

Guana River Marsh Aquatic Preserve

SEACAR Discrete Water Quality Analysis

Last compiled on 14 August, 2024

Contents

Indicators	2
Nutrients	2
Total Nitrogen - Discrete	2
Total Phosphorus - Discrete	3
Water Quality	4
Dissolved Oxygen - Discrete	4
Dissolved Oxygen - Continuous	5
Dissolved Oxygen Saturation - Discrete	6
Dissolved Oxygen Saturation - Continuous	7
Salinity - Discrete	8
Salinity - Continuous	9
Water Temperature - Discrete	10
Water Temperature - Continuous	11
pH - Discrete	12
pH - Continuous	13
Water Clarity	14
Turbidity - Discrete	14
Turbidity - Continuous	15
Total Suspended Solids - Discrete	16
Chlorophyll a, Uncorrected for Pheophytin - Discrete	17
Chlorophyll a, Corrected for Pheophytin - Discrete	18
Secchi Depth - Discrete	19
Colored Dissolved Organic Matter - Discrete	20

Indicators

Nutrients

Total Nitrogen - Discrete

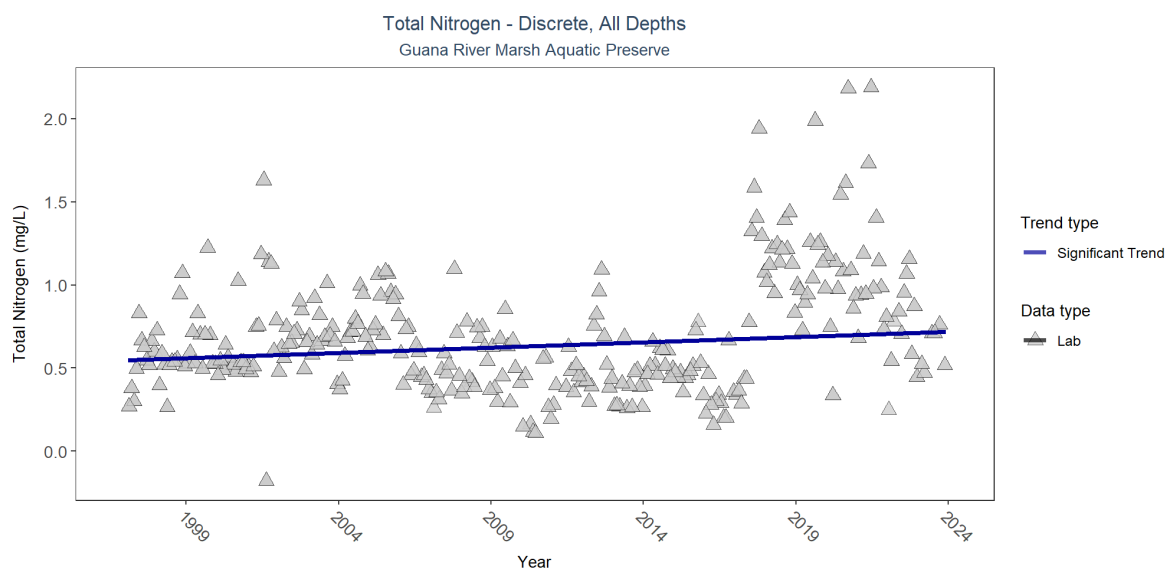


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1935	27	1997 - 2023	0.6159	0.093	0.54752	0.00637	0.0216

Total Phosphorus - Discrete

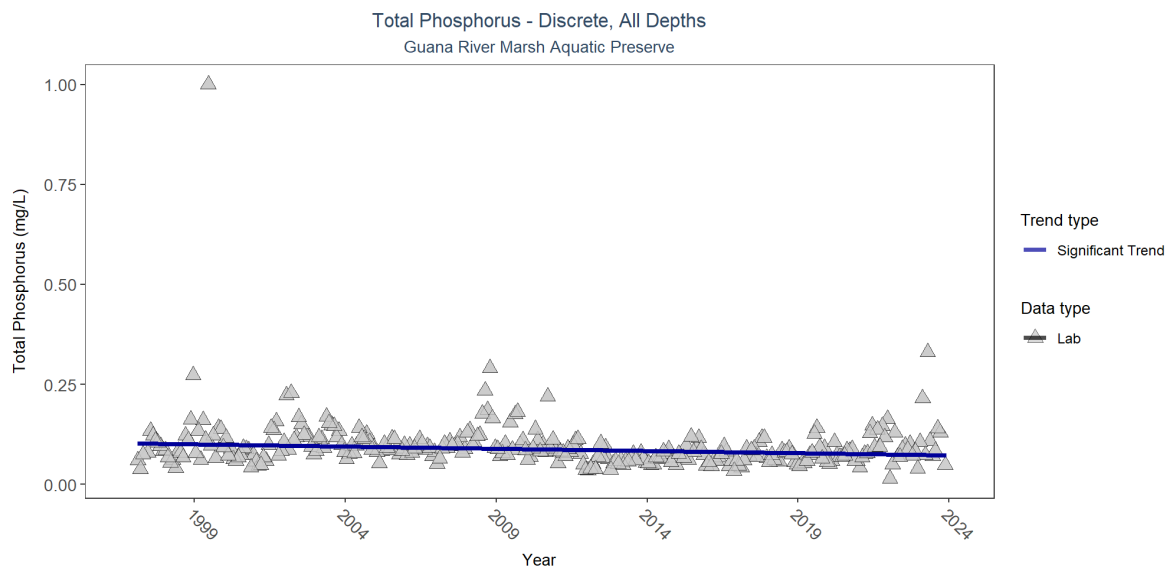


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	2716	27	1997 - 2023	0.076	-0.2135	0.10305	-0.00115	0.0000

