

# Guana River Marsh Aquatic Preserve

## SEACAR Water Quality Analysis

Last compiled on 09 January, 2025

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# Indicators

## Nutrients

### Total Nitrogen - Discrete

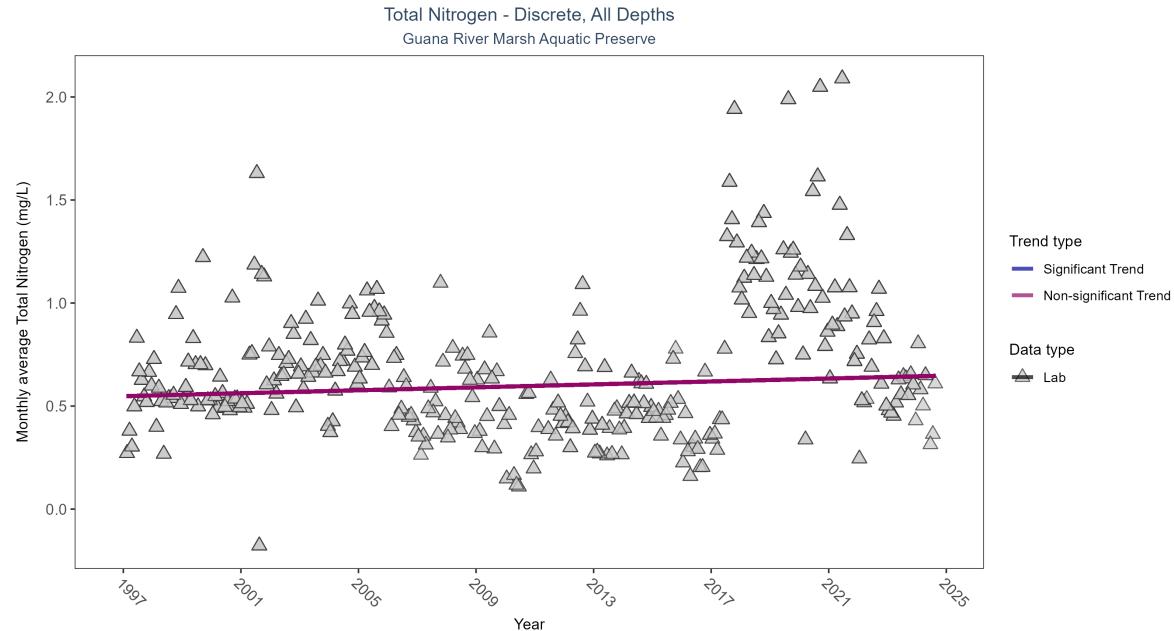


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	2015	28	1997 - 2024	0.613	0.0615	0.54803	0.00357	0.1205

## Total Phosphorus - Discrete

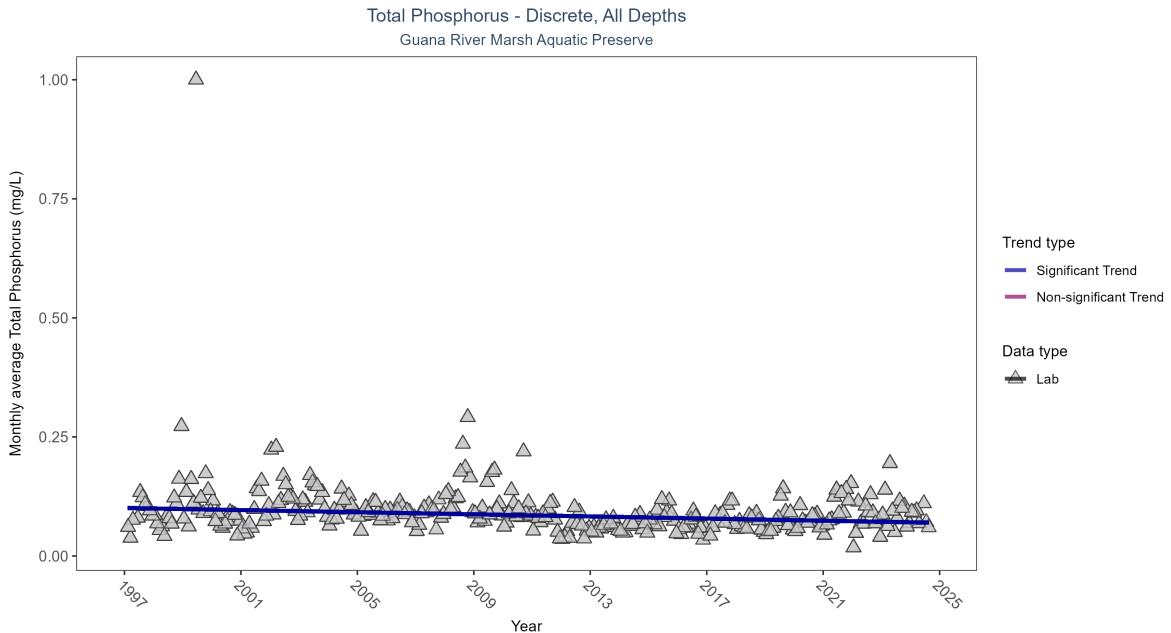


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	2884	28	1997 - 2024	0.07555	-0.2094	0.10078	-0.00111	0.0000

