

Southeast Florida Coral Reef Ecosystem Conservation Area

SEACAR Discrete Water Quality Analysis

Last compiled on 15 August, 2024

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Indicators

Nutrients

Total Nitrogen - Discrete

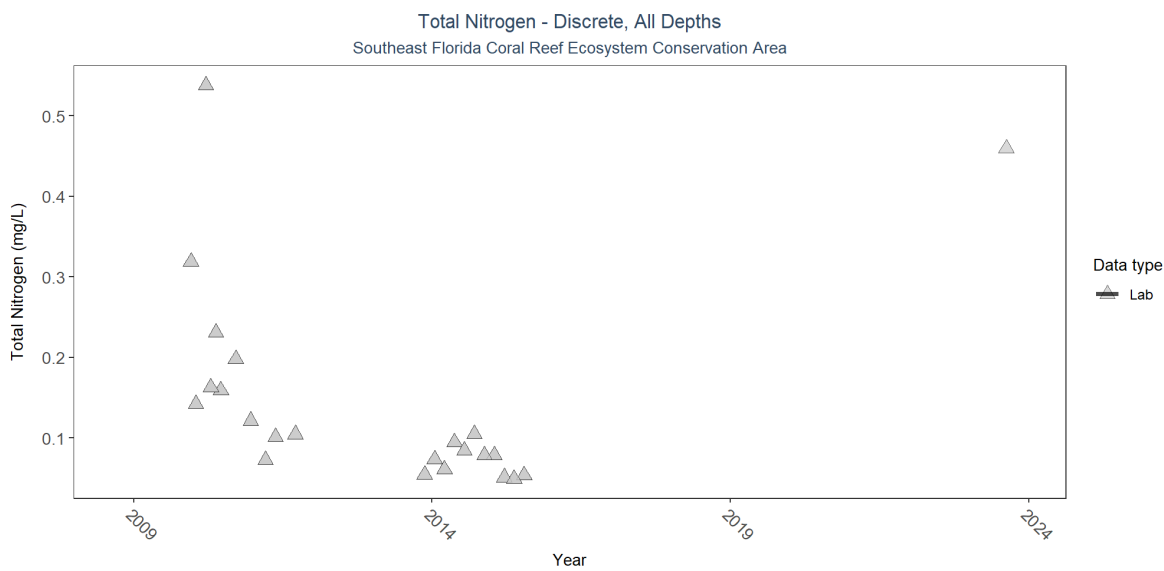


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	940	7	2009 - 2023	0.06925	-	-	-	NA

Total Phosphorus - Discrete

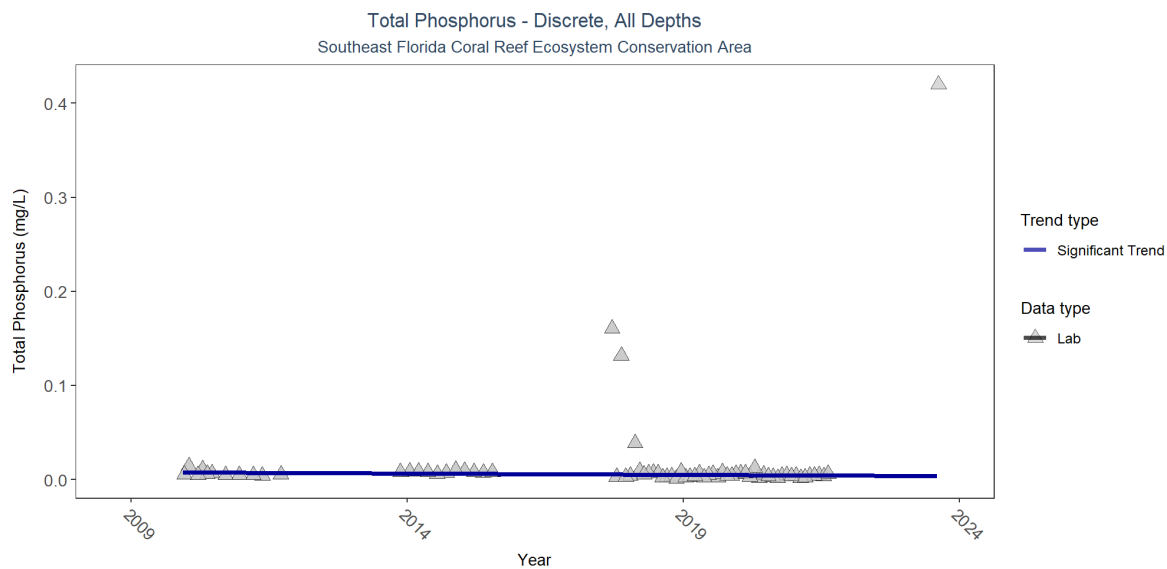


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	11083	12	2009 - 2023	0.001	-0.2247	0.00798	-0.0003	0.0128