Water Quality

Dissolved Oxygen - Discrete

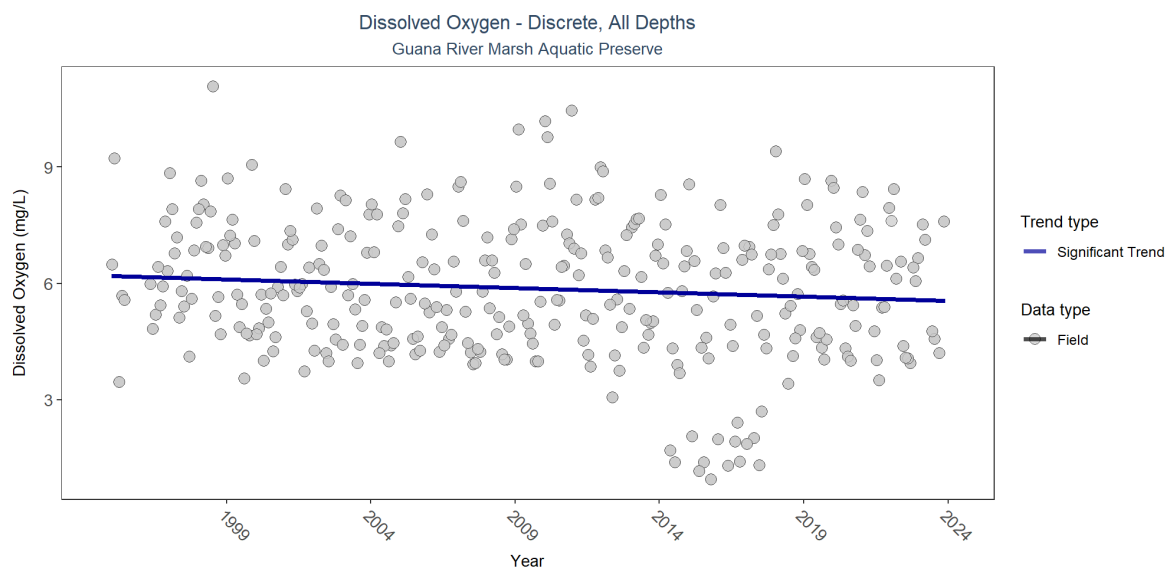


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	7535	29	1995 - 2023	5.7	-0.1192	6.18698	-0.02182	0.0020

Dissolved Oxygen - Continuous

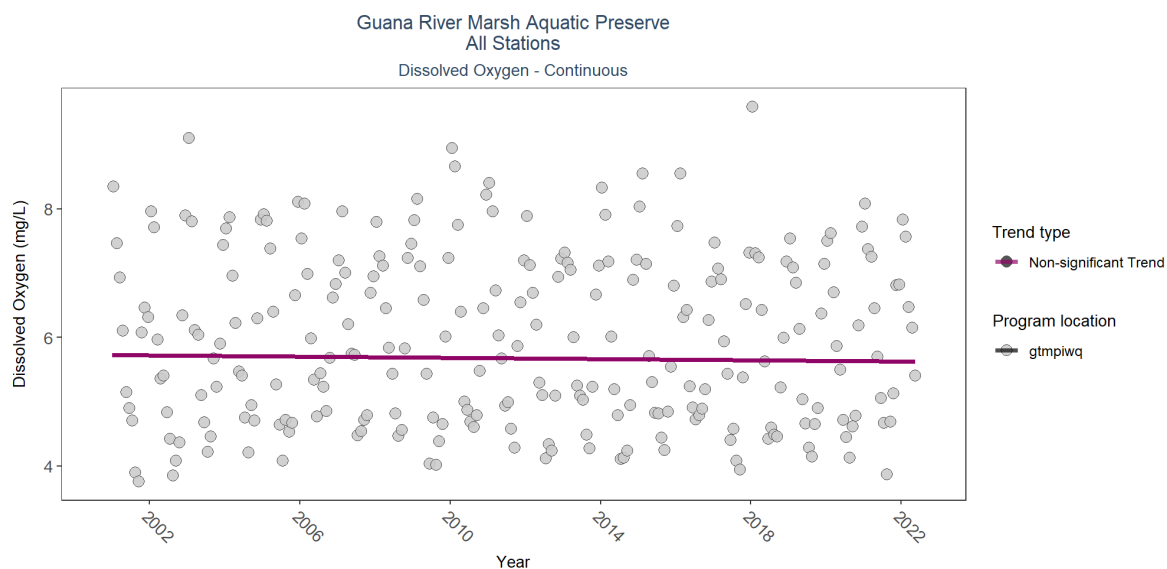


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmplwq	No significant trend	576064	22	2001 - 2022	5.9	-0.05	5.72	0	0.2940

