

Estero Bay Aquatic Preserve

SEACAR Discrete Water Quality Analysis

Last compiled on 14 August, 2024

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Indicators

Nutrients

Total Nitrogen - Discrete

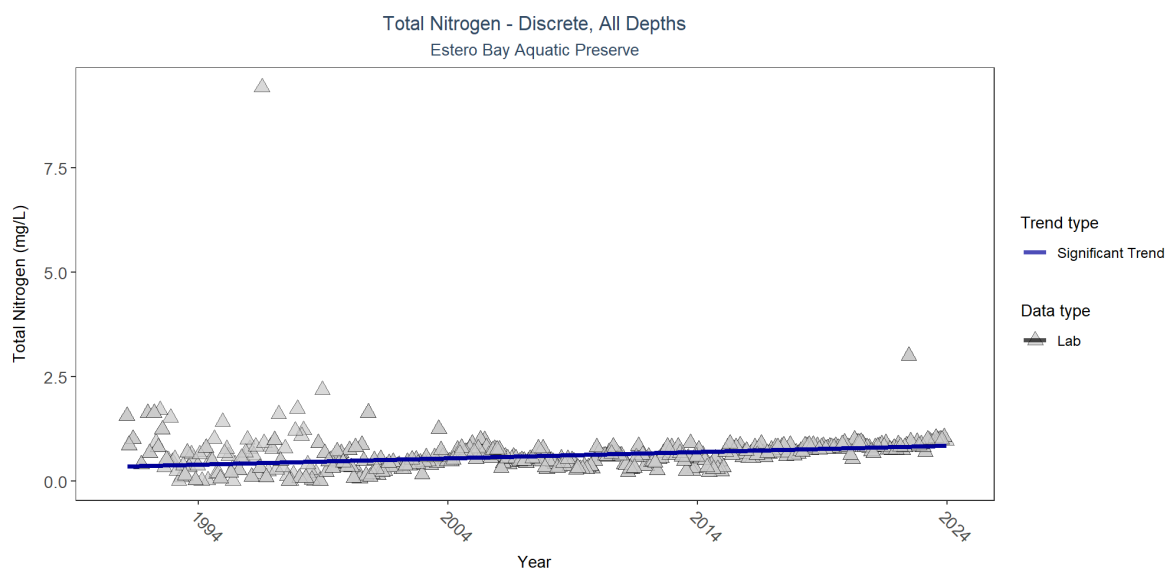


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	6992	33	1991 - 2023	0.614	0.3216	0.35345	0.01496	0.0000

Total Phosphorus - Discrete

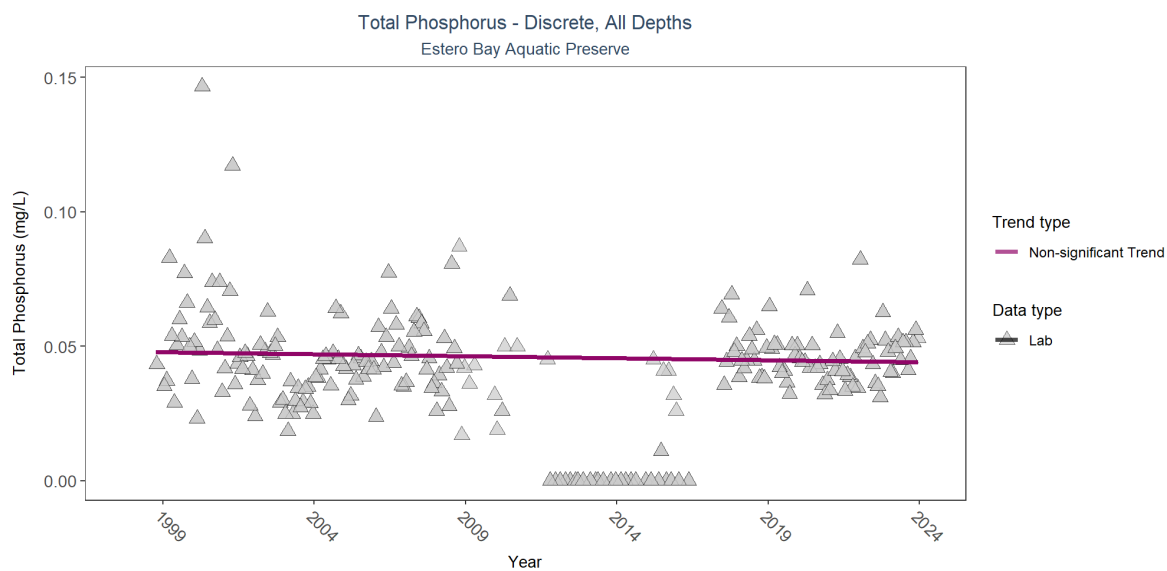


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	2501	26	1998 - 2023	0.041	-0.0535	0.04795	-0.00015	0.2599