Water Quality

Dissolved Oxygen - Discrete

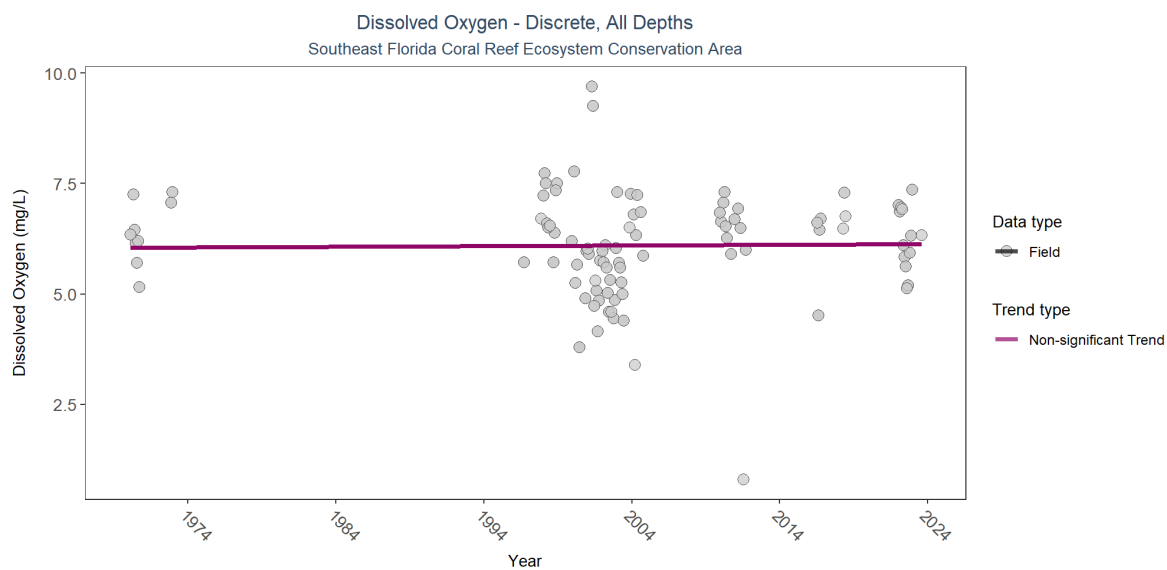


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	622	18	1970 - 2023	6.4781	0.0321	6.04801	0.00158	0.7804

Dissolved Oxygen Saturation - Discrete

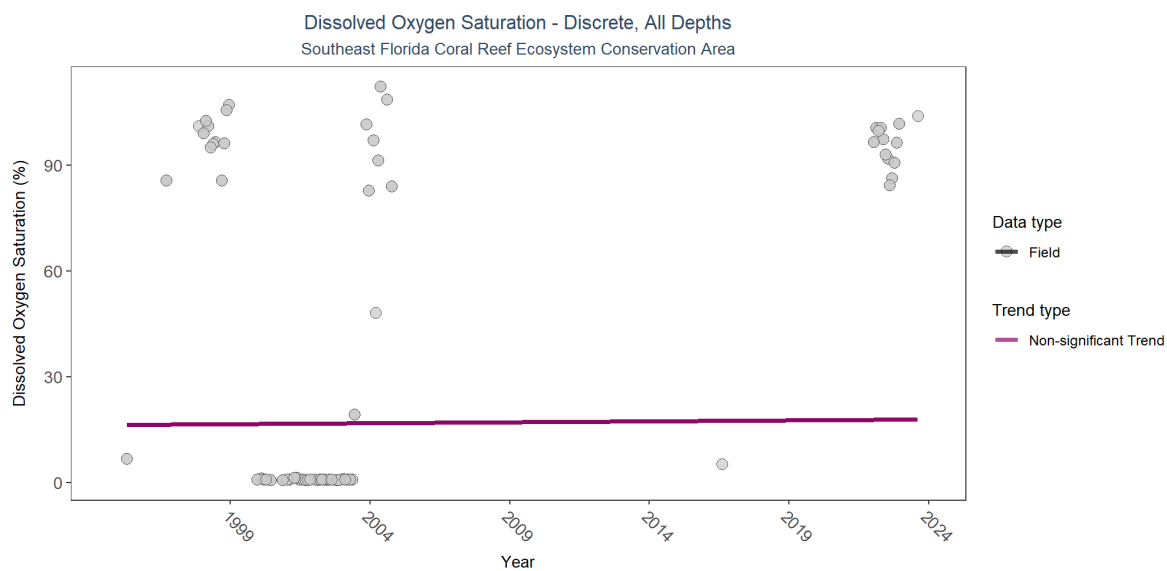


Table 4: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	No significant trend	272	13	1995 - 2023	88.15	0.1265	16.3311	0.05514	0.3484