Dissolved Oxygen Saturation - Discrete

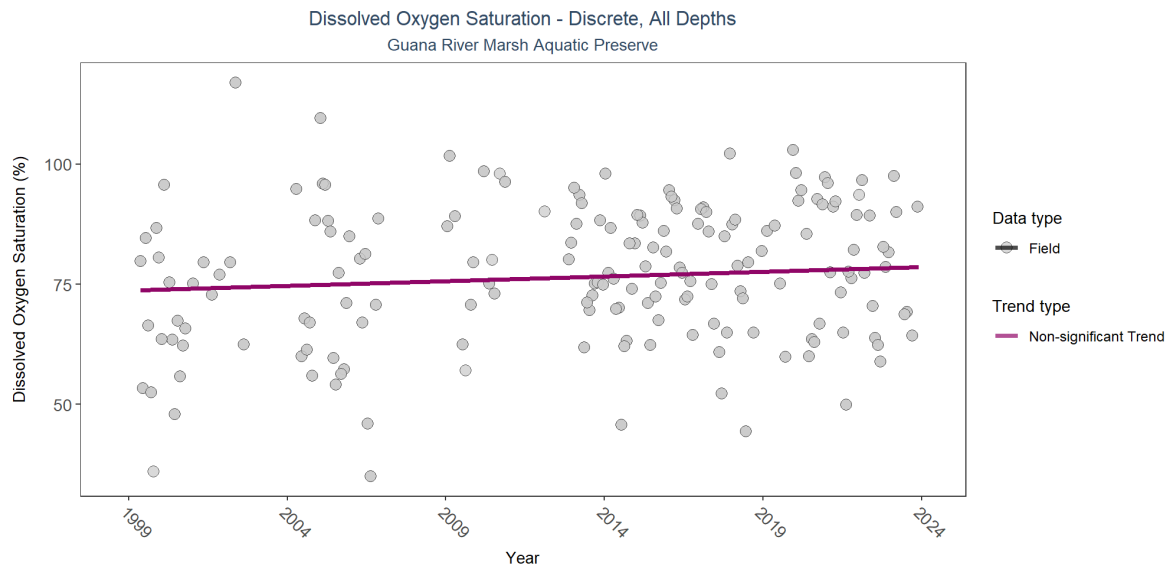


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	1150	21	1999 - 2023	78	0.0942	73.68712	0.19775	0.1097

Dissolved Oxygen Saturation - Continuous

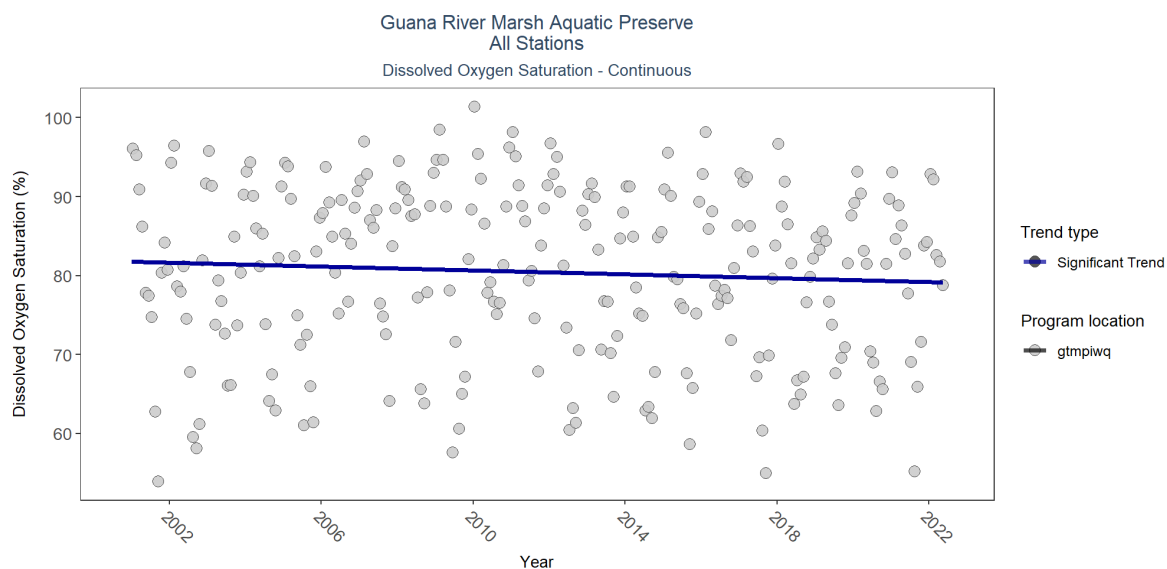


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmpiwq	Significantly decreasing trend	580954	22	2001 - 2022	83.1	-0.11	81.79	-0.12	0.0155

Salinity - Discrete

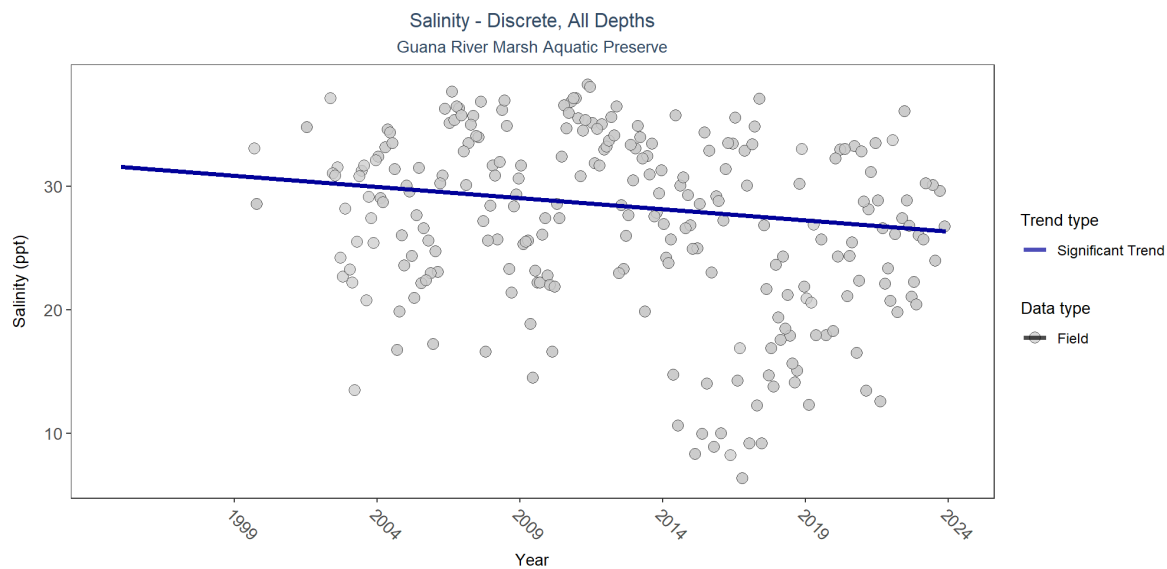


Table 7: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly decreasing trend	8270	29	1995 - 2023	31	-0.1745	31.58022	-0.1813	0.0000

