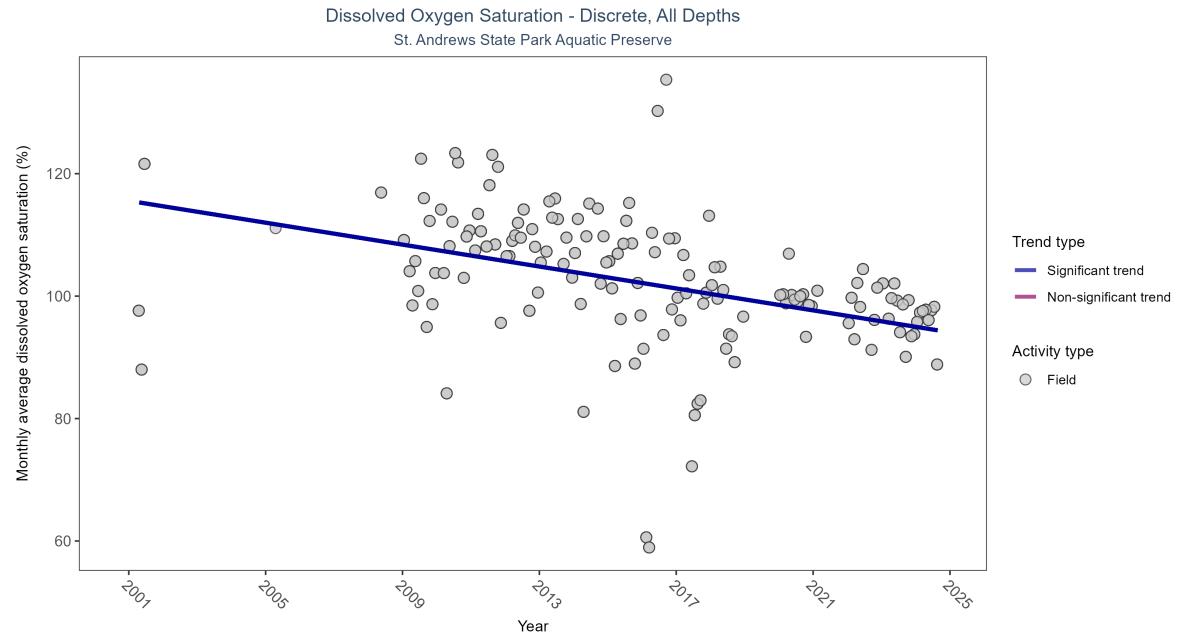
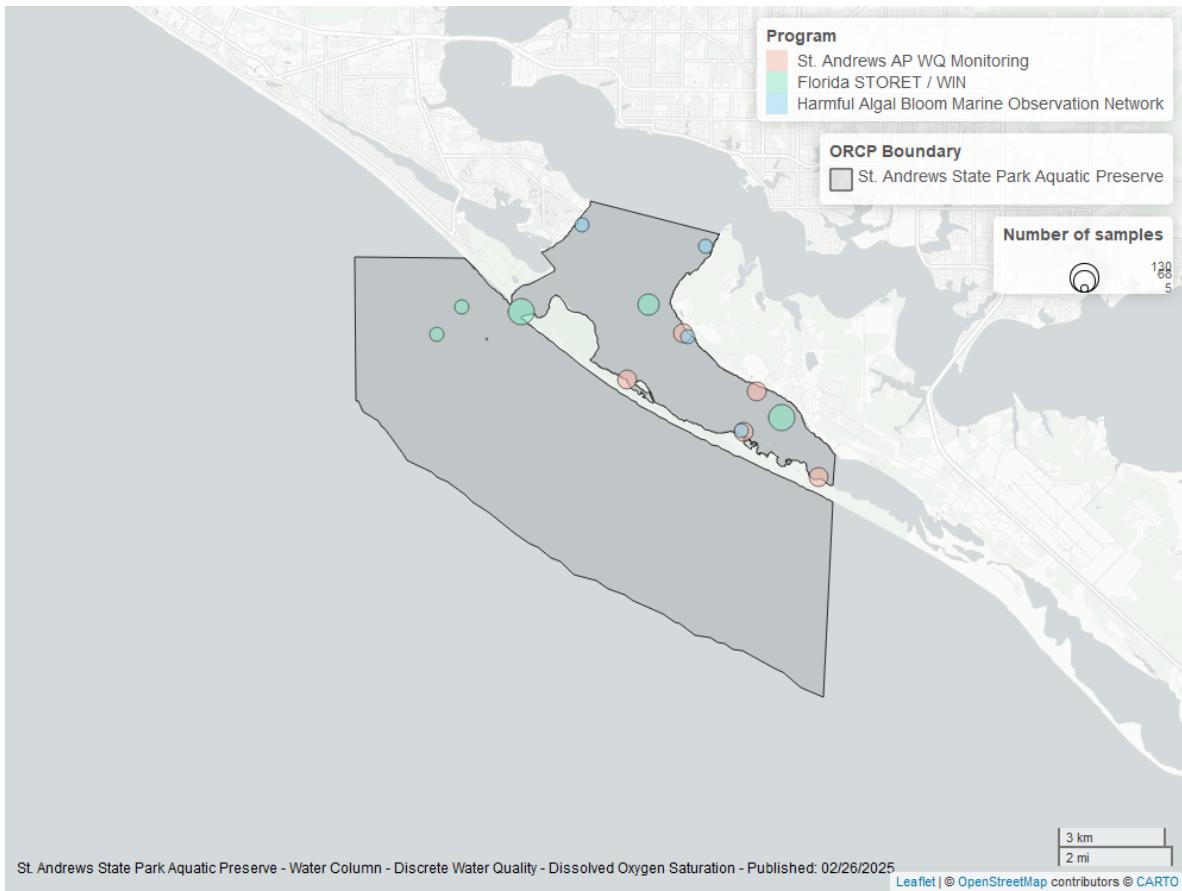


Table 4: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	901	18	2001 - 2024	101.9	-0.3978	115.5735	-0.895	0.0000



