

Gasparilla Sound-Charlotte Harbor Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 09 January, 2025

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Indicators

Nutrients

Total Nitrogen - Discrete



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

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	10595	32	1993 - 2024	0.66	0.0468	0.65488	0.00135	0.2406

Total Phosphorus - Discrete

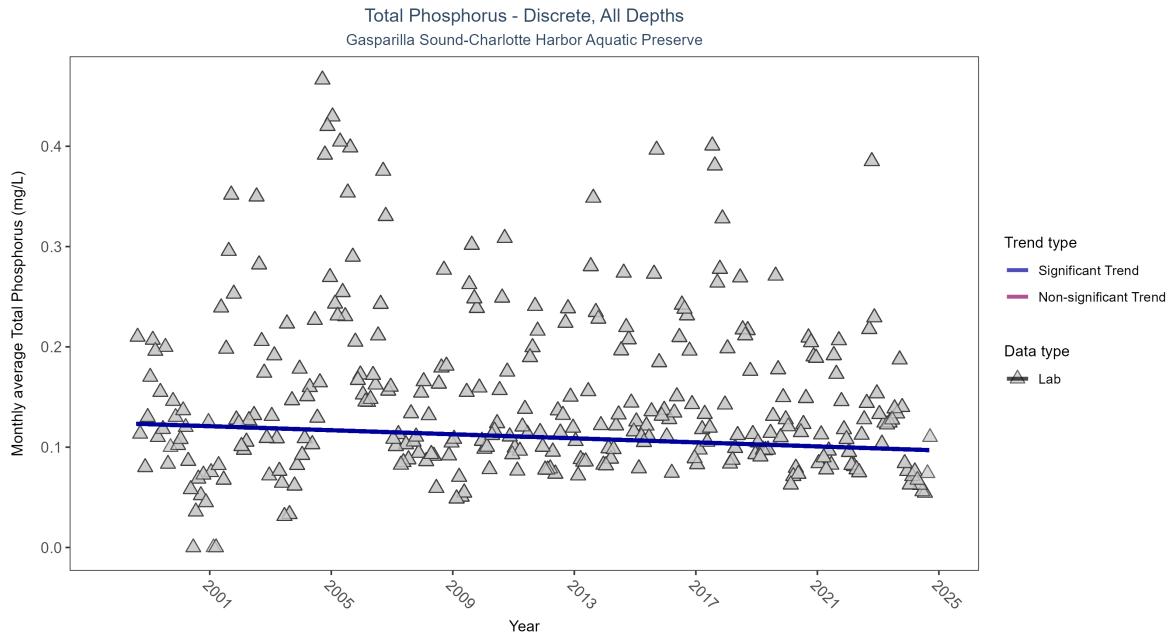


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	8673	27	1998 - 2024	0.119	-0.1003	0.12394	-0.00101	0.0126

Water Quality

Dissolved Oxygen - Discrete

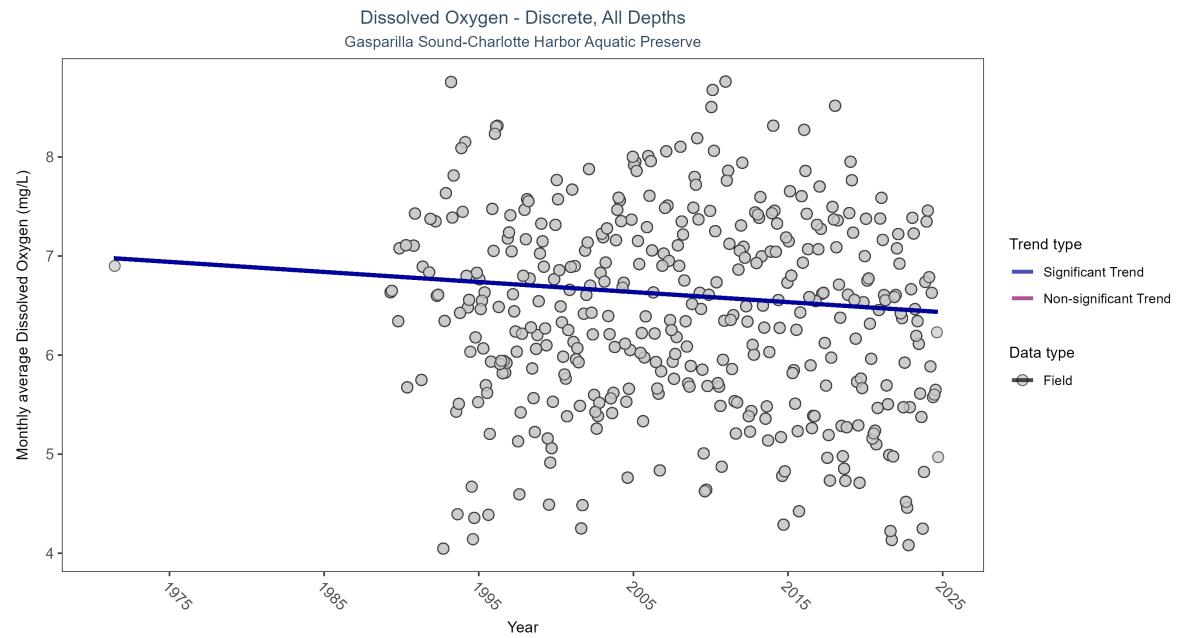


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	74232	37	1971 - 2024	6.55	-0.1305	6.98143	-0.01016	0.0001

