

Biscayne Bay Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 18 March, 2025

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Indicators

Nutrients

Total Nitrogen - Discrete

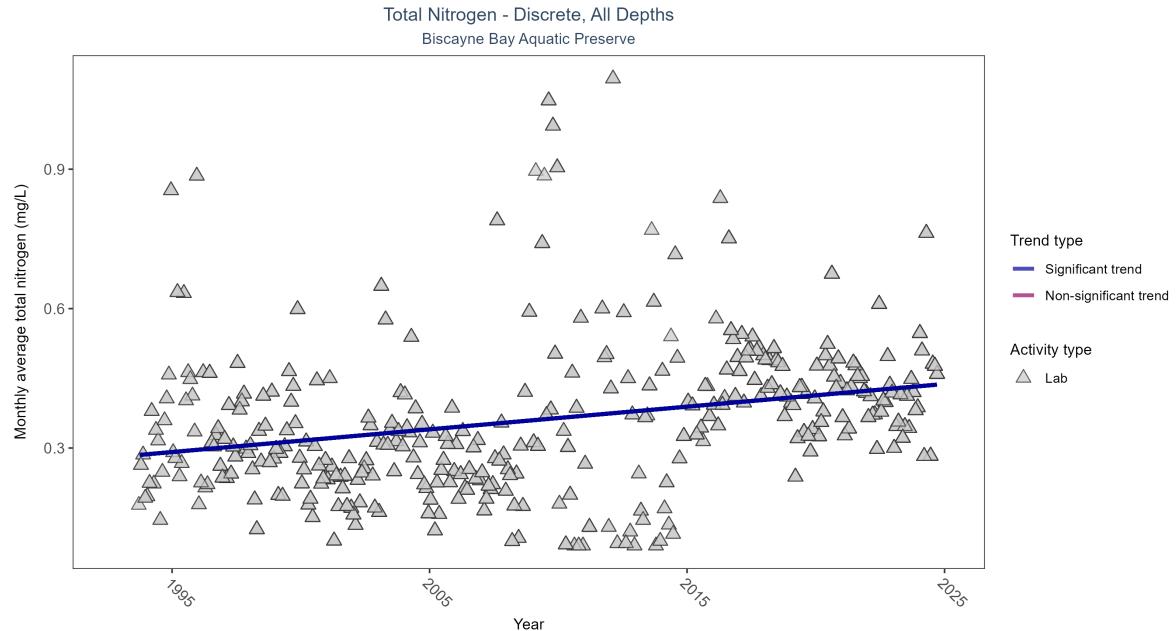
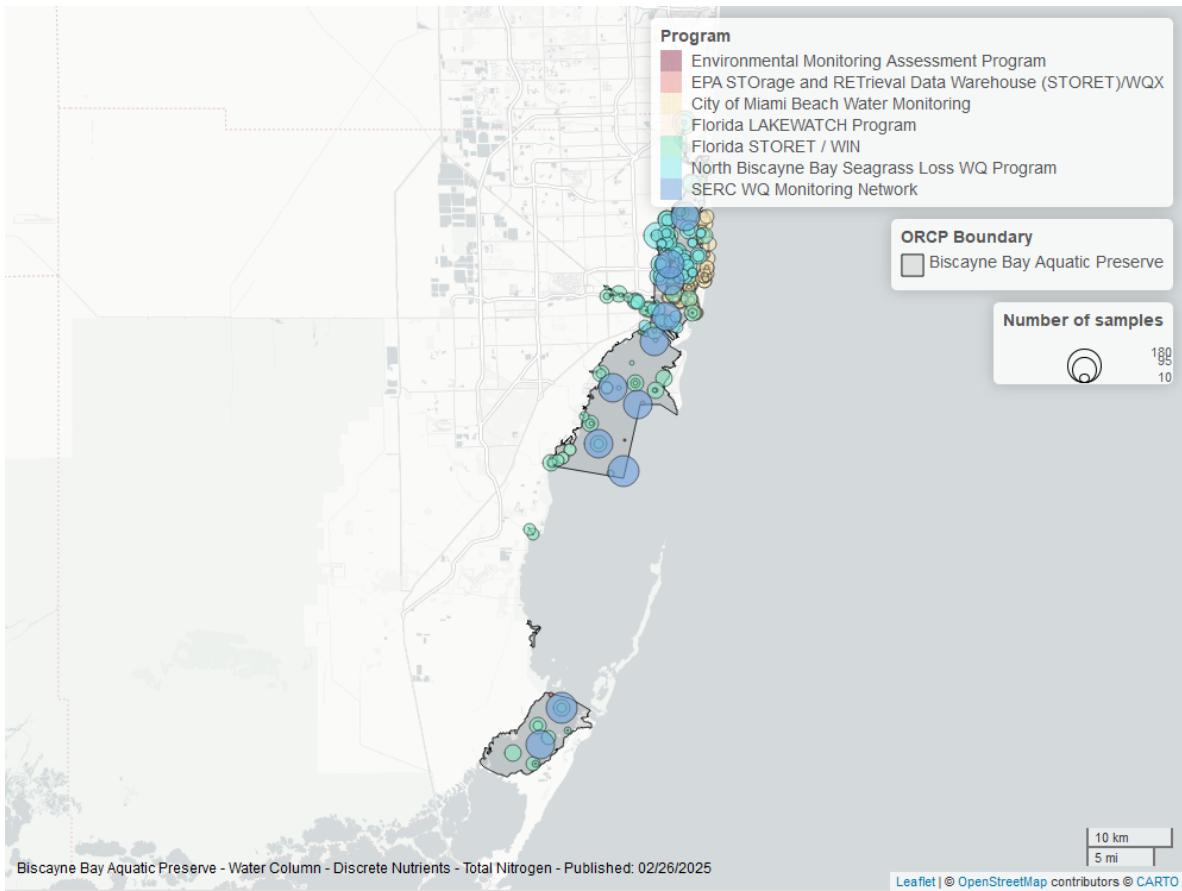


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	7918	32	1993 - 2024	0.334	0.22981	0.28157	0.00488	0.0000000099350983223260088363



Total Phosphorus - Discrete

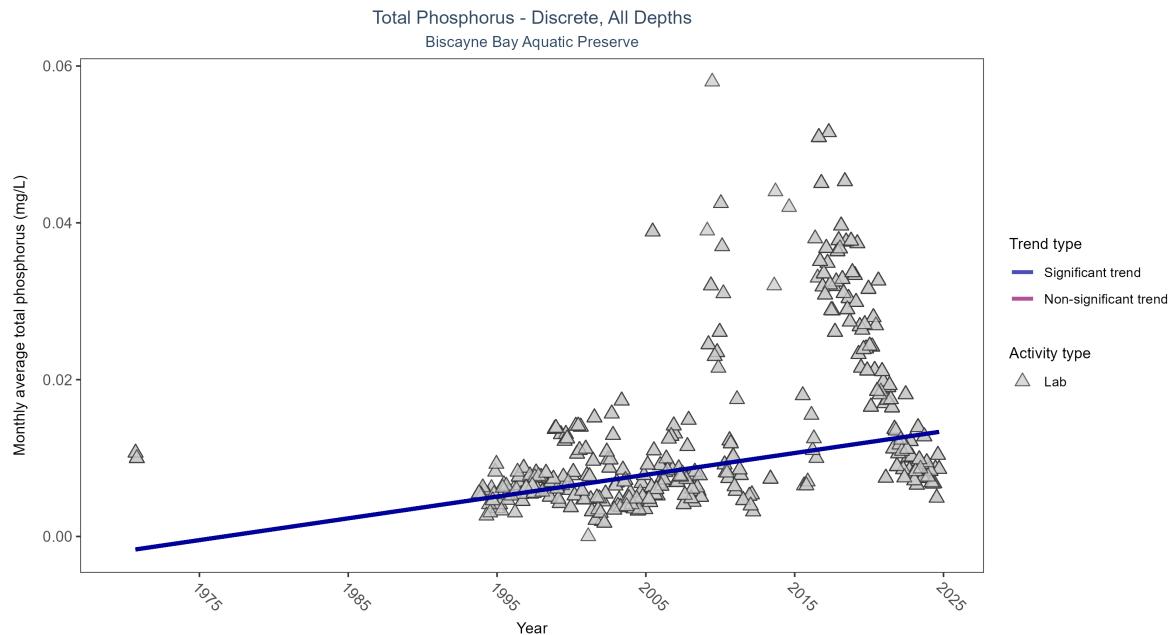
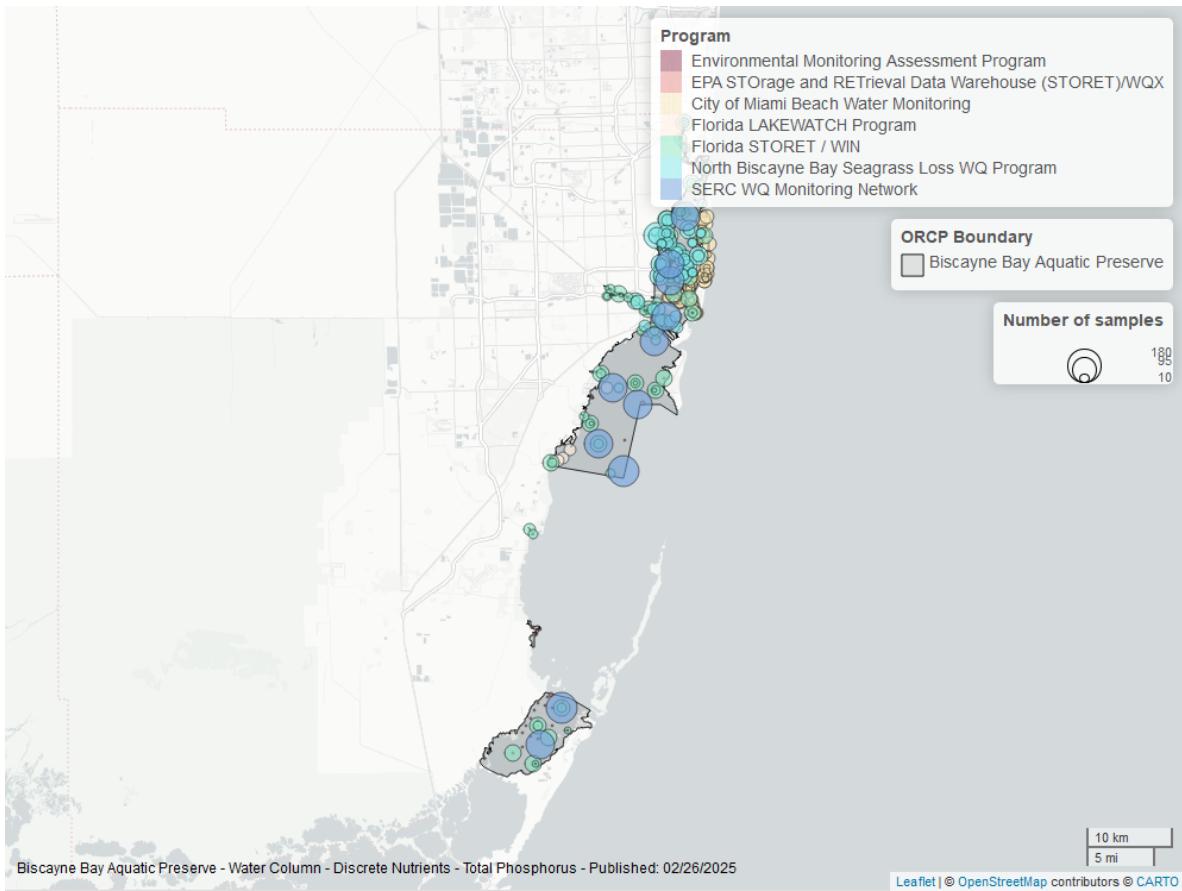


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

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	8031	33	1970 - 2024	0.009	0.36201	-0.00185	0.00028	0.0000000000000006740326905958144842068852087280106388789135963



