

# Biscayne Bay Aquatic Preserve

## SEACAR Water Quality Analysis

Last compiled on 09 January, 2025

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# Indicators

## Nutrients

### Total Nitrogen - Discrete

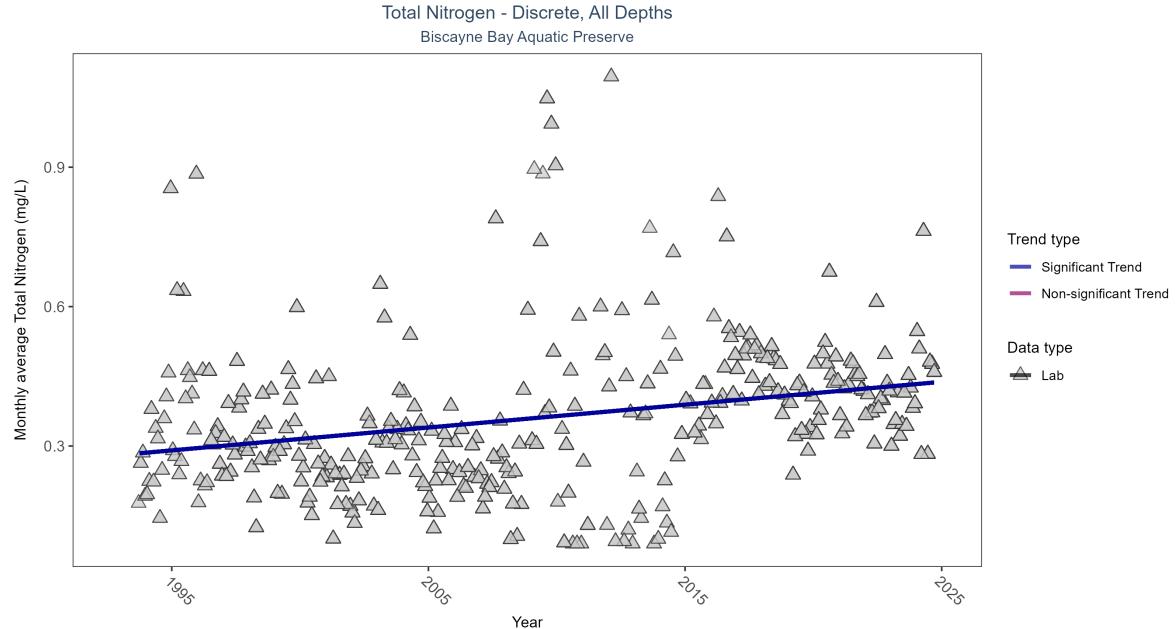


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	7878	32	1993 - 2024	0.334	0.2323	0.28075	0.00492	0.0000

## Total Phosphorus - Discrete

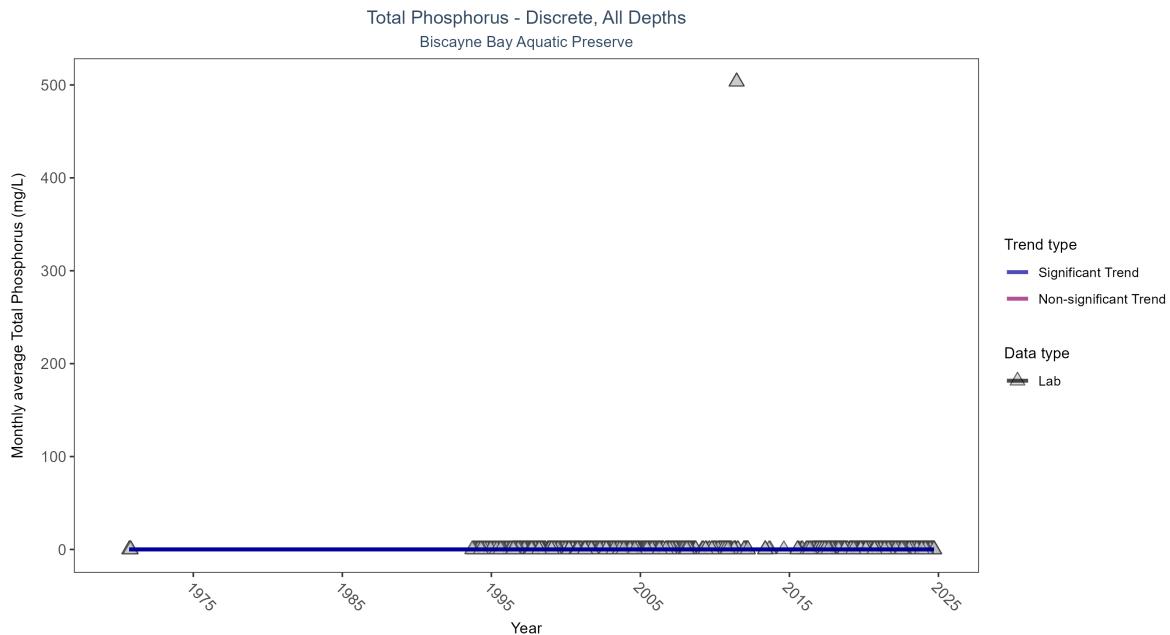


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	7984	33	1970 - 2024	0.0091	0.3644	-0.00188	0.00027	0.0000

