

Gasparilla Sound-Charlotte Harbor Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 18 March, 2025

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Indicators

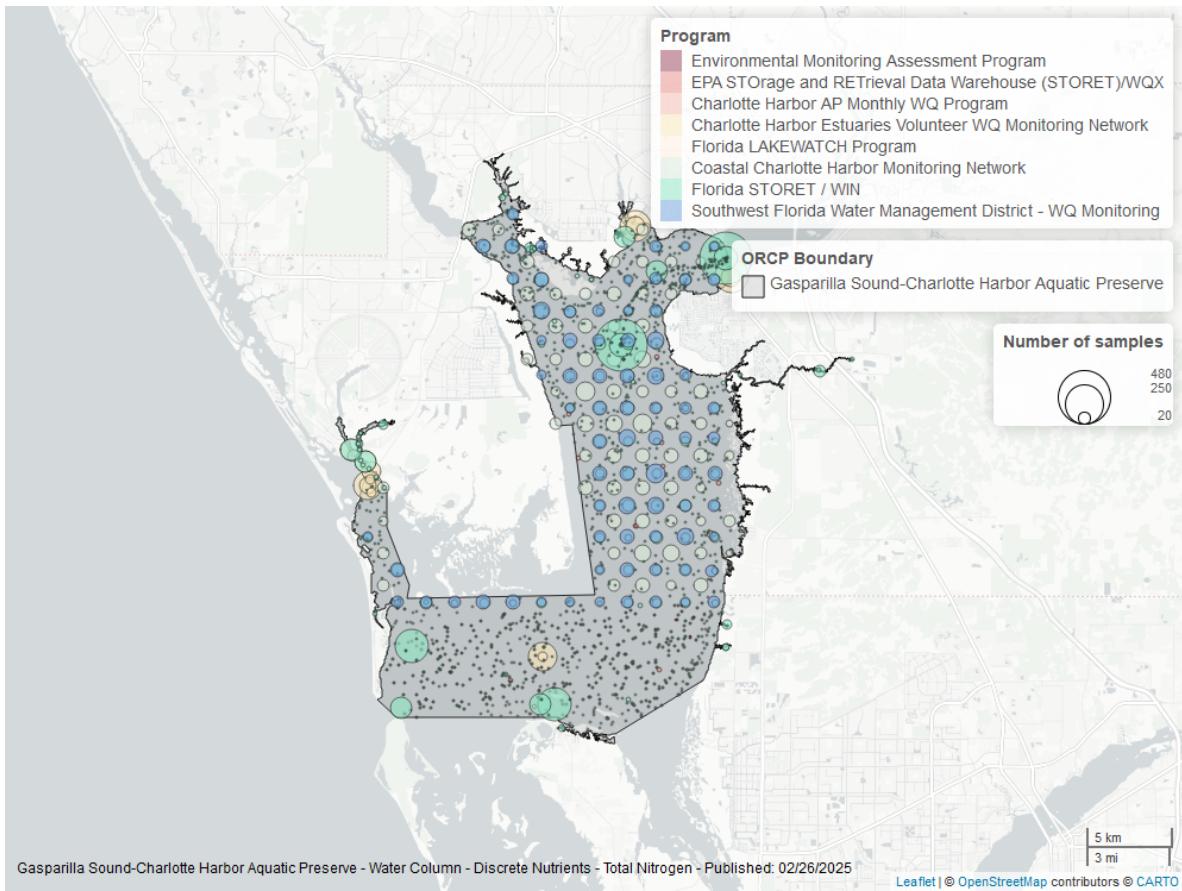
Nutrients

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	10753	33	1993 - 2025	0.663	0.04192	0.65488	0.00124	0.28398607263870301320451972060



Total Phosphorus - Discrete

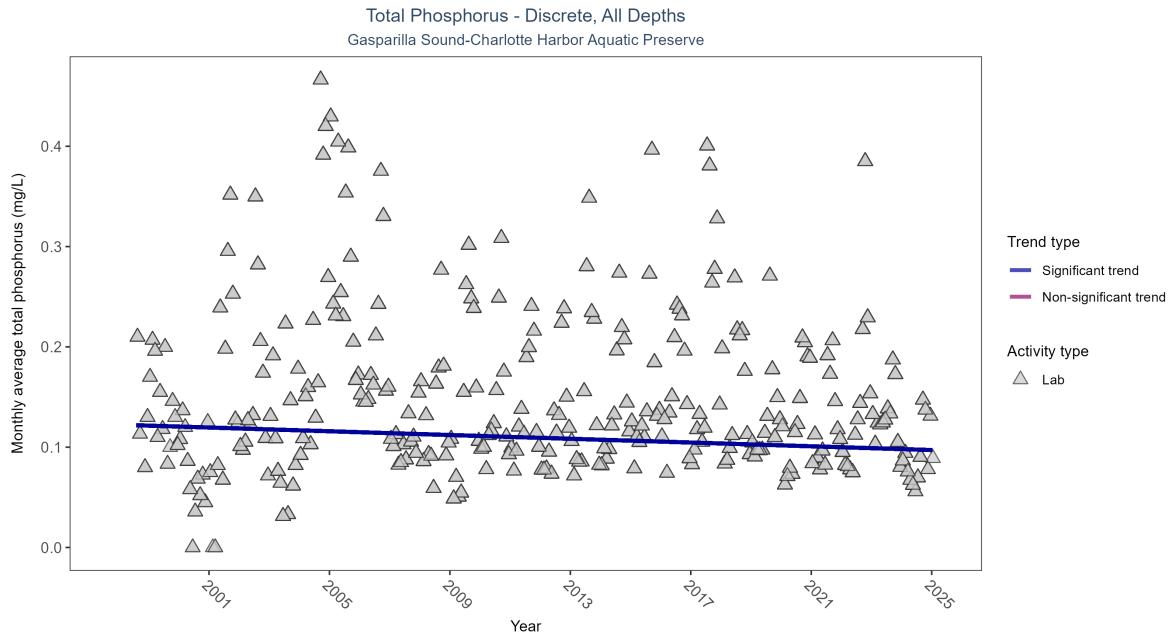
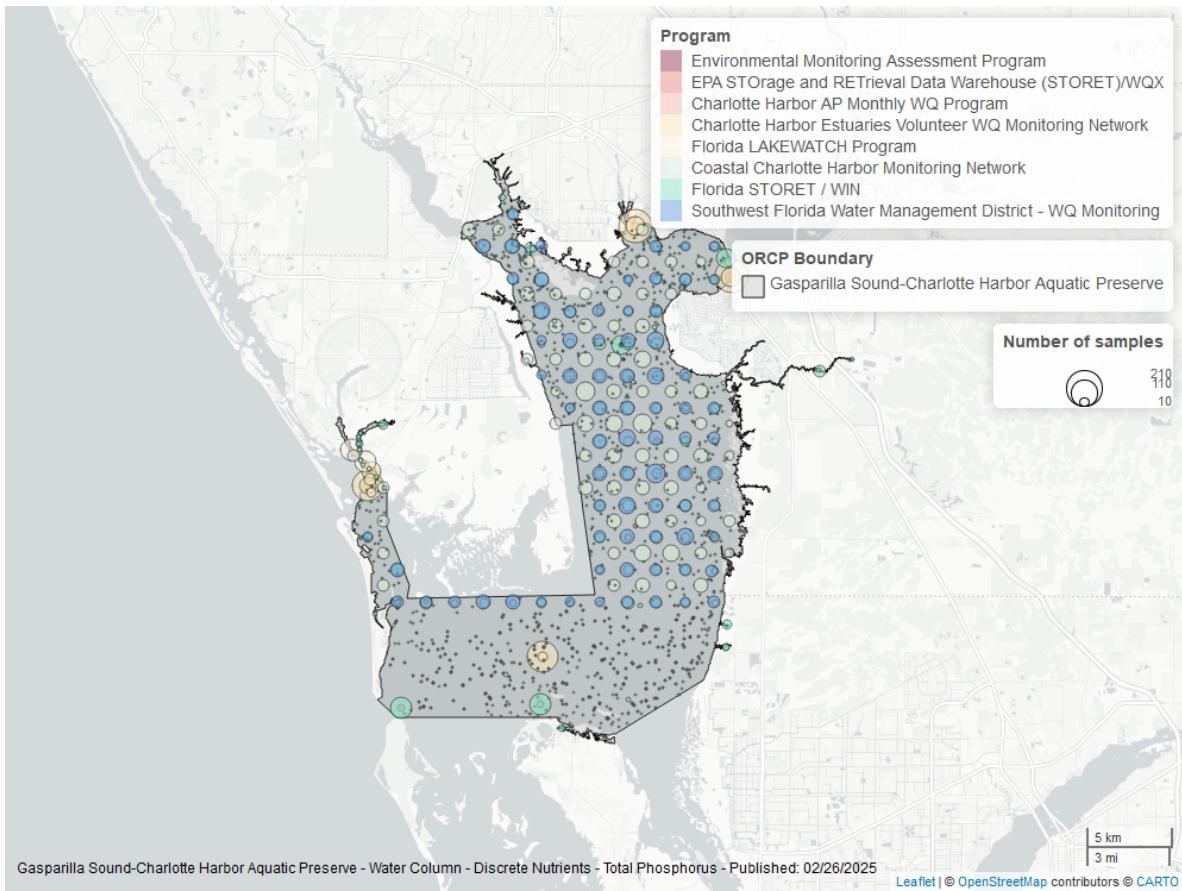


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

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	8831	28	1998 - 2025	0.118	-0.10065	0.12241	-0.00094	0.0127365604133204031456205740369114209897816181182861328125000000



Water Quality

Dissolved Oxygen - Discrete

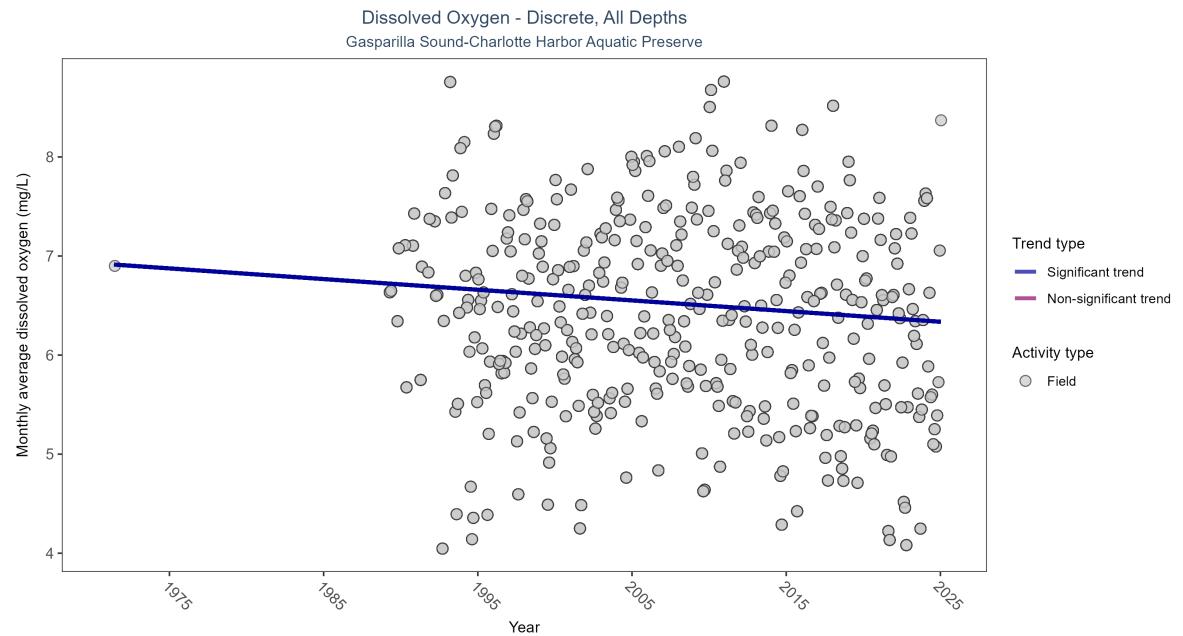
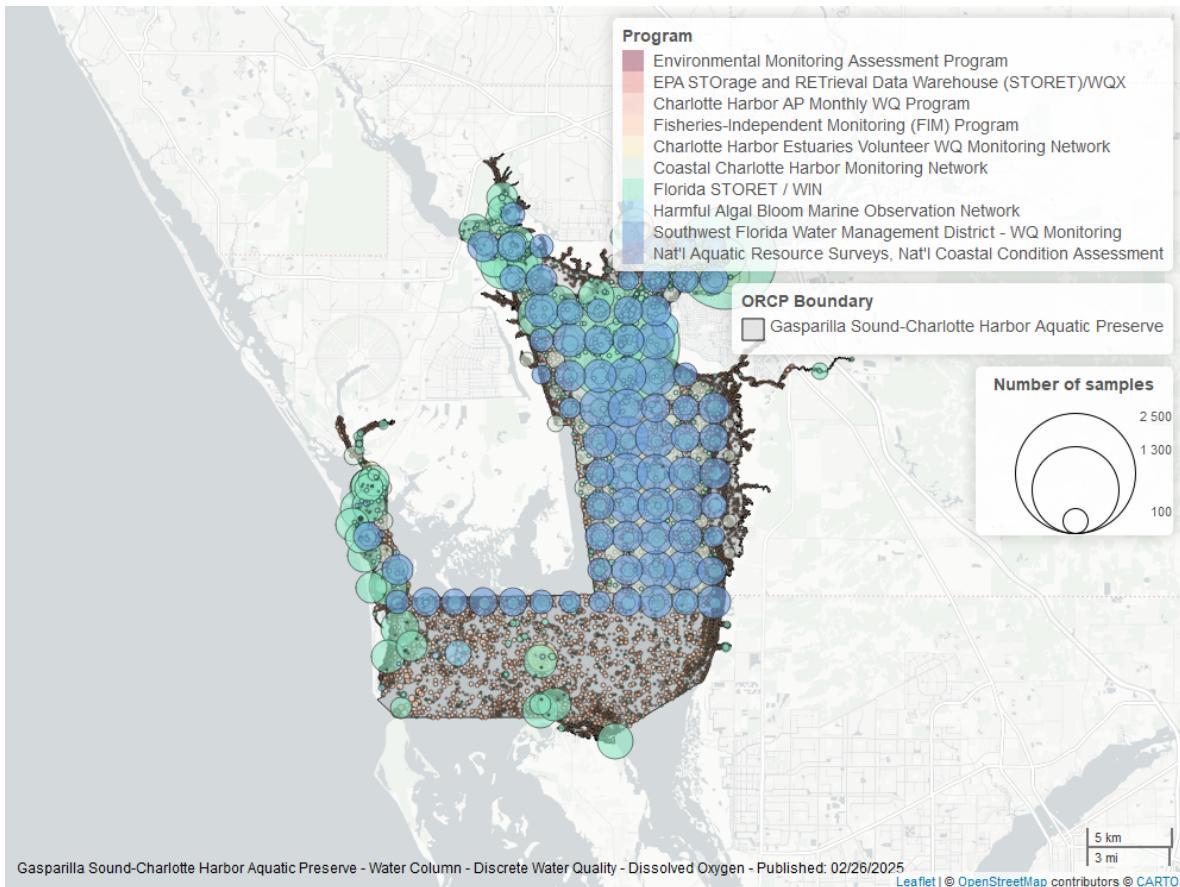