## Salinity - Discrete

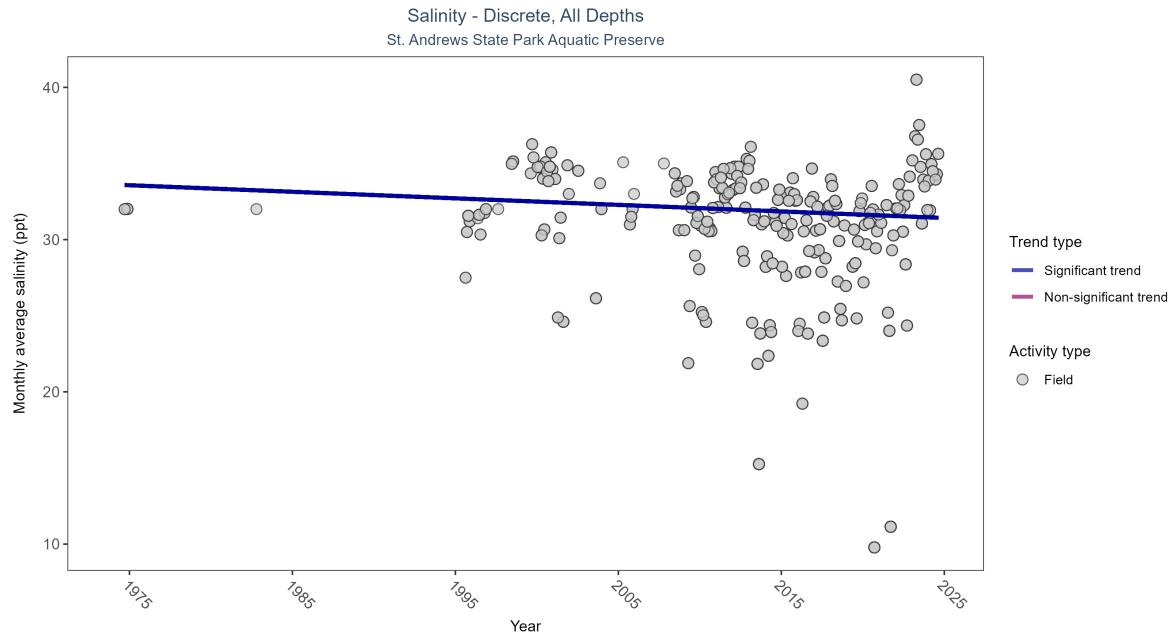
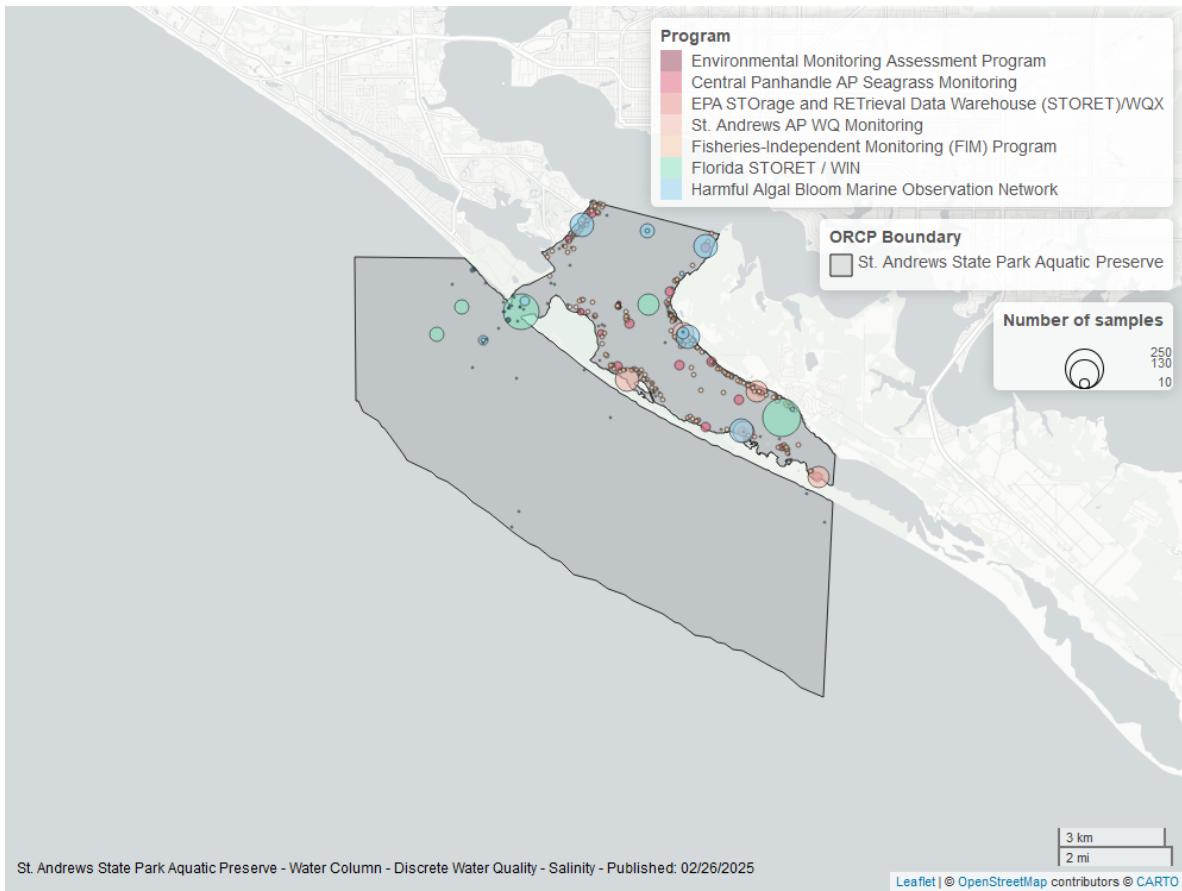


Table 5: Seasonal Kendall-Tau Results for - Salinity

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	2558	30	1974 - 2024	31.8	-0.091	33.61385	-0.043	0.0378