## Water Quality

### Dissolved Oxygen - Discrete

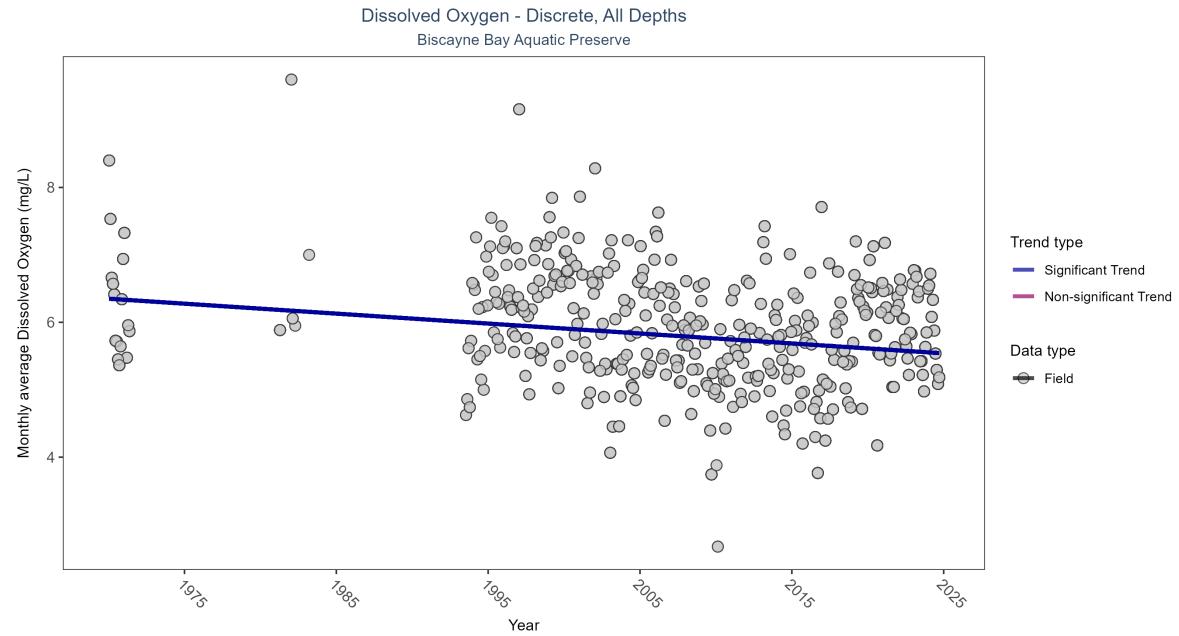


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	21842	37	1970 - 2024	6.01	-0.2043	6.34998	-0.01474	0.0000

## Dissolved Oxygen - Continuous

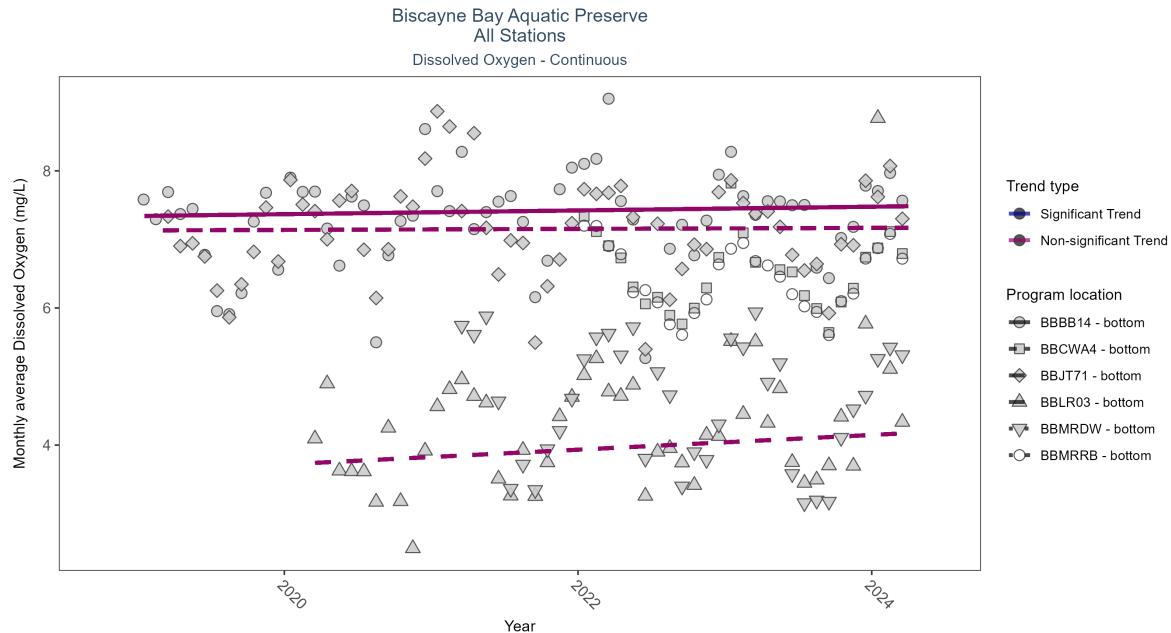


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
BBCWA4	Insufficient data to calculate trend	71466	3	2022 - 2024	6.5	-	-	-	-
BBBB14	No significant trend	158232	6	2019 - 2024	7.3	0.09	7.34	0.03	0.4258
BBJT71	No significant trend	175347	6	2019 - 2024	7.0	0.08	7.13	0.01	0.5824
BBLR03	No significant trend	130447	5	2020 - 2024	4.2	0.21	3.72	0.11	0.1564
BBMRDW	Insufficient data to calculate trend	98760	4	2021 - 2024	4.6	-	-	-	-
BBMRRB	Insufficient data to calculate trend	76975	3	2022 - 2024	6.4	-	-	-	-

## Dissolved Oxygen Saturation - Discrete

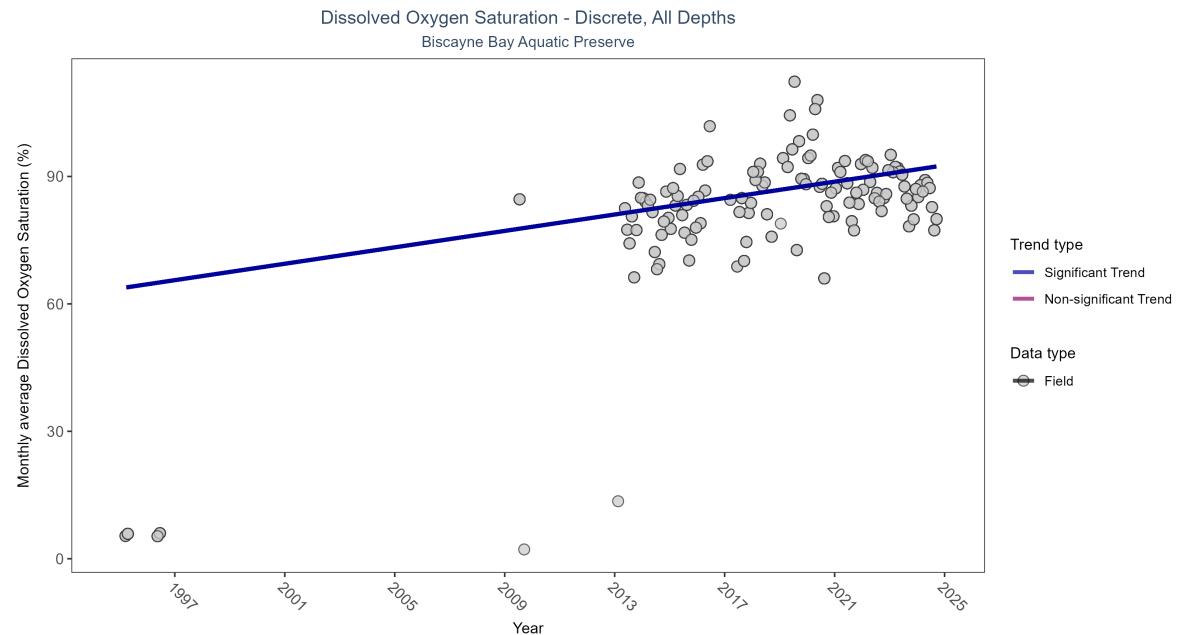


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	9941	15	1995 - 2024	90.3	0.3164	63.65064	0.9663	0.0000

