

Jensen Beach to Jupiter Inlet Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 18 March, 2025

Contents

Indicators	2
Nutrients	2
Total Nitrogen - Discrete	2
Total Phosphorus - Discrete	4
Water Quality	6
Dissolved Oxygen - Discrete	6
Dissolved Oxygen Saturation - Discrete	8
Salinity - Discrete	10
Salinity - Continuous	12
Water Temperature - Discrete	14
Water Temperature - Continuous	16
pH - Discrete	18
Water Clarity	20
Turbidity - Discrete	20
Total Suspended Solids - Discrete	22
Chlorophyll a, Uncorrected for Pheophytin - Discrete	24
Chlorophyll a, Corrected for Pheophytin - Discrete	26
Secchi Depth - Discrete	28
Colored Dissolved Organic Matter - Discrete	30

Indicators

Nutrients

Total Nitrogen - Discrete

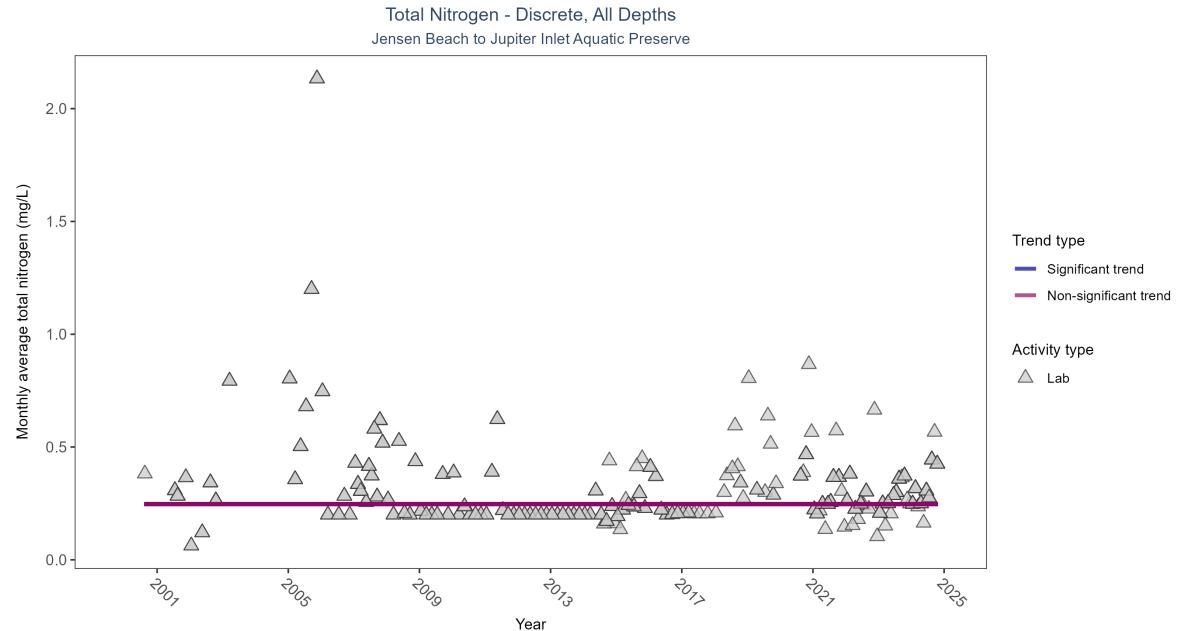
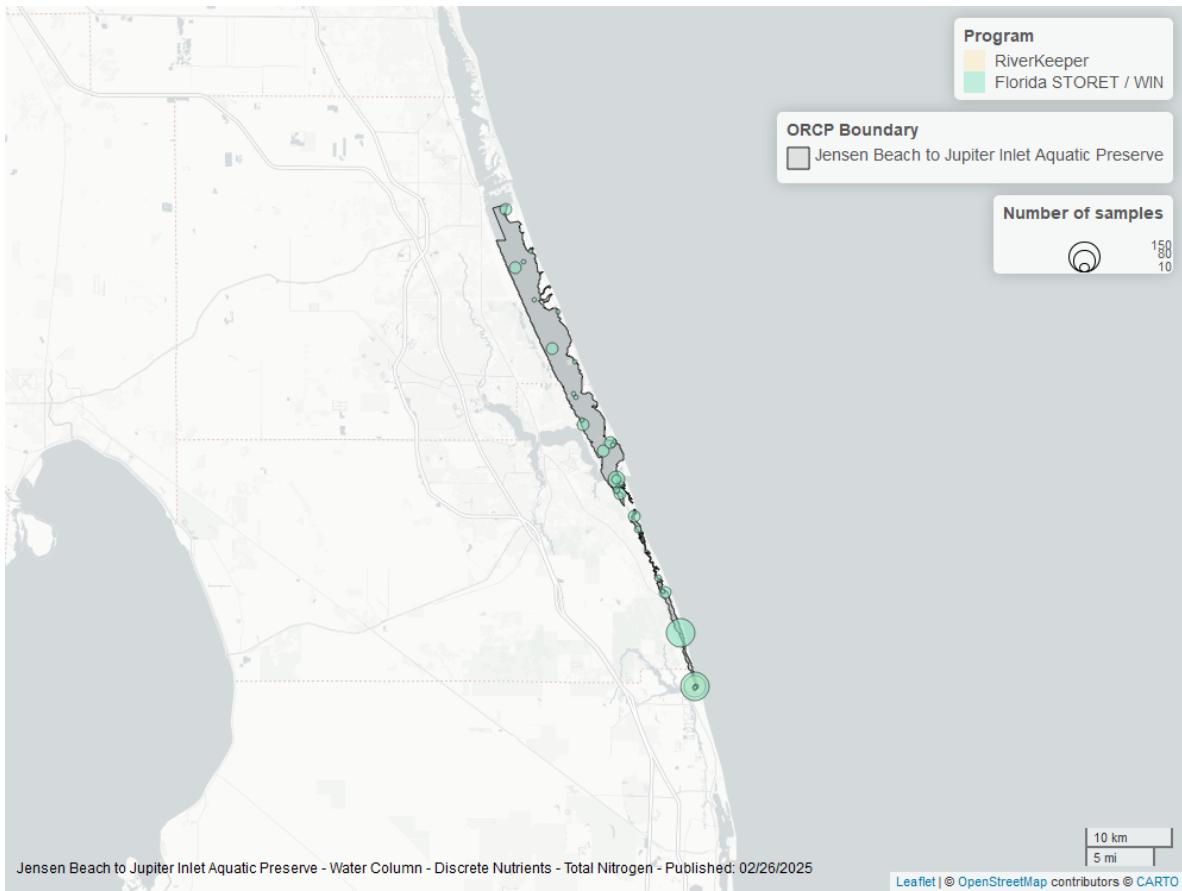


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

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	640	24	2000 - 2024	0.2535	0.00938	0.24696	0	0.86946965469391790382047702224