Salinity - Continuous

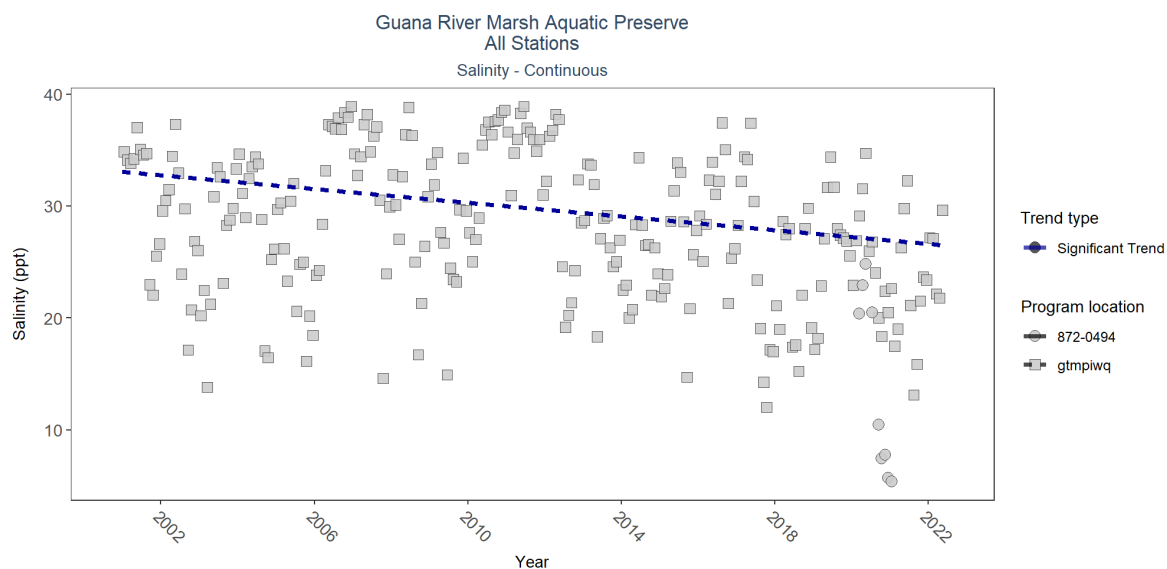


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmpiwiq	Significantly decreasing trend	577716	22	2001 - 2022	28.30	-0.23	33.04	-0.31	0.0000
872-0494	Insufficient data to calculate trend	34918	2	2020 - 2021	8.99	-	-	-	-

Water Temperature - Discrete

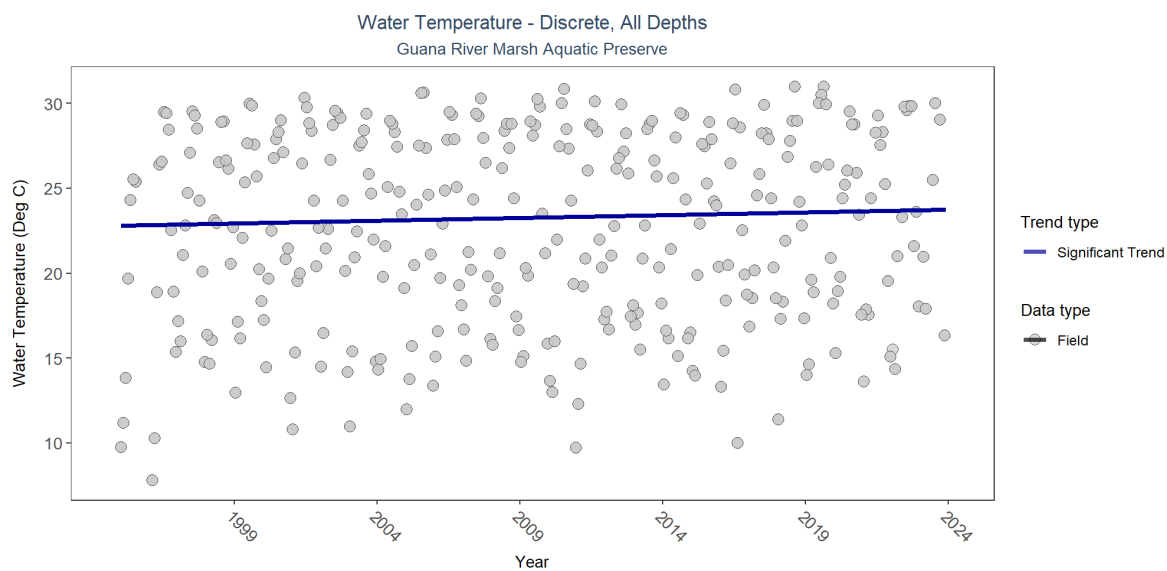


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	8223	29	1995 - 2023	23.1	0.1122	22.80078	0.0331	0.0033