Salinity - Discrete

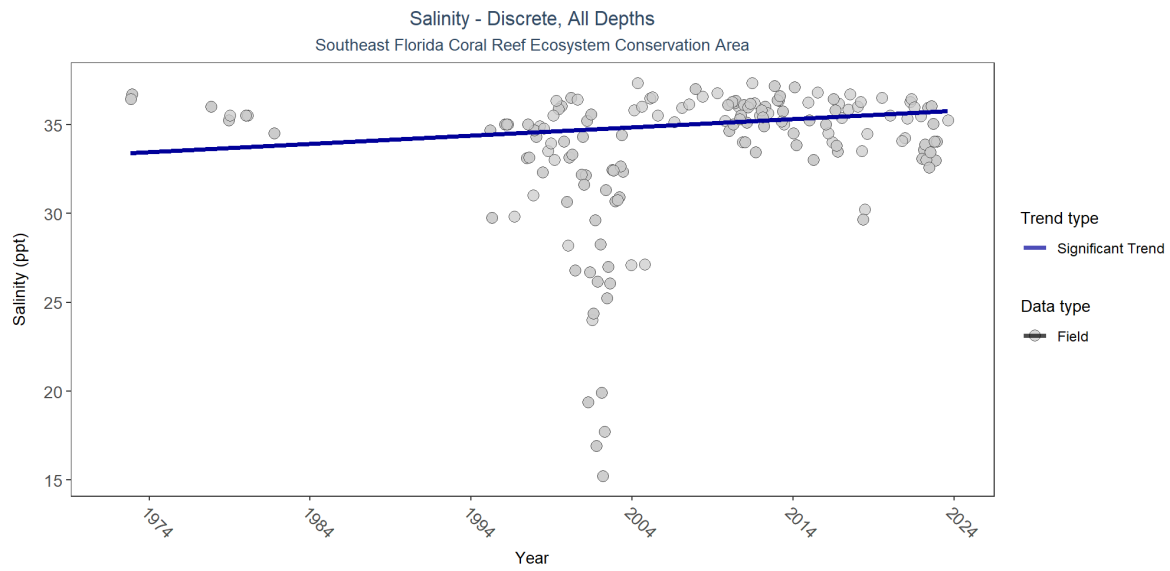


Table 5: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly increasing trend	876	35	1972 - 2023	35.8	0.1616	33.35276	0.04681	0.0085

Water Temperature - Discrete

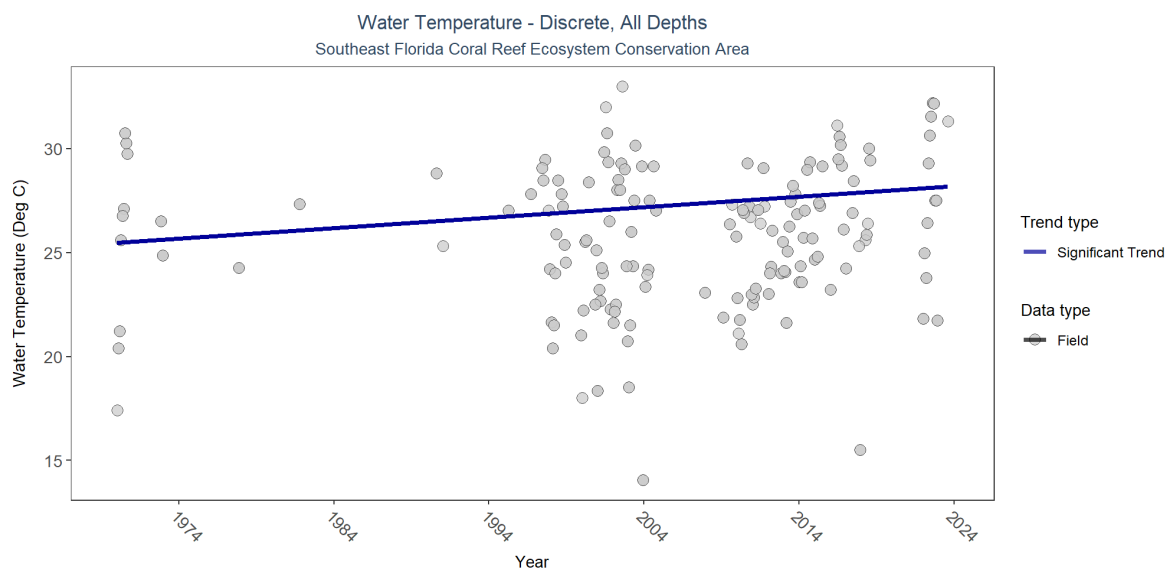


Table 6: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	1472	29	1970 - 2023	26.5	0.2066	25.48707	0.05	0.0006

