

Pinellas County Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 18 March, 2025

Contents

Indicators	2
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
Water Temperature - Continuous	14
pH - Discrete	16
Water Clarity	18
Turbidity - Discrete	18
Total Suspended Solids - Discrete	20
Chlorophyll a, Uncorrected for Pheophytin - Discrete	22
Chlorophyll a, Corrected for Pheophytin - Discrete	24
Secchi Depth - Discrete	26
Colored Dissolved Organic Matter - Discrete	28

Indicators

Nutrients

Total Nitrogen - Discrete

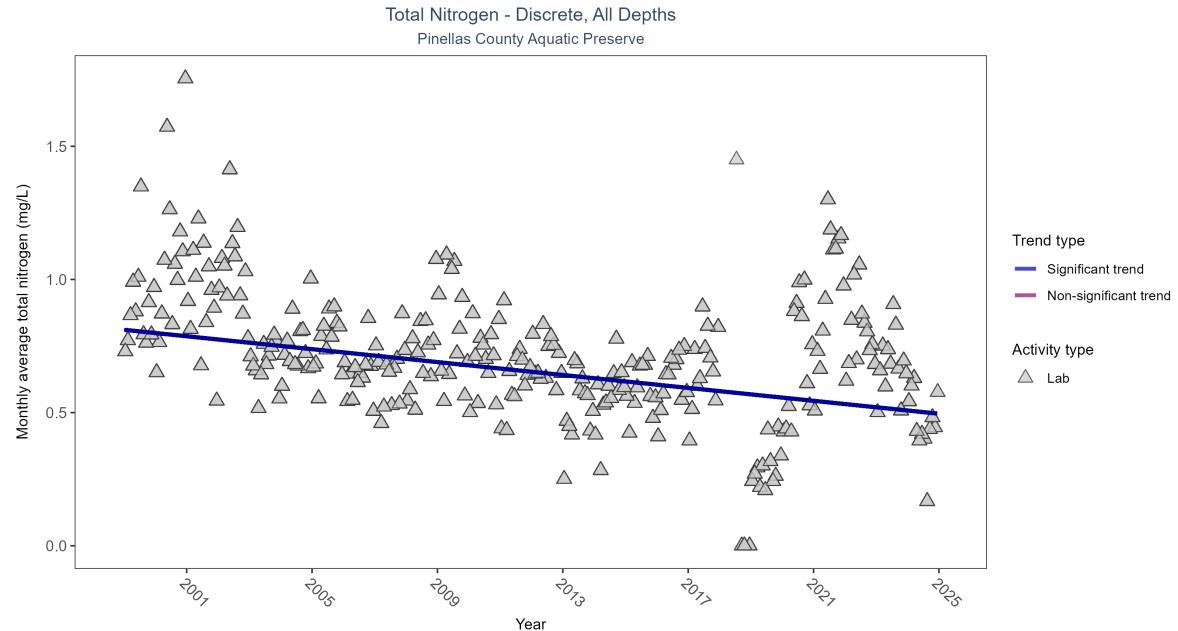
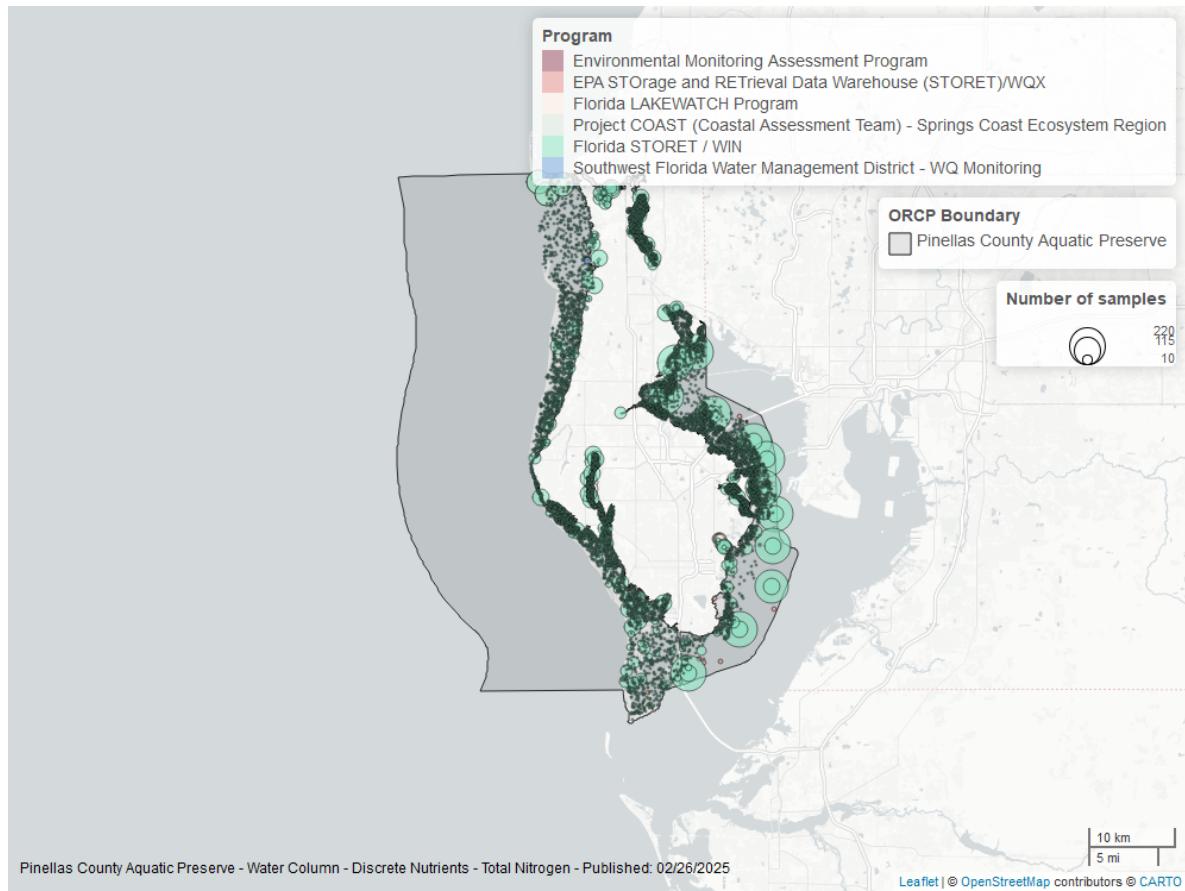


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

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	16068	26	1999 - 2024	0.59	-0.28772	0.81098	-0.01212	0.00000000000214831526280336806



Total Phosphorus - Discrete

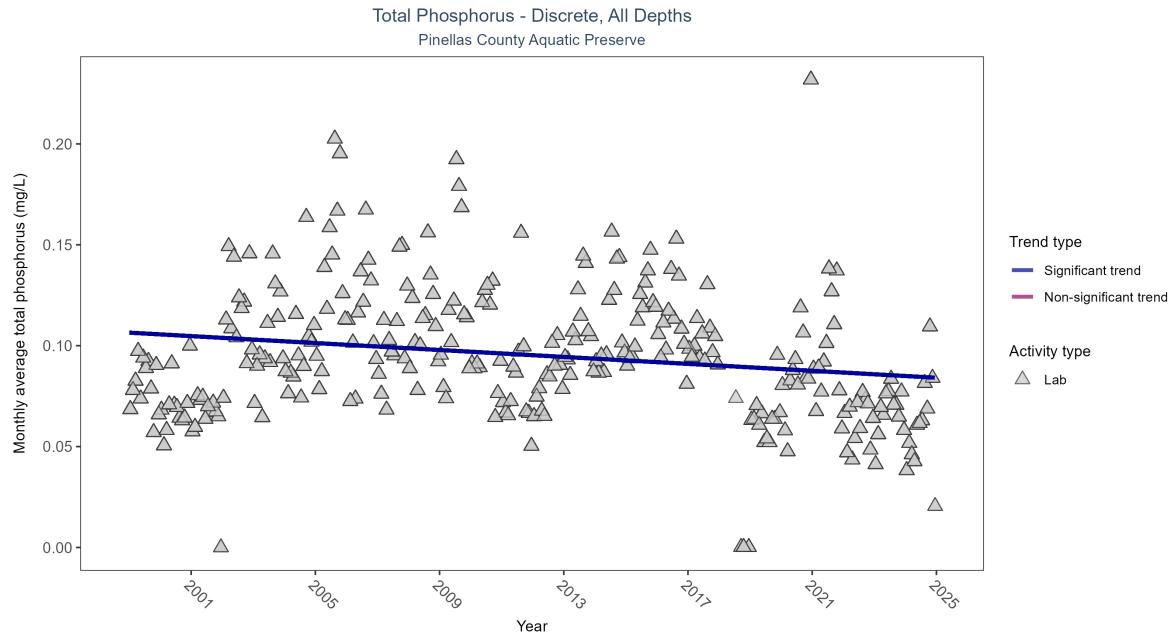
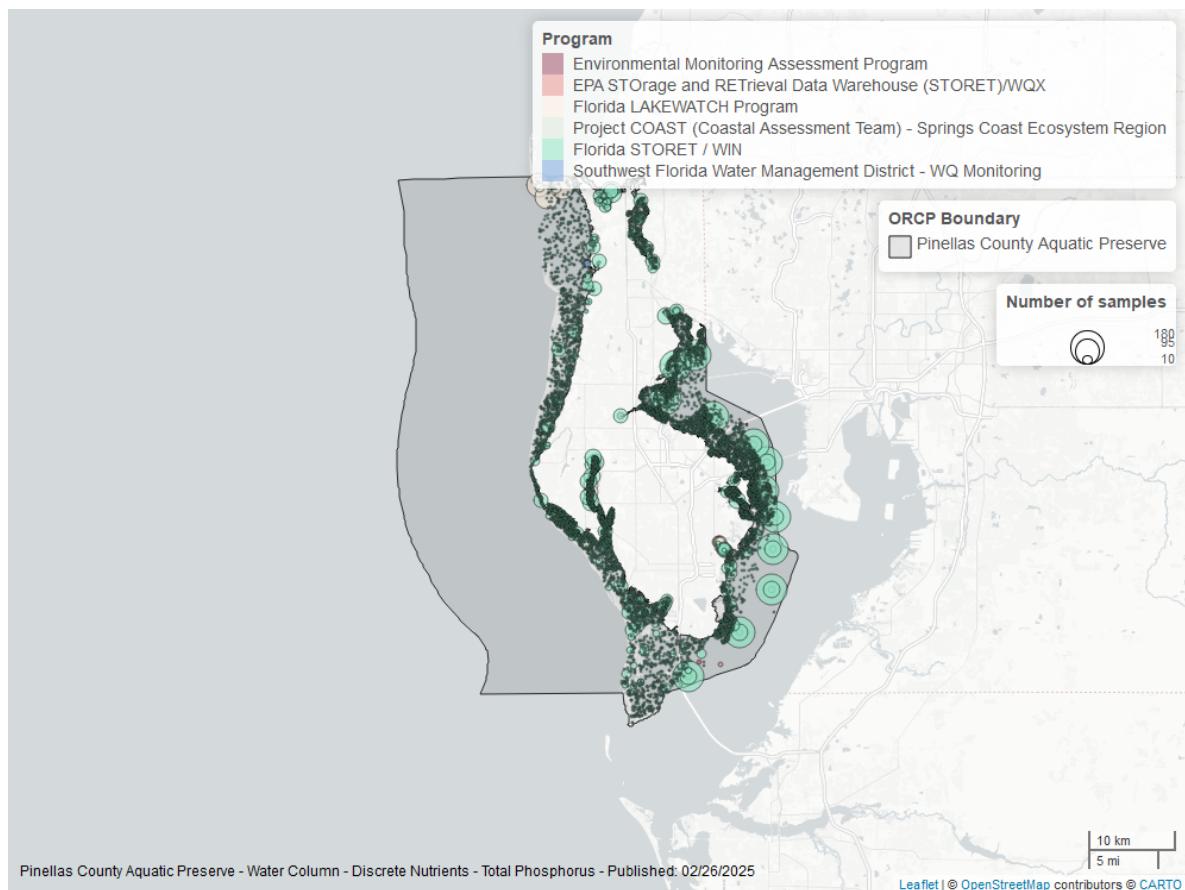


