Matlacha Pass Aquatic Preserve

SEACAR Discrete Water Quality Analysis

Last compiled on 15 August, 2024

Contents

Indicators

Nutrients

Total Nitrogen - Discrete

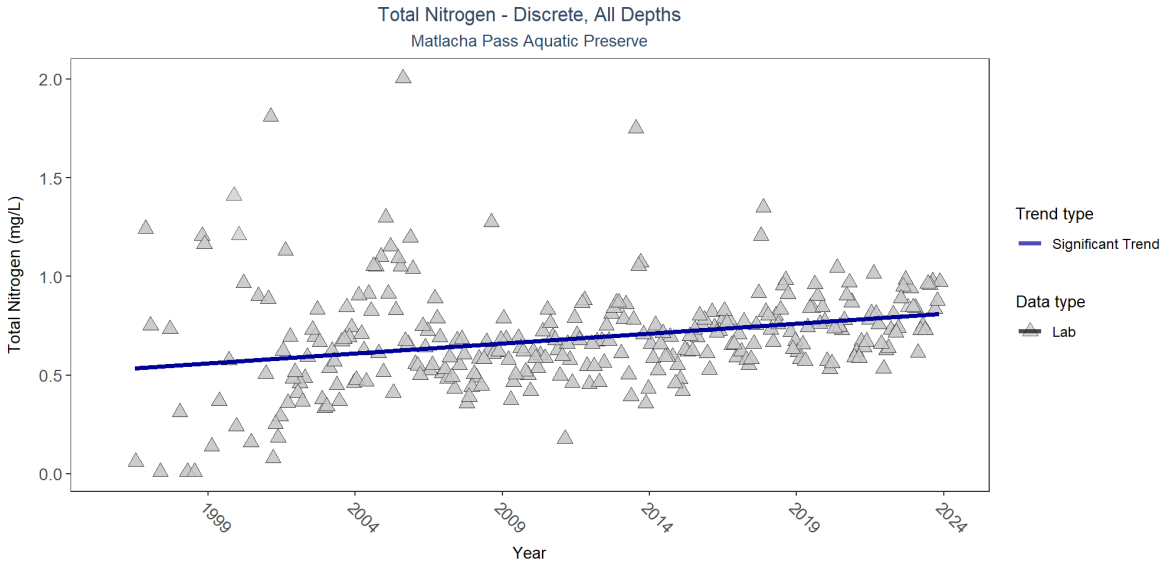

Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1606	28	1996 - 2023	0.675	0.2769	0.52864	0.01004	0.0000

Total Phosphorus - Discrete

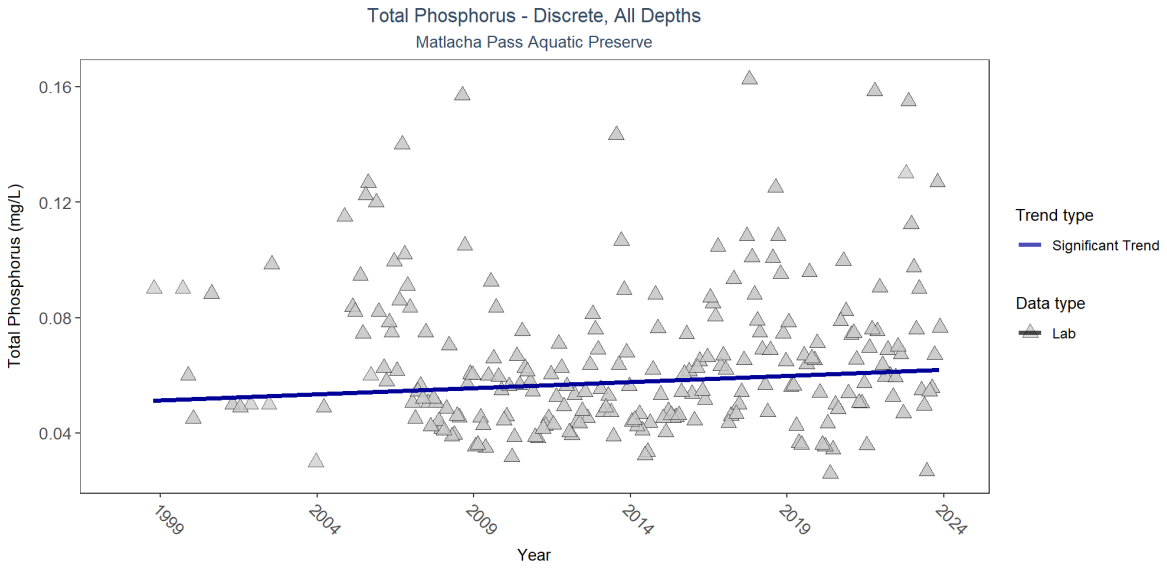

Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1278	26	1998 - 2023	0.058	0.1062	0.05084	0.00043	0.0335