Total Phosphorus - Discrete

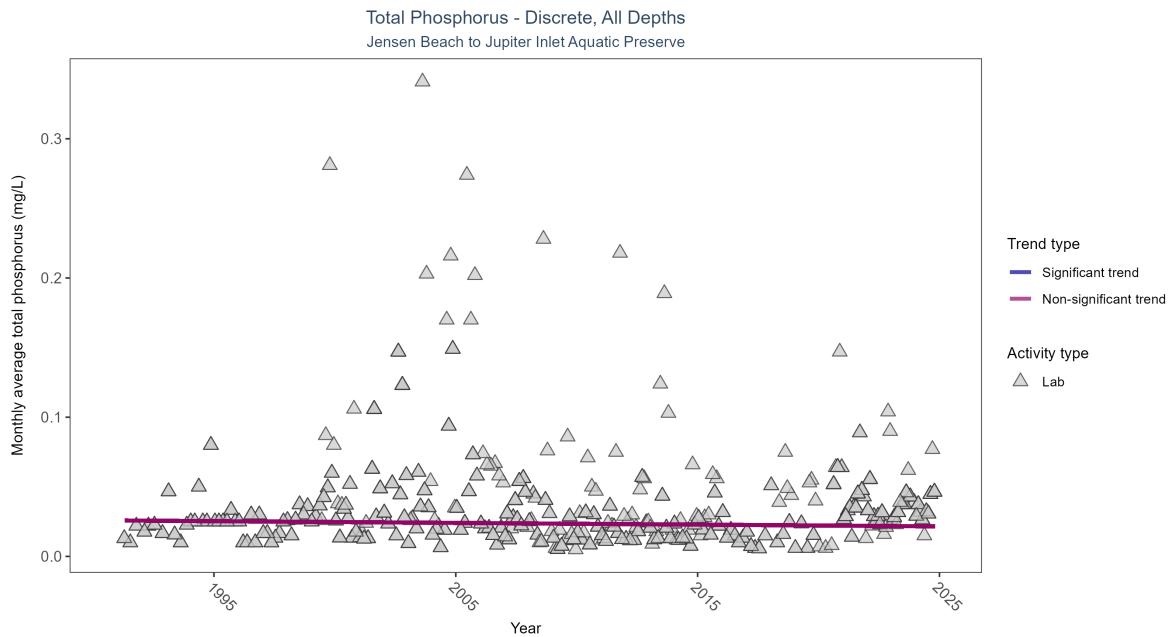
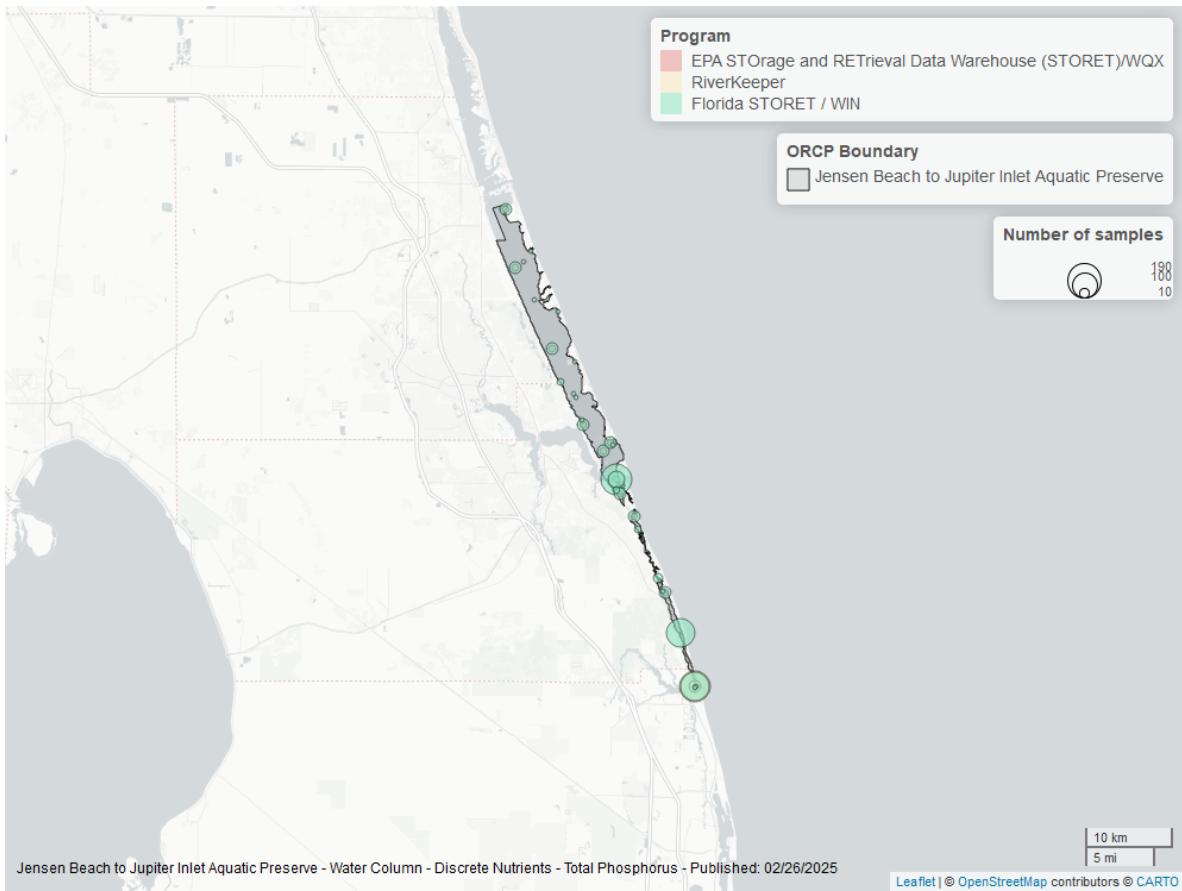


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

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	1147	34	1991 - 2024	0.027	-0.06332	0.02581	-0.00013	0.19182965319999600861677890861756168305873870849609375000000000000



