

Estero Bay Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 09 January, 2025

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Indicators

Nutrients

Total Nitrogen - Discrete

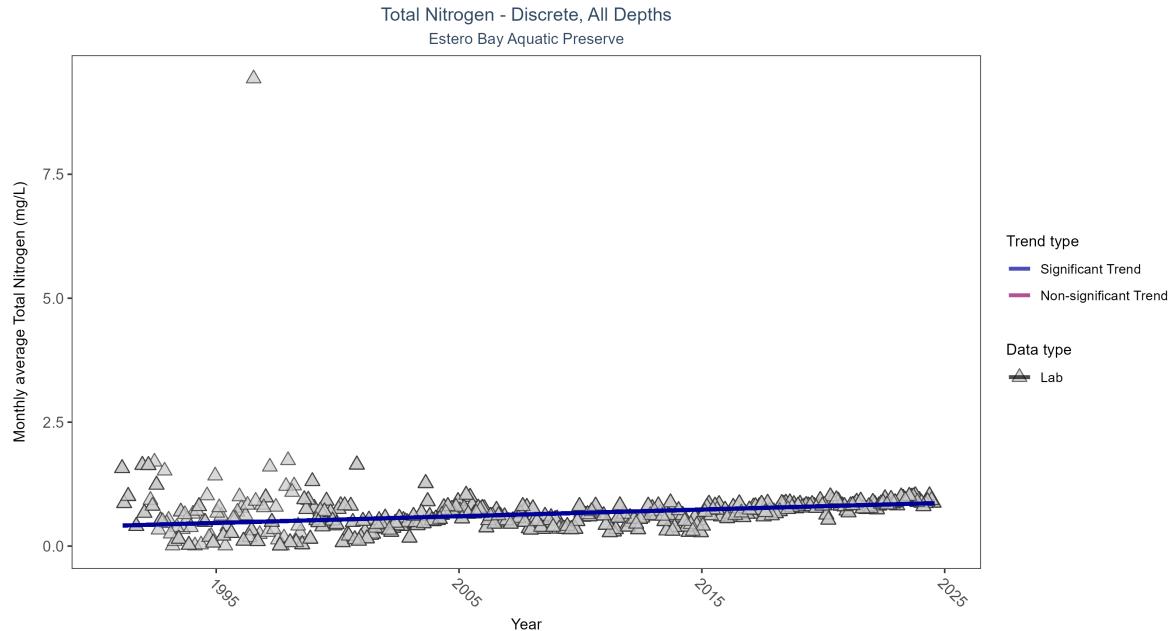


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	7880	34	1991 - 2024	0.64	0.3193	0.4134	0.01349	0.0000

Total Phosphorus - Discrete

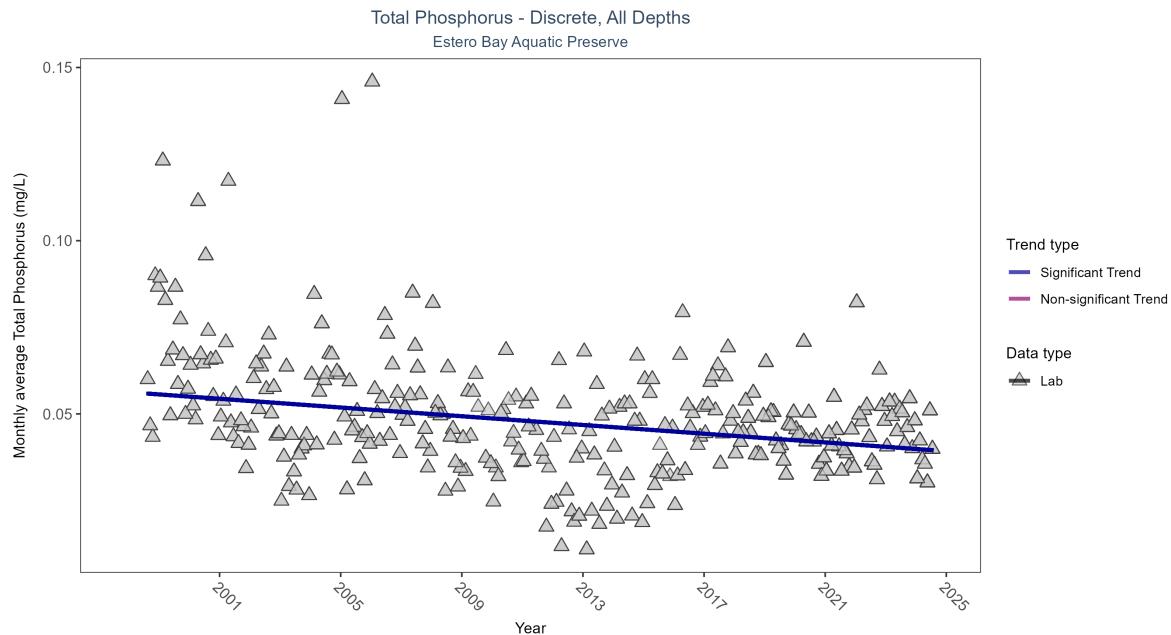


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	3392	27	1998 - 2024	0.043	-0.2495	0.05626	-0.00063	0.0000