Water Quality

Dissolved Oxygen - Discrete

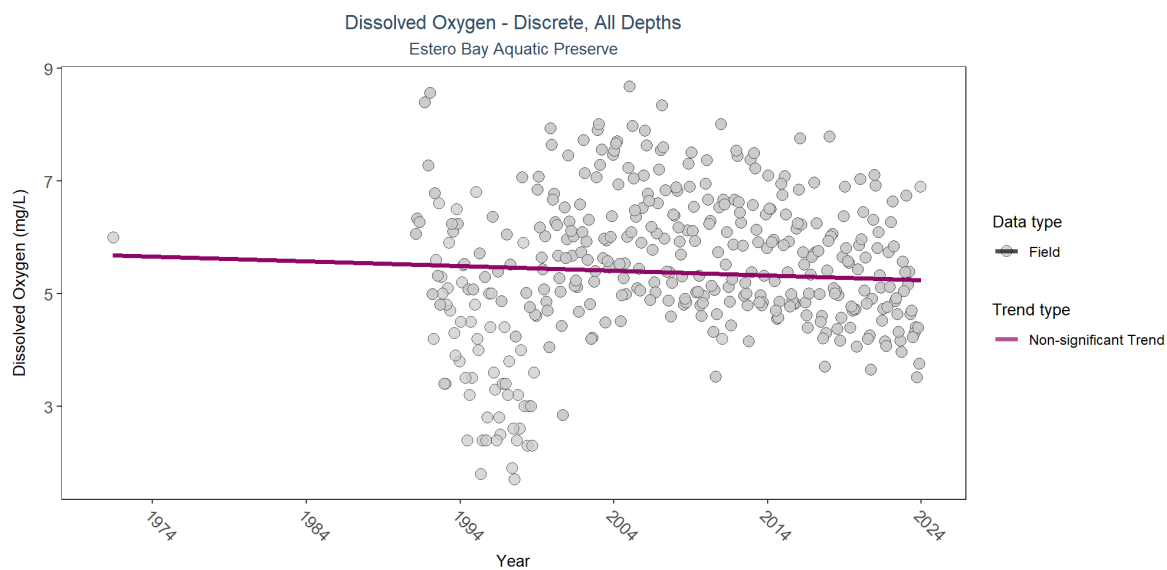


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	10602	34	1971 - 2023	5.8	-0.0593	5.68428	-0.0084	0.1038

Dissolved Oxygen - Continuous

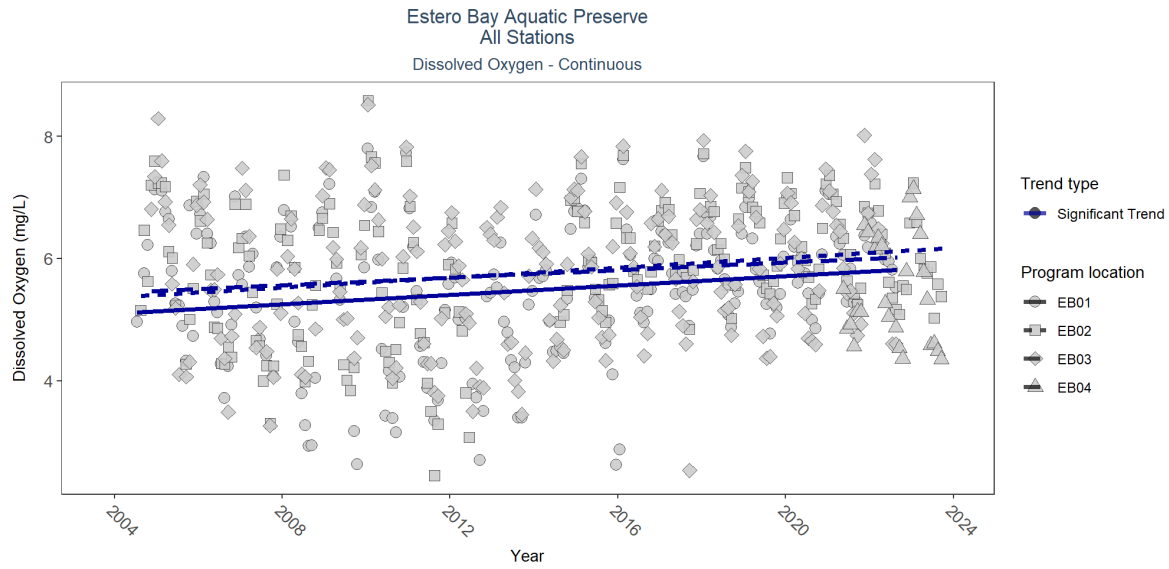


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
EB01	Significantly increasing trend	478415	19	2004 - 2022	5.6	0.22	5.1	0.04	0.0000
EB02	Significantly increasing trend	445908	19	2004 - 2023	6.0	0.25	5.36	0.04	0.0000
EB03	Significantly increasing trend	439701	19	2004 - 2022	5.9	0.2	5.44	0.03	0.0002
EB04	Insufficient data to calculate trend	65961	3	2021 - 2023	5.5	-	-	-	-

Dissolved Oxygen Saturation - Discrete

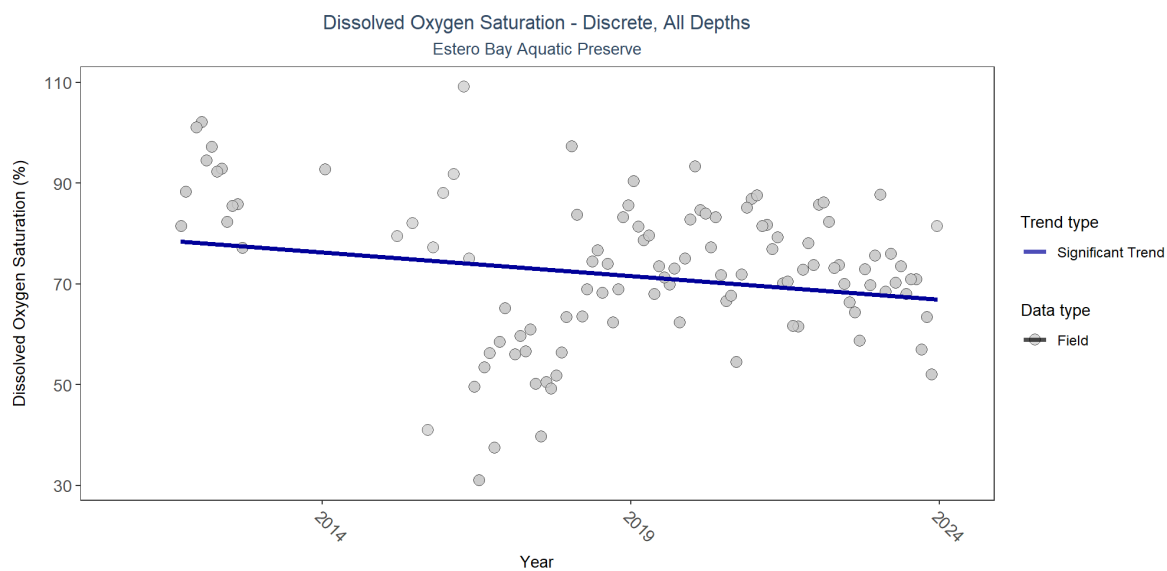


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	2424	12	2011 - 2023	81.6	-0.1888	79.10854	-0.9375	0.0151