Water Temperature - Continuous

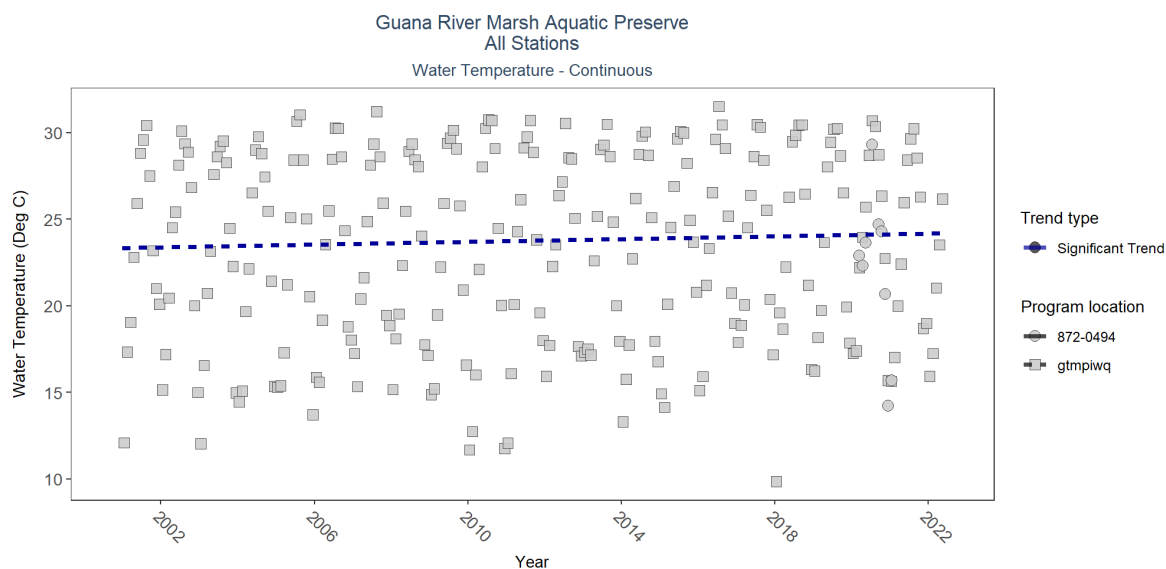


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmpiwiq	Significantly increasing trend	627043	22	2001 - 2022	24.10	0.18	23.34	0.04	0.0001
872-0494	Insufficient data to calculate trend	35473	2	2020 - 2021	22.34	-	-	-	-

pH - Discrete

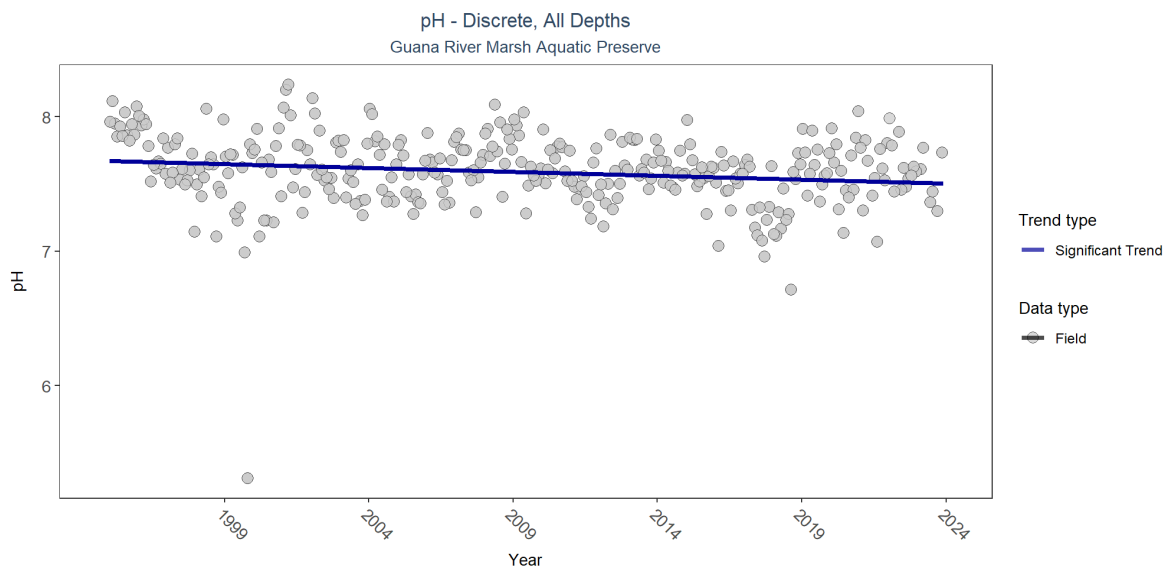


Table 11: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	6101	29	1995 - 2023	7.7	-0.161	7.67288	-0.00589	0.0000

pH - Continuous

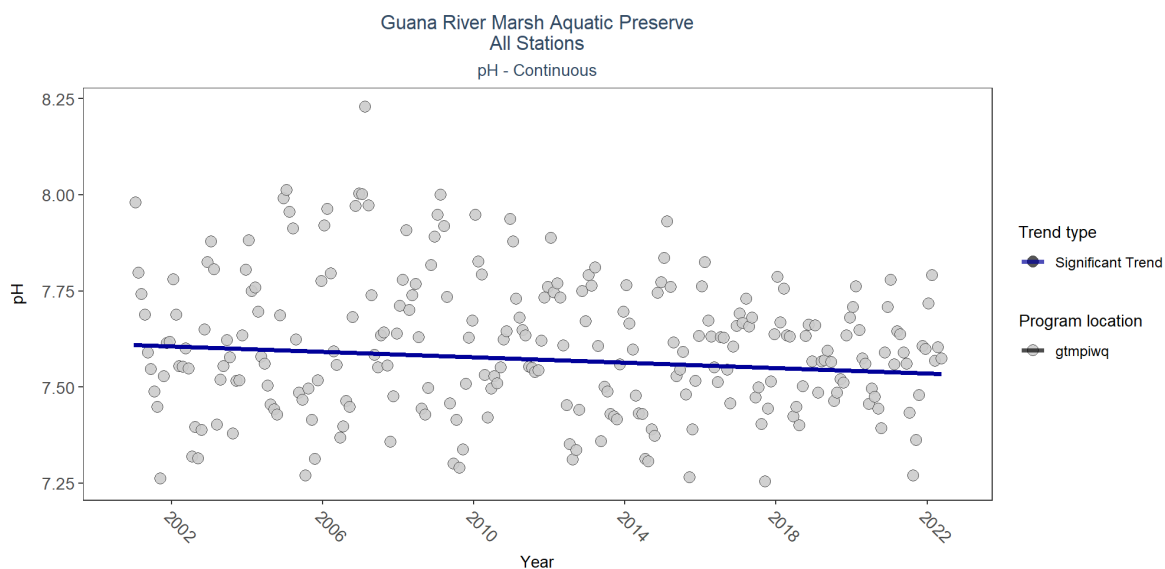


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmptwq	Significantly decreasing trend	572116	22	2001 - 2022	7.6	-0.15	7.61	0	0.0009