Water Quality

Dissolved Oxygen - Discrete

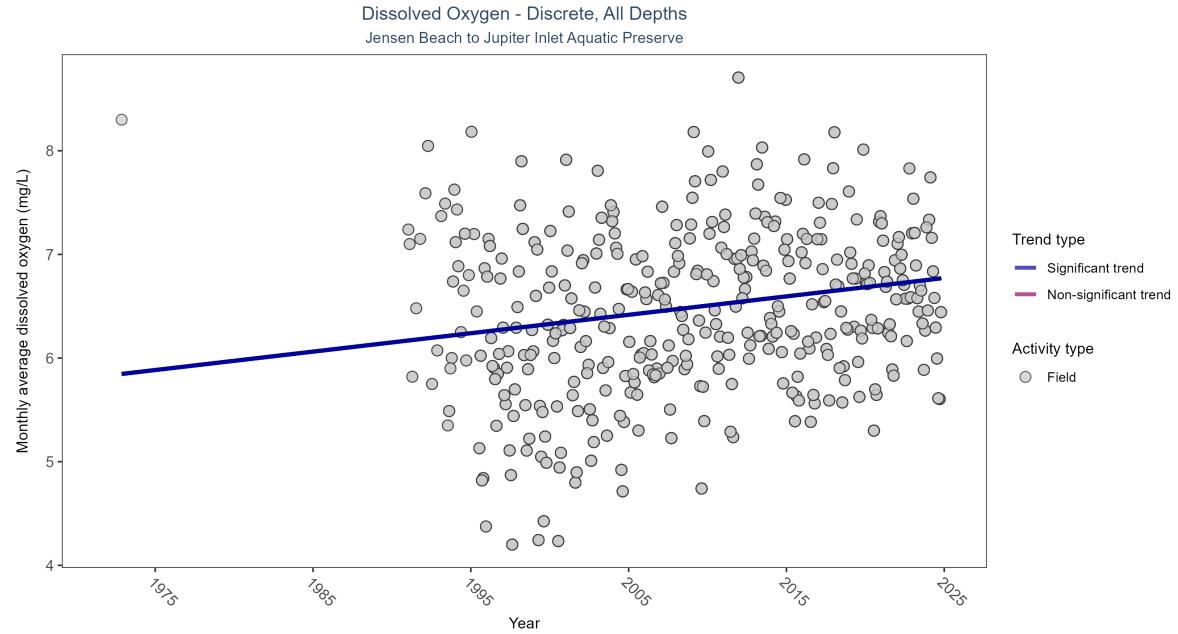
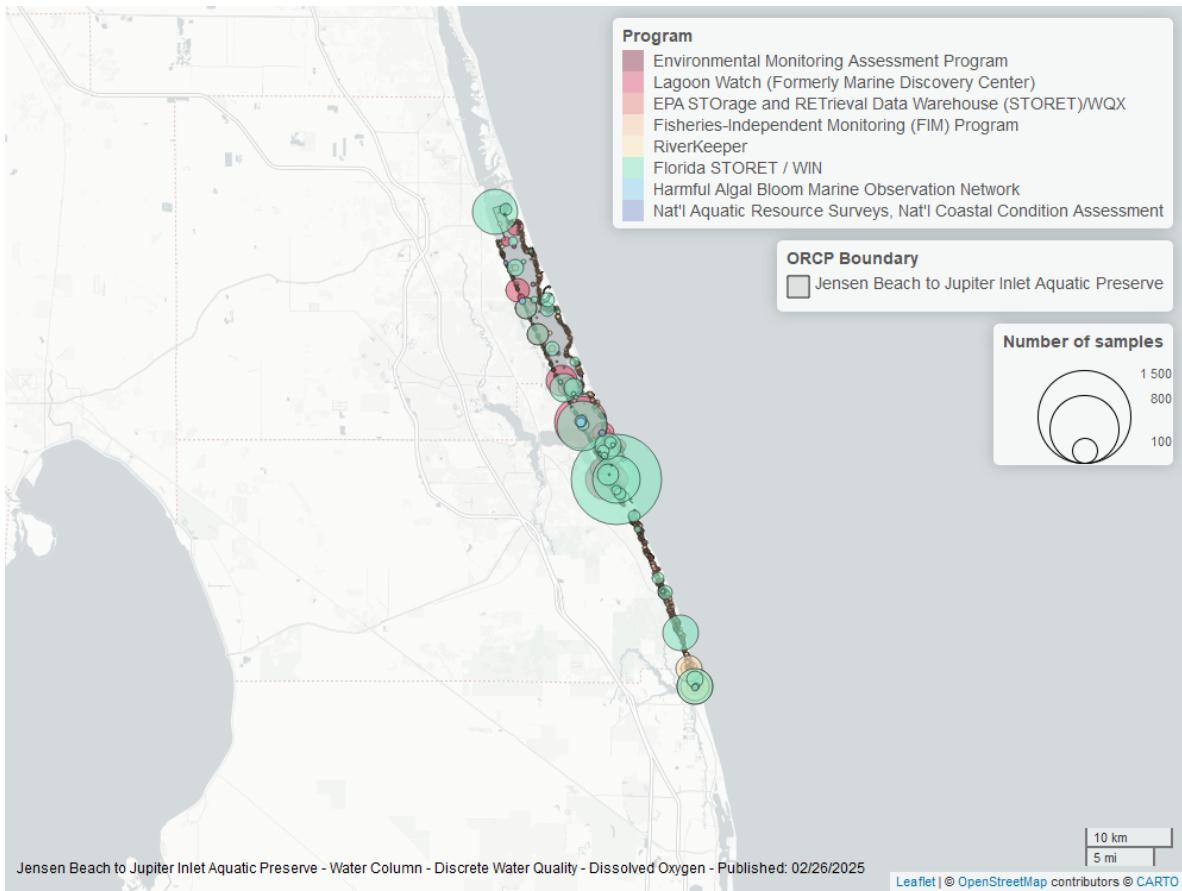


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	10723	35	1972 - 2024	6.4	0.20095	5.83105	0.01777	0.0000003518176212



Dissolved Oxygen Saturation - Discrete

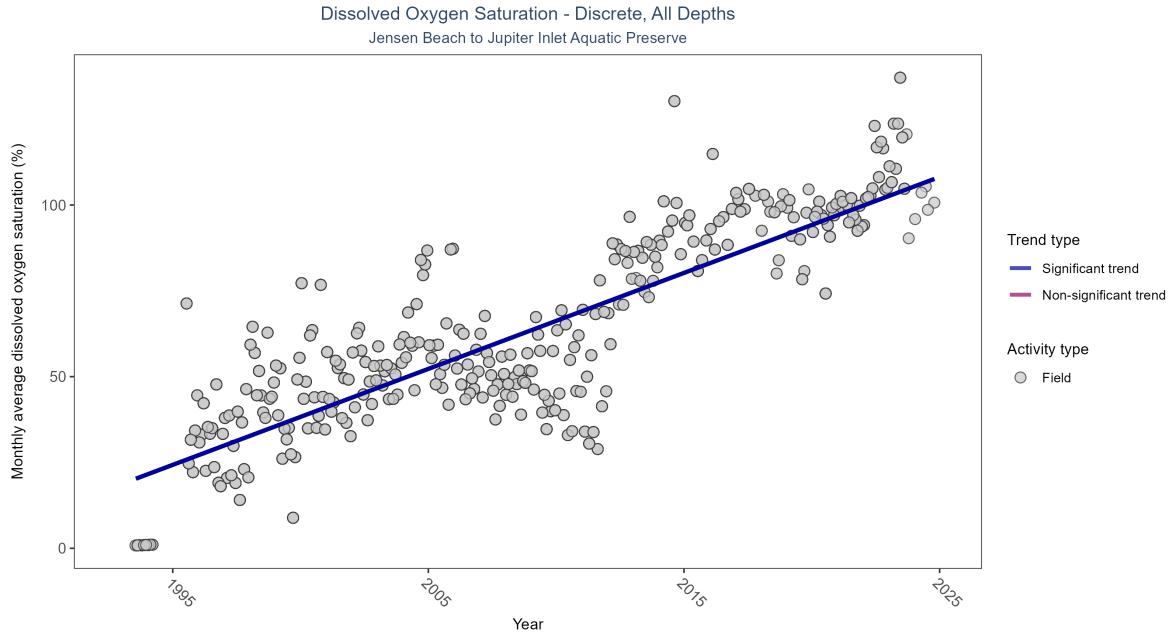
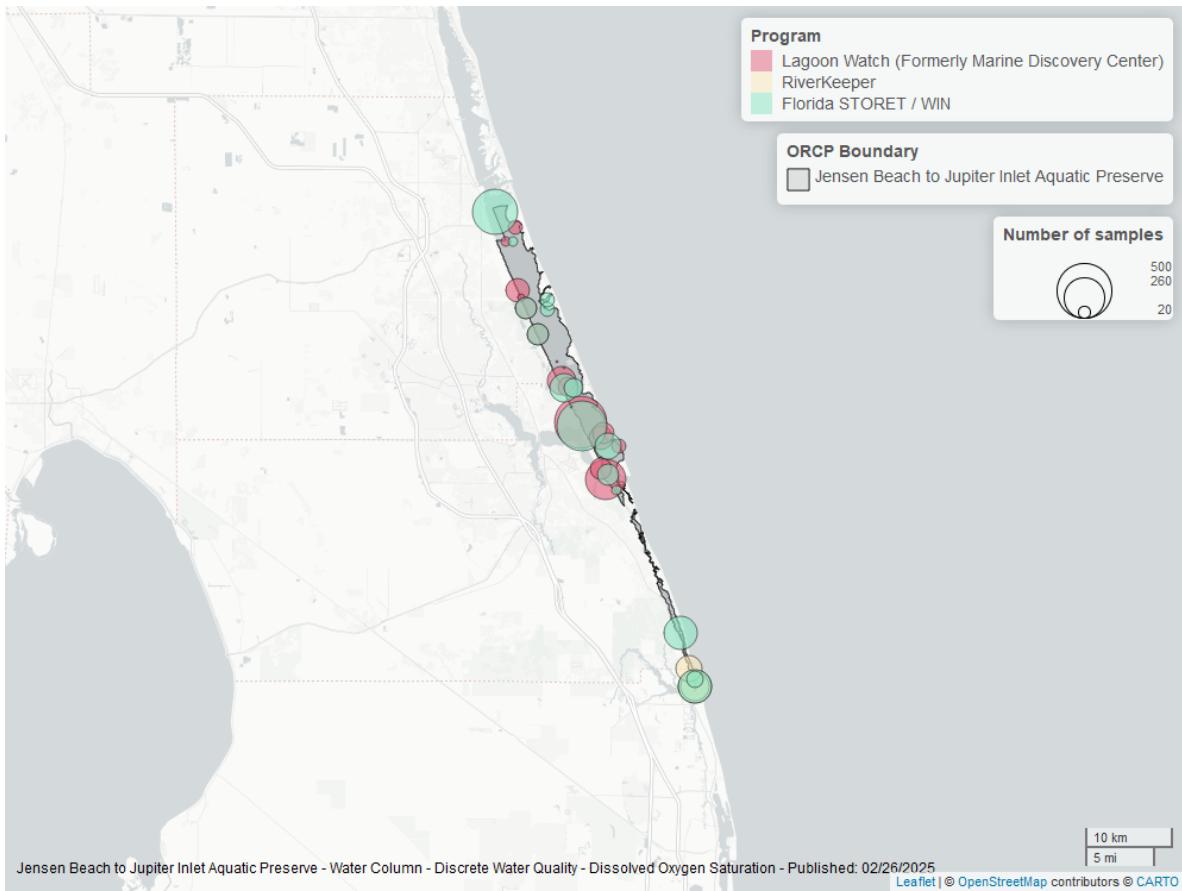