Dissolved Oxygen Saturation - Continuous

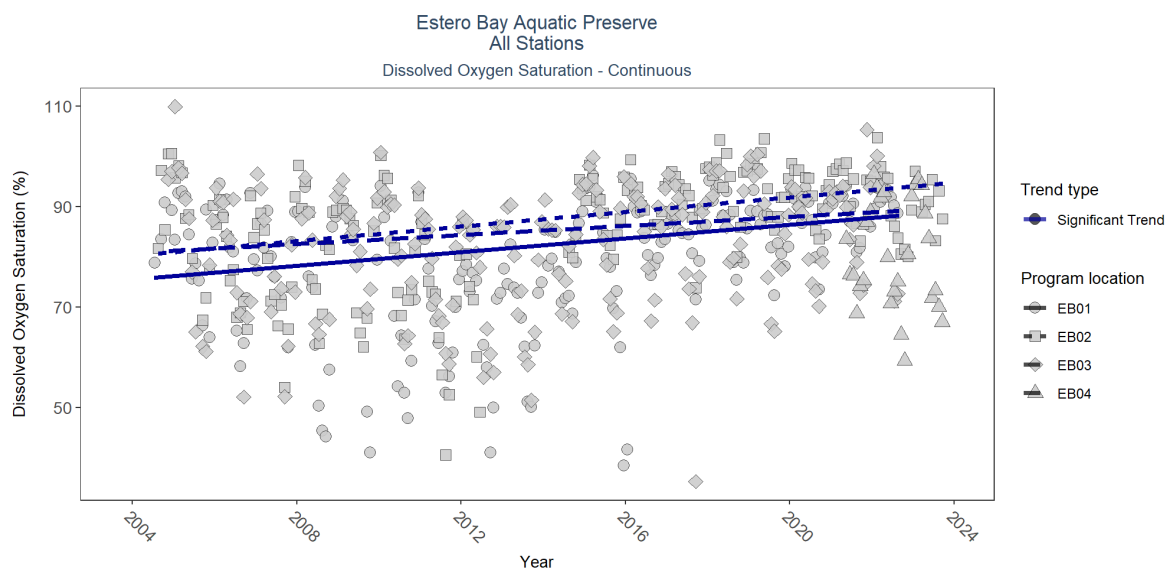


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
EB01	Significantly increasing trend	480233	19	2004 - 2022	81.6	0.31	75.5	0.68	0.0000
EB02	Significantly increasing trend	446145	19	2004 - 2023	87.6	0.38	80.21	0.72	0.0000
EB03	Significantly increasing trend	441227	19	2004 - 2022	83.7	0.25	80.69	0.45	0.0000
EB04	Insufficient data to calculate trend	76225	3	2021 - 2023	81.0	-	-	-	-

Salinity - Discrete

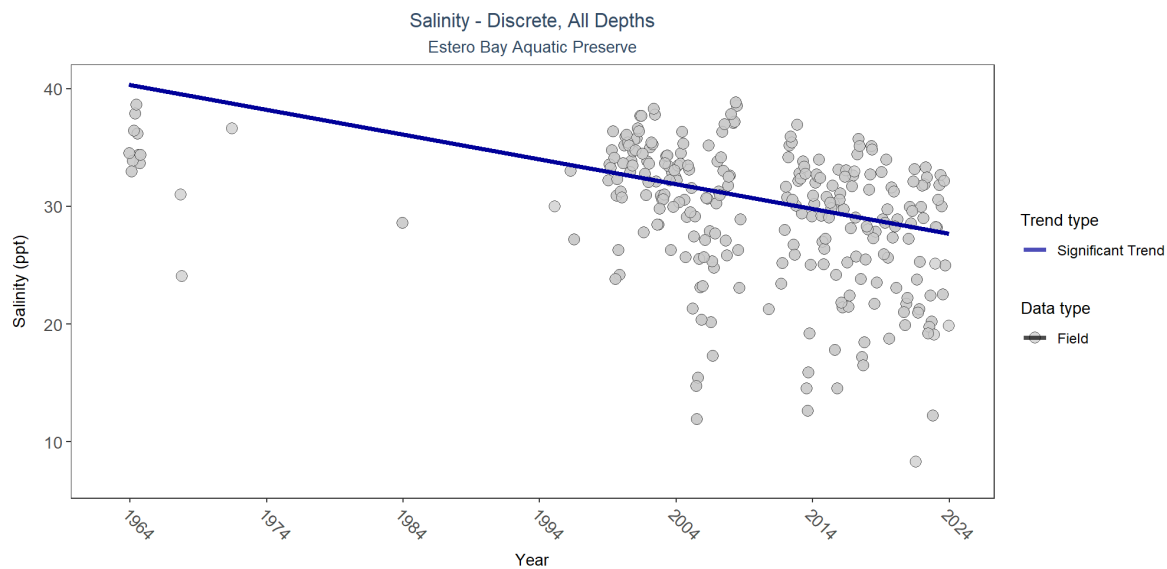


Table 7: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly decreasing trend	4492	32	1963 - 2023	32.4	-0.3636	40.55381	-0.21089	0.0000