Water Clarity

Turbidity - Discrete

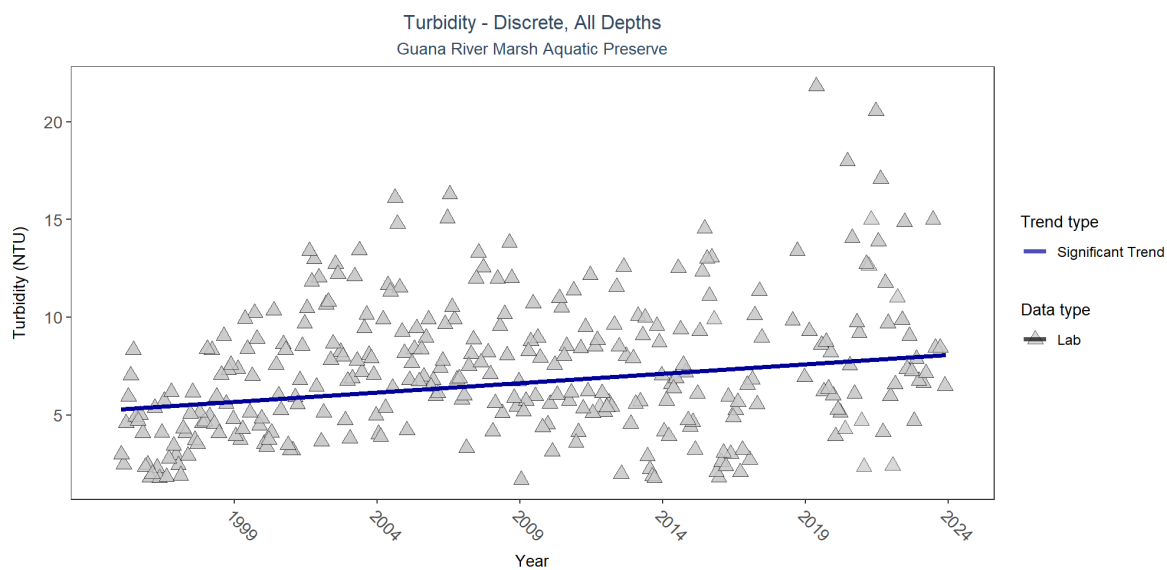


Table 13: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	4991	29	1995 - 2023	5.2	0.1941	5.29779	0.09613	0.0000

Turbidity - Continuous

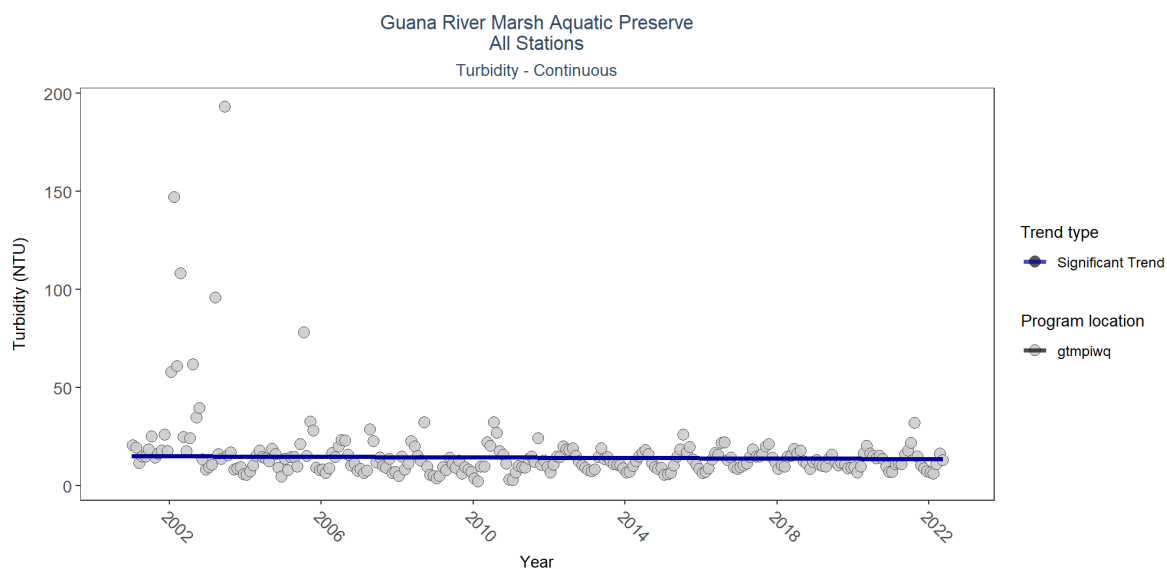


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmpiwq	Significantly decreasing trend	552290	22	2001 - 2022	10	-0.09	14.97	-0.07	0.0496

