Fort Pickens State Park Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 27 January, 2025

Contents

Indicators

Nutrients

Total Nitrogen - Discrete

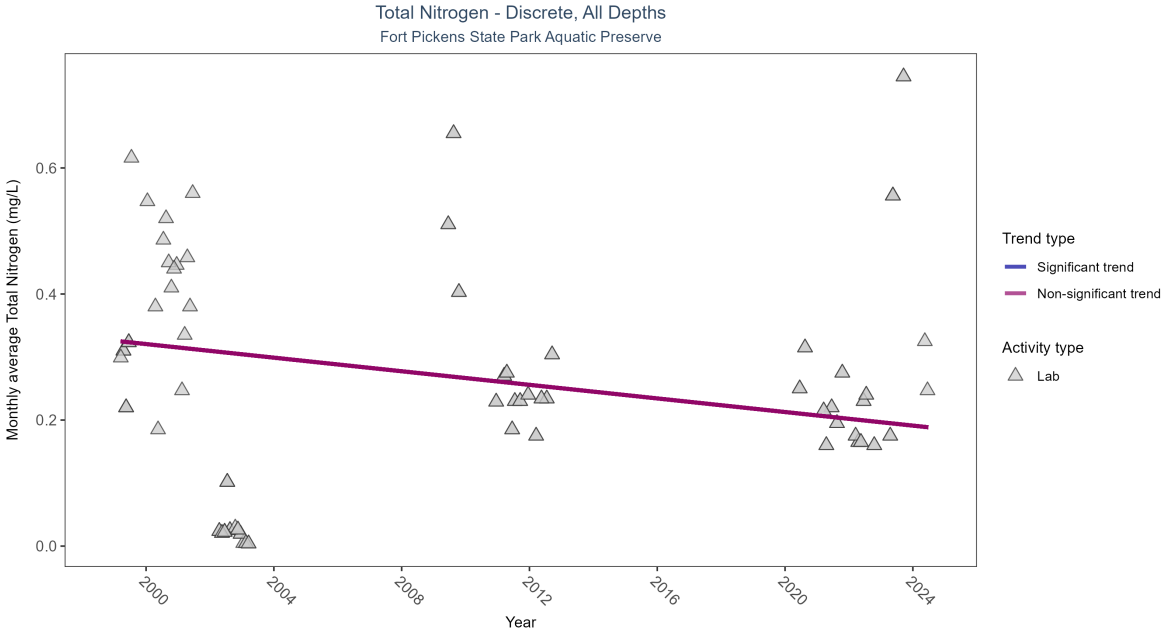

Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	112	14	1999 - 2024	0.232	-0.2194	0.32595	-0.00539	0.1802

Total Phosphorus - Discrete

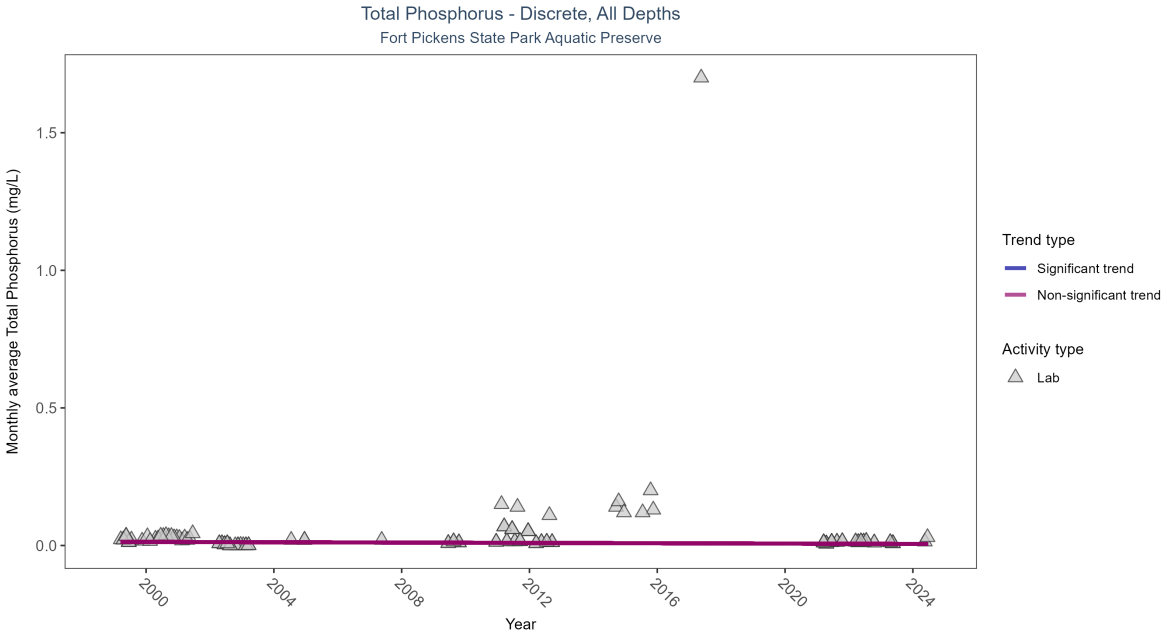

Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	131	18	1999 - 2024	0.014	-0.0562	0.01336	-0.0003	0.4306