Salinity - Continuous

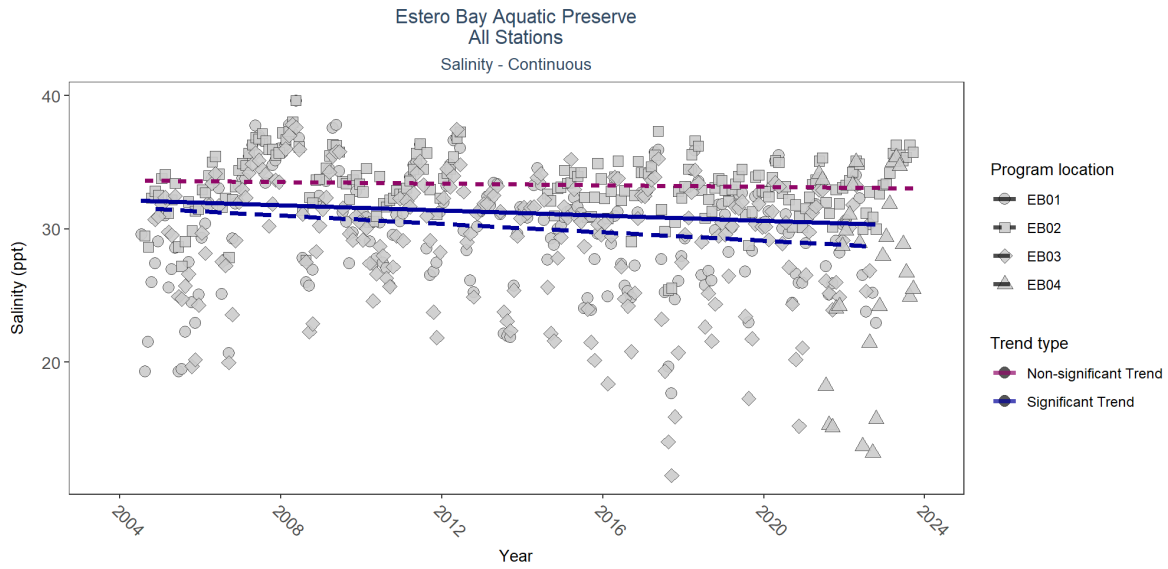


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
EB01	Significantly decreasing trend	567163	19	2004 - 2022	30.7	-0.13	32.17	-0.1	0.0110
EB02	No significant trend	531026	19	2004 - 2023	33.6	-0.07	33.65	-0.03	0.1773
EB03	Significantly decreasing trend	533169	19	2004 - 2022	30.9	-0.21	31.65	-0.16	0.0000
EB04	Insufficient data to calculate trend	75655	3	2021 - 2023	28.4	-	-	-	-

Water Temperature - Discrete

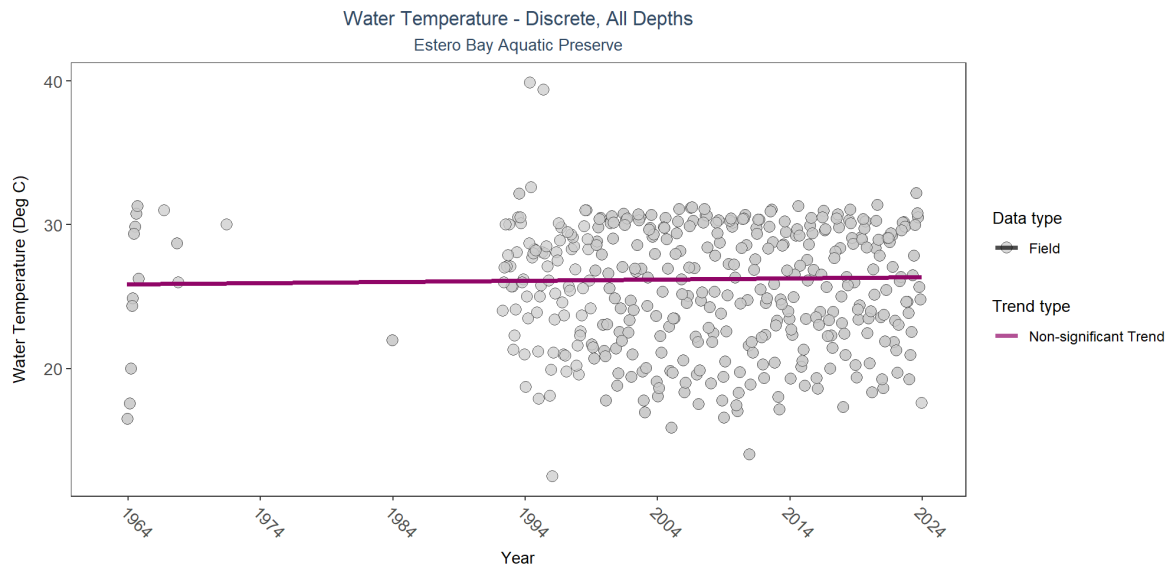


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	10058	38	1963 - 2023	26.2	0.0293	25.87015	0.00781	0.4044