Water Quality

Dissolved Oxygen - Discrete

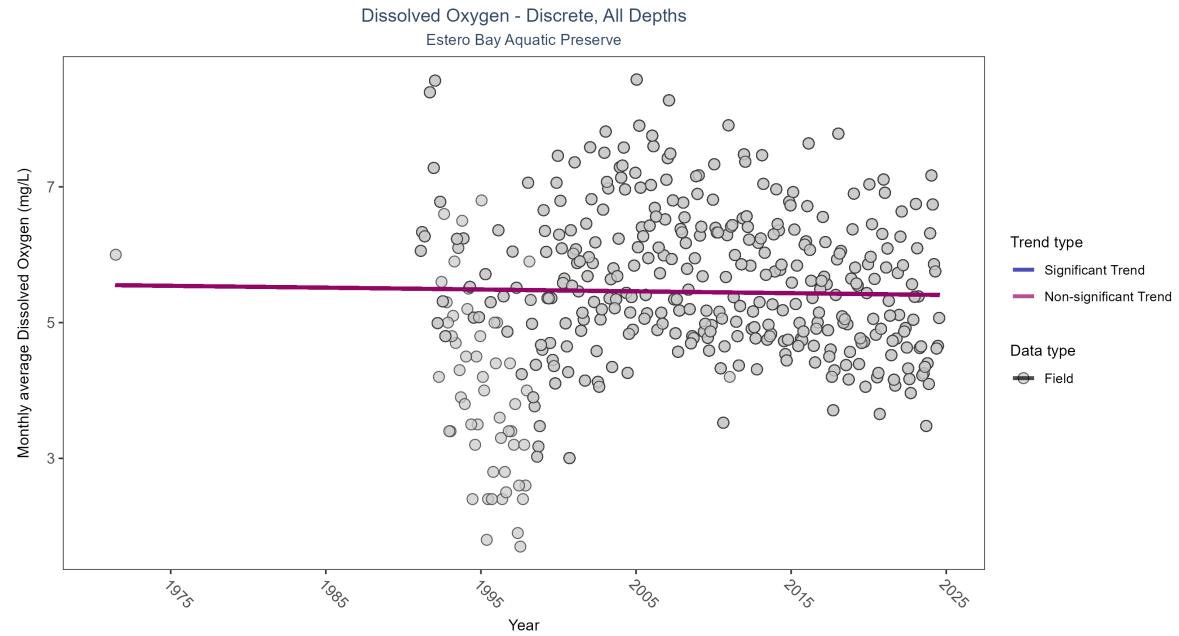


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	11569	35	1971 - 2024	5.8	-0.024	5.55254	-0.00271	0.5125

Dissolved Oxygen - Continuous

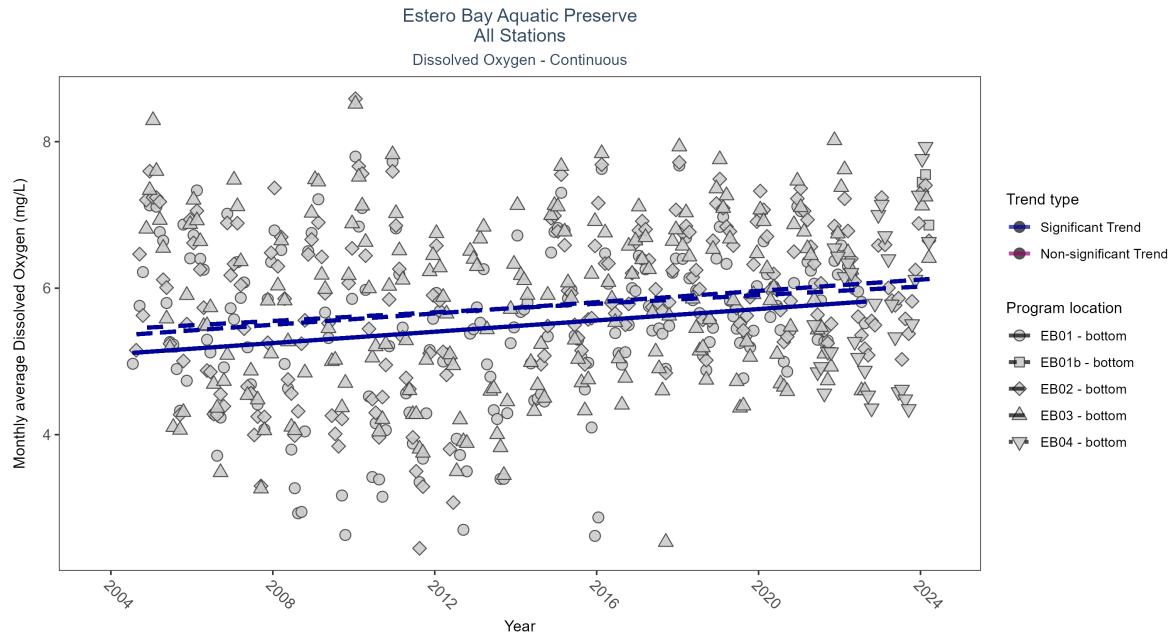


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

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	460690	20	2004 - 2024	6.1	0.26	5.35	0.04	0.0000
EB01b	Insufficient data to calculate trend	6000	1	2024 - 2024	7.4	-	-	-	-
EB03	Significantly increasing trend	447513	20	2004 - 2024	5.9	0.2	5.44	0.03	0.0002
EB04	Insufficient data to calculate trend	83521	4	2021 - 2024	5.8	-	-	-	-

Dissolved Oxygen Saturation - Discrete

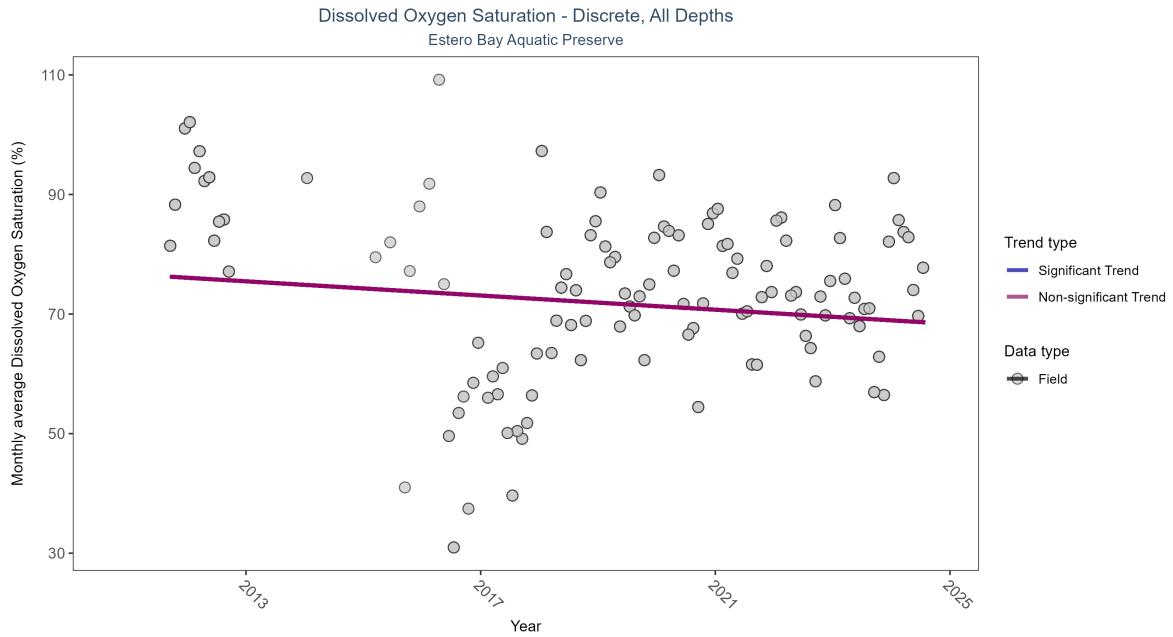


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	2669	13	2011 - 2024	82.2014	-0.1211	76.66374	-0.59361	0.0933