Water Quality

Dissolved Oxygen - Discrete

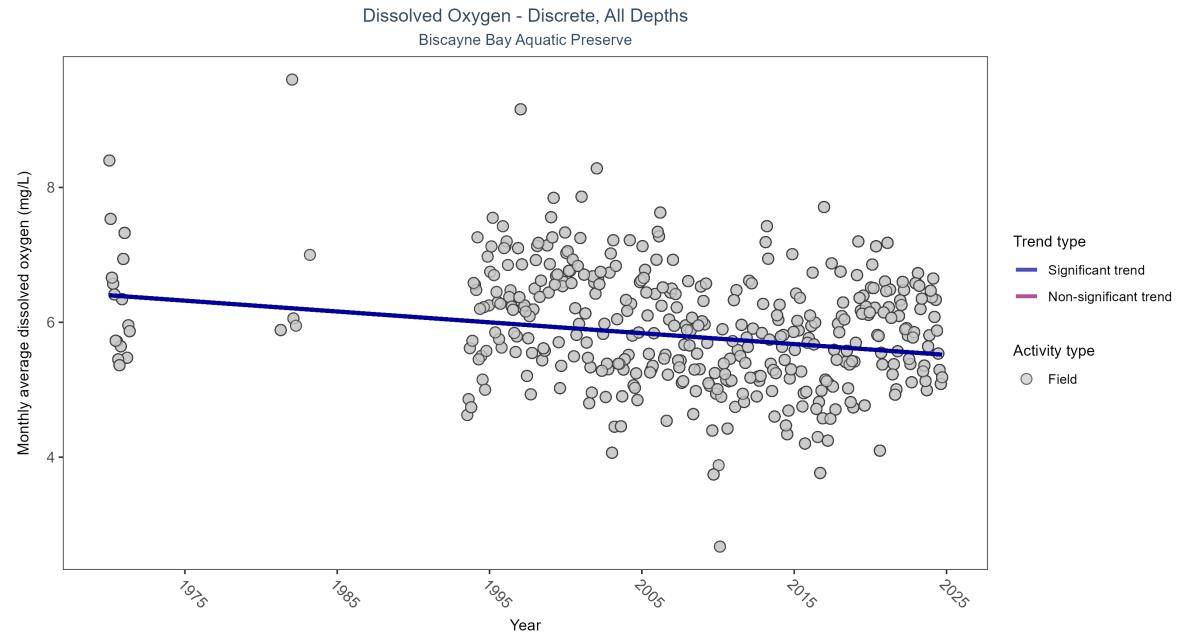
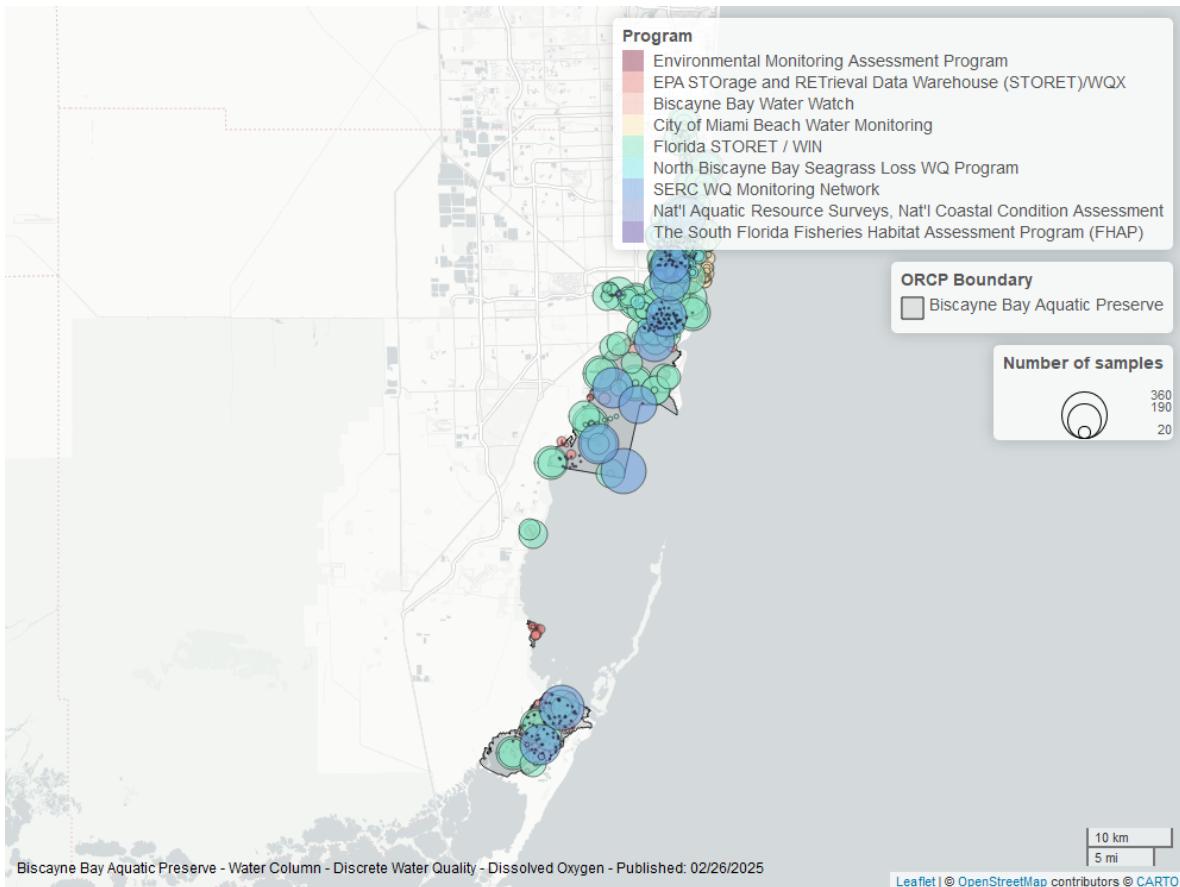


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

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	21185	37	1970 - 2024	6	-0.22906	6.40174	-0.0161	0.00000000012586823



Dissolved Oxygen - Continuous

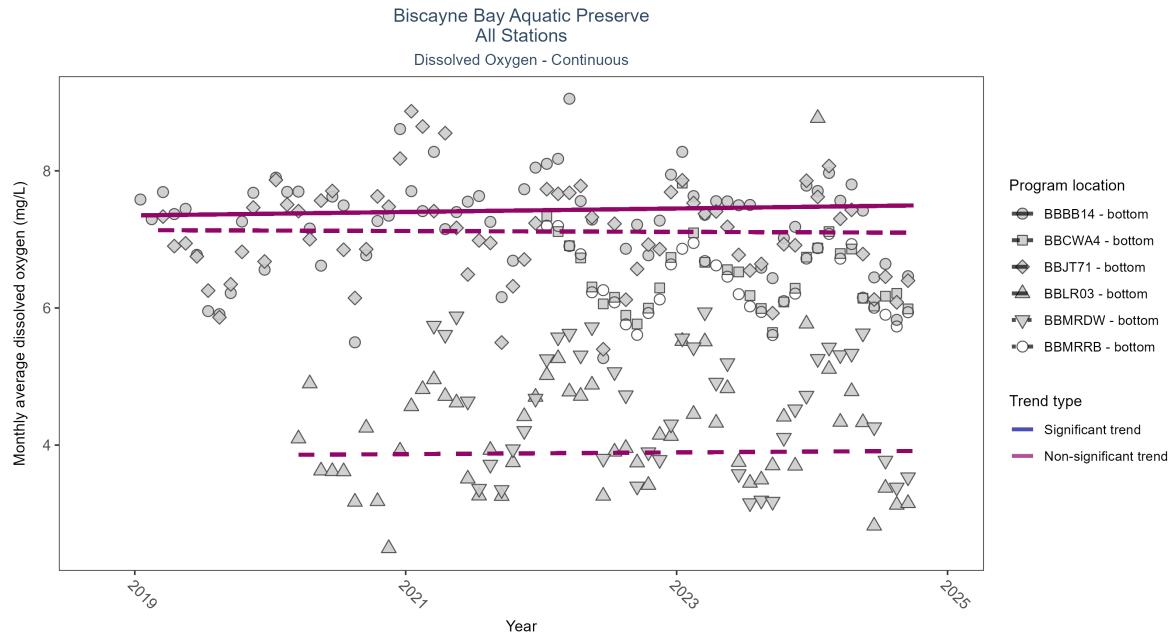
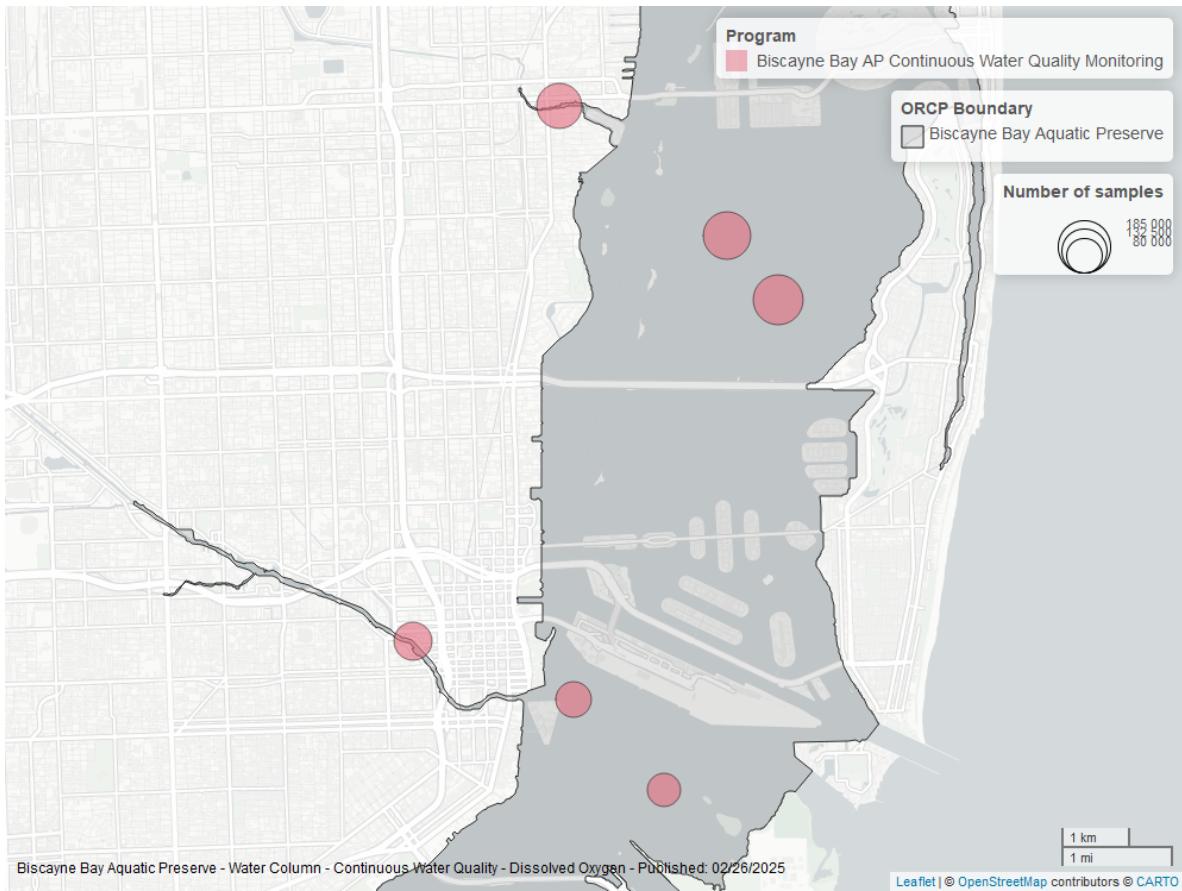


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
BBBB14	No significant trend	174312	6	2019 - 2024	7.2	0.06	7.35	0.03	0.5207033
BBCWA4	Insufficient data to calculate trend	89025	3	2022 - 2024	6.5	-	-	-	NA
BBJT71	No significant trend	192461	6	2019 - 2024	7.0	-0.02	7.14	-0.01	0.9051417
BBLR03	No significant trend	148009	5	2020 - 2024	4.1	0.06	3.86	0.01	0.9369873
BBMRDW	Insufficient data to calculate trend	92591	3	2022 - 2024	6.4	-	-	-	NA
BBMRRB	Insufficient data to calculate trend	116315	4	2021 - 2024	4.5	-	-	-	NA



Dissolved Oxygen Saturation - Discrete

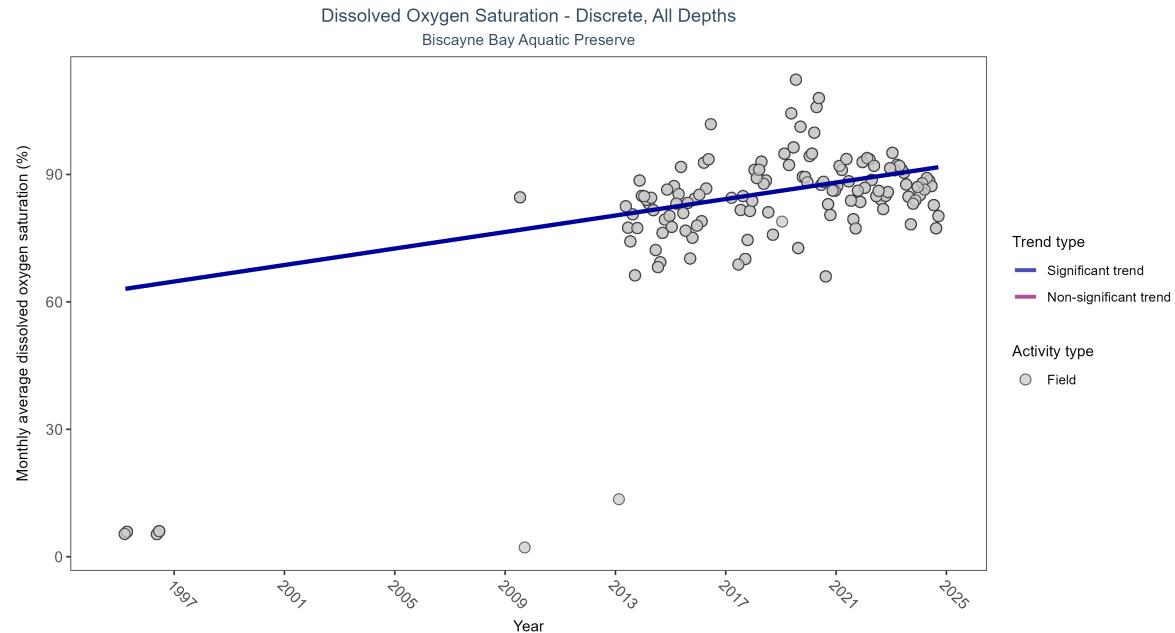
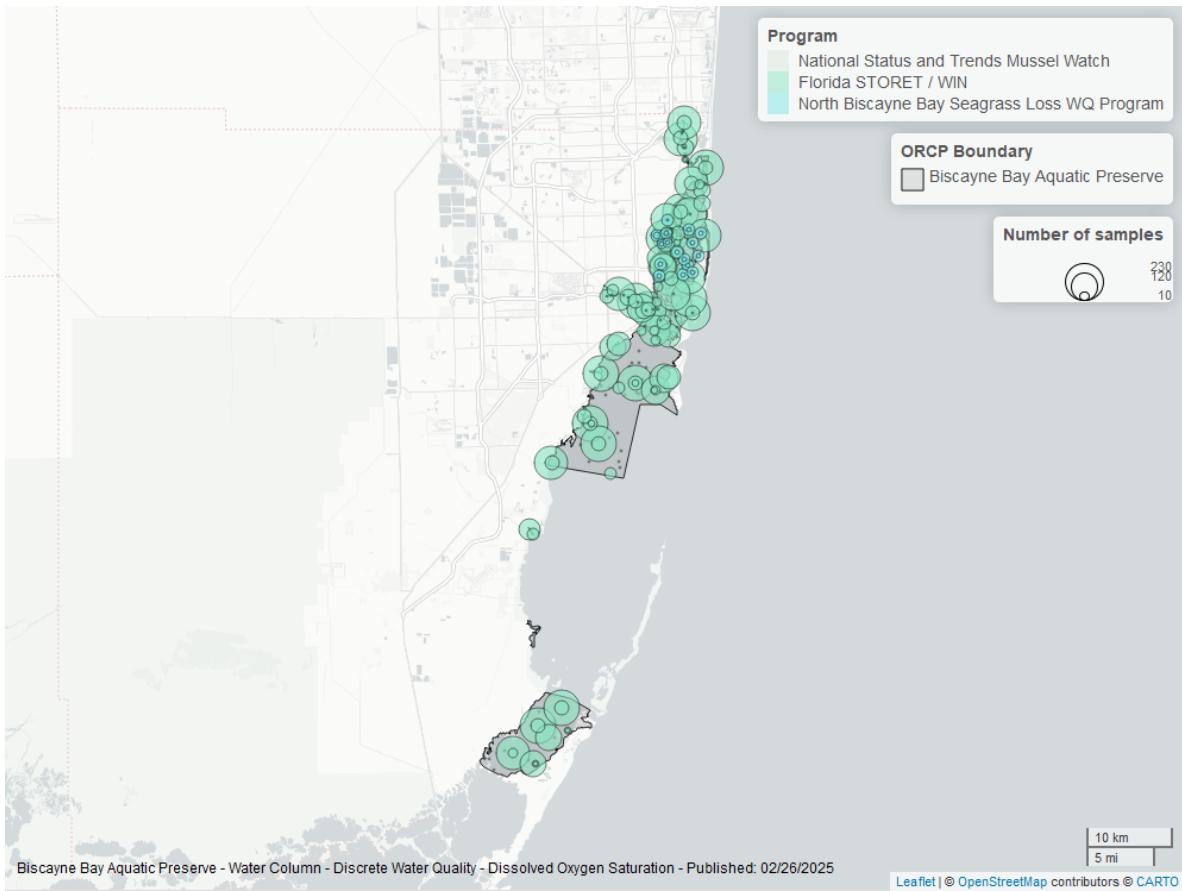