Water Temperature - Continuous

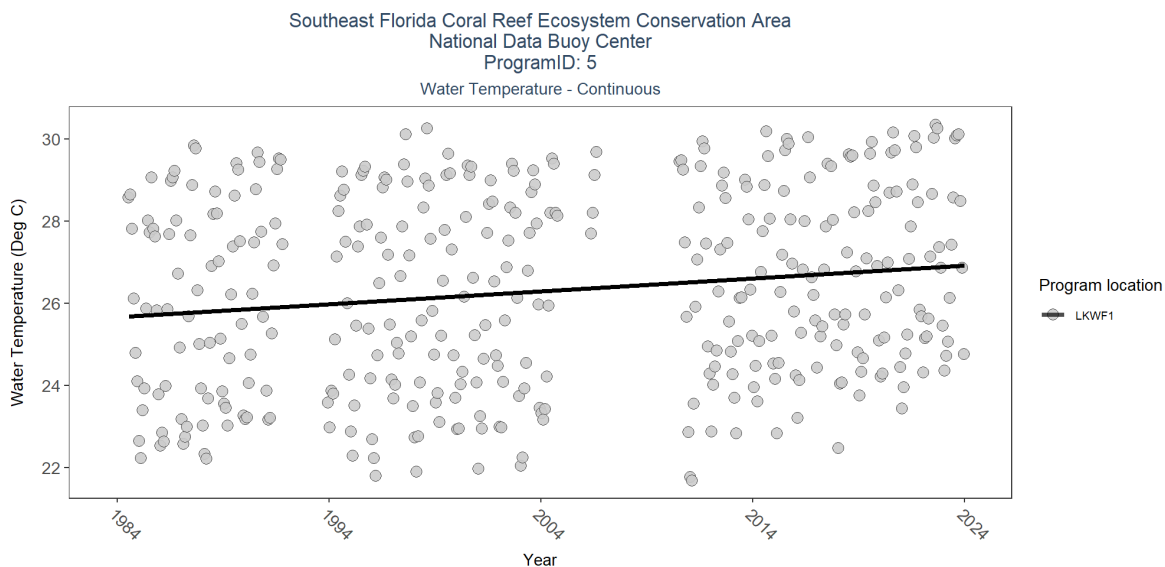


Table 7: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
LKWF1	Significantly increasing trend	1212179	35	1984 - 2023	26.5	0.41	25.67	0.03	0.0000