## Water Temperature - Discrete

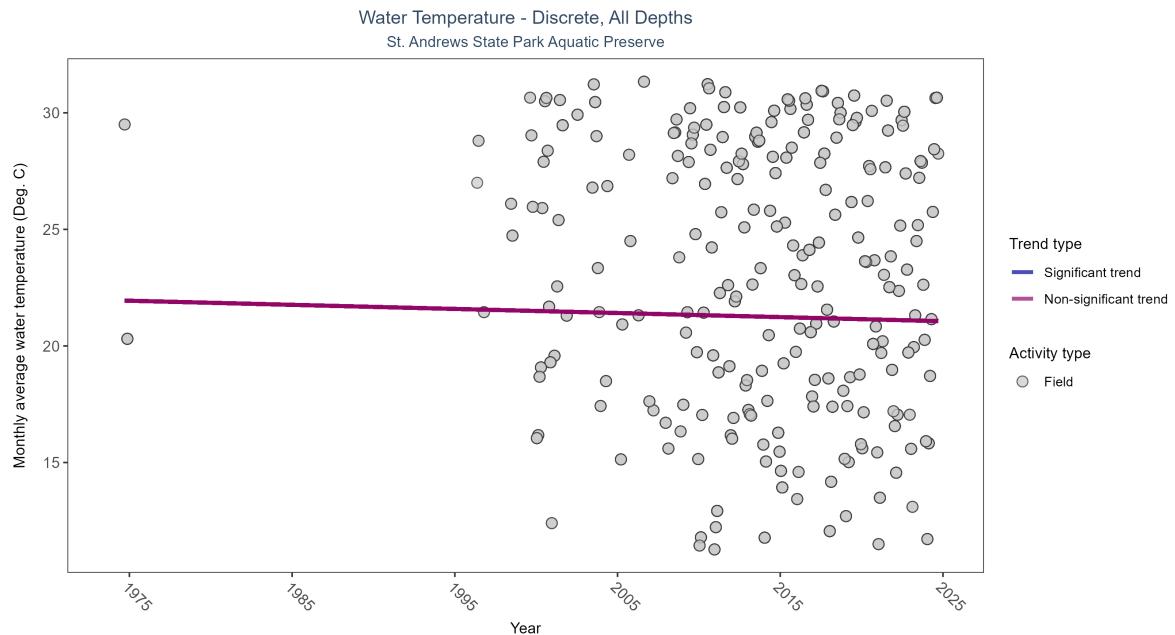
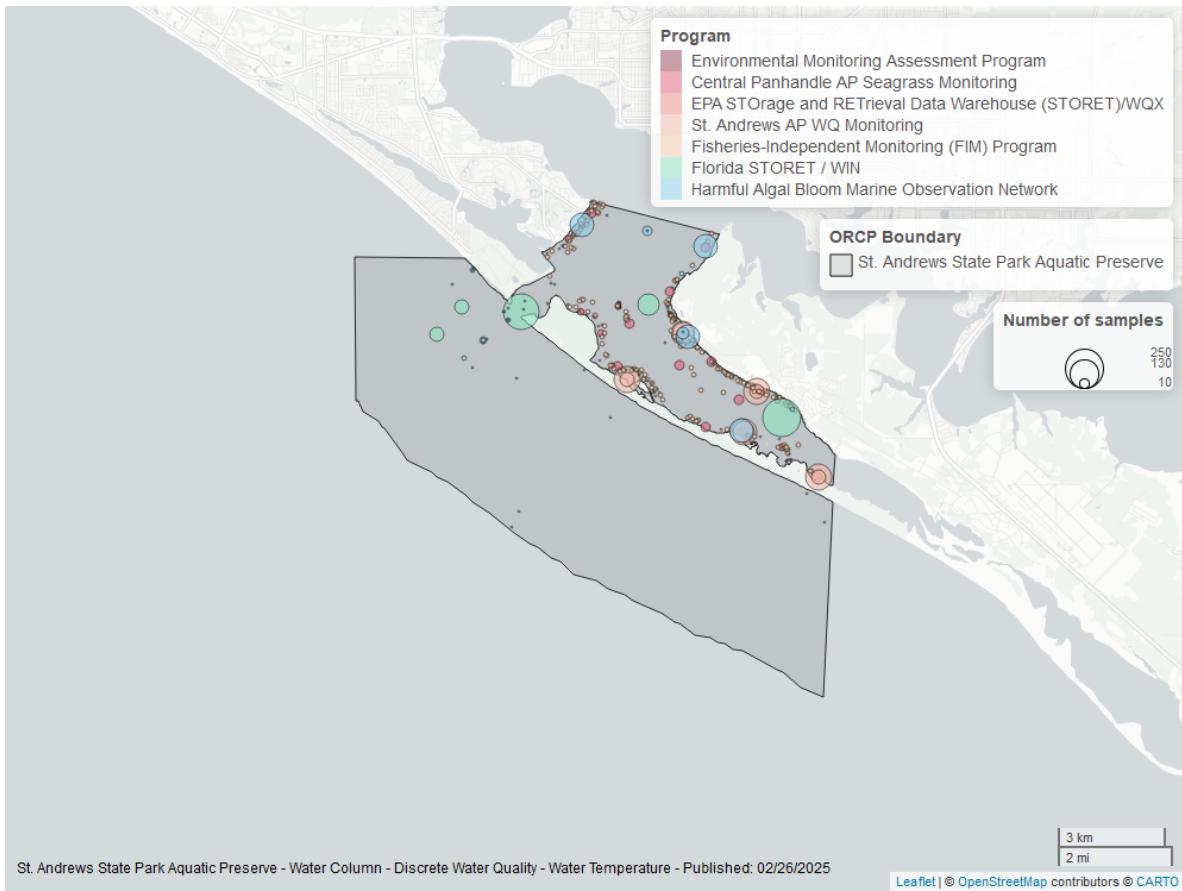


Table 6: Seasonal Kendall-Tau Results for - Water Temperature

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	2918	29	1974 - 2024	25.305	-0.0599	21.95735	-0.01758	0.1804