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

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	15909	26	1999 - 2024	0.088	-0.1589	0.10646	-0.00086	0.00010488451969761645099152302940126446628710255026817321777343750



Water Quality

Dissolved Oxygen - Discrete

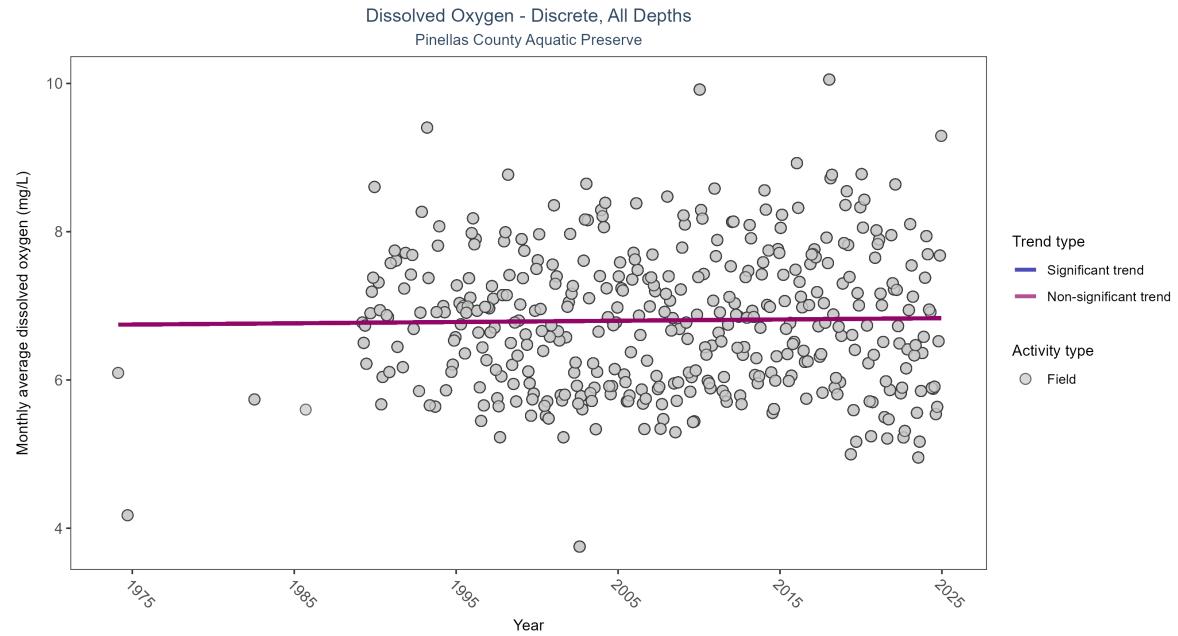
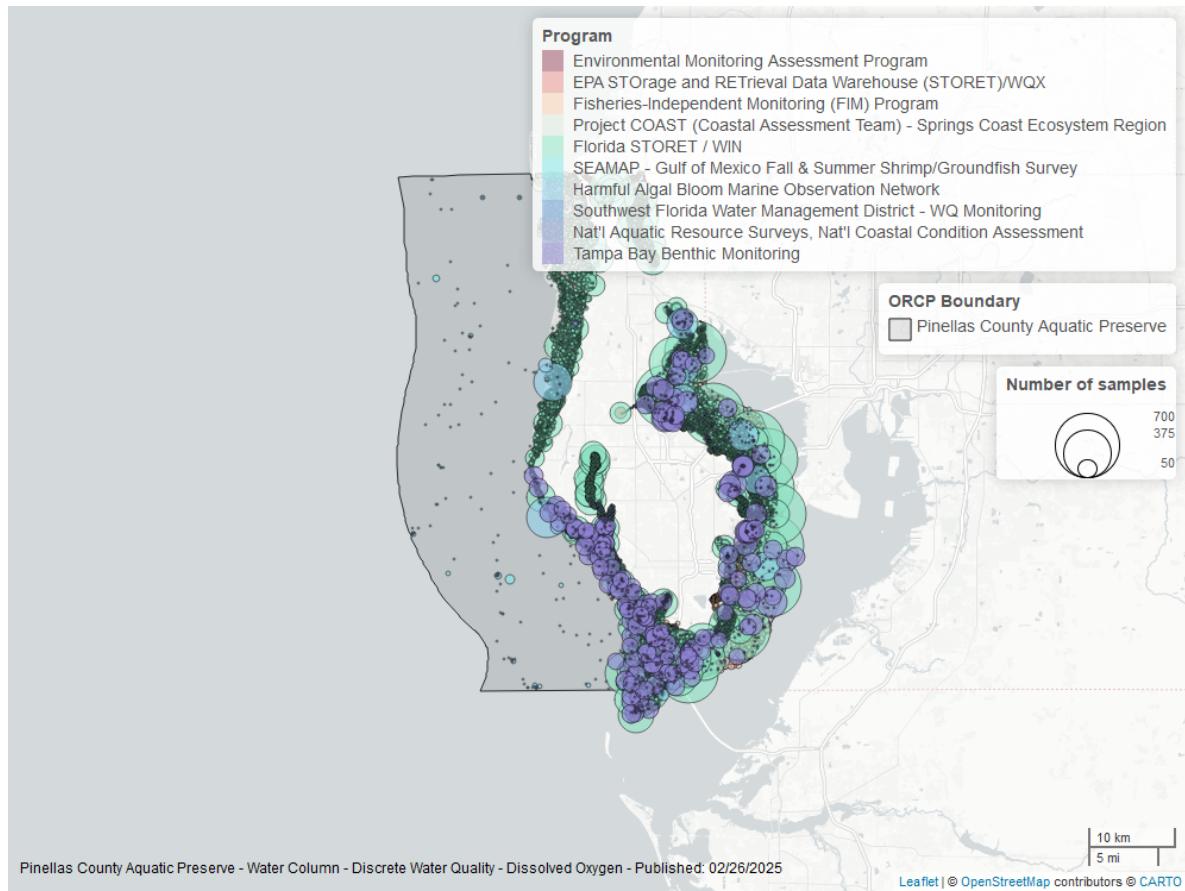


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

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	95696	39	1974 - 2024	6.6	0.03043	6.7457	0.00172	0.47005561329918588



