

# Guana River Marsh Aquatic Preserve

## SEACAR Water Quality Analysis

Last compiled on 18 March, 2025

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# Indicators

## Nutrients

### Total Nitrogen - Discrete

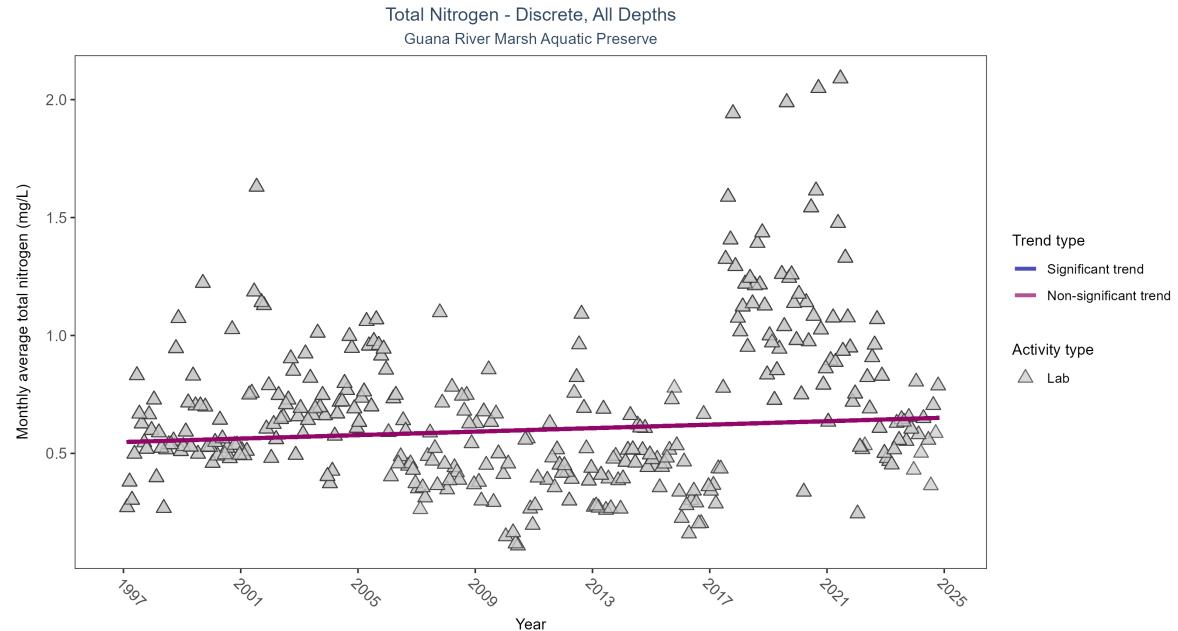


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	2020	28	1997 - 2024	0.613	0.06672	0.54803	0.00369	0.09021170162659543356742375408



## Total Phosphorus - Discrete

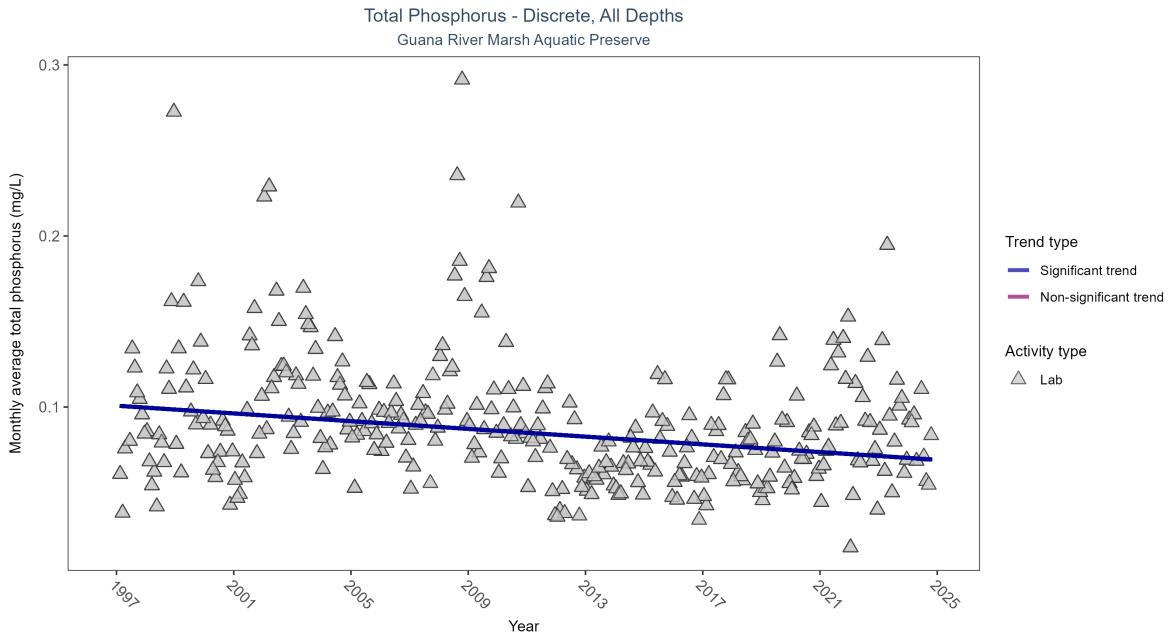


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

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	2889	28	1997 - 2024	0.0755	-0.21405	0.10078	-0.00113	0.0000004474344944616232287986495874676506900868844240903854370117



## Water Quality

### Dissolved Oxygen - Discrete

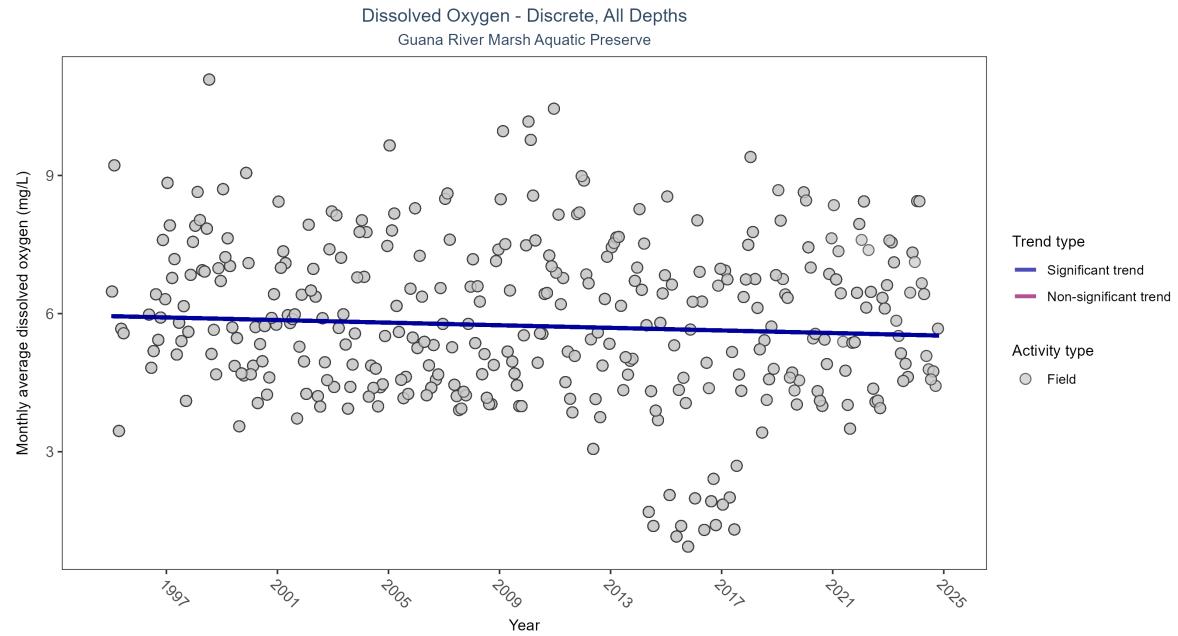


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	7614	30	1995 - 2024	5.7	-0.086	5.94432	-0.01411	0.02226671978634237