Dissolved Oxygen - Continuous

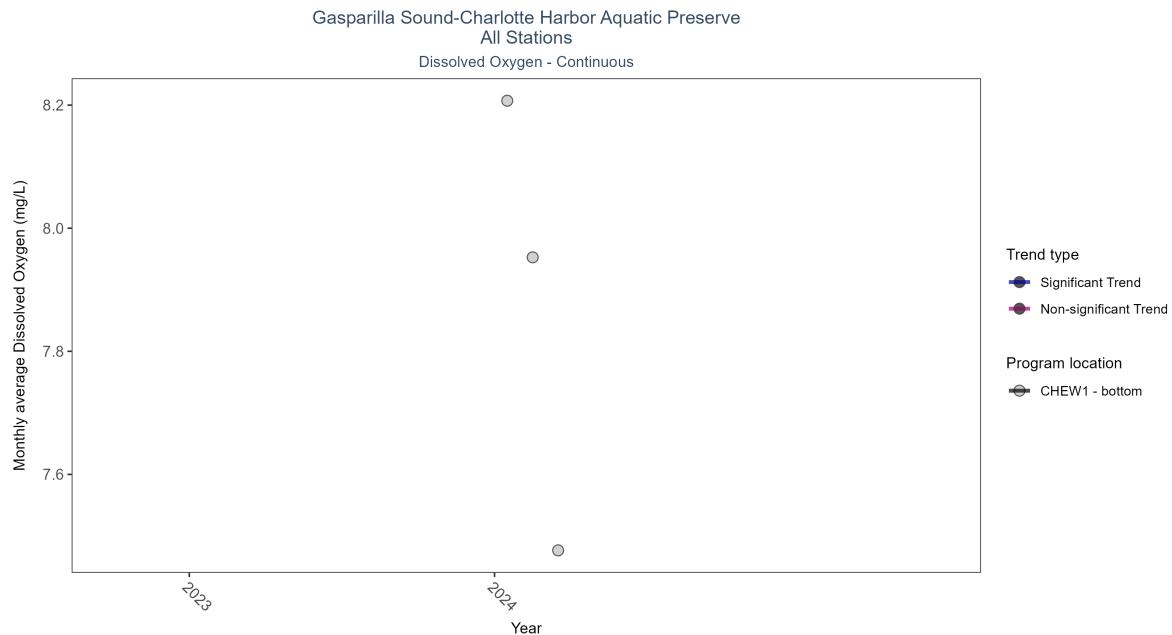


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
CHEW1	Insufficient data to calculate trend	4029	1	2024 - 2024	7.9	-	-	-	-

Dissolved Oxygen Saturation - Discrete

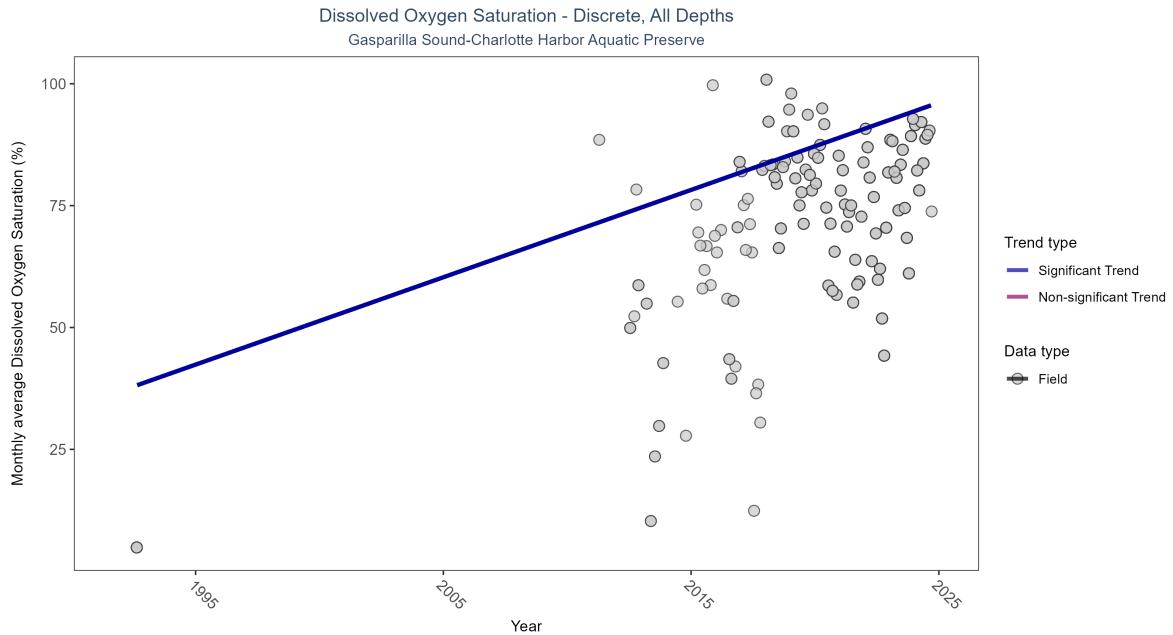


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	772	15	1992 - 2024	82.85	0.2956	37.01412	1.79167	0.0000