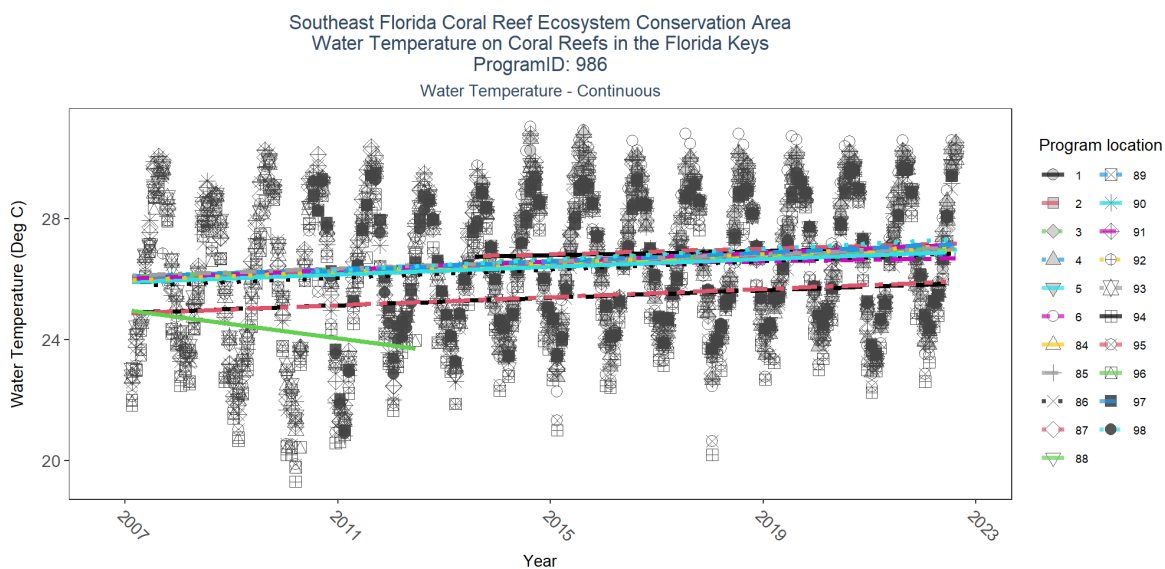


Table 8: Seasonal Kendall-Tau Results for All Stations - Water Temperature

ProgramLocationID	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
4	Significantly increasing trend	68937	10	2013 - 2022	26.59	0.17	26.46	0.04	0.0305
93	Significantly increasing trend	106903	16	2007 - 2022	26.47	0.35	26.12	0.06	0.0000
90	Significantly increasing trend	97006	16	2007 - 2022	26.43	0.33	25.91	0.06	0.0000
85	Significantly increasing trend	114214	16	2007 - 2022	26.26	0.34	25.99	0.07	0.0000
1	No significant trend	65108	10	2013 - 2022	26.40	0.13	26.72	0.04	0.1158
94	Significantly increasing trend	90265	16	2007 - 2022	25.55	0.28	24.89	0.06	0.0000
84	Significantly increasing trend	111153	16	2007 - 2022	26.32	0.36	25.94	0.07	0.0000
95	Significantly increasing trend	102279	16	2007 - 2022	25.58	0.30	24.87	0.07	0.0000
91	Significantly increasing trend	102406	16	2007 - 2022	26.54	0.33	26.01	0.07	0.0000
86	Significantly increasing trend	104767	16	2007 - 2022	26.16	0.36	25.78	0.07	0.0000
3	Significantly increasing trend	60887	10	2013 - 2022	26.65	0.25	26.54	0.06	0.0010
89	Significantly increasing trend	113809	16	2007 - 2022	26.28	0.35	26.08	0.07	0.0000
88	Significantly increasing trend	115305	16	2007 - 2022	26.35	0.34	26.08	0.06	0.0000
87	Significantly increasing trend	108339	16	2007 - 2022	26.44	0.31	25.99	0.06	0.0000
97	Significantly increasing trend	97533	13	2010 - 2022	26.45	0.38	26.21	0.08	0.0000
5	Significantly increasing trend	51977	10	2013 - 2022	26.62	0.22	26.46	0.05	0.0067
98	Significantly increasing trend	87973	13	2010 - 2022	26.40	0.39	26.21	0.09	0.0000
92	Significantly increasing trend	111826	16	2007 - 2022	26.45	0.37	25.96	0.07	0.0000
96	No significant trend	25550	6	2007 - 2012	24.87	-0.25	24.98	-0.23	0.0801
2	Significantly increasing trend	64486	10	2013 - 2022	26.72	0.26	26.73	0.05	0.0007
6	No significant trend	63582	10	2013 - 2022	26.77	0.09	26.42	0.03	0.2598

pH - Discrete

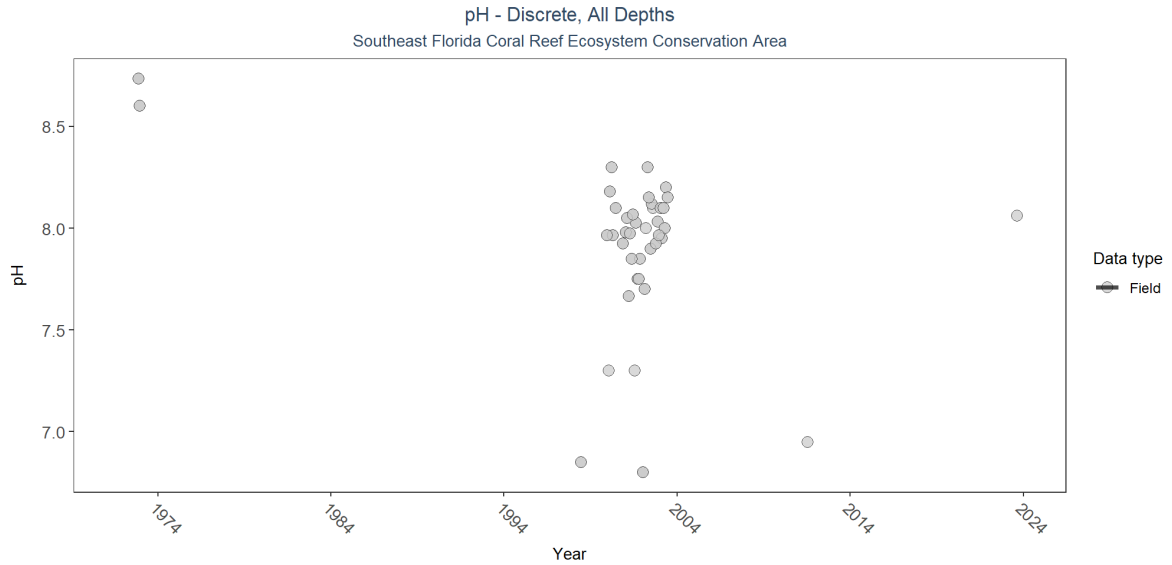


Table 9: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Insufficient data to calculate trend	170	9	1972 - 2023	8.2	-	-	-	NA