Table 4: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation



Salinity - Discrete

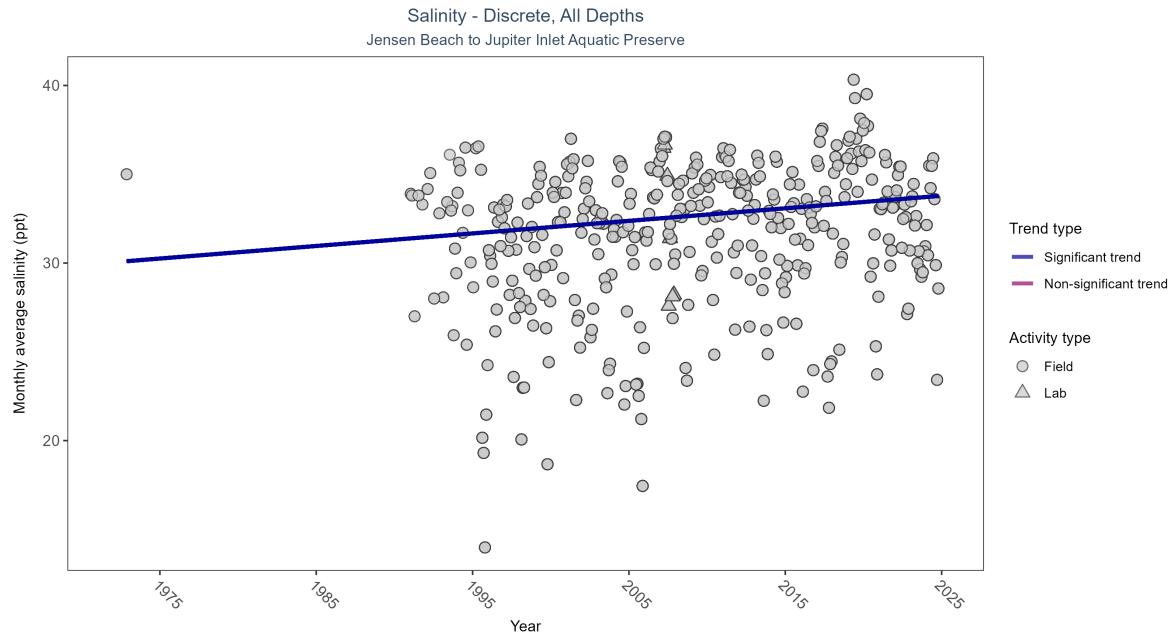
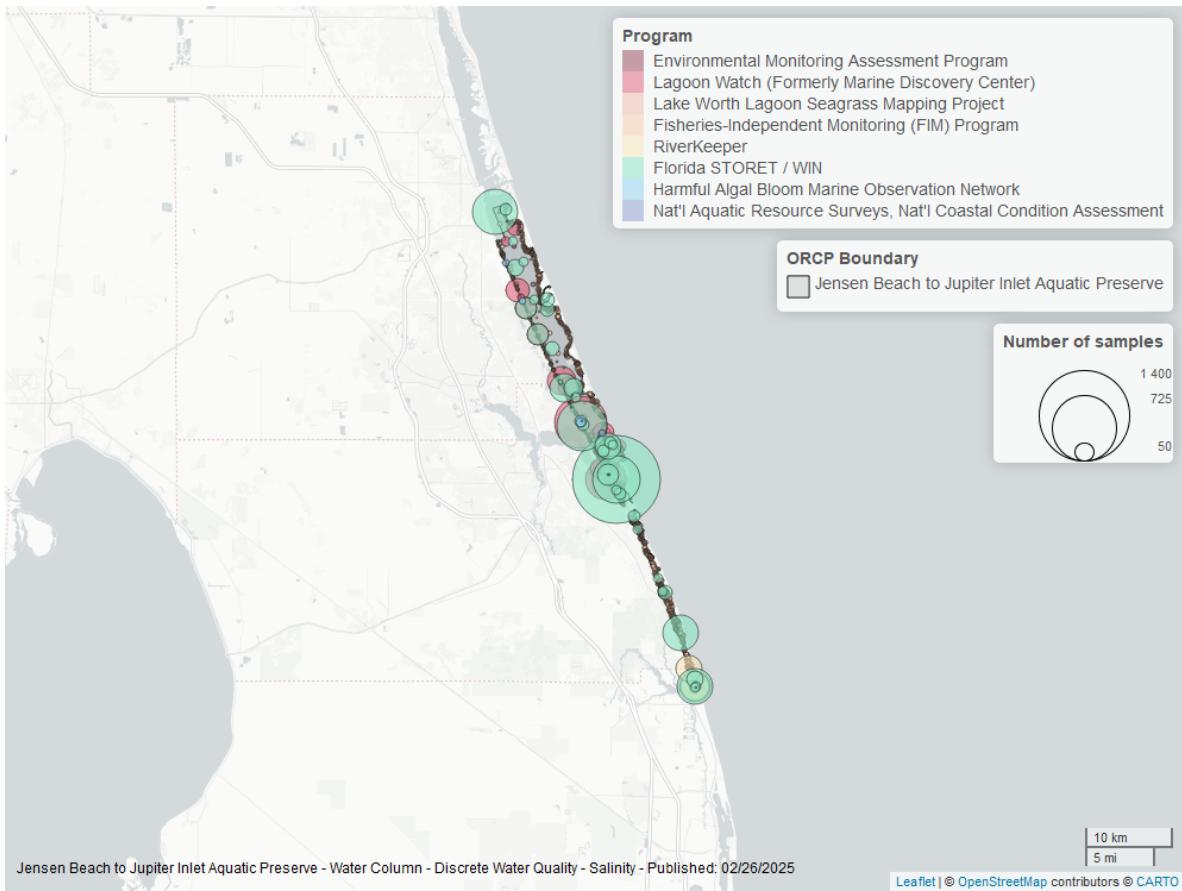