Dissolved Oxygen Saturation - Continuous

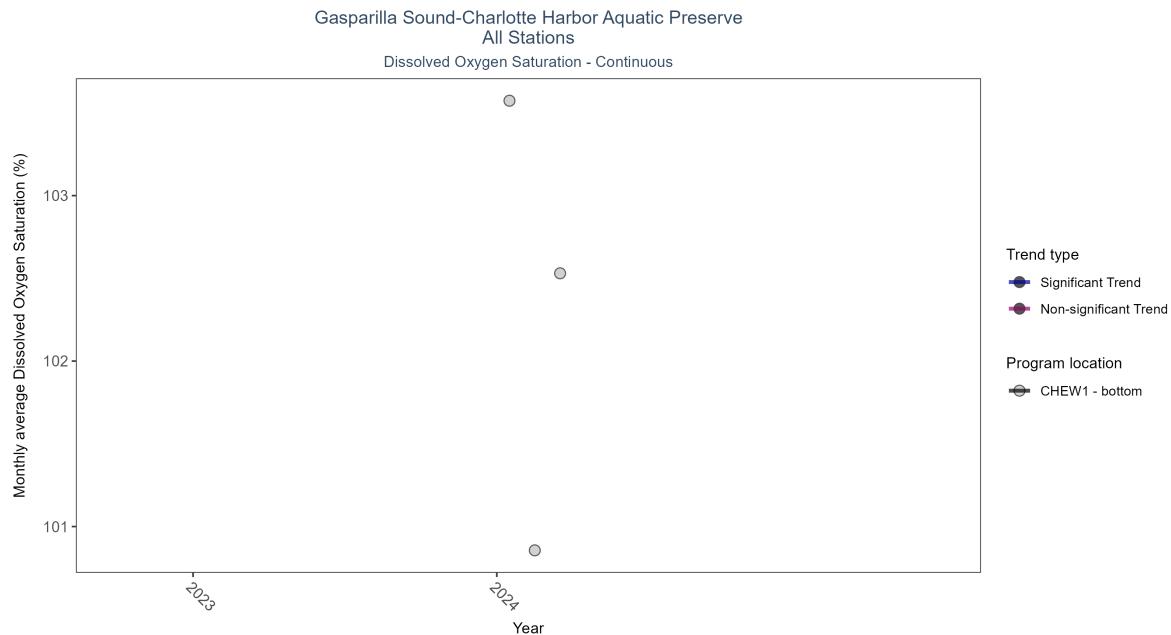


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
CHEW1	Insufficient data to calculate trend	4029	1	2024 - 2024	100.2	-	-	-	-

Salinity - Discrete

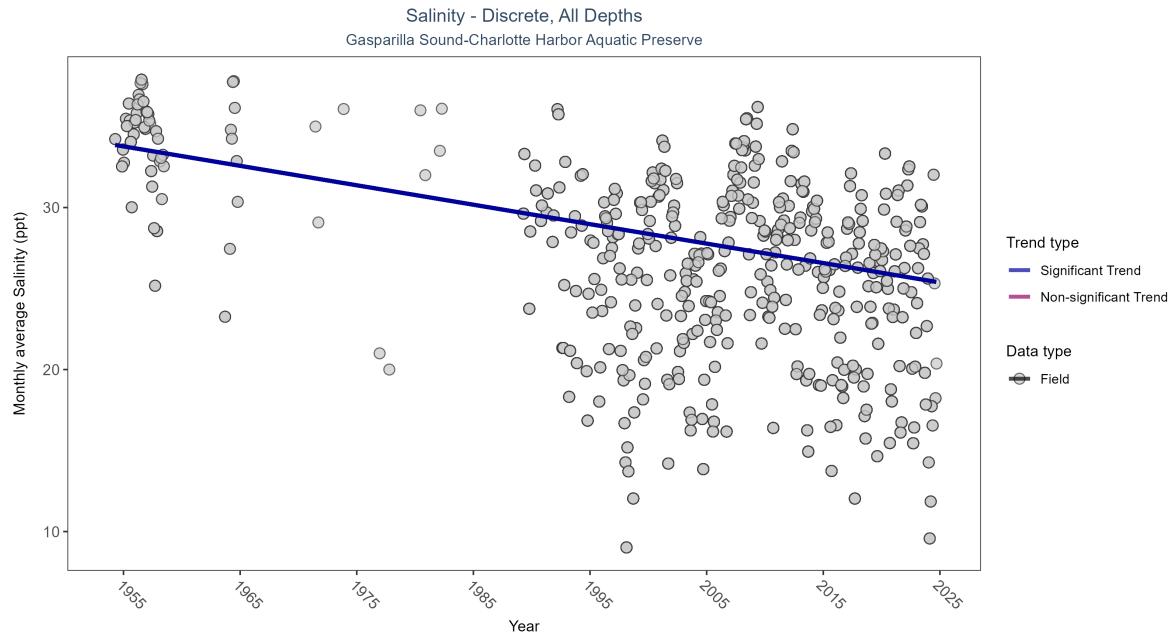


Table 7: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly decreasing trend	72763	49	1954 - 2024	26.7	-0.2941	33.89492	-0.12003	0.0000

Salinity - Continuous

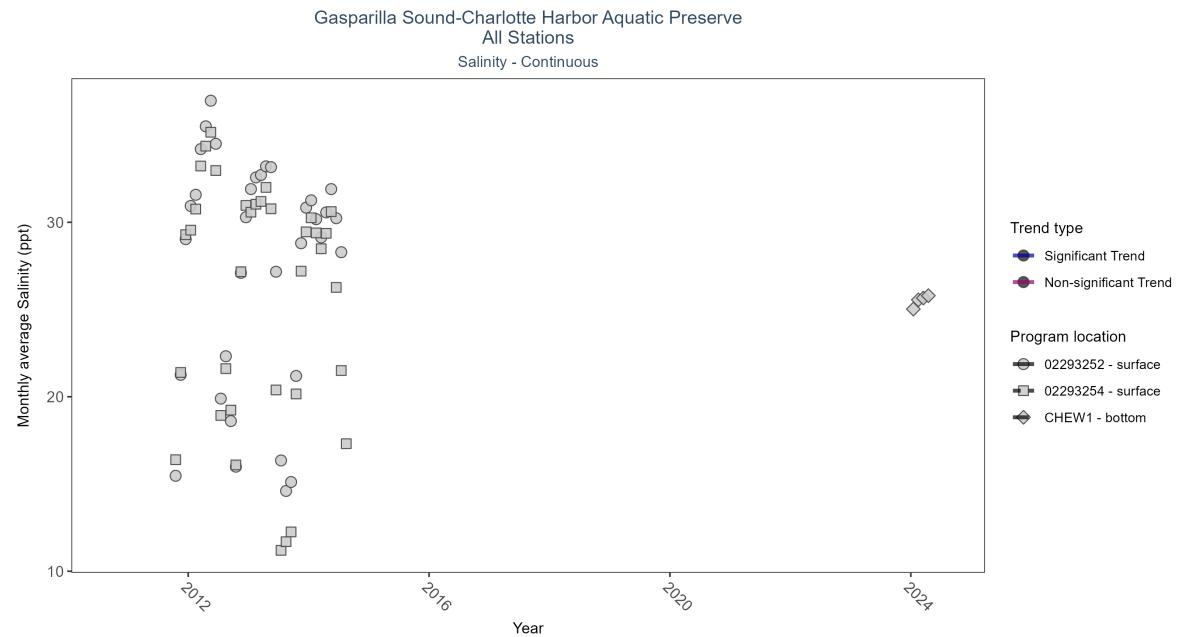


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
02293252	Insufficient data to calculate trend	1002	4	2011 - 2014	30.0	-	-	-	-
02293254	Insufficient data to calculate trend	1030	4	2011 - 2014	29.0	-	-	-	-
CHEW1	Insufficient data to calculate trend	6613	1	2024 - 2024	25.9	-	-	-	-