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

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	74596	38	1971 - 2025	6.55	-0.13434	6.91813	-0.01077	0.00006993256566391



Dissolved Oxygen - Continuous

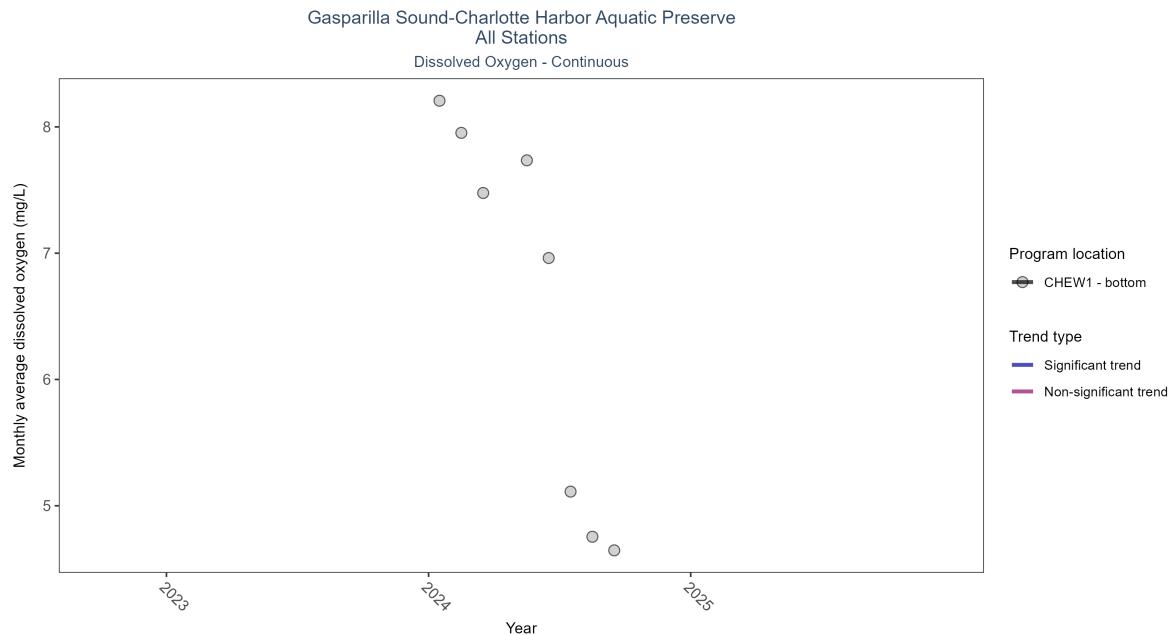
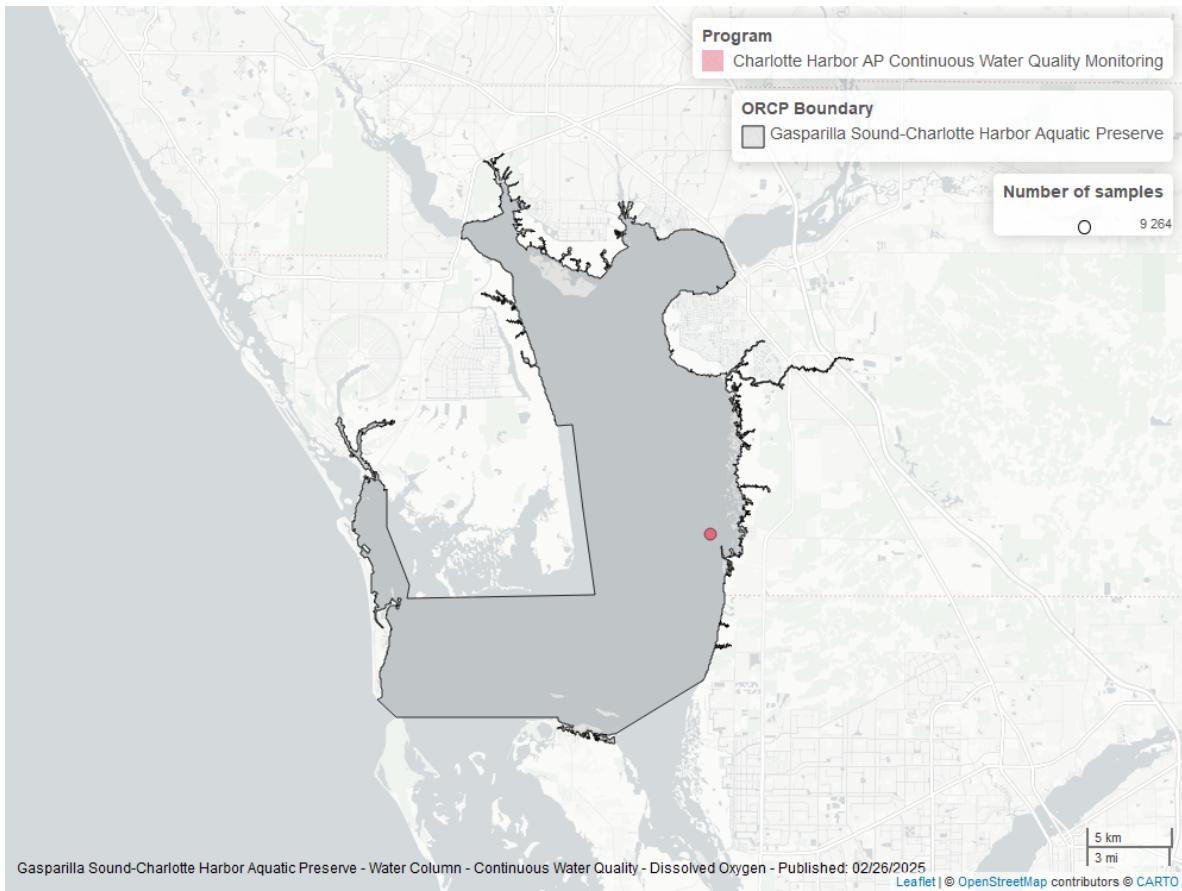


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
CHEW1	Insufficient data to calculate trend	18086	1	2024 - 2024	6.2	-	-	-	NA



Dissolved Oxygen Saturation - Discrete

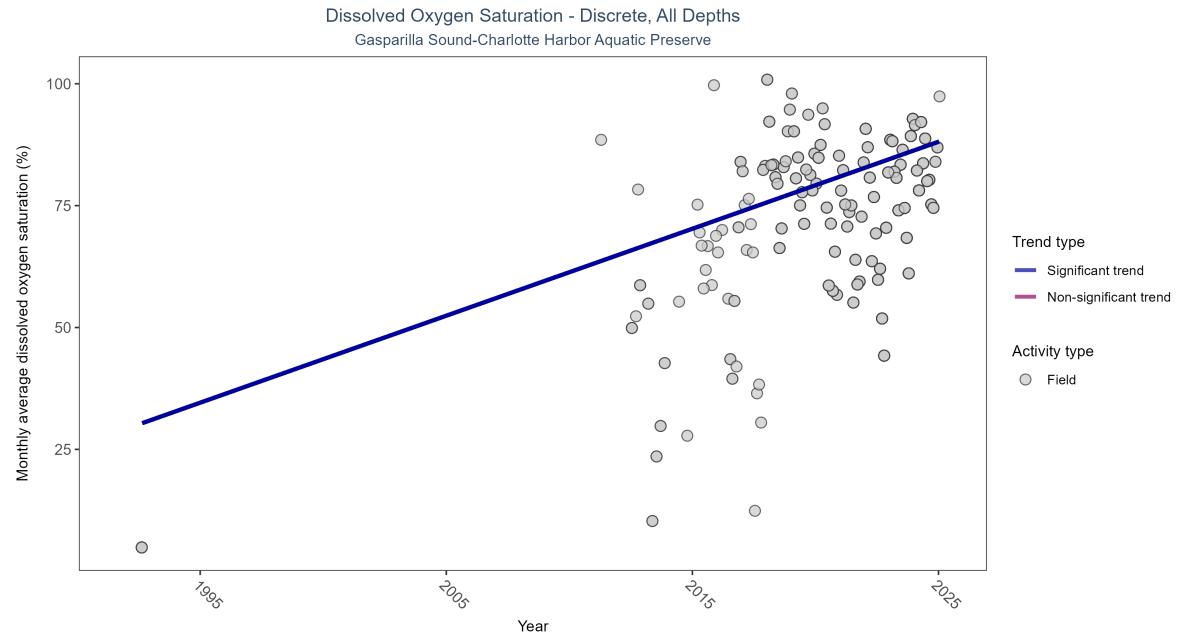
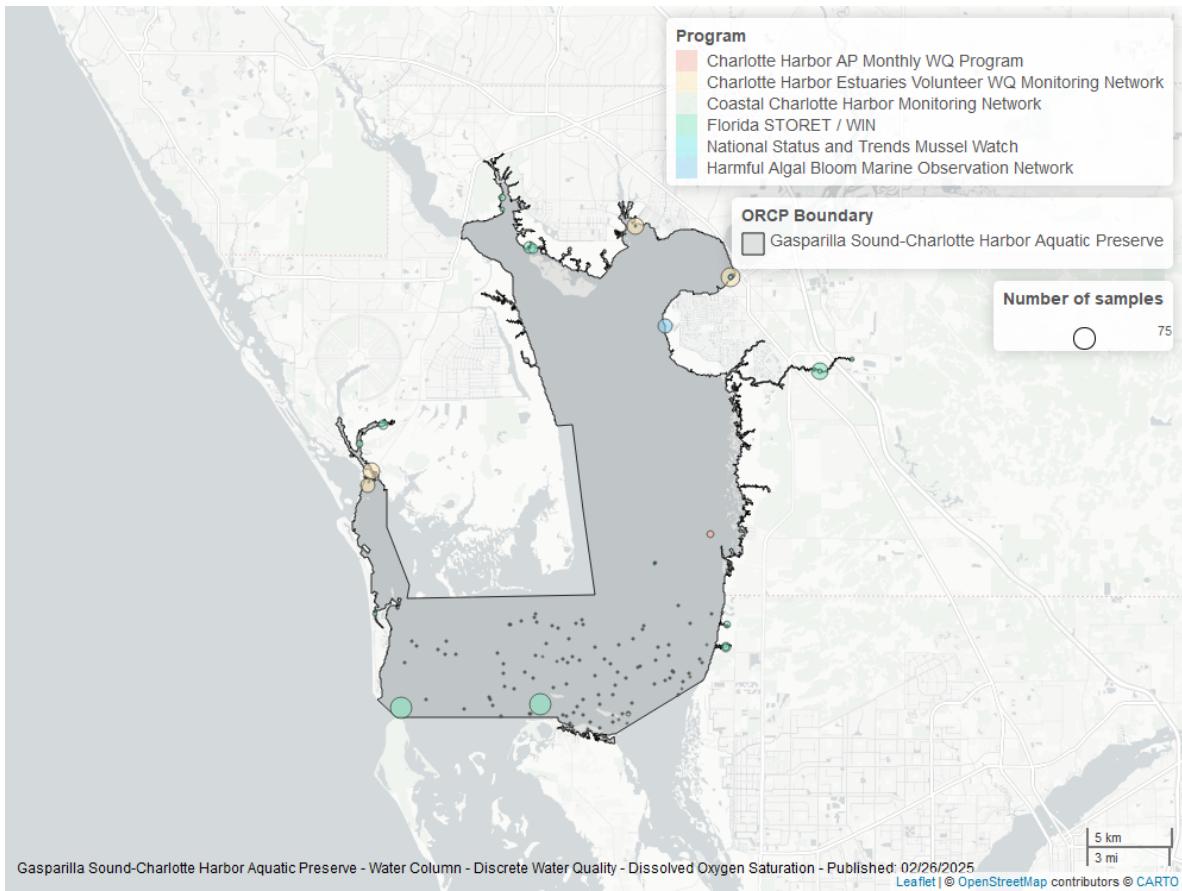