Dissolved Oxygen Saturation - Discrete

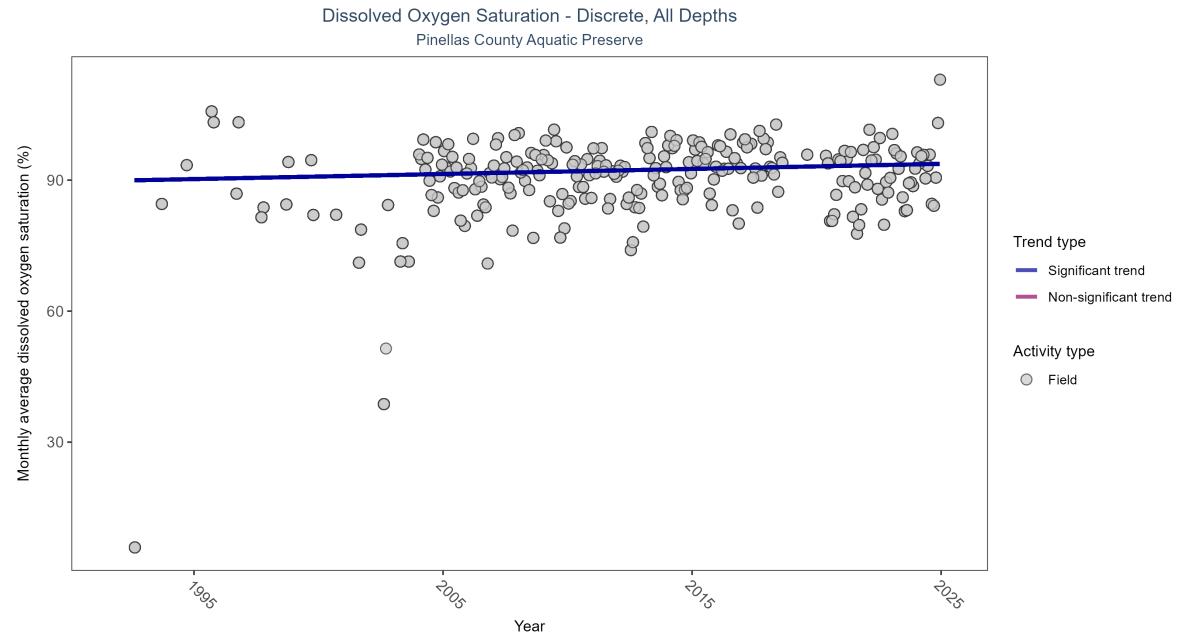
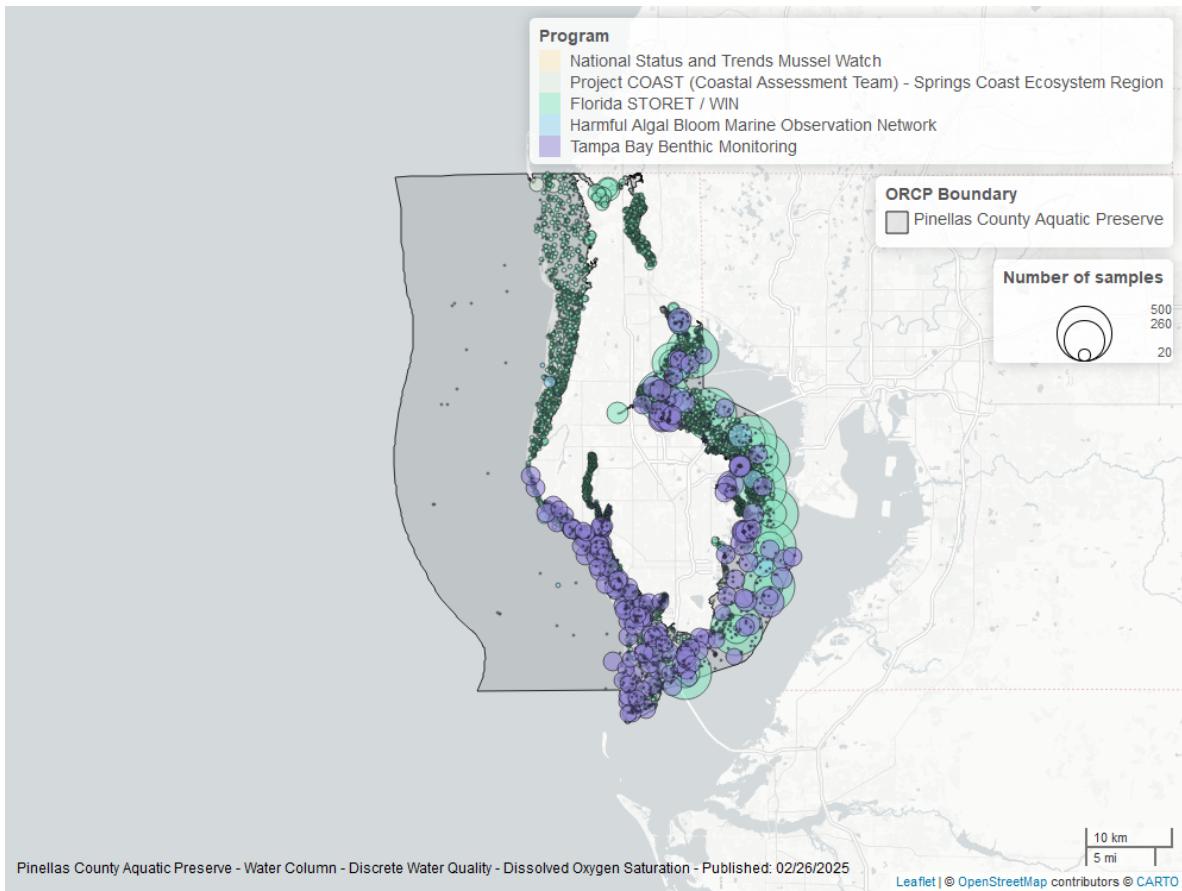


Table 4: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	30336	33	1992 - 2024	90.9	0.11119	89.88893	0.11627	0.01770146378389196931135707302473747404292225837707519531250000000000000000



Salinity - Discrete

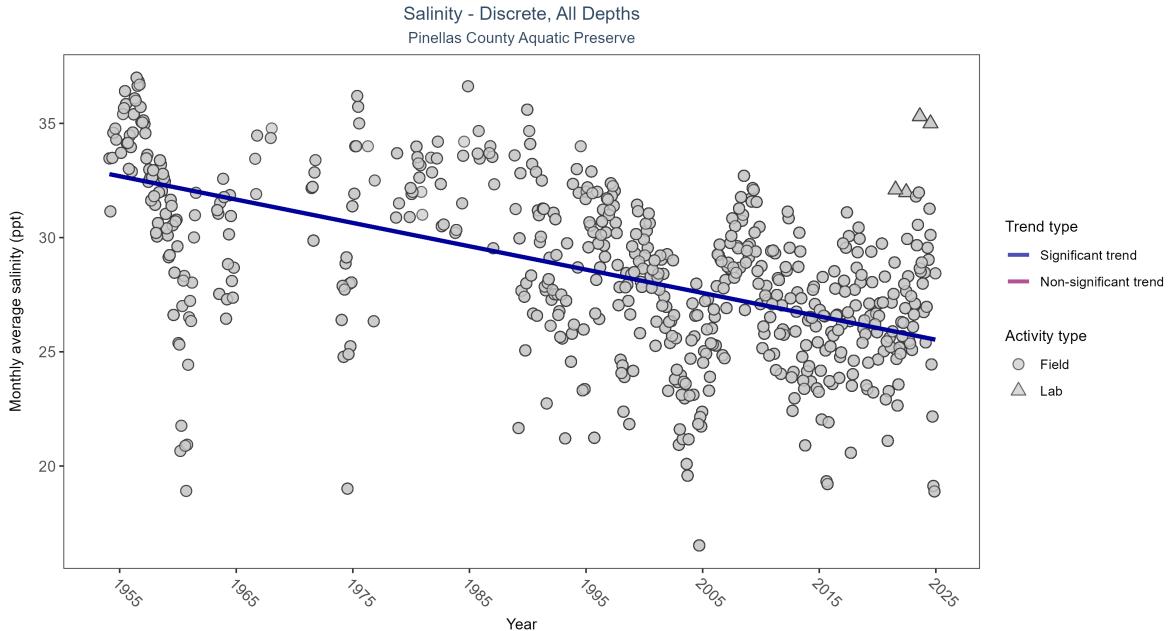
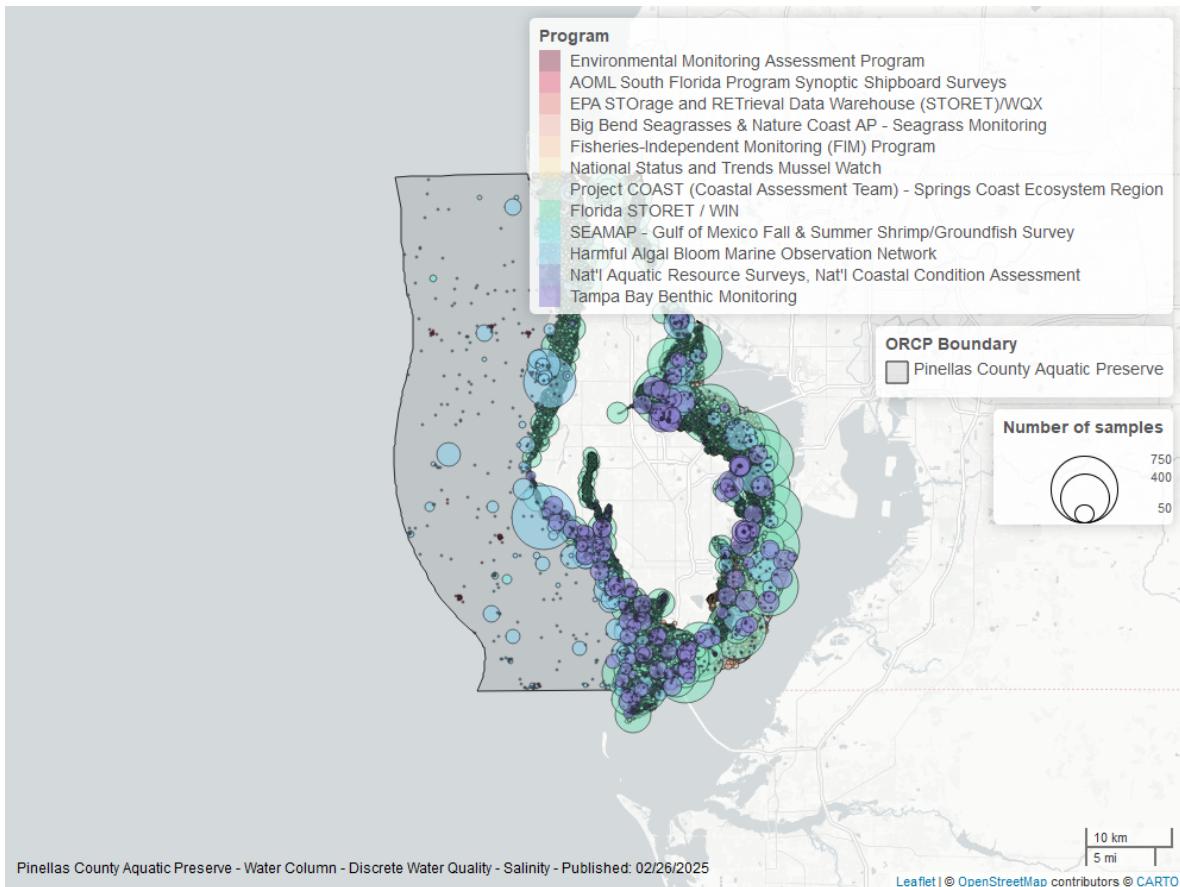