Table 5: Seasonal Kendall-Tau Results for - Salinity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
All	Significantly increasing trend	10744	35	1972 - 2024	32.8	0.14479	30.04103	0.07073	0.00006546579160273112993687072425075257342541590



Salinity - Continuous

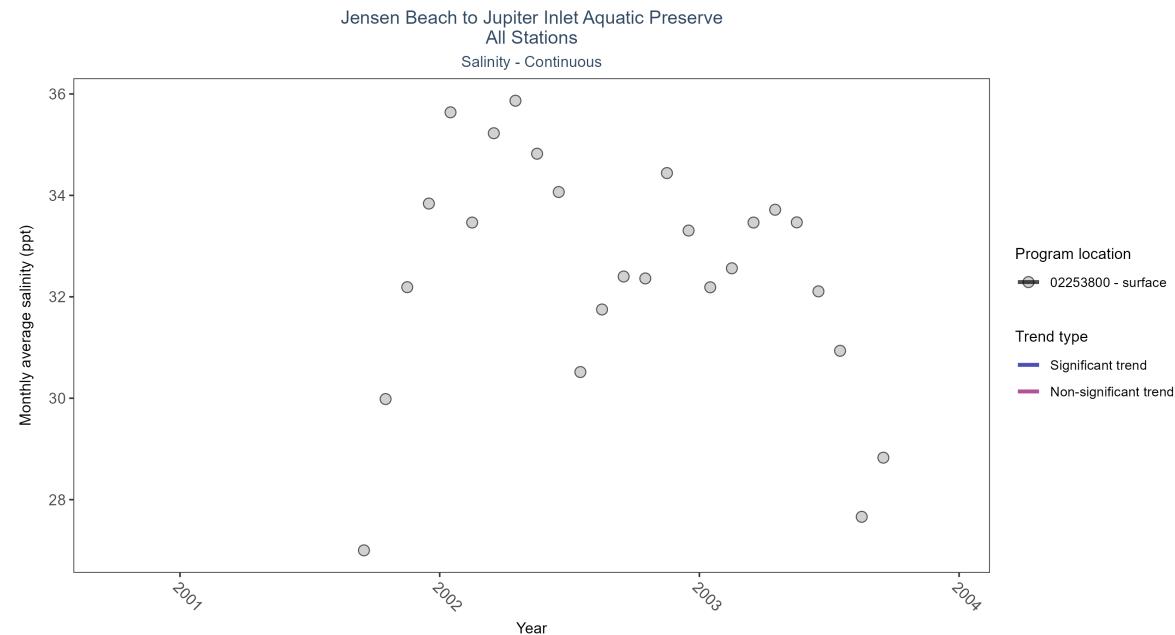
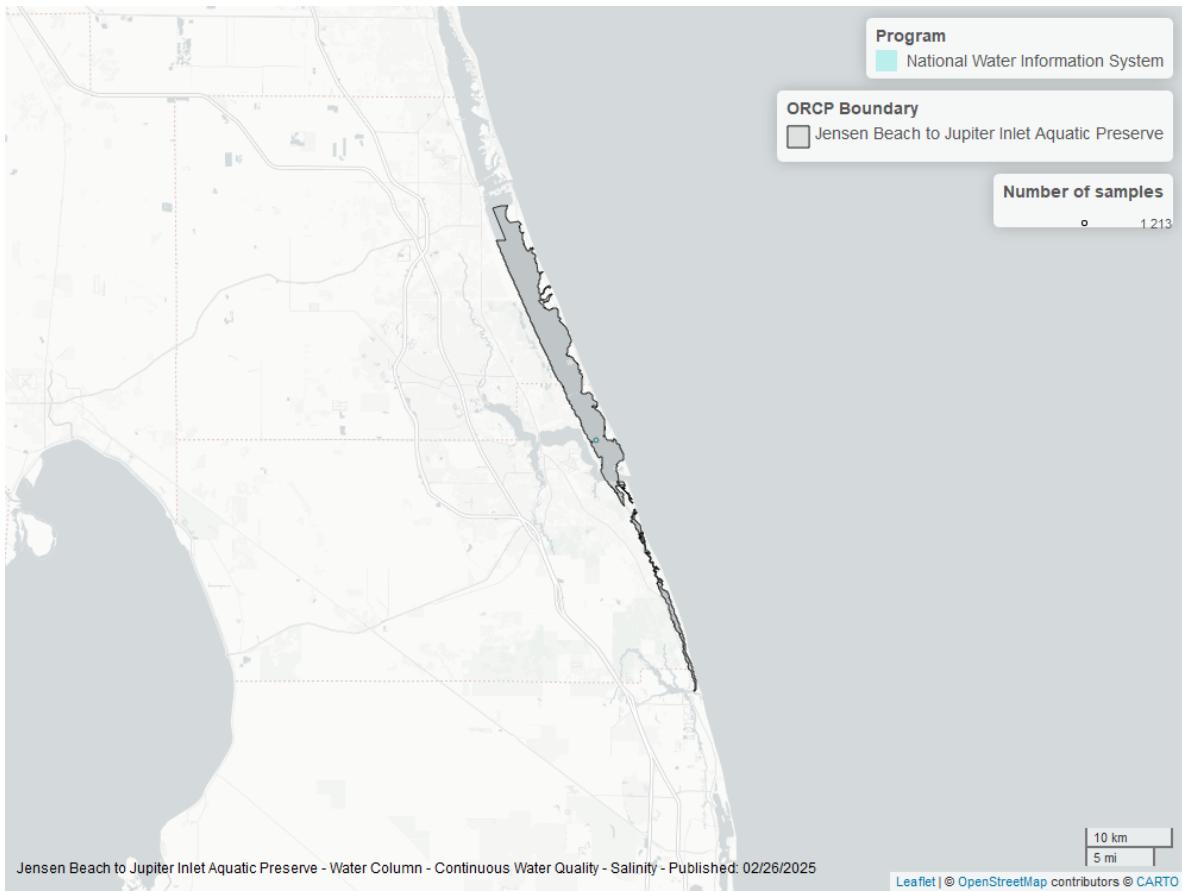


Table 6: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
02253800	Insufficient data to calculate trend	1213	3	2001 - 2003	33	-	-	-	NA