Dissolved Oxygen Saturation - Continuous

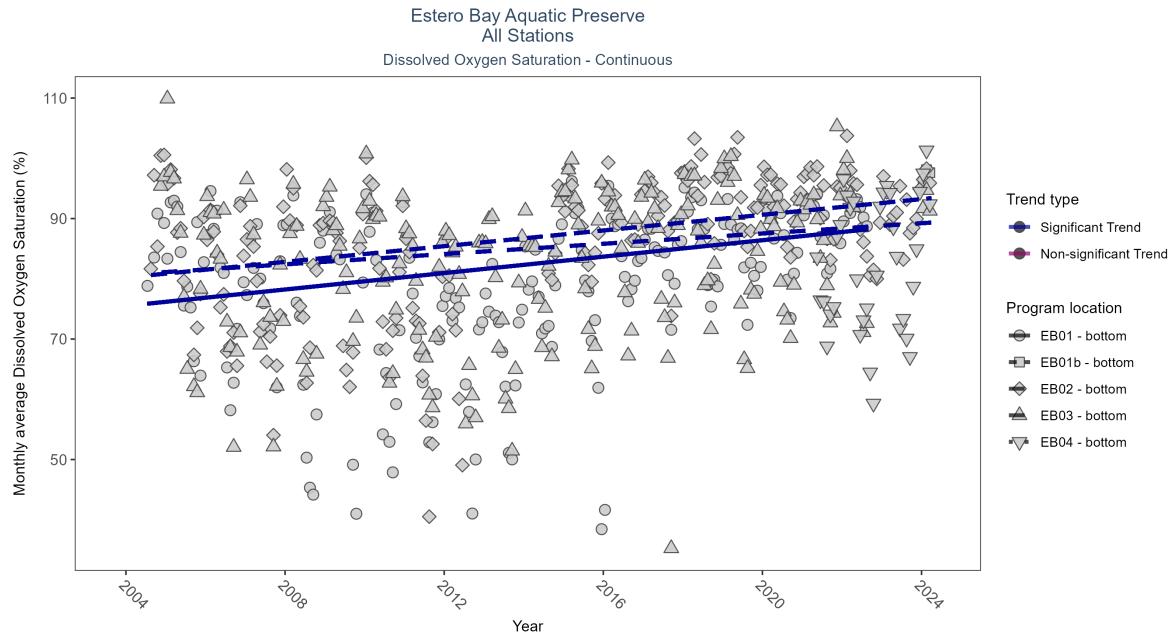


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

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	460927	20	2004 - 2024	87.9	0.38	80.21	0.65	0.0000
EB01b	Insufficient data to calculate trend	6001	1	2024 - 2024	96.8	-	-	-	-
EB03	Significantly increasing trend	449039	20	2004 - 2024	83.9	0.25	80.69	0.43	0.0000
EB04	Insufficient data to calculate trend	93785	4	2021 - 2024	83.5	-	-	-	-

Salinity - Discrete

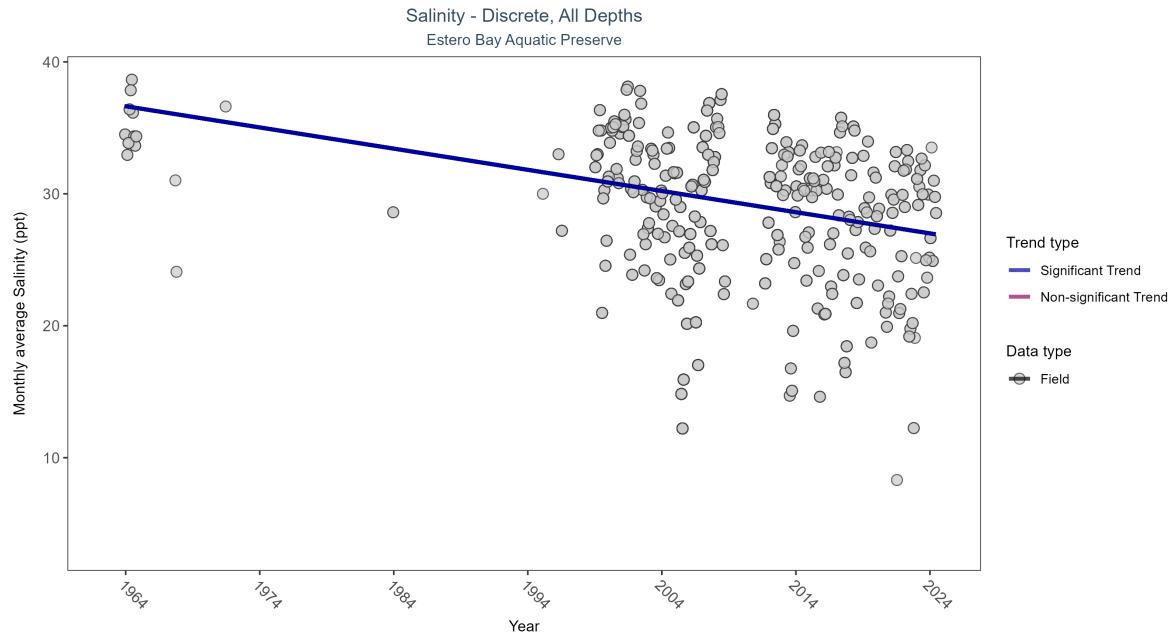


Table 7: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly decreasing trend	5338	34	1963 - 2024	32.2	-0.2895	36.79879	-0.16061	0.0000