Water Temperature - Continuous

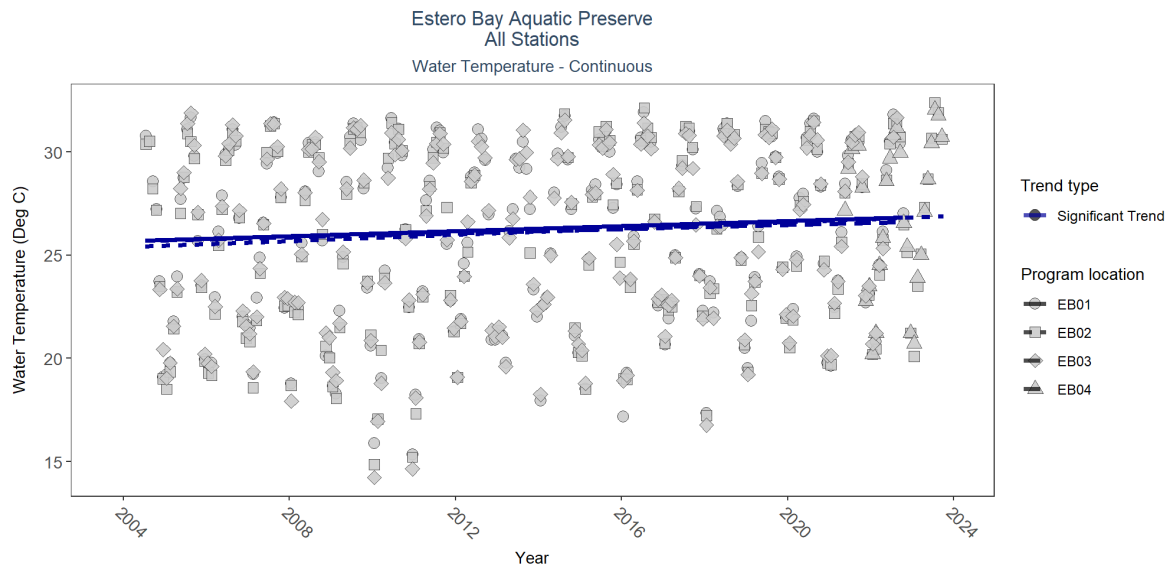


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
EB01	Significantly increasing trend	617636	19	2004 - 2022	26.8	0.25	25.69	0.06	0.0000
EB02	Significantly increasing trend	574714	20	2004 - 2023	26.7	0.35	25.4	0.08	0.0000
EB04	Insufficient data to calculate trend	83717	3	2021 - 2023	28.1	-	-	-	-
EB03	Significantly increasing trend	572084	19	2004 - 2022	26.5	0.17	25.68	0.05	0.0006

pH - Discrete

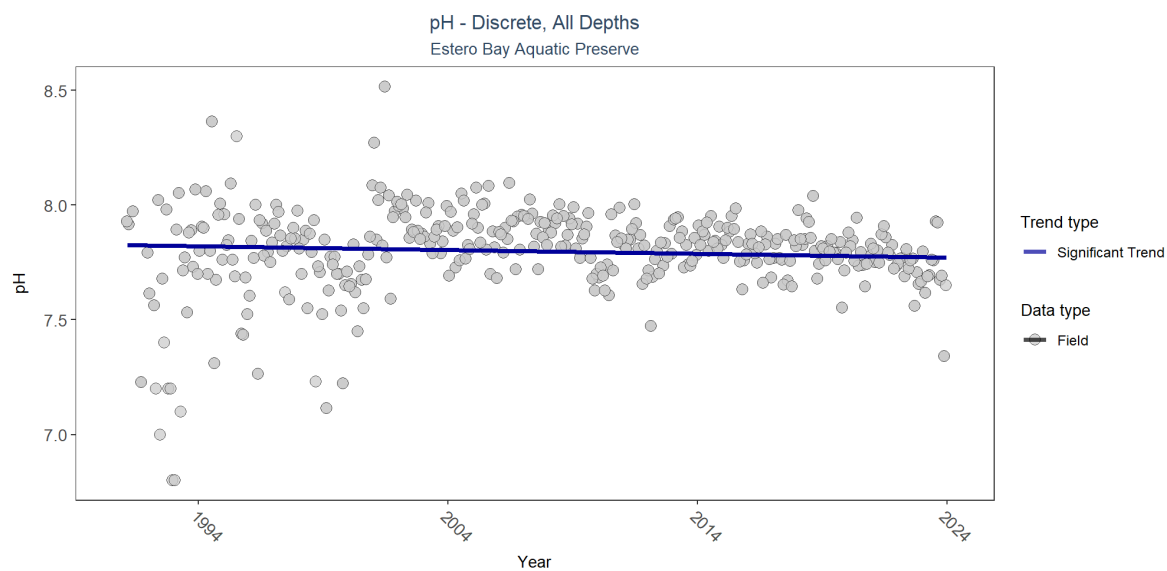


Table 11: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	9908	33	1991 - 2023	7.9	-0.0769	7.82681	-0.00171	0.0321

pH - Continuous

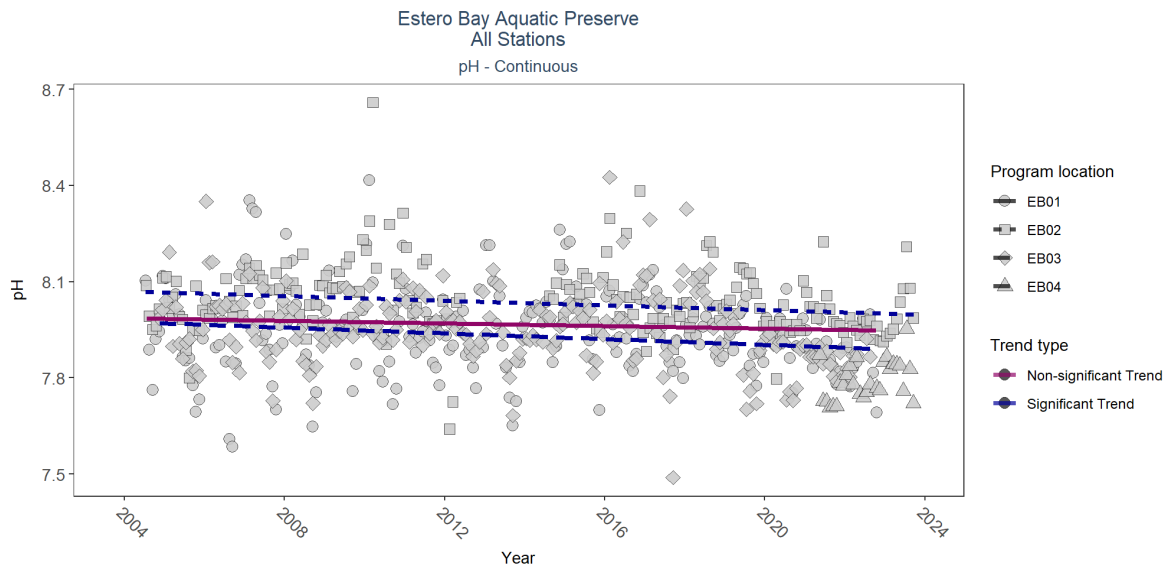


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
EB01	No significant trend	562188	19	2004 - 2022	7.9	-0.08	7.99	0	0.1157
EB02	Significantly decreasing trend	512064	19	2004 - 2023	8.0	-0.17	8.07	0	0.0013
EB03	Significantly decreasing trend	525178	19	2004 - 2022	8.0	-0.17	7.97	0	0.0007
EB04	Insufficient data to calculate trend	78723	3	2021 - 2023	7.8	-	-	-	-