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

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	9895	15	1995 - 2024	90.3	0.33202	62.85345	0.97111	0.000000841410232880471117659915147868332496727816760540008544921875000000



Dissolved Oxygen Saturation - Continuous

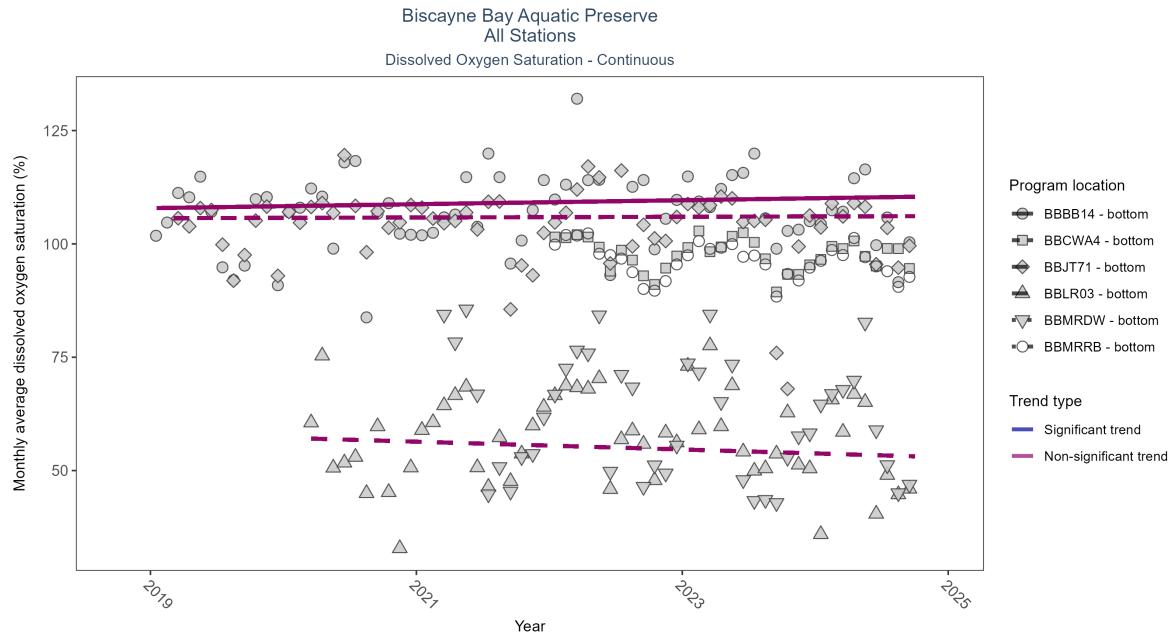
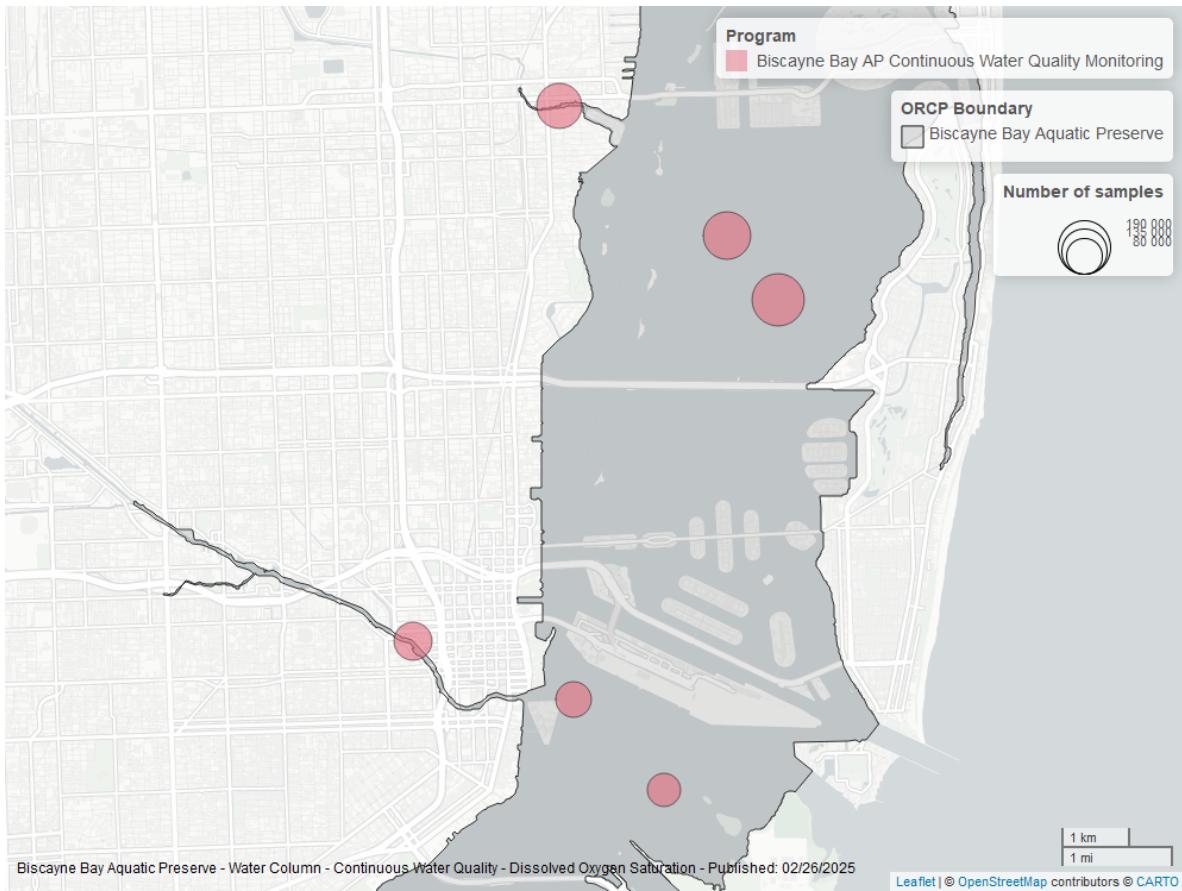


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
BBBB14	No significant trend	174052	6	2019 - 2024	104.8	0.1	107.88	0.44	0.3209117
BBCWA4	Insufficient data to calculate trend	92748	3	2022 - 2024	97.4	-	-	-	NA
BBJT71	No significant trend	193612	6	2019 - 2024	101.8	0.03	105.66	0.08	0.8116194
BBLR03	No significant trend	148008	5	2020 - 2024	56.4	-0.1	57.24	-0.86	0.3845046
BBMRRB	Insufficient data to calculate trend	92599	3	2022 - 2024	95.7	-	-	-	NA
BBMRDW	Insufficient data to calculate trend	116316	4	2021 - 2024	60.0	-	-	-	NA



Salinity - Discrete

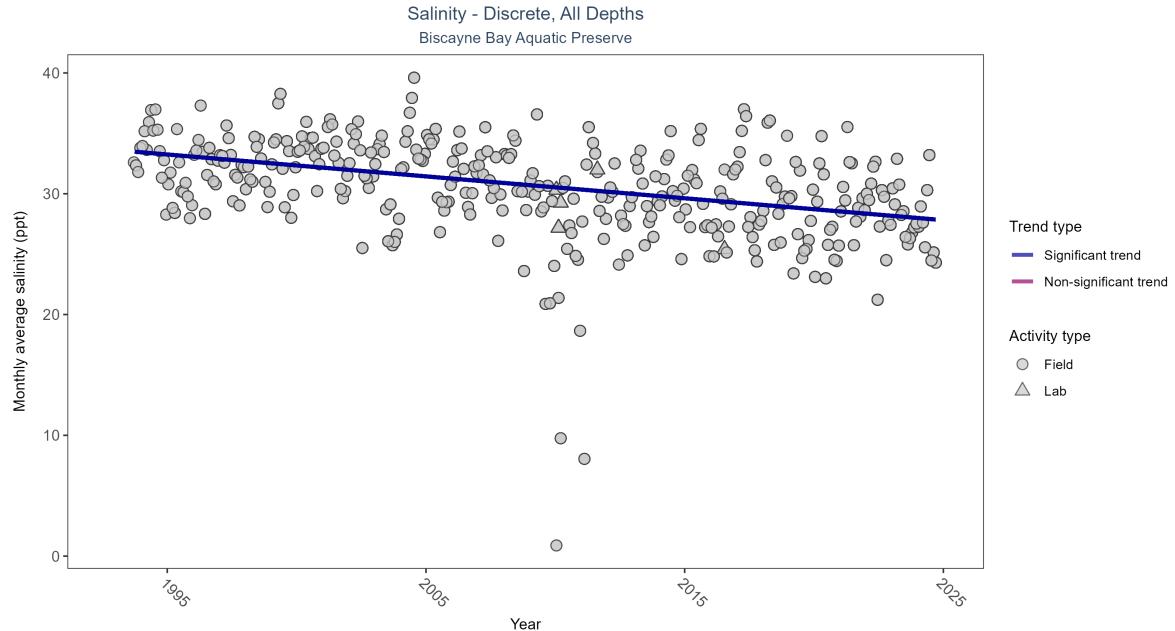
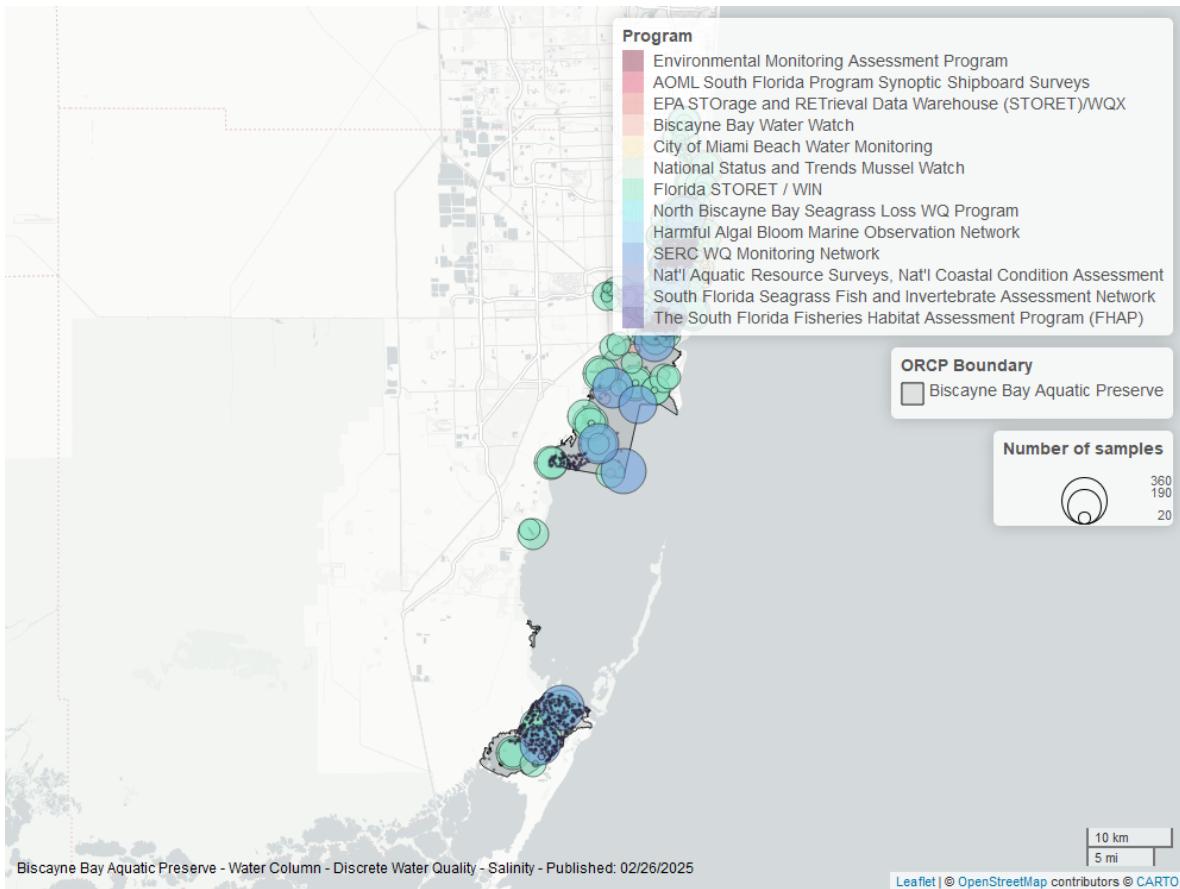