Water Temperature - Discrete

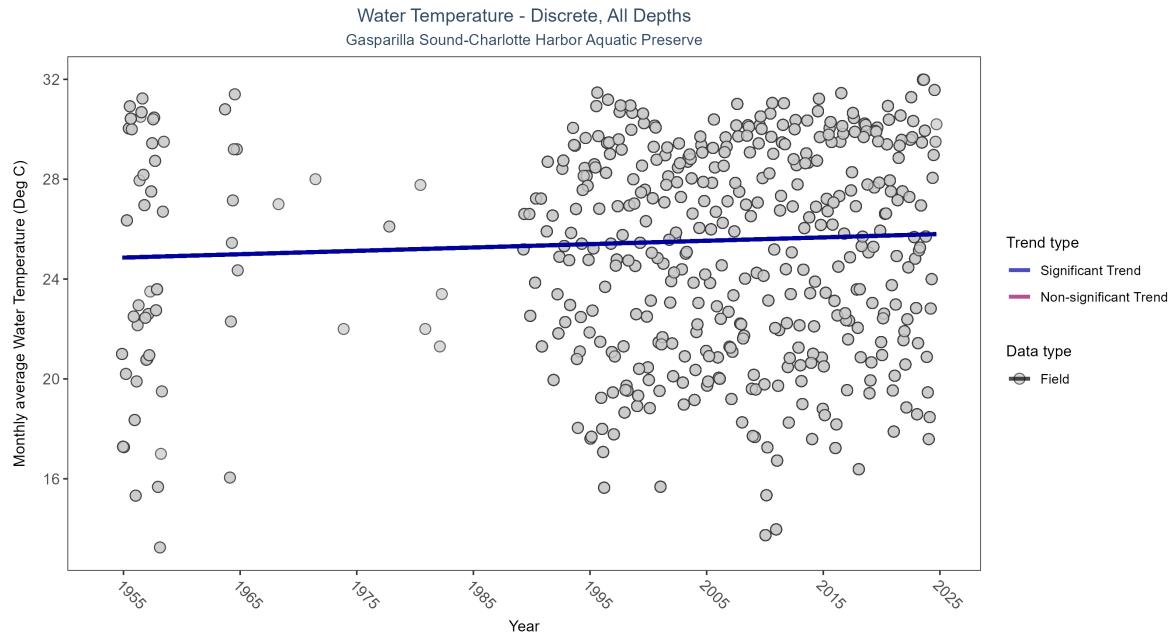


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	75271	49	1954 - 2024	26.1	0.1235	24.84707	0.01348	0.0002

Water Temperature - Continuous

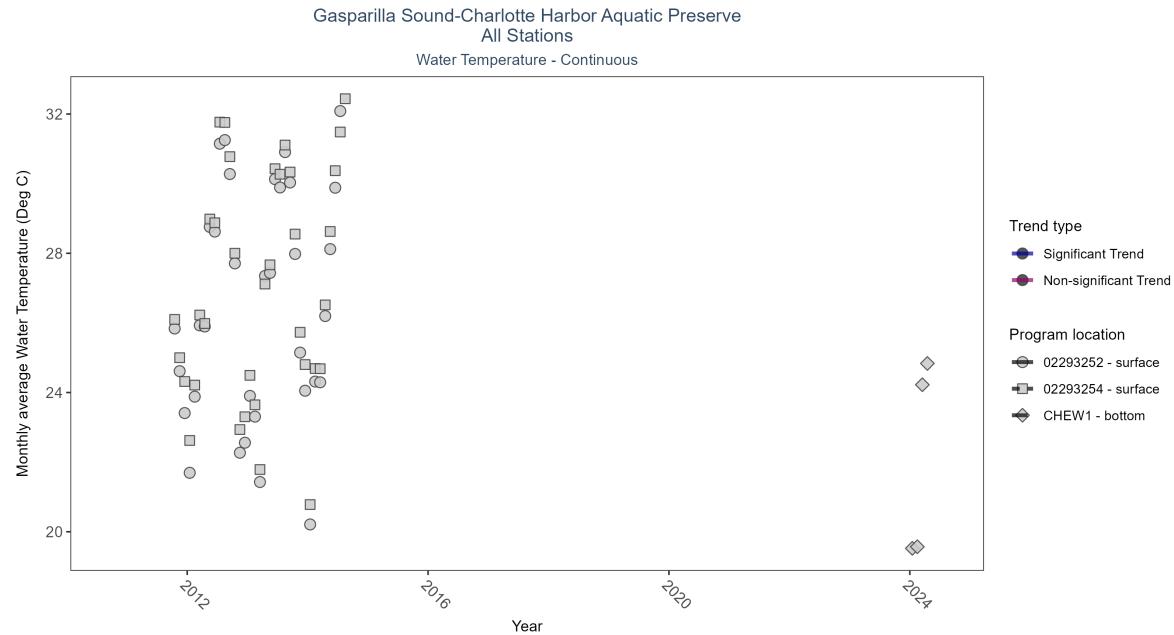


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
02293252	Insufficient data to calculate trend	1003	4	2011 - 2014	26.4	-	-	-	-
02293254	Insufficient data to calculate trend	1041	4	2011 - 2014	27.0	-	-	-	-
CHEW1	Insufficient data to calculate trend	6615	1	2024 - 2024	22.0	-	-	-	-