## pH - Discrete

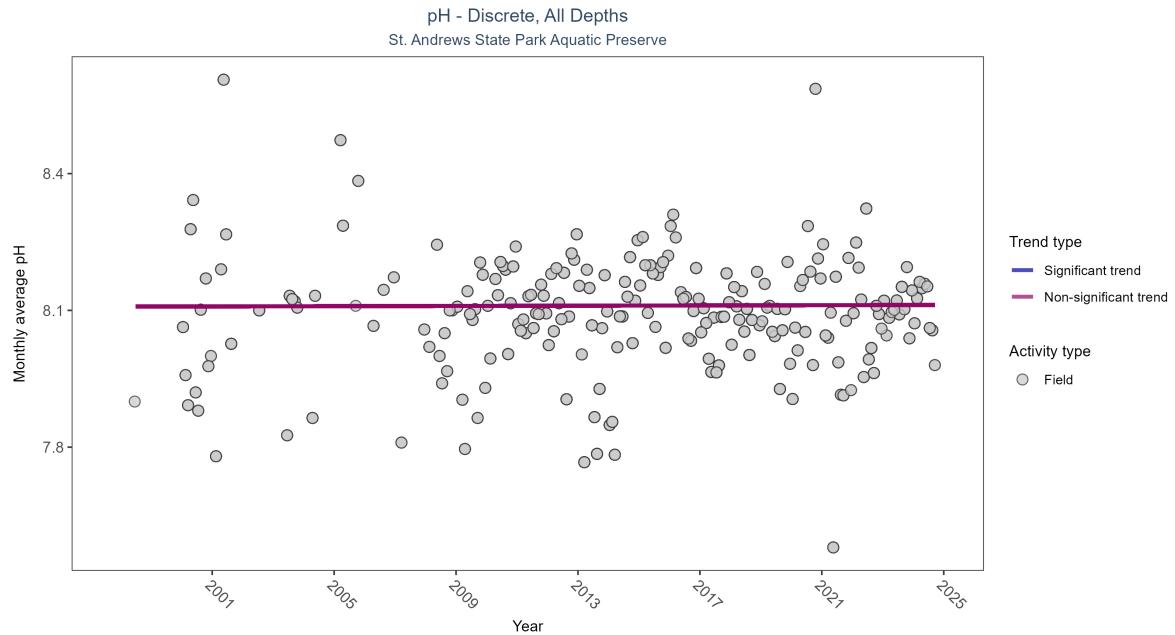
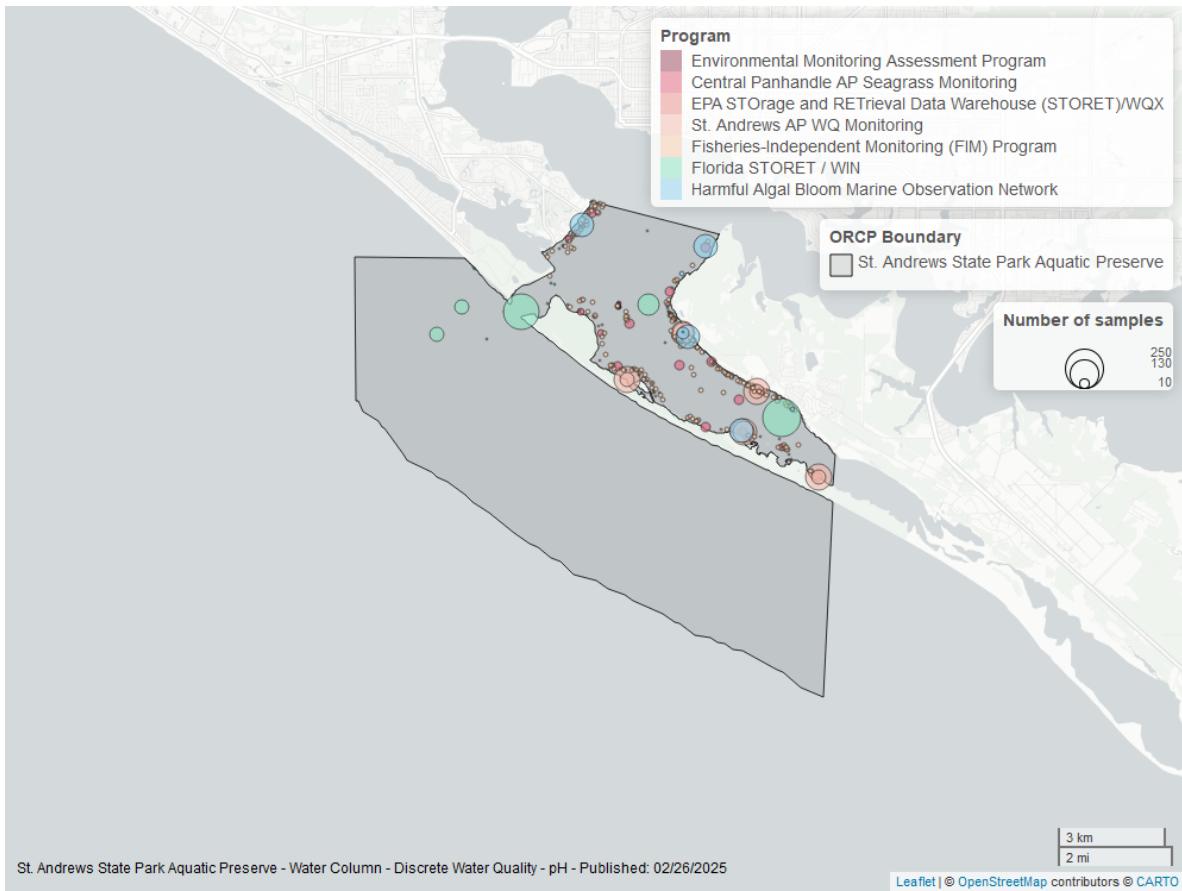


Table 7: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	2713	26	1998 - 2024	8.1	0.013	8.10826	0.00013	0.8718