## Water Quality

### Dissolved Oxygen - Discrete

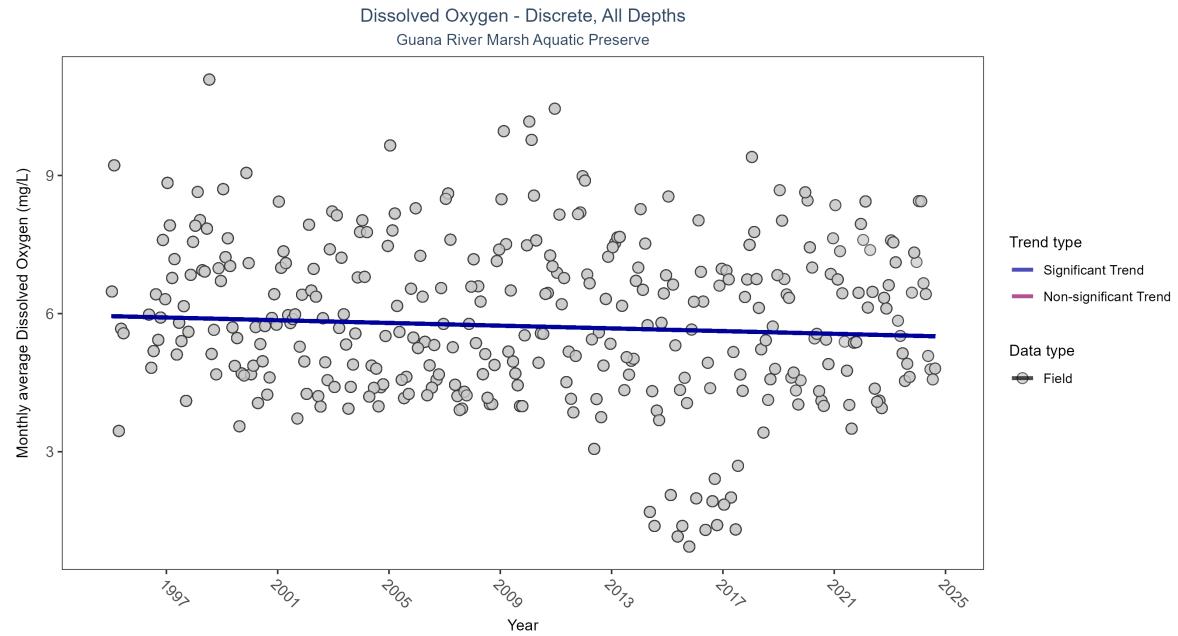


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	7608	30	1995 - 2024	5.7	-0.0876	5.94432	-0.01475	0.0200

## Dissolved Oxygen - Continuous

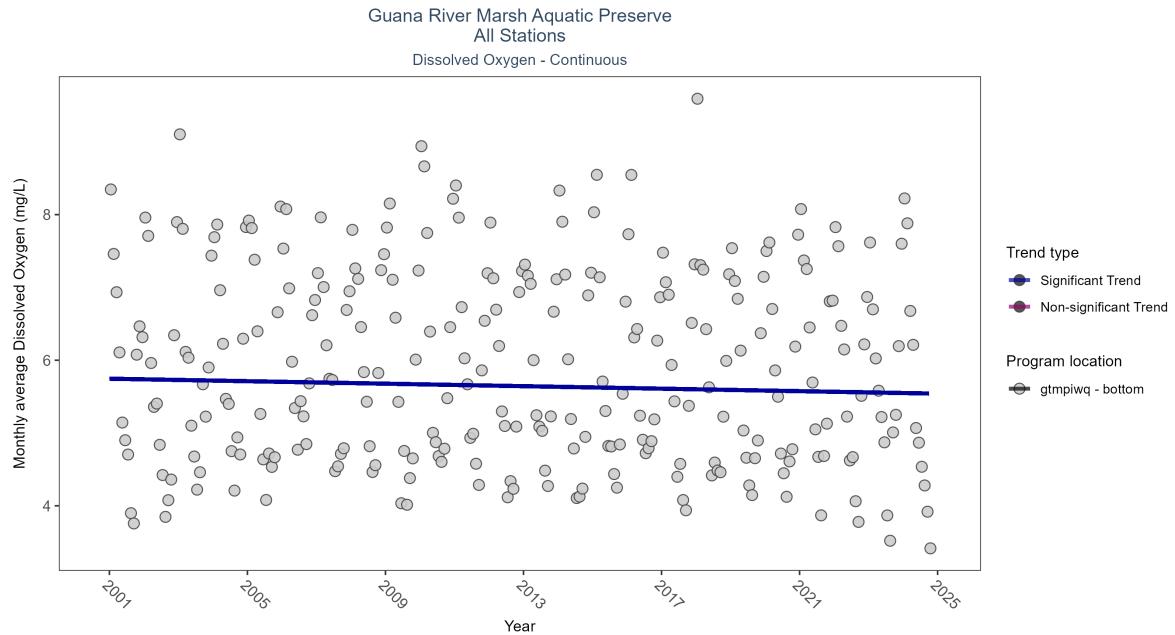


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmpiwq	Significantly decreasing trend	657932	24	2001 - 2024	5.9	-0.11	5.75	-0.01	0.0126

## Dissolved Oxygen Saturation - Discrete

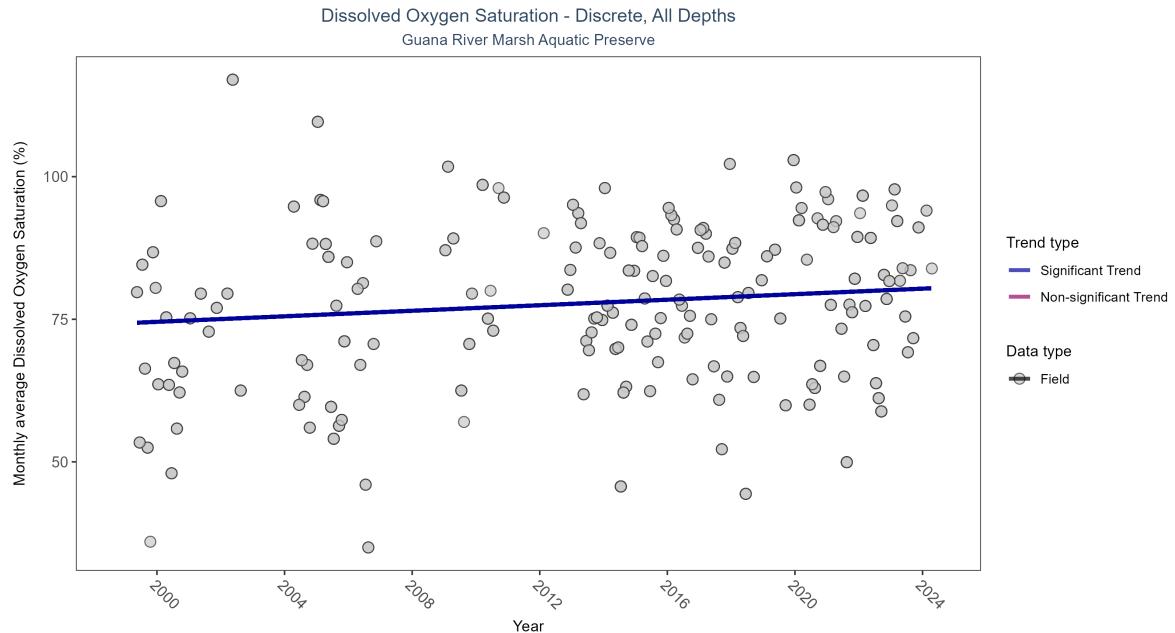


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	1170	22	1999 - 2024	78.35	0.1177	74.30789	0.24242	0.0389