Water Quality

Dissolved Oxygen - Discrete

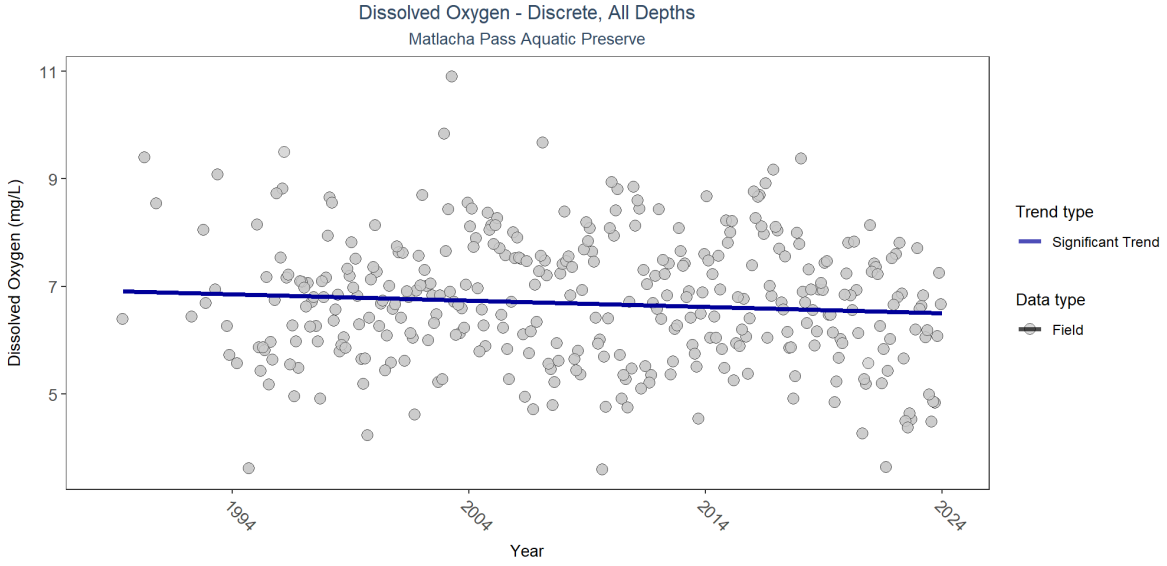

Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	8761	34	1989 - 2023	6.7	-0.082	6.91601	-0.01189	0.0305

Dissolved Oxygen - Continuous

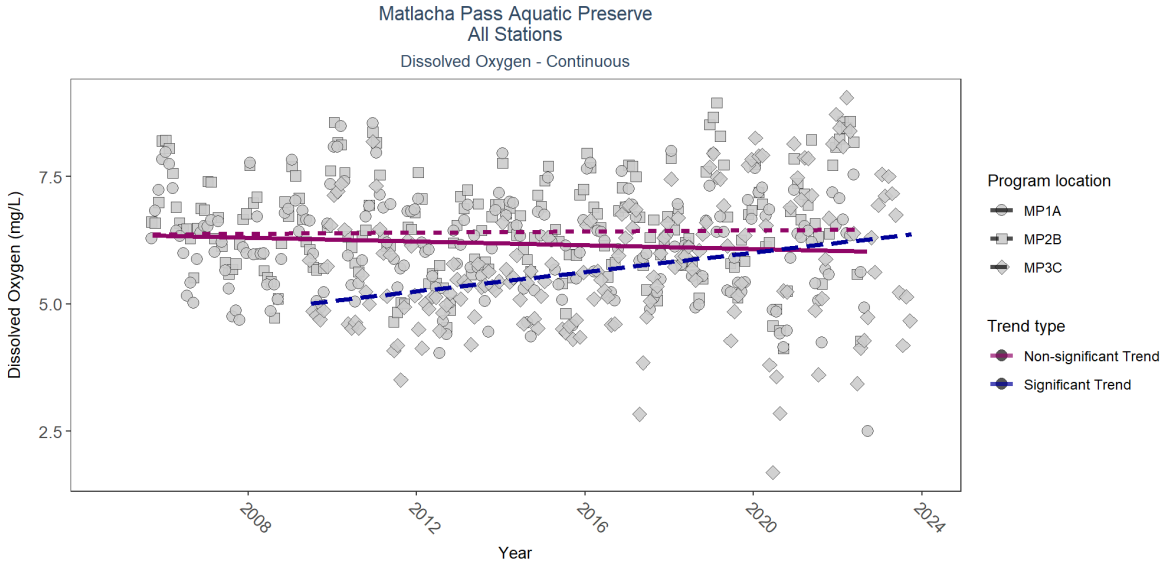

Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
MP2B	No significant trend	543952	18	2005 - 2022	6.6	0.03	6.36	0.01	0.5386
MP1A	No significant trend	529522	18	2005 - 2022	6.3	-0.10	6.36	-0.02	0.0556
MP3C	Significantly increasing trend	453711	15	2009 - 2023	5.8	0.28	4.97	0.09	0.0000

Dissolved Oxygen Saturation - Discrete

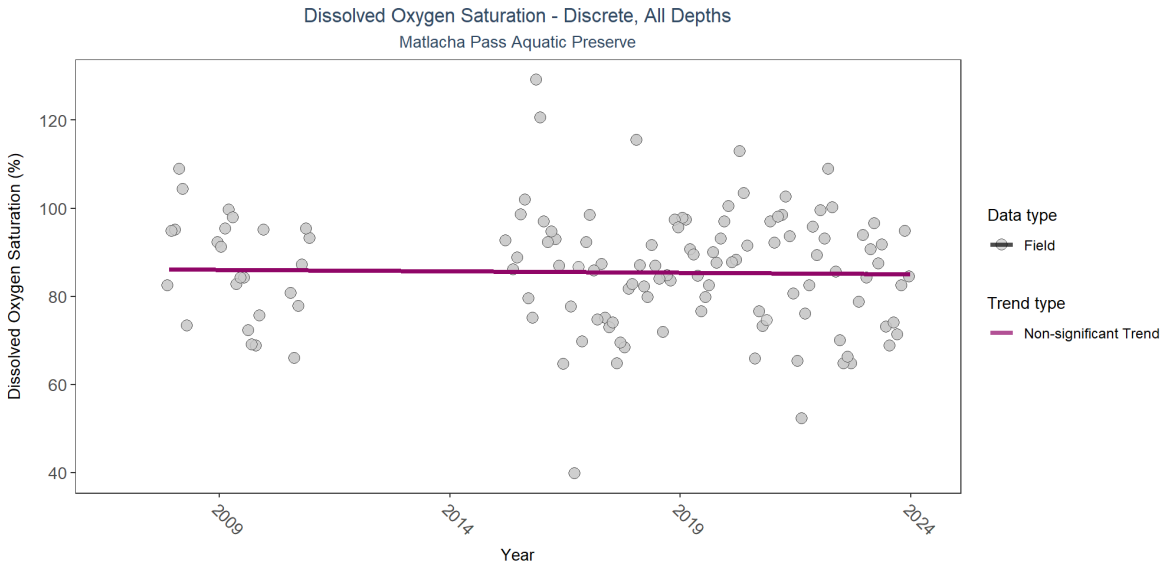

Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	768	13	2007 - 2023	88.05	-0.0236	86.2203	-0.06667	0.7784