## Dissolved Oxygen Saturation - Continuous

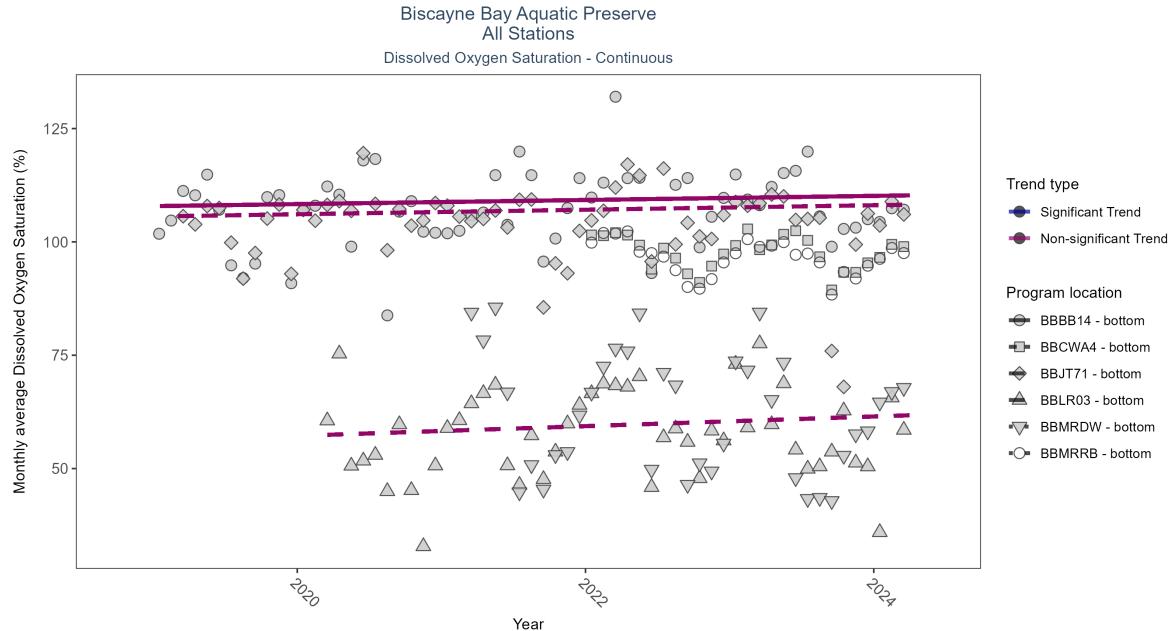


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
BBCWA4	Insufficient data to calculate trend	75189	3	2022 - 2024	97.5	-	-	-	-
BBBB14	No significant trend	157972	6	2019 - 2024	105.1	0.12	107.88	0.45	0.3528
BBLR03	No significant trend	130446	5	2020 - 2024	56.9	0.05	57.22	1.07	0.7768
BBJT71	No significant trend	176498	6	2019 - 2024	102.0	0.1	105.6	0.5	0.4095
BBMRRB	Insufficient data to calculate trend	76983	3	2022 - 2024	95.8	-	-	-	-
BBMRDW	Insufficient data to calculate trend	98761	4	2021 - 2024	60.6	-	-	-	-

## Salinity - Discrete

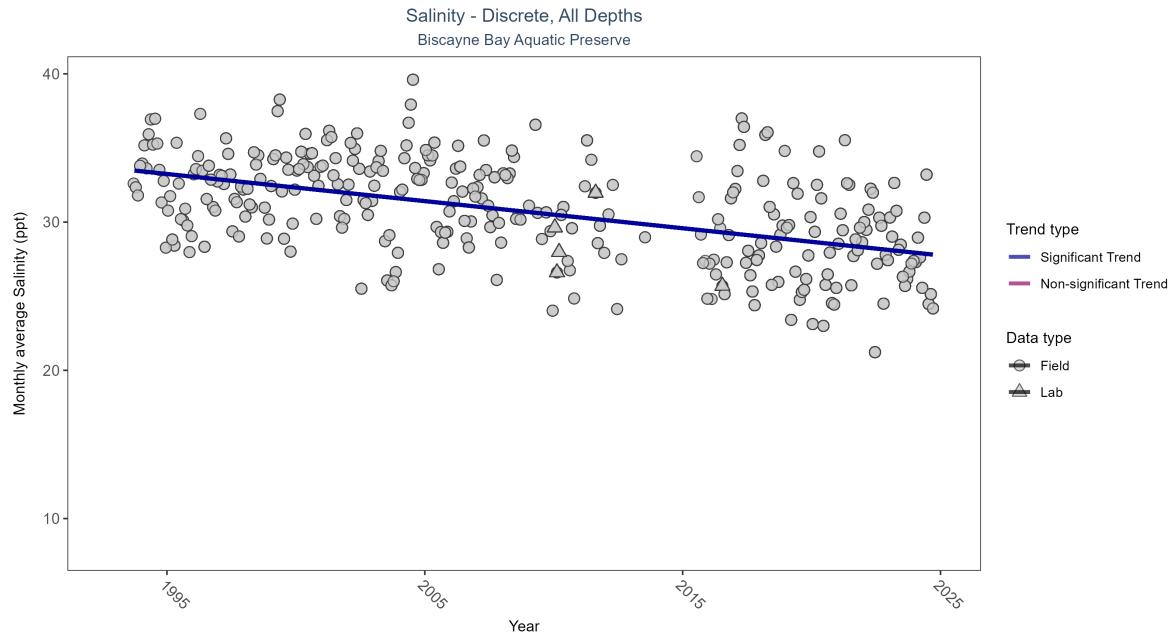


Table 7: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly decreasing trend	23942	32	1993 - 2024	32	-0.4146	33.61132	-0.18304	0.0000