Water Quality

Dissolved Oxygen - Discrete

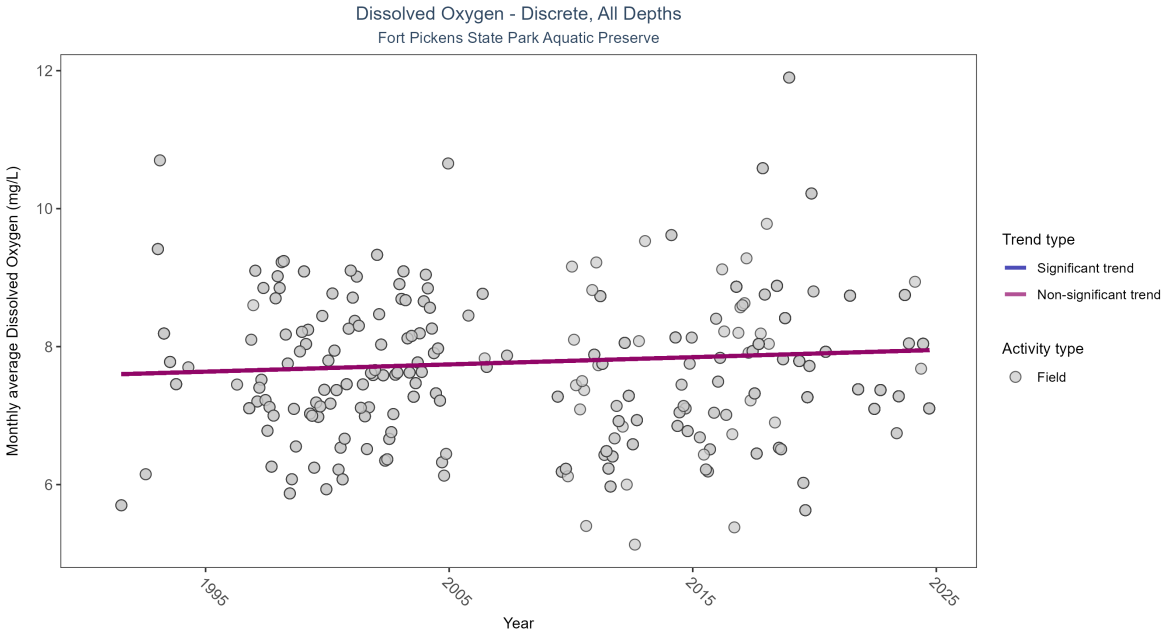

Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	1222	32	1991 - 2024	7.54	0.0679	7.59499	0.01049	0.1643

Dissolved Oxygen - Continuous

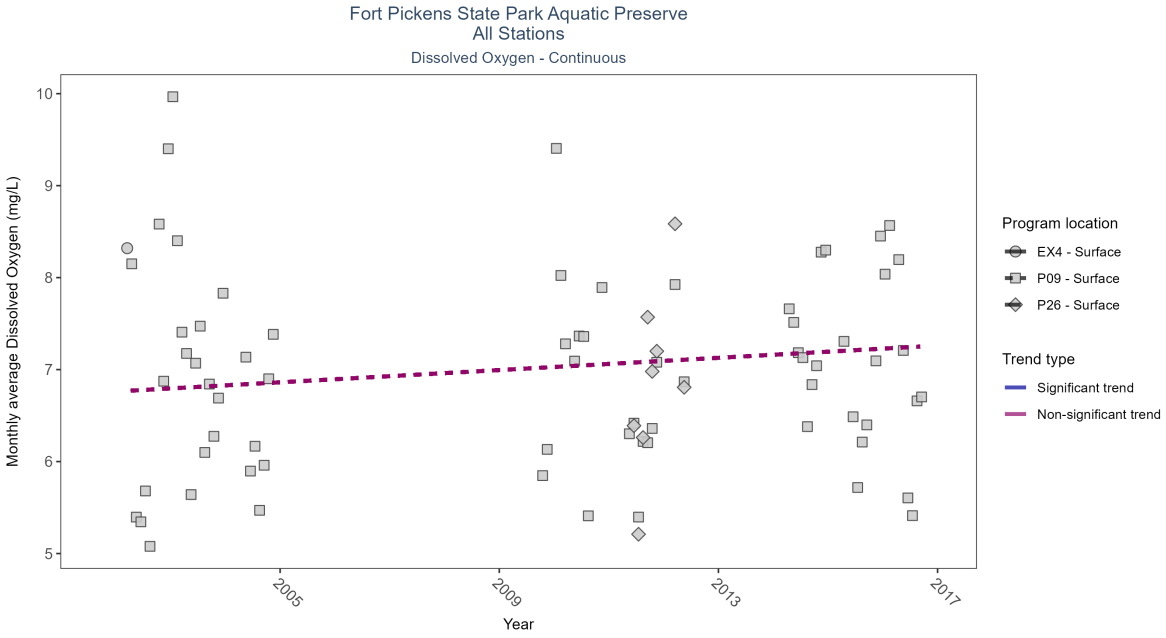

Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
P09	No significant trend	364	10	2002 - 2016	6.82	0.14	6.76	0.03	0.0970
P26	Insufficient data to calculate trend	27	2	2011 - 2012	6.61	-	-	-	NA
EX4	Insufficient data to calculate trend	2	1	2002 - 2002	8.32	-	-	-	NA

Dissolved Oxygen Saturation - Discrete

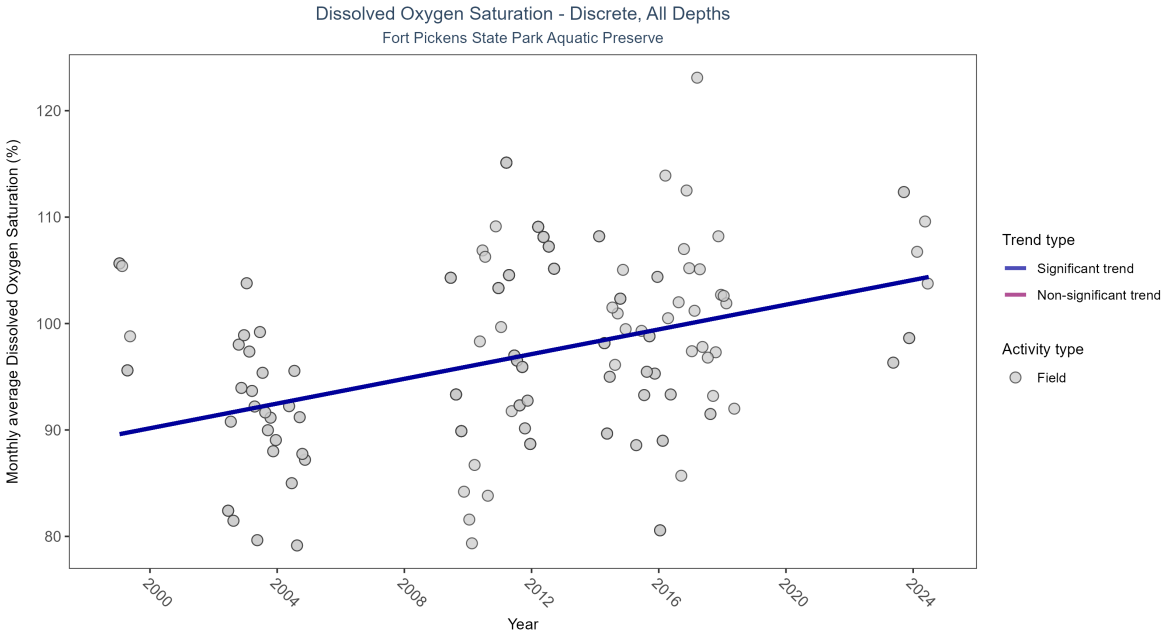

Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	257	15	1999 - 2024	98.41	0.294	89.58022	0.58056	0.0002