Dissolved Oxygen Saturation - Continuous

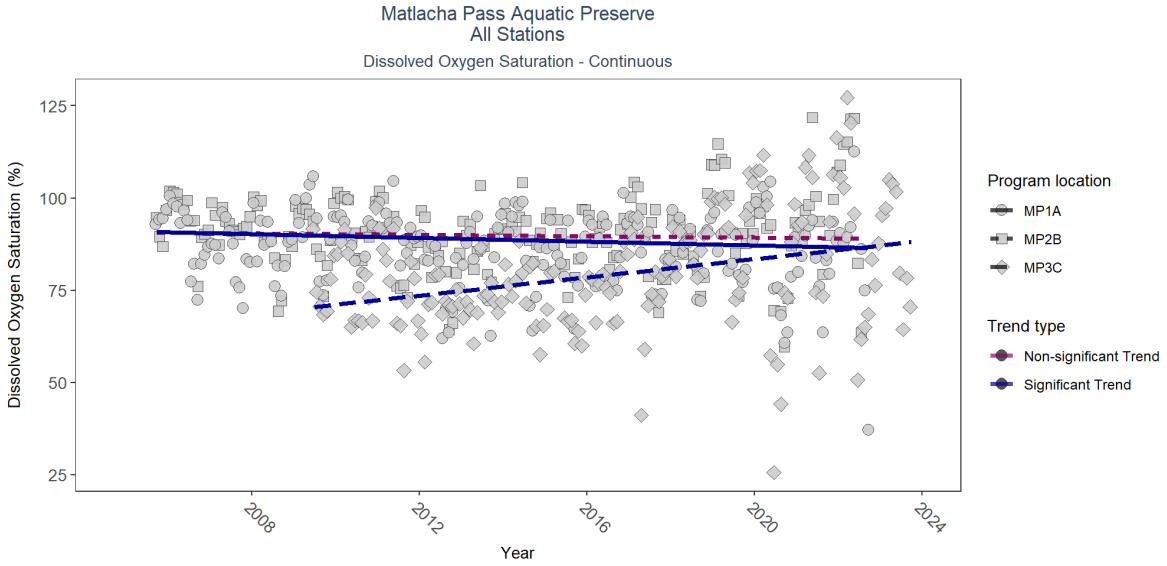

Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
MP2B	No significant trend	544252	18	2005 - 2022	91.1	-0.04	90.69	-0.09	0.4621
MP1A	Significantly decreasing trend	526884	18	2005 - 2022	87.9	-0.15	90.93	-0.26	0.0035
MP3C	Significantly increasing trend	455052	15	2009 - 2023	80.7	0.27	69.82	1.23	0.0000

Salinity - Discrete

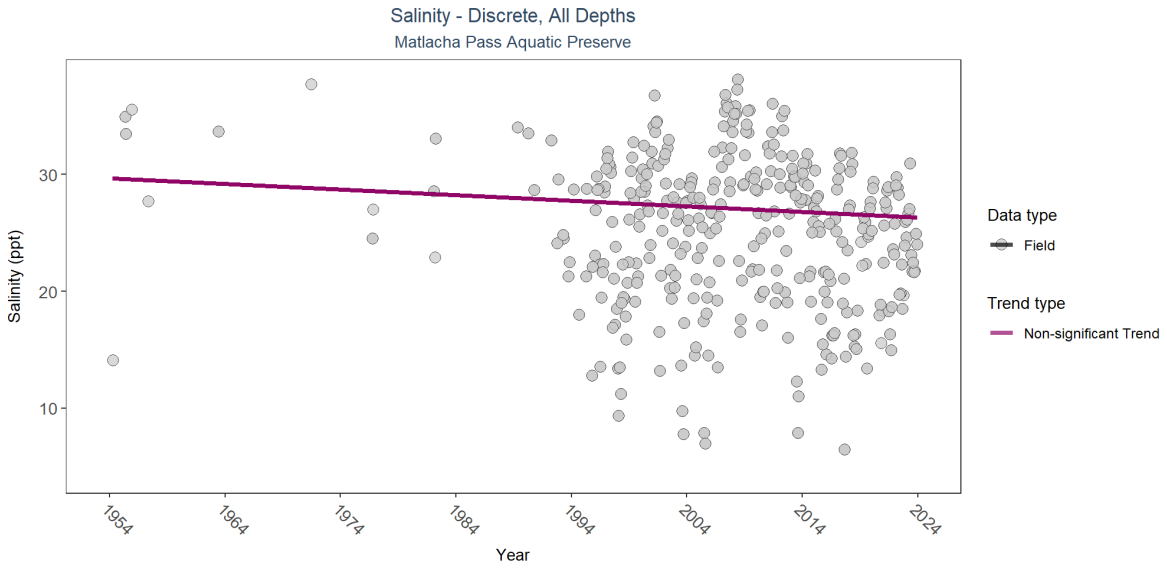

Table 7: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	No significant trend	7937	41	1954 - 2023	26.1	-0.072	29.69605	-0.04829	0.0518