Table 5: Seasonal Kendall-Tau Results for - Salinity



Water Temperature - Discrete

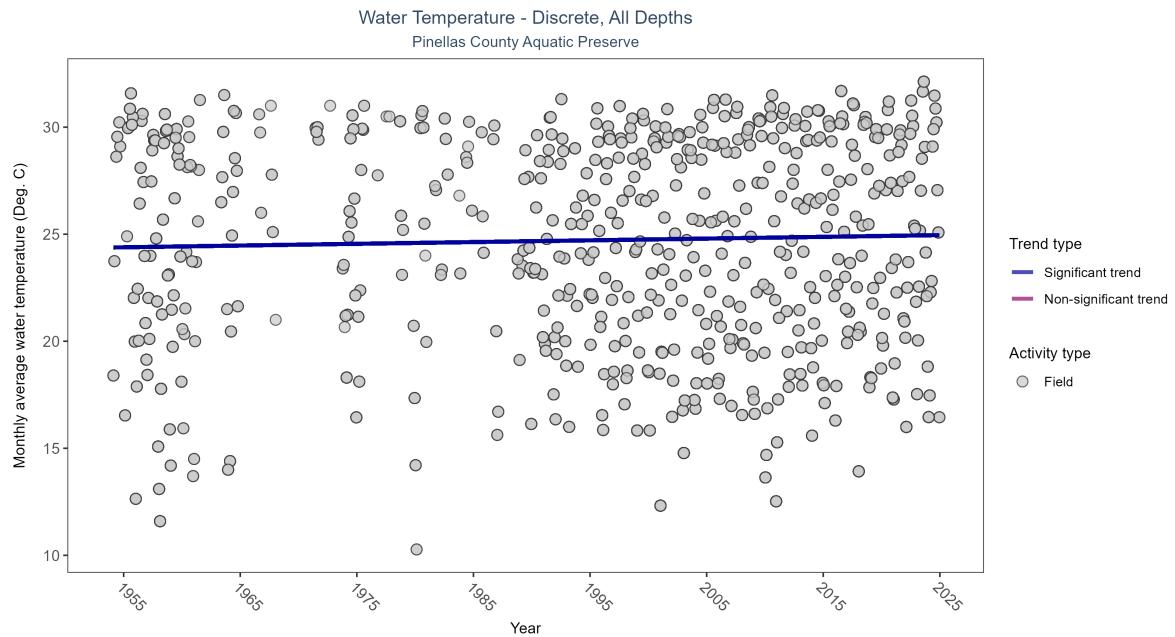
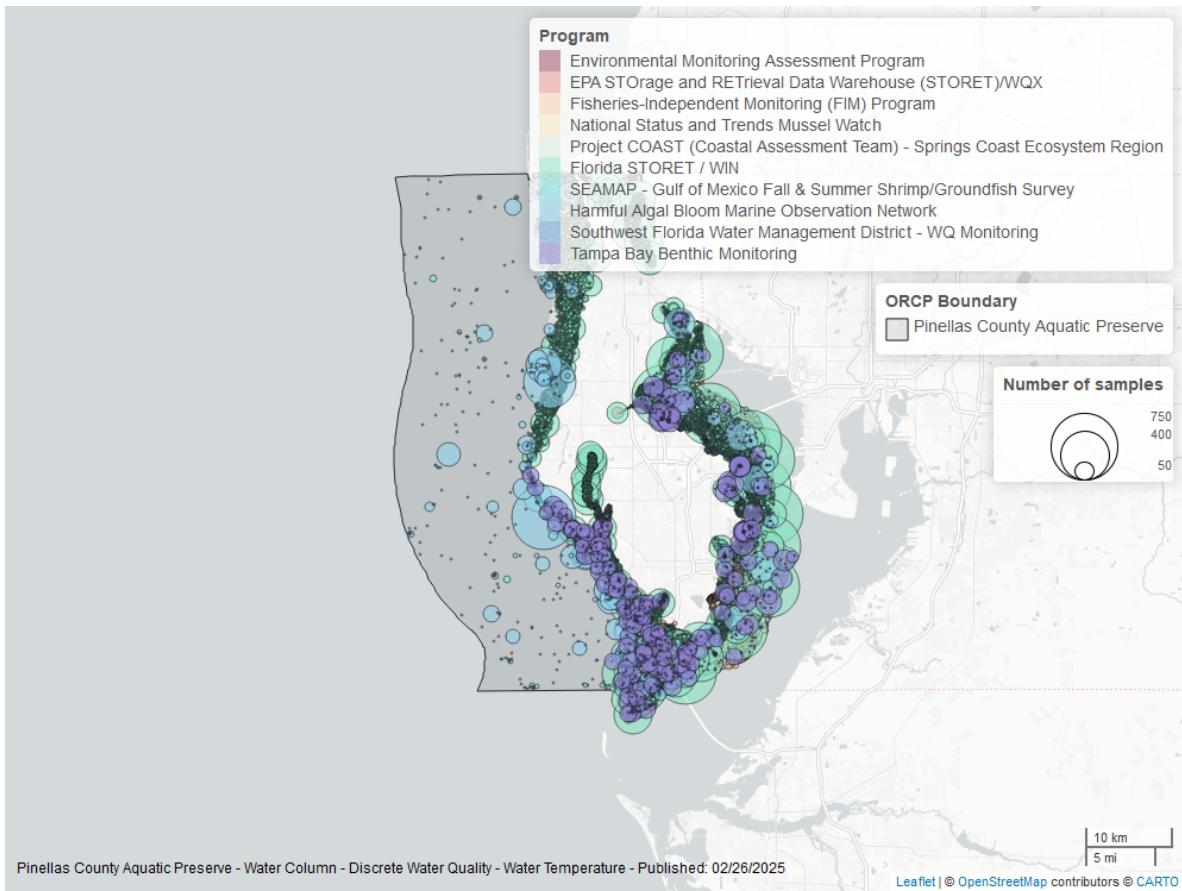


Table 6: Seasonal Kendall-Tau Results for - Water Temperature

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	101357	67	1954 - 2024	26.58	0.08829	24.38017	0.00813	0.002164361785665694



Water Temperature - Continuous

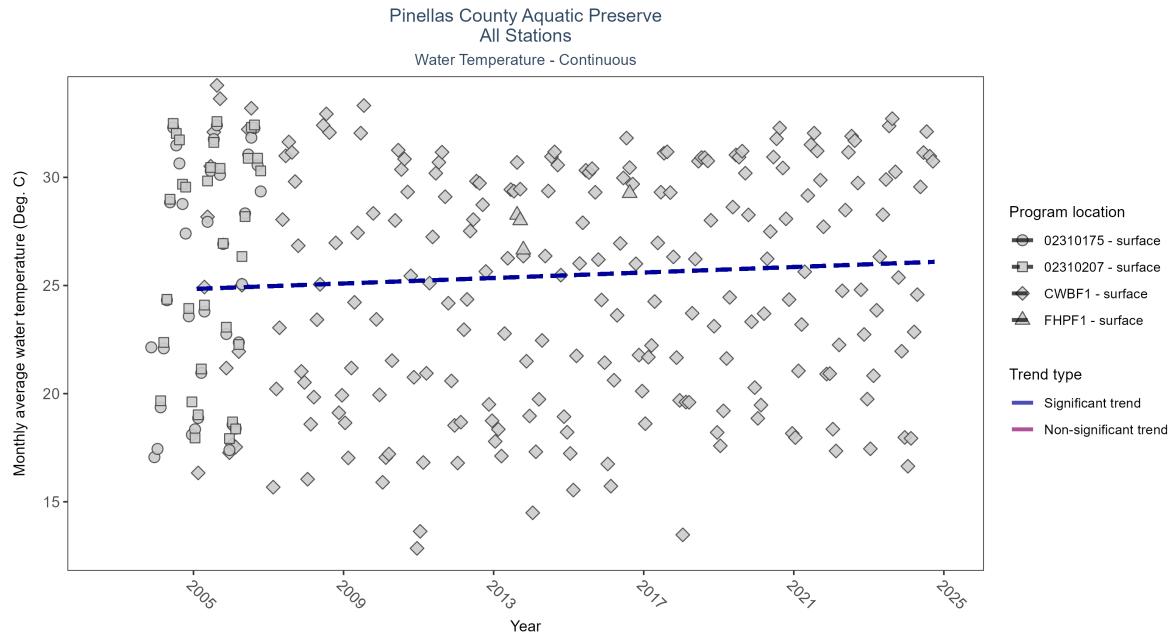
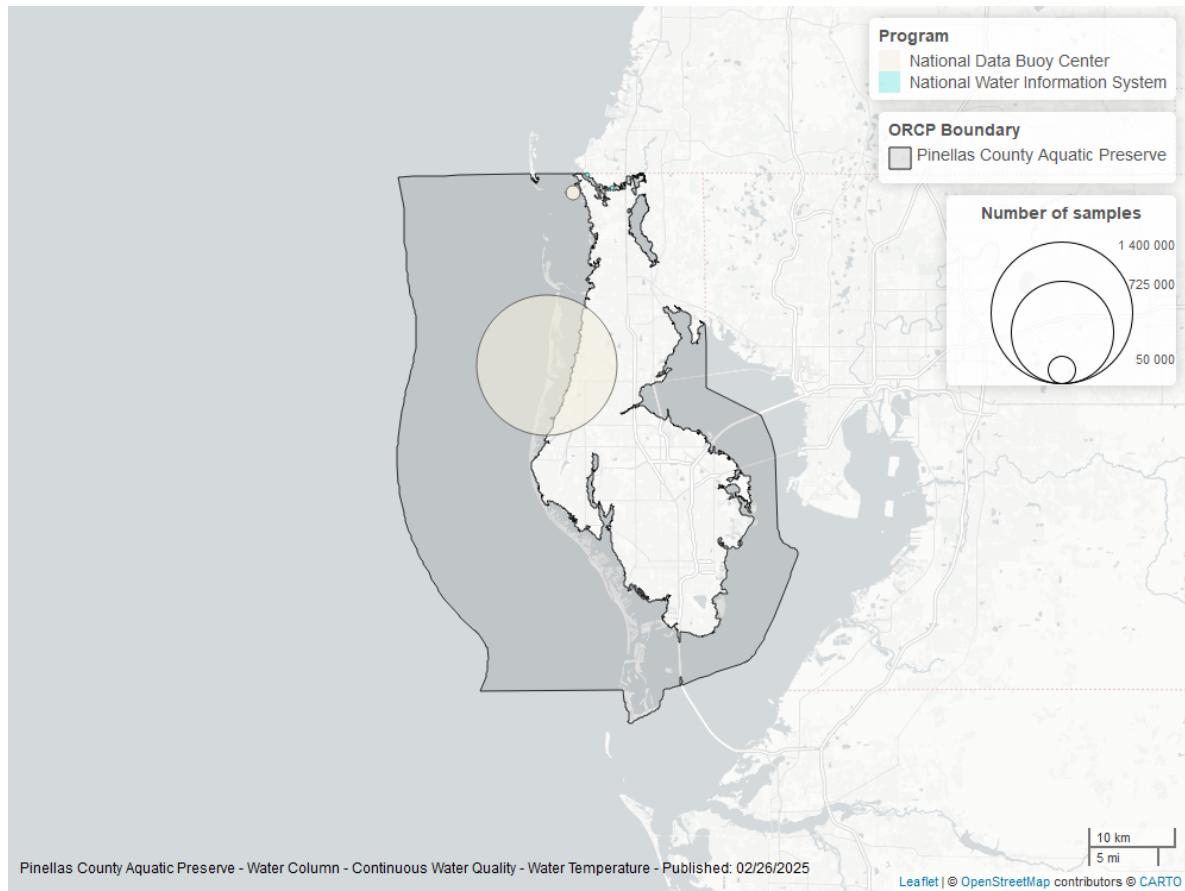