## Dissolved Oxygen - Continuous

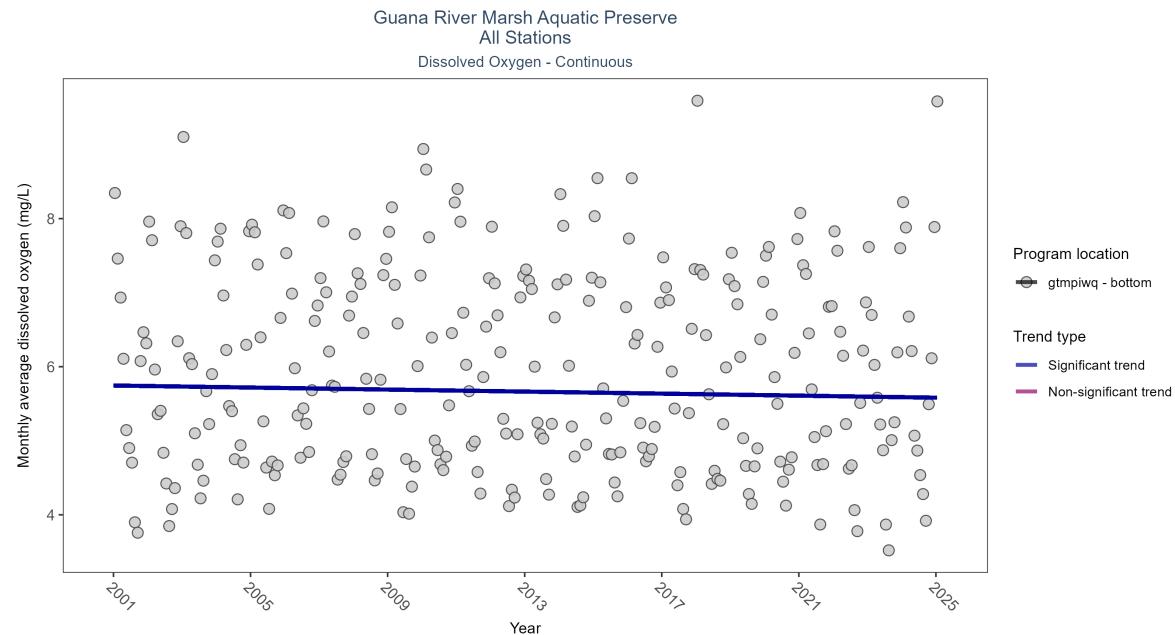
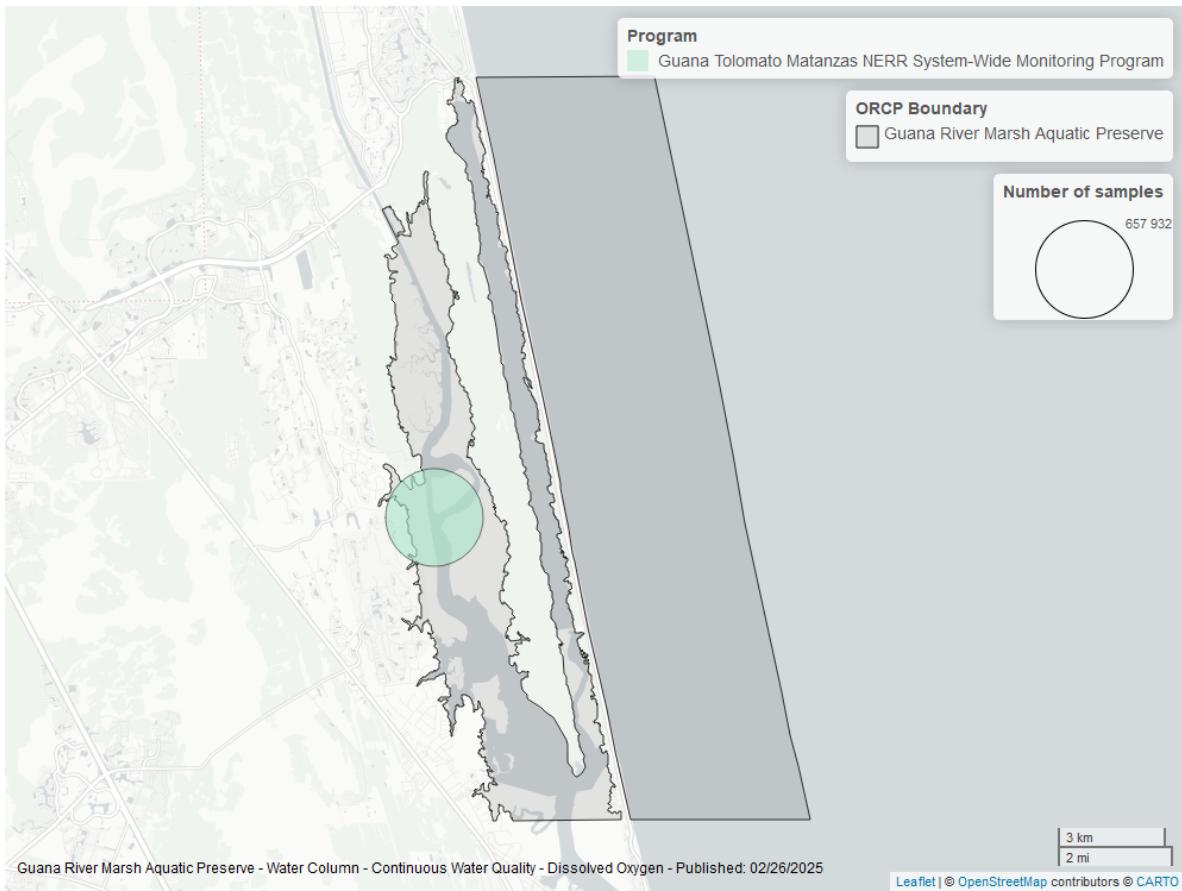


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
gtmpiwq	Significantly decreasing trend	665008	25	2001 - 2025	5.9	-0.09	5.75	-0.01	0.042364390



## Dissolved Oxygen Saturation - Discrete

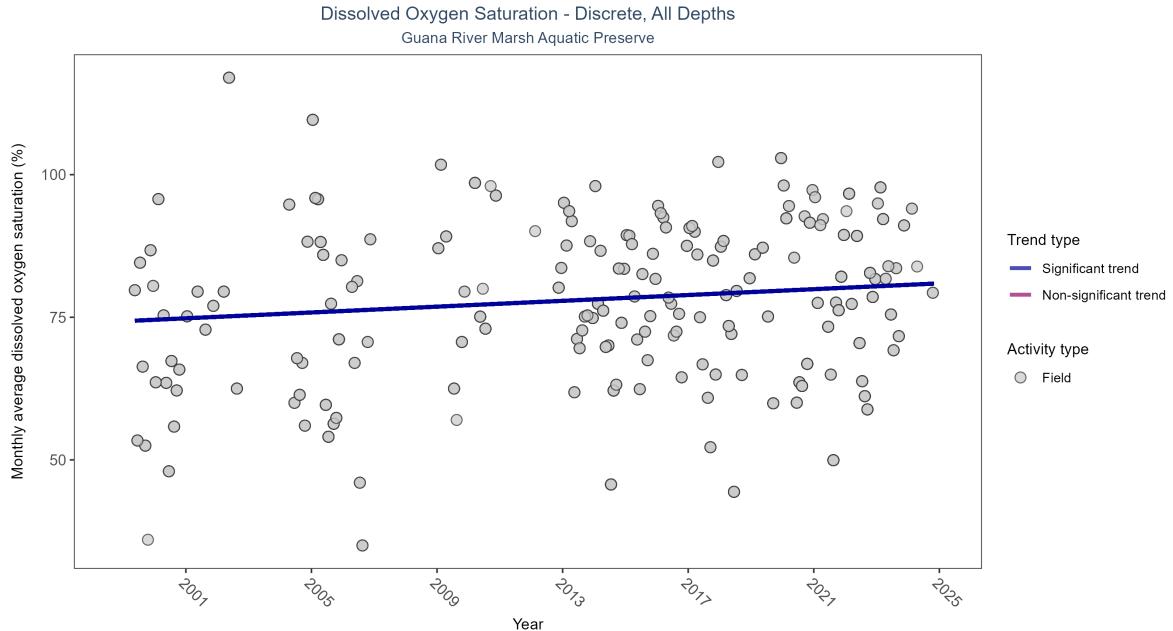
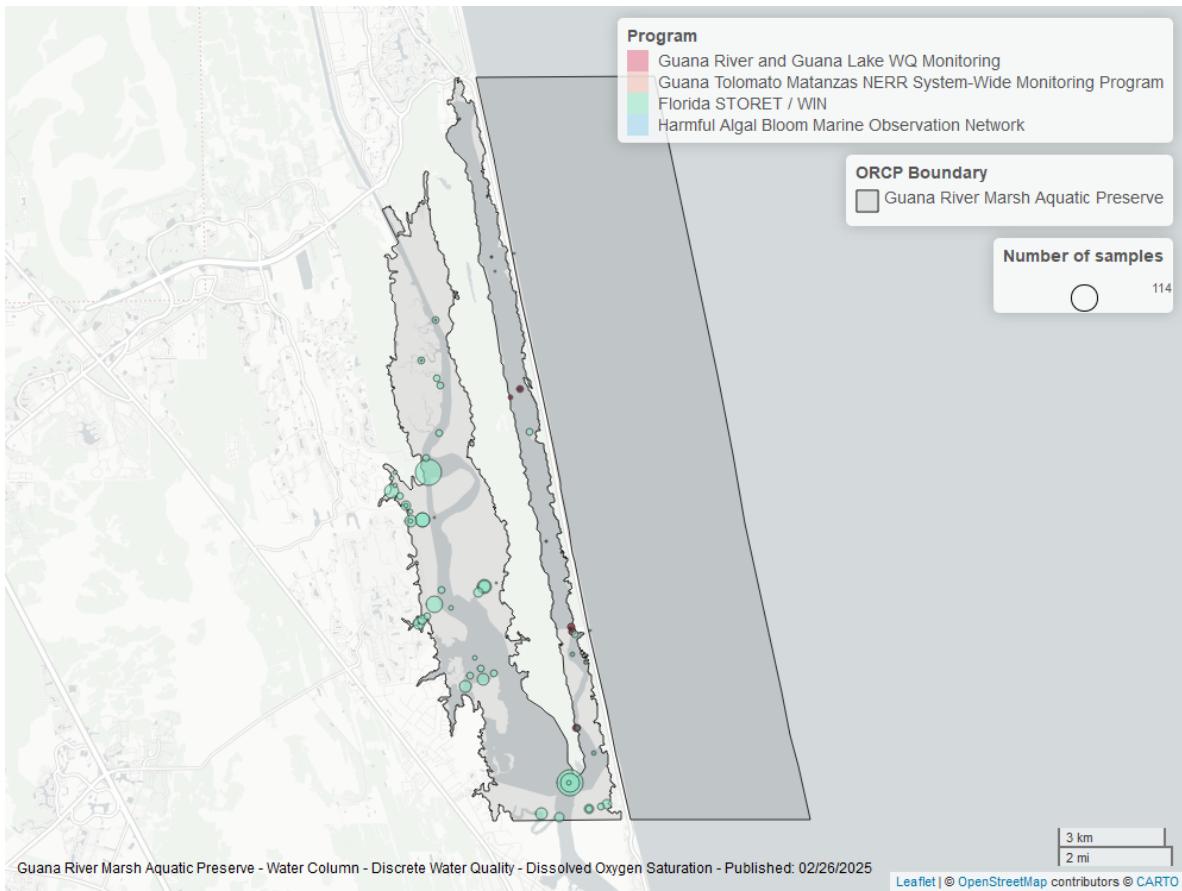