## Dissolved Oxygen Saturation - Continuous

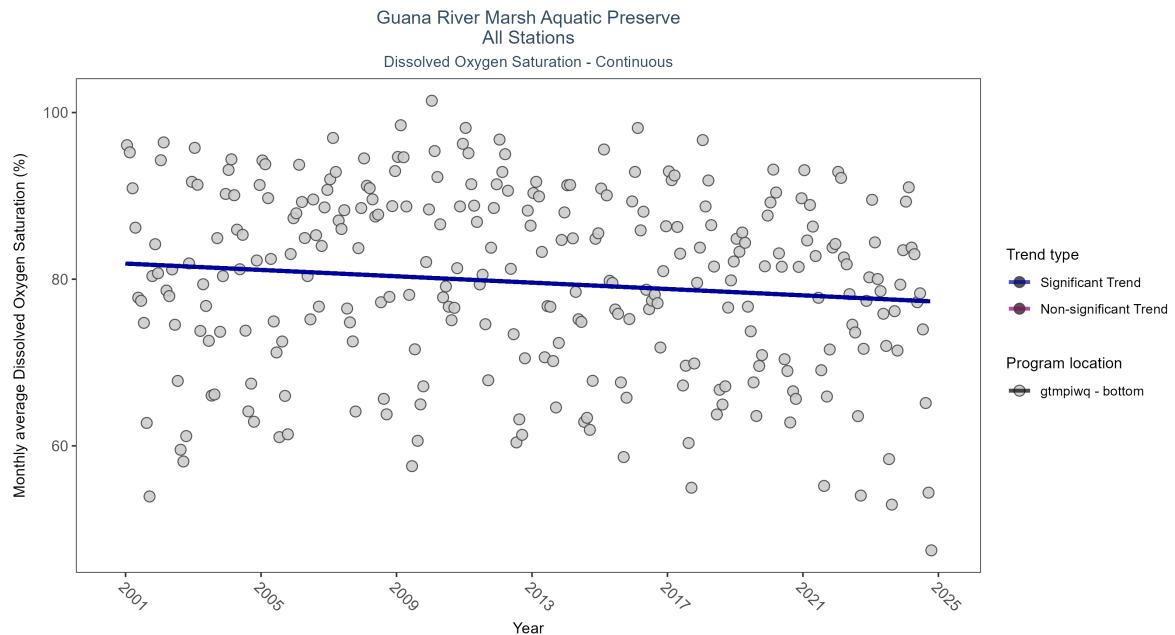


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmpiwq	Significantly decreasing trend	663744	24	2001 - 2024	82.2	-0.19	81.87	-0.19	0.0000

## Salinity - Discrete

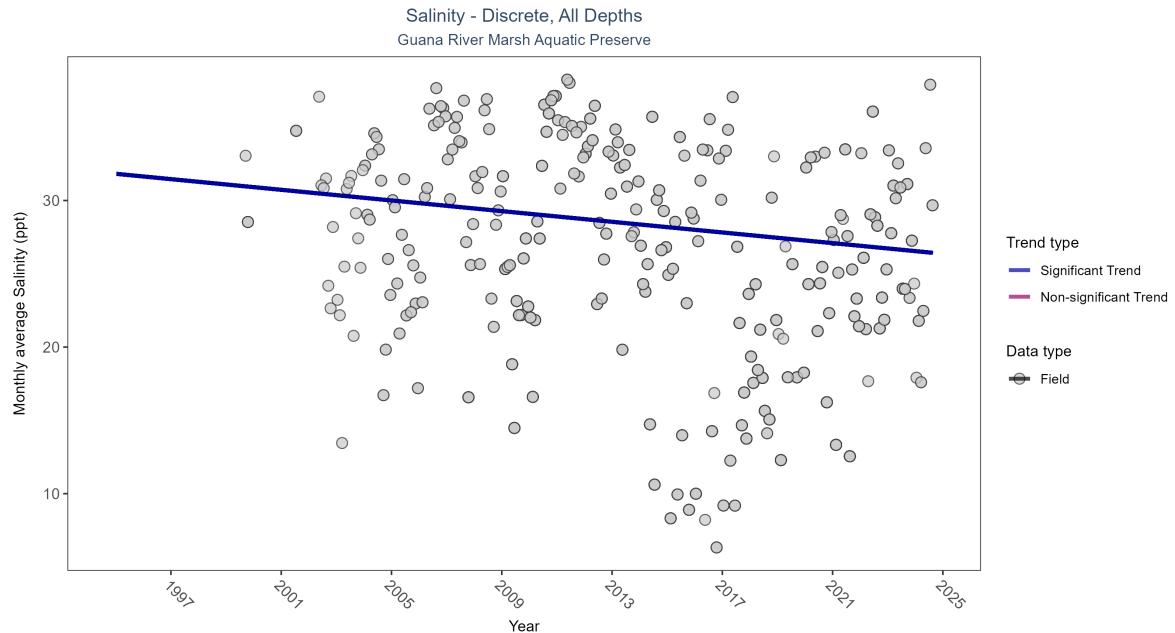


Table 7: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly decreasing trend	8358	30	1995 - 2024	31	-0.1811	31.8209	-0.18188	0.0000