pH - Discrete

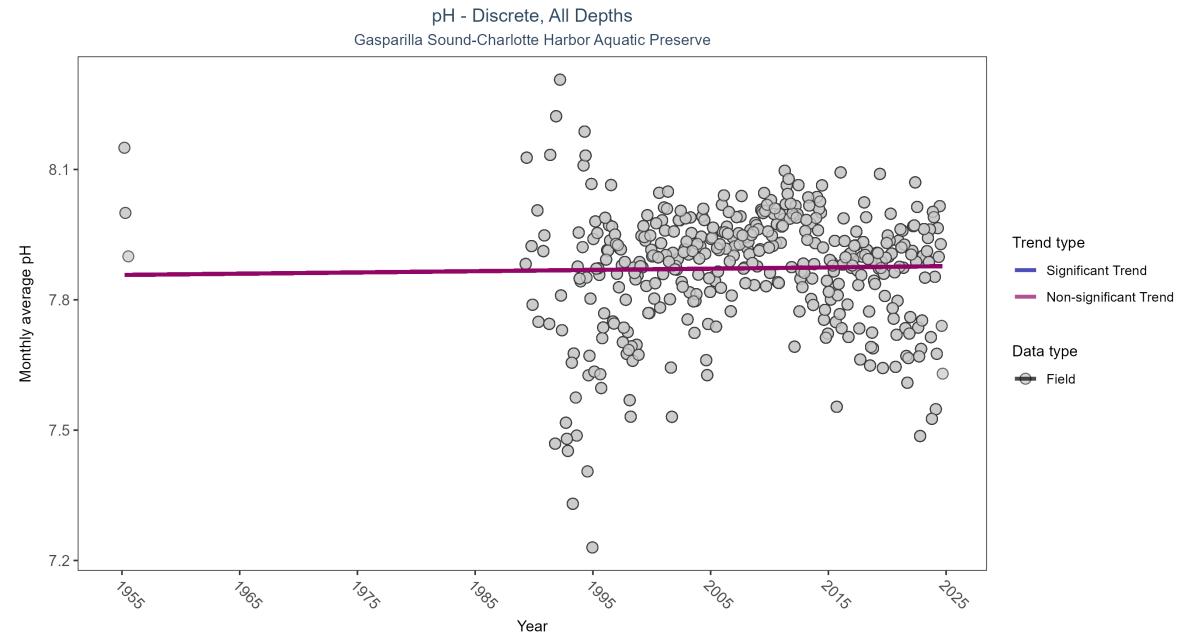


Table 11: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	70874	37	1955 - 2024	7.91	0.0233	7.85722	0.00029	0.5543

pH - Continuous

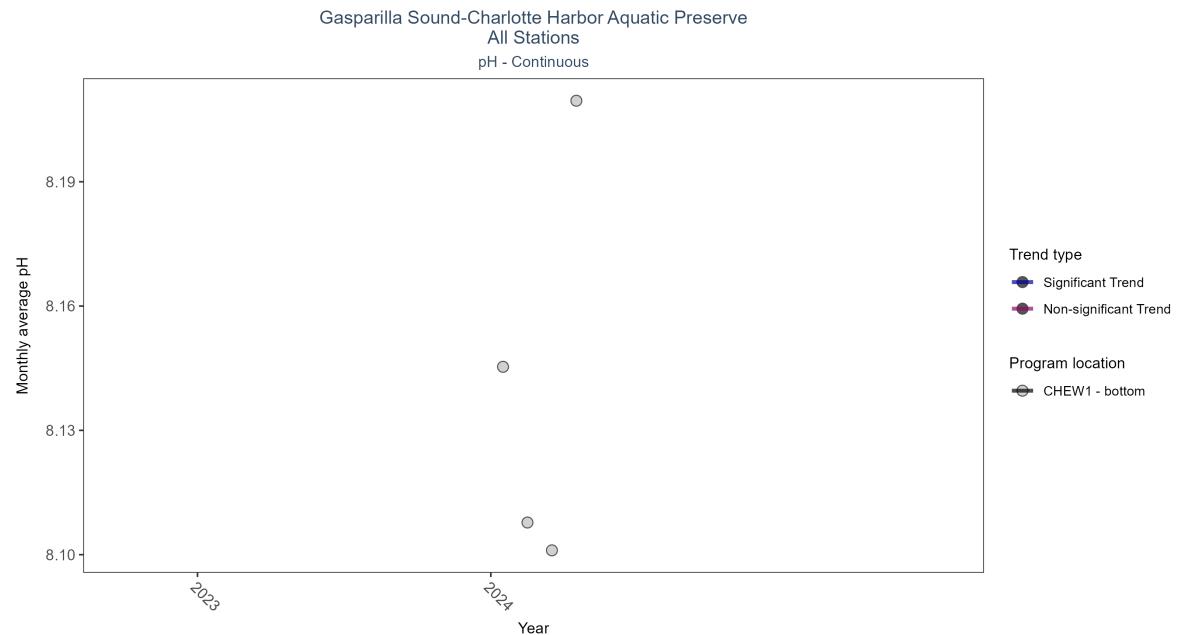


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
CHEW1	Insufficient data to calculate trend	6615	1	2024 - 2024	8.1	-	-	-	-