Salinity - Continuous

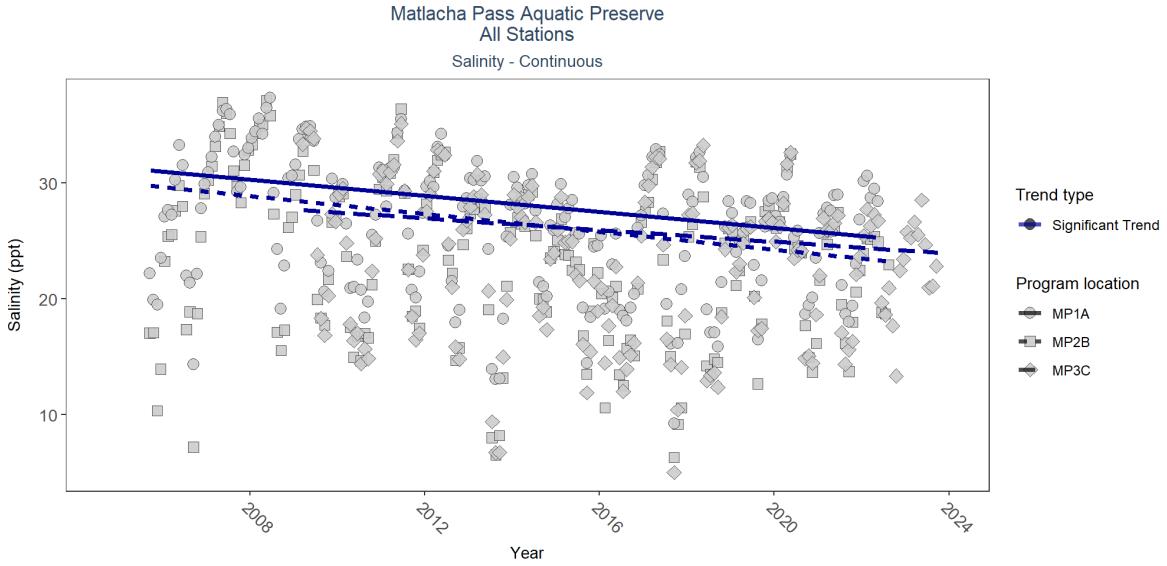

Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
MP2B	Significantly decreasing trend	563919	18	2005 - 2022	24.7	-0.32	30.02	-0.38	0.0000
MP1A	Significantly decreasing trend	541260	18	2005 - 2022	27.3	-0.33	31.36	-0.35	0.0000
MP3C	Significantly decreasing trend	479167	15	2009 - 2023	23.9	-0.20	27.72	-0.25	0.0007

Water Temperature - Discrete

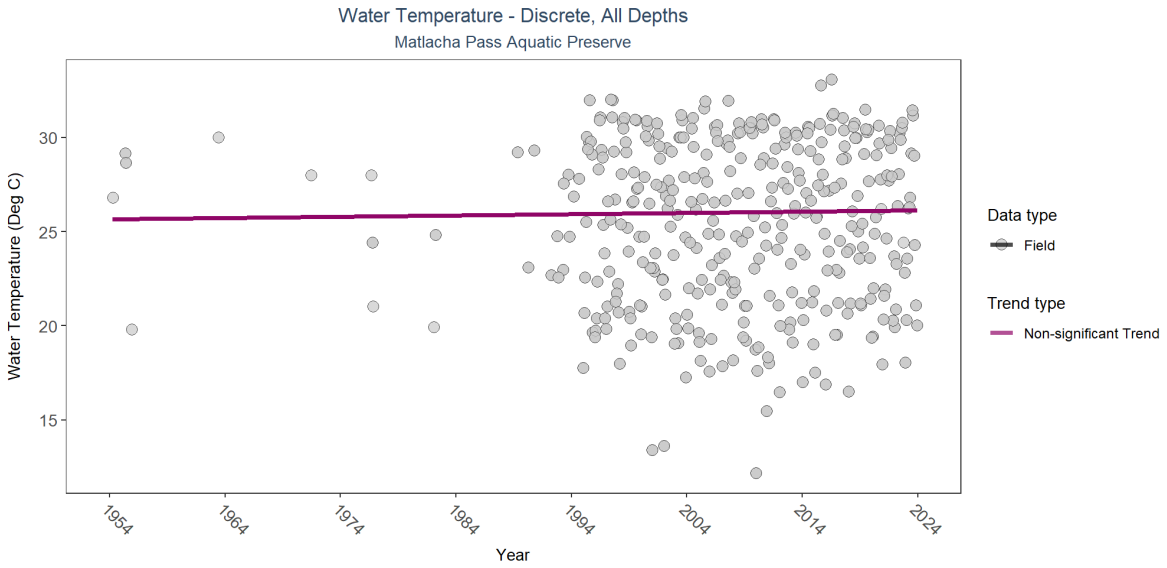

Table 9: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	8903	40	1954 - 2023	26.2	0.0304	25.64892	0.00702	0.3845