Dissolved Oxygen Saturation - Continuous

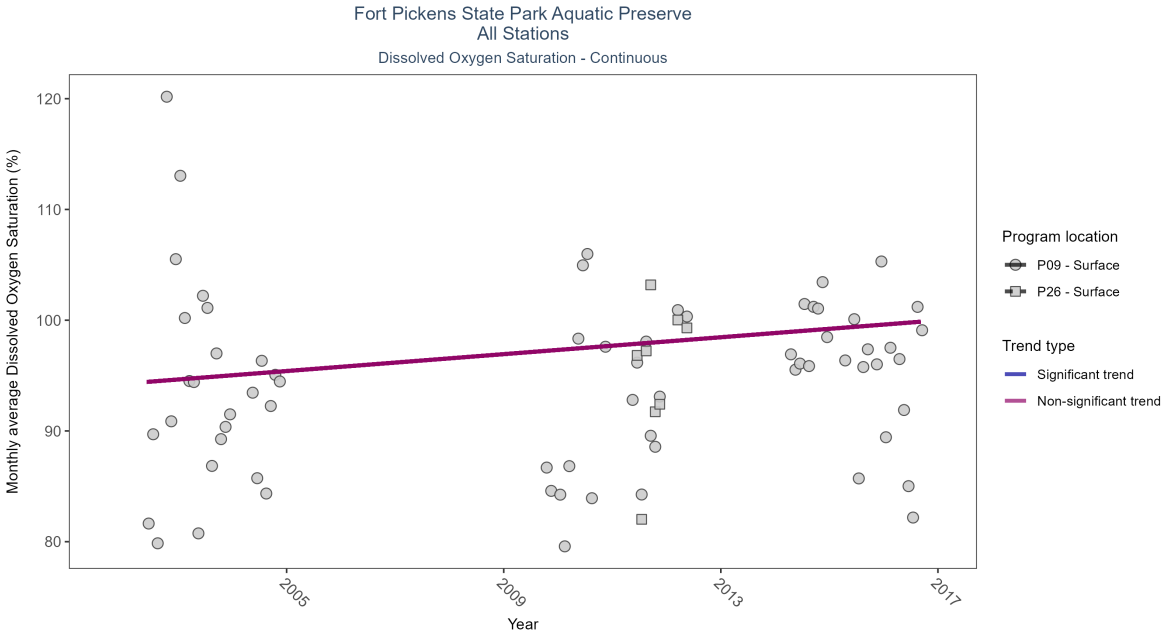

Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
P09	No significant trend	358	10	2002 - 2016	96.91	0.11	94.26	0.38	0.2446
P26	Insufficient data to calculate trend	27	2	2011 - 2012	98.17	-	-	-	NA

Salinity - Discrete

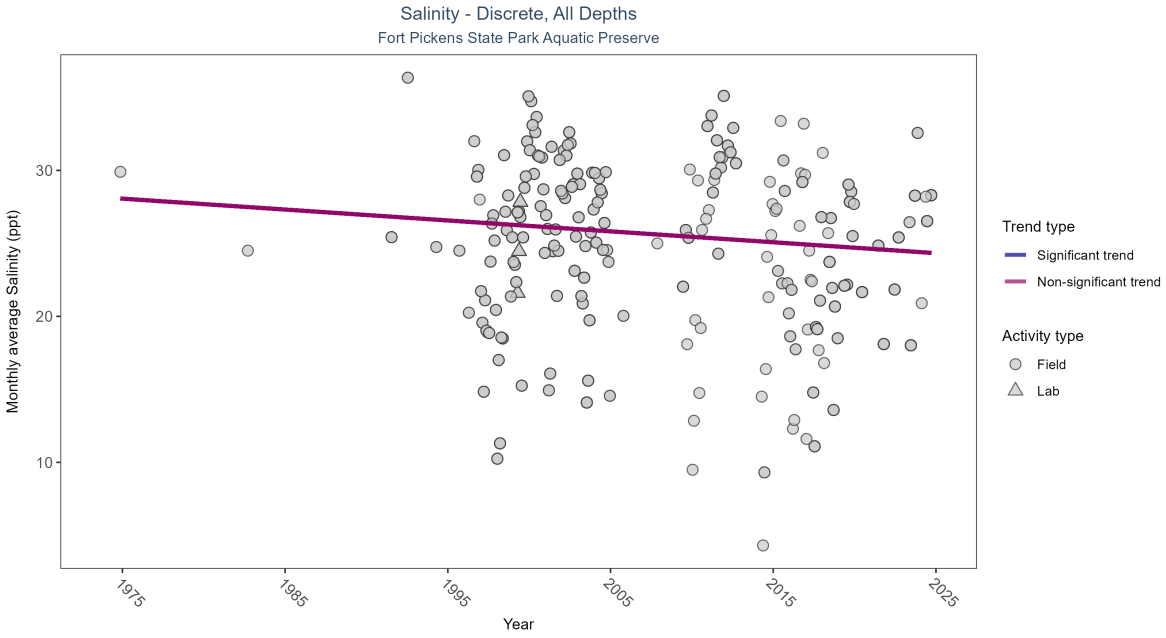

Table 7: Seasonal Kendall-Tau Results for - Salinity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
All	No significant trend	1163	32	1974 - 2024	25.98	-0.0838	28.13898	-0.0747	0.1000