Table 7: Seasonal Kendall-Tau Results for - Salinity



Salinity - Continuous

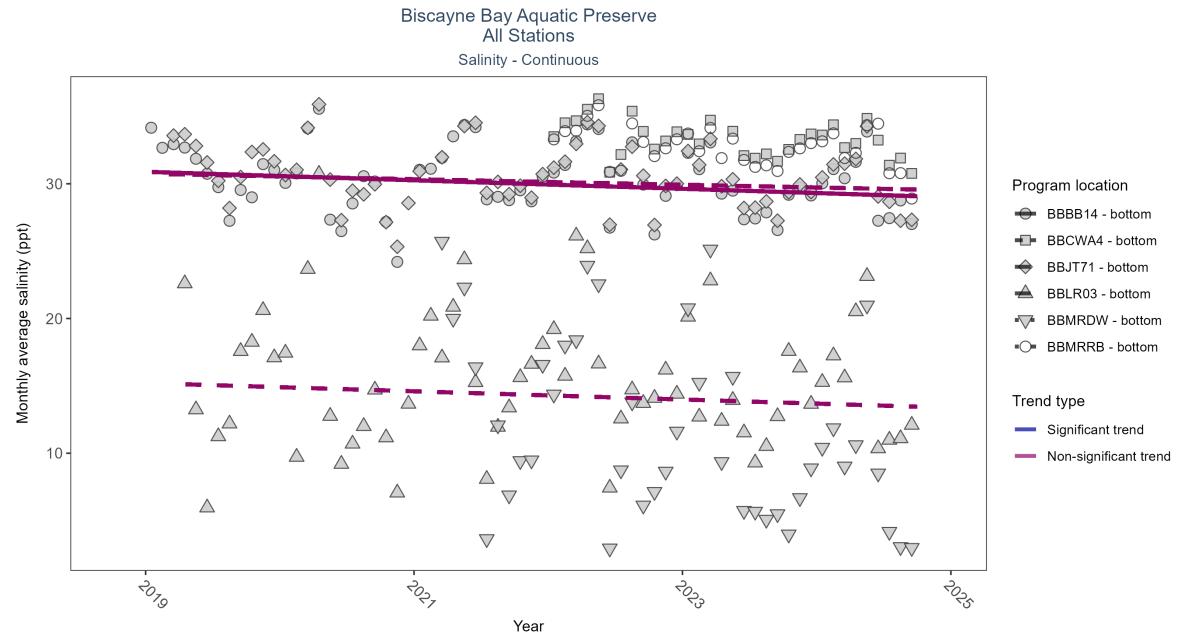
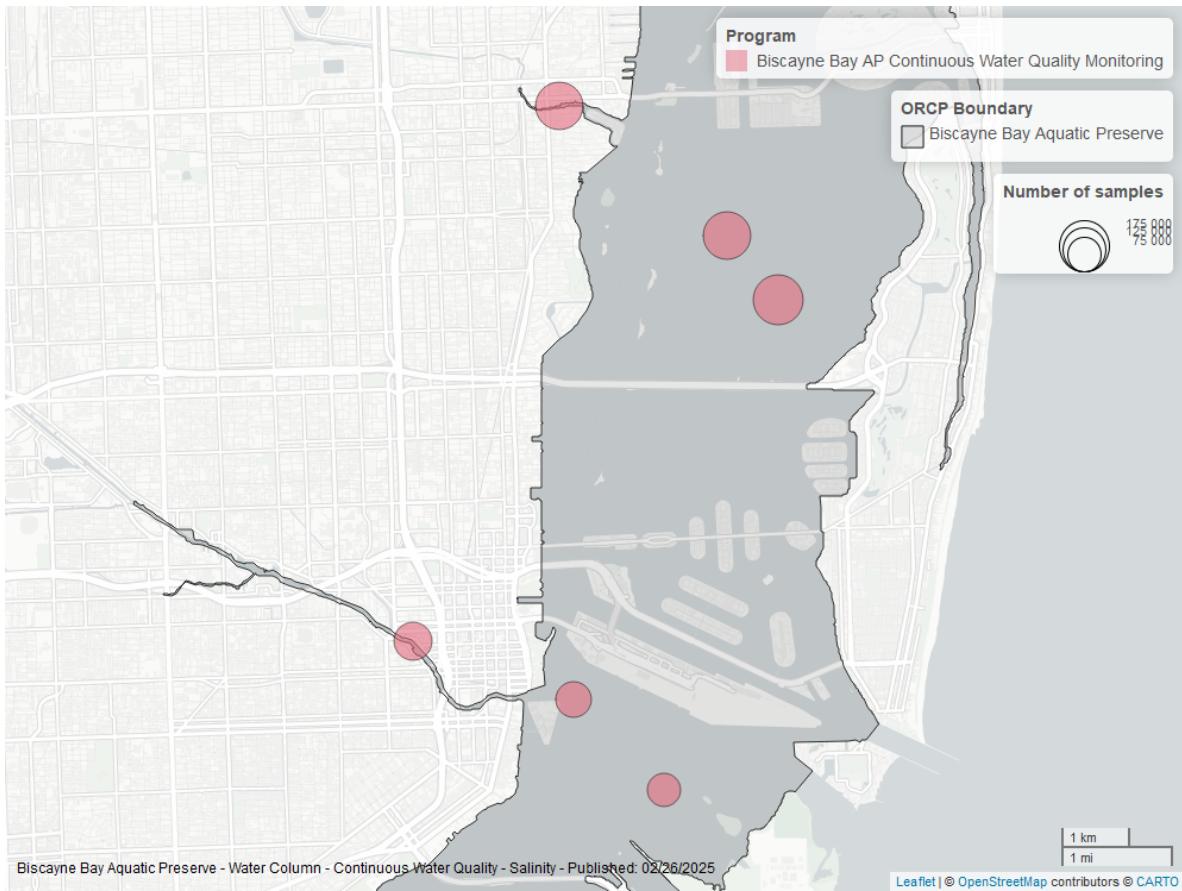


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
BBBB14	No significant trend	163926	6	2019 - 2024	30.1	-0.23	30.89	-0.32	0.05074746
BBCWA4	Insufficient data to calculate trend	87140	3	2022 - 2024	33.4	-	-	-	NA
BBJT71	No significant trend	178697	6	2019 - 2024	30.8	-0.16	30.75	-0.2	0.12246600
BBLR03	No significant trend	168006	6	2019 - 2024	16.2	-0.15	15.2	-0.3	0.16159256
BBMRDW	Insufficient data to calculate trend	92599	3	2022 - 2024	33.0	-	-	-	NA
BBMRRB	Insufficient data to calculate trend	114444	4	2021 - 2024	9.0	-	-	-	NA



Water Temperature - Discrete

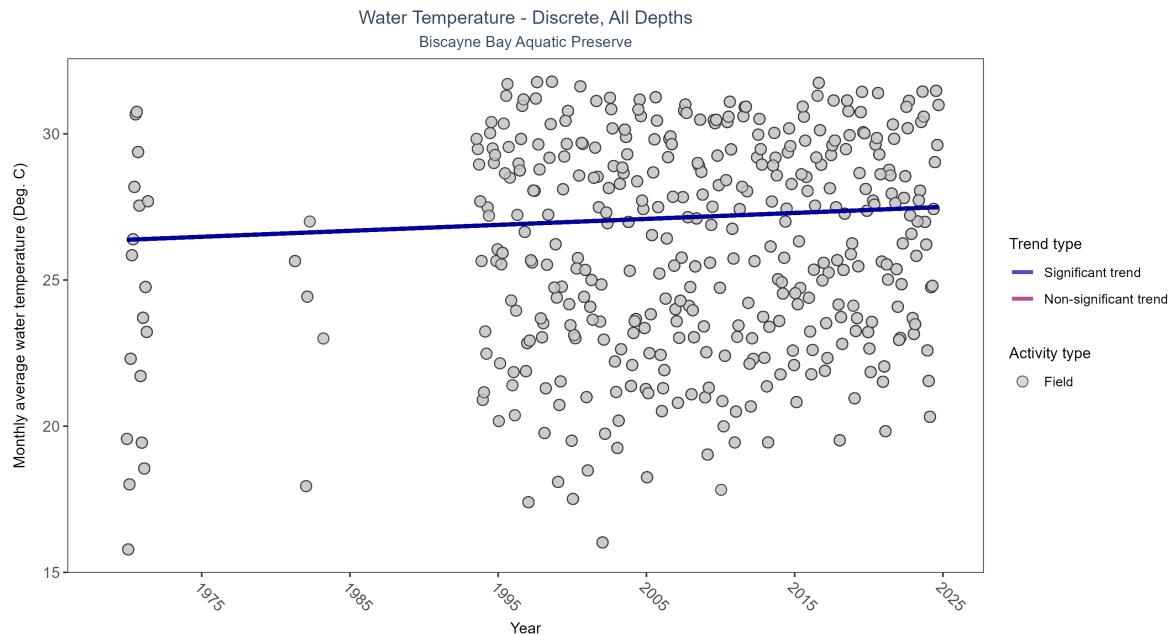
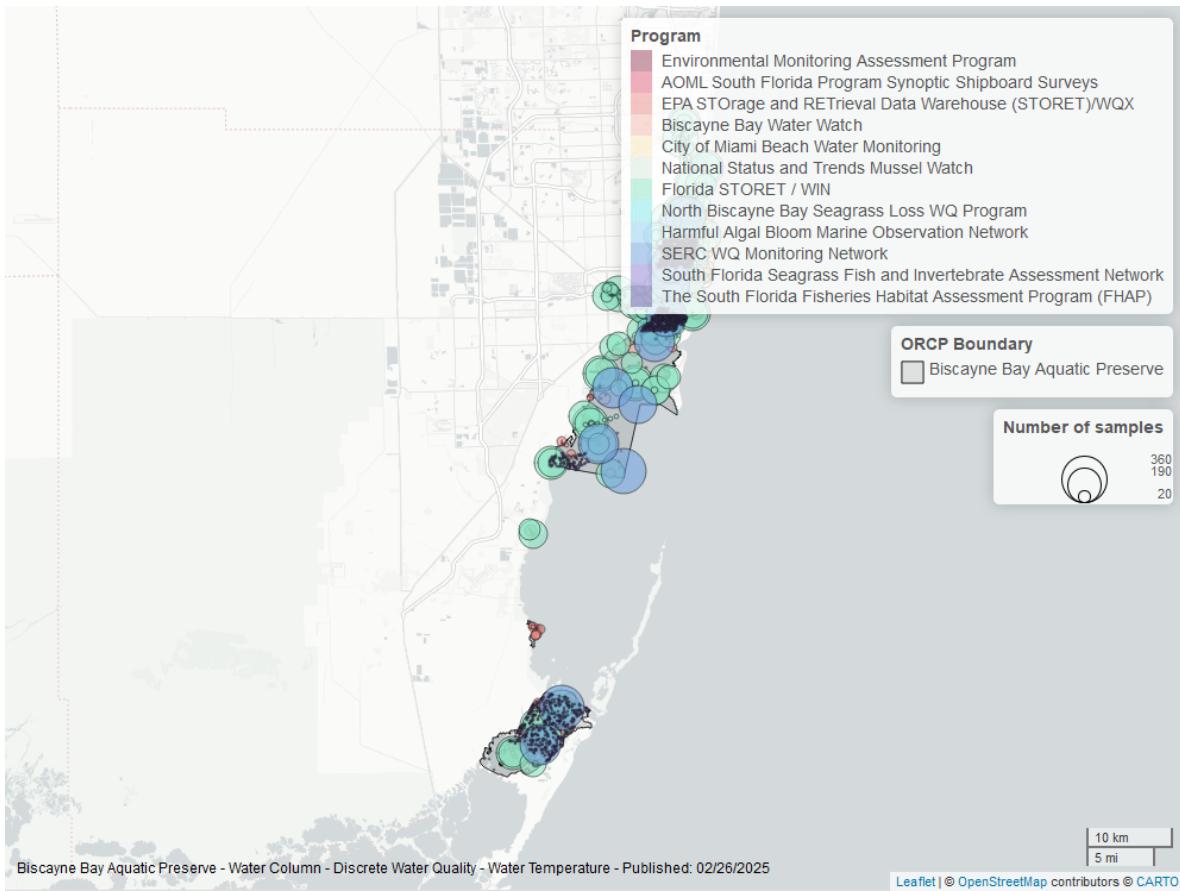


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

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	25079	38	1969 - 2024		27	0.13097	26.35587	0.02038	0.000248816182077409