Salinity - Continuous

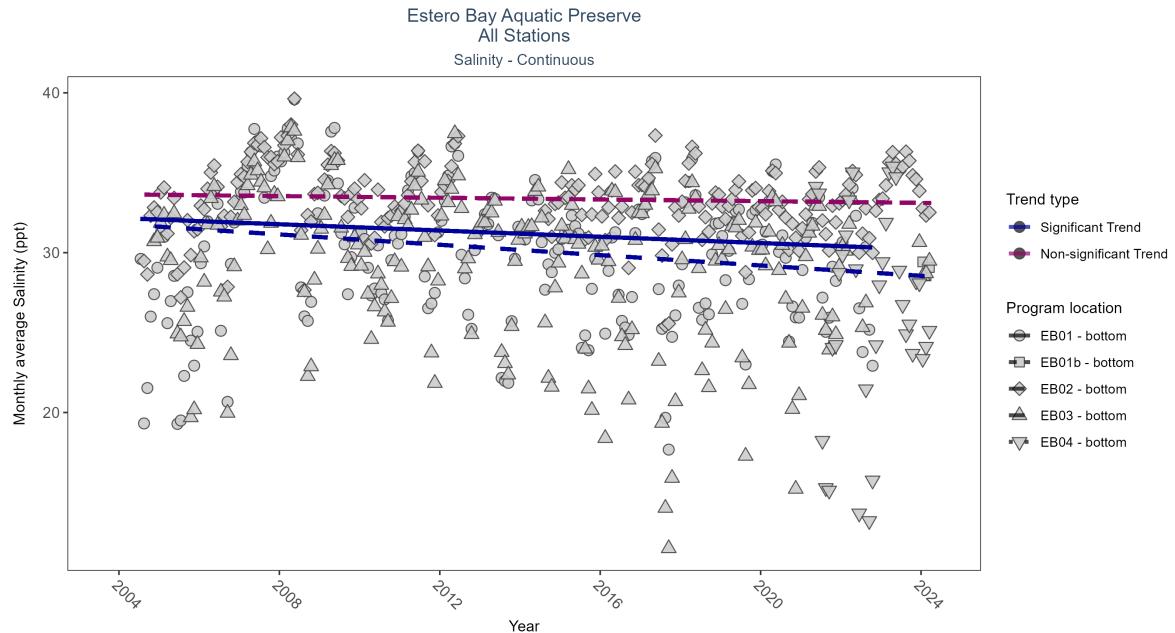


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

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	548588	20	2004 - 2024	33.6	-0.06	33.65	-0.03	0.1963
EB01b	Insufficient data to calculate trend	6000	1	2024 - 2024	29.3	-	-	-	-
EB03	Significantly decreasing trend	543765	21	2004 - 2024	30.8	-0.22	31.79	-0.16	0.0000
EB04	Insufficient data to calculate trend	93215	4	2021 - 2024	27.7	-	-	-	-

Water Temperature - Discrete

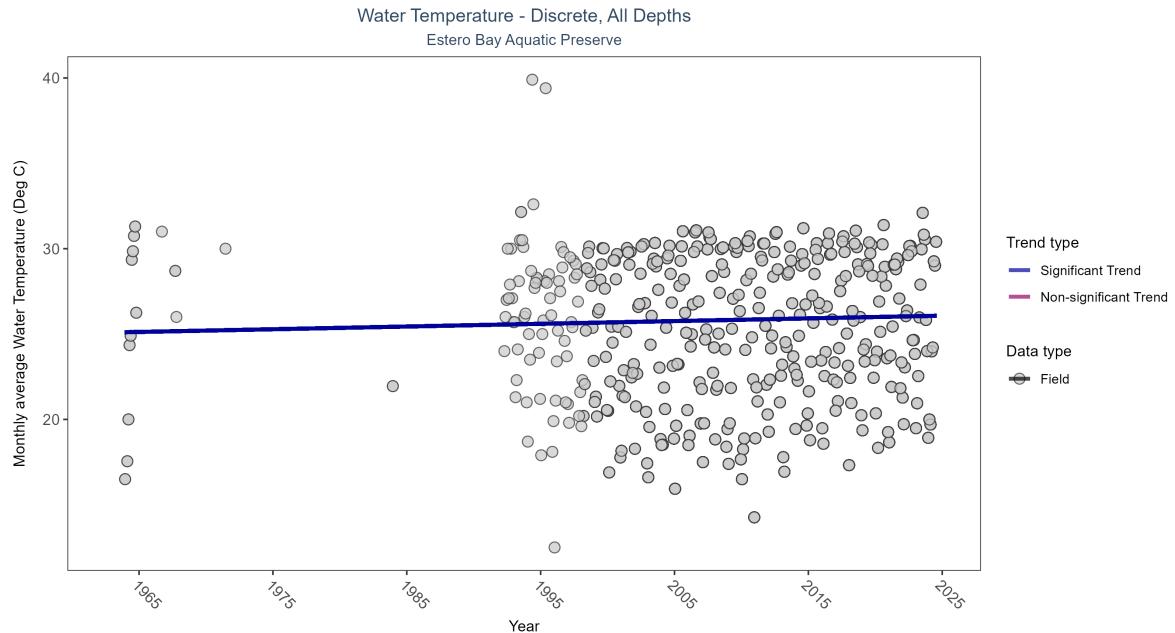


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	11200	39	1963 - 2024	25.9	0.0919	25.09112	0.01591	0.0091