Water Temperature - Continuous

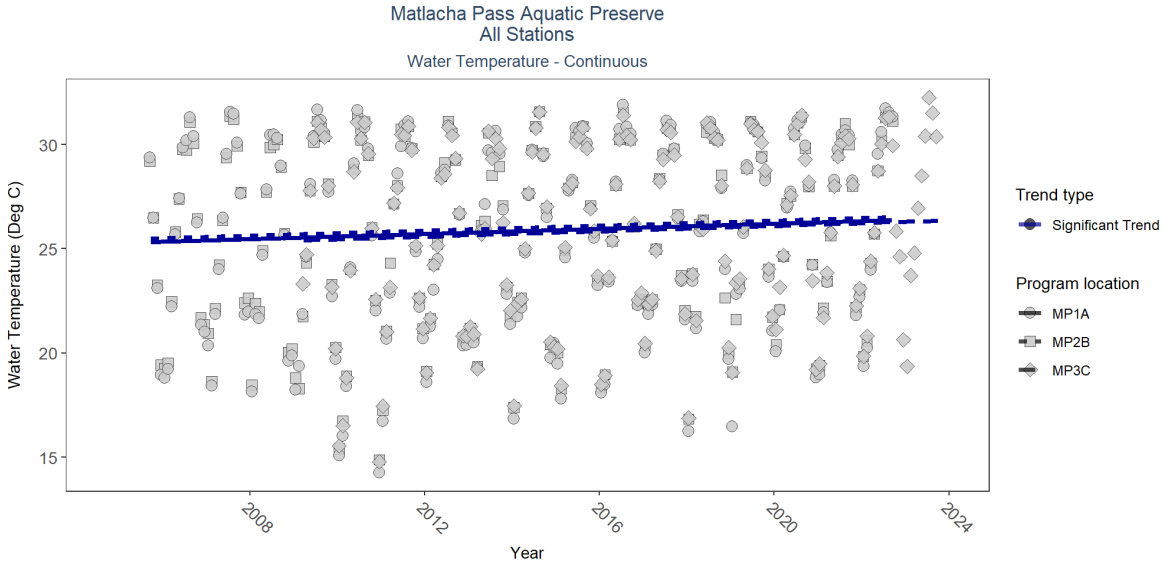

Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
MP2B	Significantly increasing trend	572608	18	2005 - 2022	26.2	0.21	25.44	0.06	0.0001
MP1A	Significantly increasing trend	574443	18	2005 - 2022	26.4	0.24	25.28	0.06	0.0000
MP3C	Significantly increasing trend	483113	15	2009 - 2023	26.7	0.22	25.38	0.06	0.0002

pH - Discrete

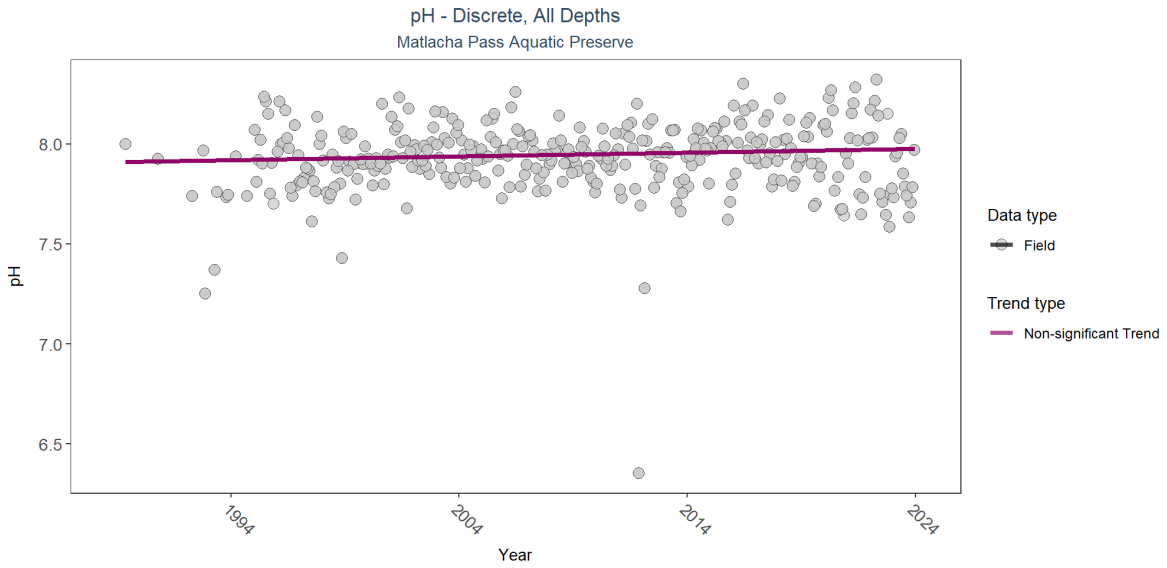

Table 11: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	8082	34	1989 - 2023	7.9	0.0703	7.91054	0.00181	0.0502

pH - Continuous

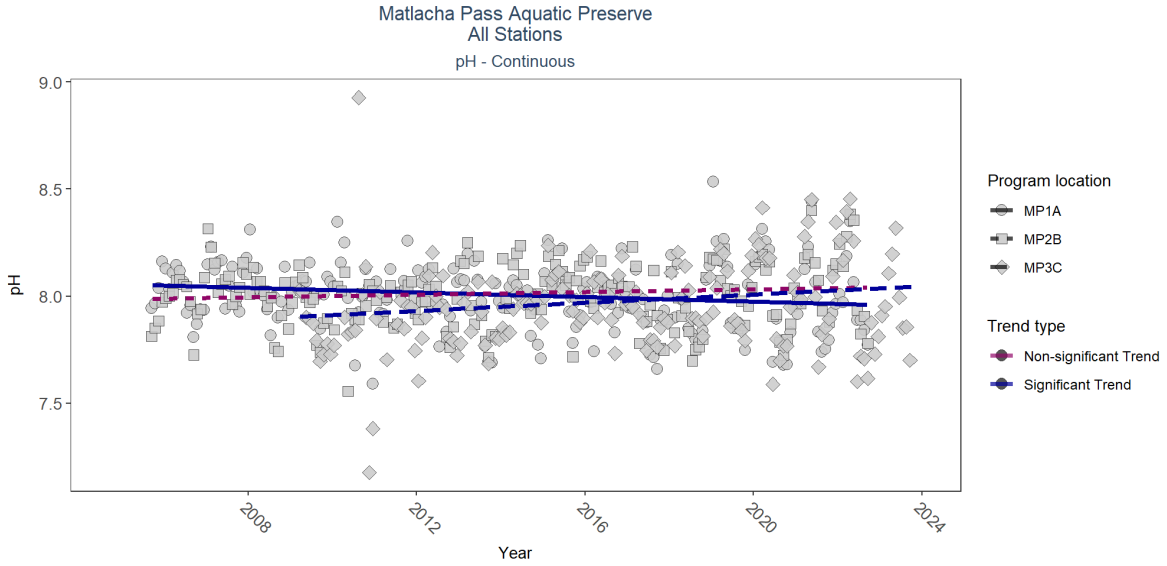

Table 12: Seasonal Kendall-Tau Results for All Stations - pH

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
MP1A	Significantly decreasing trend	493048	18	2005 - 2022	8.0	-0.15	8.06	-0.01	0.0055
MP2B	No significant trend	509989	18	2005 - 2022	8.0	0.06	7.99	0.00	0.2185
MP3C	Significantly increasing trend	421129	15	2009 - 2023	7.9	0.16	7.90	0.01	0.0090