## Salinity - Continuous

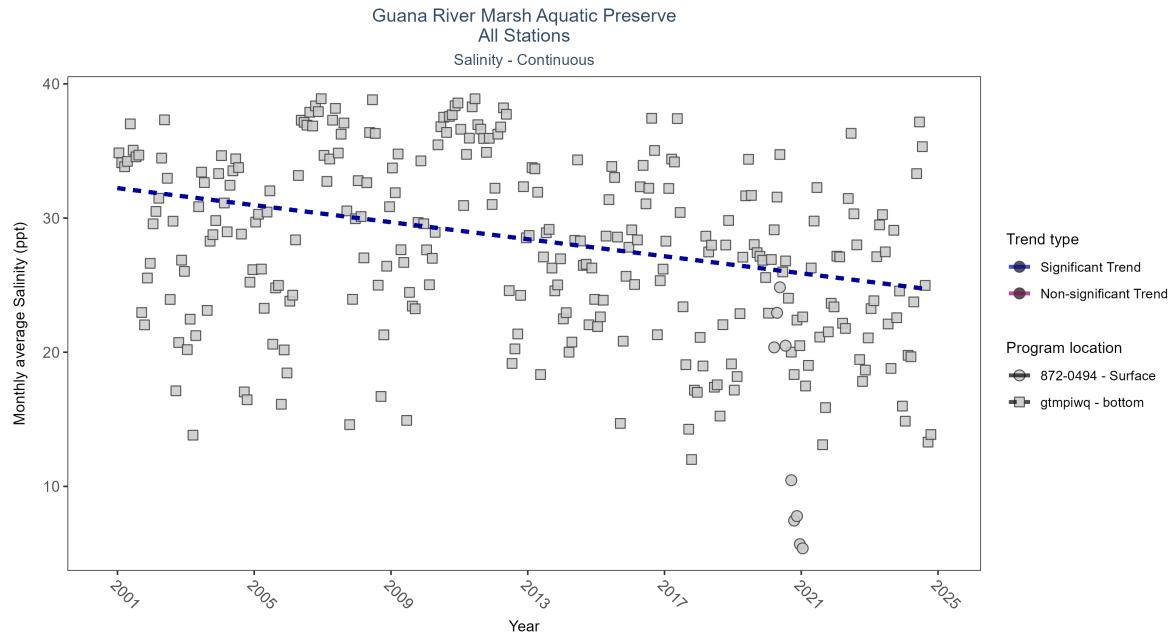


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gttmpiwq	Significantly decreasing trend	659986	24	2001 - 2024	28.00	-0.26	32.23	-0.32	0.0000
872-0494	Insufficient data to calculate trend	34918	2	2020 - 2021	8.99	-	-	-	-

## Water Temperature - Discrete

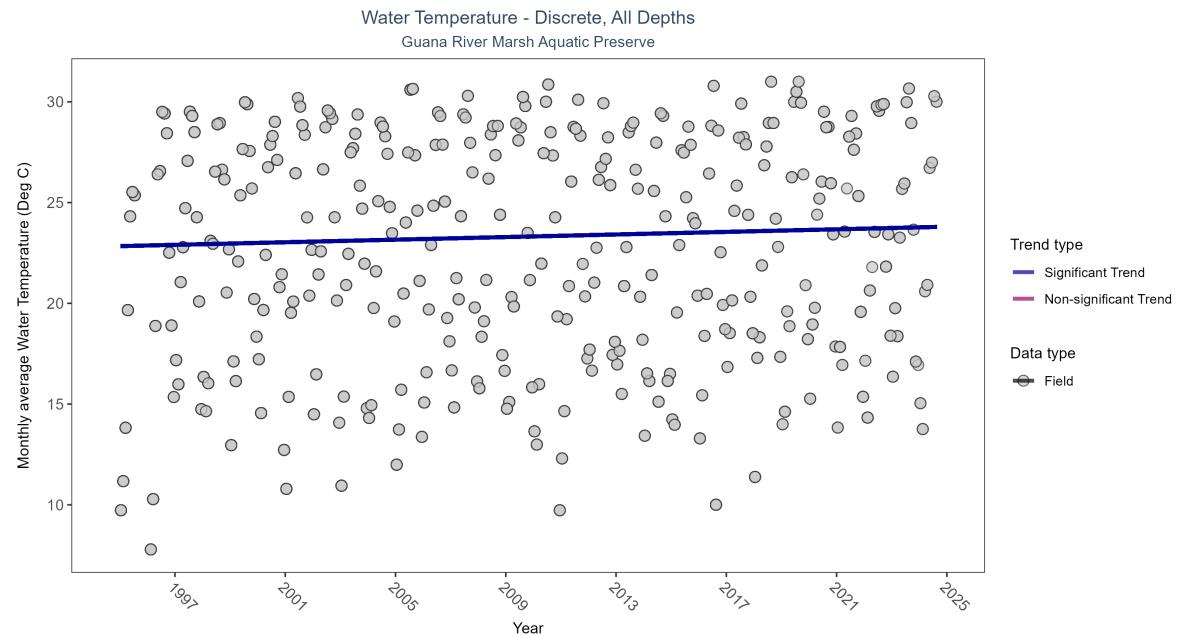


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	8320	30	1995 - 2024	23.1	0.1178	22.83822	0.03216	0.0018