Water Temperature - Discrete

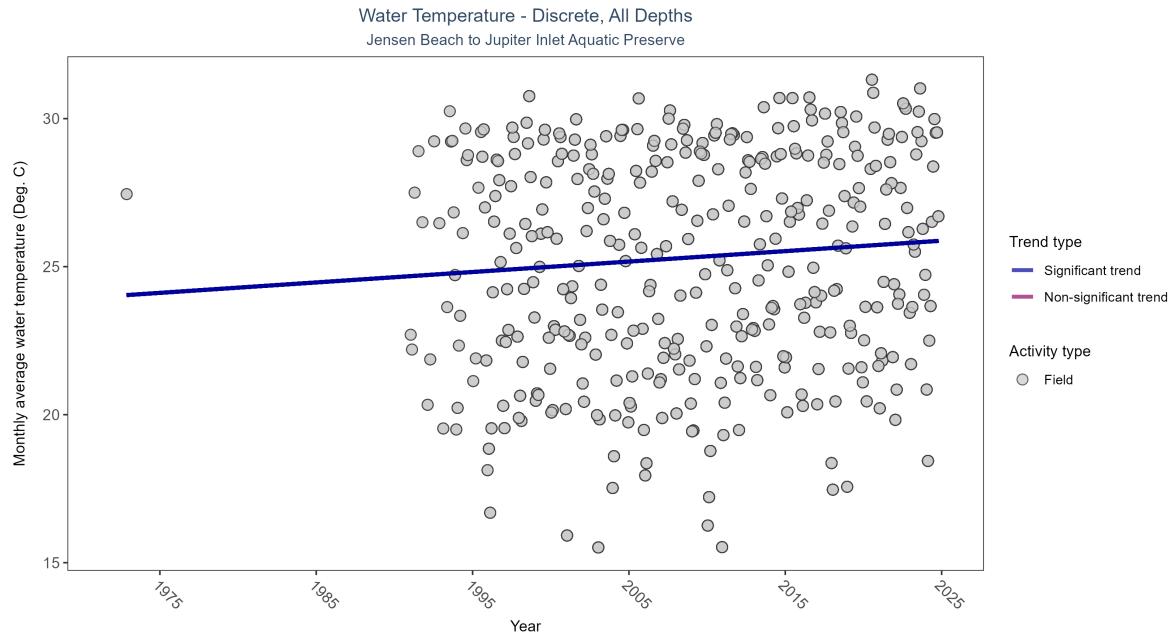
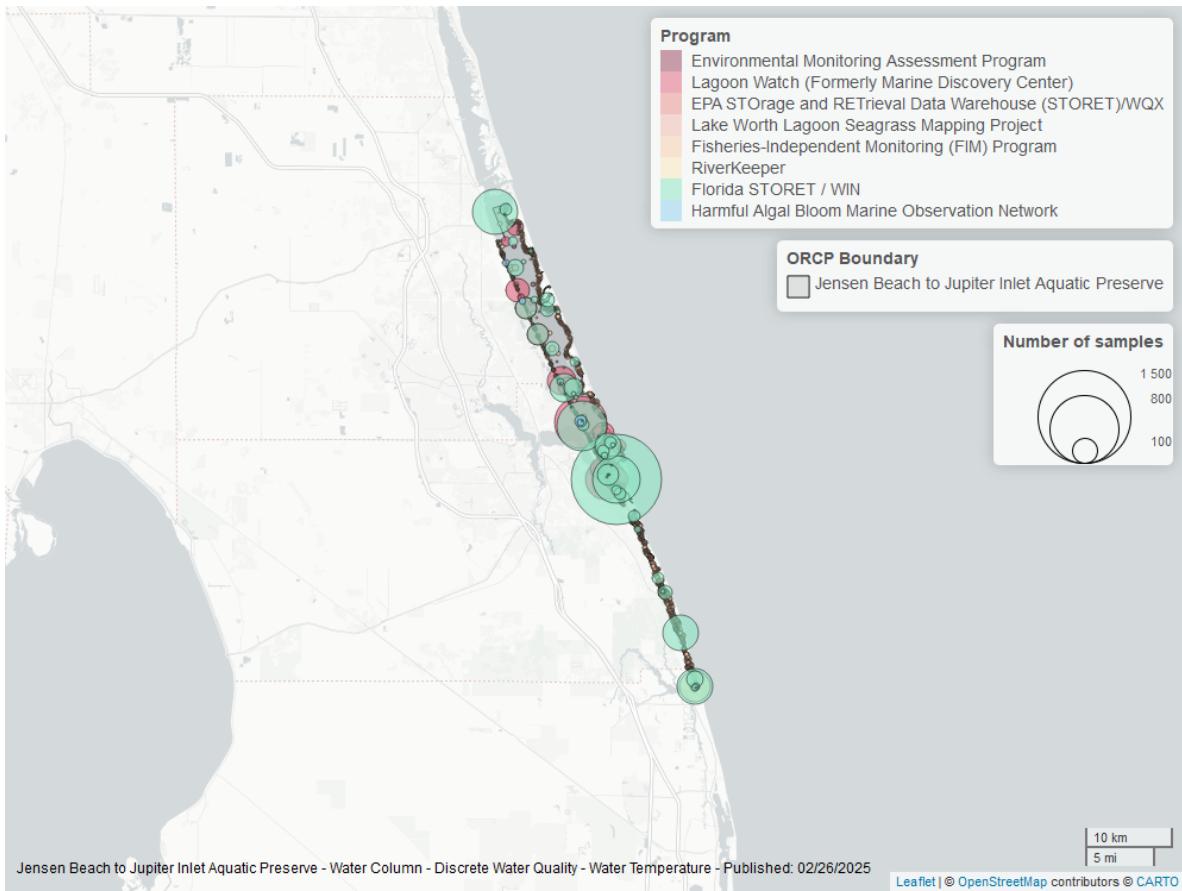


Table 7: Seasonal Kendall-Tau Results for - Water Temperature

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	10655	35	1972 - 2024	25.5	0.20401	24.00838	0.03525	0.000000016114475613