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	828	16	1992 - 2025	82.95	0.30793	29.22726	1.78399	0.000005025016571739020400030883983788498881040140986442565917968750000000



Dissolved Oxygen Saturation - Continuous

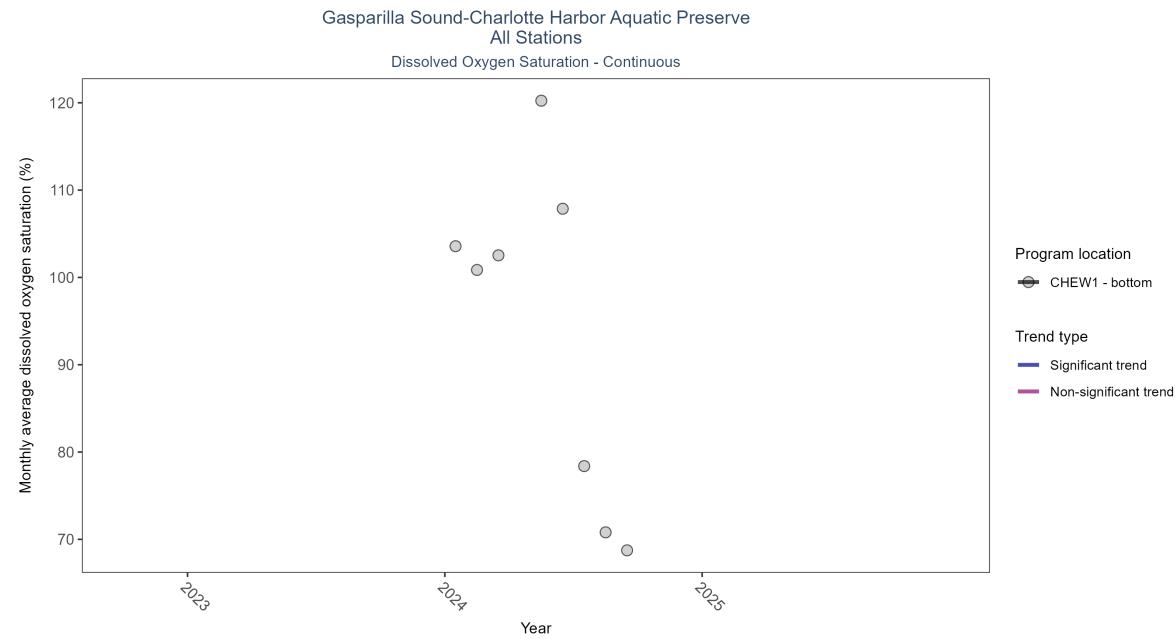
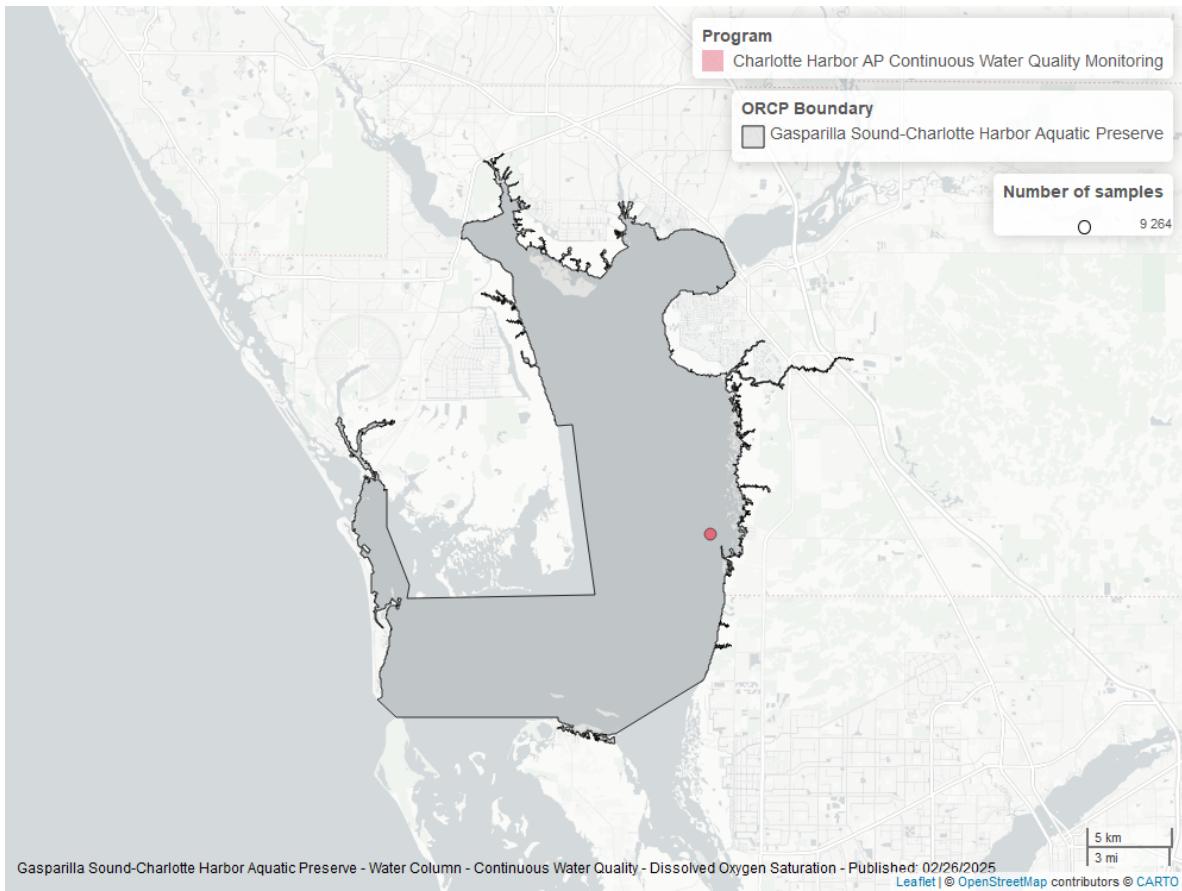


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
CHEW1	Insufficient data to calculate trend	18086	1	2024 - 2024	89.6	-	-	-	NA



Salinity - Discrete

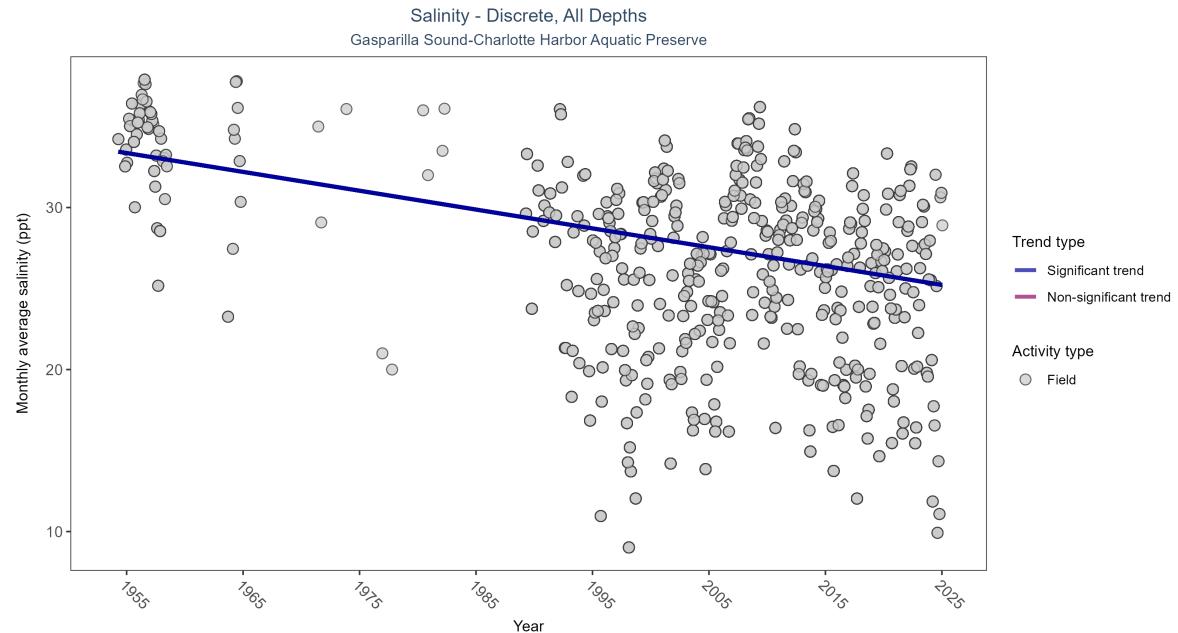
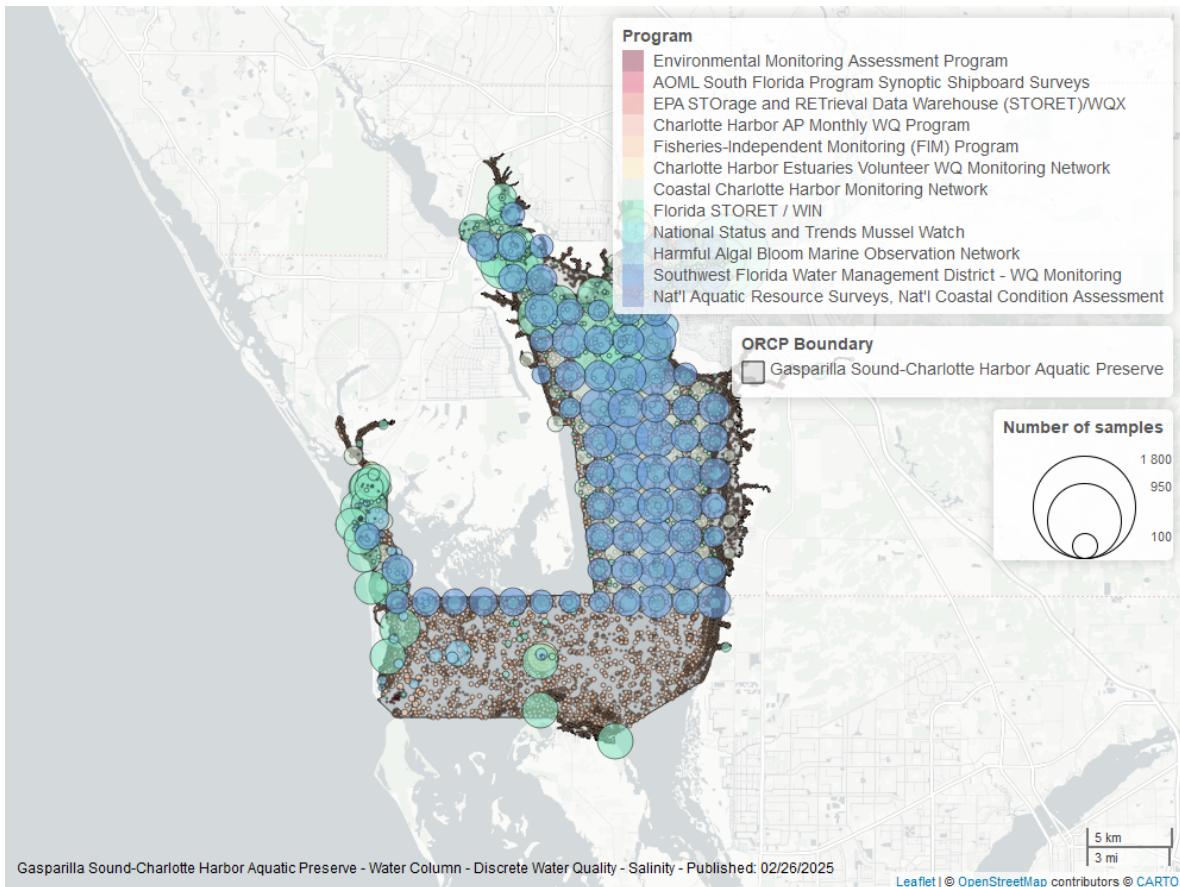


Table 7: Seasonal Kendall-Tau Results for - Salinity

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	73087	50	1954 - 2025	26.7	-0.28403	33.47918	-0.11626	0.00000000000000062681990895911327106938915676