Water Temperature - Continuous

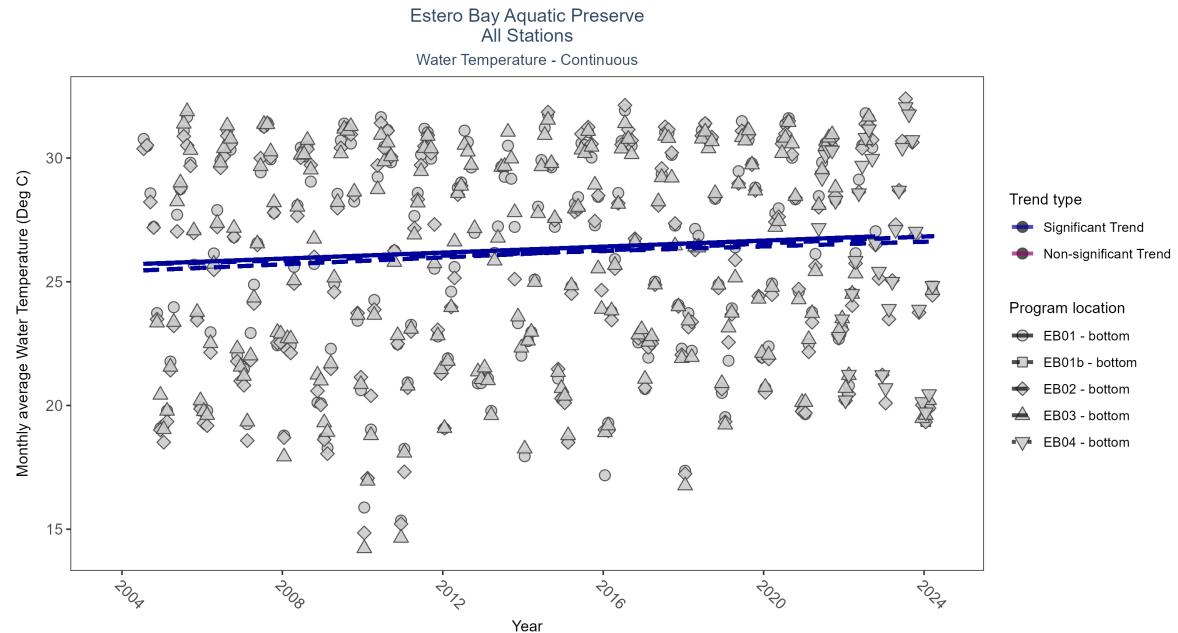


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

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	592277	21	2004 - 2024	26.4	0.33	25.42	0.07	0.0000
EB01b	Insufficient data to calculate trend	5999	1	2024 - 2024	19.5	-	-	-	-
EB03	Significantly increasing trend	582680	21	2004 - 2024	26.3	0.16	25.68	0.05	0.0010
EB04	Insufficient data to calculate trend	101277	4	2021 - 2024	27.0	-	-	-	-

pH - Discrete

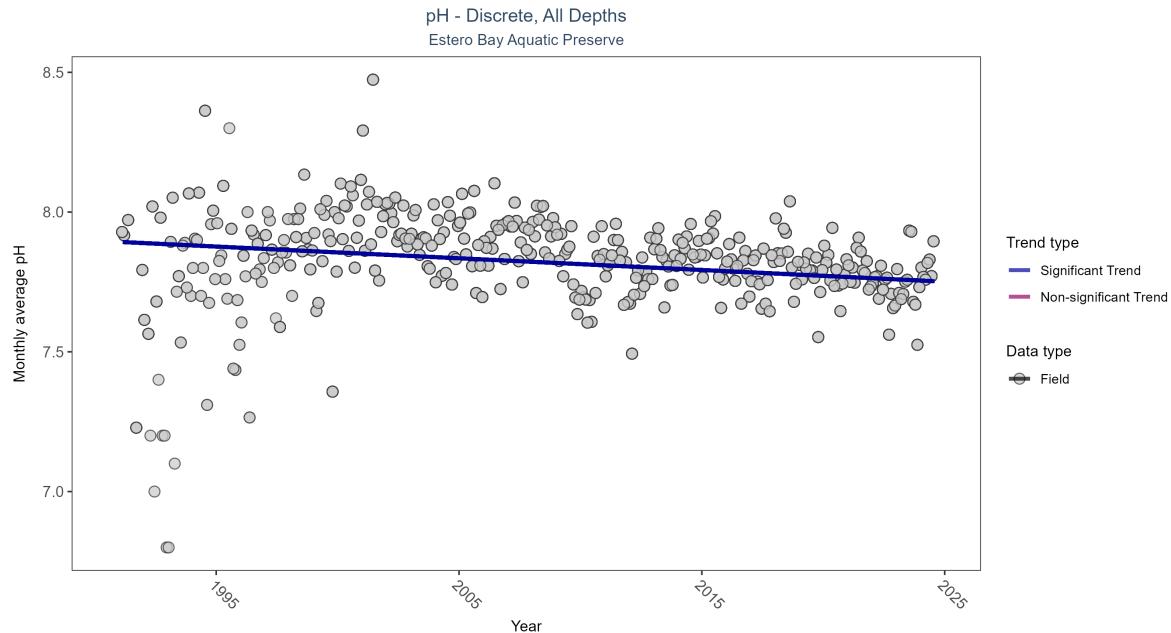


Table 11: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	10934	34	1991 - 2024	7.9	-0.1934	7.89332	-0.00419	0.0000

pH - Continuous

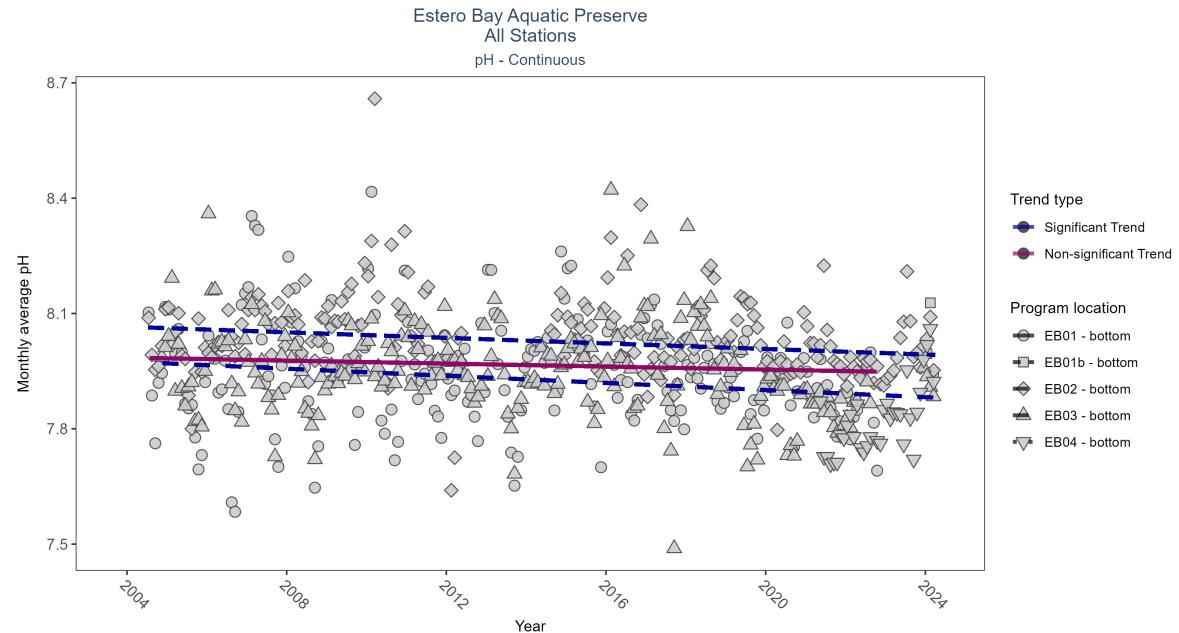


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
EB01	No significant trend	562188	19	2004 - 2022	7.9	-0.08	7.99	0	0.1157
EB02	Significantly decreasing trend	529626	20	2004 - 2024	8.0	-0.17	8.07	0	0.0009
EB01b	Insufficient data to calculate trend	6001	1	2024 - 2024	8.0	-	-	-	-
EB03	Significantly decreasing trend	535767	21	2004 - 2024	8.0	-0.18	7.97	0	0.0002
EB04	Insufficient data to calculate trend	96283	4	2021 - 2024	7.8	-	-	-	-