Water Temperature - Continuous

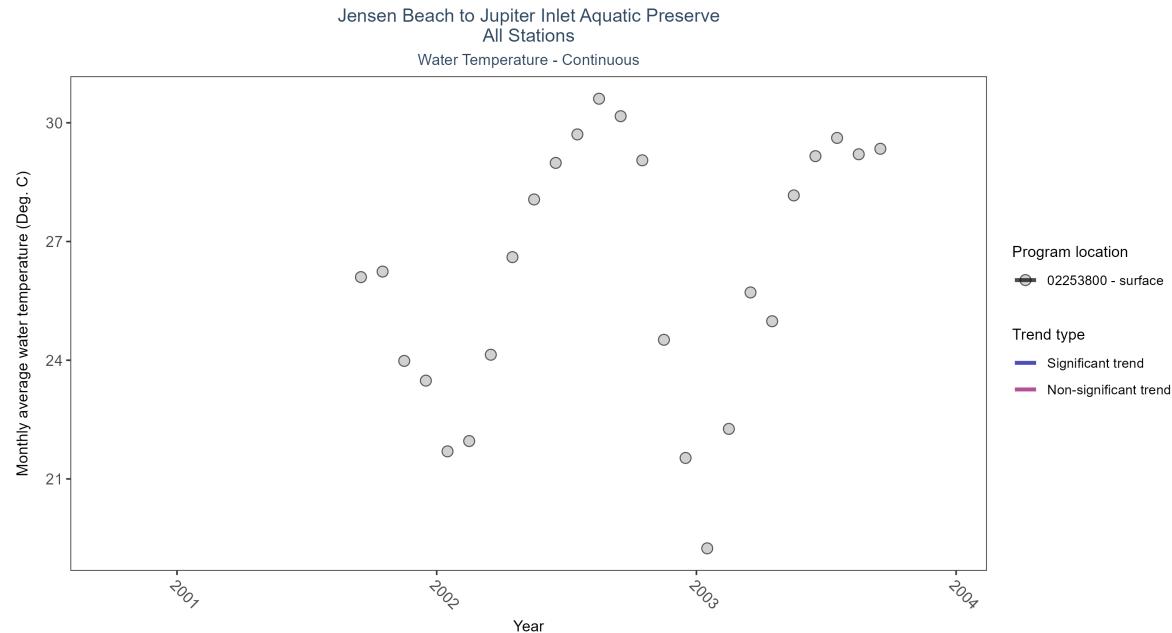
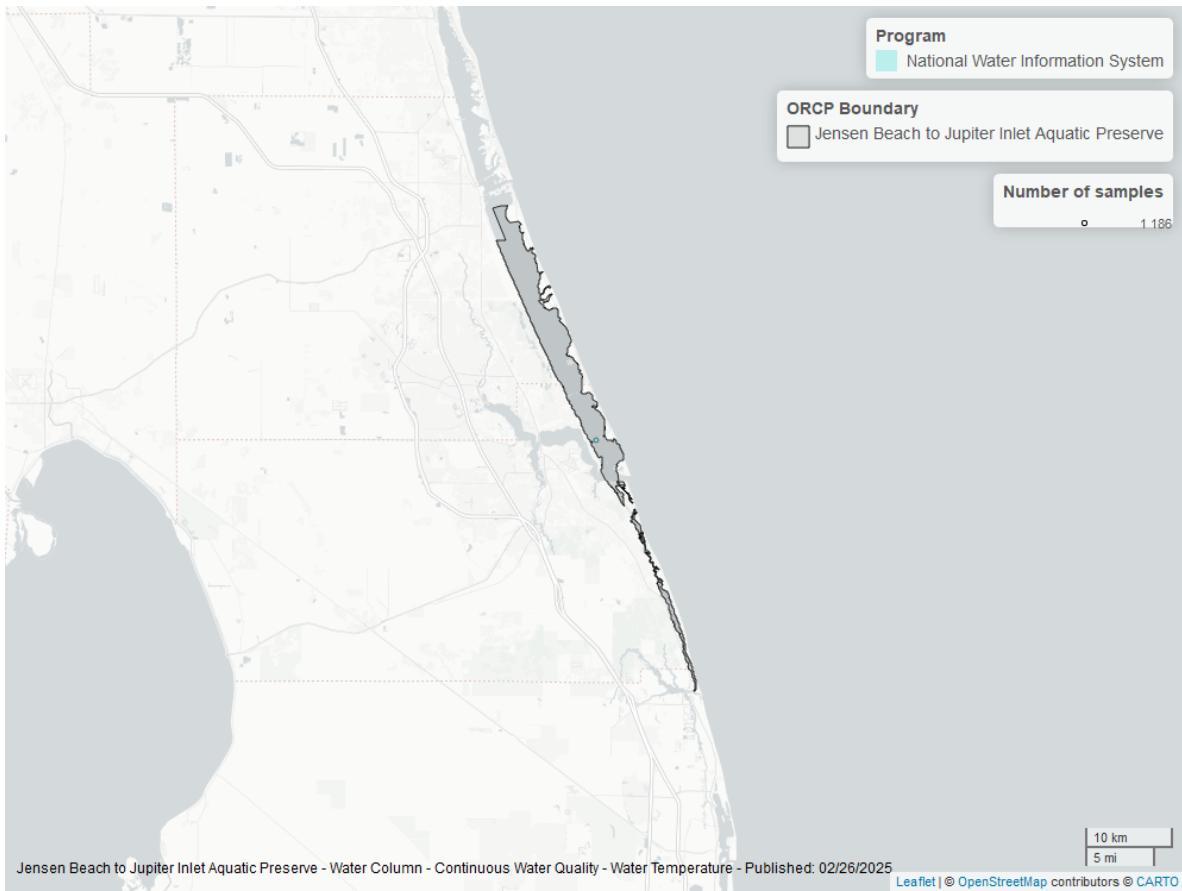


Table 8: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
02253800	Insufficient data to calculate trend	1186	3	2001 - 2003	27.1	-	-	-	NA



pH - Discrete

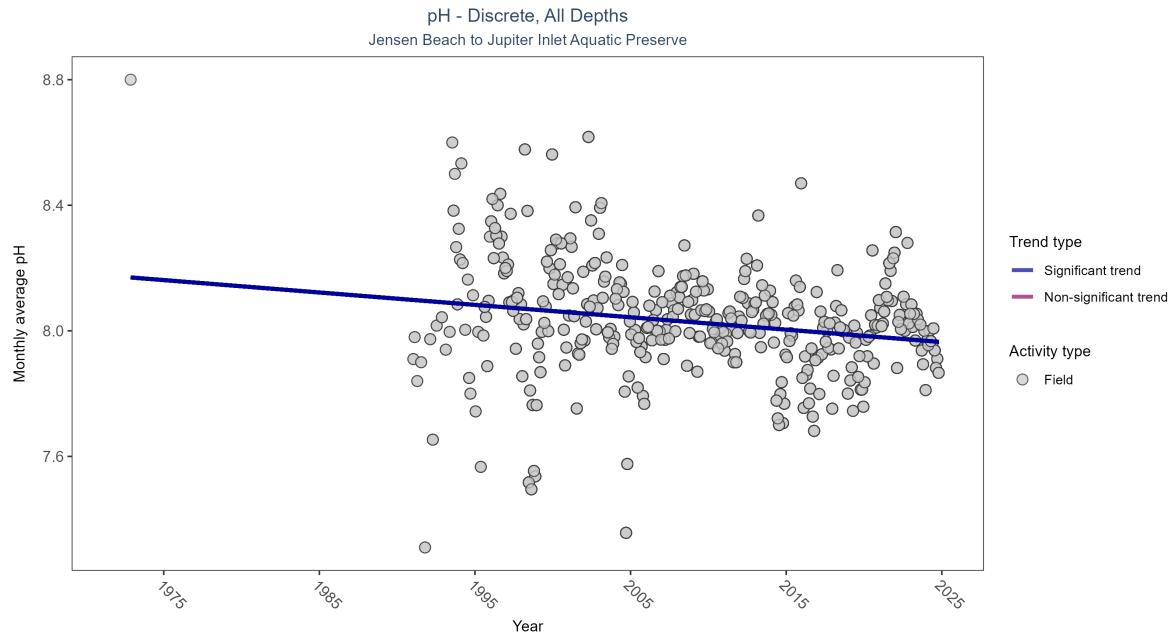
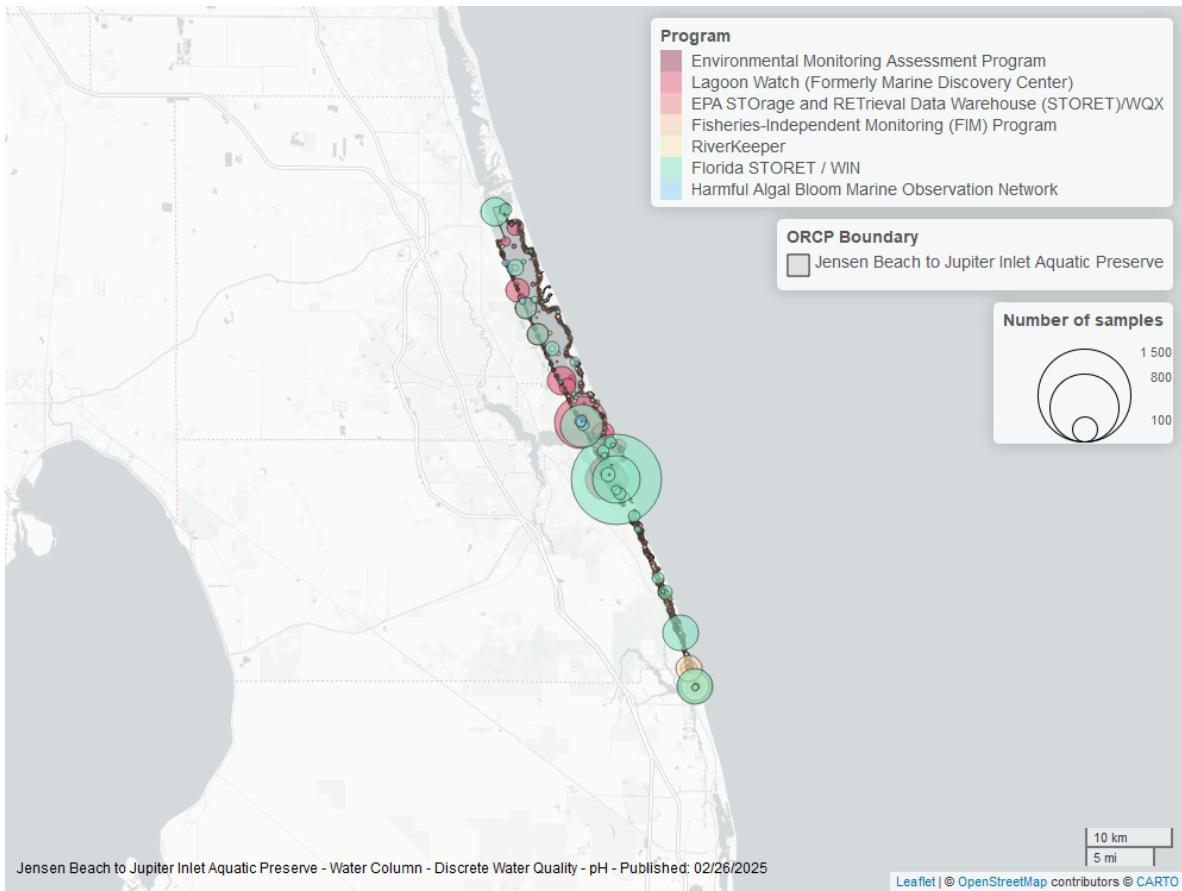