Water Clarity

Turbidity - Discrete

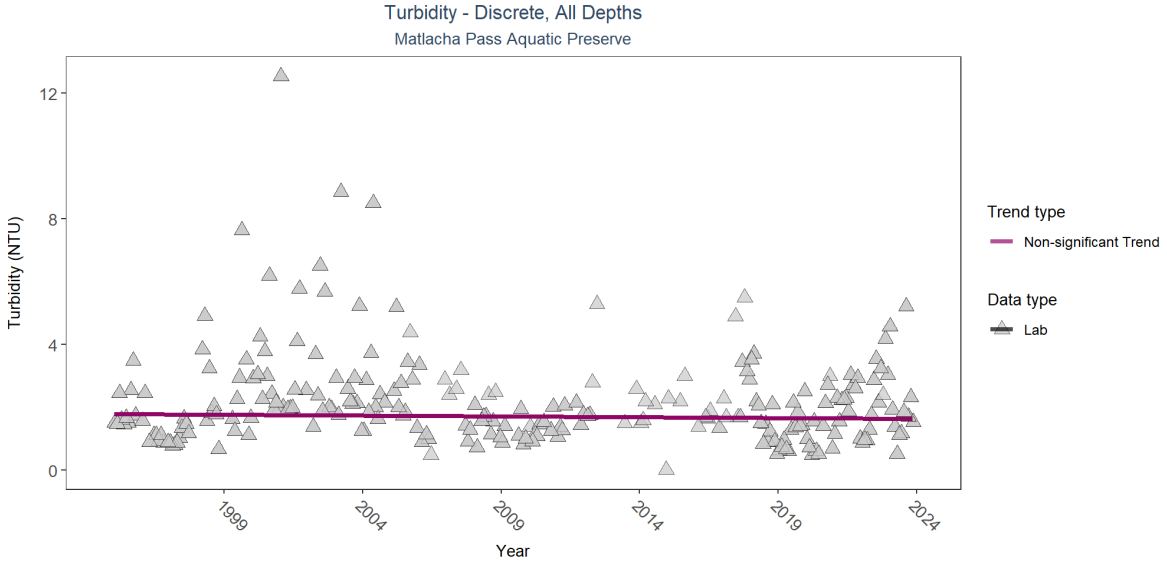

Table 13: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	2152	29	1995 - 2023	1.6	-0.0328	1.78674	-0.00502	0.4343

Turbidity - Continuous

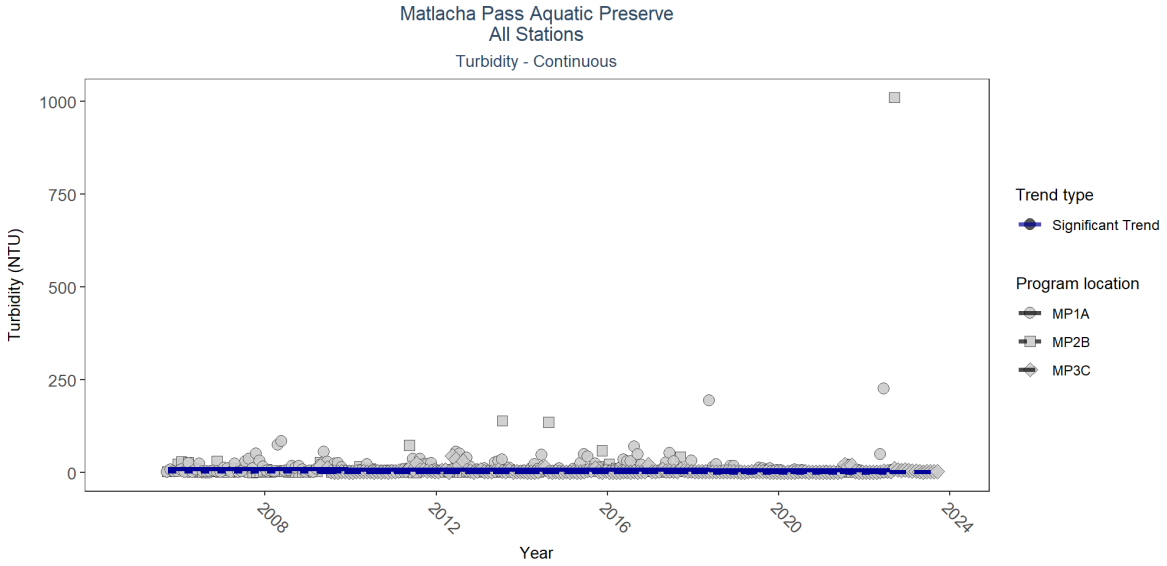

Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
MP2B	Significantly decreasing trend	490414	18	2005 - 2022	1	-0.25	3.07	-0.13	0.0000
MP1A	Significantly decreasing trend	434165	18	2005 - 2022	2	-0.15	10.27	-0.18	0.0038
MP3C	Significantly decreasing trend	417177	15	2009 - 2023	1	-0.13	2.35	-0.08	0.0207