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation



## Dissolved Oxygen Saturation - Continuous

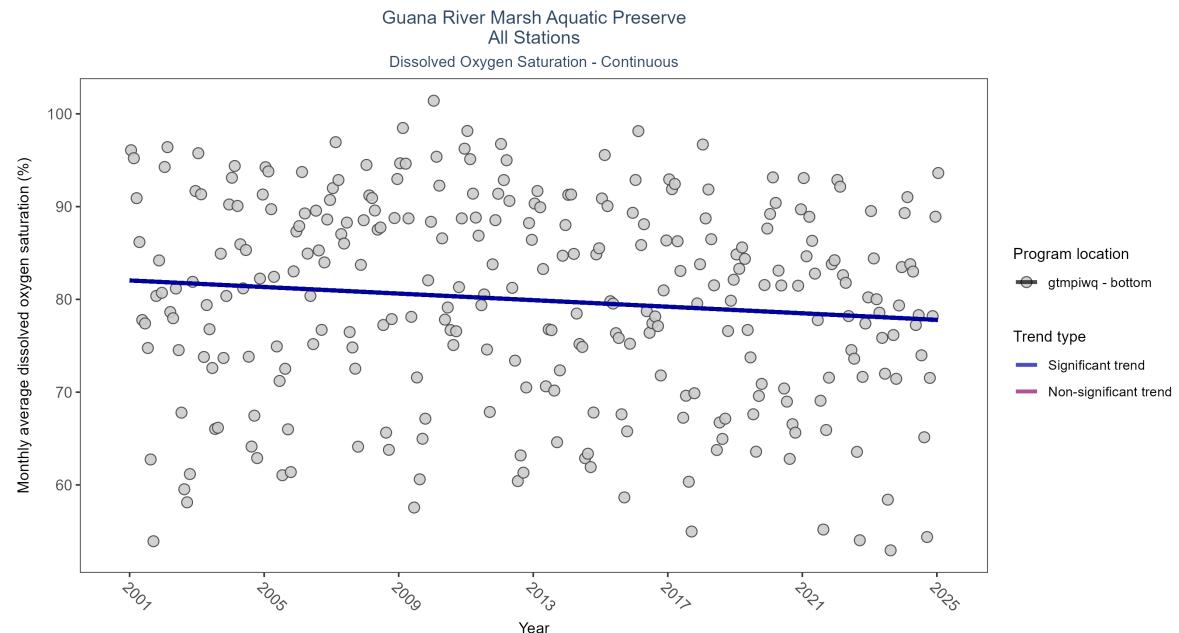
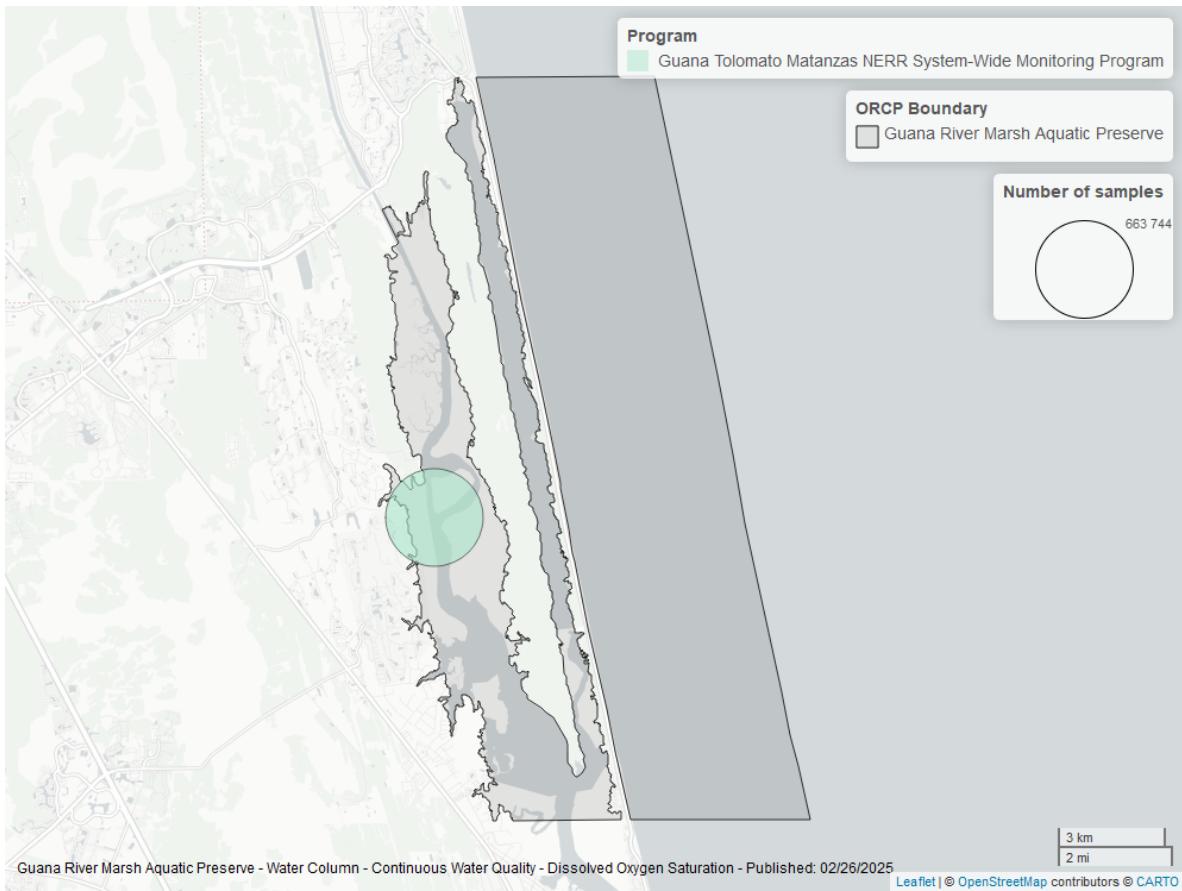


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
gtmpiwq	Significantly decreasing trend	670820	25	2001 - 2025	82.2	-0.18	82.04	-0.18	0.00002726625



## Salinity - Discrete

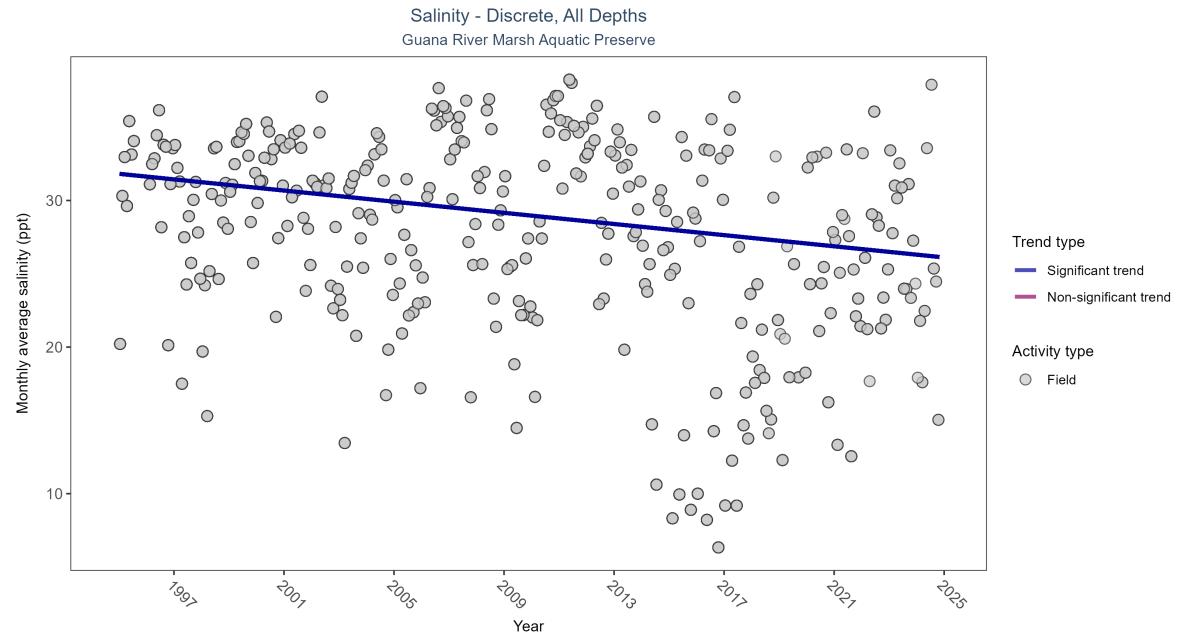


Table 7: Seasonal Kendall-Tau Results for - Salinity

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	8364	30	1995 - 2024	31	-0.18628	31.8209	-0.1902	0.00000103401165331128693089177139619039280660218