Salinity - Continuous

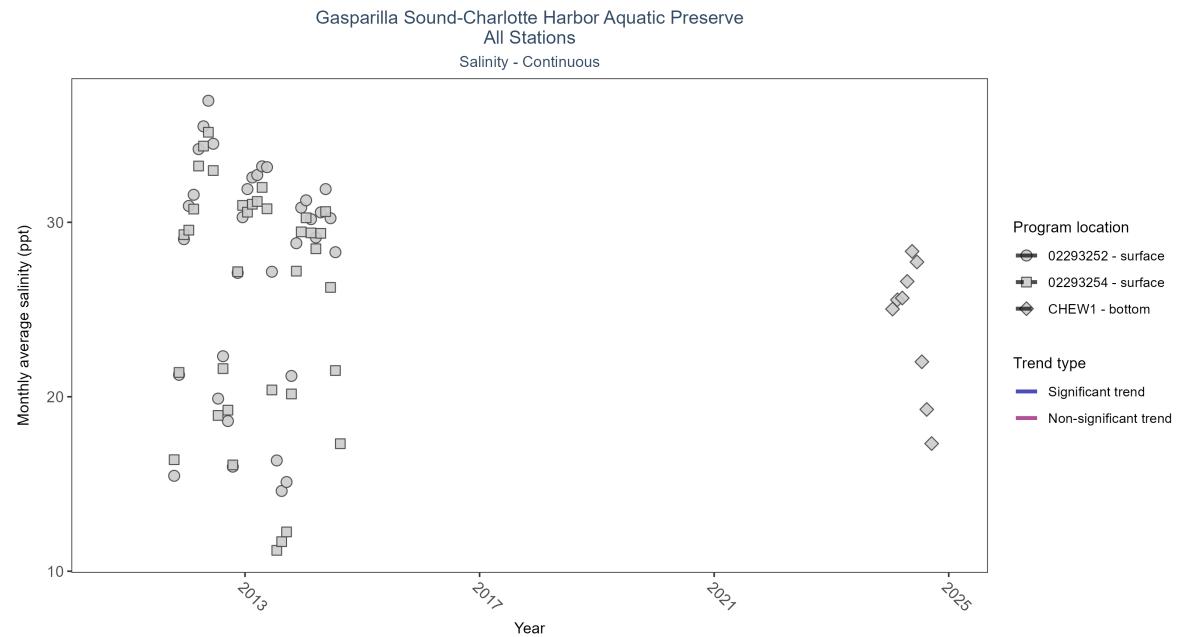
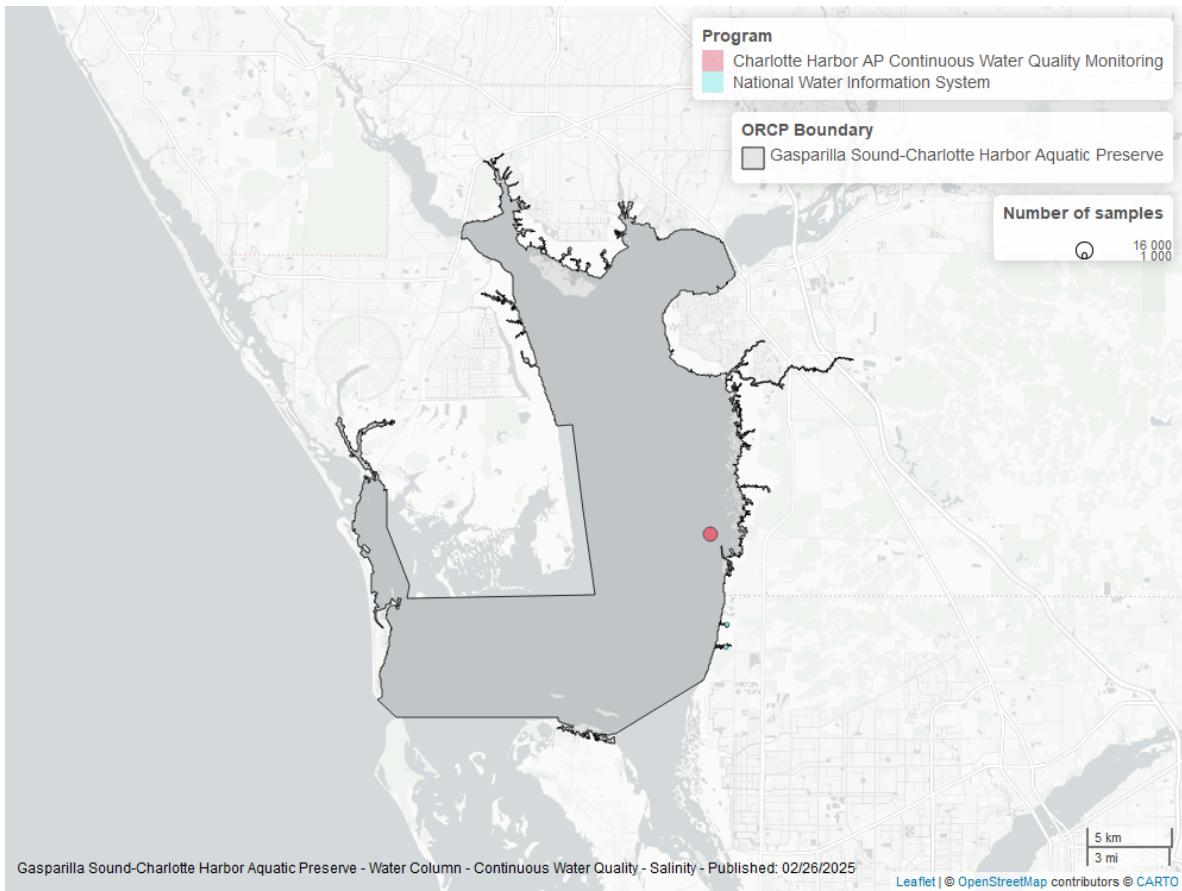


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
02293252	Insufficient data to calculate trend	1002	4	2011 - 2014	30.0	-	-	-	NA
02293254	Insufficient data to calculate trend	1030	4	2011 - 2014	29.0	-	-	-	NA
CHEW1	Insufficient data to calculate trend	24038	1	2024 - 2024	25.4	-	-	-	NA



Water Temperature - Discrete

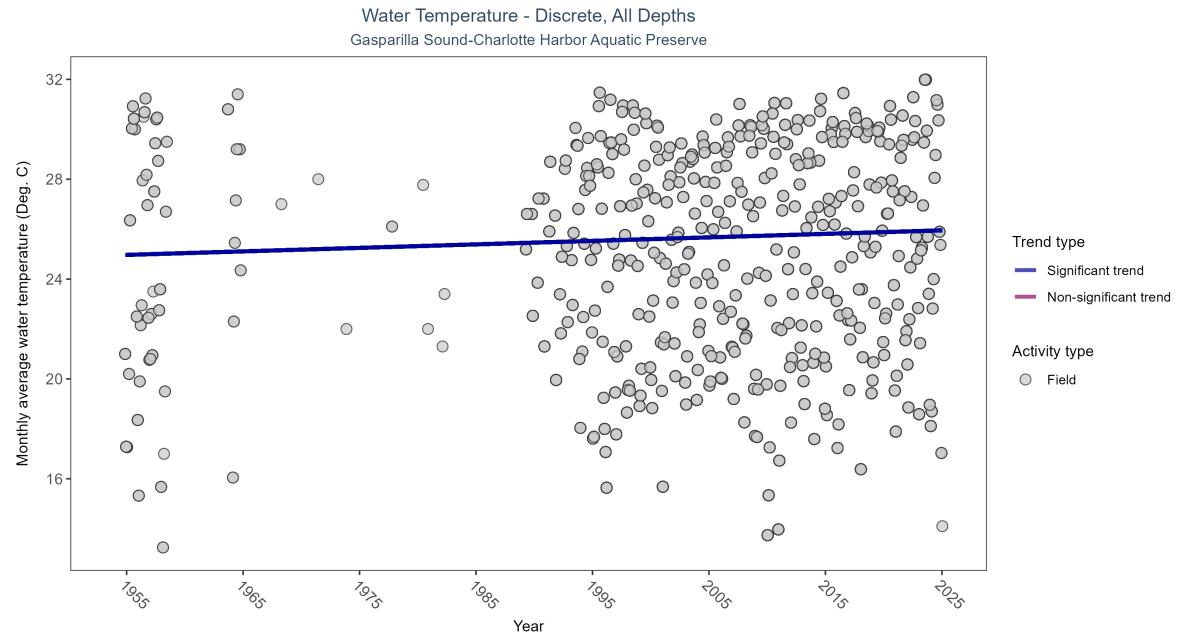
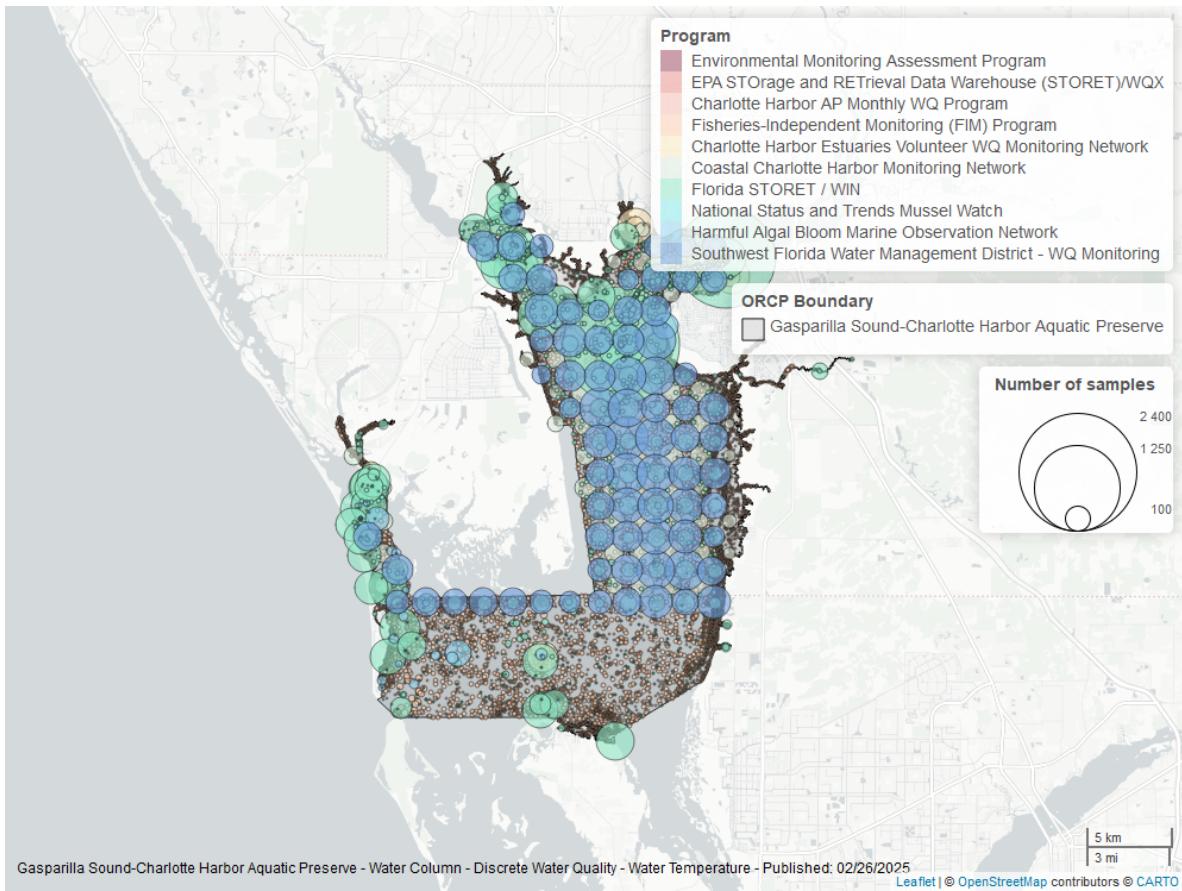


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

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	75636	50	1954 - 2025	26.06	0.12498	24.9543	0.01403	0.000117384722877687