## Water Temperature - Continuous

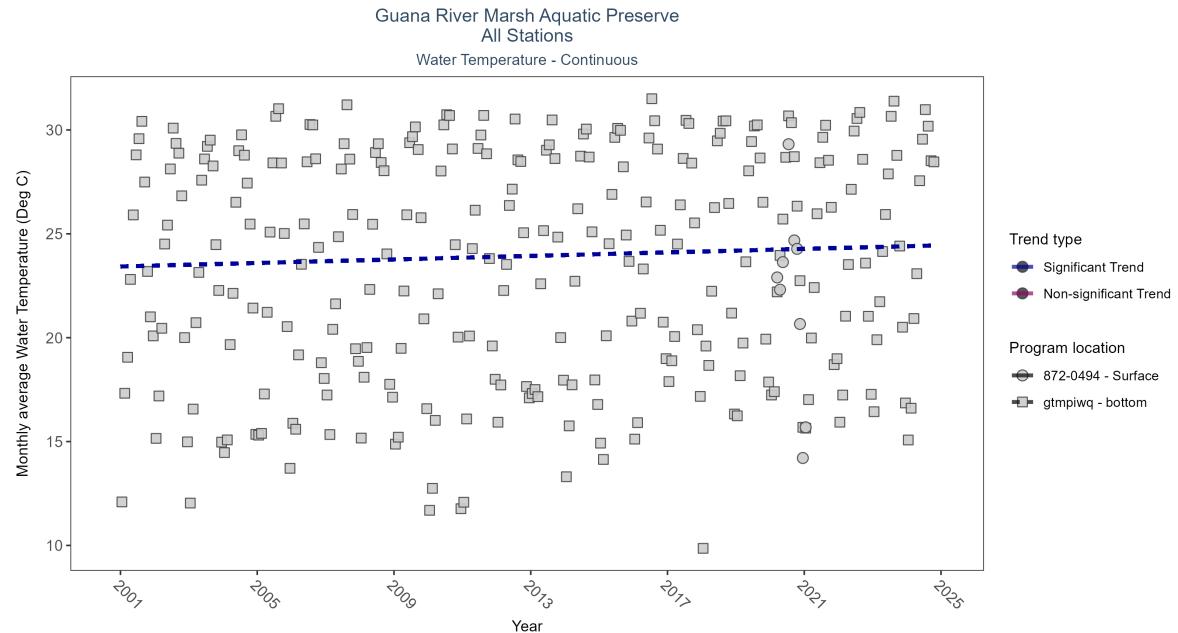


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gttmpiwq	Significantly increasing trend	710270	24	2001 - 2024	24.30	0.2	23.43	0.04	0.0000
872-0494	Insufficient data to calculate trend	35473	2	2020 - 2021	22.34	-	-	-	-

## pH - Discrete

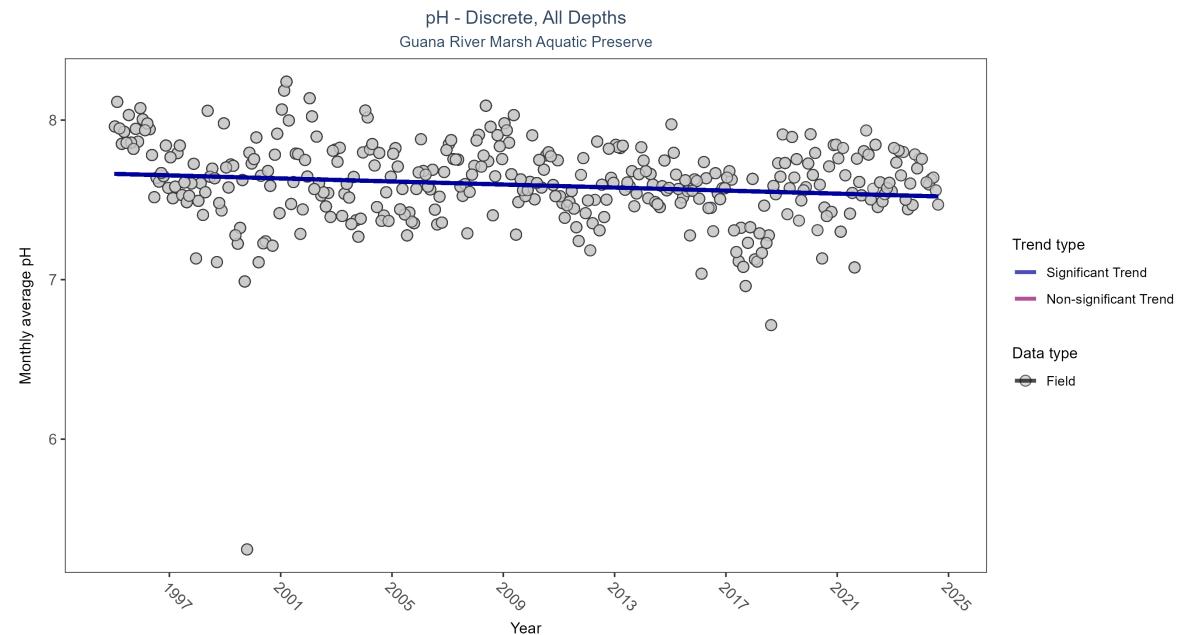


Table 11: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	6185	30	1995 - 2024	7.7	-0.138	7.66304	-0.00477	0.0002

## pH - Continuous

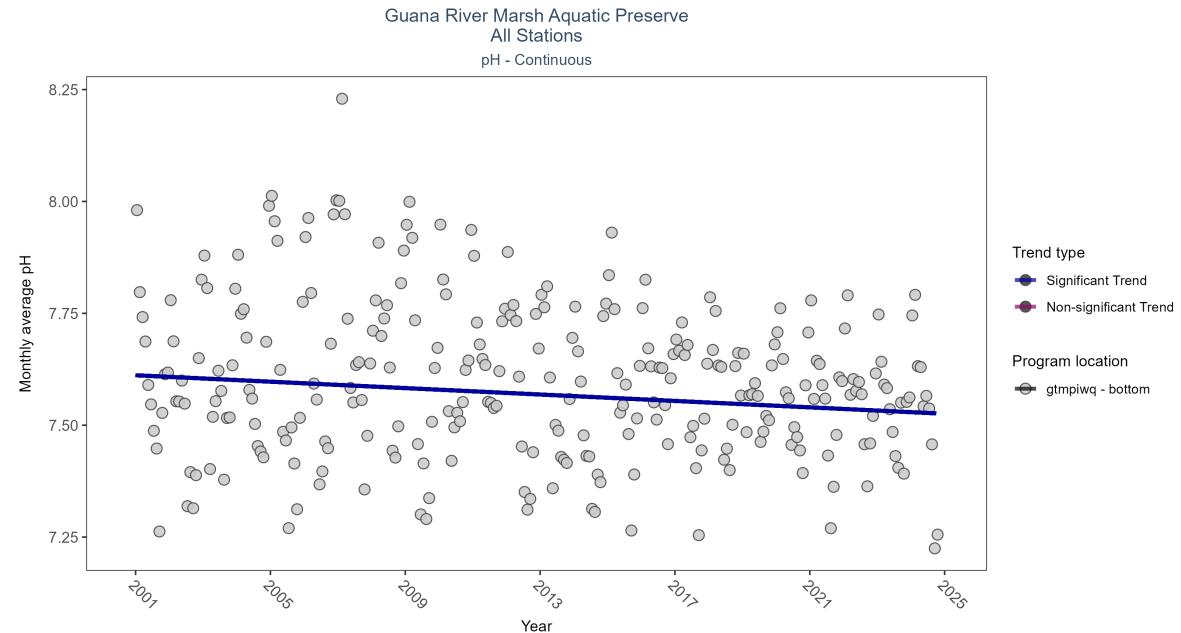


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmipi - bottom	Significantly decreasing trend	654000	24	2001 - 2024	7.6	-0.17	7.61	0	0.0001