Total Suspended Solids - Discrete

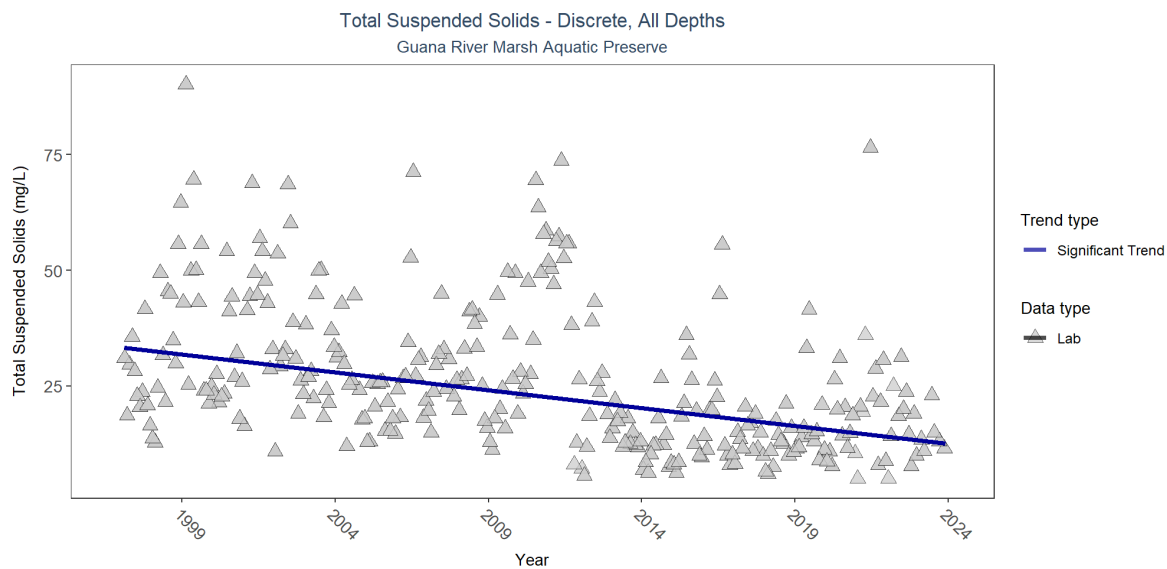


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	1652	27	1997 - 2023	22.5	-0.3809	33.30005	-0.7675	0.0000

Chlorophyll a, Uncorrected for Pheophytin - Discrete

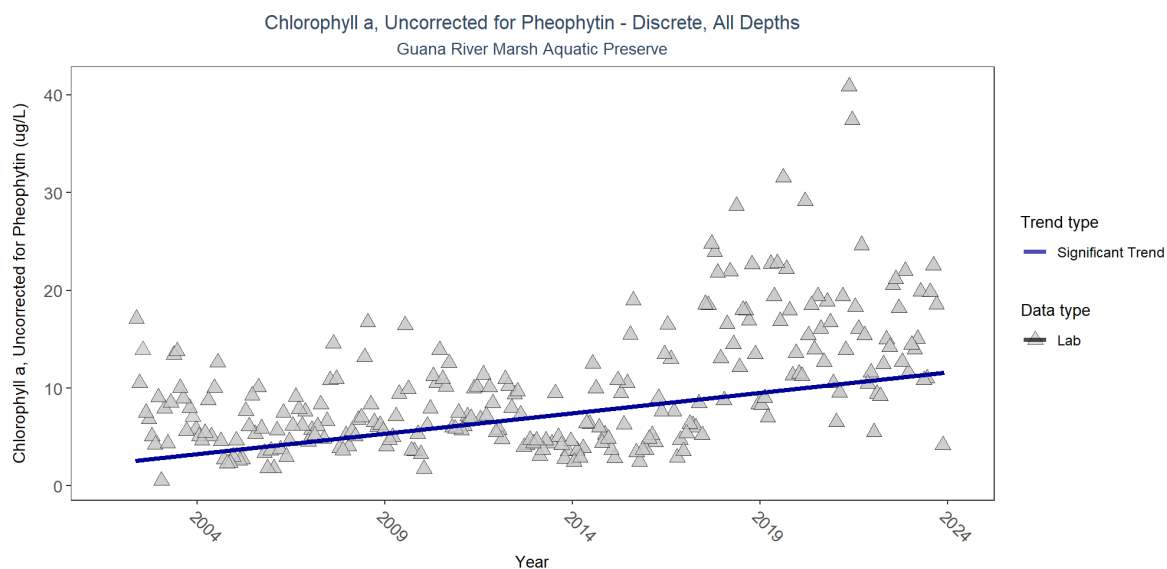


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1211	22	2002 - 2023	7.7	0.3969	2.44147	0.41684	0.0000