Table 7: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
CWBF1	Significantly increasing trend	1397582	20	2005 - 2024	25.40	0.18	24.84	0.06	0.00023137211677993
FHPF1	Insufficient data to calculate trend	12636	2	2013 - 2016	27.90	-	-	-	NA
02310175	Insufficient data to calculate trend	1421	4	2003 - 2006	26.50	-	-	-	NA
02310207	Insufficient data to calculate trend	1424	3	2004 - 2006	27.55	-	-	-	NA



pH - Discrete

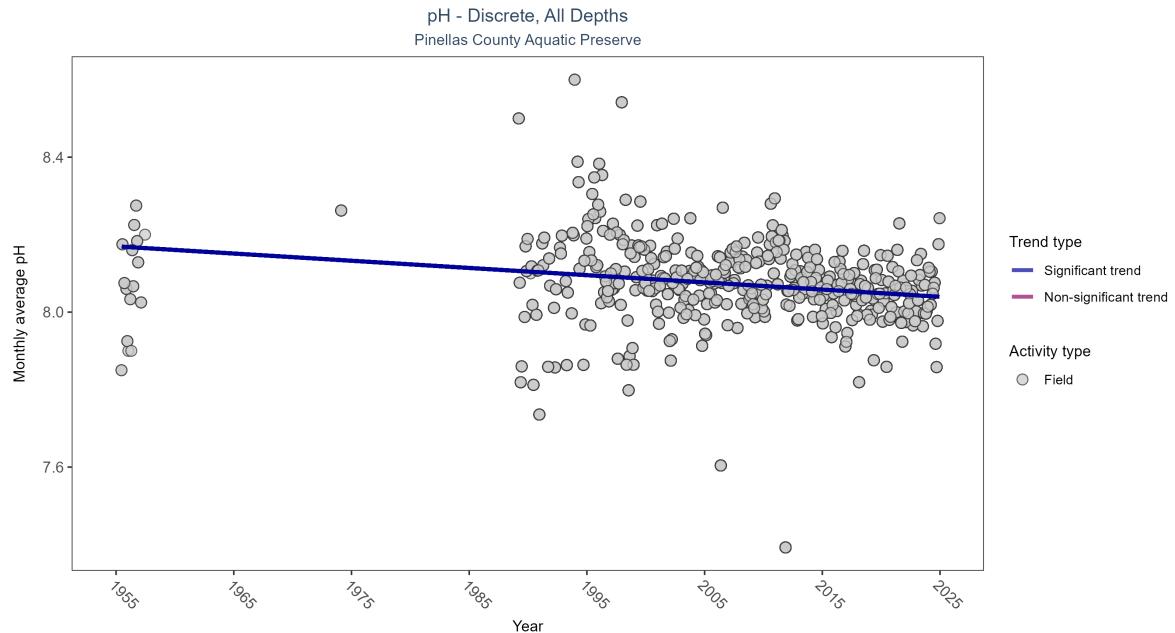
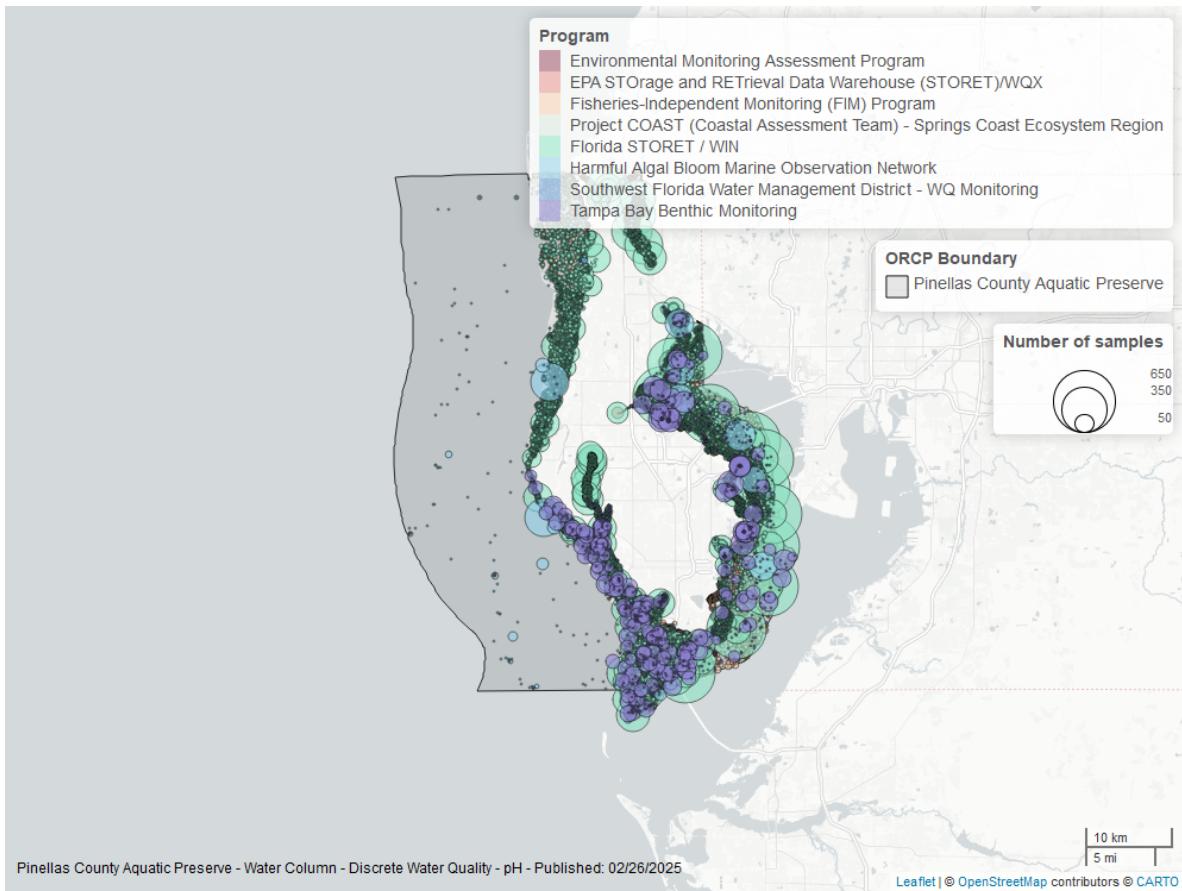


Table 8: Seasonal Kendall-Tau Results for - pH

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	90916	40	1955 - 2024	8.1	-0.17585	8.16985	-0.00186	0.0000024614320840137783421349565449176566