## Salinity - Continuous

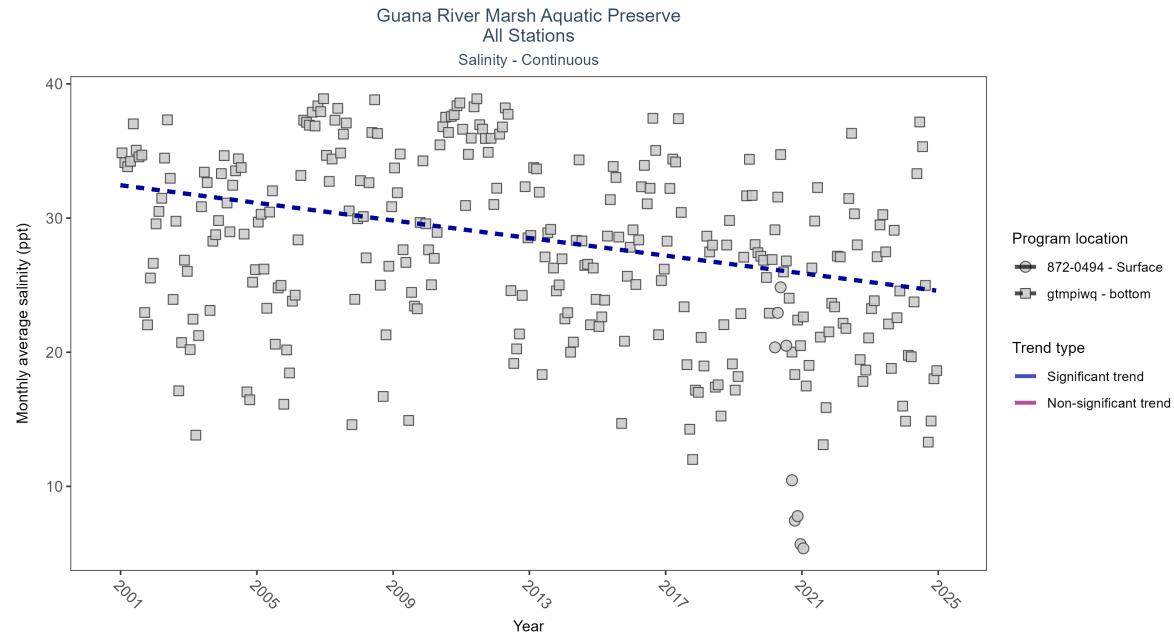
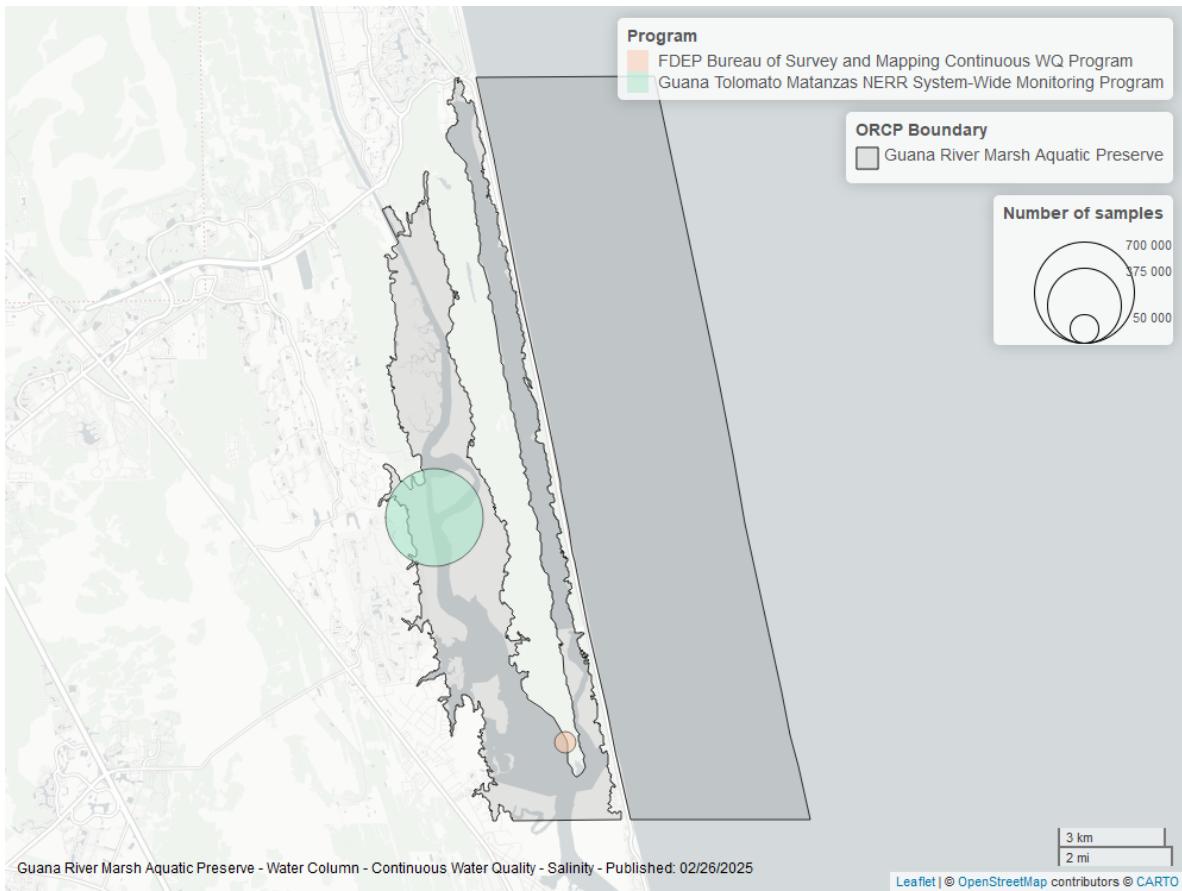


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
gtmipiwb	Significantly decreasing trend	666468	24	2001 - 2024	27.90	-0.26	32.45	-0.33	0.0000000004077239
872-0494	Insufficient data to calculate trend	34918	2	2020 - 2021	8.99	-	-	-	NA



## Water Temperature - Discrete

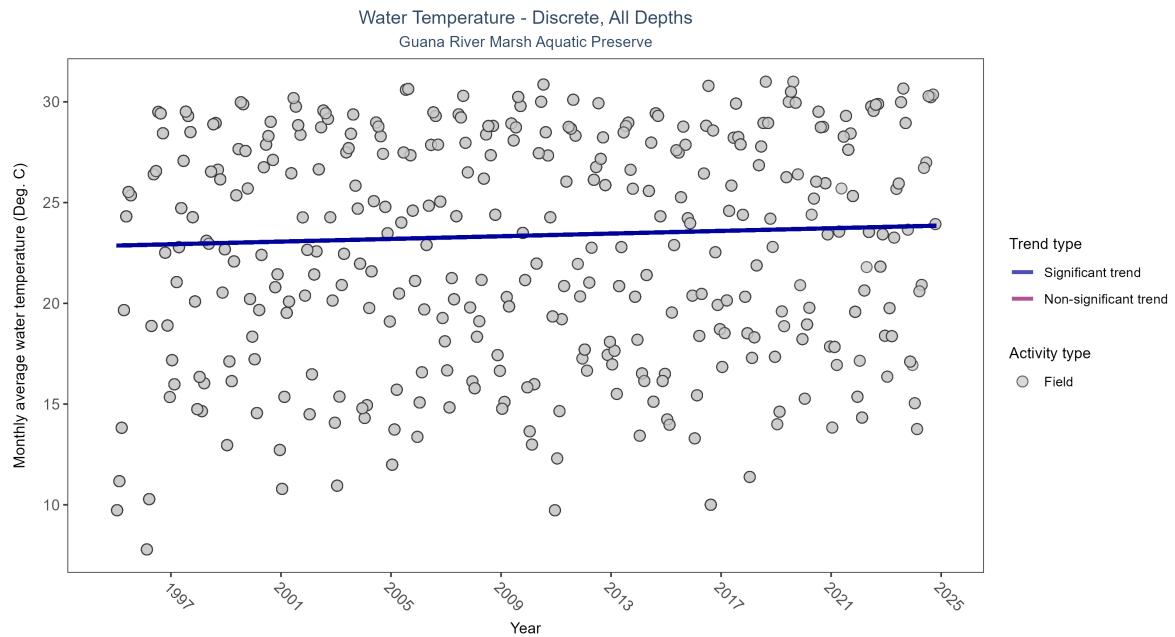


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

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	8326	30	1995 - 2024		23.1	0.11953	22.86539	0.03314	0.001467746880527858



## Water Temperature - Continuous

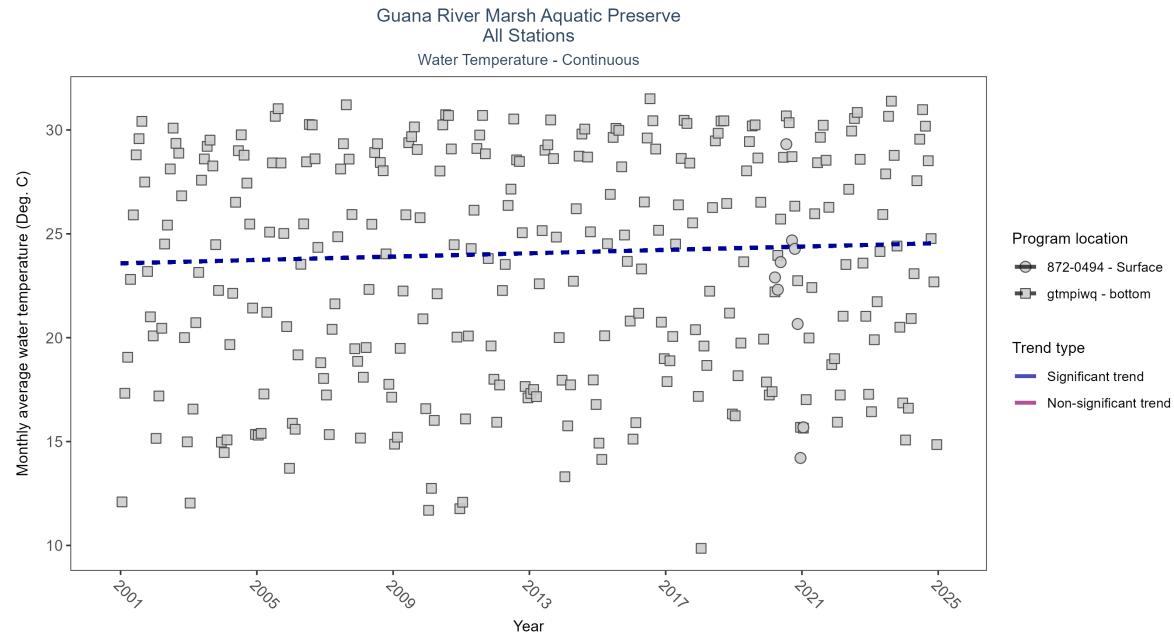
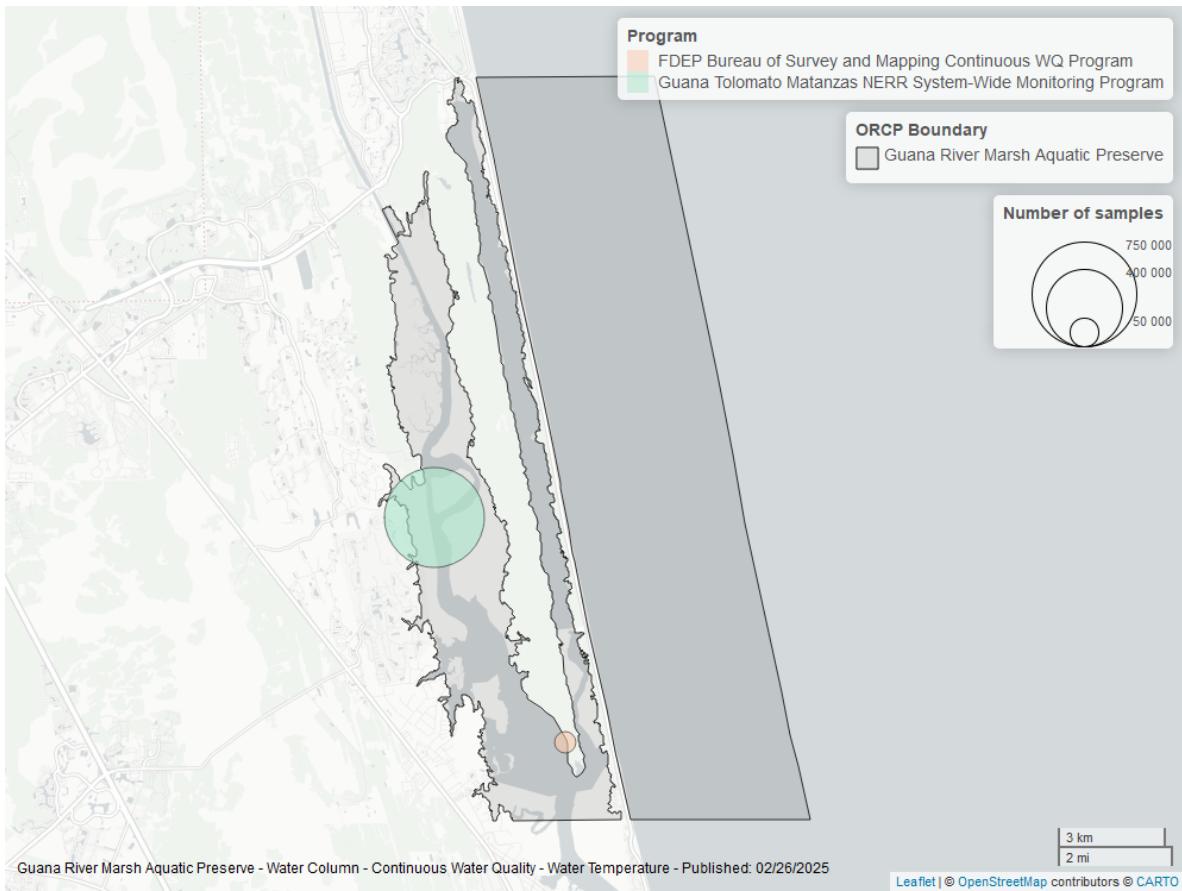