Water Clarity

Turbidity - Discrete

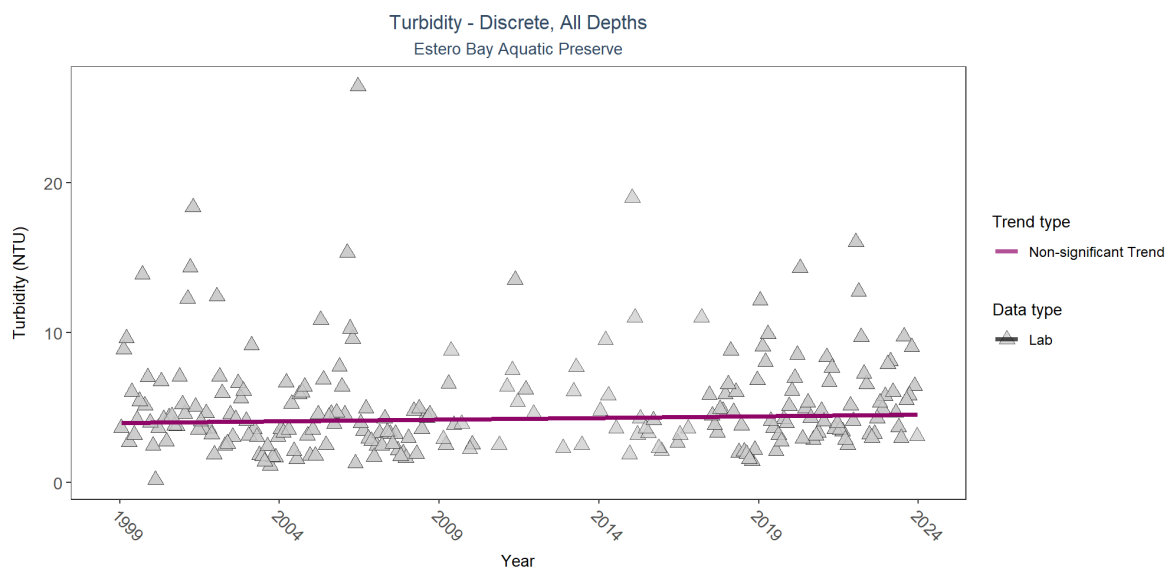


Table 13: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	1998	25	1999 - 2023	3.805	0.0608	3.96474	0.02344	0.1690

Turbidity - Continuous

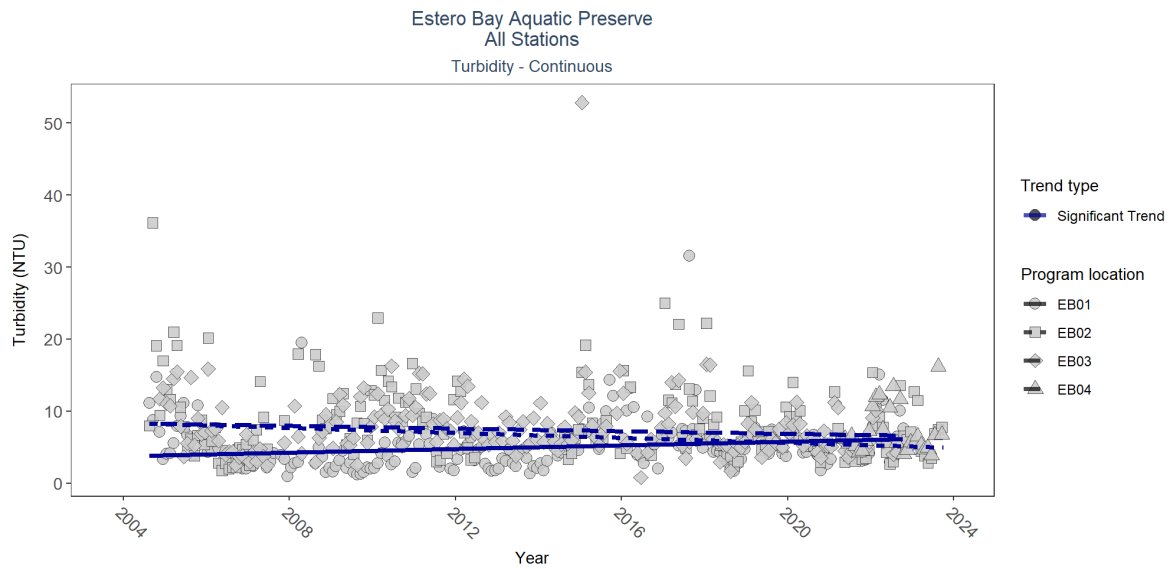


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
EB01	Significantly increasing trend	510965	19	2004 - 2022	4	0.18	3.79	0.13	0.0005
EB02	Significantly decreasing trend	428586	19	2004 - 2023	5	-0.19	8.41	-0.17	0.0009
EB03	Significantly decreasing trend	413599	19	2004 - 2022	5	-0.13	8.37	-0.1	0.0190
EB04	Insufficient data to calculate trend	73526	3	2021 - 2023	5	-	-	-	-