Total Suspended Solids - Discrete

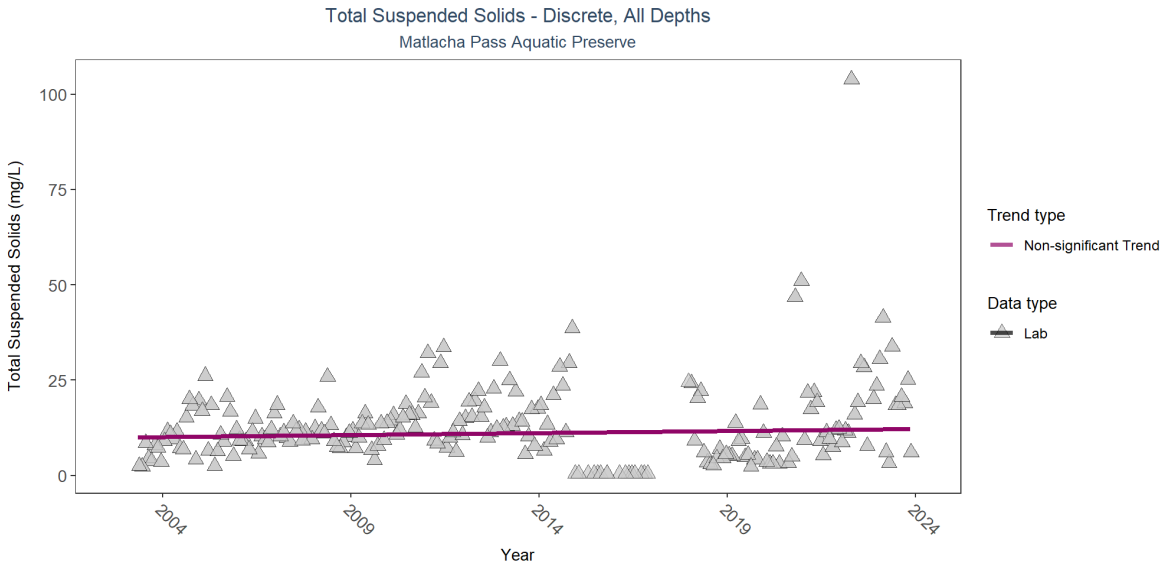

Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	844	21	2003 - 2023	10.45	0.0531	9.9322	0.10496	0.2930

Chlorophyll a, Uncorrected for Pheophytin - Discrete

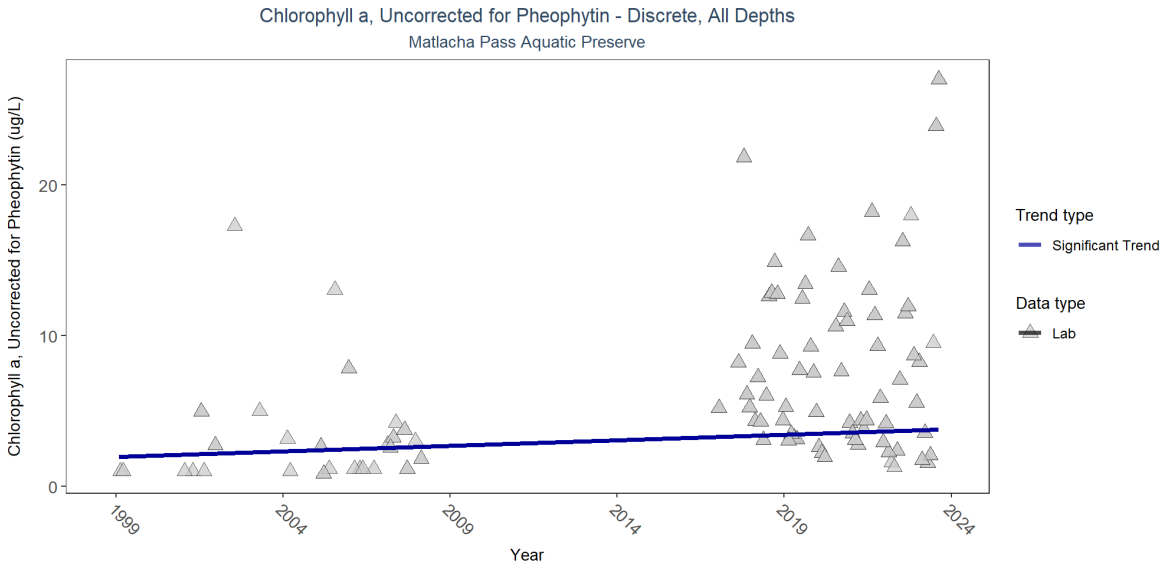

Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	385	16	1999 - 2023	4.8	0.2267	1.95181	0.07332	0.0065