Salinity - Continuous

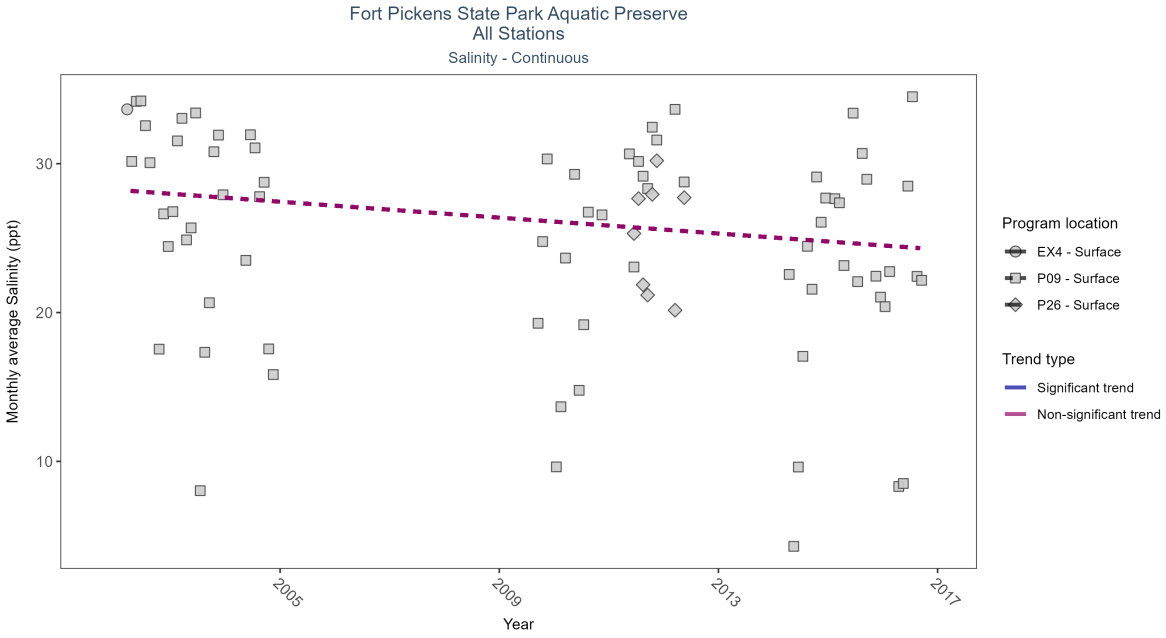

Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
P09	No significant trend	373	10	2002 - 2016	25.91	-0.17	28.25	-0.27	0.1296
P26	Insufficient data to calculate trend	27	2	2011 - 2012	26.38	-	-	-	NA
EX4	Insufficient data to calculate trend	2	1	2002 - 2002	33.65	-	-	-	NA

Water Temperature - Discrete

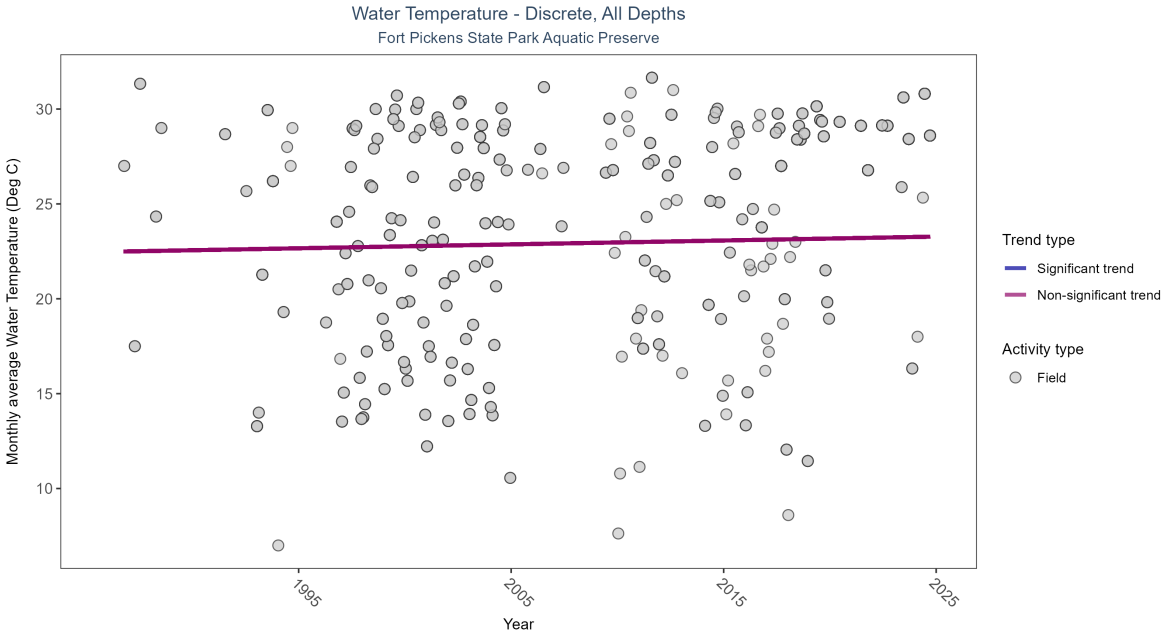

Table 9: Seasonal Kendall-Tau Results for - Water Temperature

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	1264	35	1986 - 2024	27.1	0.0762	22.4764	0.02054	0.1033