Water Clarity

Turbidity - Discrete

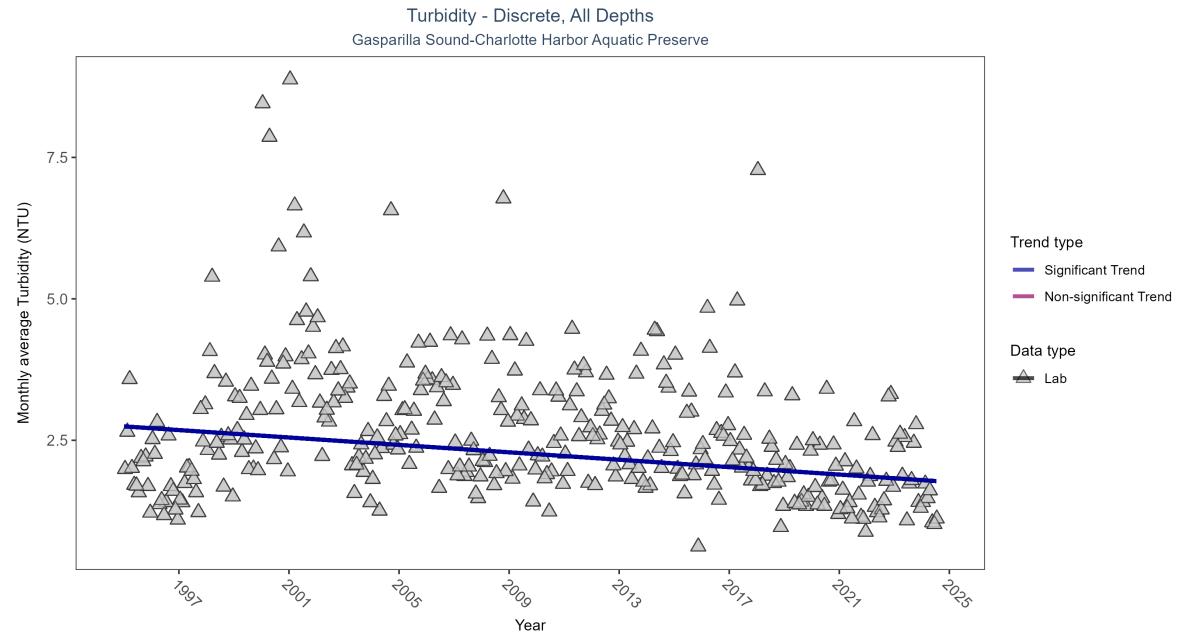


Table 13: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	14525	30	1995 - 2024	1.94	-0.2129	2.74568	-0.03275	0.0000

Turbidity - Continuous

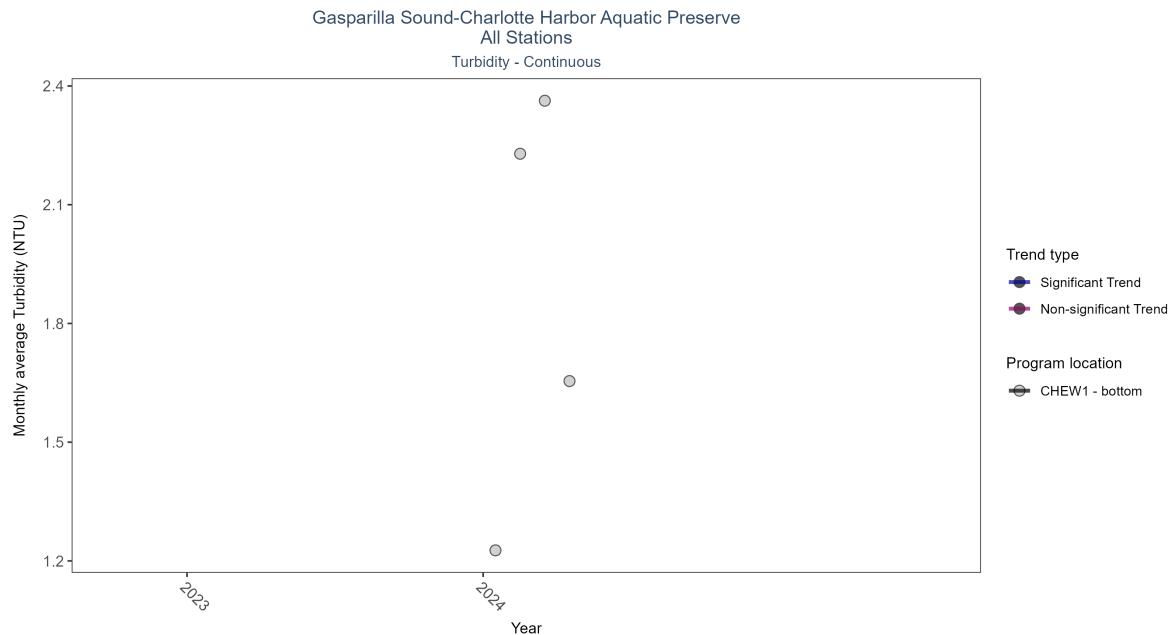


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
CHEW1	Insufficient data to calculate trend	4020	1	2024 - 2024	2	-	-	-	-