Water Clarity

Turbidity - Discrete

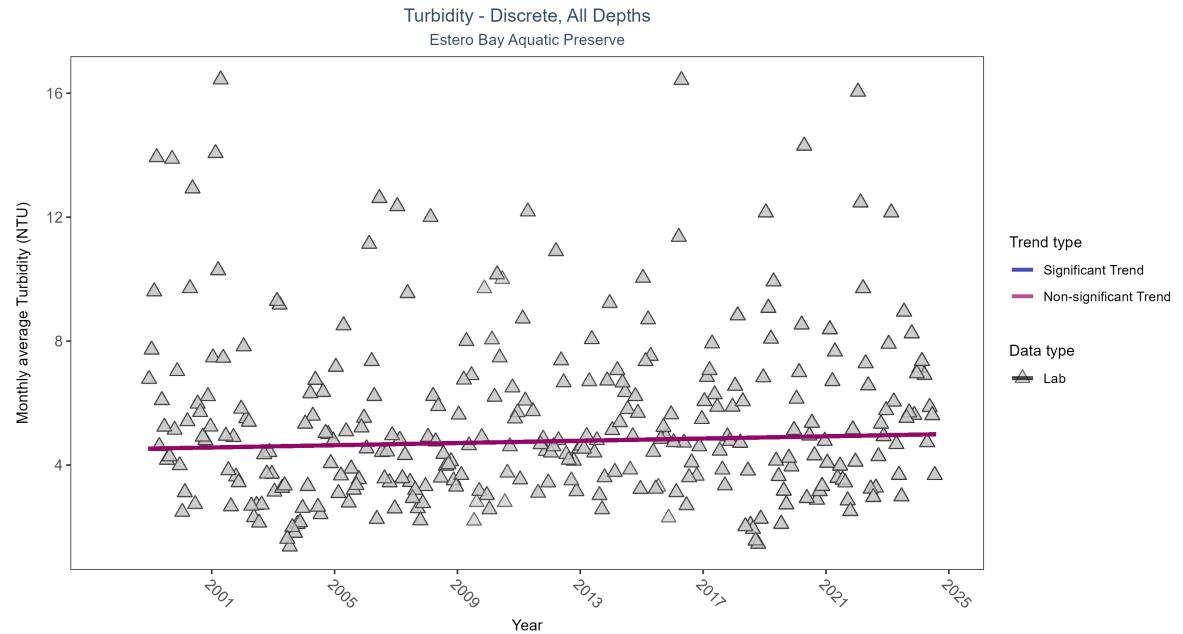


Table 13: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	2977	27	1998 - 2024	4	0.0456	4.51203	0.01805	0.2446

Turbidity - Continuous

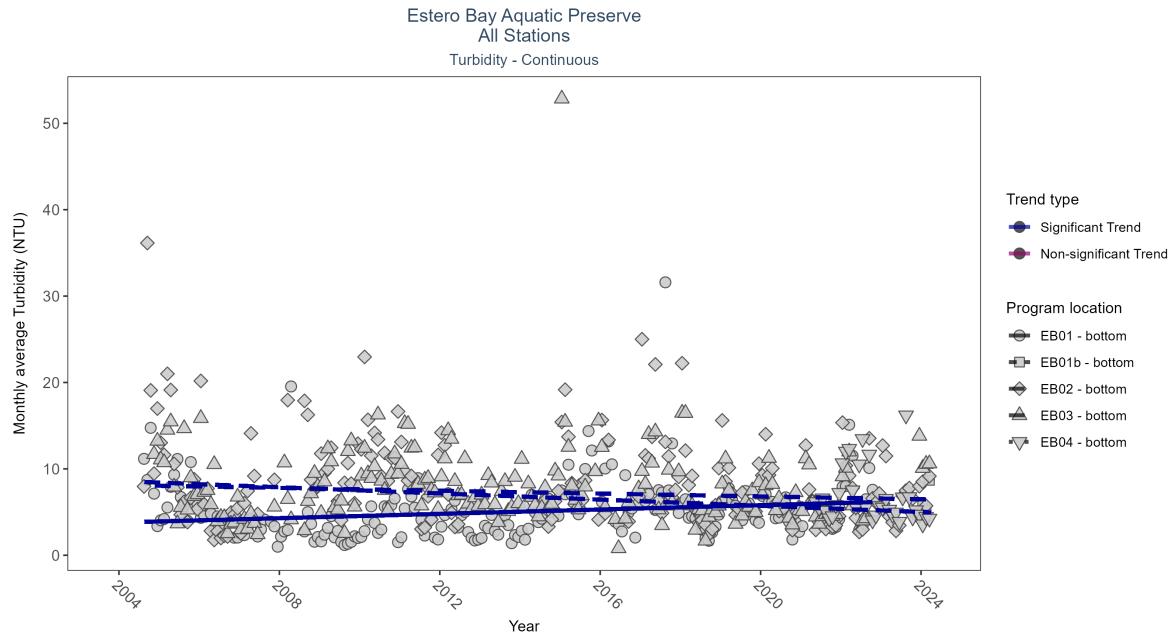


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

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	443455	20	2004 - 2024	5	-0.21	8.59	-0.18	0.0002
EB01b	Insufficient data to calculate trend	8672	1	2024 - 2024	6	-	-	-	-
EB03	Significantly decreasing trend	424195	21	2004 - 2024	5	-0.12	8.13	-0.08	0.0426
EB04	Insufficient data to calculate trend	90939	4	2021 - 2024	5	-	-	-	-