Water Temperature - Continuous

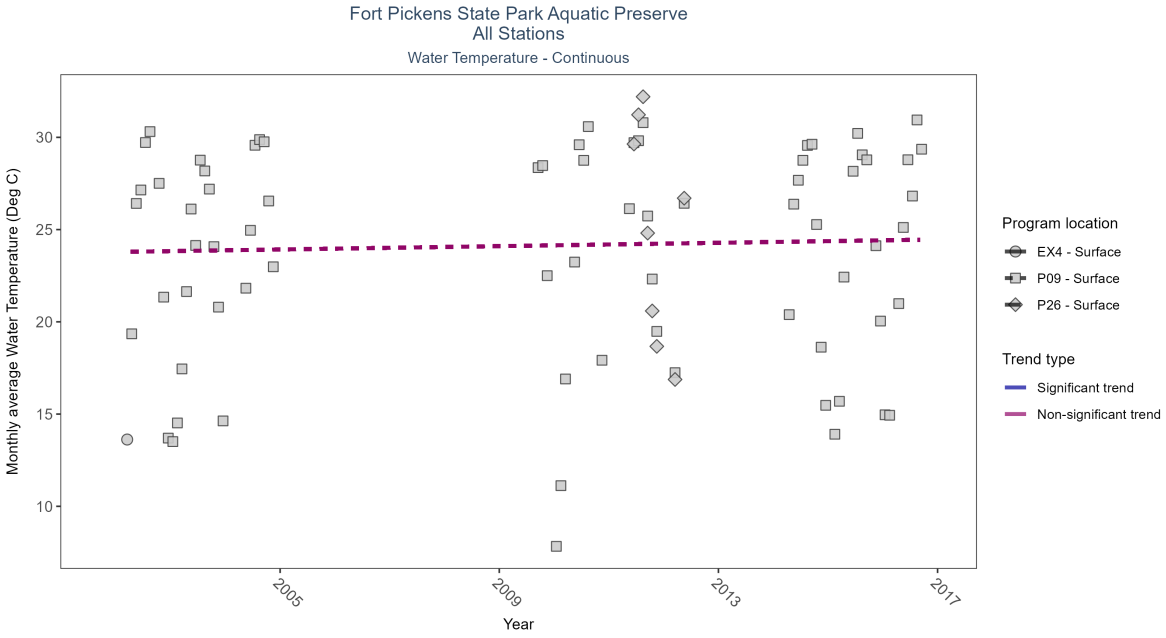

Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
P09	No significant trend	373	10	2002 - 2016	26.39	0.1	23.79	0.05	0.4485
P26	Insufficient data to calculate trend	27	2	2011 - 2012	29.64	-	-	-	NA
EX4	Insufficient data to calculate trend	2	1	2002 - 2002	13.62	-	-	-	NA

pH - Discrete

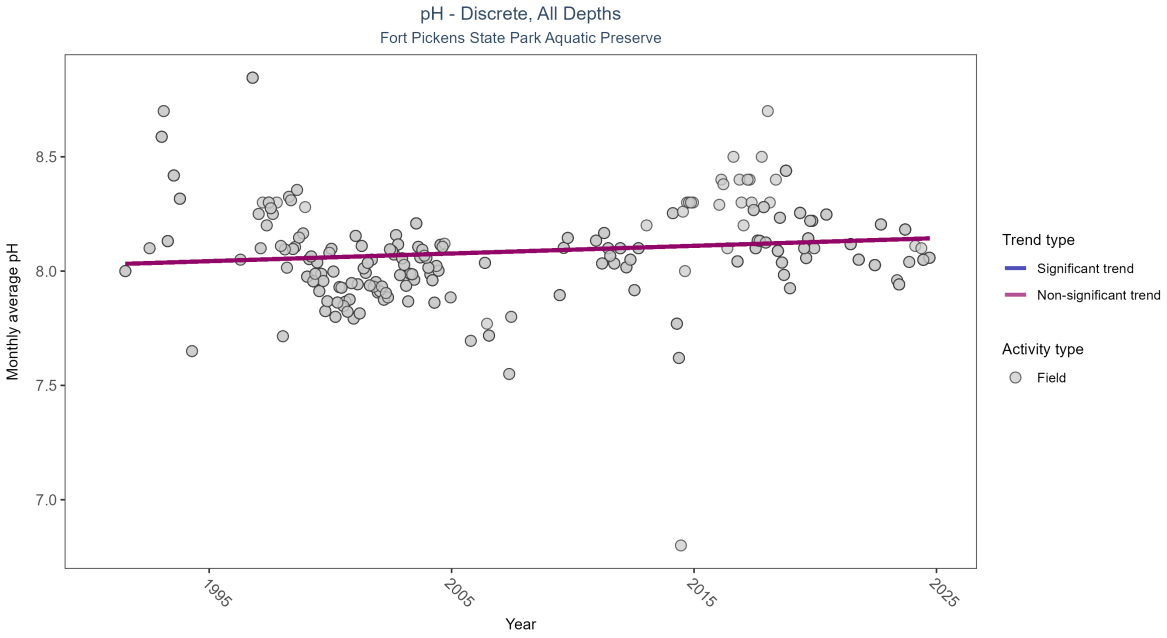

Table 11: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	1024	31	1991 - 2024	8.1	0.1197	8.03003	0.00336	0.0586

pH - Continuous

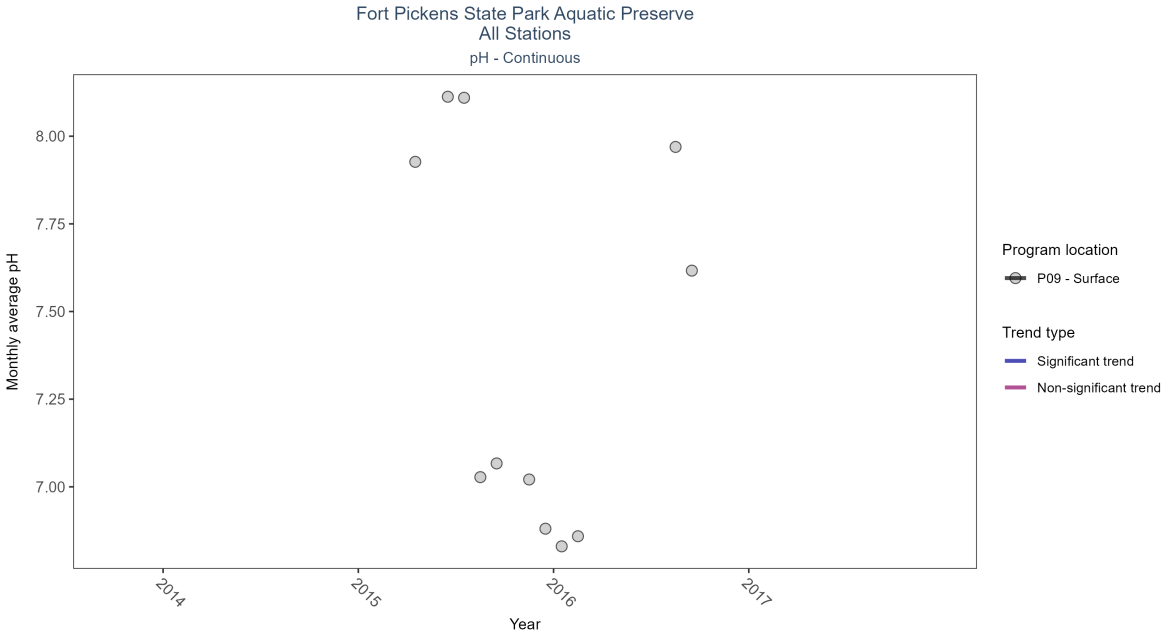

Table 12: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
P09	Insufficient data to calculate trend	157	2	2015 - 2016	7.06	-	-	-	NA