Water Temperature - Continuous

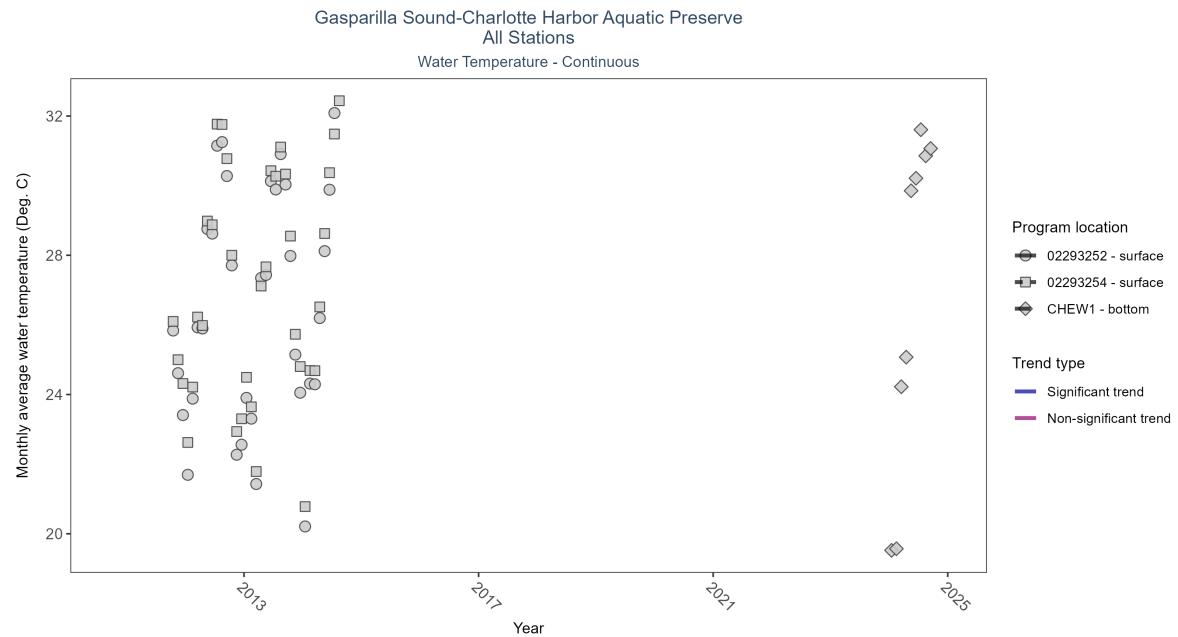
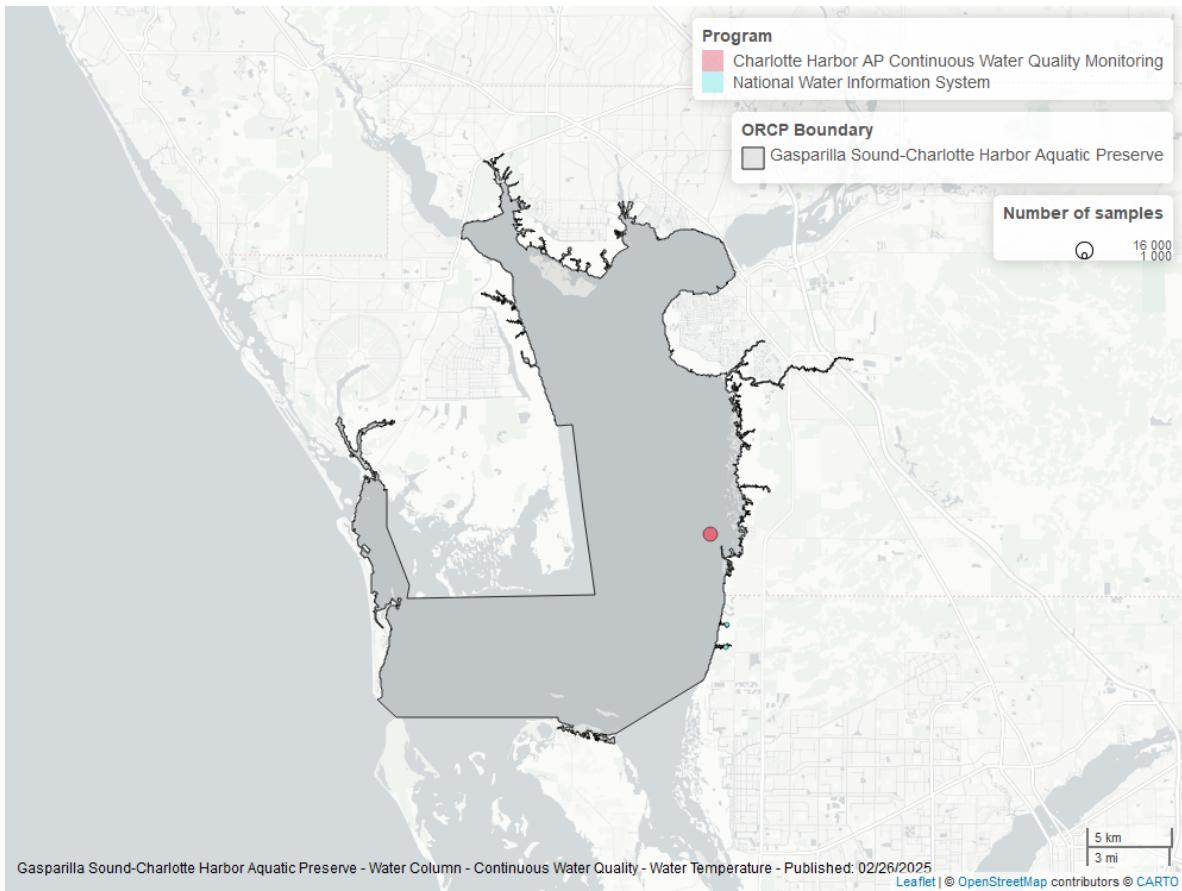


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
02293254	Insufficient data to calculate trend	1041	4	2011 - 2014	27.0	-	-	-	NA
02293252	Insufficient data to calculate trend	1003	4	2011 - 2014	26.4	-	-	-	NA
CHEW1	Insufficient data to calculate trend	24041	1	2024 - 2024	29.4	-	-	-	NA



pH - Discrete

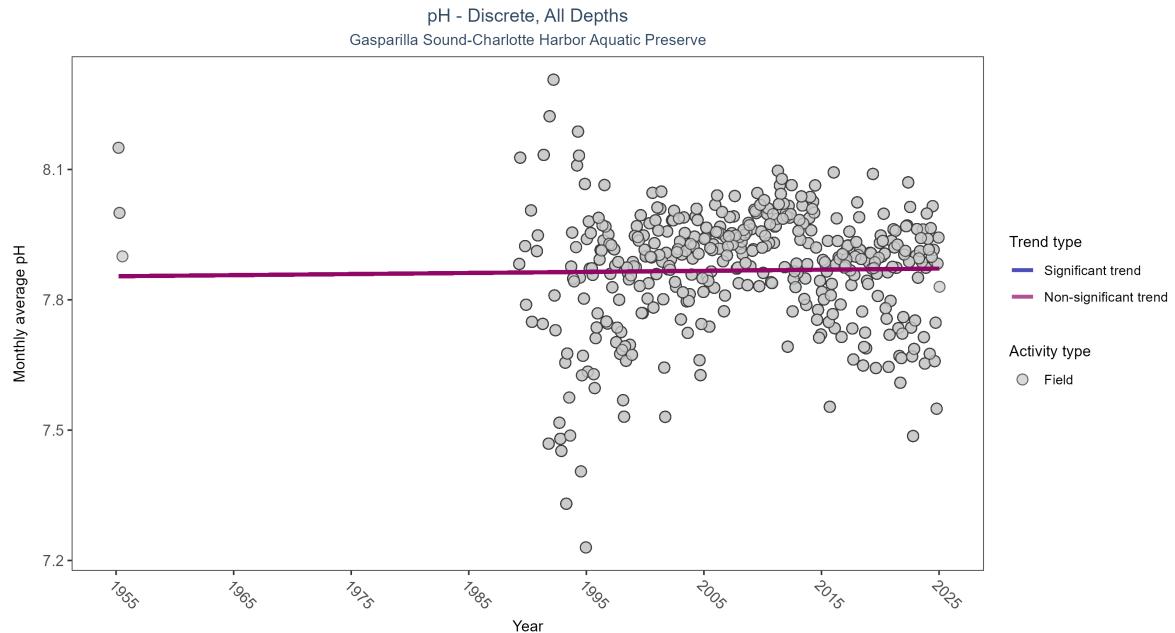
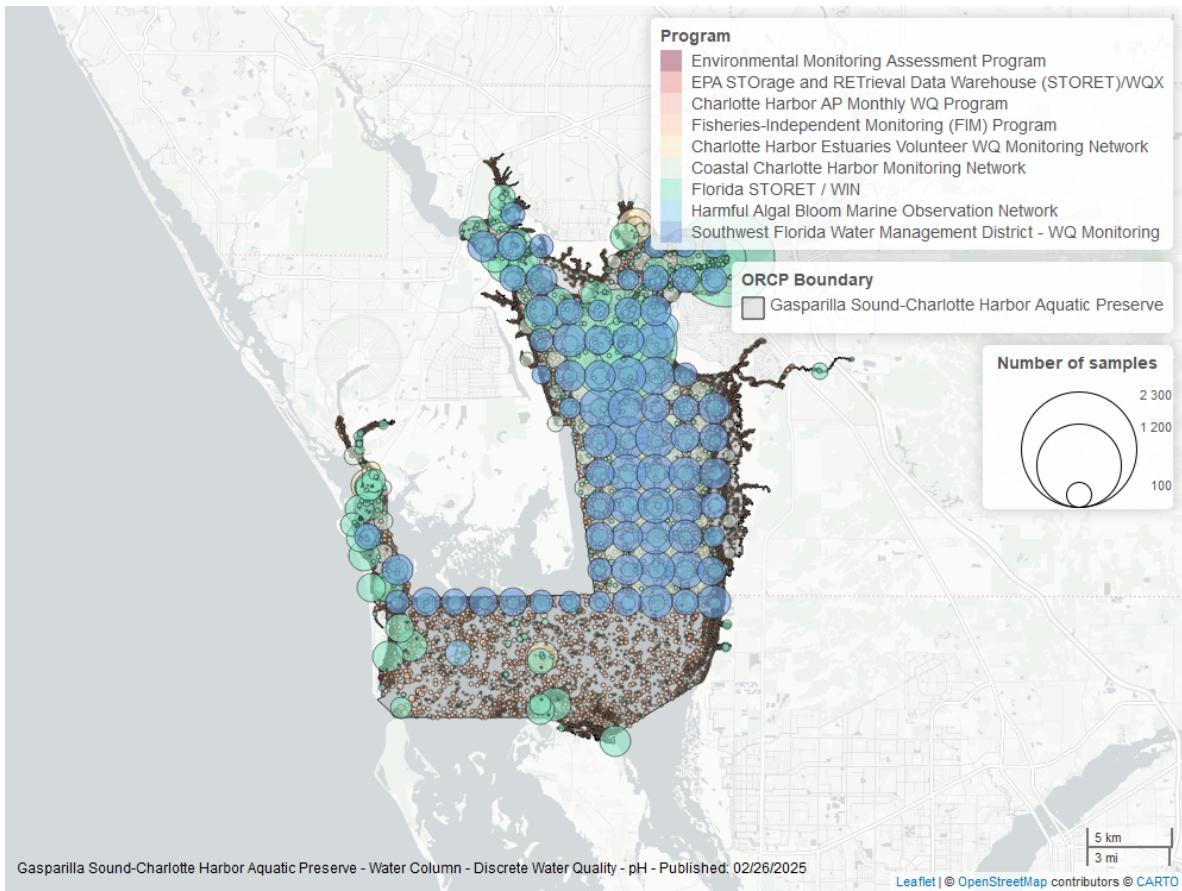


Table 11: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	71238	38	1955 - 2025	7.91	0.02263	7.85423	0.00025	0.59275590479346518257841580634703859686852



pH - Continuous

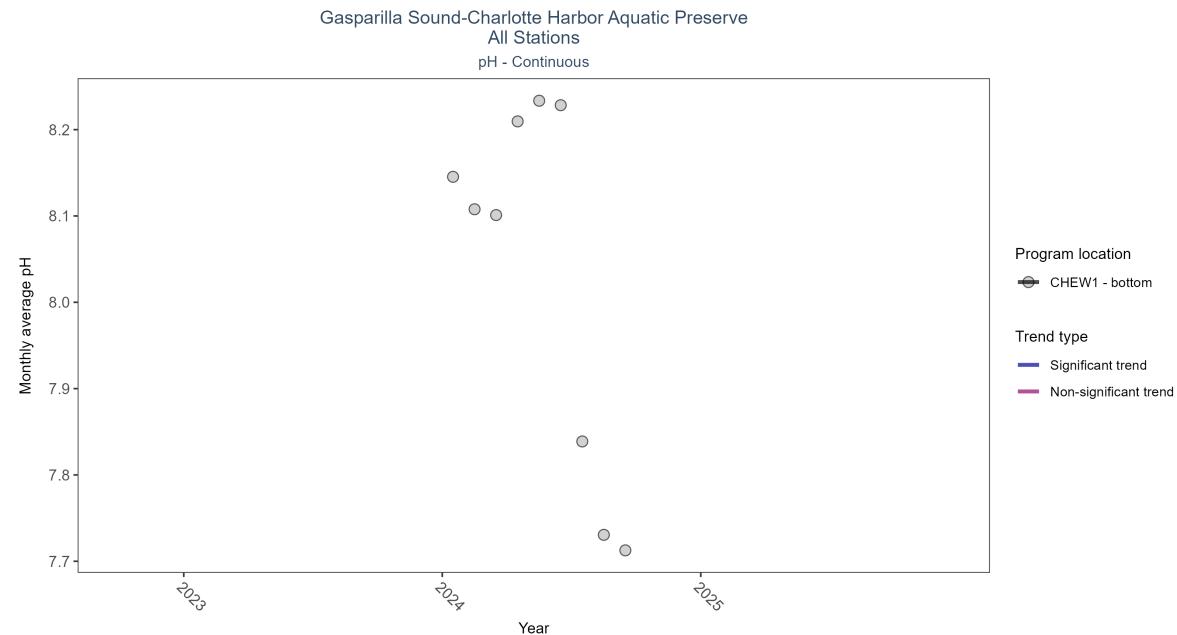
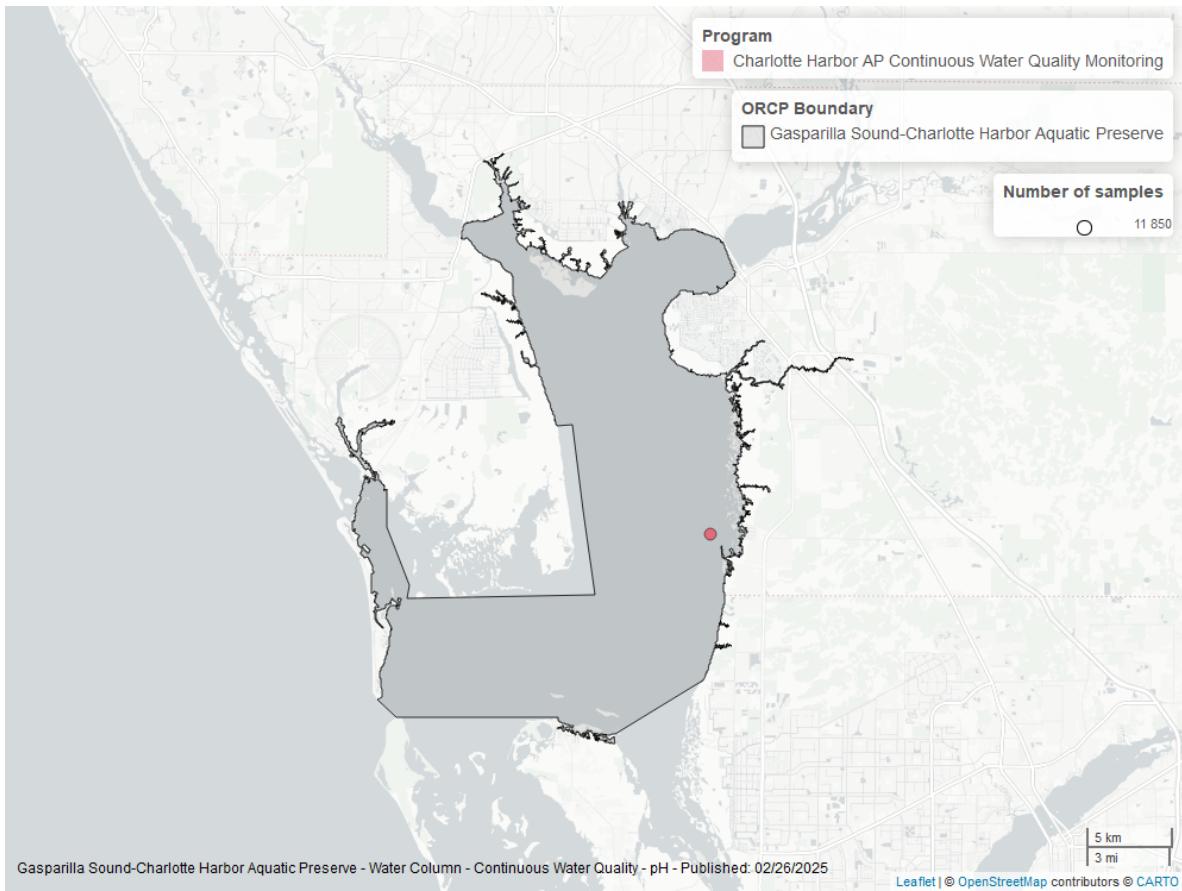