## Salinity - Continuous

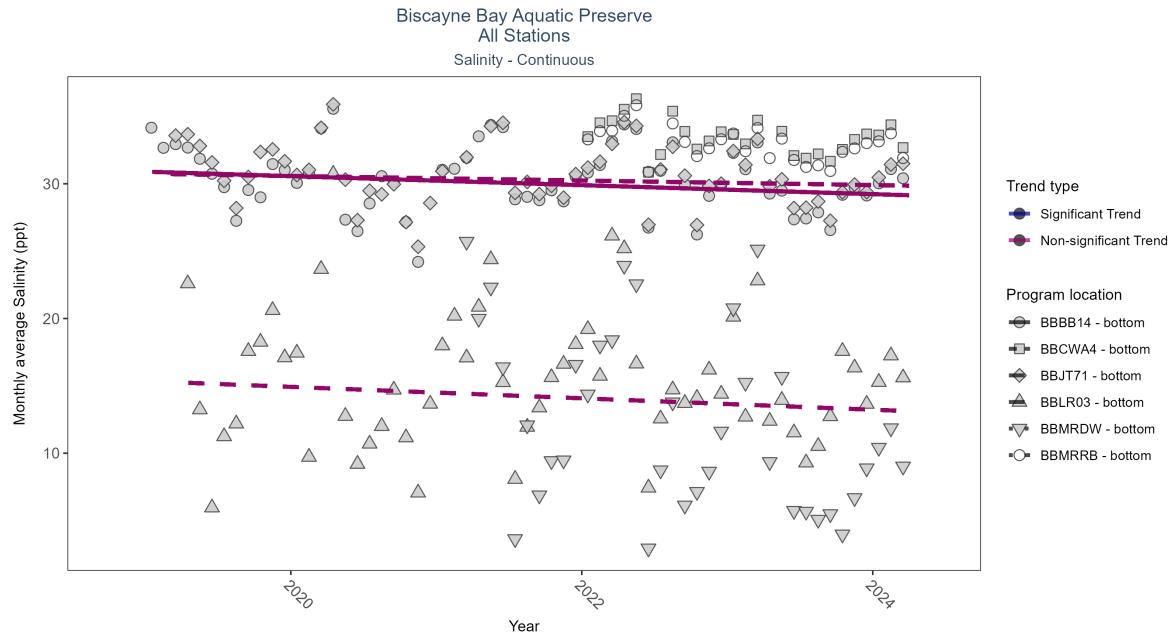


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
BBBBB14	No significant trend	147846	6	2019 - 2024	30.2	-0.21	30.9	-0.33	0.1049
BBCWA4	Insufficient data to calculate trend	69581	3	2022 - 2024	33.6	-	-	-	-
BBLR03	No significant trend	150444	6	2019 - 2024	16.2	-0.15	15.35	-0.42	0.2293
BBJT71	No significant trend	161583	6	2019 - 2024	30.9	-0.12	30.75	-0.17	0.3169
BBMRDW	Insufficient data to calculate trend	96889	4	2021 - 2024	10.1	-	-	-	-
BBMRRB	Insufficient data to calculate trend	76983	3	2022 - 2024	33.1	-	-	-	-

## Water Temperature - Discrete

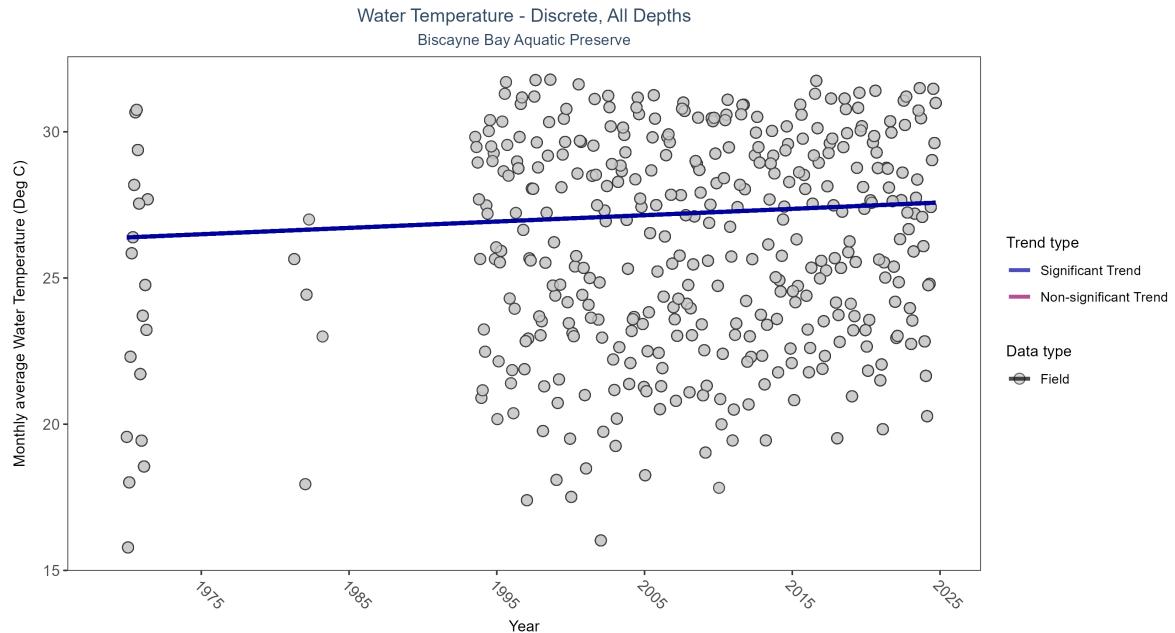


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	25790	38	1969 - 2024	27	0.1371	26.36647	0.0217	0.0001