Total Suspended Solids - Discrete

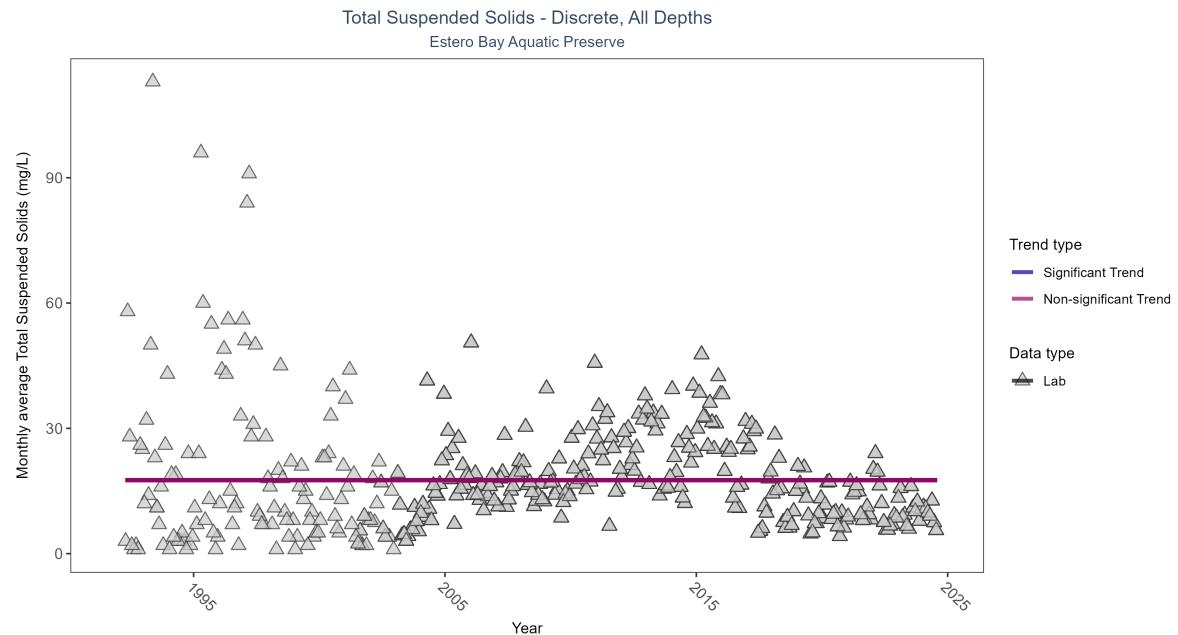


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	5412	33	1992 - 2024	14	-0.0004	17.57222	0	0.9517

Chlorophyll a, Uncorrected for Pheophytin - Discrete

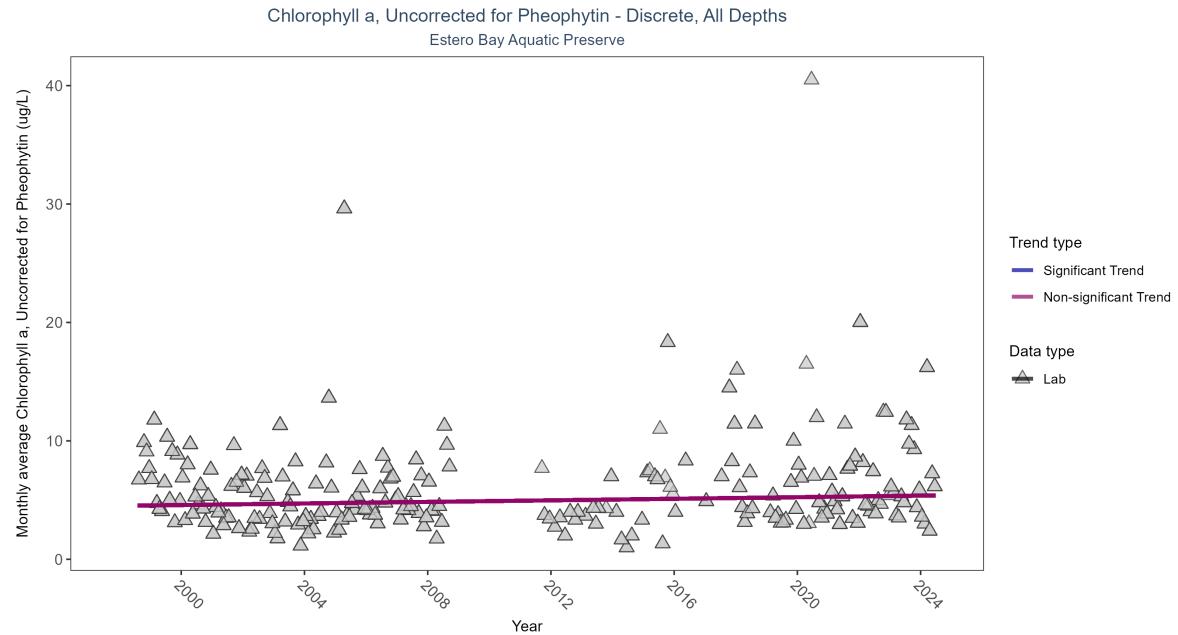


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	1228	25	1998 - 2024	4.32	0.0898	4.51467	0.03299	0.0571