Water Clarity

Turbidity - Discrete

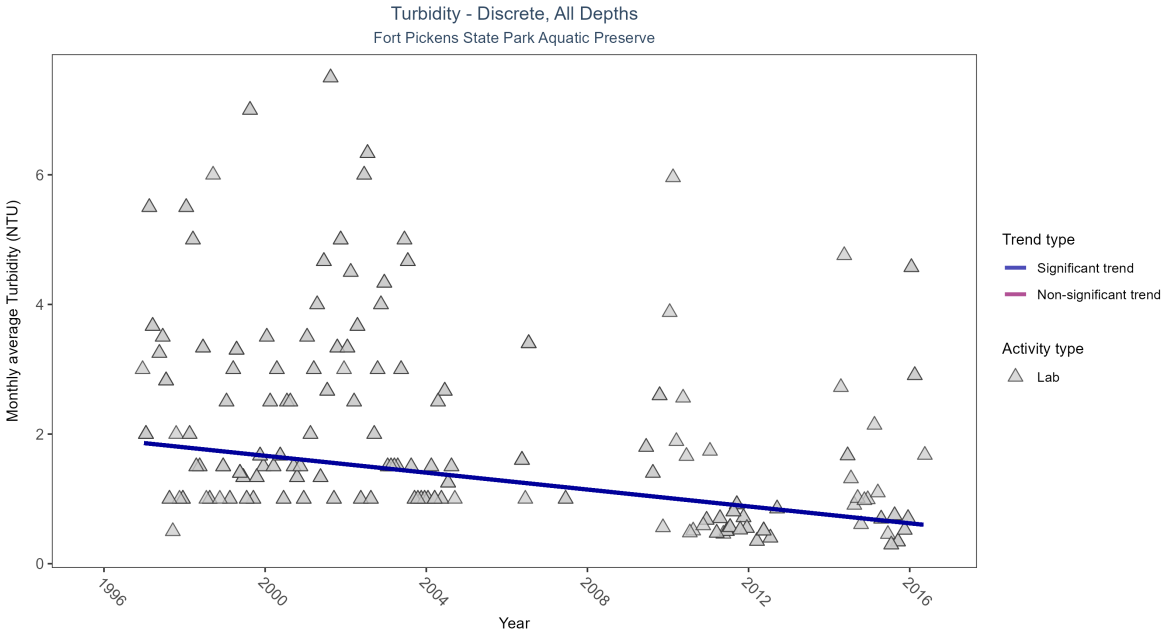

Table 13: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	313	18	1996 - 2016	1.0122	-0.3143	1.92558	-0.06511	0.0000

Turbidity - Continuous

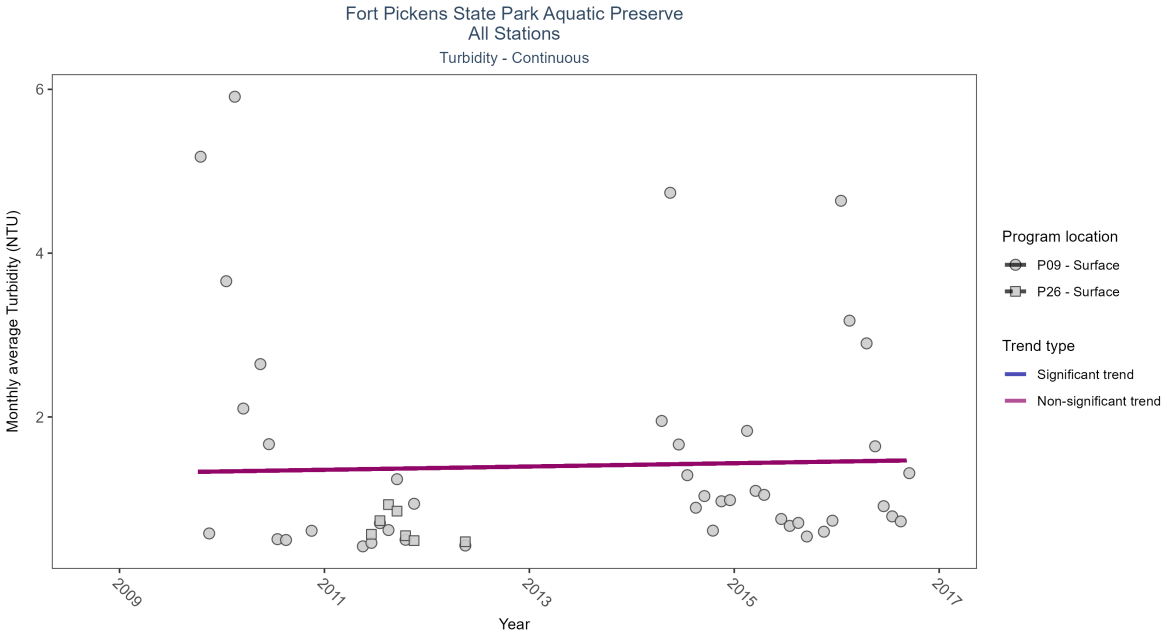

Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
P09	No significant trend	275	7	2009 - 2016	0.85	0.07	1.31	0.02	0.3820
P26	Insufficient data to calculate trend	25	2	2011 - 2012	0.62	-	-	-	NA