Water Clarity

Turbidity - Discrete

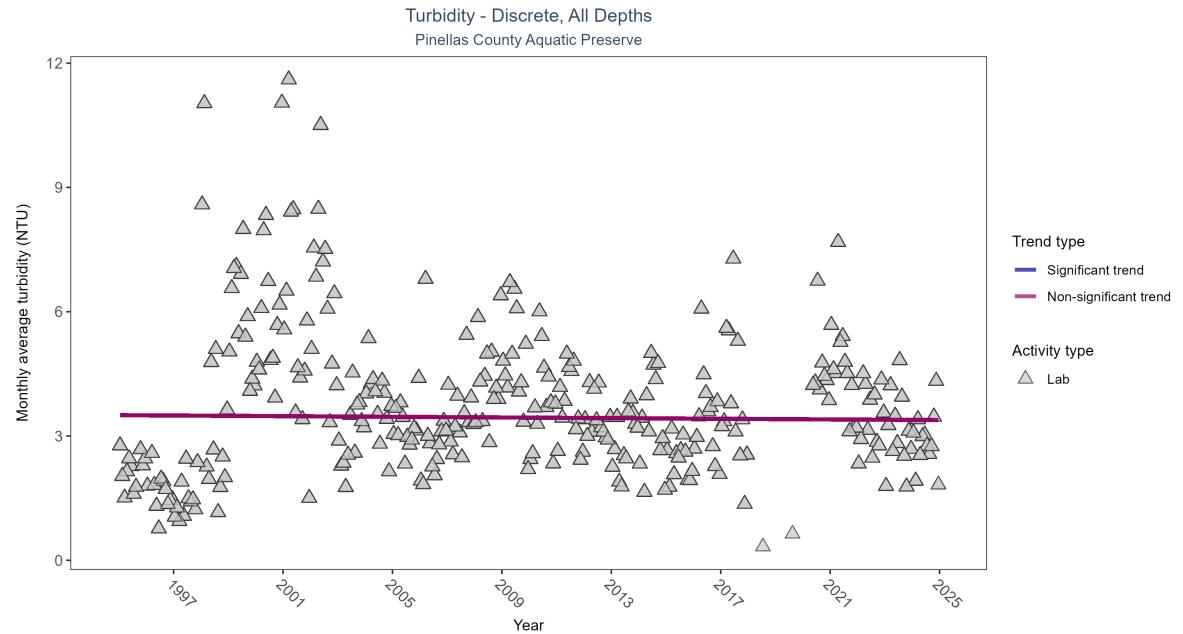
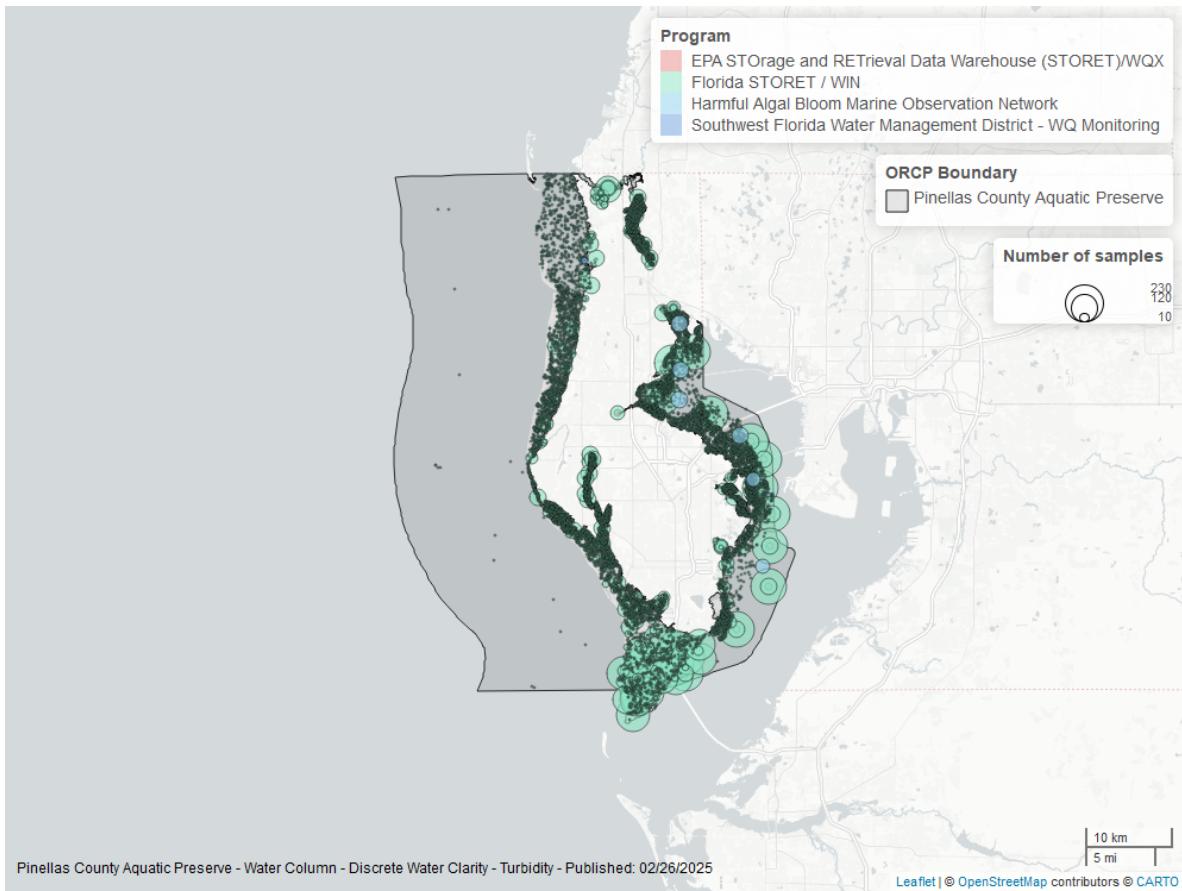


Table 9: Seasonal Kendall-Tau Results for - Turbidity

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	21129	30	1995 - 2024		2.5	-0.01735	3.50184	-0.00393	0.69644785895464211833



Total Suspended Solids - Discrete

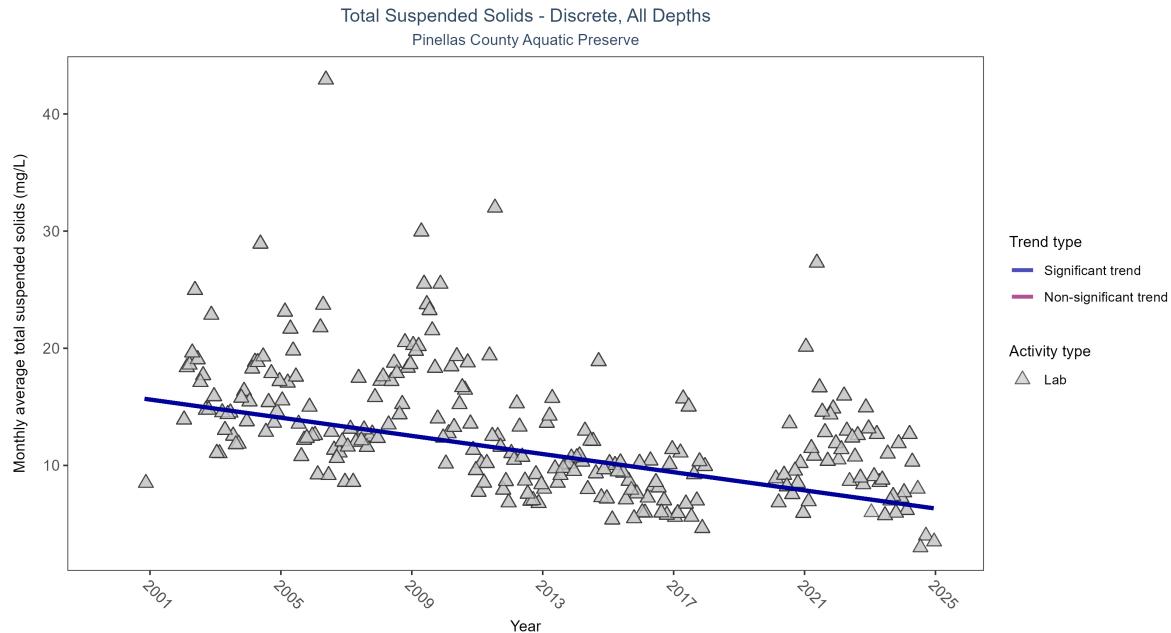
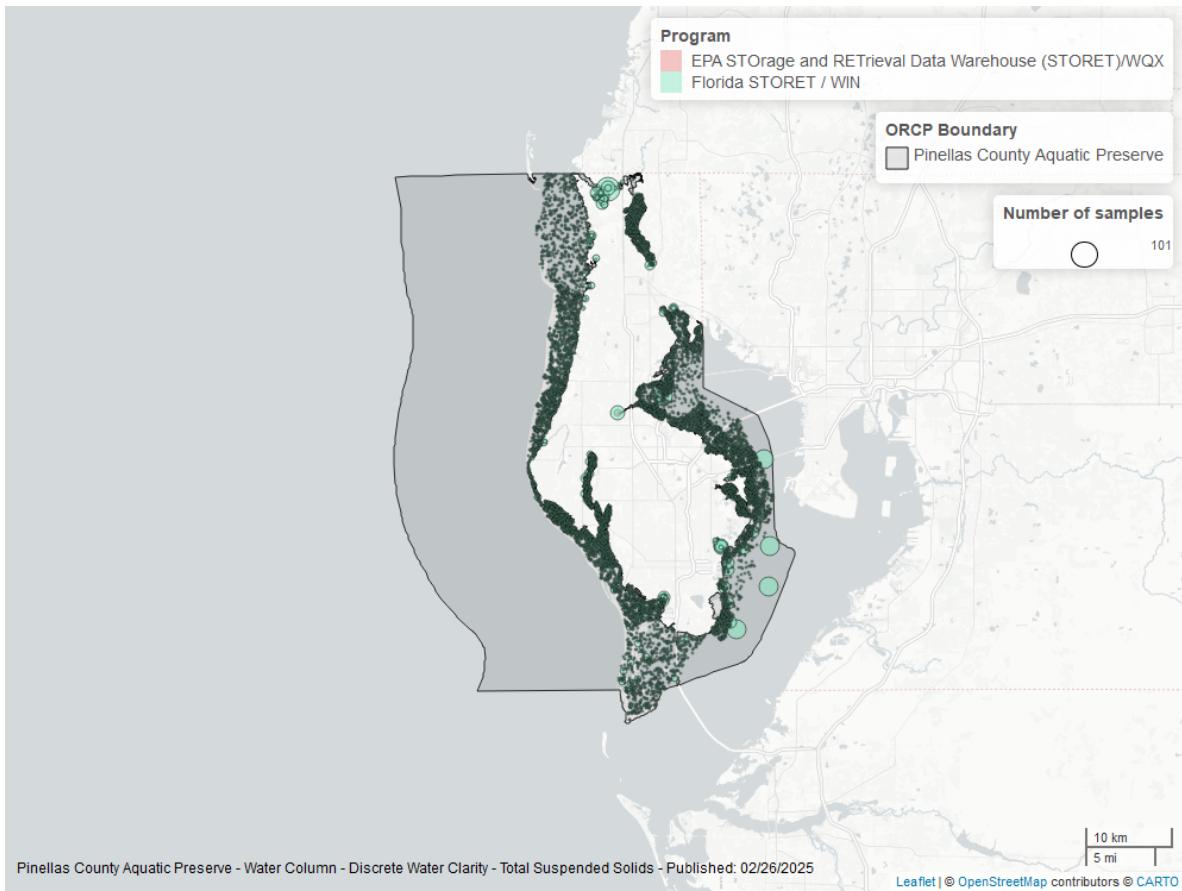


Table 10: Seasonal Kendall-Tau Results for - Total Suspended Solids

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	12088	22	2000 - 2024	10	-0.40362	16.01068	-0.38755	0.00000000000000002378205050415243