Total Suspended Solids - Discrete

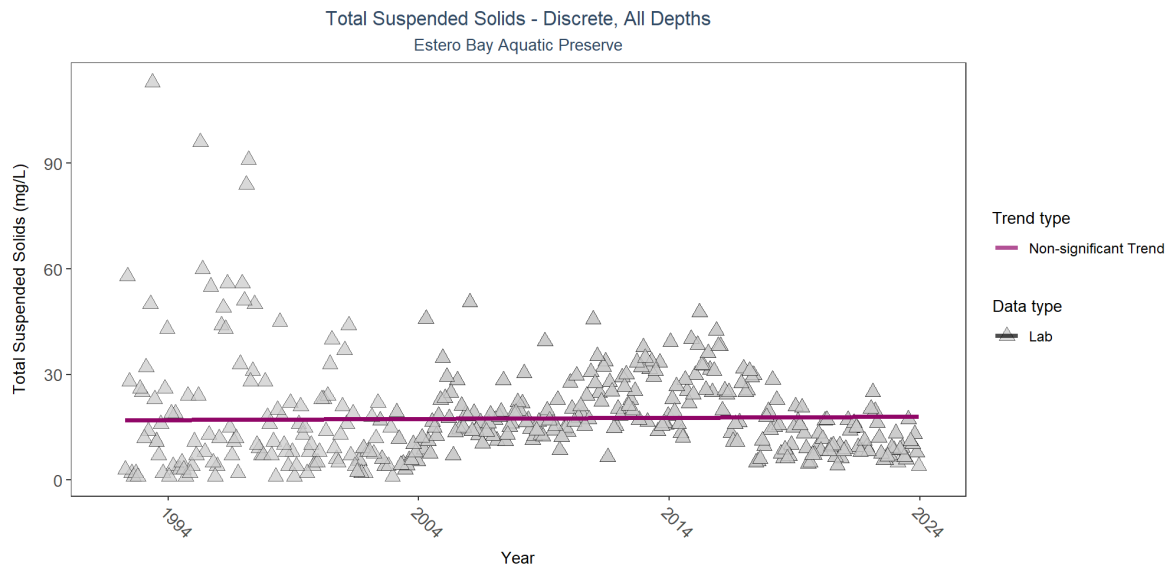


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	5158	32	1992 - 2023	14.2	0.0201	16.99765	0.03284	0.5983

Chlorophyll a, Uncorrected for Pheophytin - Discrete

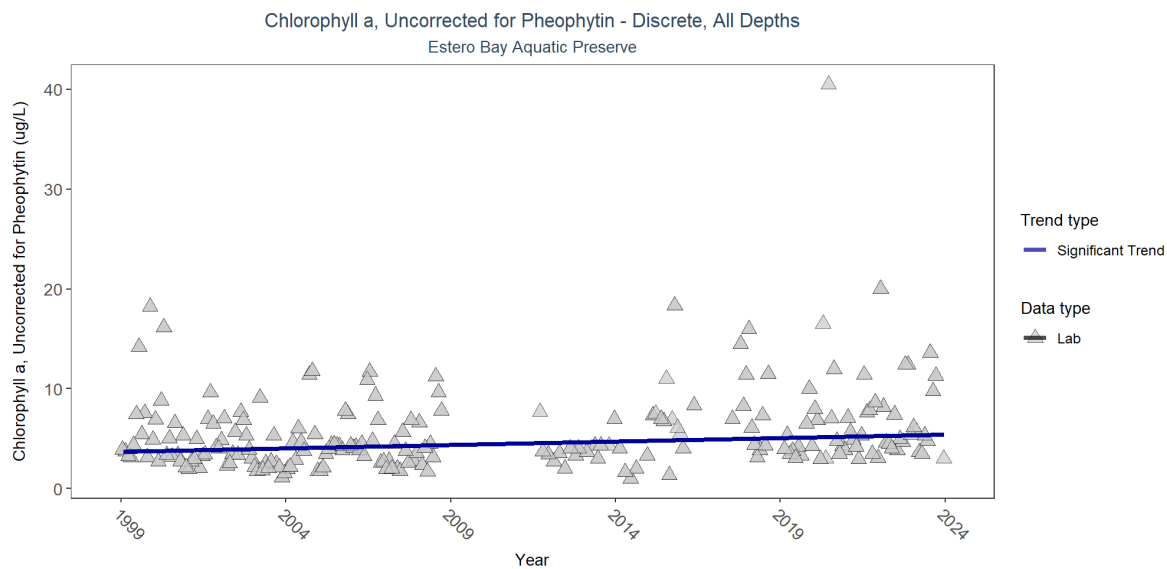


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	896	23	1999 - 2023	4.1	0.1709	3.7	0.06917	0.0006