Water Clarity

Turbidity - Discrete

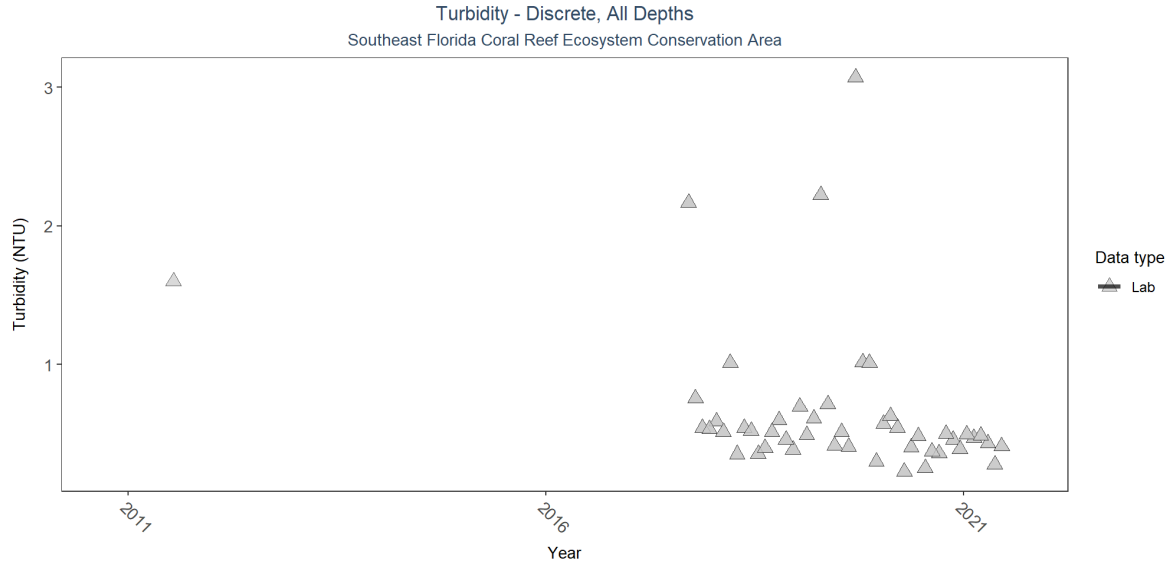


Table 10: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	8371	6	2011 - 2021	0.35	-	-	-	NA

Total Suspended Solids - Discrete

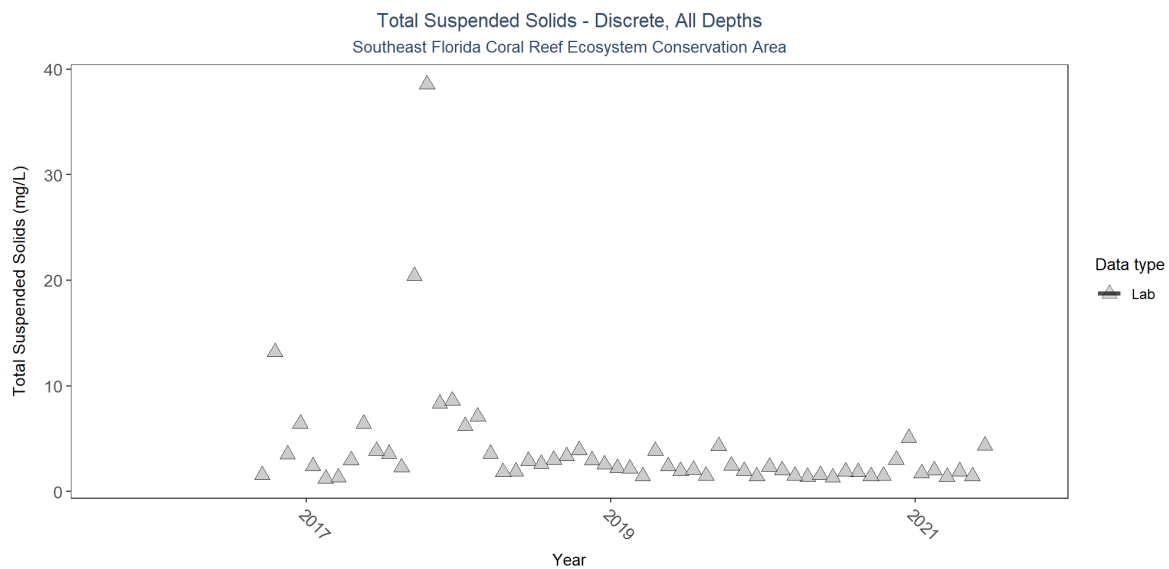


Table 11: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	8993	6	2016 - 2021	1.75	-	-	-	NA