Water Temperature - Continuous

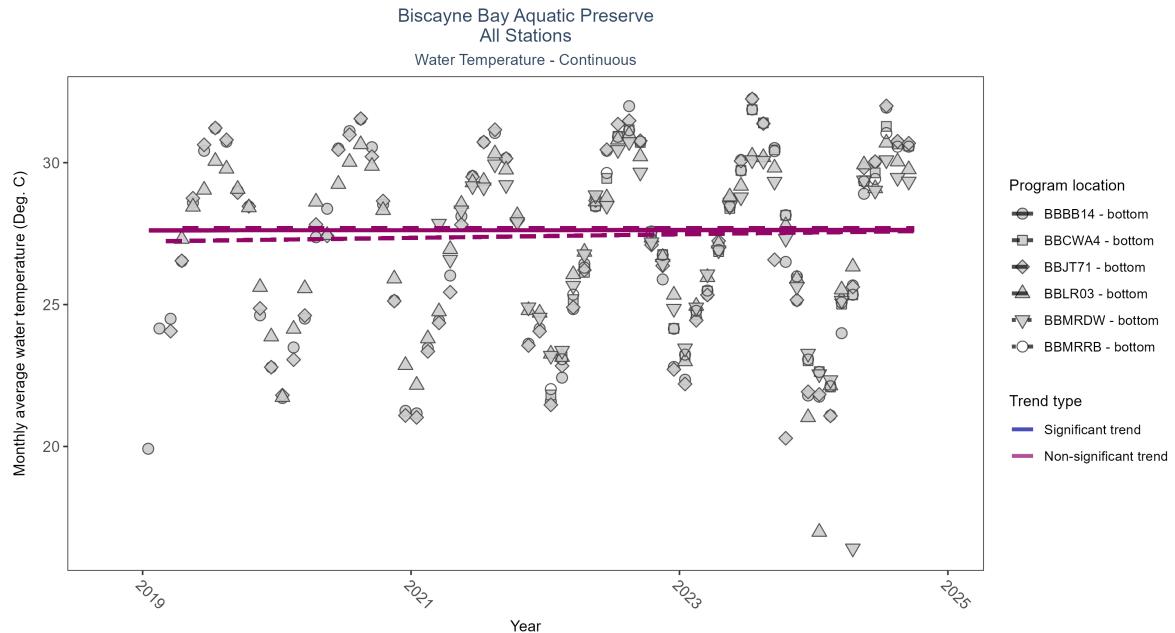
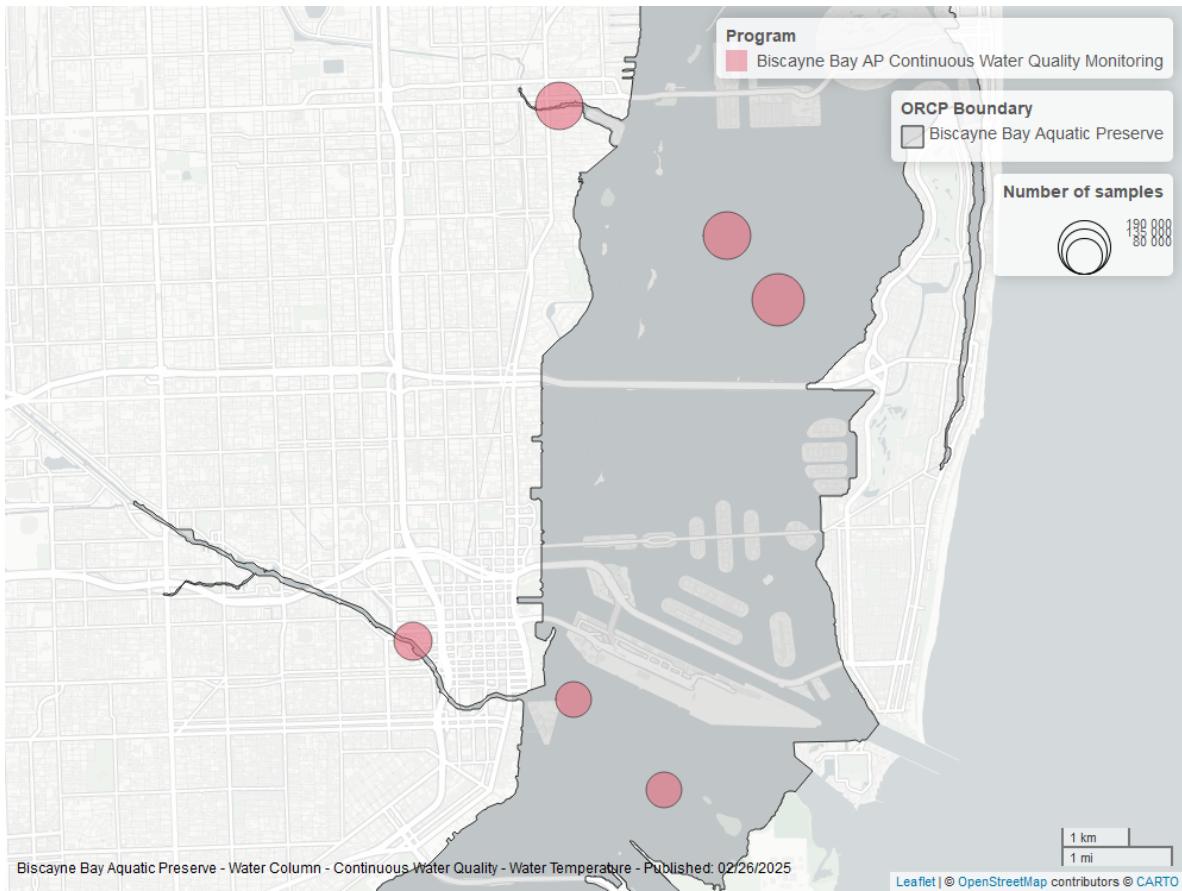


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature



pH - Discrete

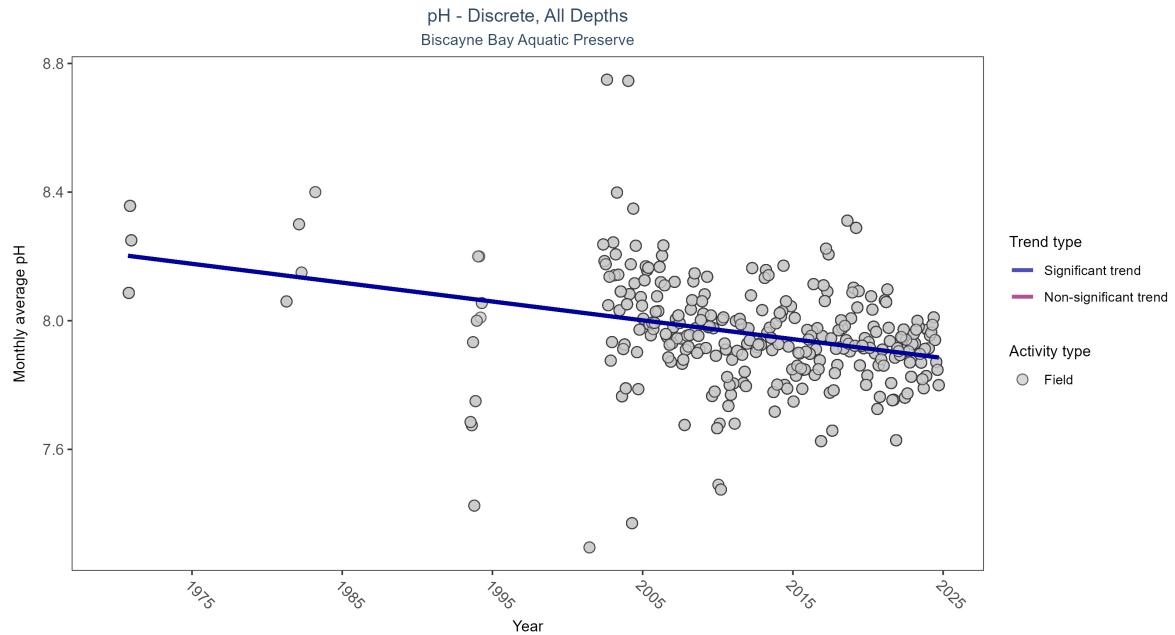
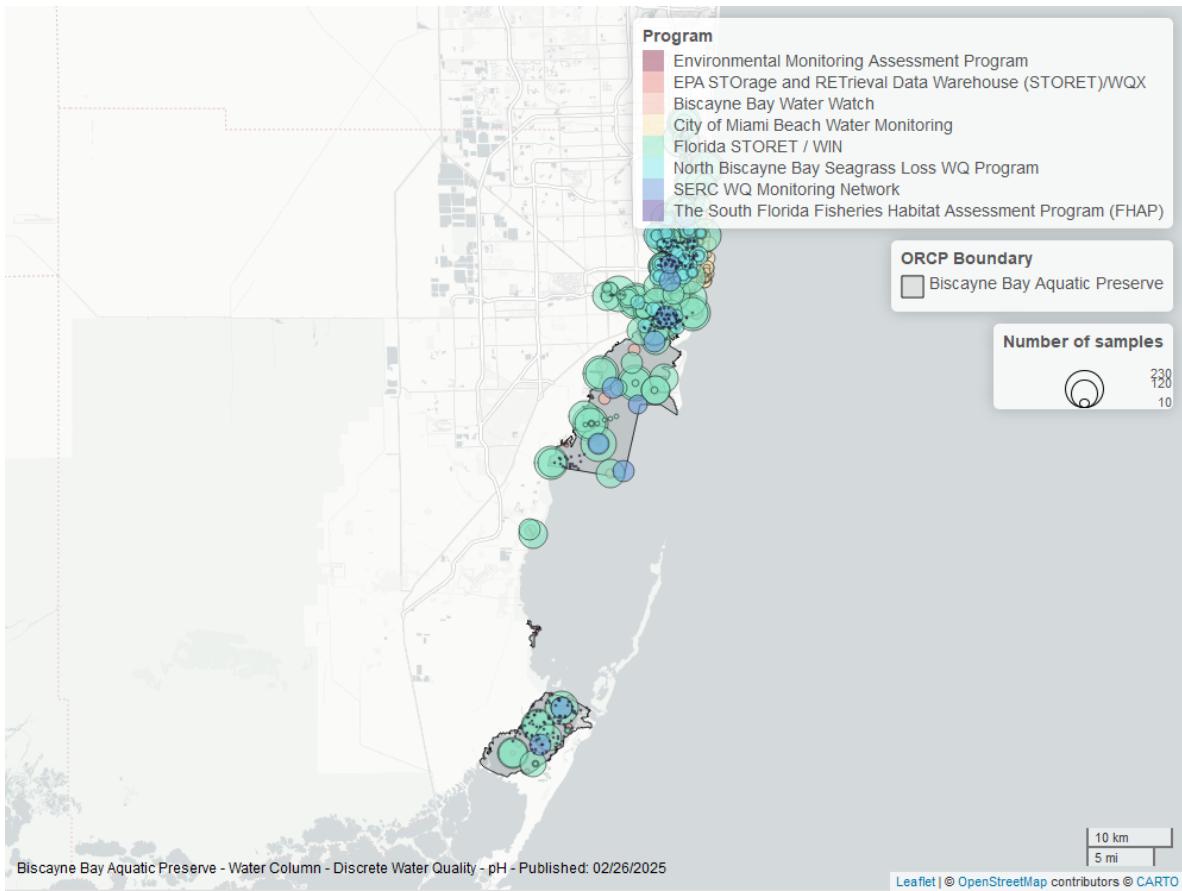


Table 11: Seasonal Kendall-Tau Results for - pH

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	17425	30	1970 - 2024	7.97	-0.28914	8.20631	-0.00586	0.0000000001942645176187761857800745390890



pH - Continuous

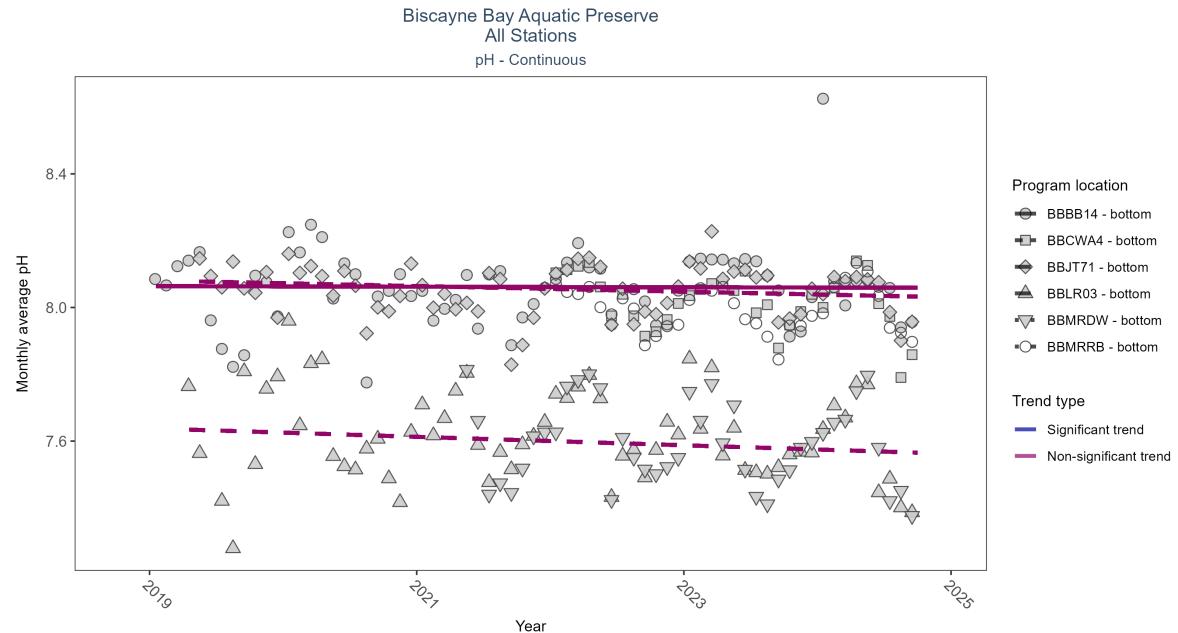
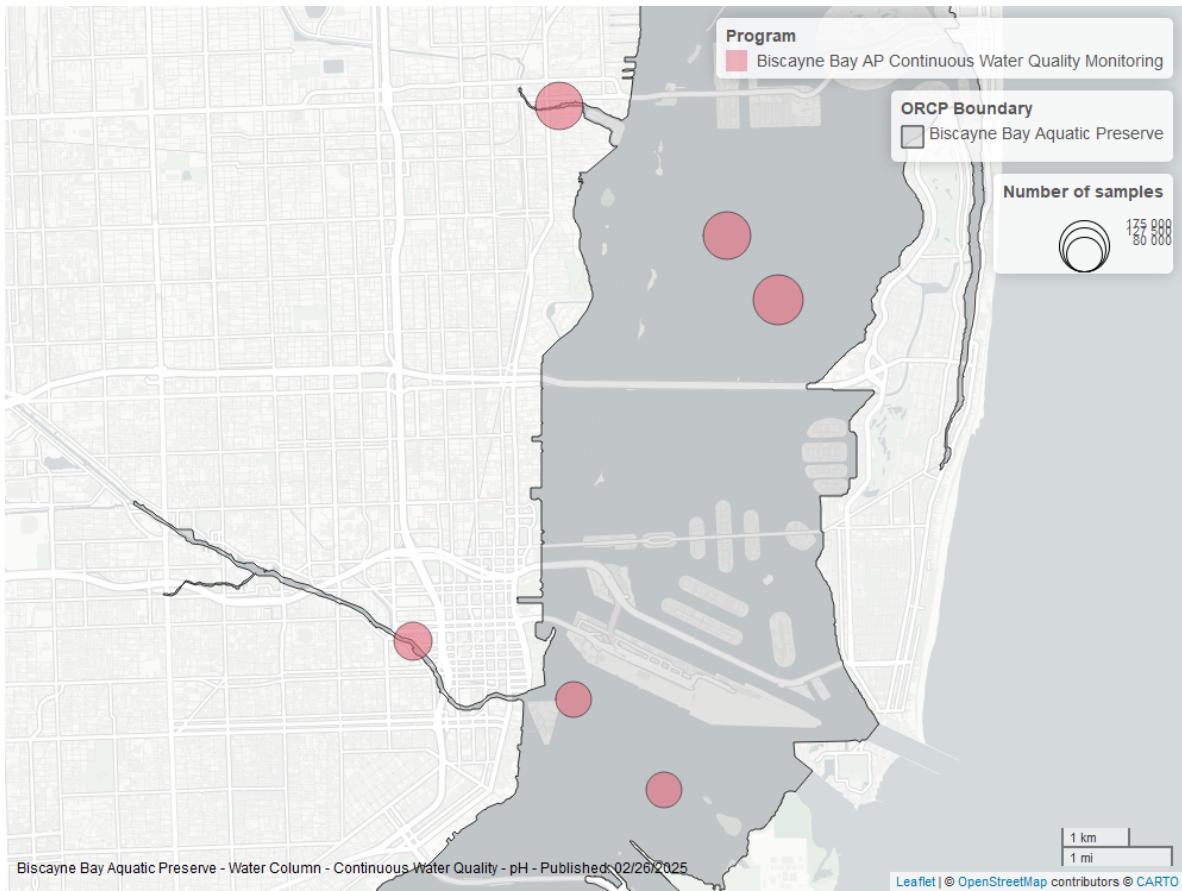