Chlorophyll a, Uncorrected for Pheophytin - Discrete

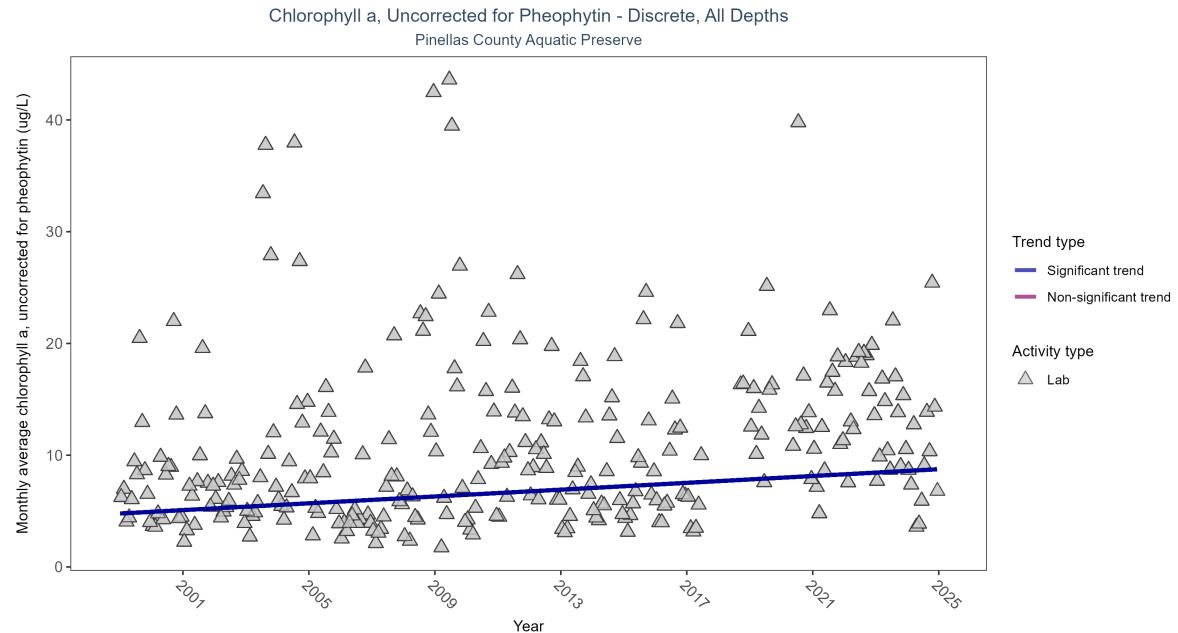
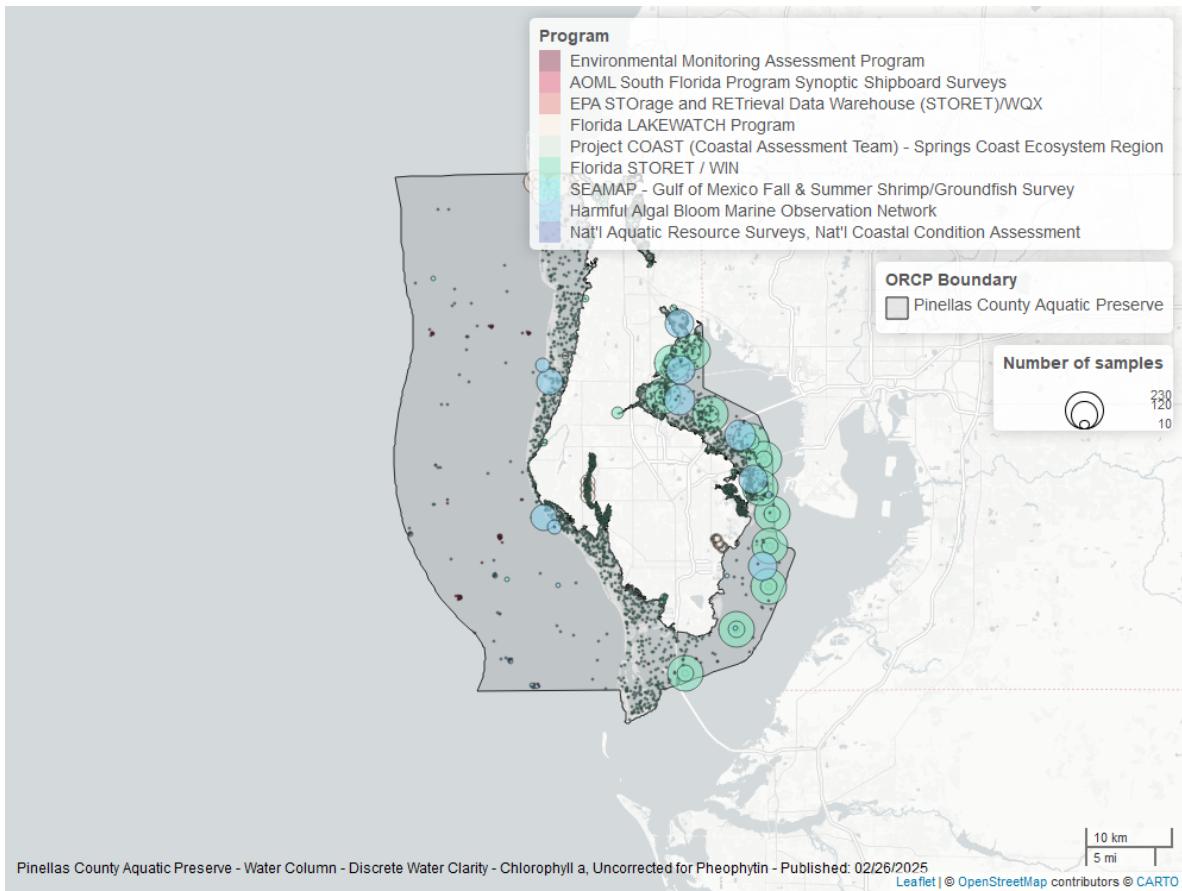


Table 11: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	6736	26	1999 - 2024	6.2	0.22563	4.78108	0.15253	0.00000009276248234030824024



Chlorophyll a, Corrected for Pheophytin - Discrete

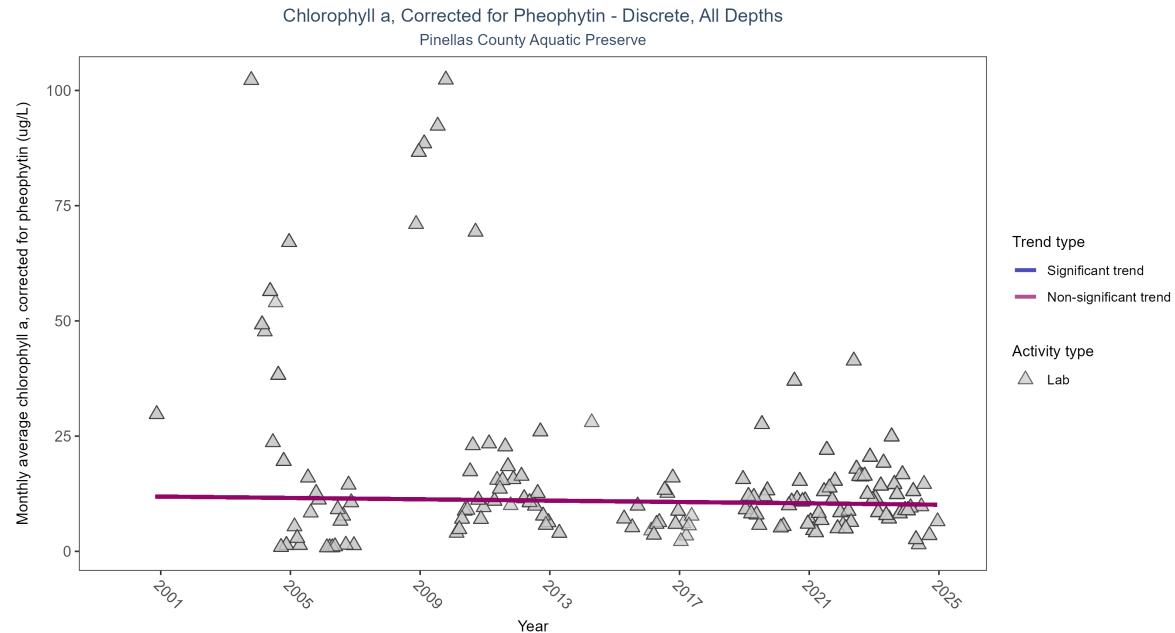
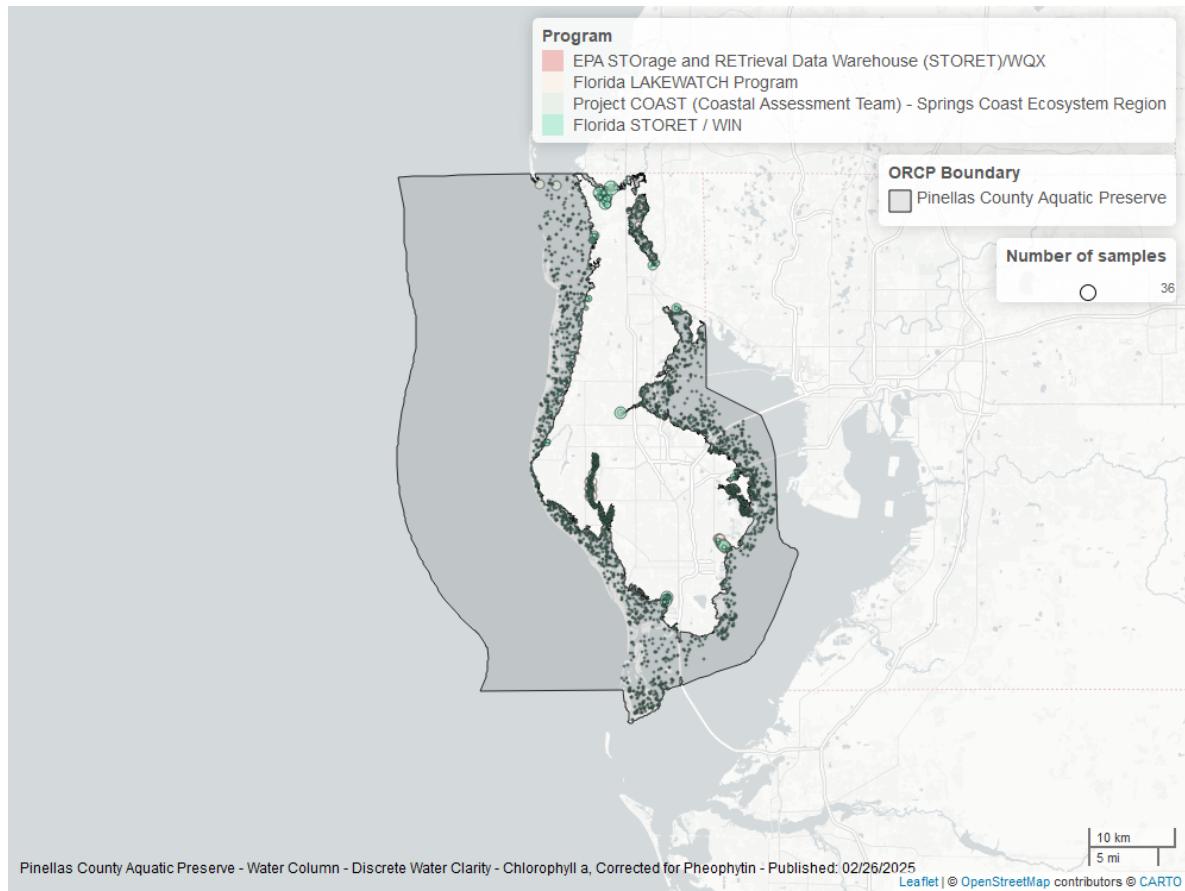