Chlorophyll a, Uncorrected for Pheophytin - Discrete

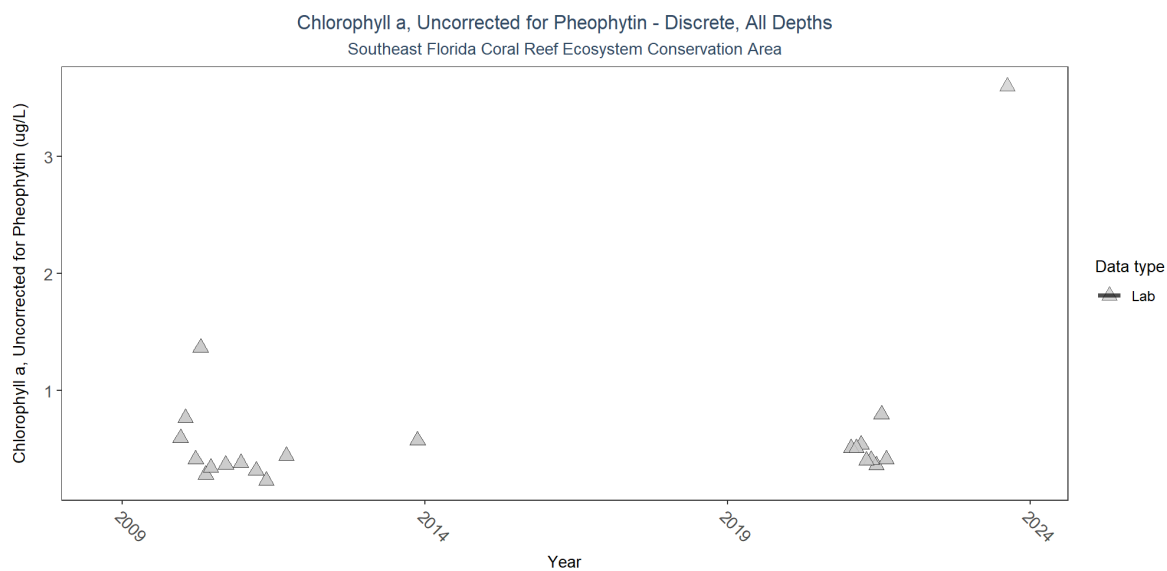


Table 12: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	1929	6	2009 - 2023	0.384	-	-	-	NA

Chlorophyll a, Corrected for Pheophytin - Discrete

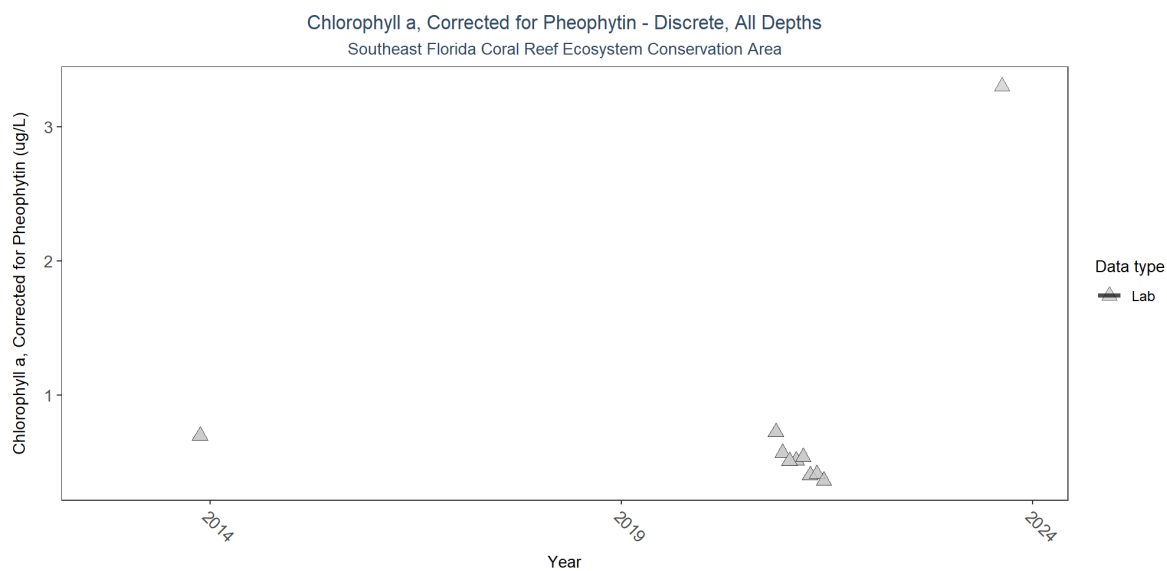


Table 13: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	1508	4	2013 - 2023	0.4245	-	-	-	NA