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
BBBB14	No significant trend	170239	6	2019 - 2024	8.1	-0.03	8.06	0	0.95344003
BBCWA4	Insufficient data to calculate trend	92930	3	2022 - 2024	8.0	-	-	-	NA
BBJT71	No significant trend	180871	6	2019 - 2024	8.1	-0.21	8.08	-0.01	0.06196962
BBLR03	No significant trend	163519	6	2019 - 2024	7.6	-0.18	7.64	-0.01	0.13538211
BBMRDW	Insufficient data to calculate trend	92643	3	2022 - 2024	8.0	-	-	-	NA
BBMRRB	Insufficient data to calculate trend	111368	4	2021 - 2024	7.6	-	-	-	NA



Water Clarity

Turbidity - Discrete

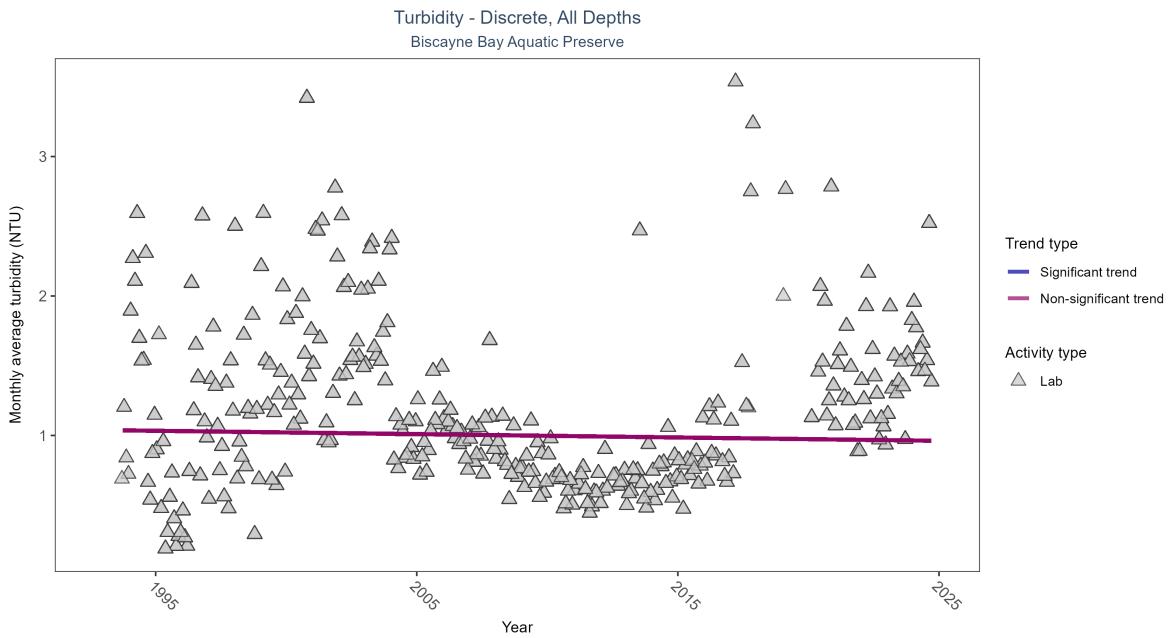
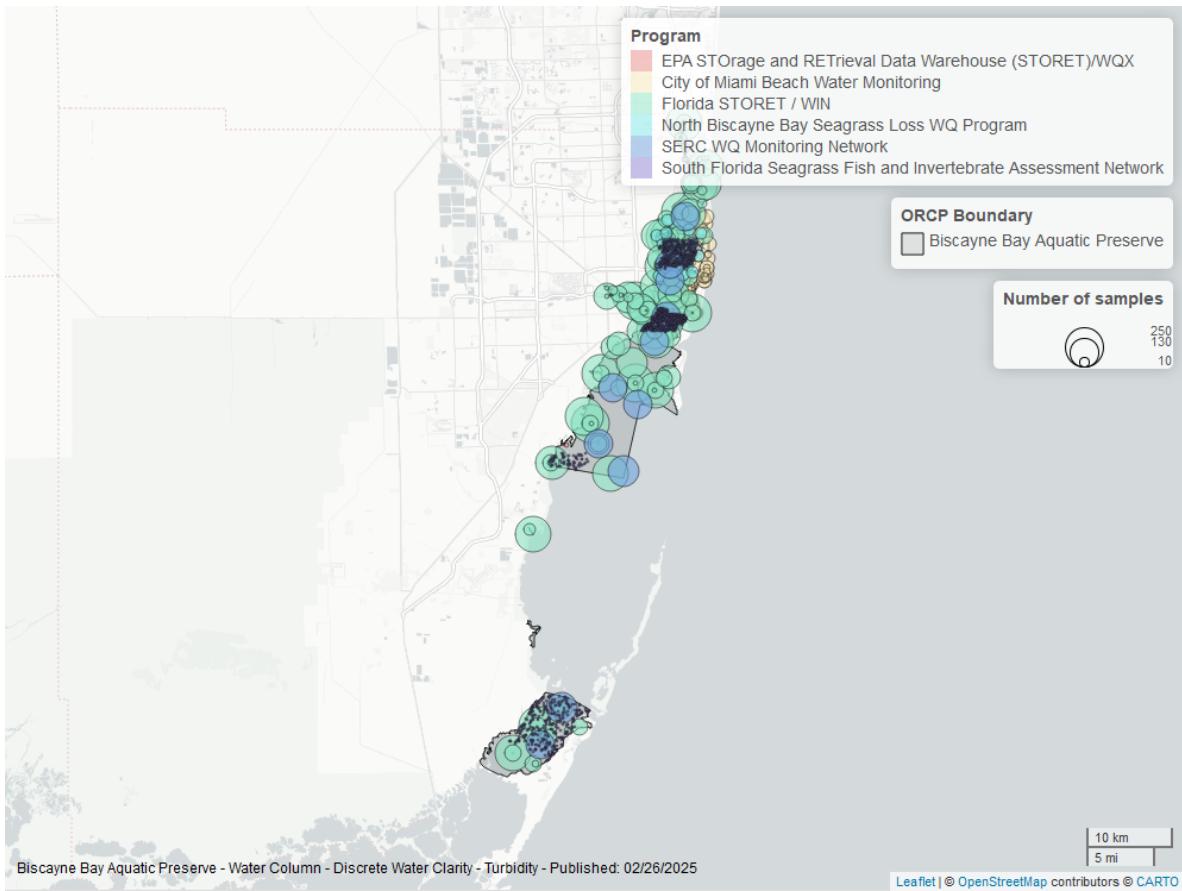


Table 13: Seasonal Kendall-Tau Results for - Turbidity

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	11884	31	1993 - 2024		0.8	-0.02702	1.03829	-0.0024	0.49306167653249849403



Turbidity - Continuous

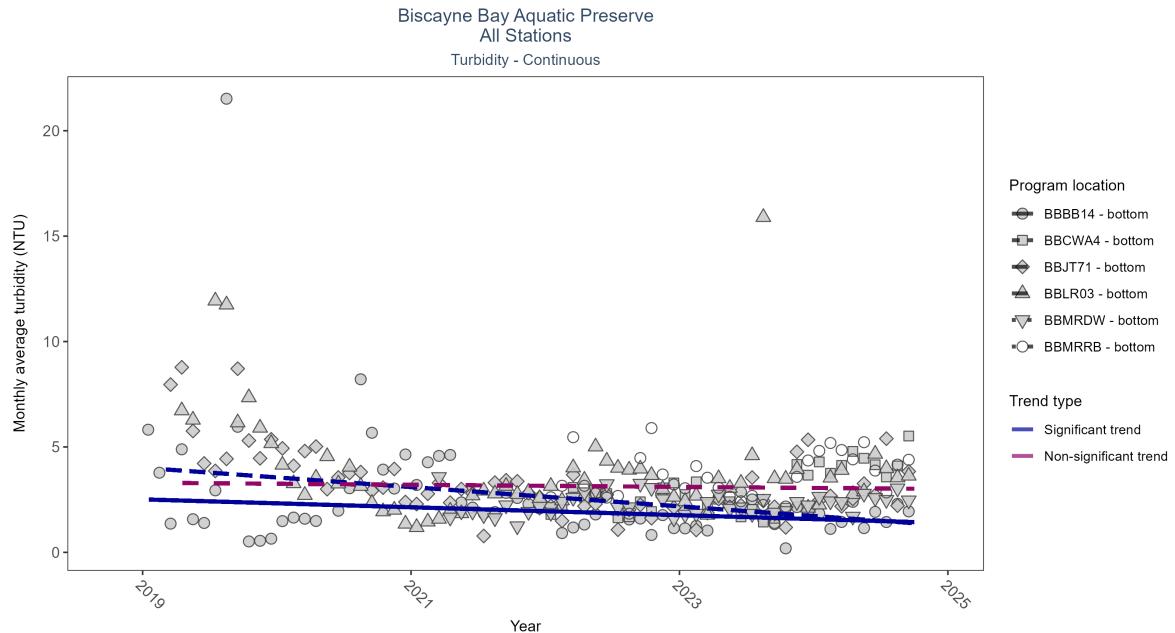
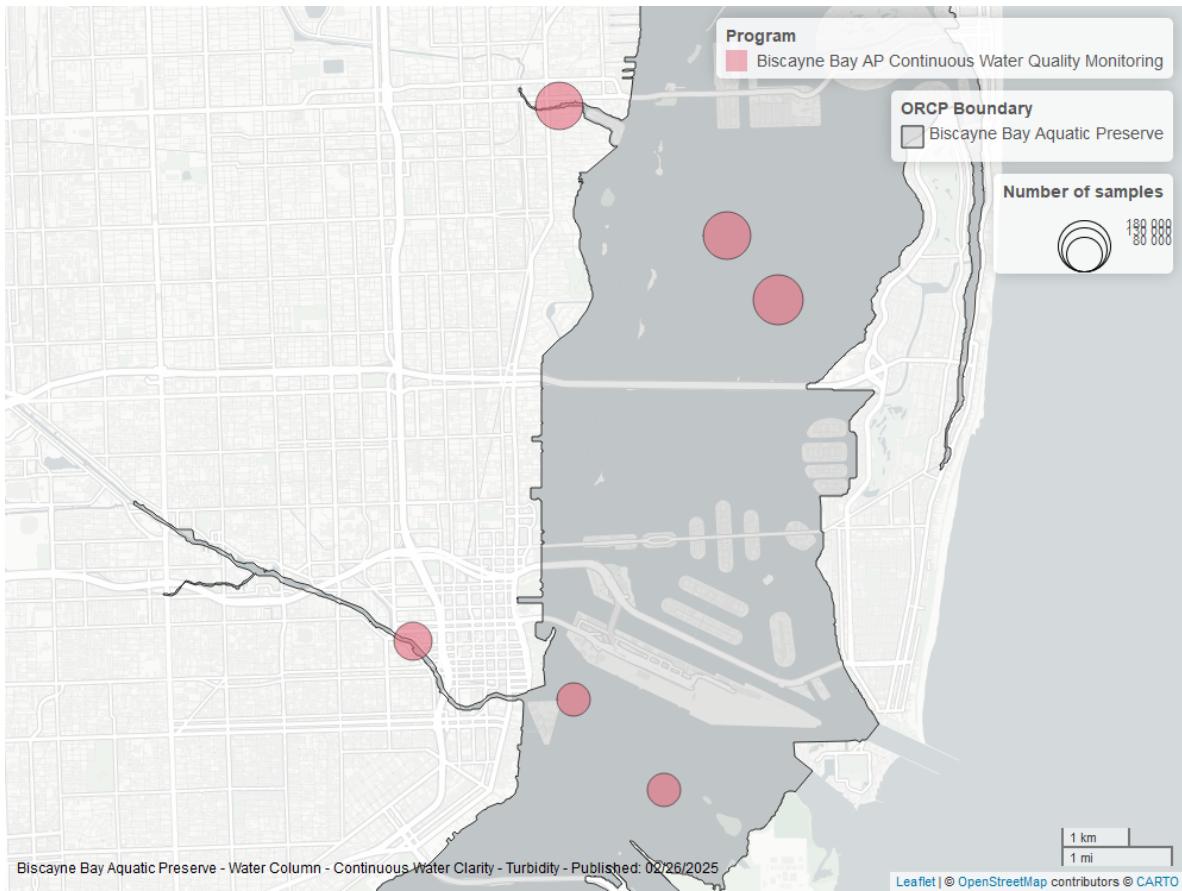