## Water Temperature - Continuous

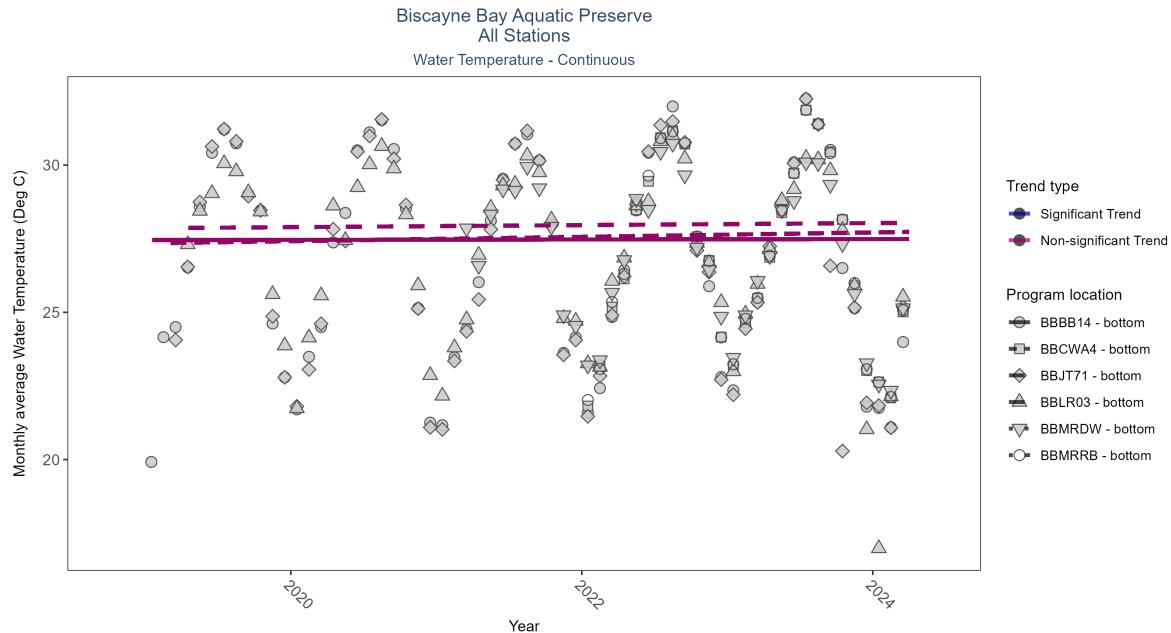


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
BBBBB14	No significant trend	158344	6	2019 - 2024	26.9	0.04	27.45	0.01	0.7906
BBCWA4	Insufficient data to calculate trend	75372	3	2022 - 2024	26.7	-	-	-	-
BBJT71	No significant trend	176850	6	2019 - 2024	27.1	0.06	27.34	0.07	0.5824
BBLR03	No significant trend	156713	6	2019 - 2024	27.7	0.02	27.86	0.03	0.9436
BBMRDW	Insufficient data to calculate trend	98772	4	2021 - 2024	27.4	-	-	-	-
BBMRRB	Insufficient data to calculate trend	77027	3	2022 - 2024	26.9	-	-	-	-

## pH - Discrete

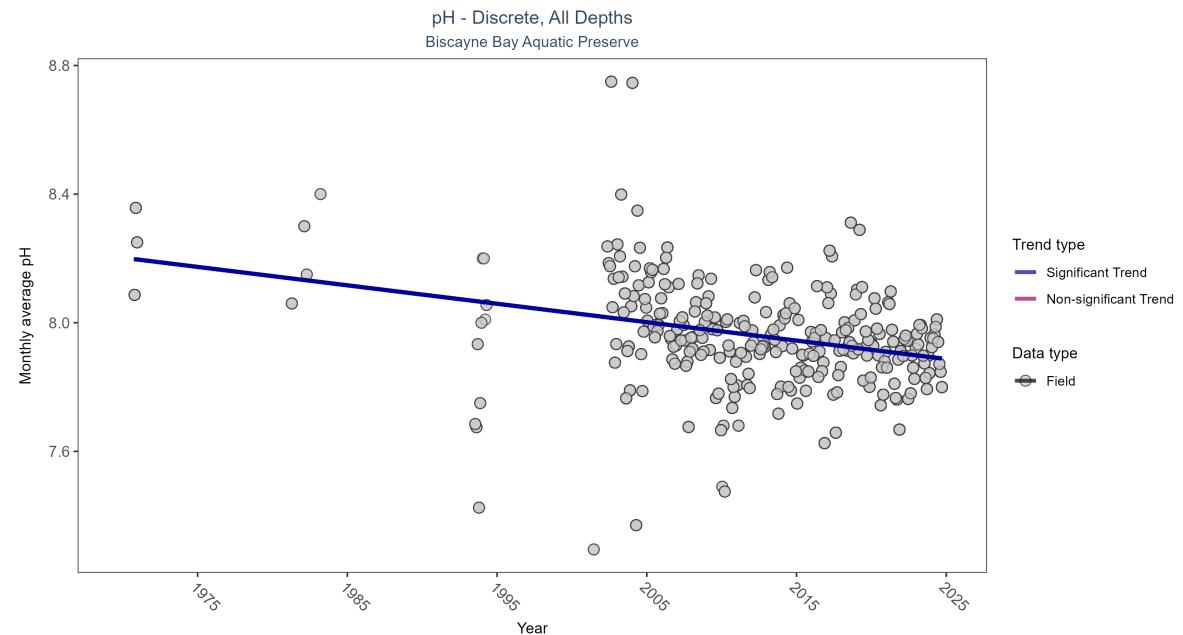


Table 11: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	18131	30	1970 - 2024	7.96	-0.2897	8.20226	-0.00573	0.0000