Total Suspended Solids - Discrete

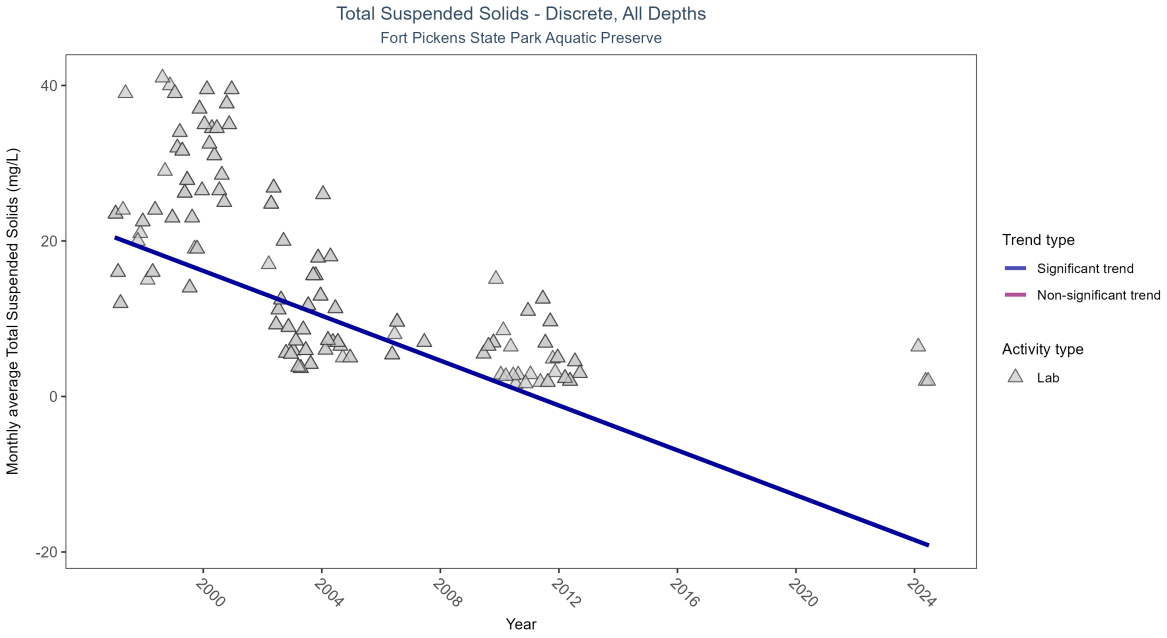

Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	258	14	1997 - 2024	10	-0.6092	20.48186	-1.44236	0.0000

Chlorophyll a, Uncorrected for Pheophytin - Discrete

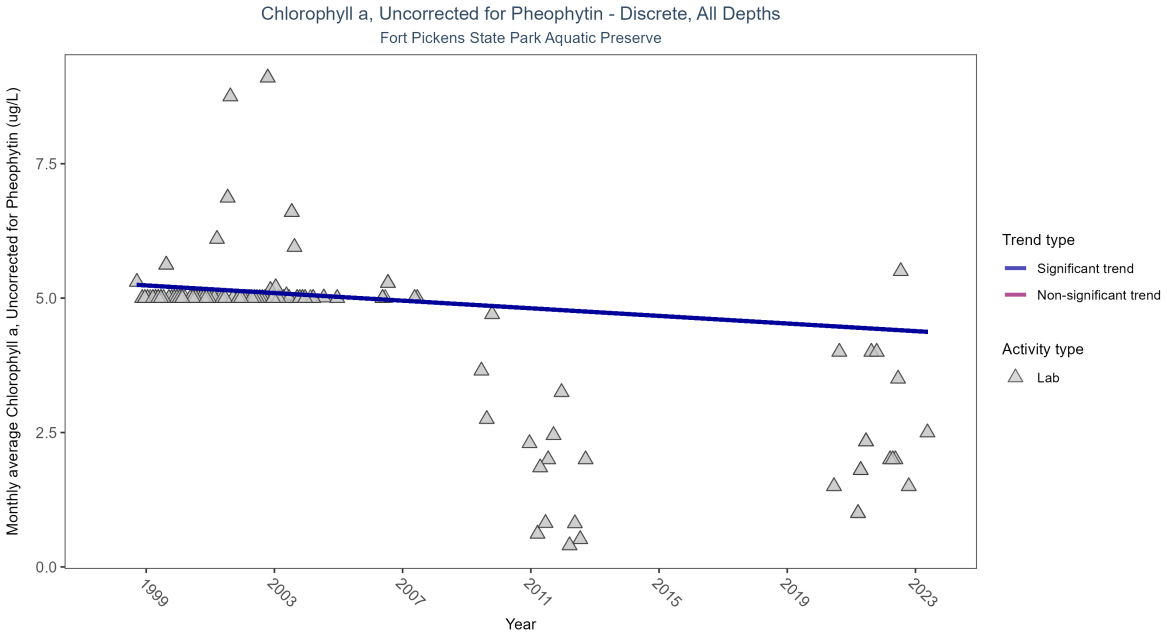

Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	233	17	1998 - 2023	5	-0.3229	5.27153	-0.03542	0.0000