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
BBBB14	Significantly decreasing trend	163375	6	2019 - 2024	2	-0.3	2.51	-0.19	0.00612747844
BBCWA4	Insufficient data to calculate trend	90269	3	2022 - 2024	3	-	-	-	NA
BBJT71	Significantly decreasing trend	186564	6	2019 - 2024	3	-0.46	4.01	-0.46	0.00003033921
BBLR03	No significant trend	170459	6	2019 - 2024	3	-0.04	3.3	-0.05	0.61866955708
BBMRRB	Insufficient data to calculate trend	91453	3	2022 - 2024	3	-	-	-	NA
BBMRDW	Insufficient data to calculate trend	116032	4	2021 - 2024	2	-	-	-	NA



Total Suspended Solids - Discrete

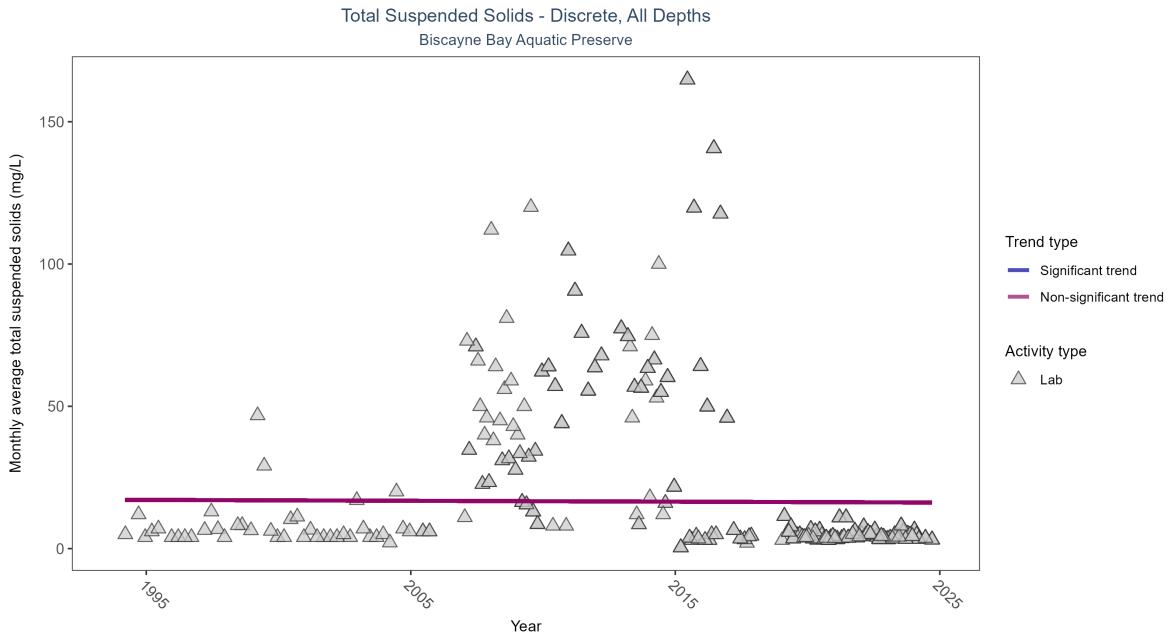
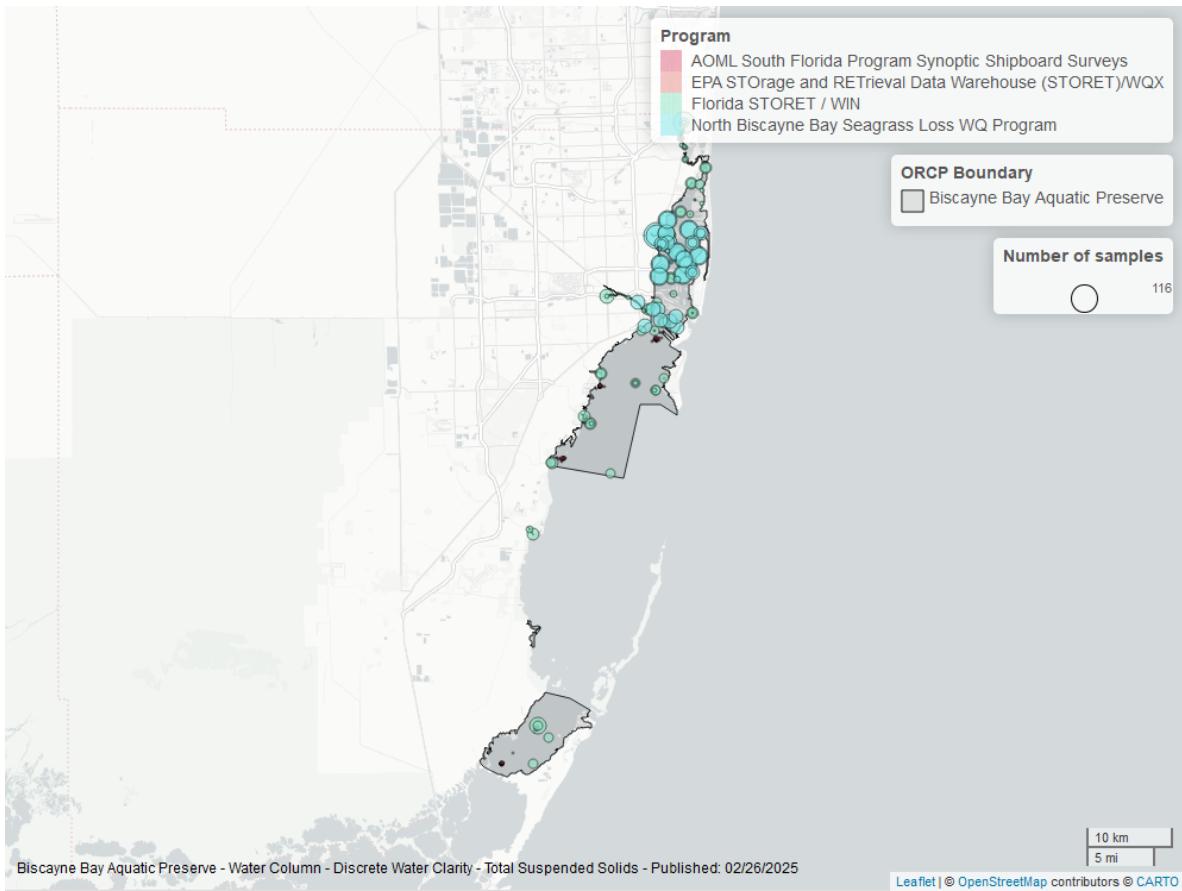


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	2221	29	1994 - 2024	4.9	-0.15956	17.13541	-0.03081	0.272444583101660420254575001308694



Chlorophyll a, Uncorrected for Pheophytin - Discrete

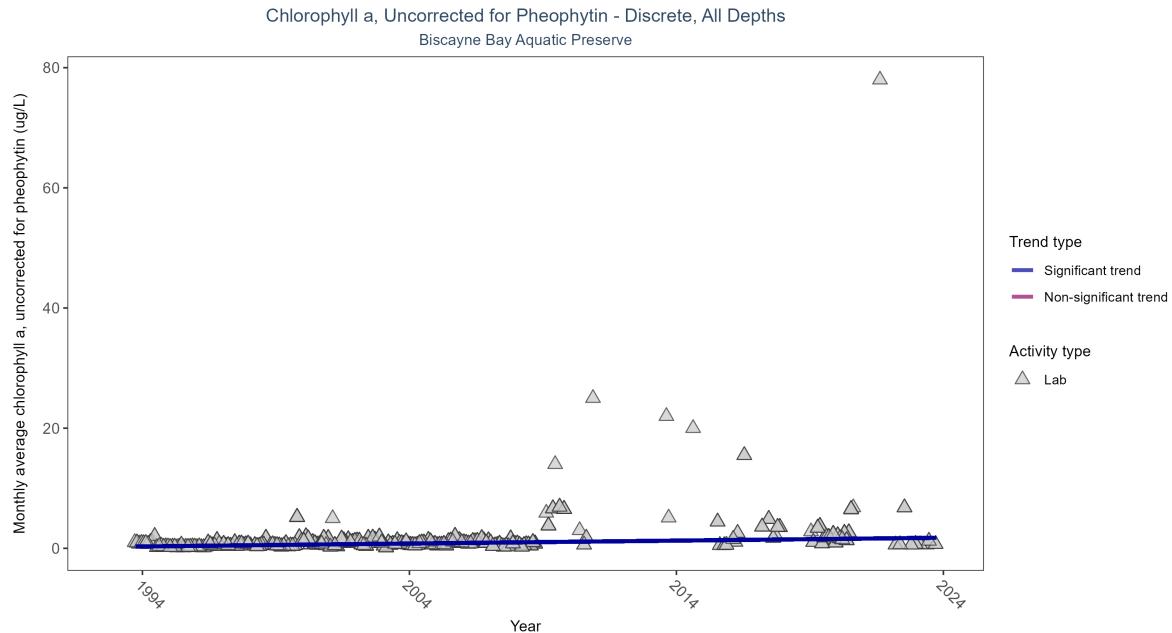
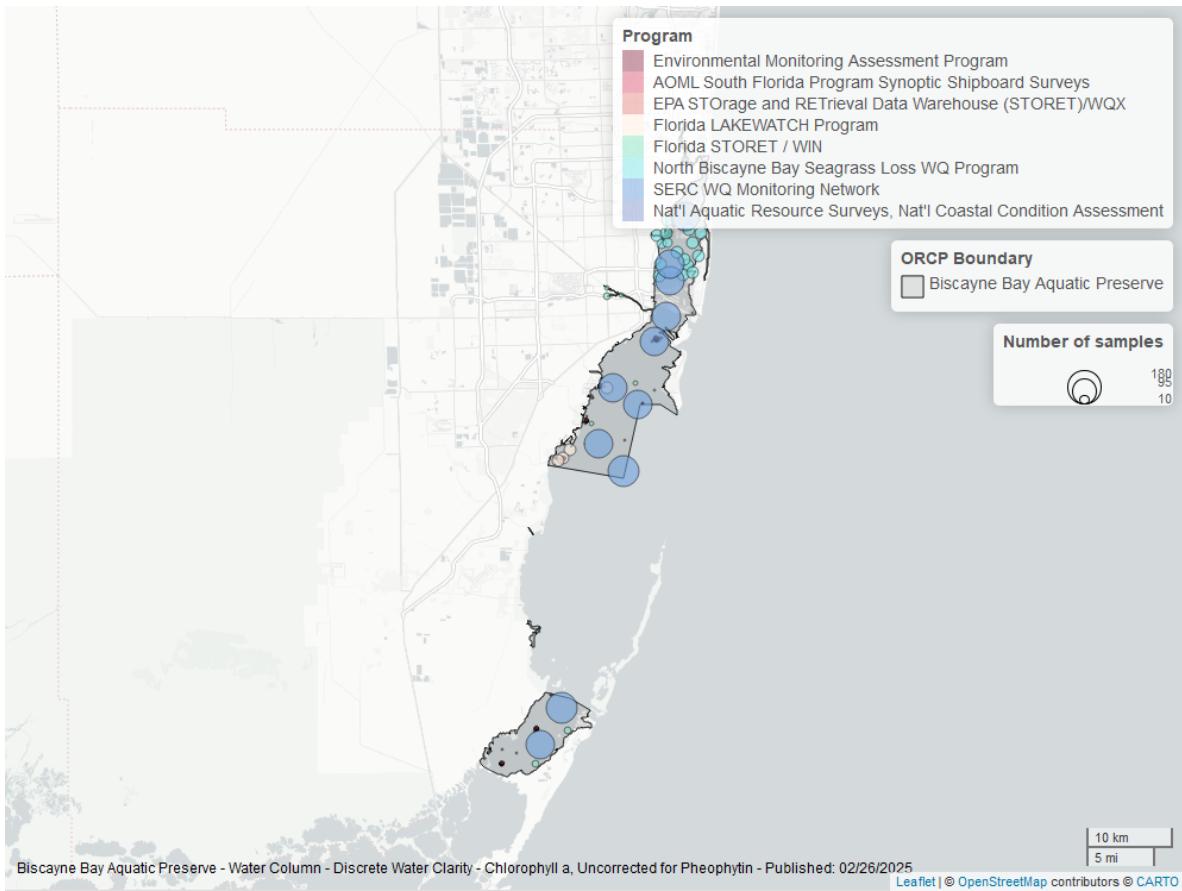


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	2254	28	1993 - 2023	0.66655	0.39038	0.26493	0.04843	0.00000000000000019393080633