## pH - Continuous

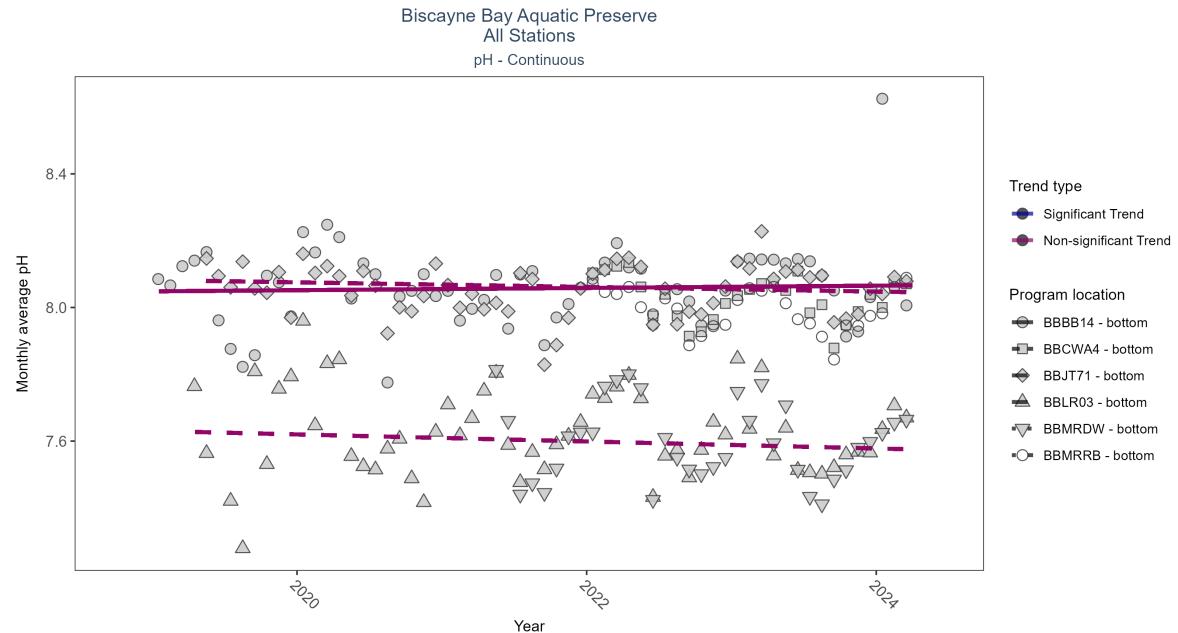


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
BBCWA4	Insufficient data to calculate trend	75371	3	2022 - 2024	8.0	-	-	-	-
BBBB14	No significant trend	154159	6	2019 - 2024	8.1	0.06	8.05	0	0.6905
BBJT71	No significant trend	163759	6	2019 - 2024	8.1	-0.15	8.08	-0.01	0.2199
BBLR03	No significant trend	145957	6	2019 - 2024	7.6	-0.16	7.63	-0.01	0.2199
BBMRDW	Insufficient data to calculate trend	95215	4	2021 - 2024	7.6	-	-	-	-
BBMRRB	Insufficient data to calculate trend	77027	3	2022 - 2024	8.0	-	-	-	-

## Water Clarity

### Turbidity - Discrete

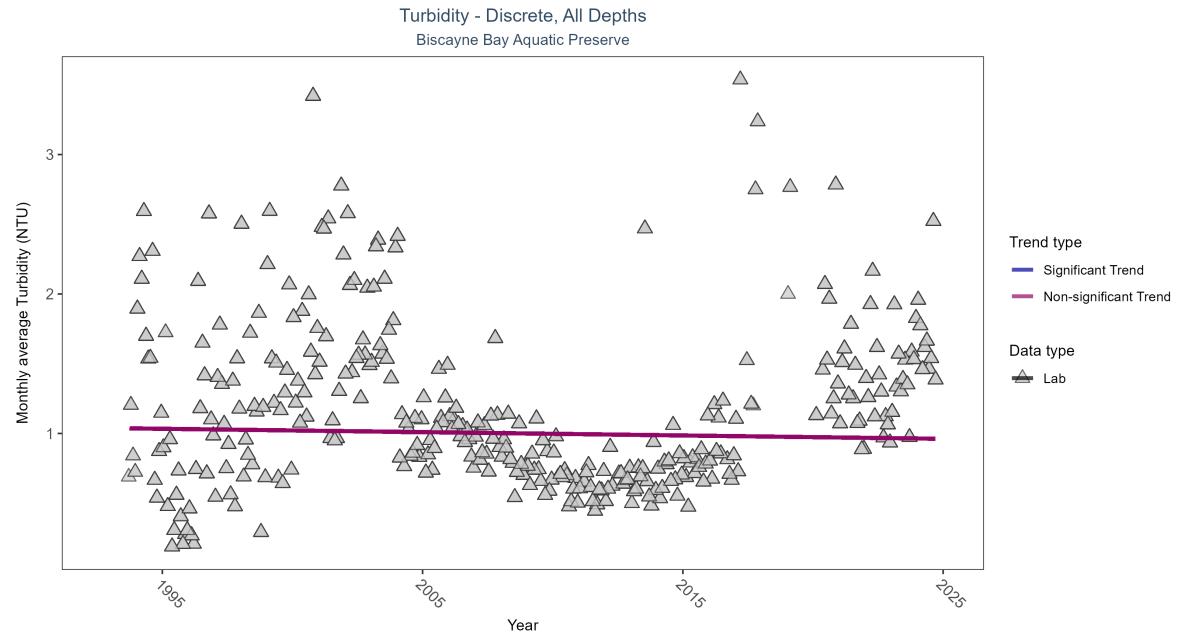


Table 13: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	11884	31	1993 - 2024	0.8	-0.027	1.03829	-0.0024	0.4931

## Turbidity - Continuous

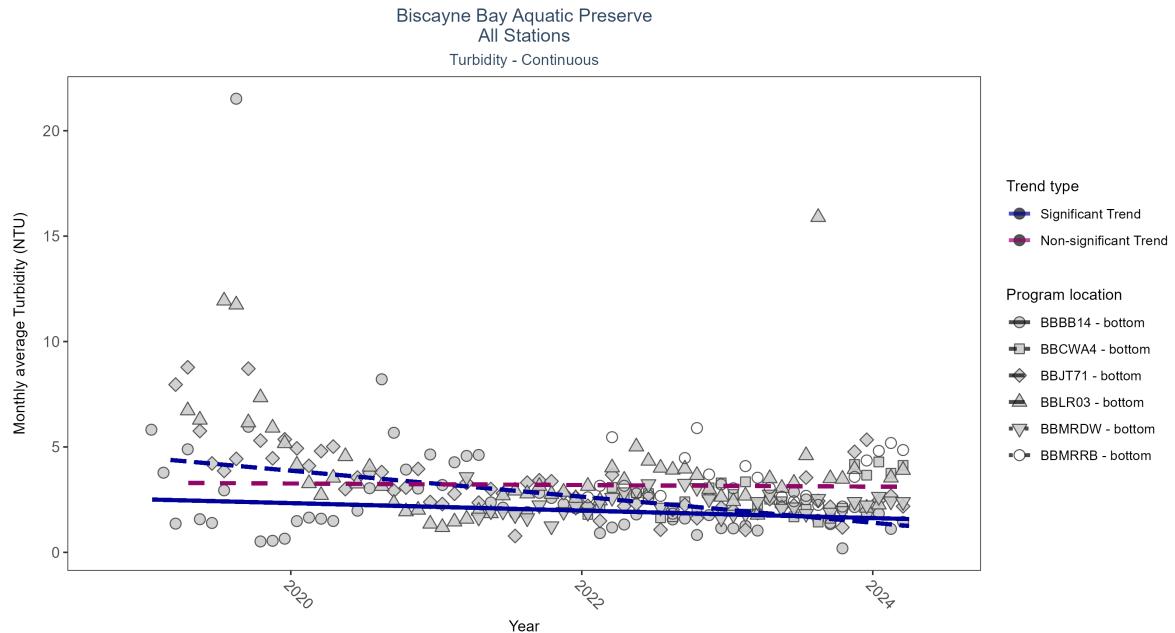


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
BBBB14	Significantly decreasing trend	147344	6	2019 - 2024	2	-0.26	2.51	-0.18	0.0216
BBCWA4	Insufficient data to calculate trend	72769	3	2022 - 2024	2	-	-	-	-
BBJT71	Significantly decreasing trend	169453	6	2019 - 2024	3	-0.61	4.49	-0.62	0.0000
BBLR03	No significant trend	152908	6	2019 - 2024	3	-0.03	3.3	-0.04	0.8286
BBMRDW	Insufficient data to calculate trend	98484	4	2021 - 2024	2	-	-	-	-
BBMRRB	Insufficient data to calculate trend	76043	3	2022 - 2024	3	-	-	-	-