Chlorophyll a, Corrected for Pheophytin - Discrete

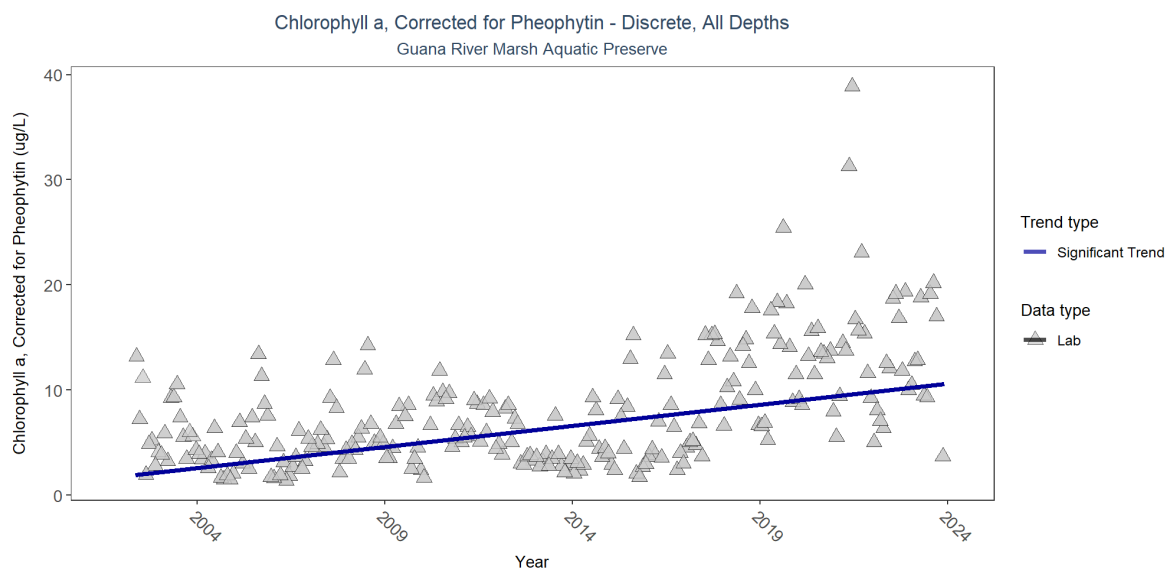


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1522	22	2002 - 2023	5.3	0.4201	1.7831	0.40227	0.0000

Secchi Depth - Discrete

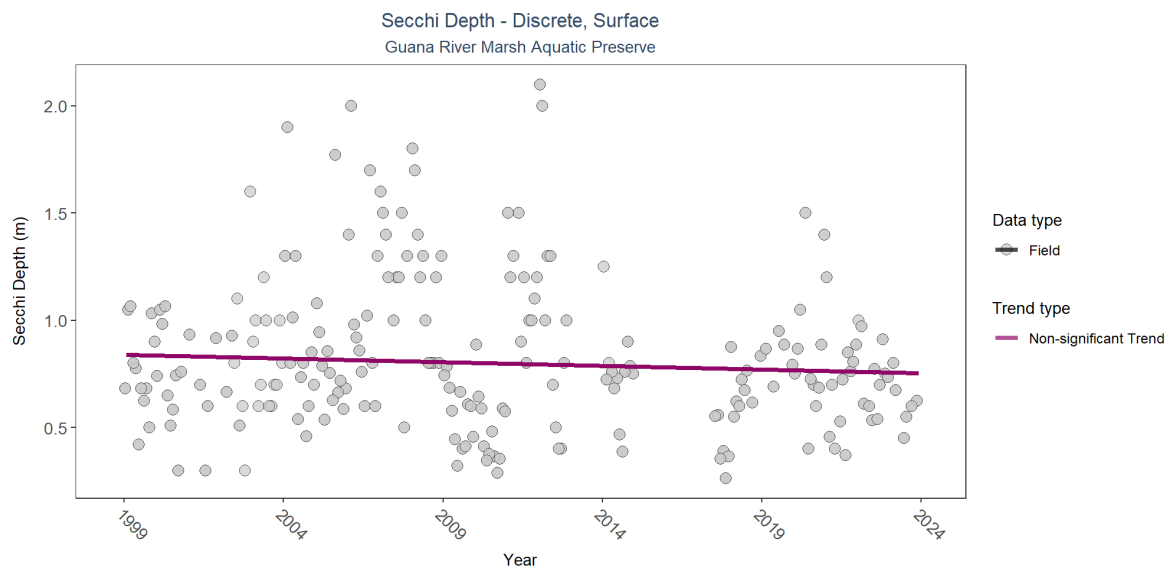


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	1330	22	1999 - 2023	0.7	-0.0762	0.84053	-0.00345	0.1410

Colored Dissolved Organic Matter - Discrete

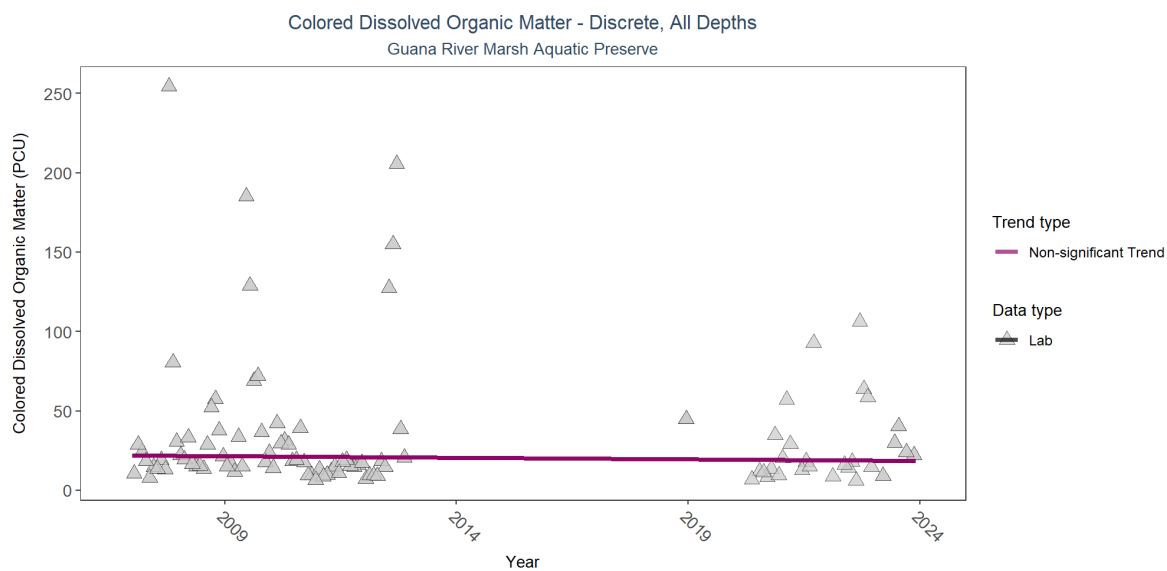


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	182	11	2007 - 2023	18.05	-0.1405	22.04197	-0.19539	0.1478