Chlorophyll a, Corrected for Pheophytin - Discrete

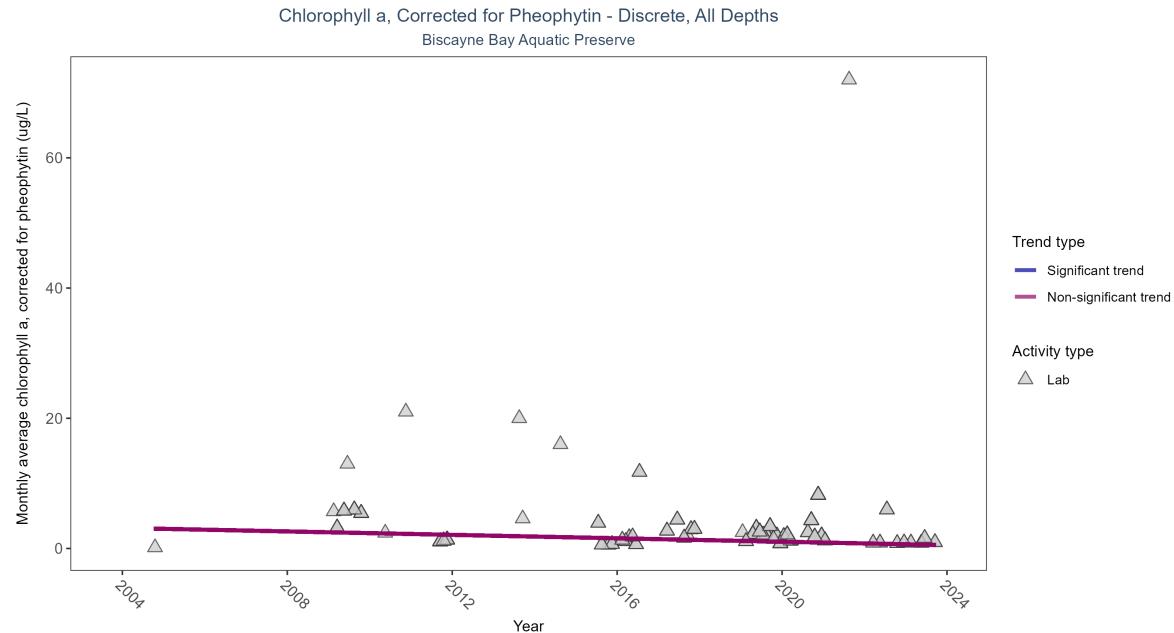
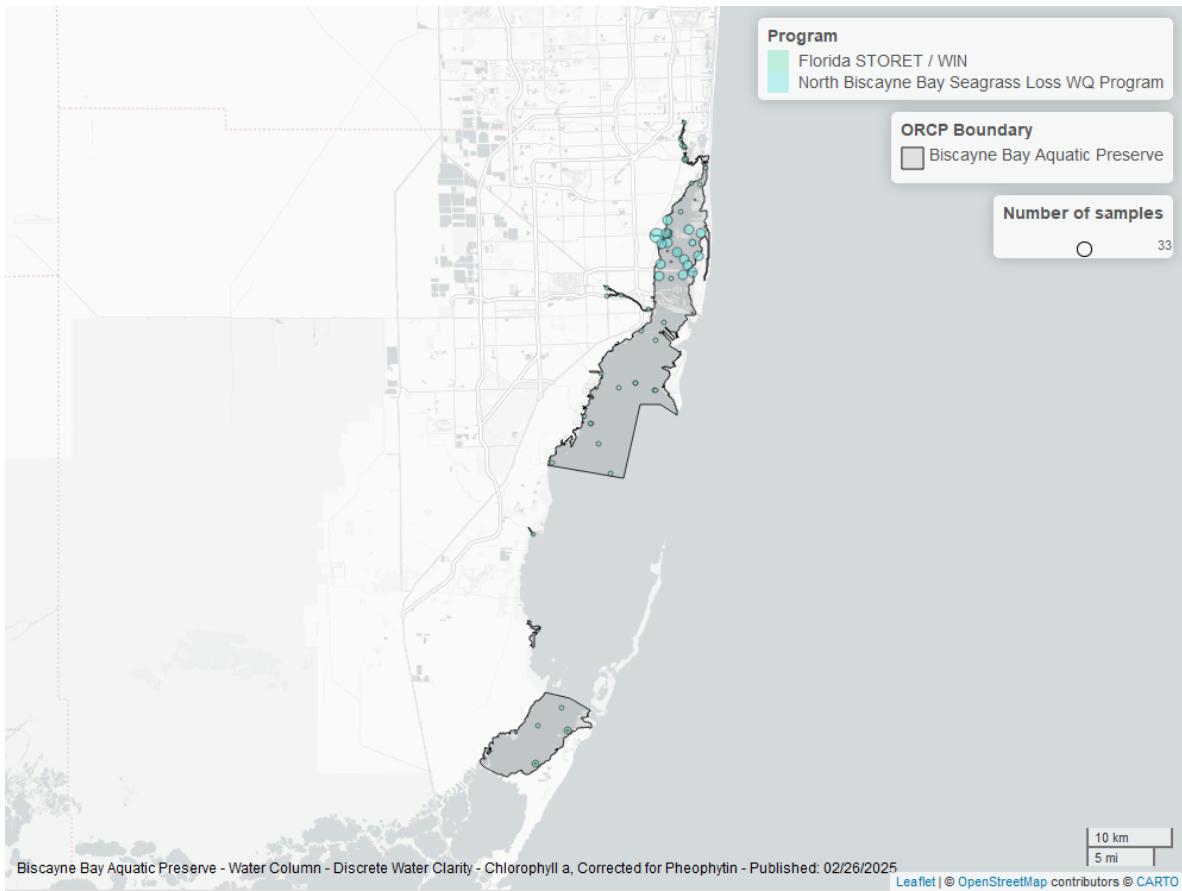


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	470	14	2004 - 2023	1.4	-0.18454	3.14798	-0.13185	0.1713076985172285182645879331



Secchi Depth - Discrete

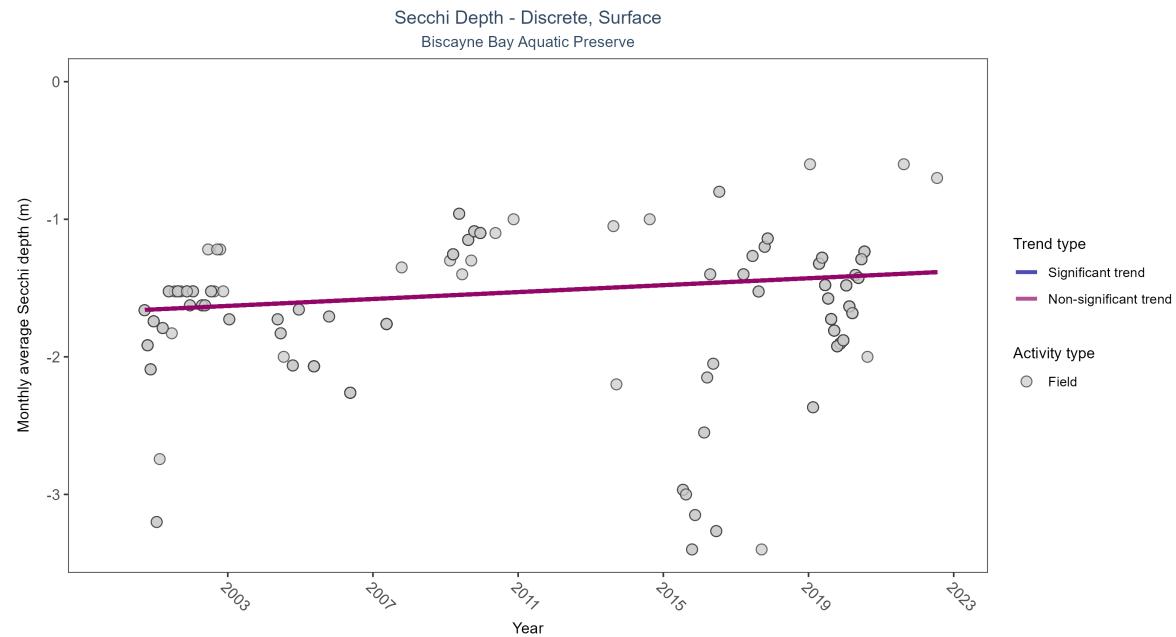
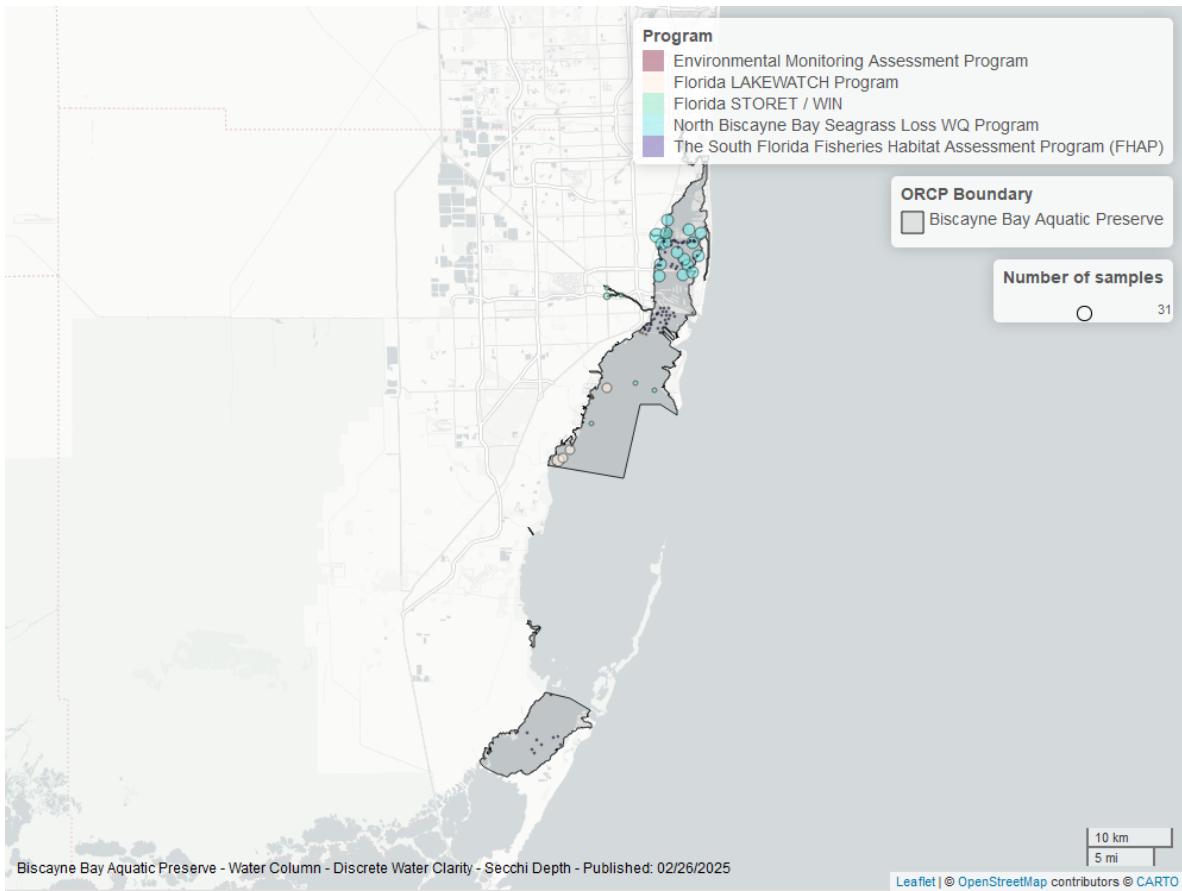


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

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	686	19	2000 - 2022	-1.52402	0.11555	-1.66756	0.01256	0.3365196471116367882281394940946



Colored Dissolved Organic Matter - Discrete

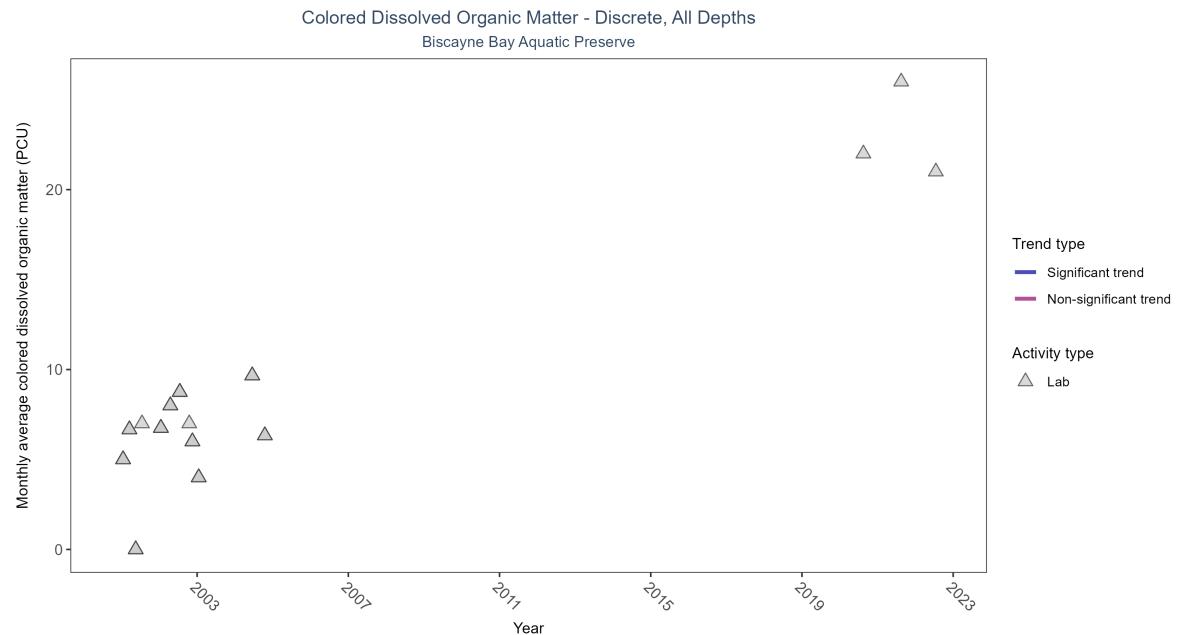


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

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	38	7	2001 - 2022		7	-	-	- NA