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
gtmipi	Significantly increasing trend	716752	24	2001 - 2024	24.30	0.19	23.58	0.04	0.000005445138344
872-0494	Insufficient data to calculate trend	35473	2	2020 - 2021	22.34	-	-	-	NA



## pH - Discrete

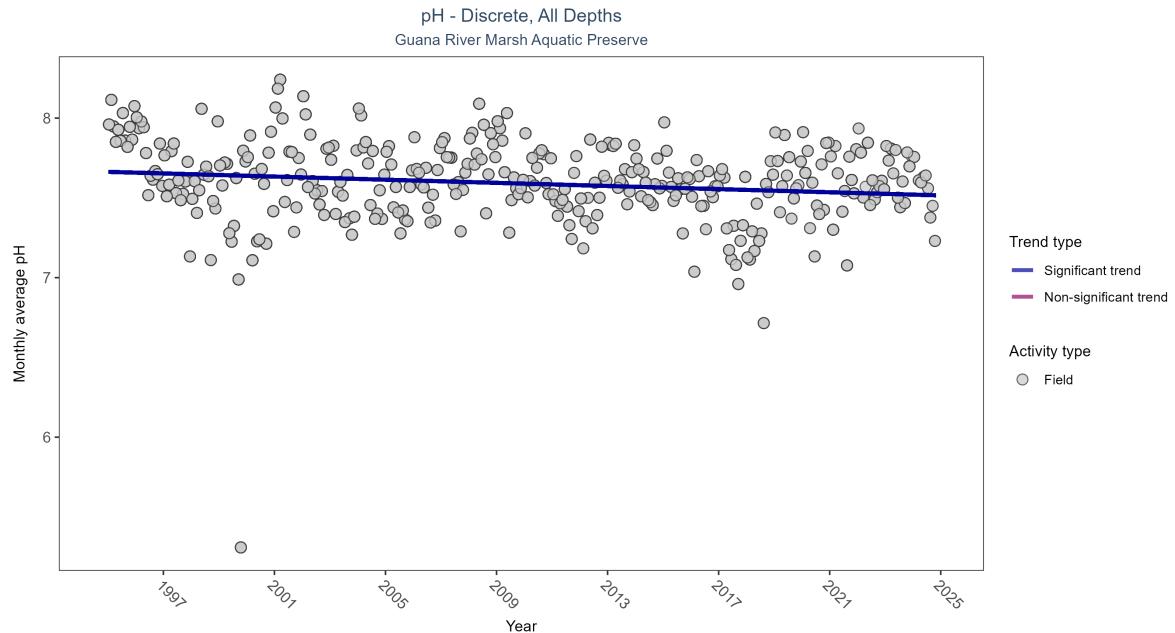


Table 11: Seasonal Kendall-Tau Results for - pH

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	6191	30	1995 - 2024	7.7	-0.14673	7.66304	-0.00492	0.00009229137950987284250842224153643655882



## pH - Continuous

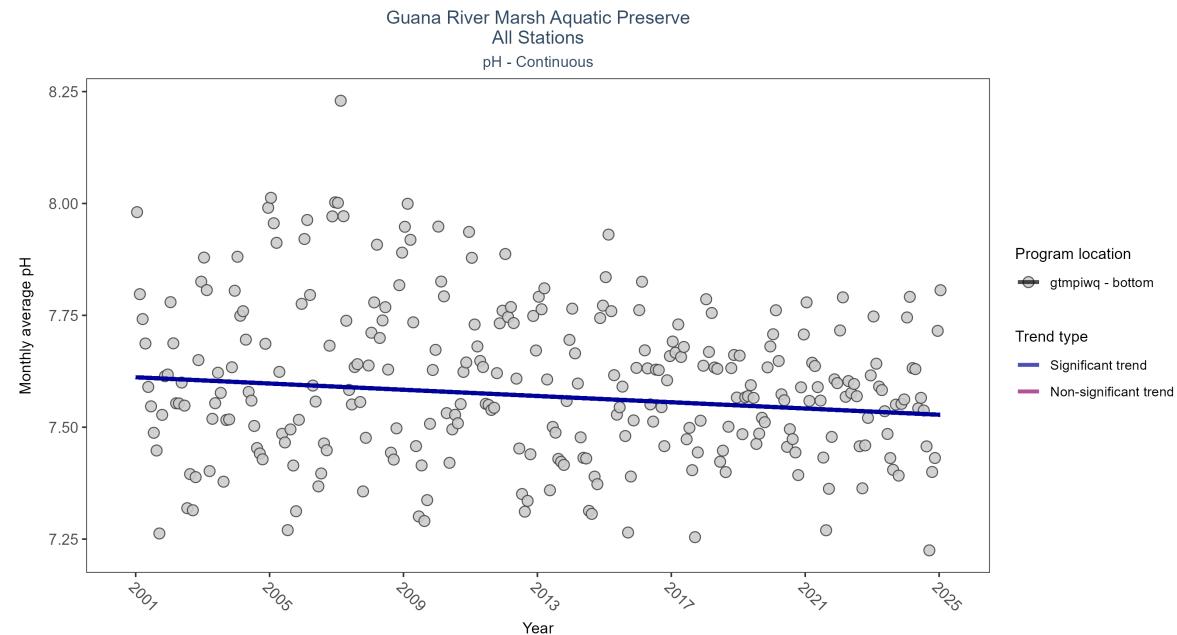
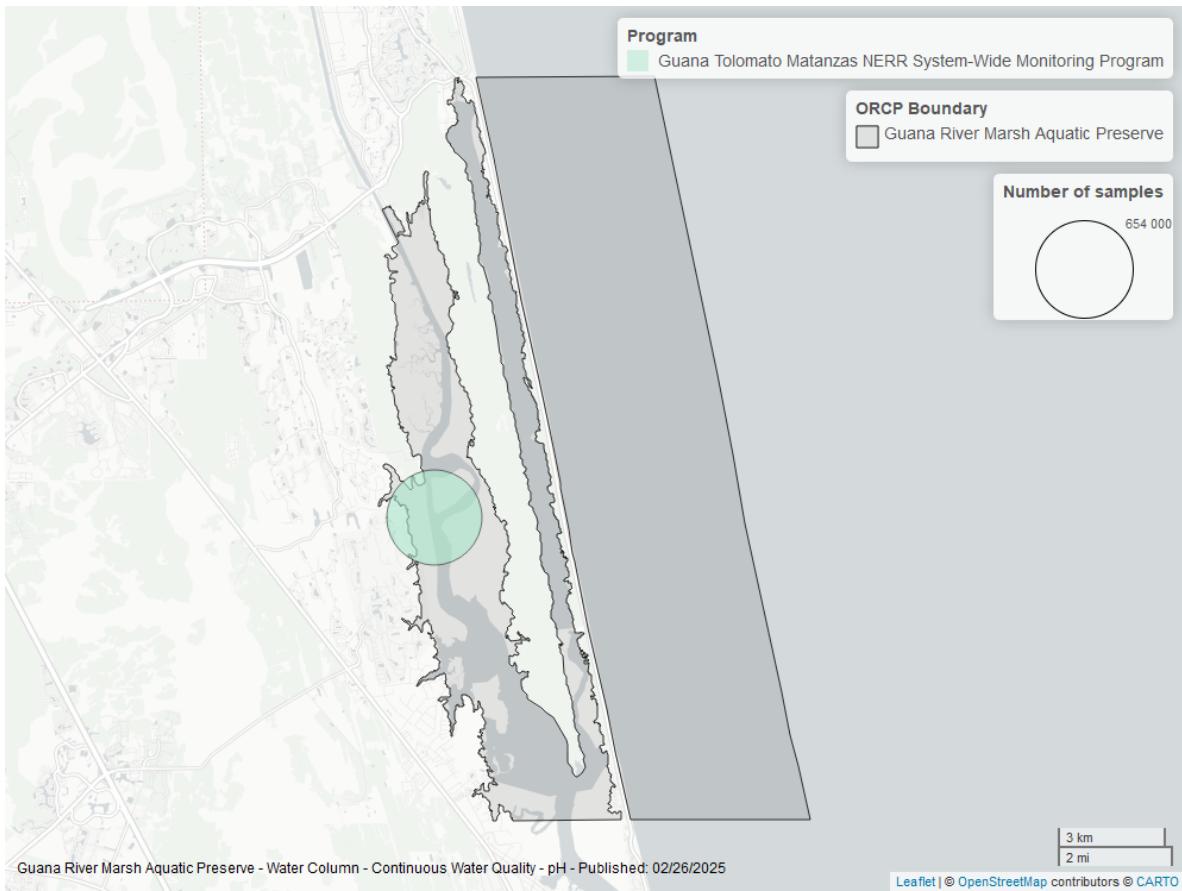


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
gtmpiwq	Significantly decreasing trend	661500	25	2001 - 2025	7.6	-0.17	7.61	0	0.0000684824