Chlorophyll a, Corrected for Pheophytin - Discrete

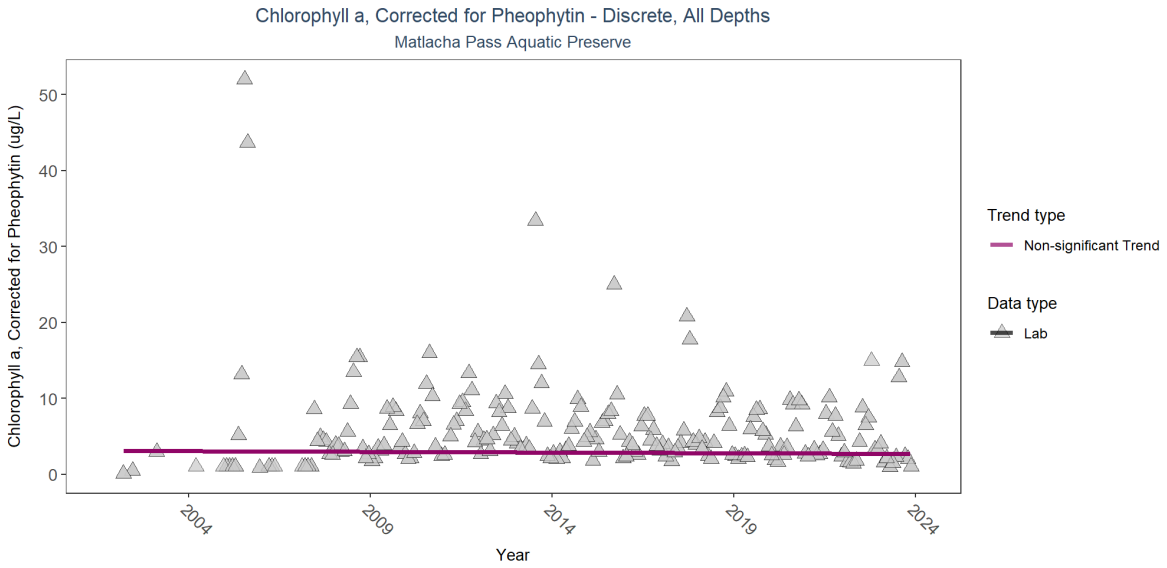

Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	1099	22	2002 - 2023	3.31	-0.0315	3.052	-0.01571	0.4896

Secchi Depth - Discrete

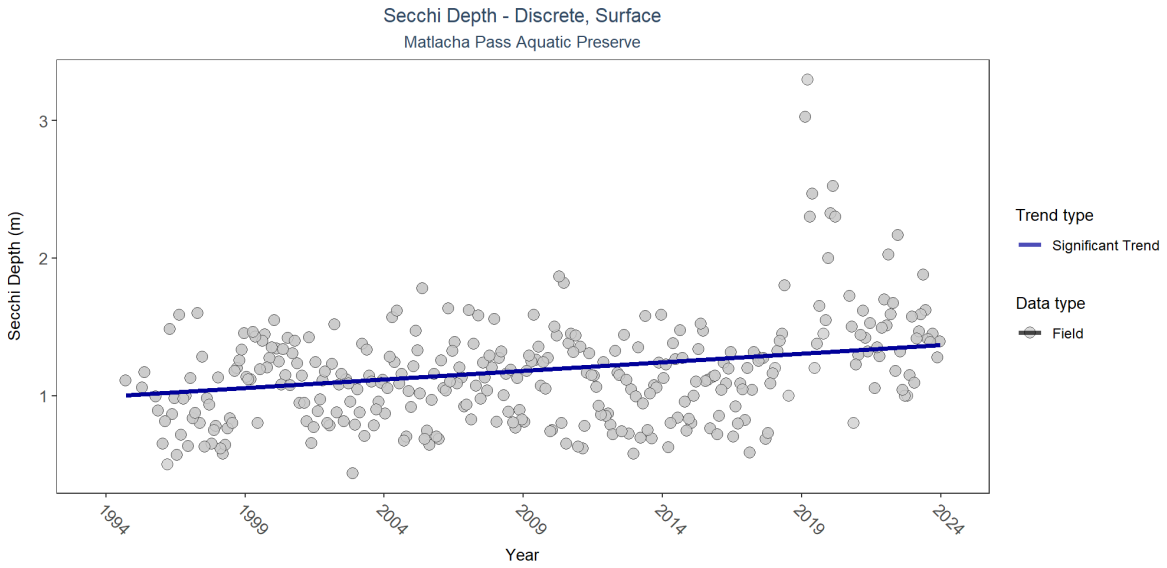

Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	4773	30	1994 - 2023	0.9	0.2125	0.99425	0.0125	0.0000

Colored Dissolved Organic Matter - Discrete

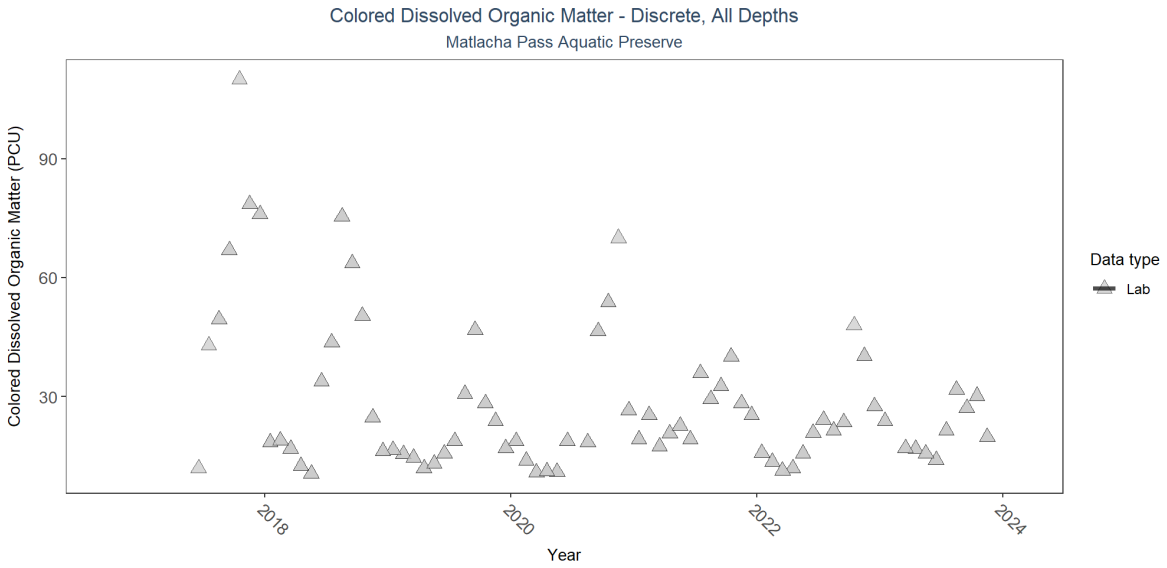

Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	344	7	2017 - 2023	21.35	-	-	-	NA