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
CHEW1	Insufficient data to calculate trend	20679	1	2024 - 2024	8	-	-	-	NA



Water Clarity

Turbidity - Discrete

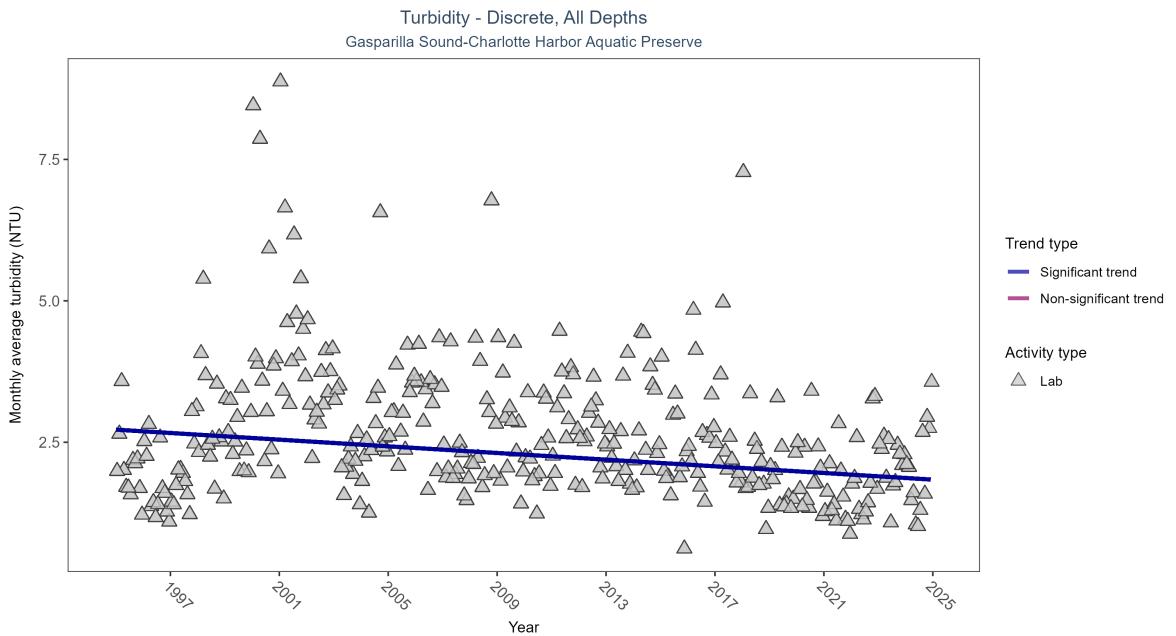
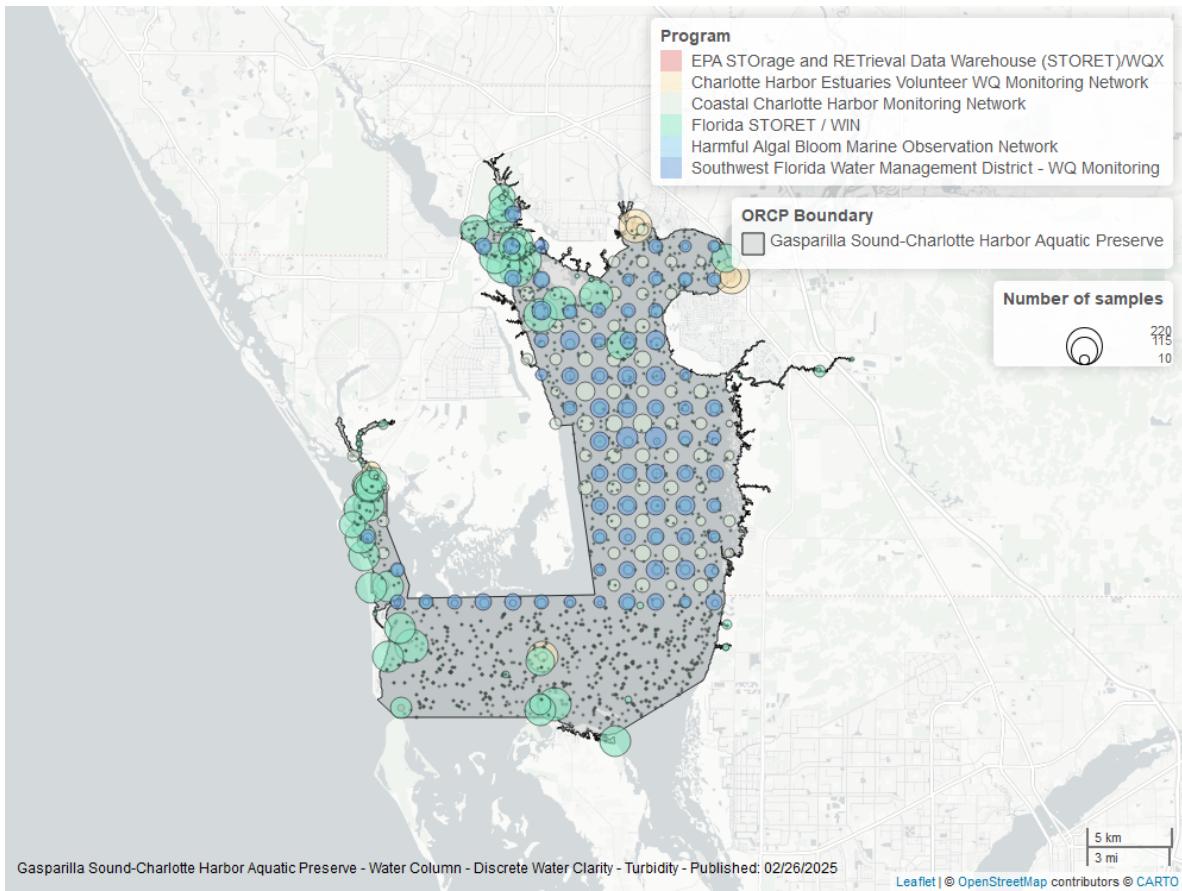


Table 13: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	14679	30	1995 - 2024	1.96	-0.19157	2.723	-0.02945	0.00000026736158711275



Turbidity - Continuous

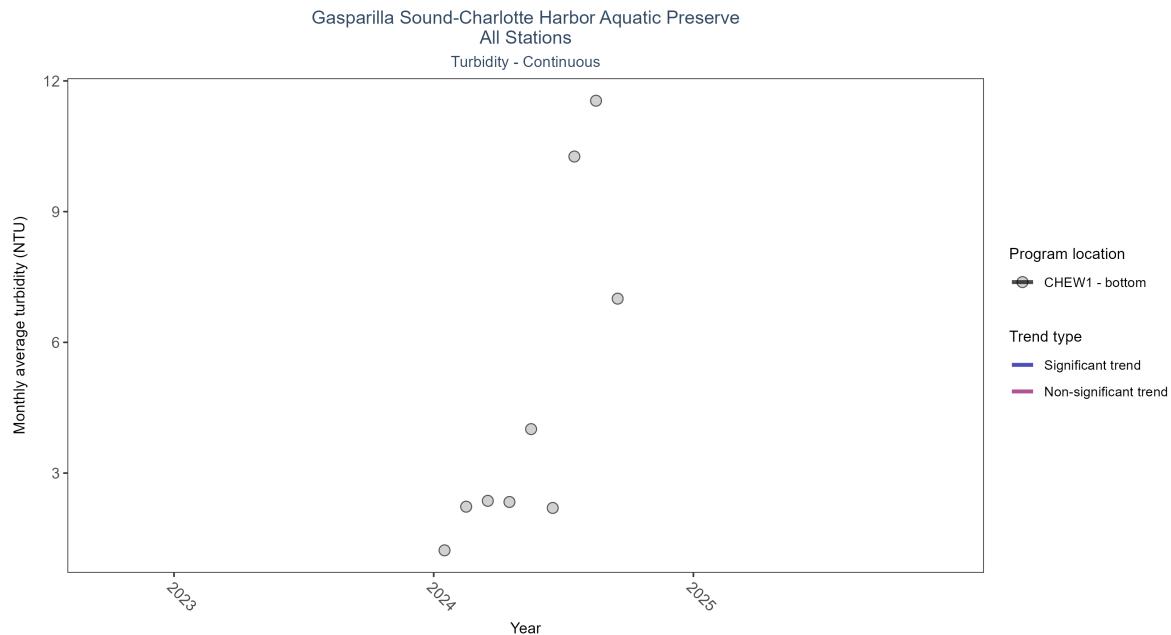
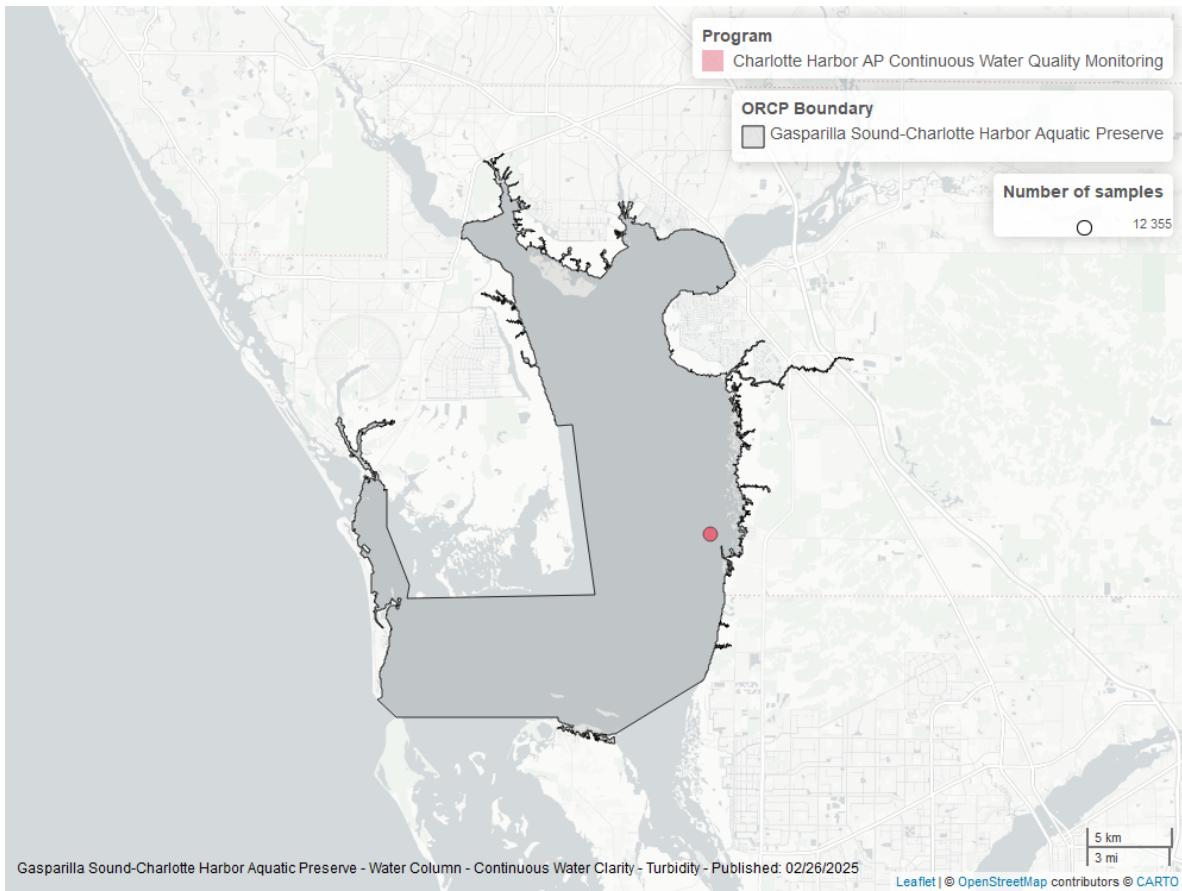