## Water Clarity

### Turbidity - Discrete

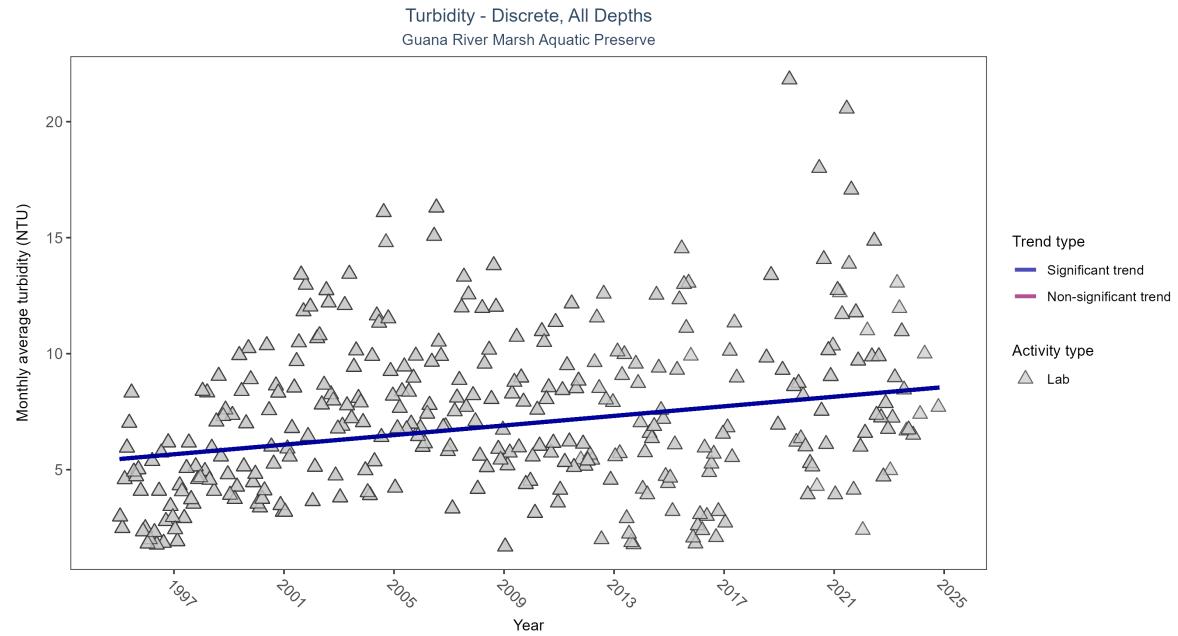
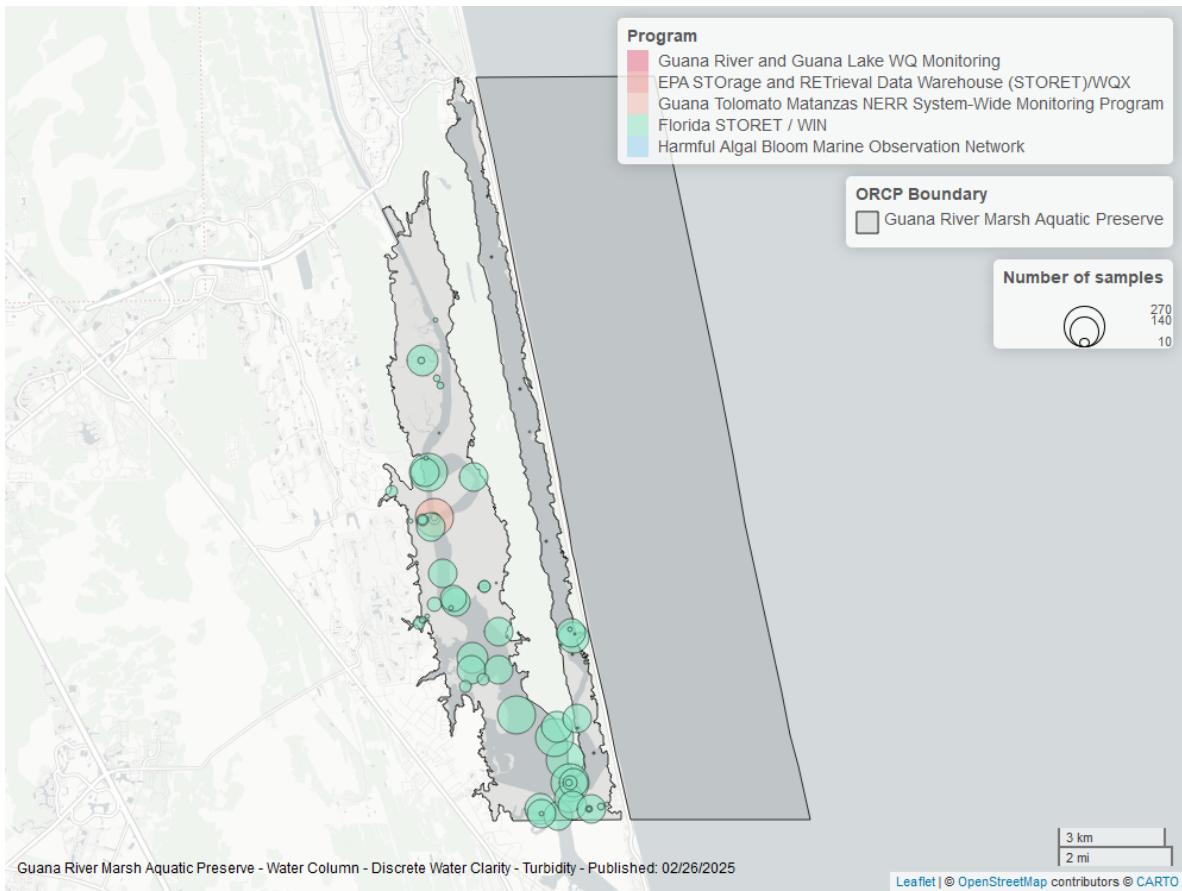


Table 13: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	5008	30	1995 - 2024	5.2	0.21587	5.45783	0.10339	0.0000005341190921873



## Turbidity - Continuous

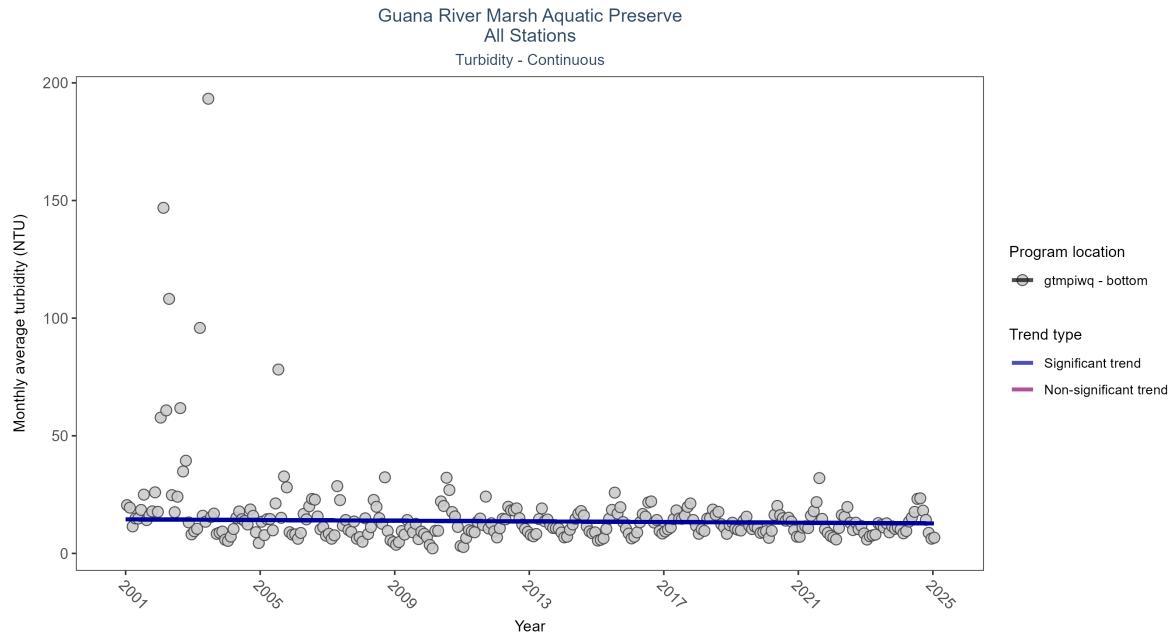
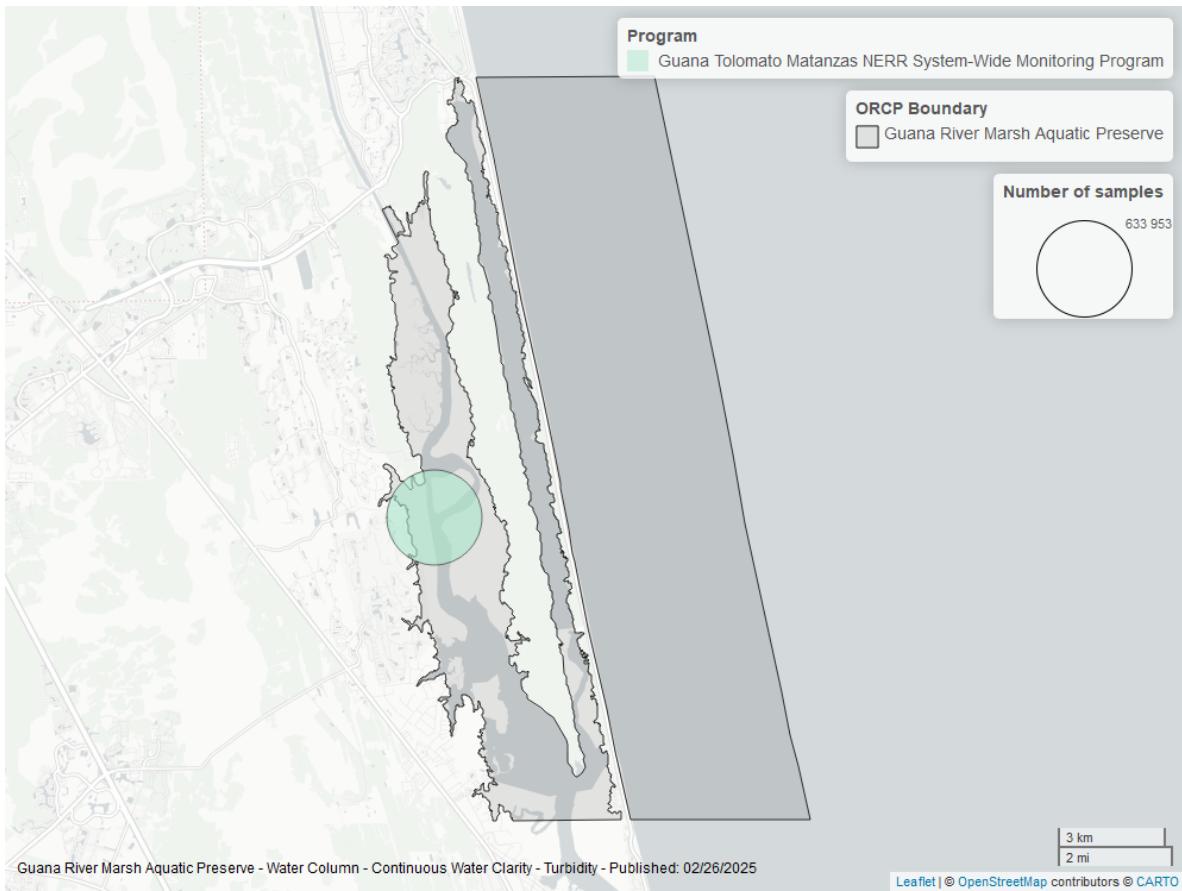