## Total Suspended Solids - Discrete

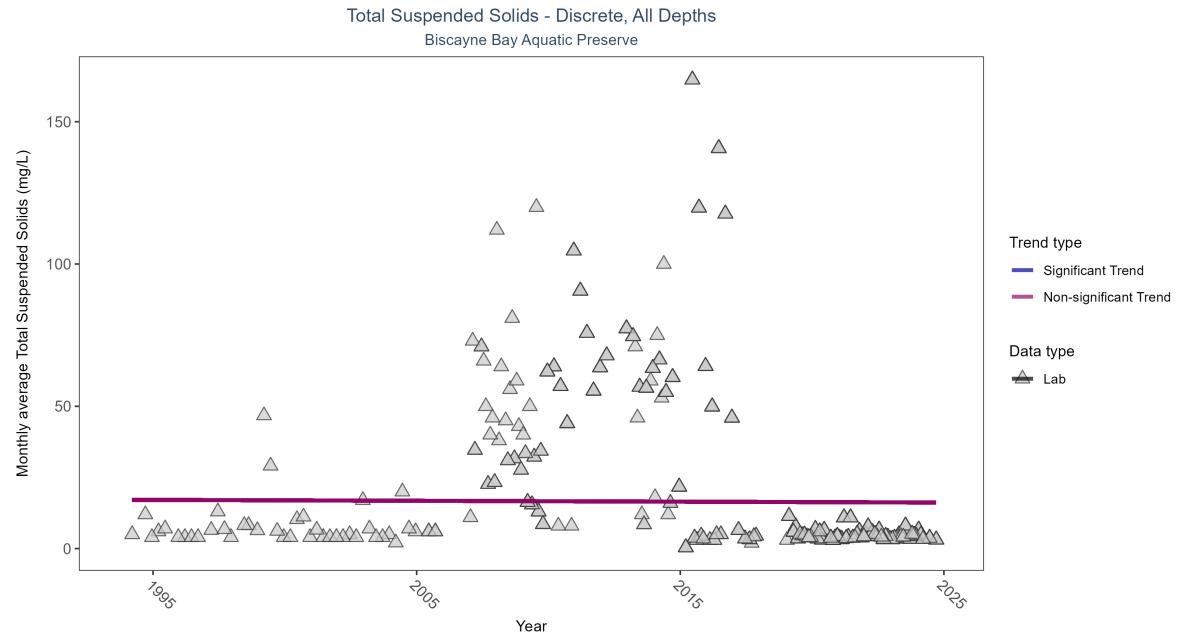


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	2221	29	1994 - 2024	4.9	-0.1596	17.13541	-0.03081	0.2724

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

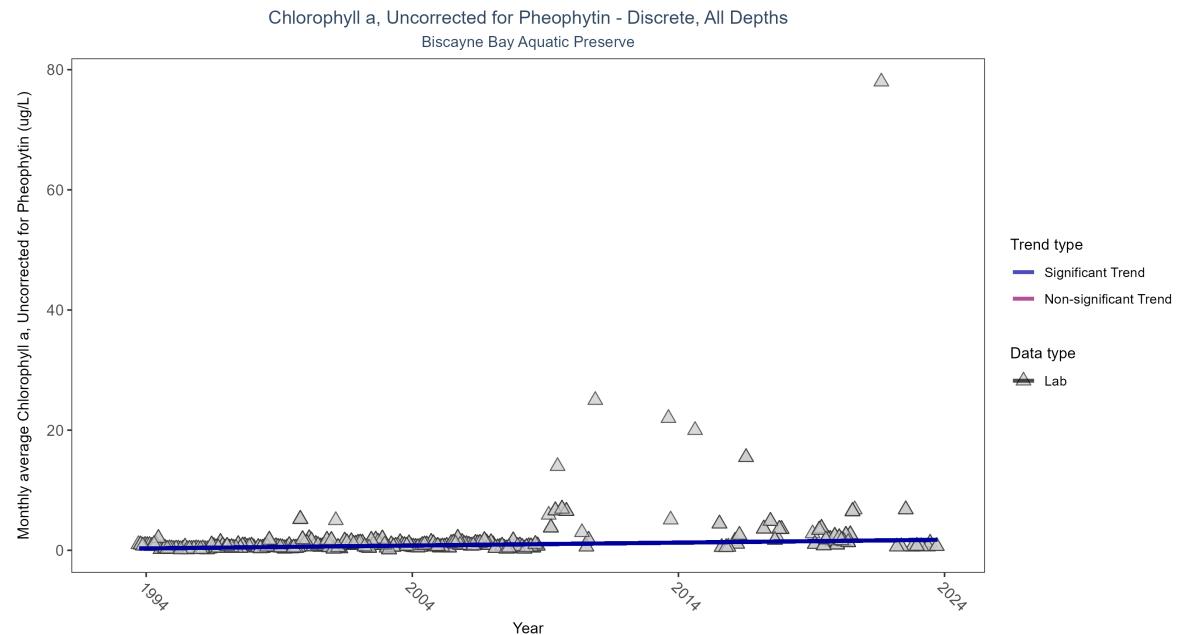


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	2254	28	1993 - 2023	0.66655	0.3904	0.26493	0.04843	0.0000