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
CHEW1	Insufficient data to calculate trend	18211	1	2024 - 2024	2	-	-	-	NA



Total Suspended Solids - Discrete

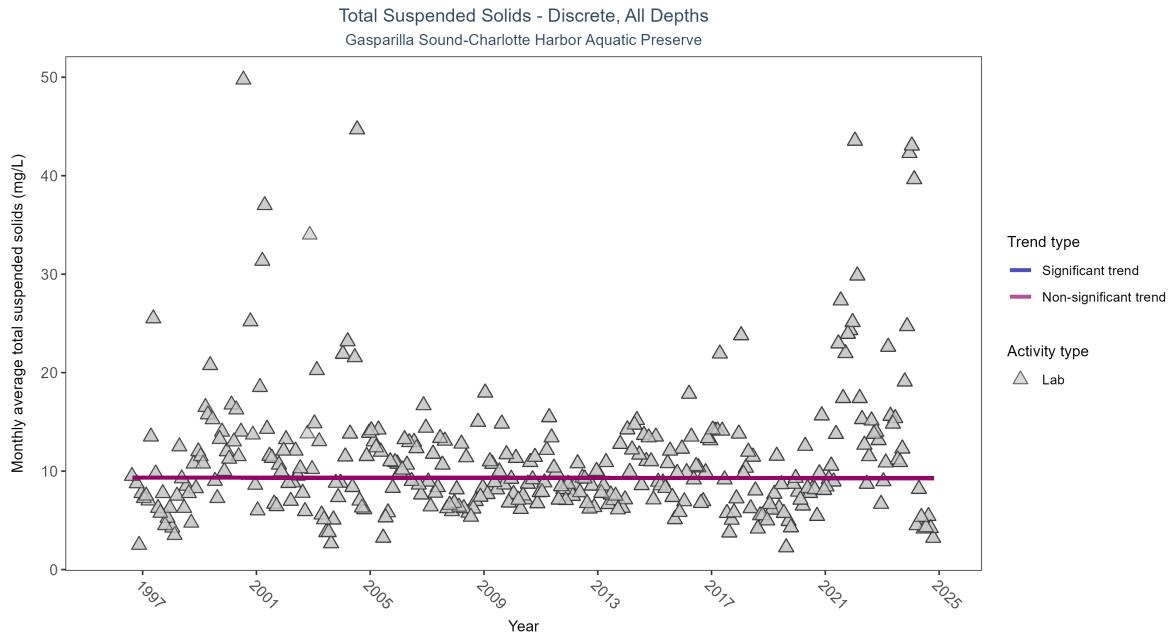
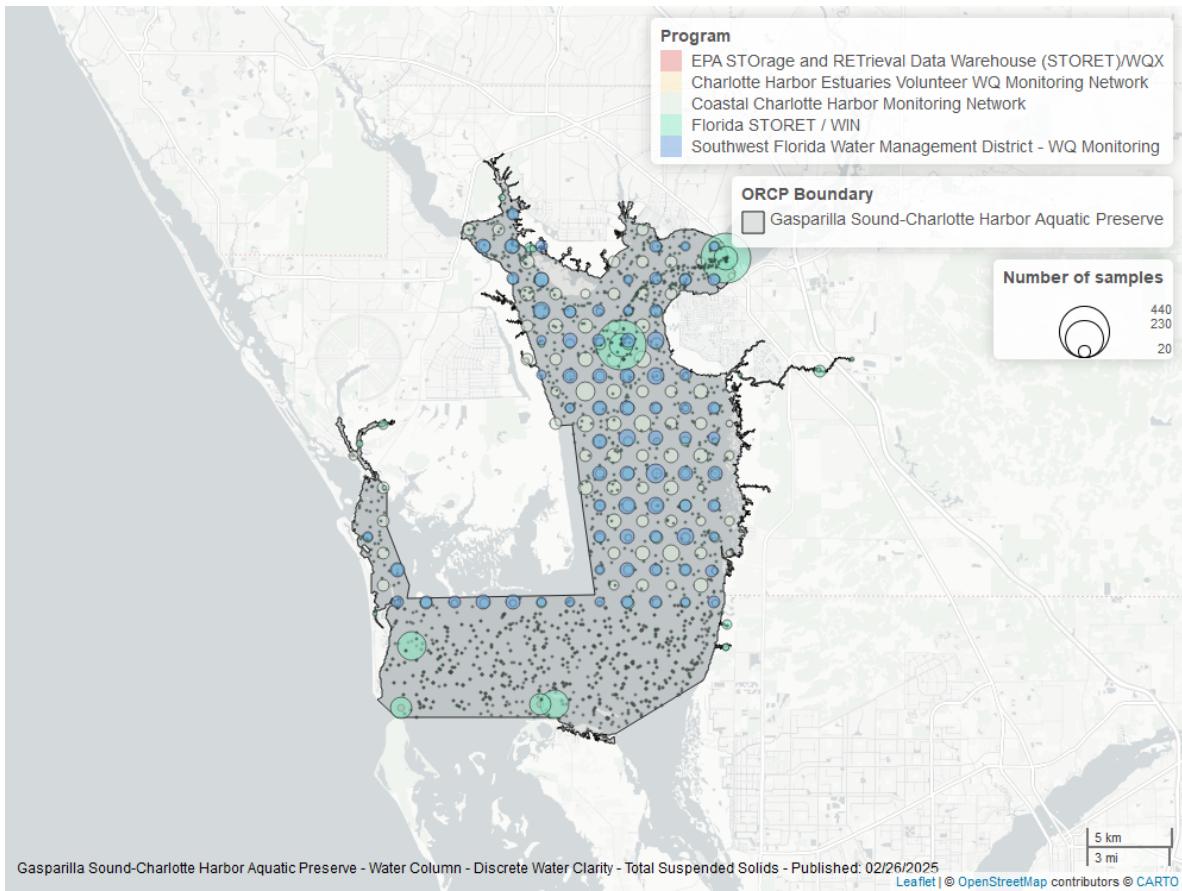


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

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	8788	29	1996 - 2024	7.25	-0.00221	9.3404	-0.00192	0.959075373078356663292254324915120



Chlorophyll a, Uncorrected for Pheophytin - Discrete

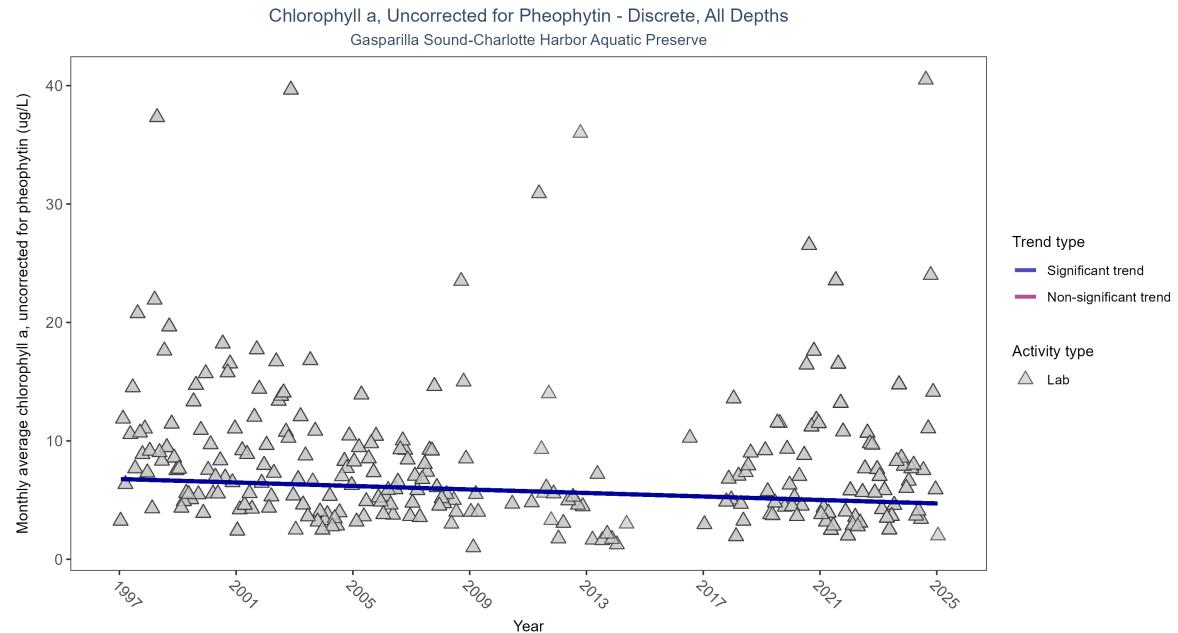
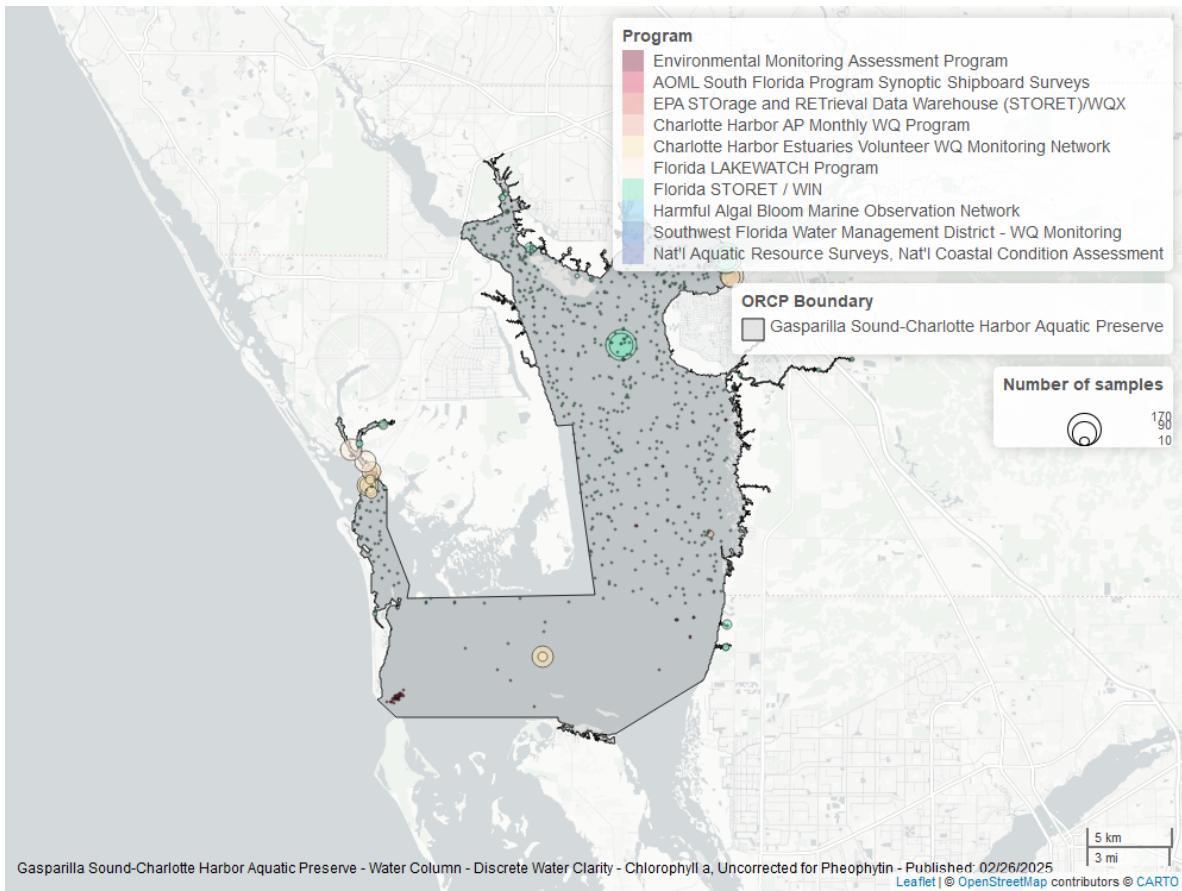


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	2499	28	1997 - 2025	4.75	-0.15483	6.7786	-0.07375	0.00075466909286402204890681