## Water Clarity

### Turbidity - Discrete

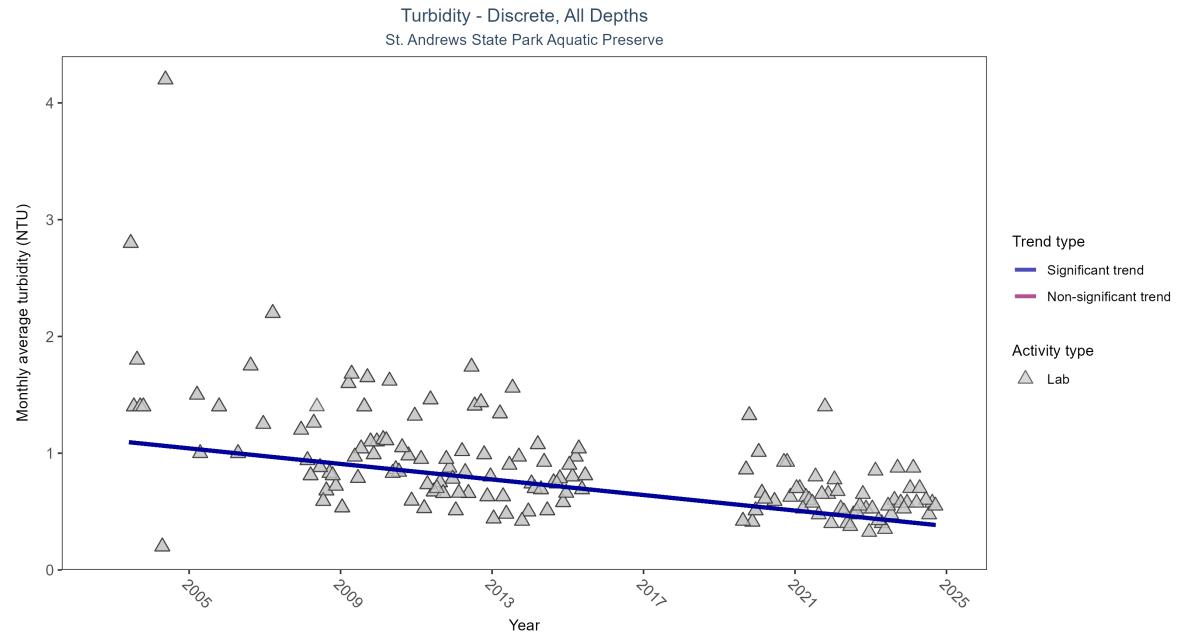
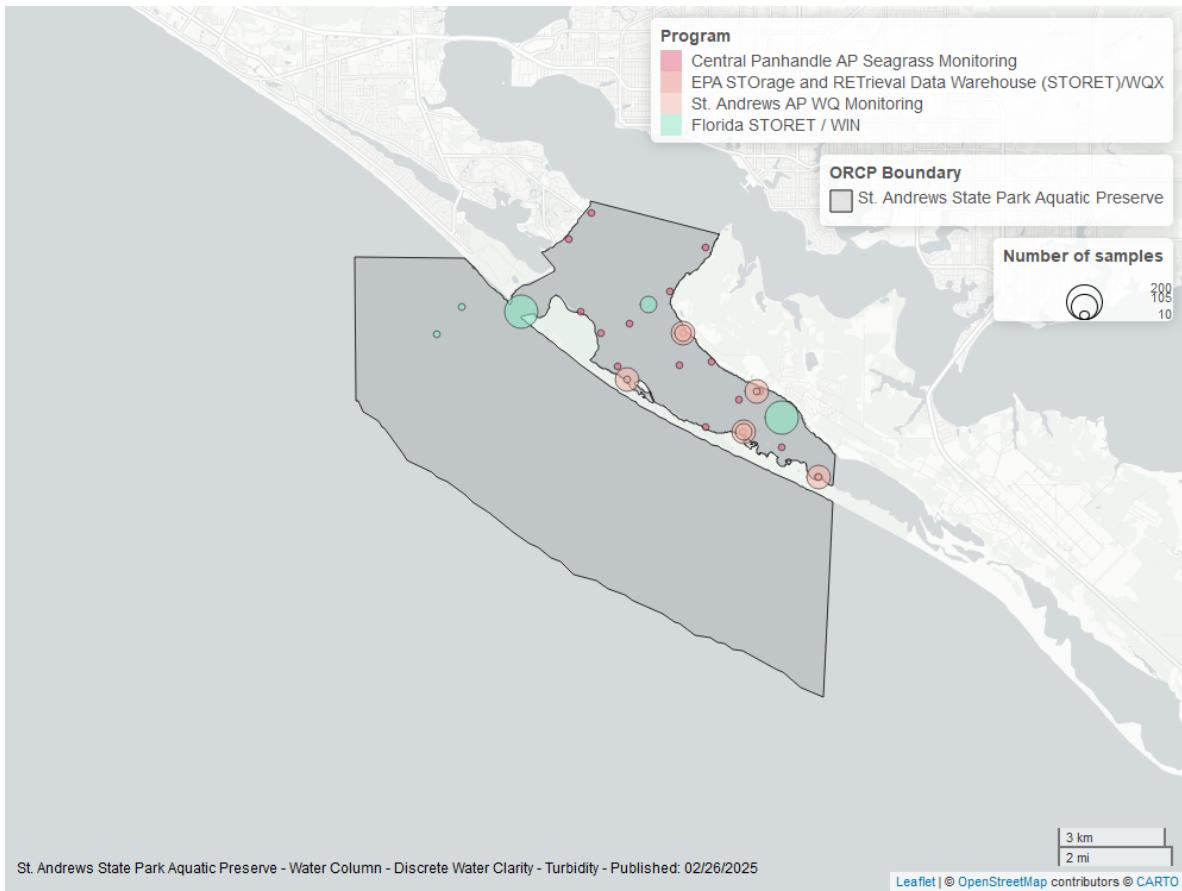


Table 8: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P	
Lab	Significantly decreasing trend	620	19	2003 - 2024		0.75	-0.4407	1.10782	-0.03327	0.0000