Total Suspended Solids - Discrete

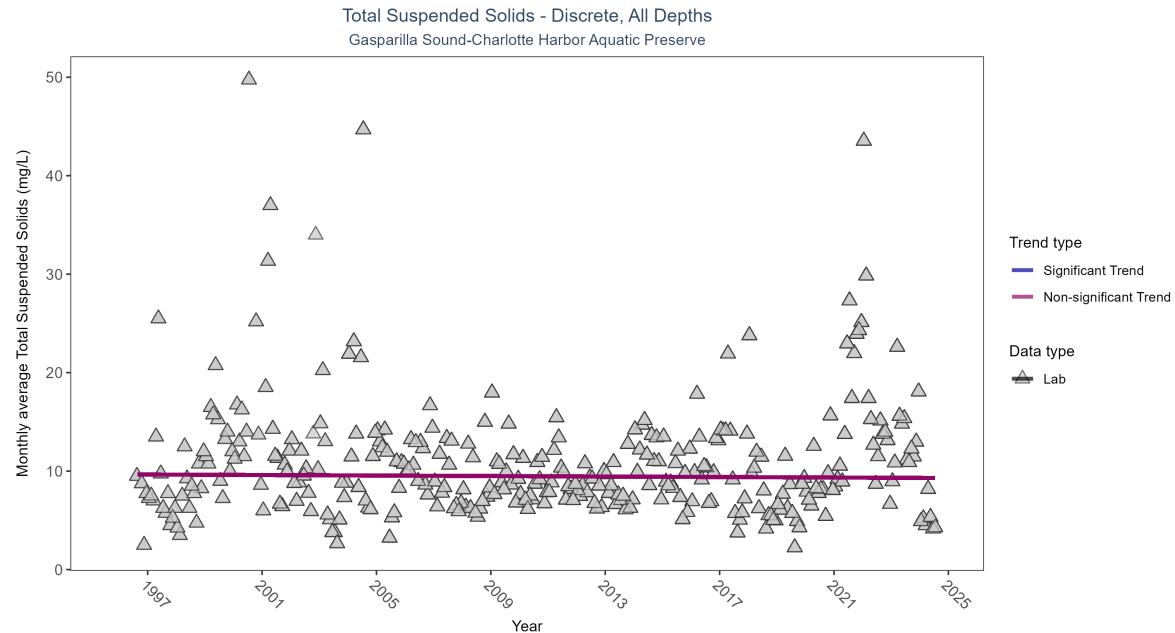


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	8645	29	1996 - 2024	7.2	-0.0144	9.66303	-0.01267	0.7031

Chlorophyll a, Uncorrected for Pheophytin - Discrete

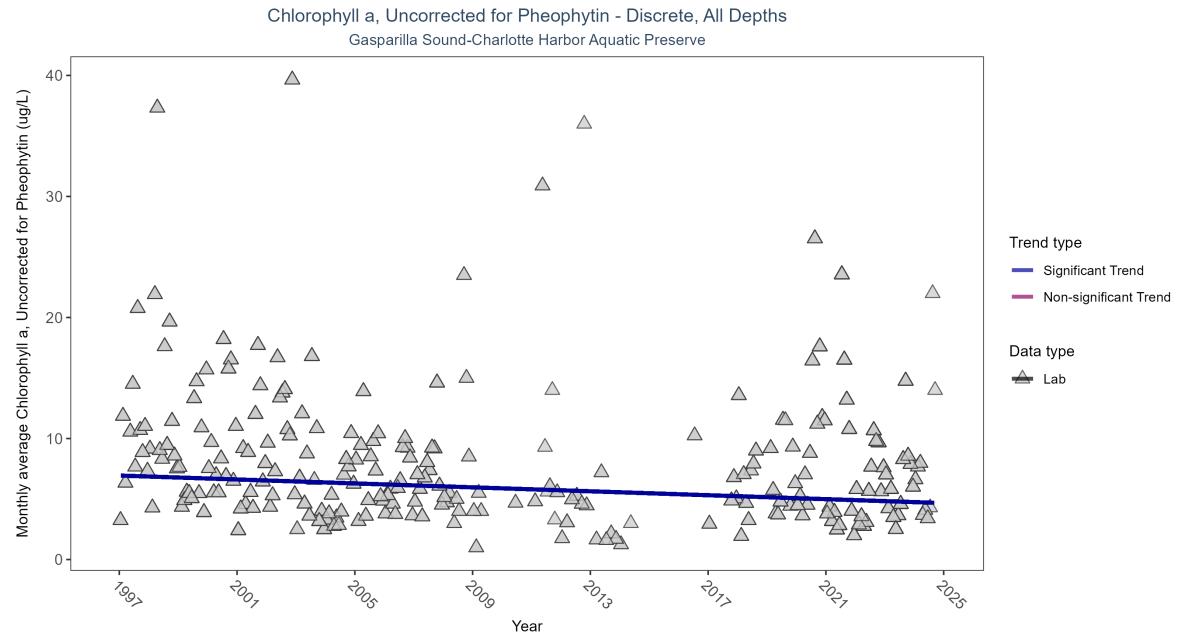


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	2482	27	1997 - 2024	4.72	-0.1678	6.94034	-0.08129	0.0003

Chlorophyll a, Corrected for Pheophytin - Discrete

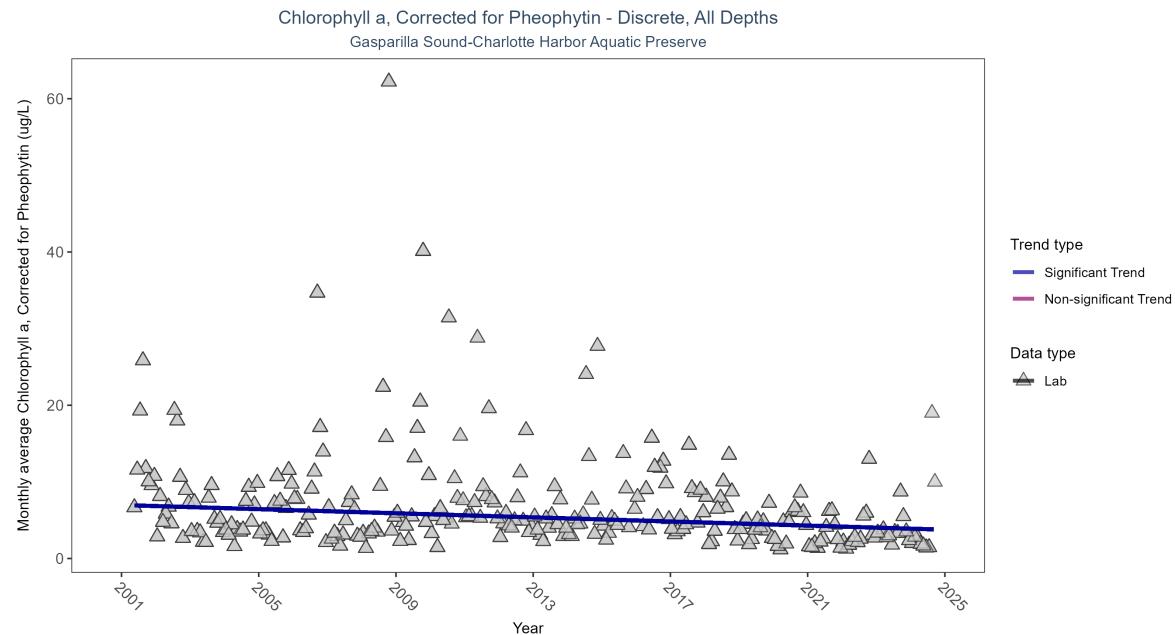


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	4501	24	2001 - 2024	3.74	-0.2458	6.97634	-0.1341	0.0000