Chlorophyll a, Corrected for Pheophytin - Discrete

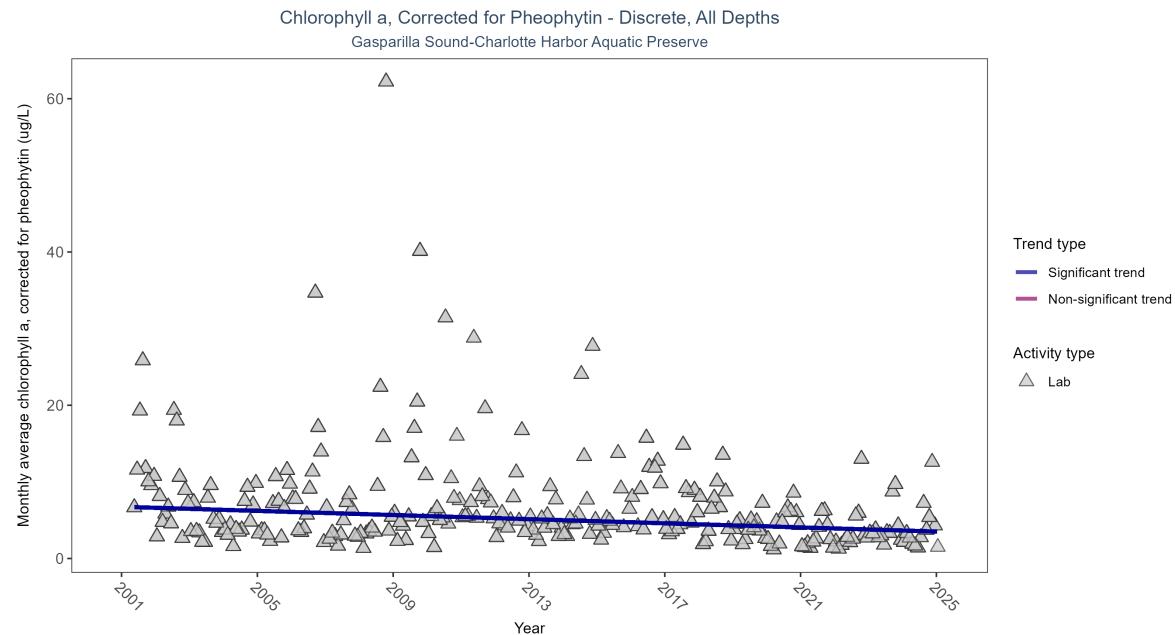
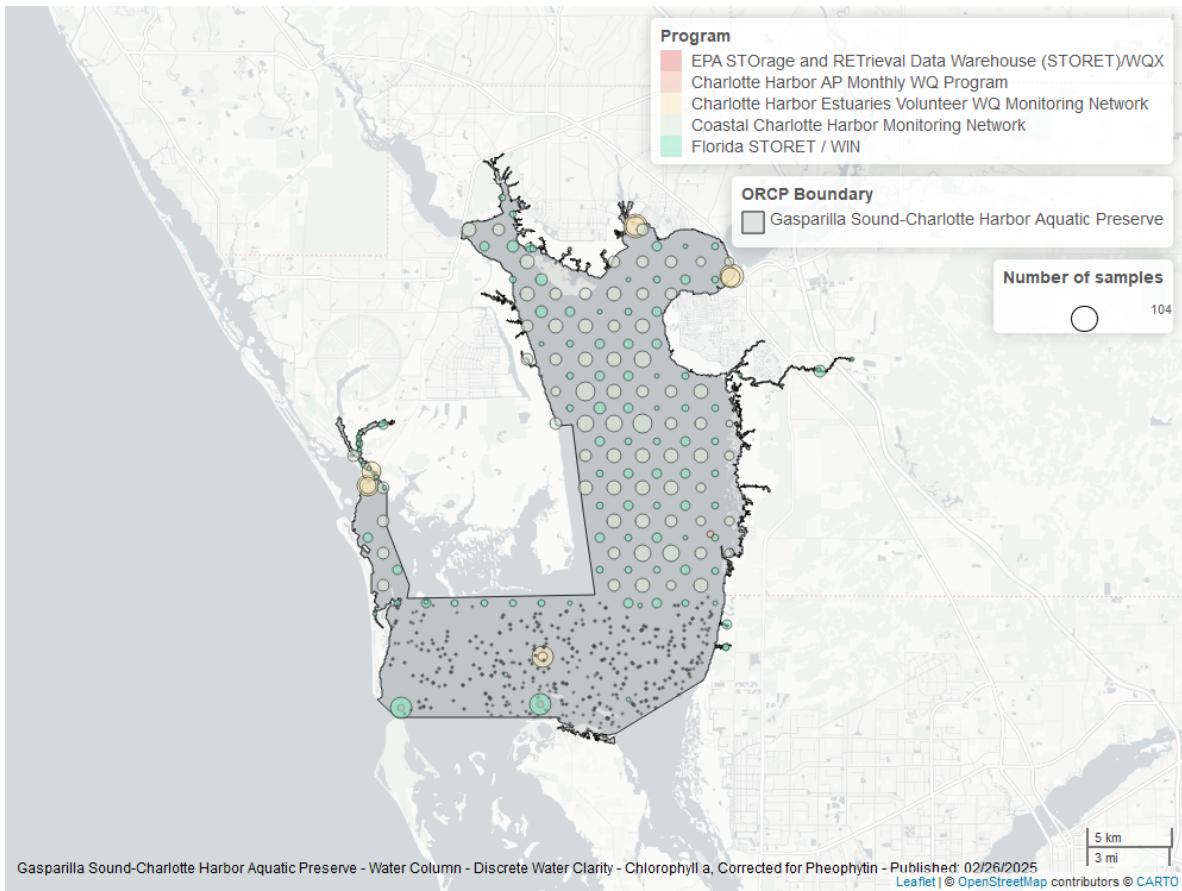


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	4659	25	2001 - 2025	3.71	-0.25129	6.75169	-0.13474	0.000000042789364575450843410



Secchi Depth - Discrete

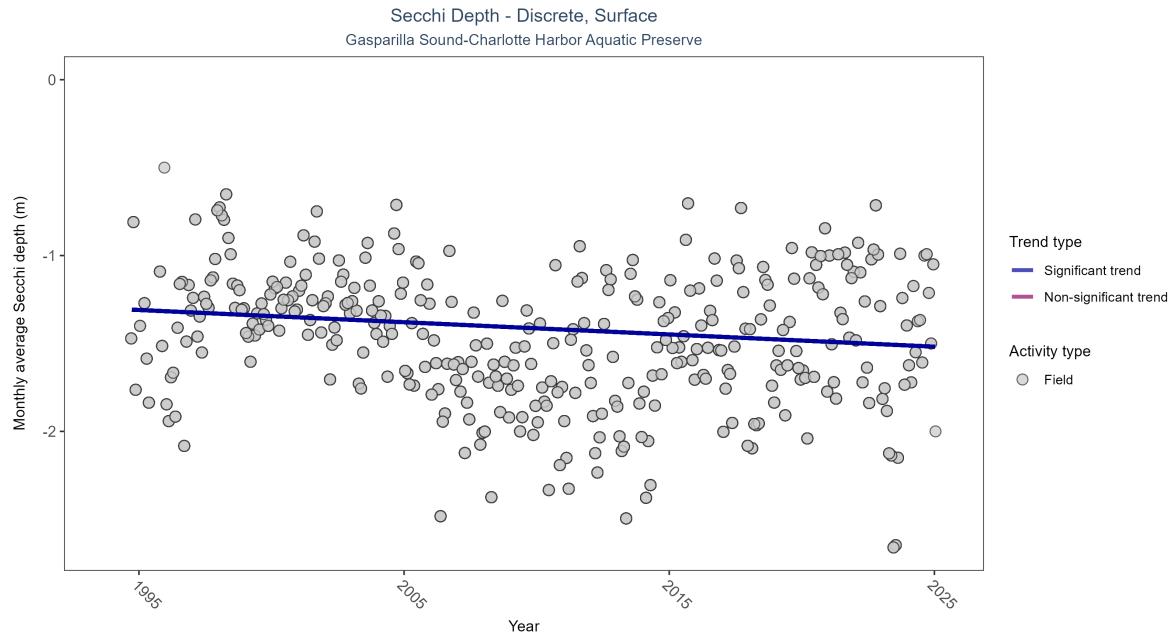
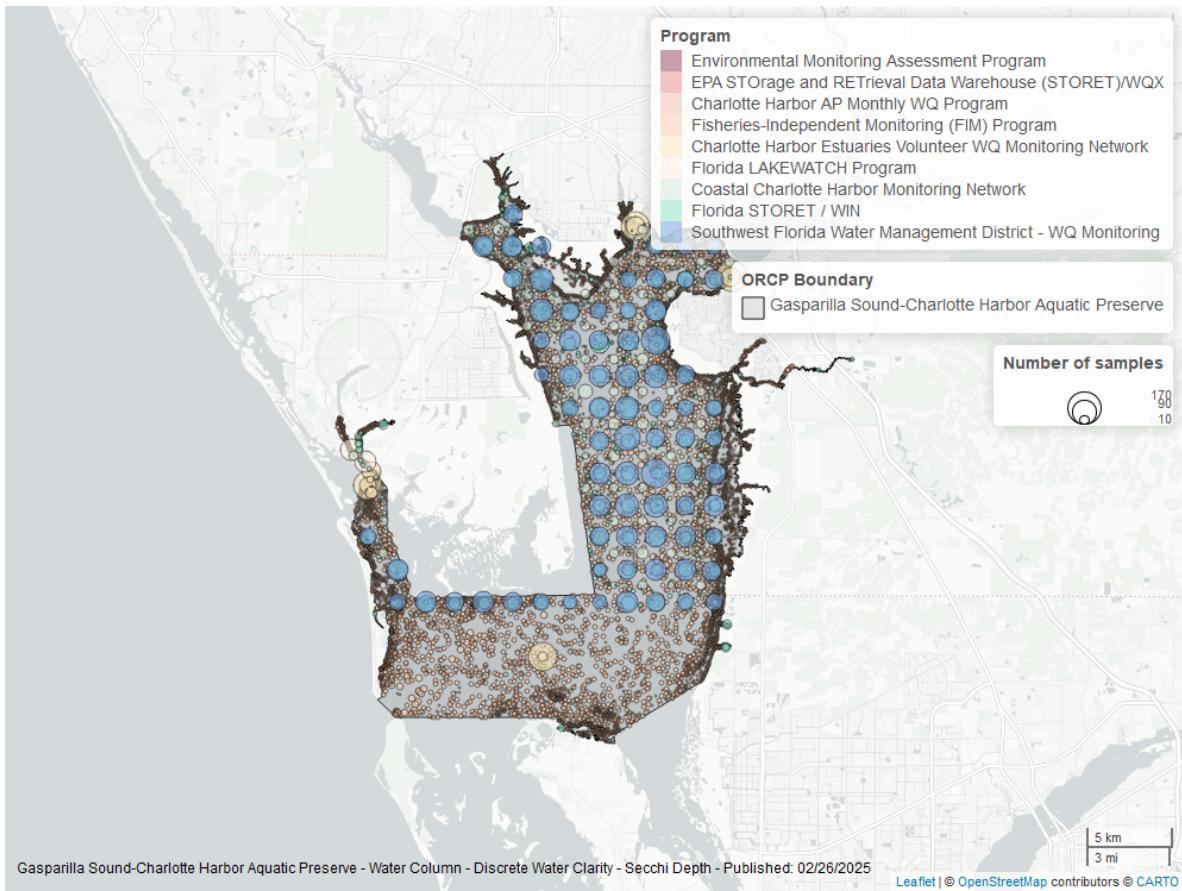


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

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	44439	32	1994 - 2025		-1.2	-0.12227	-1.30269	-0.00695 0.0010736342746970675698925390407



Colored Dissolved Organic Matter - Discrete

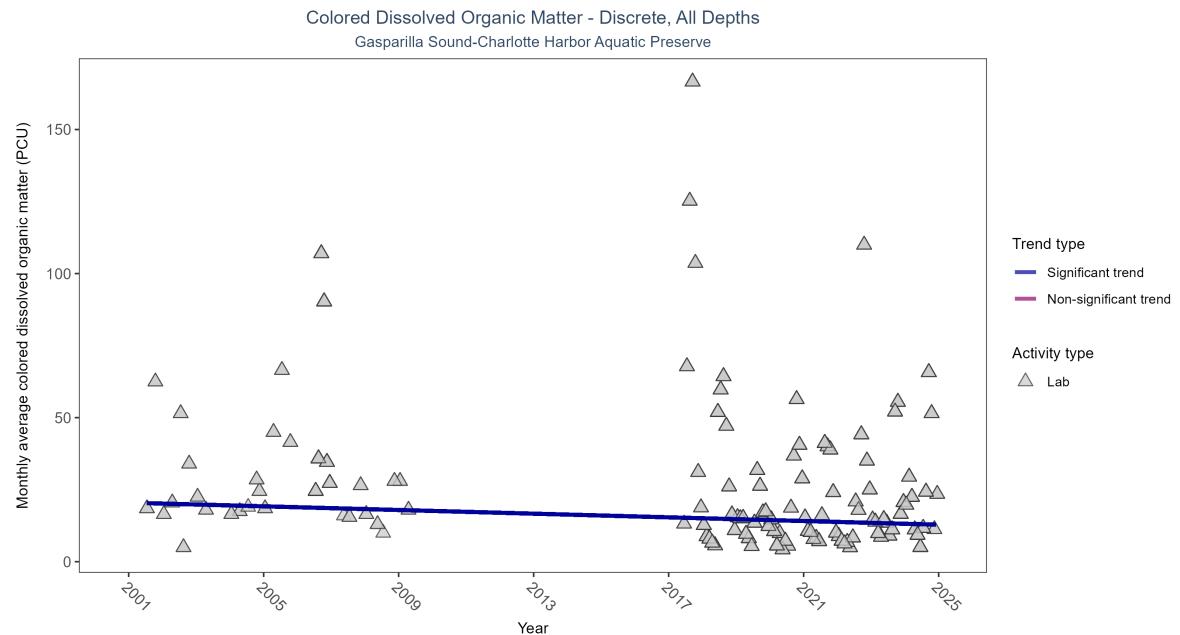


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	1228	17	2001 - 2024	13.55	-0.13864	20.49301	-0.31878	0.016599770812484648807583