Secchi Depth - Discrete

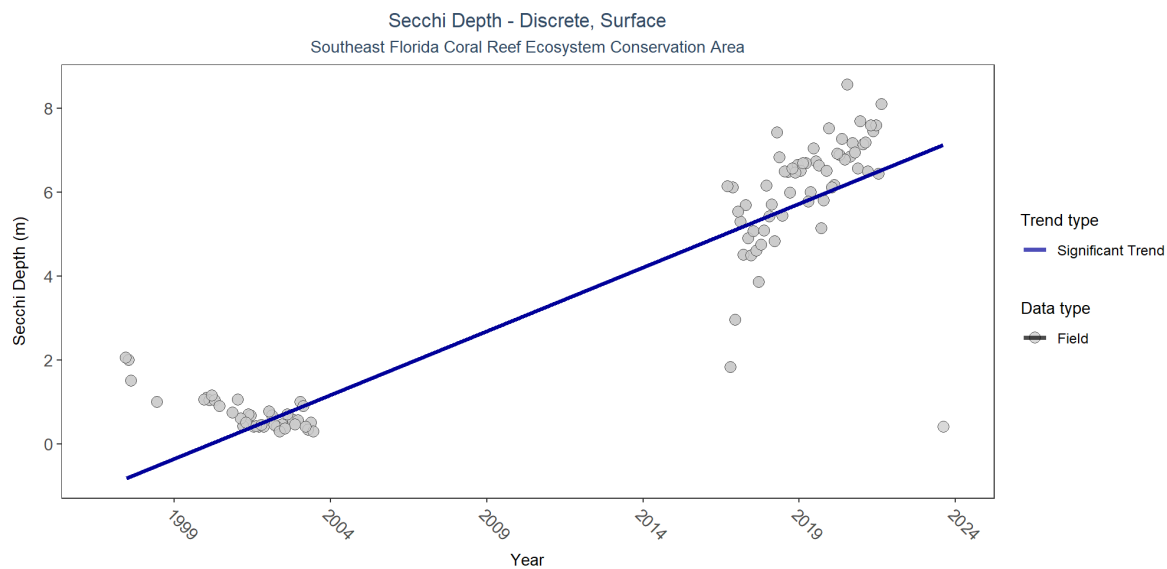


Table 14: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	5866	14	1997 - 2023	5.2	0.6421	-0.96852	0.3041	0.0000

Colored Dissolved Organic Matter - Discrete

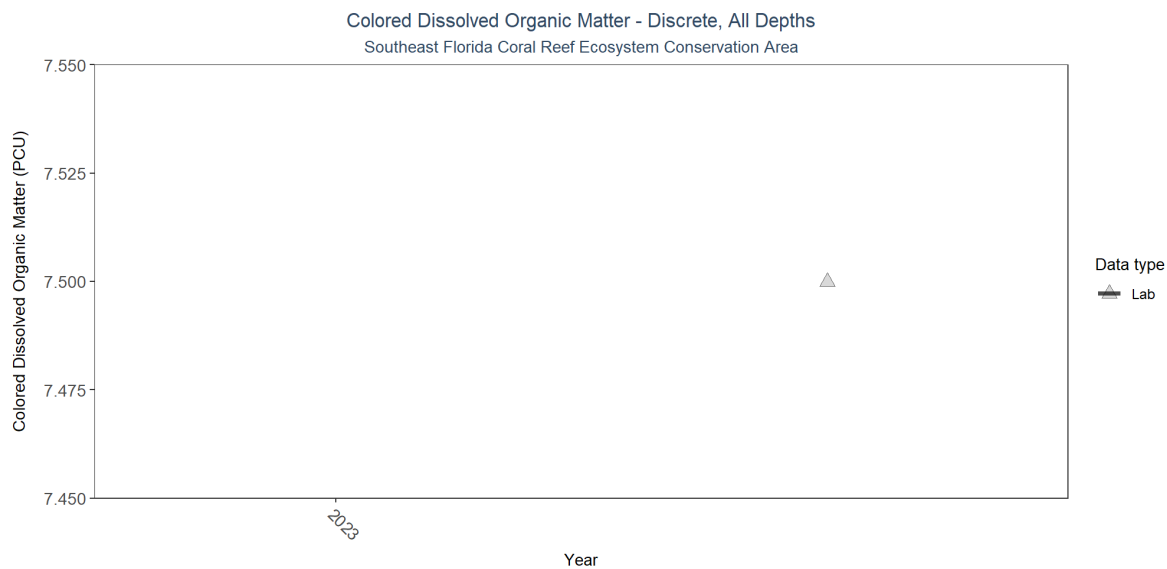


Table 15: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	1	1	2023 - 2023	7.5	-	-	-	NA