Chlorophyll a, Corrected for Pheophytin - Discrete

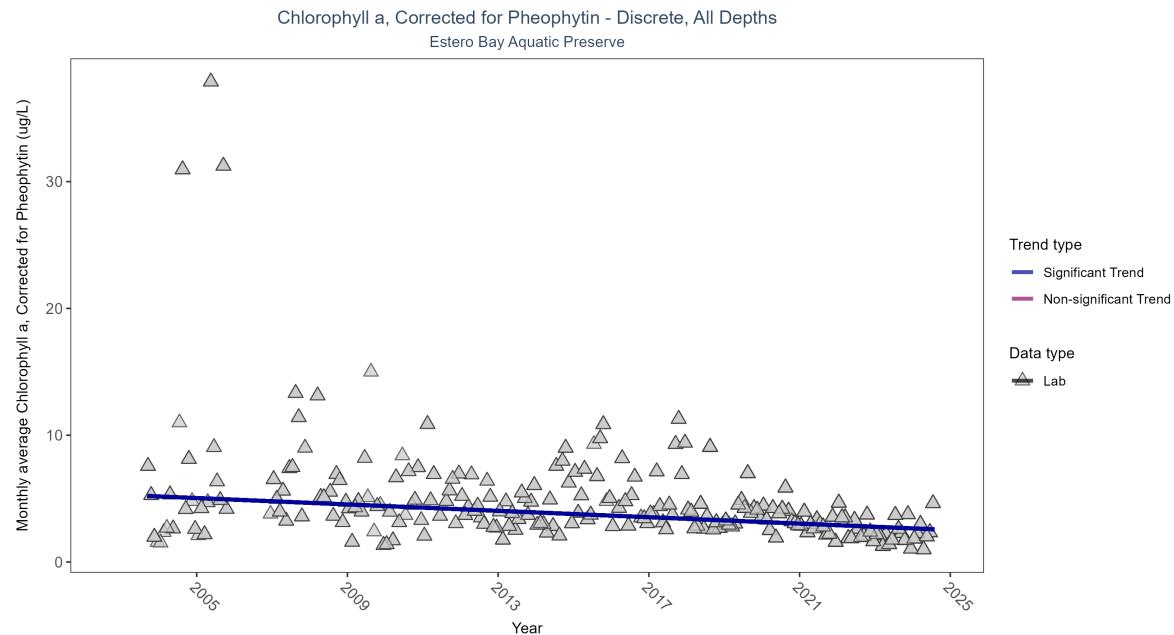


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	2480	22	2003 - 2024	2.73	-0.2805	5.29387	-0.12588	0.0000

Secchi Depth - Discrete

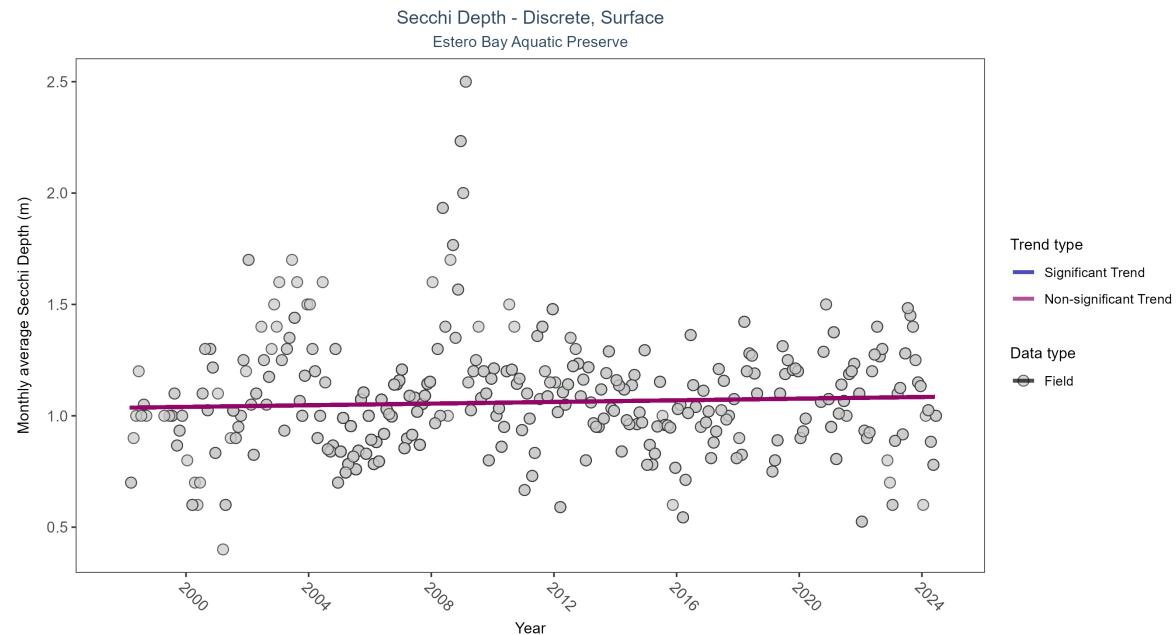


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	3379	27	1998 - 2024	0.9	0.0398	1.03621	0.00185	0.3033

Colored Dissolved Organic Matter - Discrete

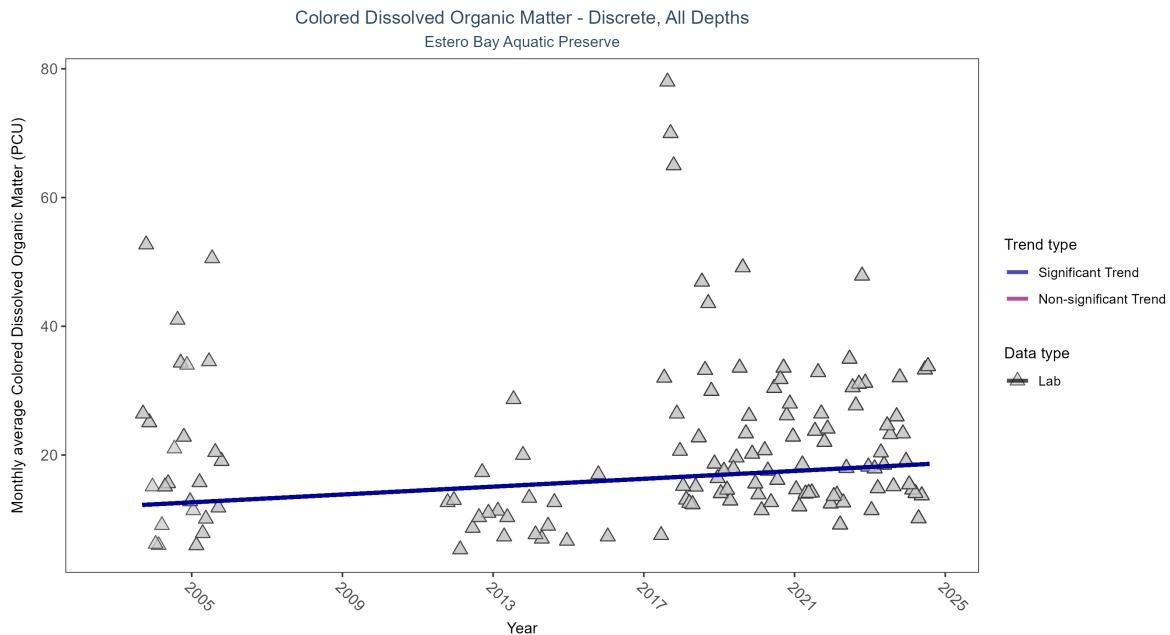


Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1919	17	2003 - 2024	14	0.2171	12.03937	0.30487	0.0011