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
gtmpiwq	Significantly decreasing trend	643280	25	2001 - 2025	10	-0.1	14.48	-0.07	0.0222347224391014481



## Total Suspended Solids - Discrete

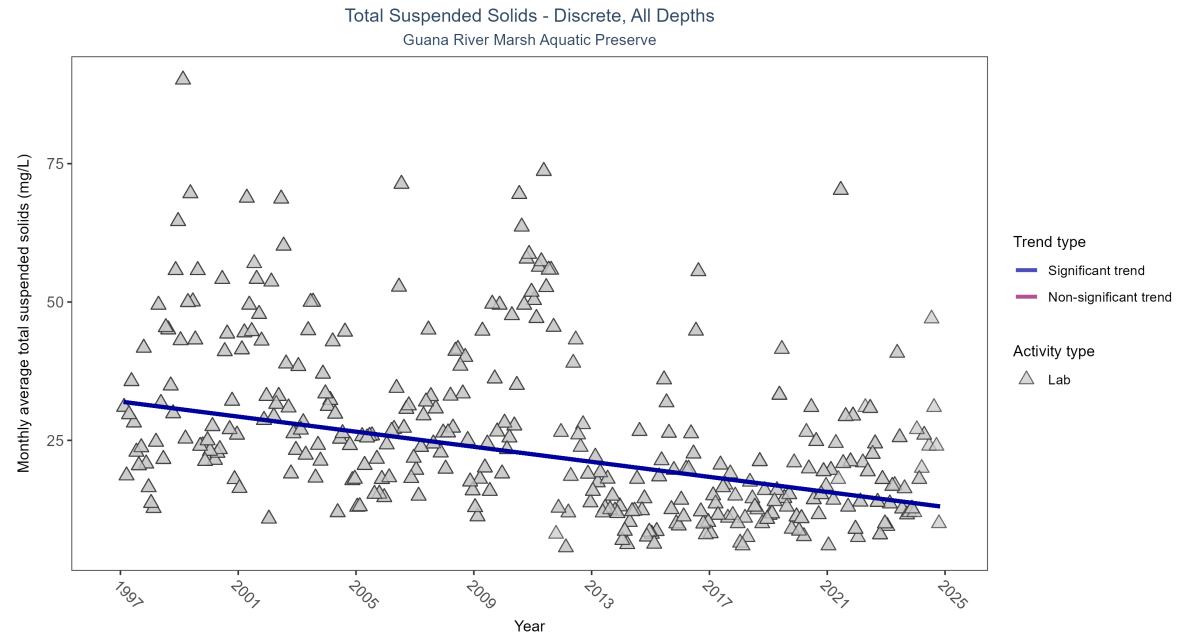
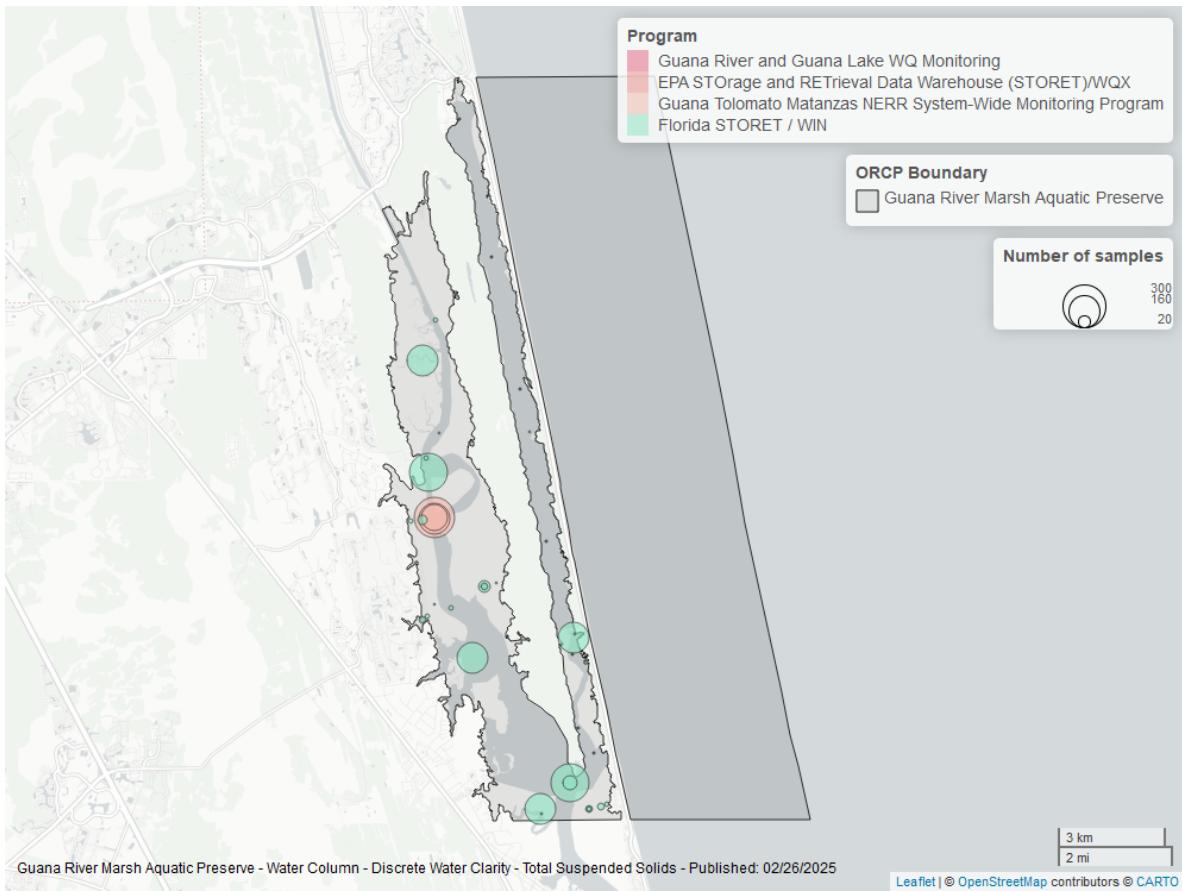


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

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	1706	28	1997 - 2024	22.45	-0.35211	32.01201	-0.68082	0.0000000000000000354593165545516



## Chlorophyll a, Uncorrected for Pheophytin - Discrete

Chlorophyll a, Uncorrected for Pheophytin - Discrete, All Depths  
Guana River Marsh Aquatic Preserve

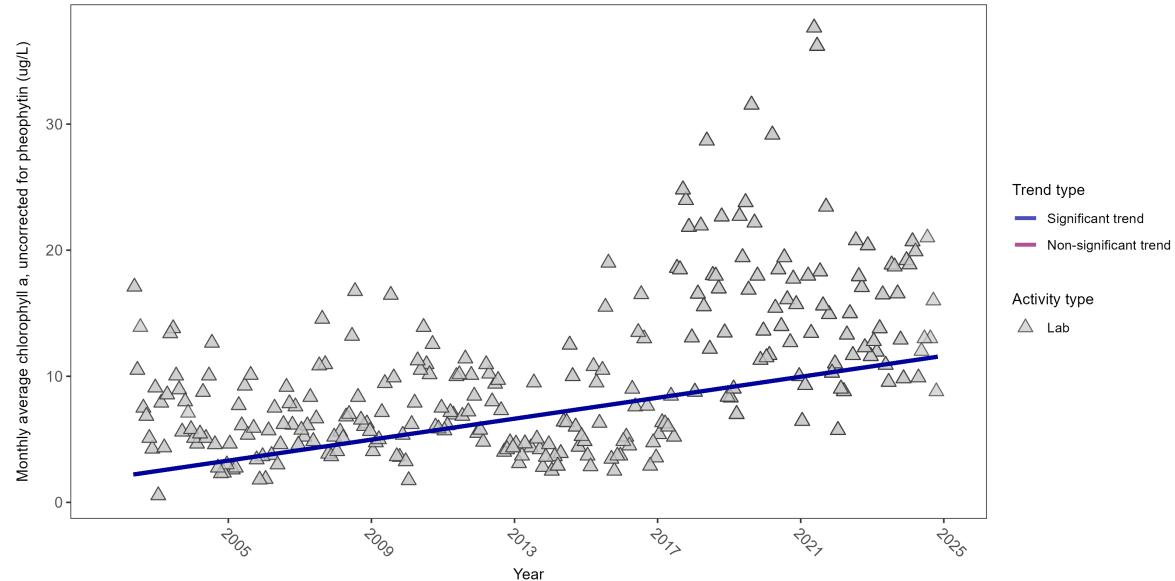
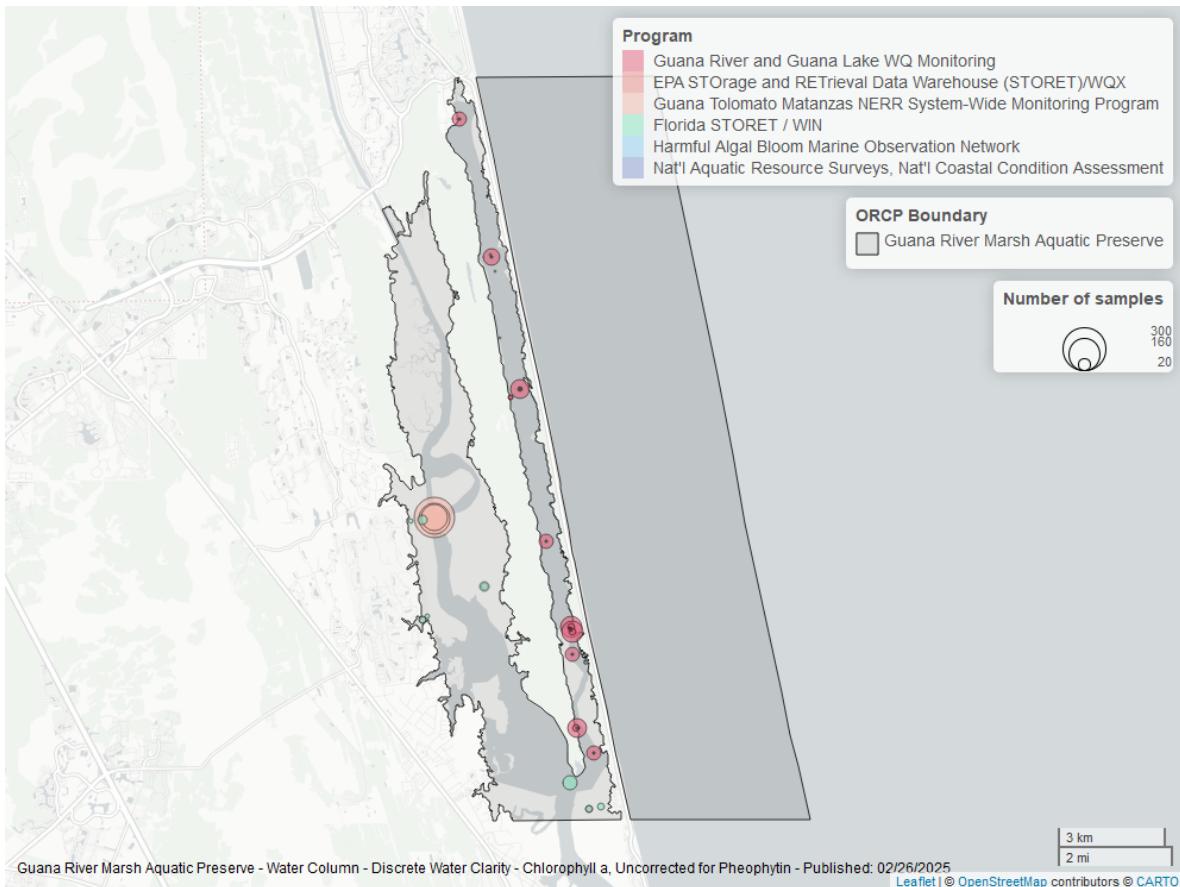