Chlorophyll a, Corrected for Pheophytin - Discrete

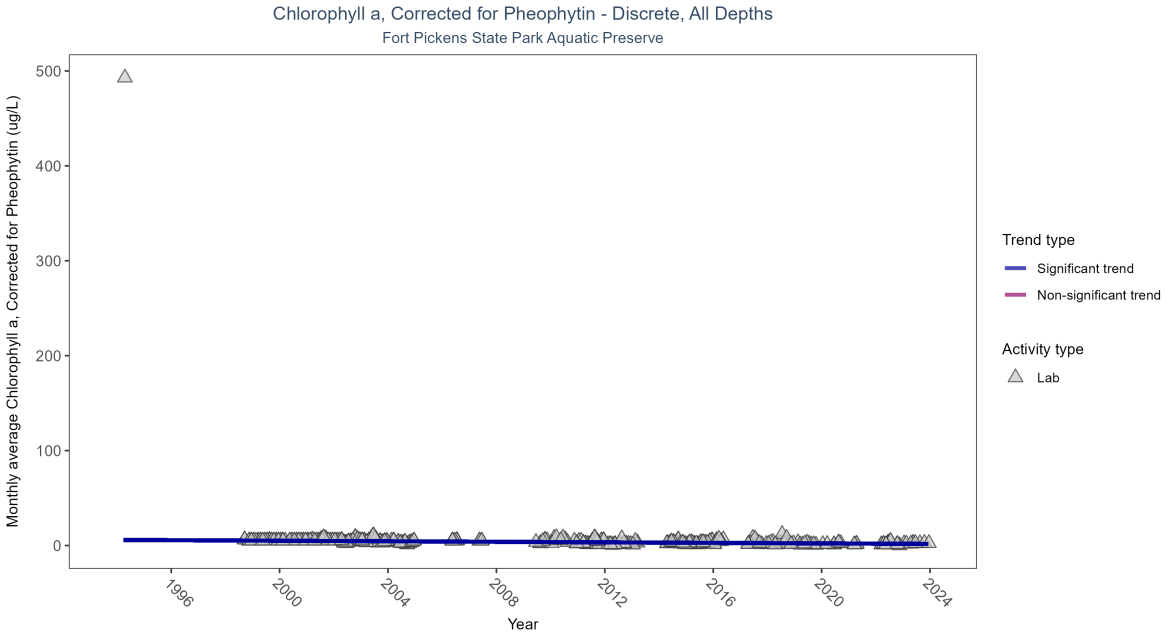

Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	395	25	1994 - 2023	5	-0.4096	5.85363	-0.14	0.0000

Secchi Depth - Discrete

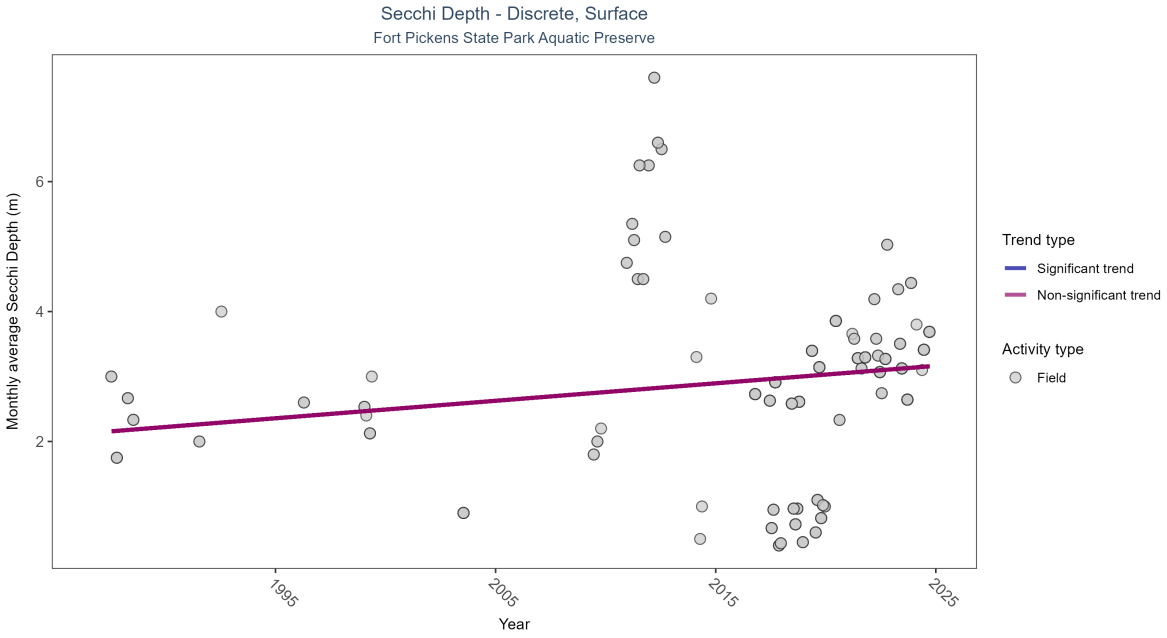

Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	547	21	1987 - 2024	2.75	0.1433	2.14224	0.02691	0.4209

Colored Dissolved Organic Matter - Discrete

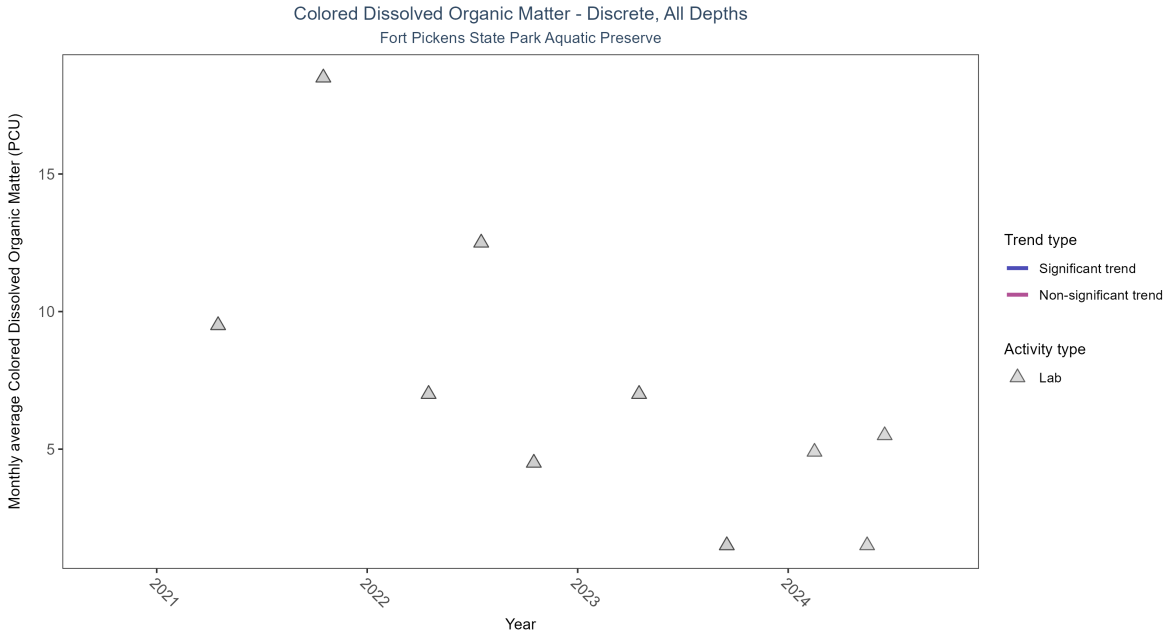

Table 19: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Insufficient data to calculate trend	17	4	2021 - 2024	6	-	-	-	NA