## Water Clarity

### Turbidity - Discrete

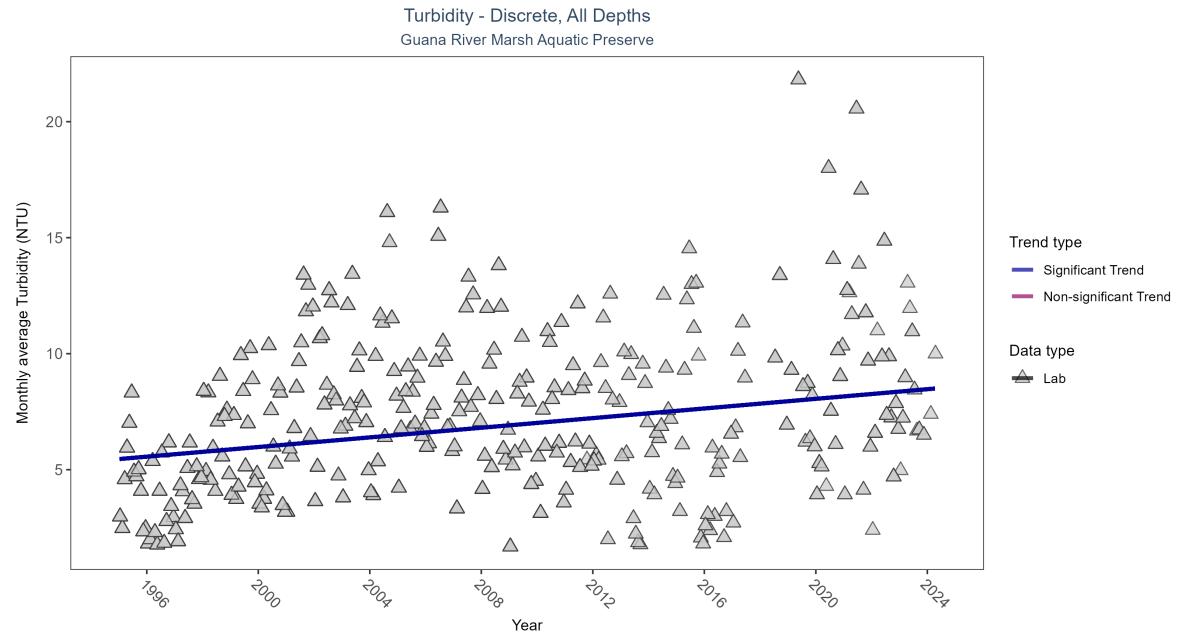


Table 13: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	5007	30	1995 - 2024	5.2	0.2161	5.45783	0.10384	0.0000

## Turbidity - Continuous

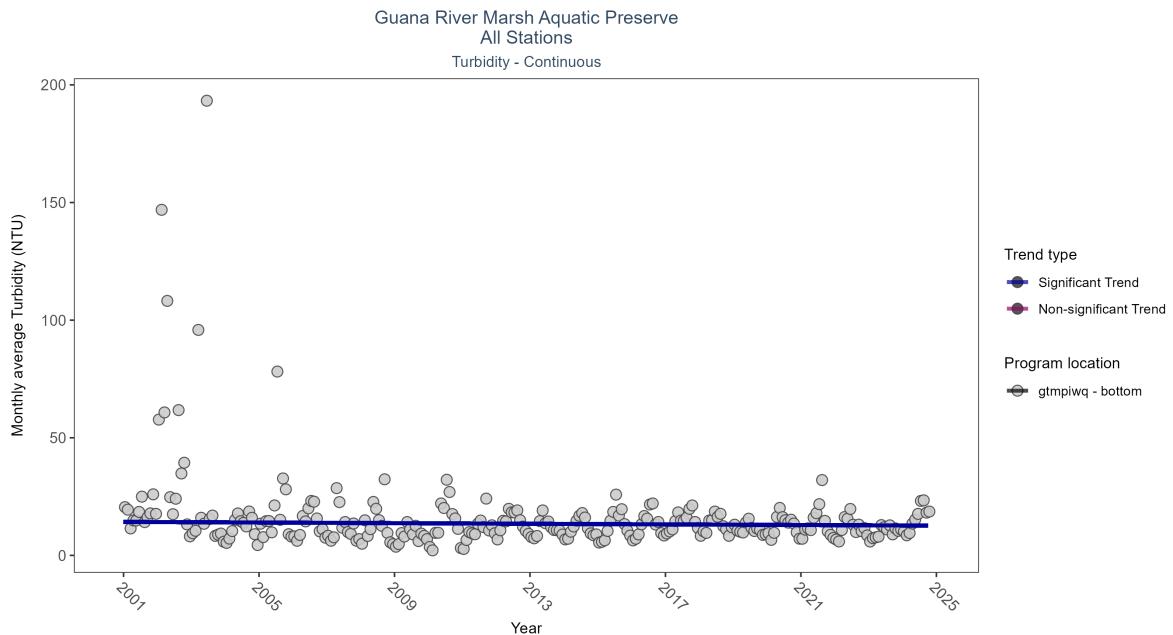


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
gtmplwq	Significantly decreasing trend	633953	24	2001 - 2024	11	-0.09	14.24	-0.07	0.0407