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	1314	23	2002 - 2024	7.75	0.40772	2.06713	0.41545	0.00000000000000001585598



## Chlorophyll a, Corrected for Pheophytin - Discrete

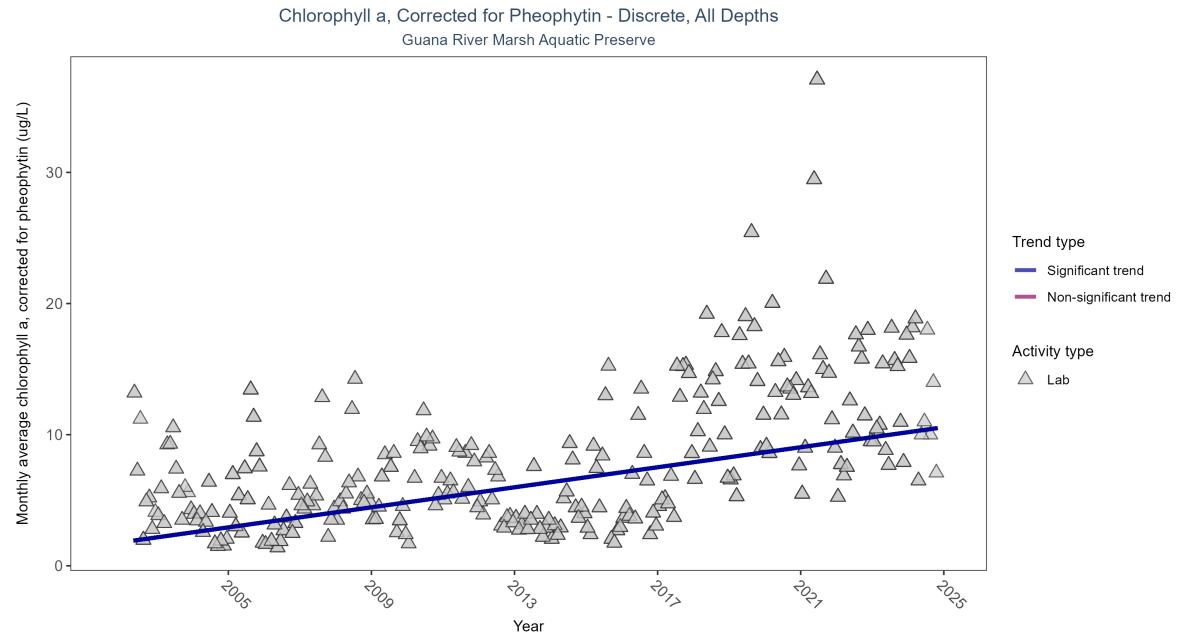


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin



## Secchi Depth - Discrete

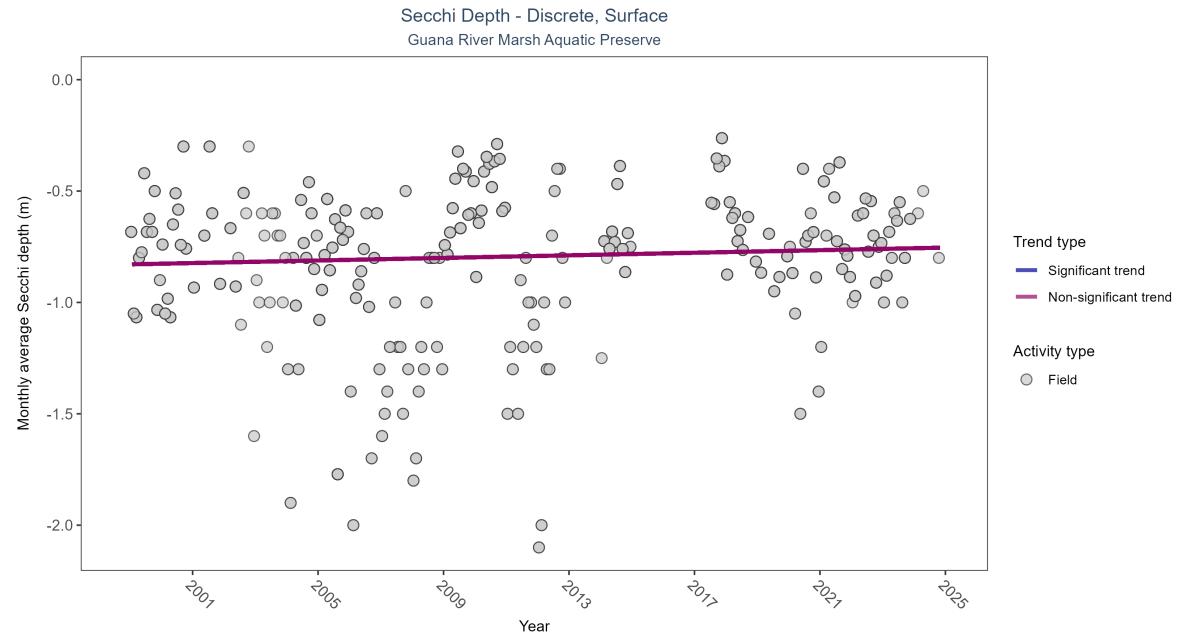


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

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	1354	23	1999 - 2024	-0.7	0.069	-0.82907	0.00289	0.1853830494191046895924301907144



## Colored Dissolved Organic Matter - Discrete

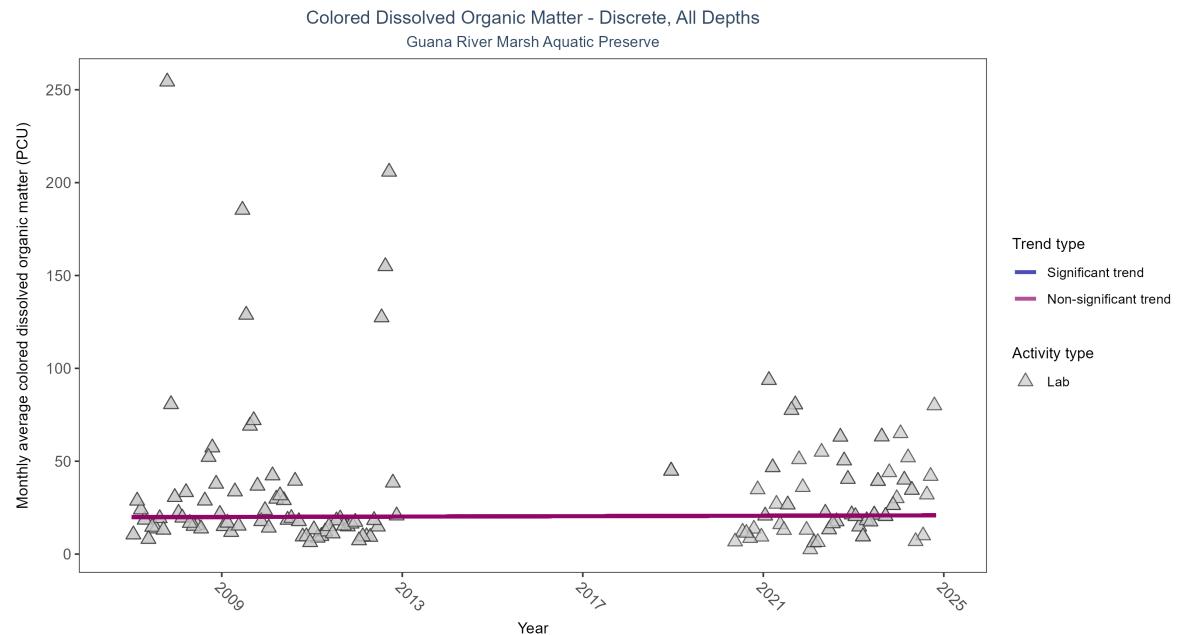


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	236	12	2007 - 2024	19.5	0.00851	19.85027	0.05667	0.902503846317406210886247