Chlorophyll a, Corrected for Pheophytin - Discrete

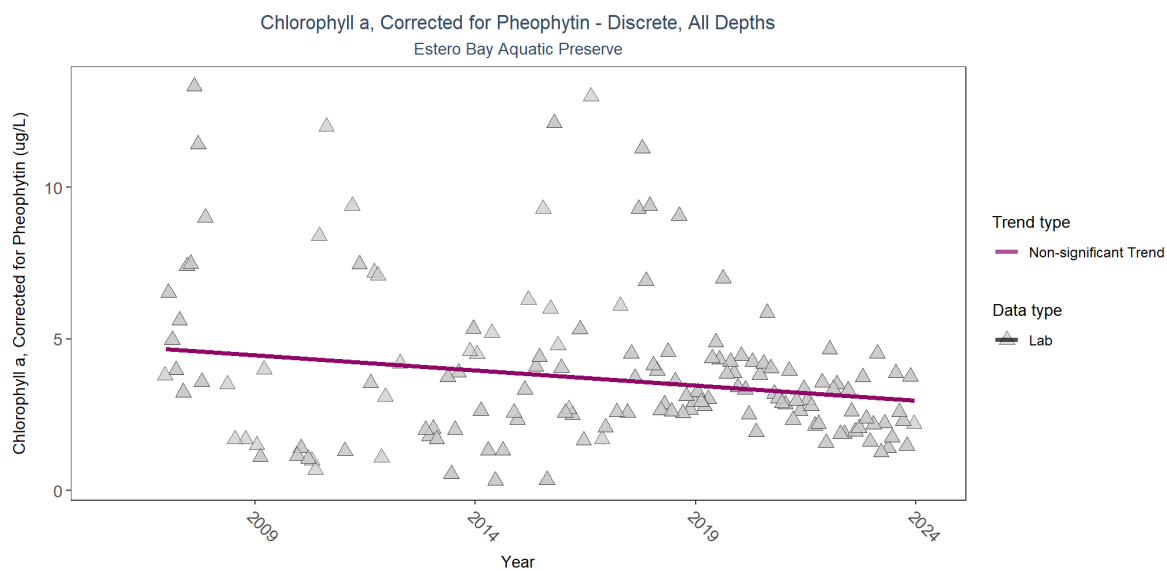


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	1912	18	2006 - 2023	2.585	-0.1214	4.76801	-0.1	0.0673

Secchi Depth - Discrete

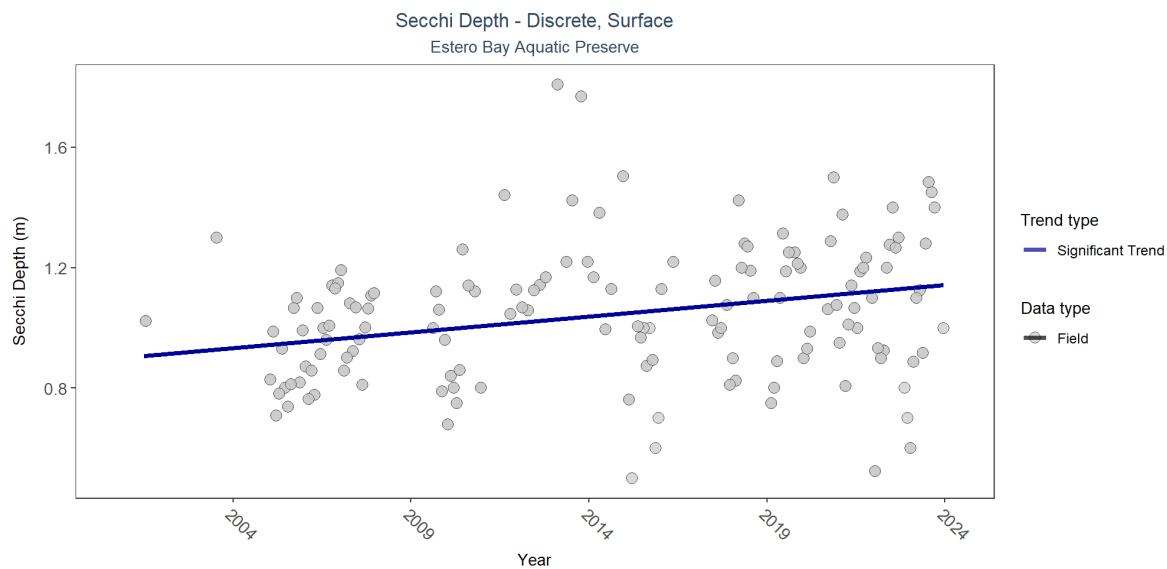


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	2759	20	2001 - 2023	0.9	0.2298	0.9019	0.01047	0.0003

Colored Dissolved Organic Matter - Discrete

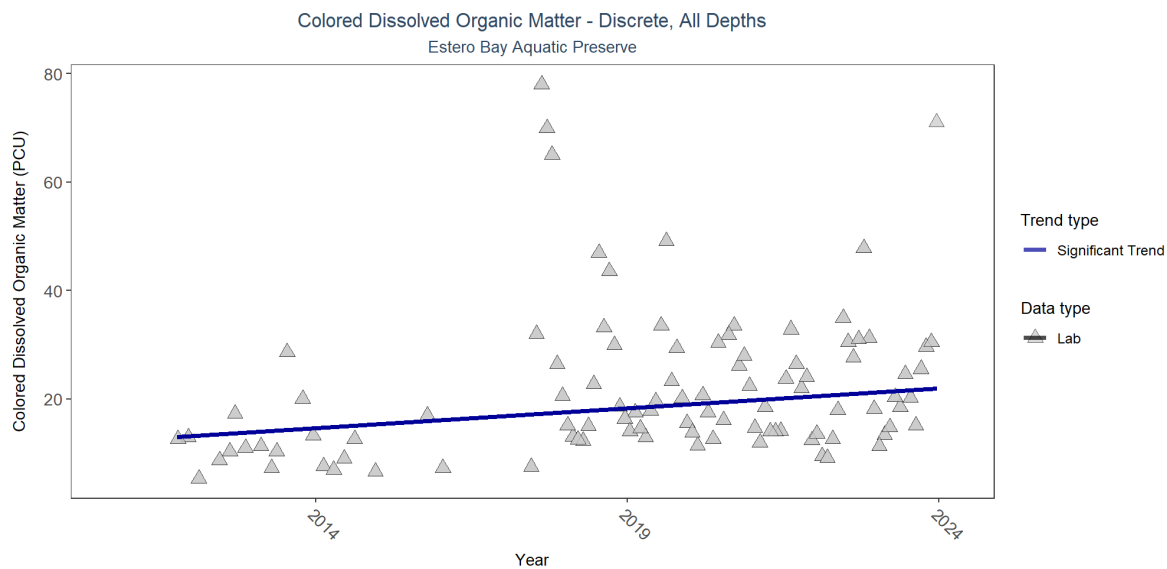


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1636	13	2011 - 2023	14.2	0.2574	12.47818	0.72665	0.0011