## Total Suspended Solids - Discrete

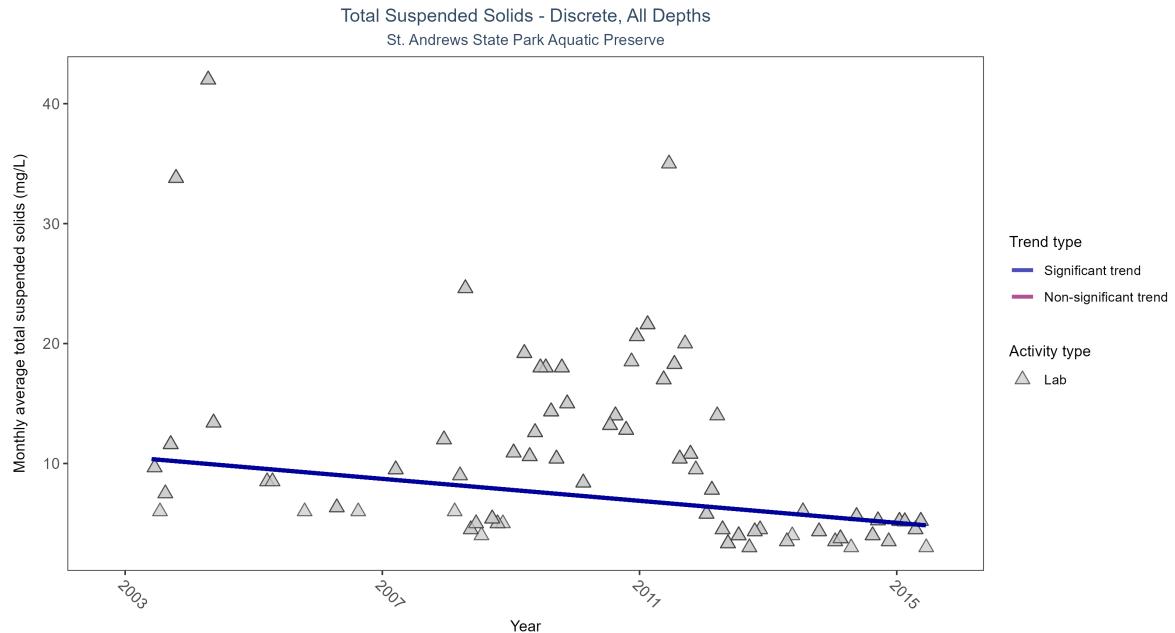


Table 9: Seasonal Kendall-Tau Results for - Total Suspended Solids

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	263	13	2003 - 2015	9	-0.2373	10.55284	-0.45833	0.0040



## Chlorophyll a, Uncorrected for Pheophytin - Discrete

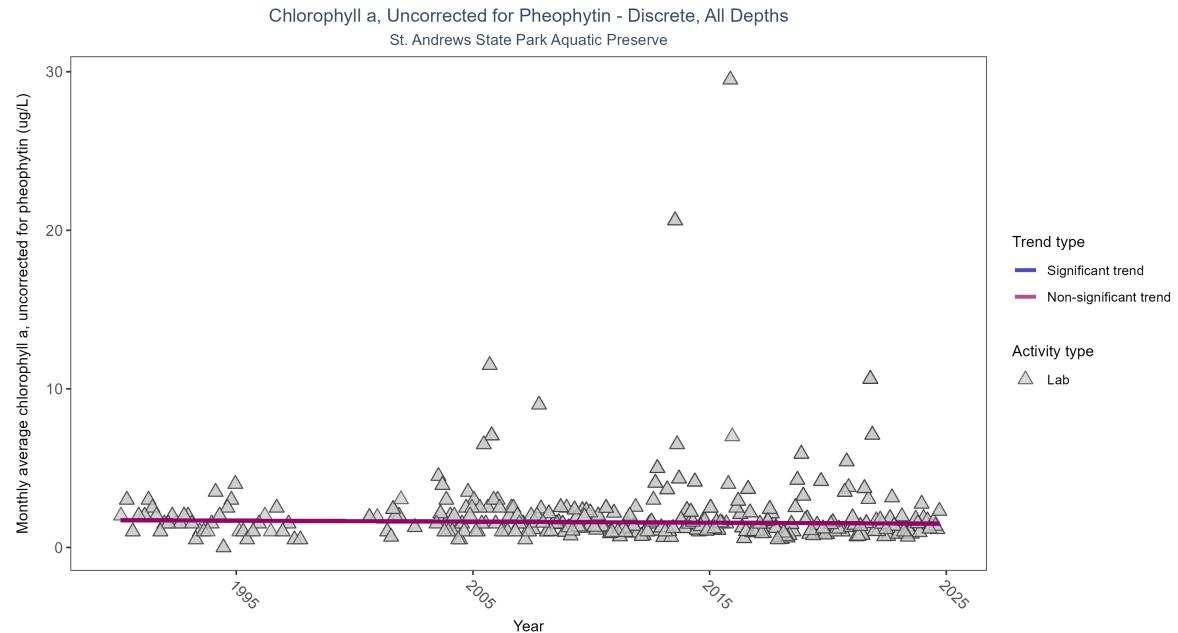
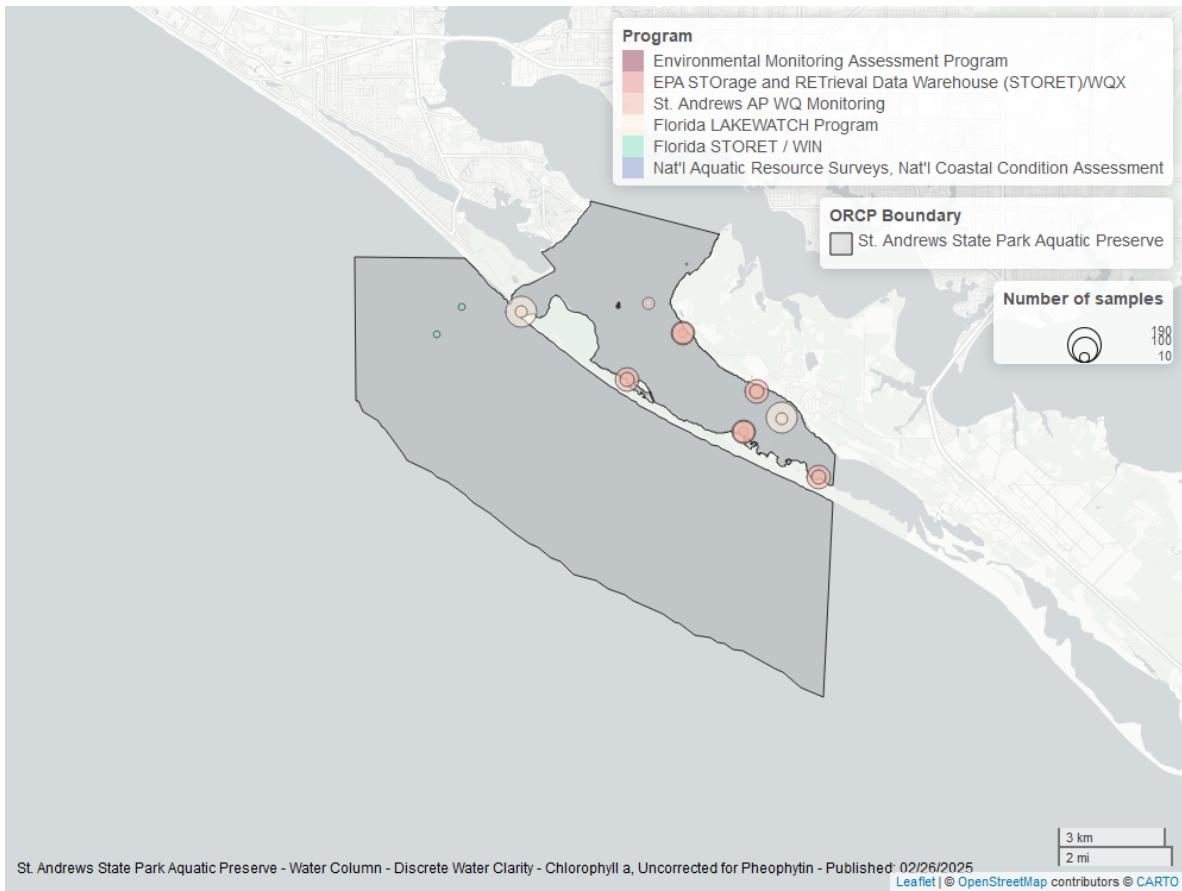