Secchi Depth - Discrete

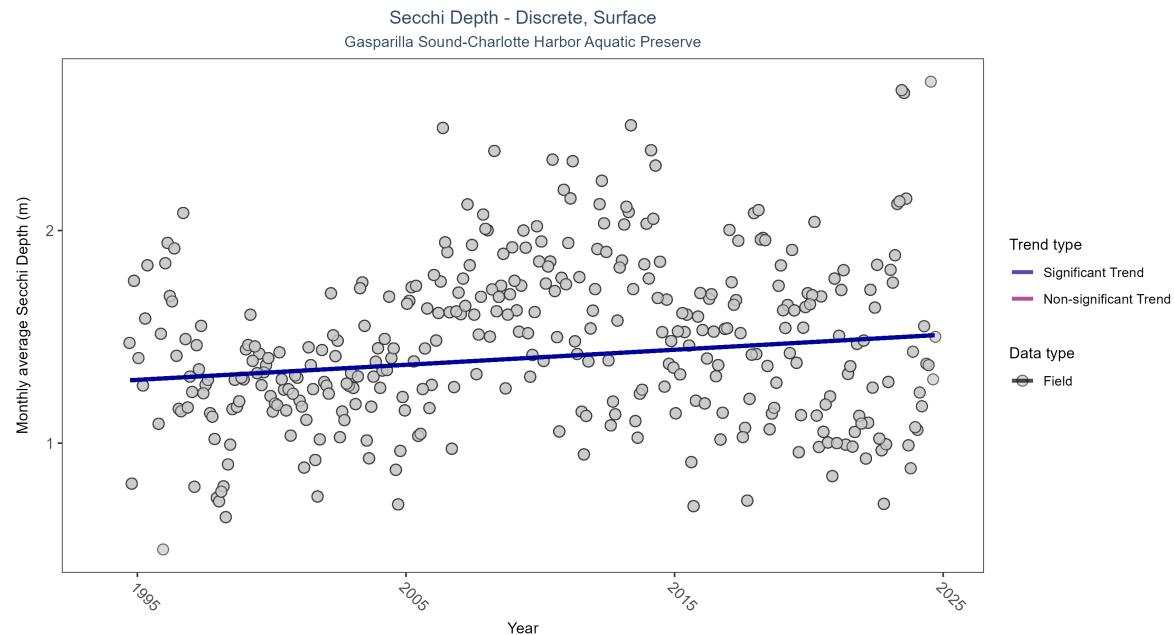


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	44333	31	1994 - 2024	1.2	0.12	1.29051	0.00708	0.0015

Colored Dissolved Organic Matter - Discrete

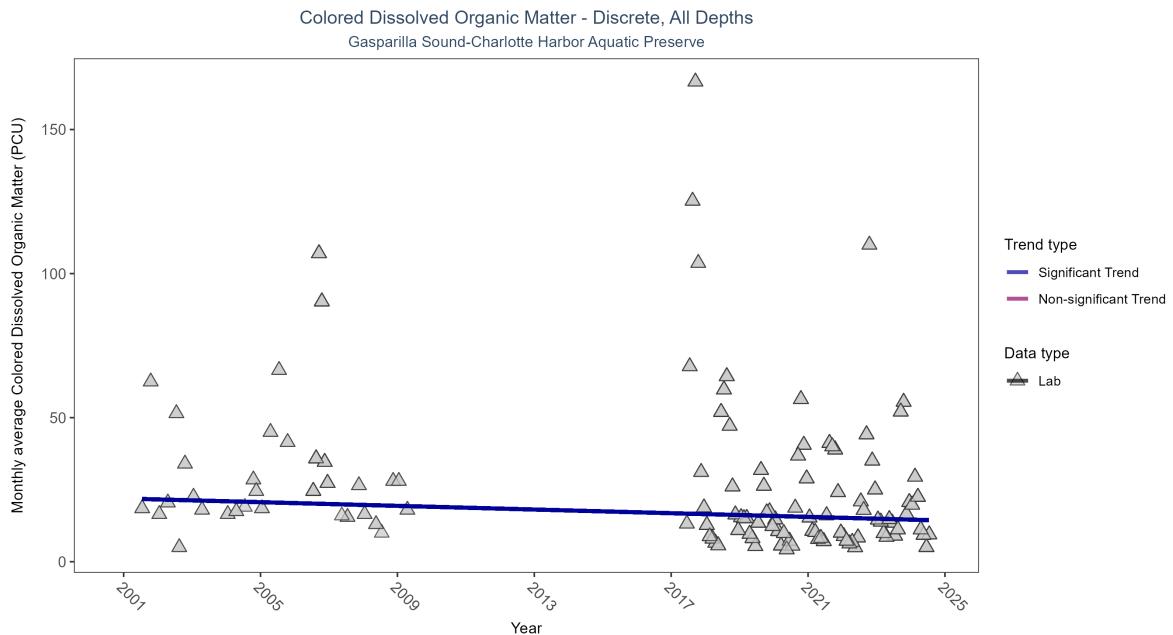


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	1187	17	2001 - 2024	13	-0.1446	21.92974	-0.31878	0.0152