Table 12: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

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	3536	22	2000 - 2024	5.5	-0.03437	11.95975	-0.07345	0.5298641605904415019523412411



Secchi Depth - Discrete

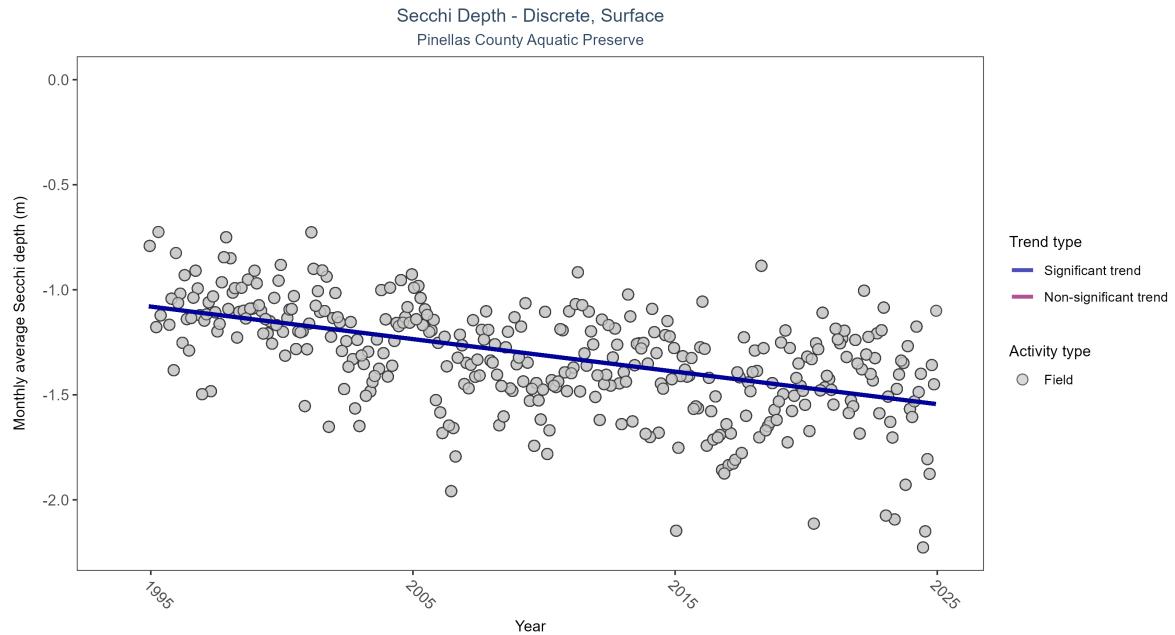
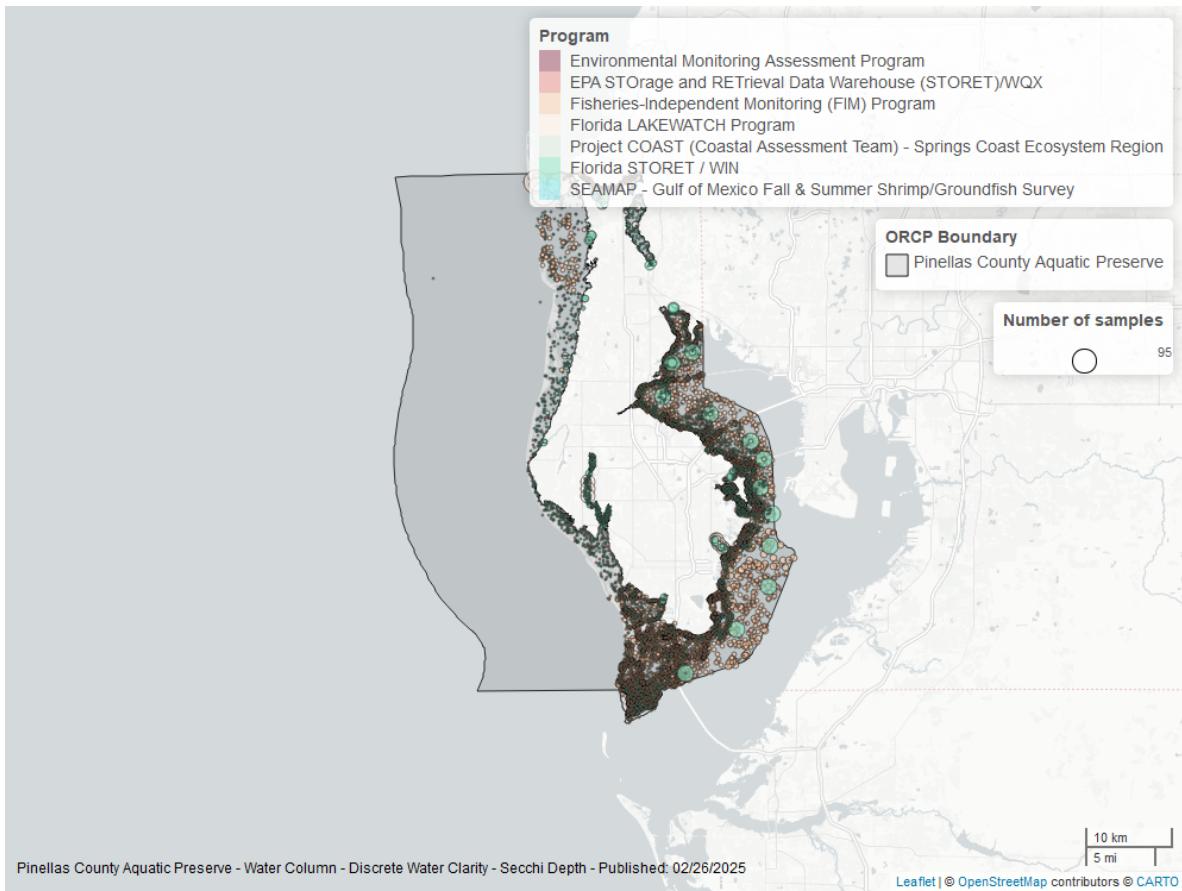


Table 13: Seasonal Kendall-Tau Results for - Secchi Depth

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	30963	31	1994 - 2024	-1.2	-0.38966	-1.06466	-0.01548	0.000000000000000000000000000000003005362



Colored Dissolved Organic Matter - Discrete

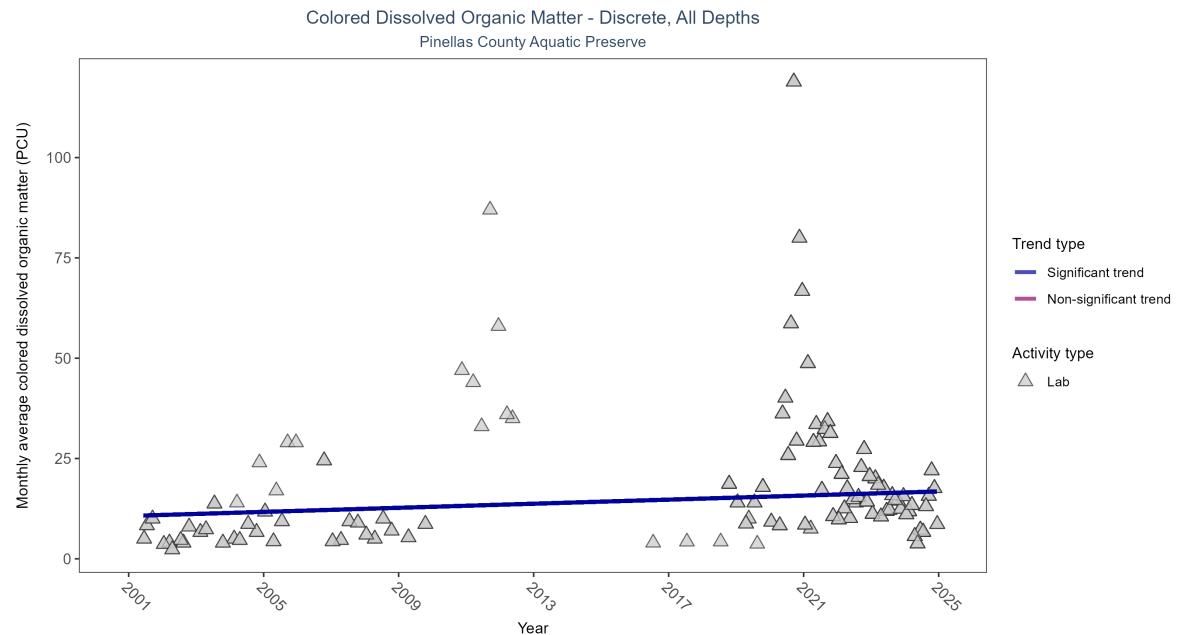


Table 14: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	1108	21	2001 - 2024	10	0.09619	10.67559	0.25439	0.0149091201119494477677