Table 10: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

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	1249	33	1990 - 2024	1.3	-0.0783	1.72091	-0.00637	0.0872



## Chlorophyll a, Corrected for Pheophytin - Discrete

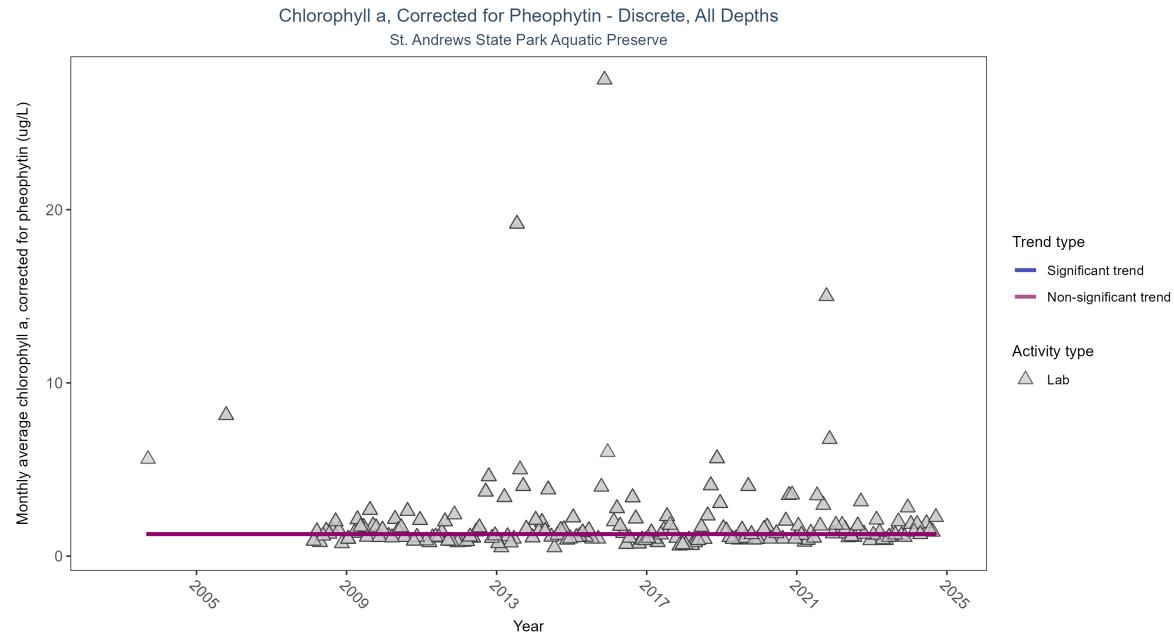


Table 11: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	850	19	2003 - 2024	1.2	0.0022	1.27184	-0.00014	0.9893