## Chlorophyll a, Corrected for Pheophytin - Discrete

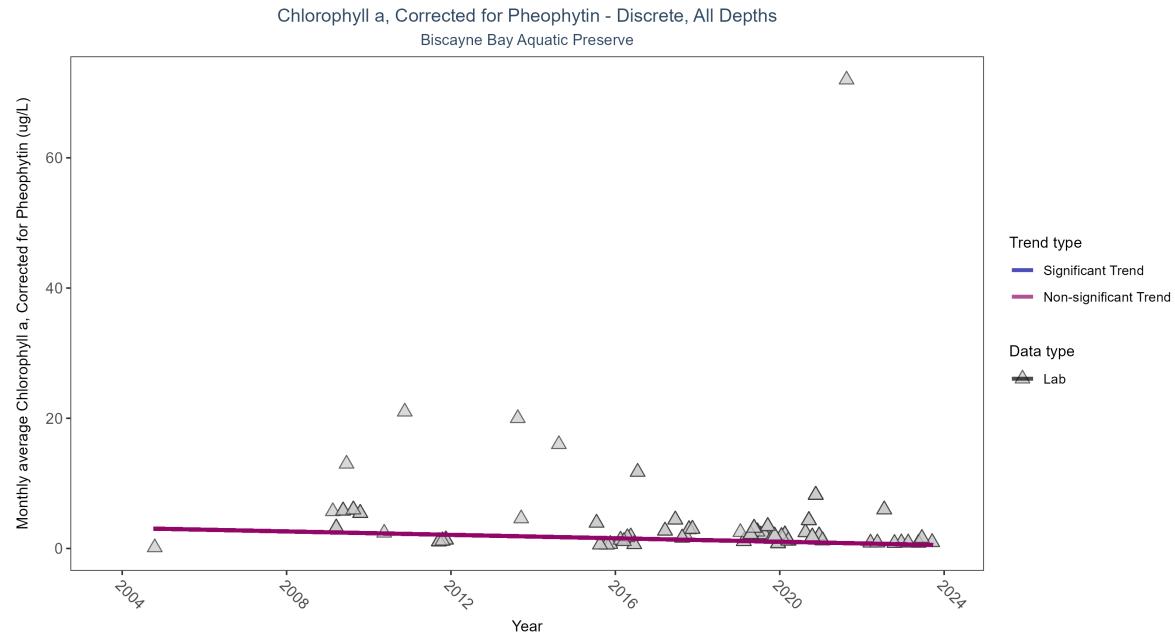


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	470	14	2004 - 2023	1.4	-0.1845	3.14798	-0.13185	0.1713

## Secchi Depth - Discrete

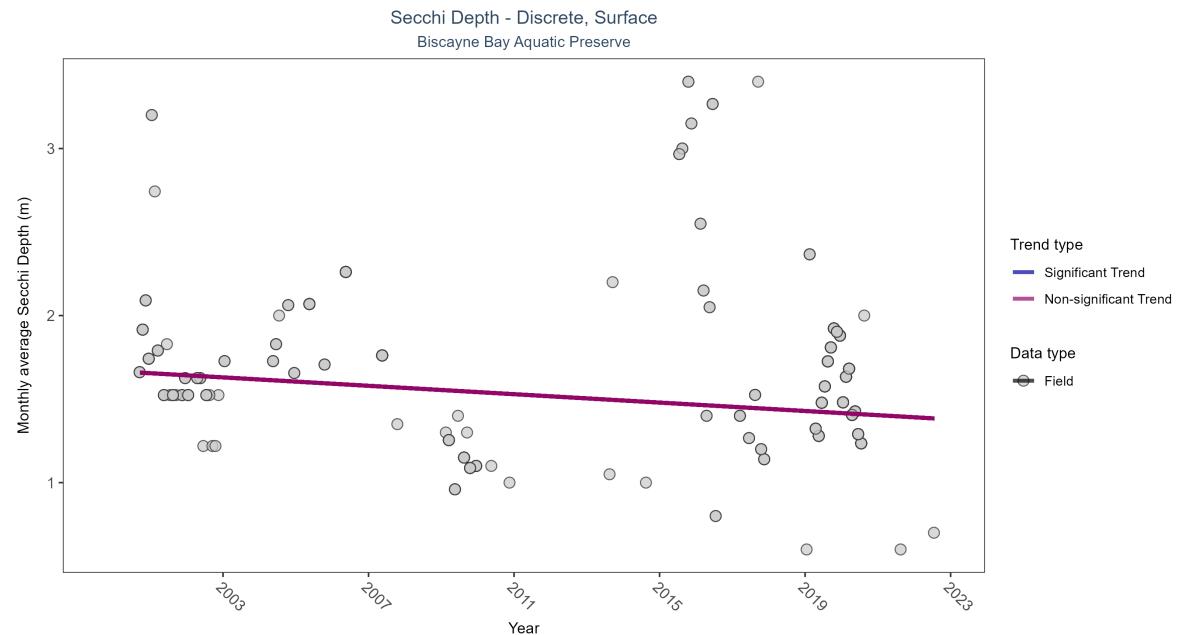


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

## Colored Dissolved Organic Matter - Discrete

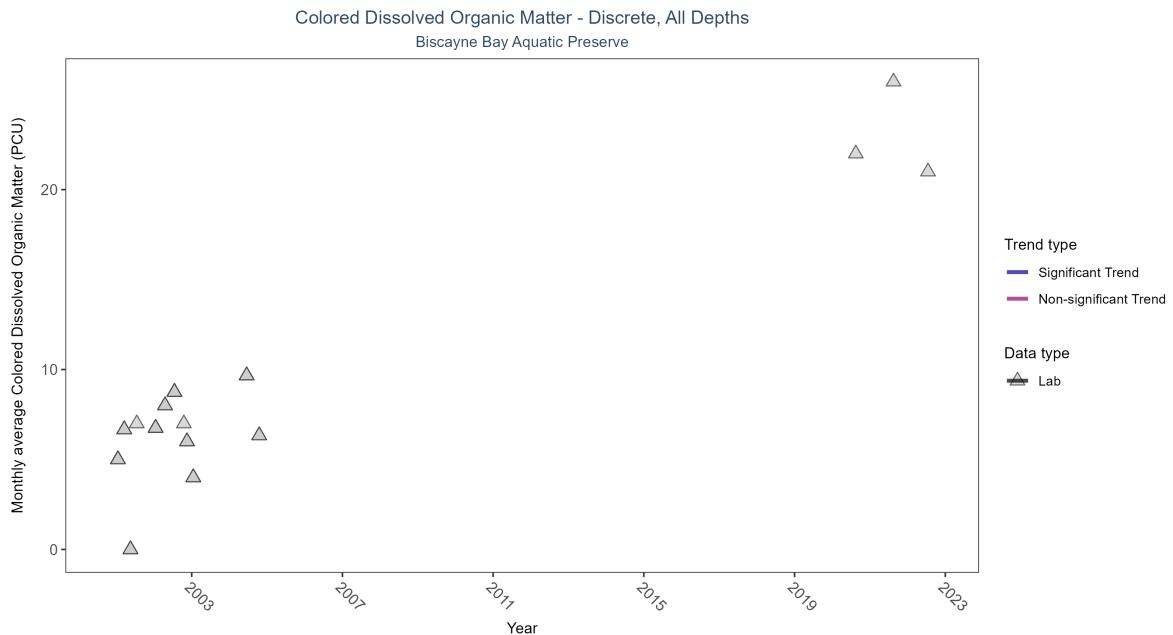


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	38	7	2001 - 2022	7	-	-	-	NA