## Total Suspended Solids - Discrete

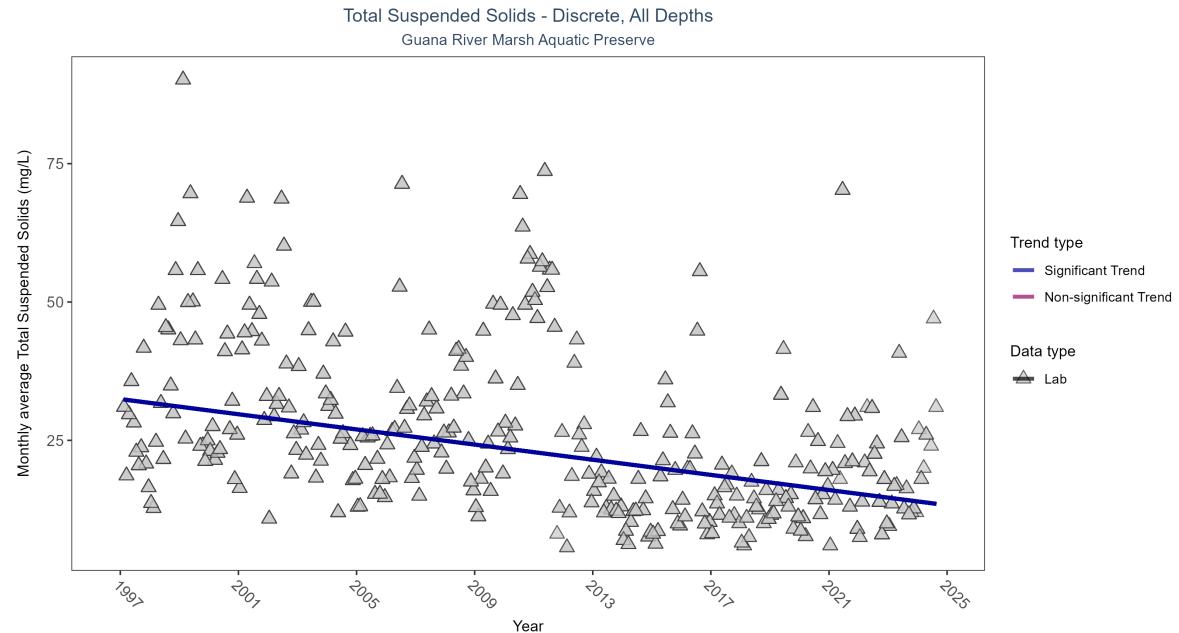


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	1704	28	1997 - 2024	22.45	-0.3536	32.45824	-0.685	0.0000

## **Chlorophyll a, Uncorrected for Pheophytin - Discrete**

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

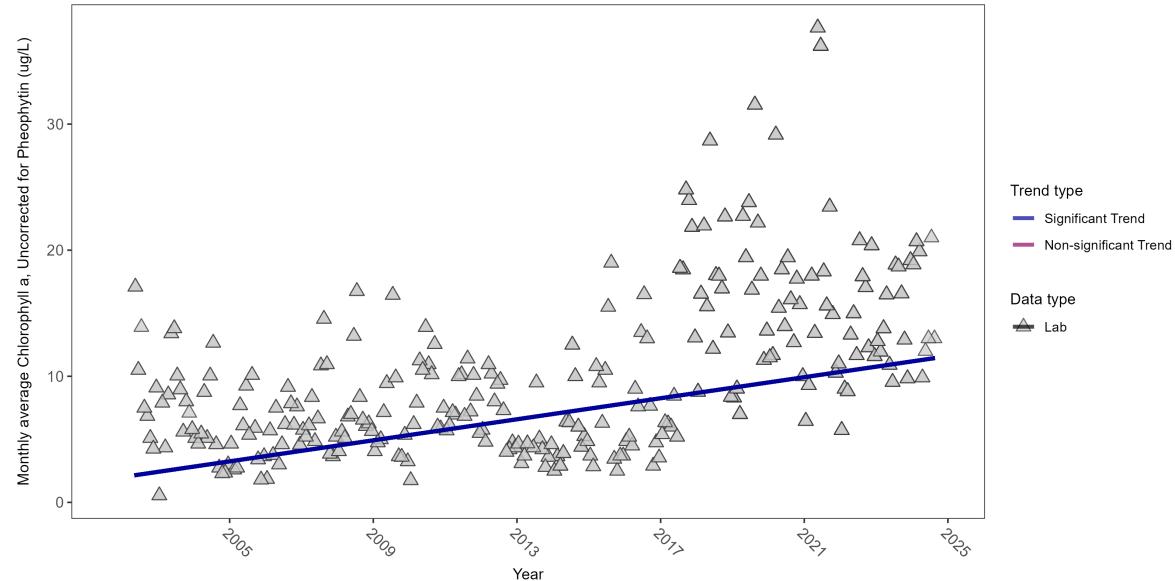


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1312	23	2002 - 2024	7.7	0.408	2.00126	0.41717	0.0000