## Secchi Depth - Discrete

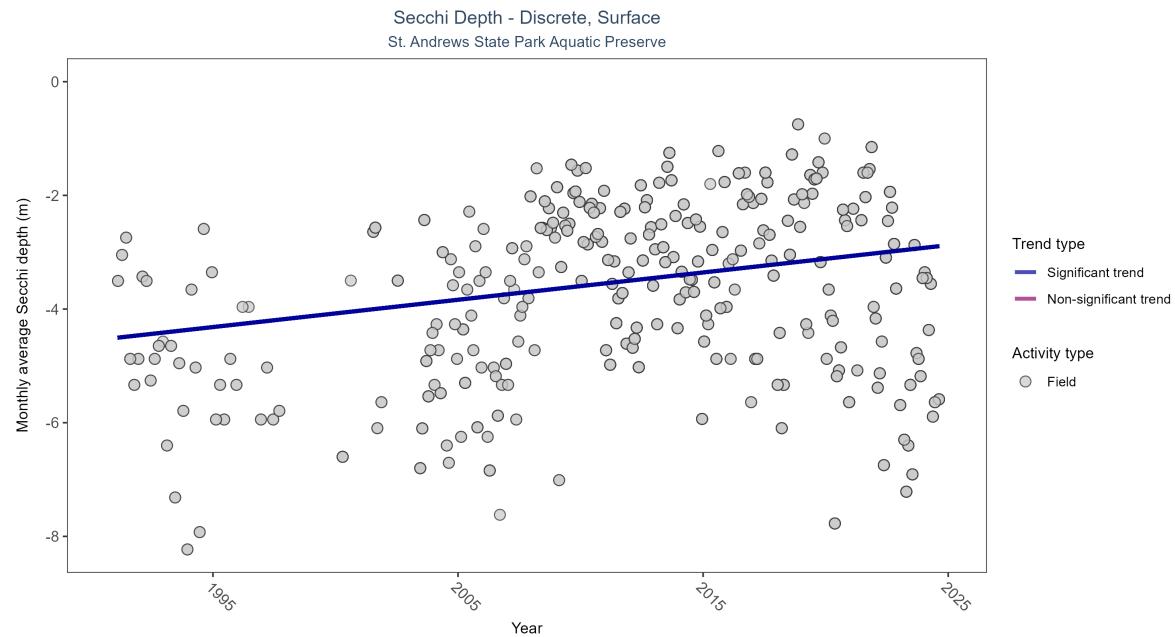
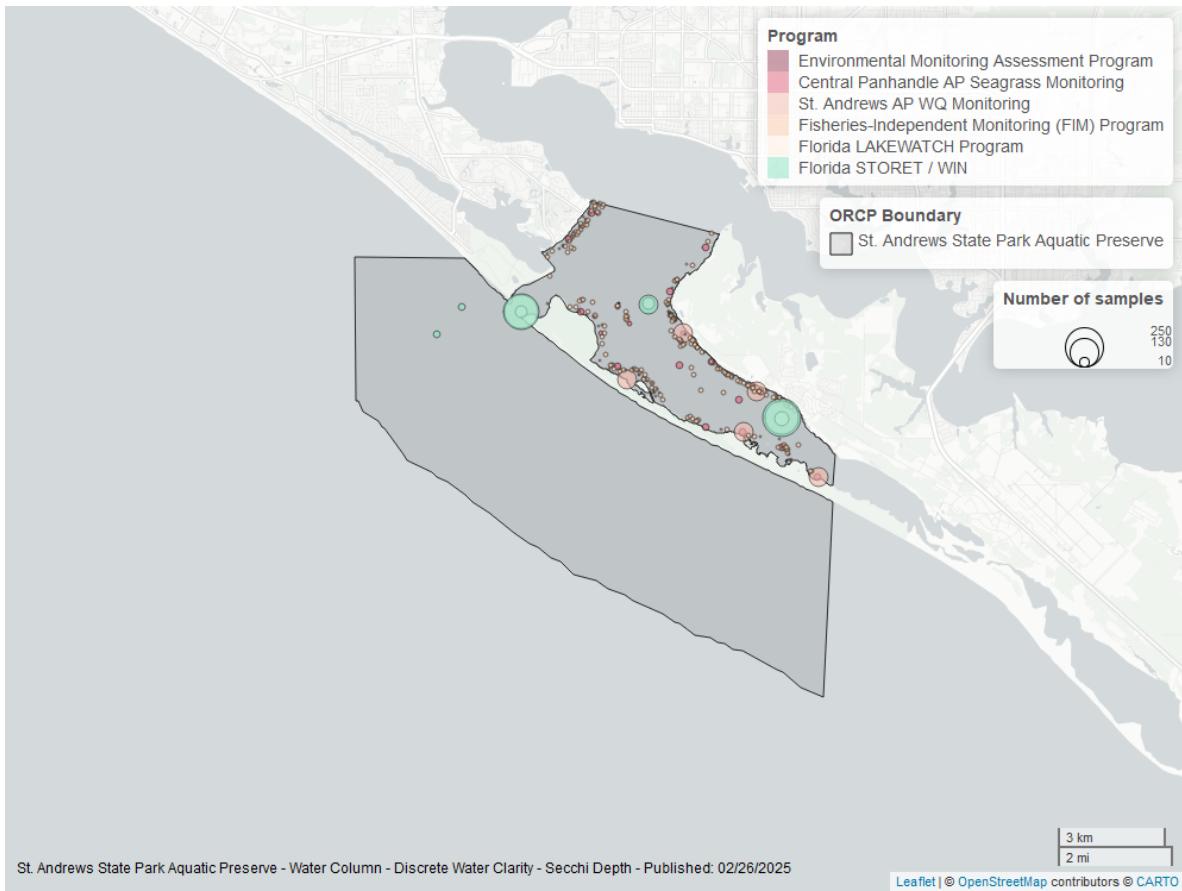


Table 12: Seasonal Kendall-Tau Results for - Secchi Depth

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	2186	32	1991 - 2024	-2.6	0.1701	-4.50922	0.04803	0.0000



## Colored Dissolved Organic Matter - Discrete

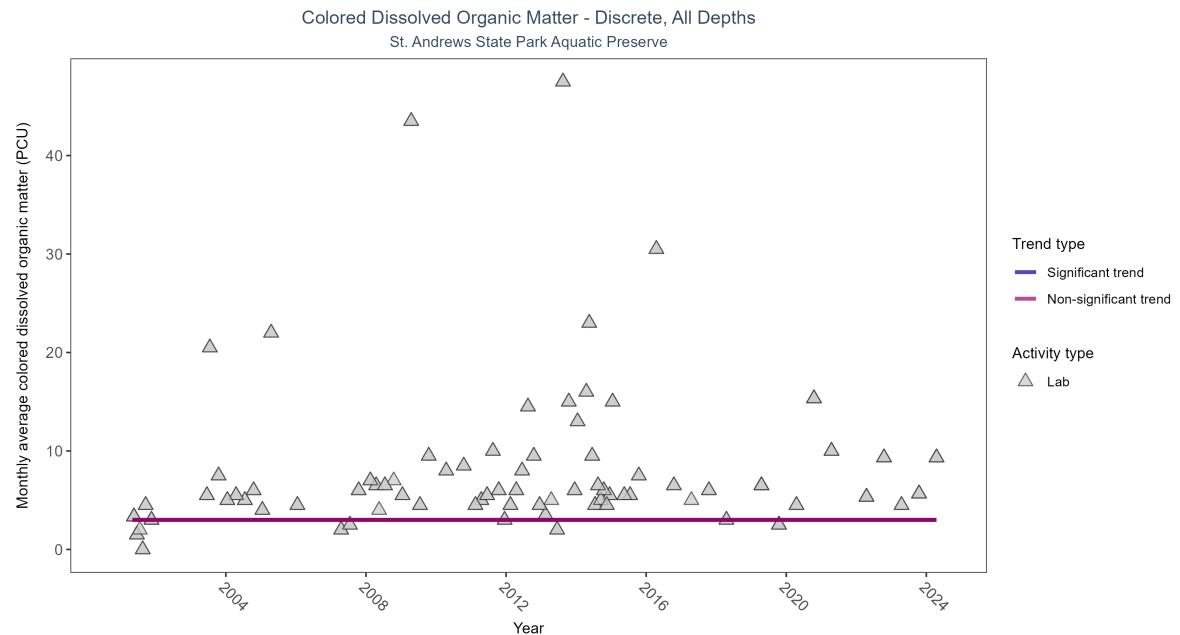


Table 13: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	161	23	2001 - 2024	6	0.178	3	0	0.8787