## Chlorophyll a, Corrected for Pheophytin - Discrete

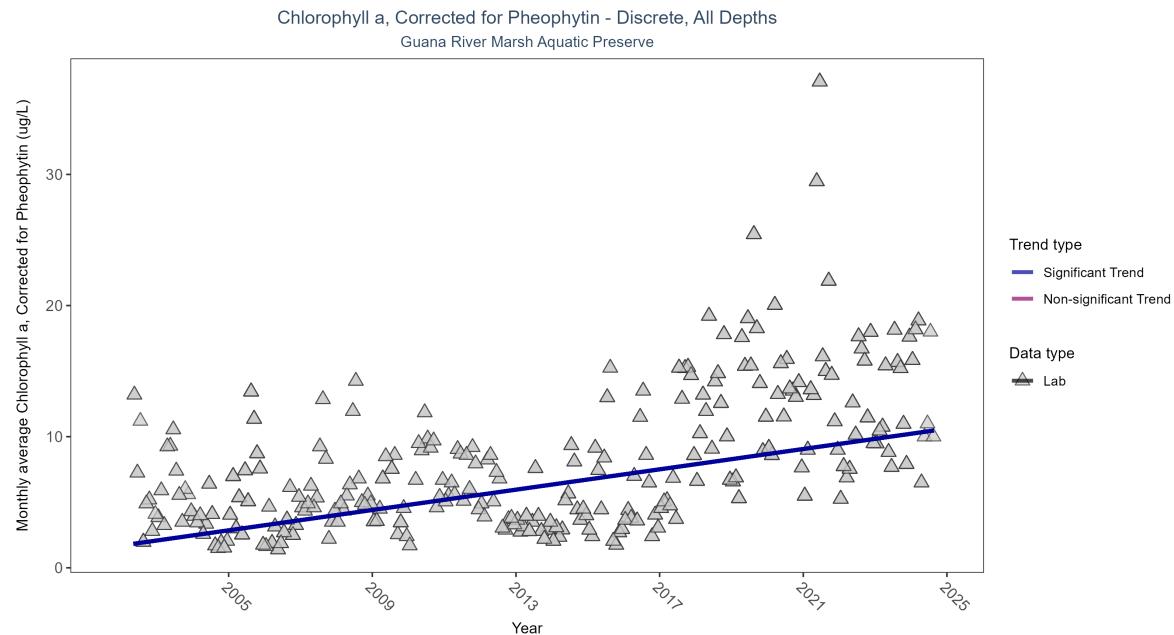


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1633	23	2002 - 2024	5.4	0.4298	1.69409	0.38766	0.0000

## Secchi Depth - Discrete

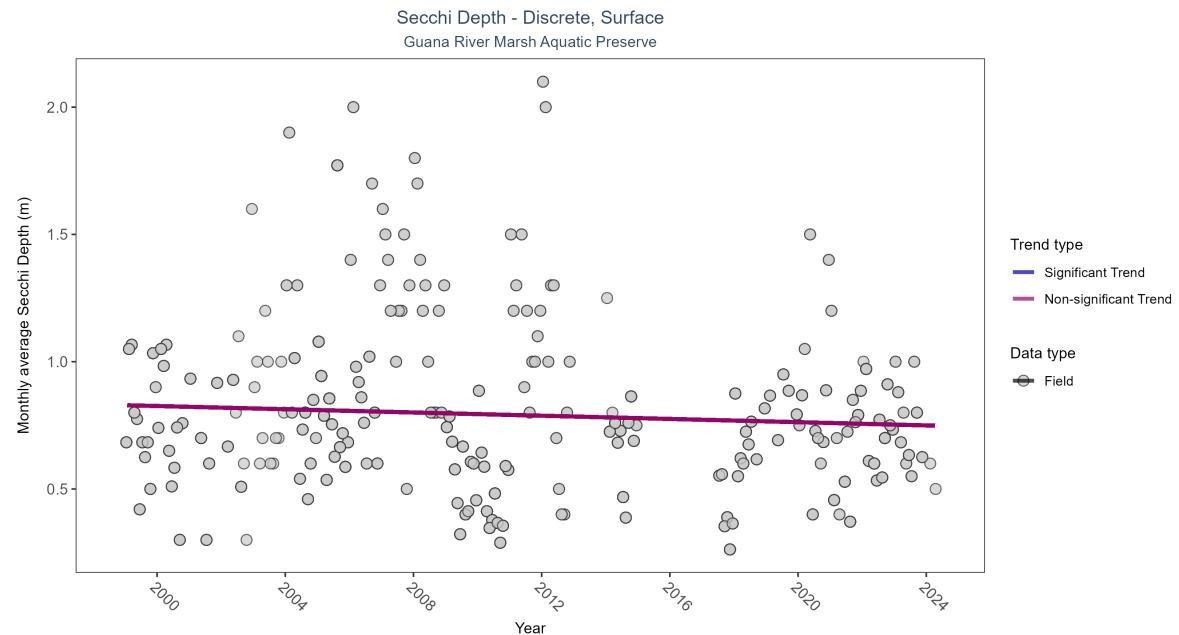


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	1353	23	1999 - 2024	0.7	-0.0721	0.82907	-0.00317	0.1579

## Colored Dissolved Organic Matter - Discrete

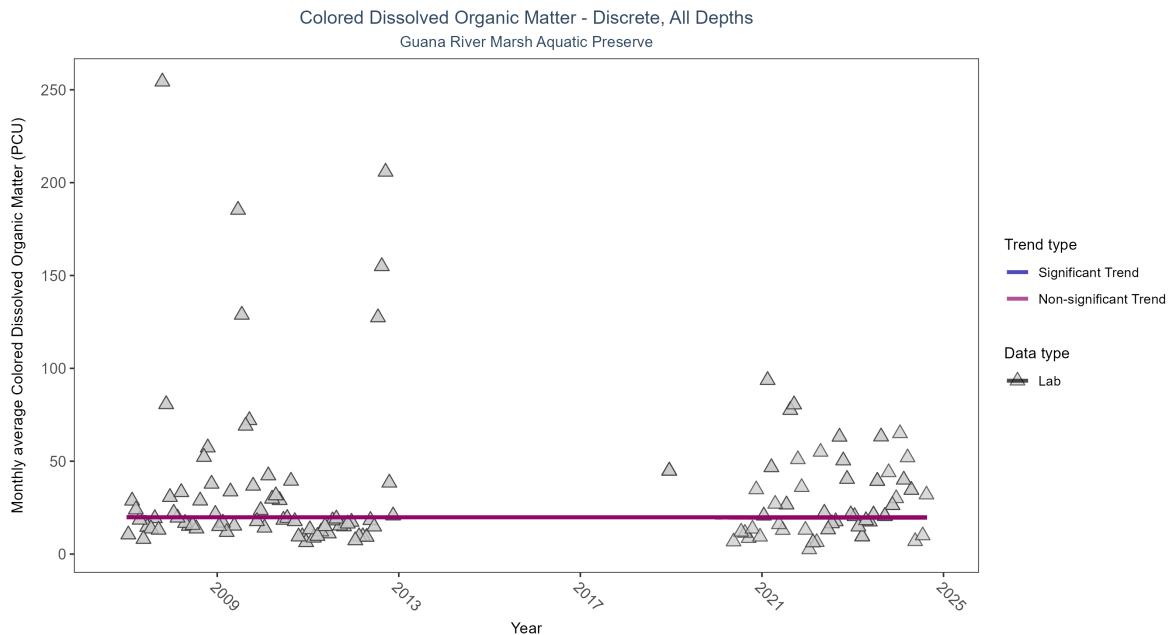


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	234	12	2007 - 2024	19.35	-0.0045	19.85027	-0.00531	0.9800