Table 9: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	9707	35	1972 - 2024	8.01	-0.17382	8.1735	-0.00395	0.00000182601527745285156251880964717315692



Water Clarity

Turbidity - Discrete

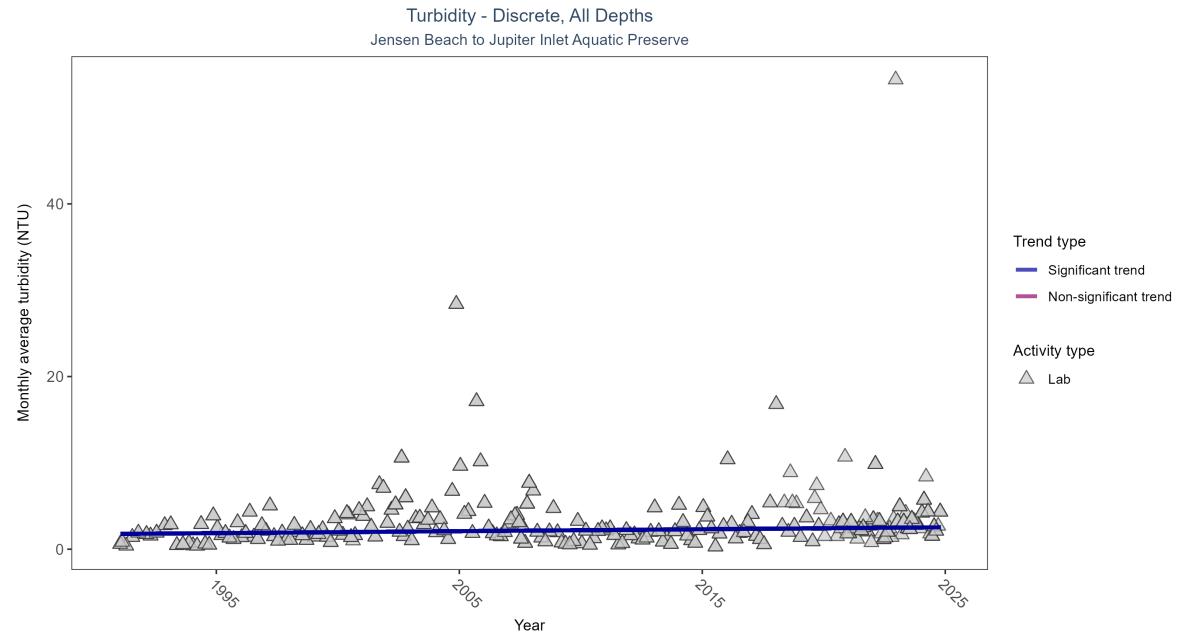
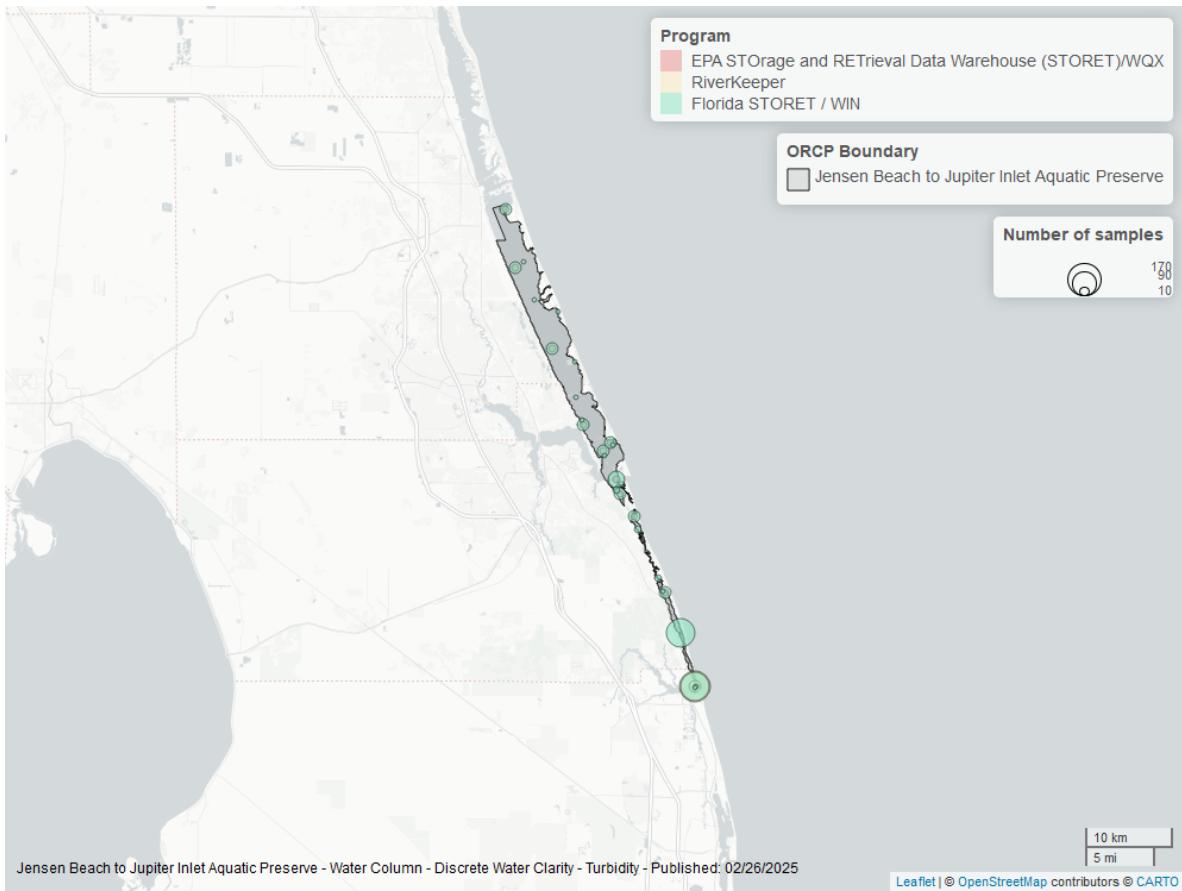


Table 10: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	884	34	1991 - 2024	2.2	0.10381	1.77238	0.0225	0.03699767843003465978



Total Suspended Solids - Discrete

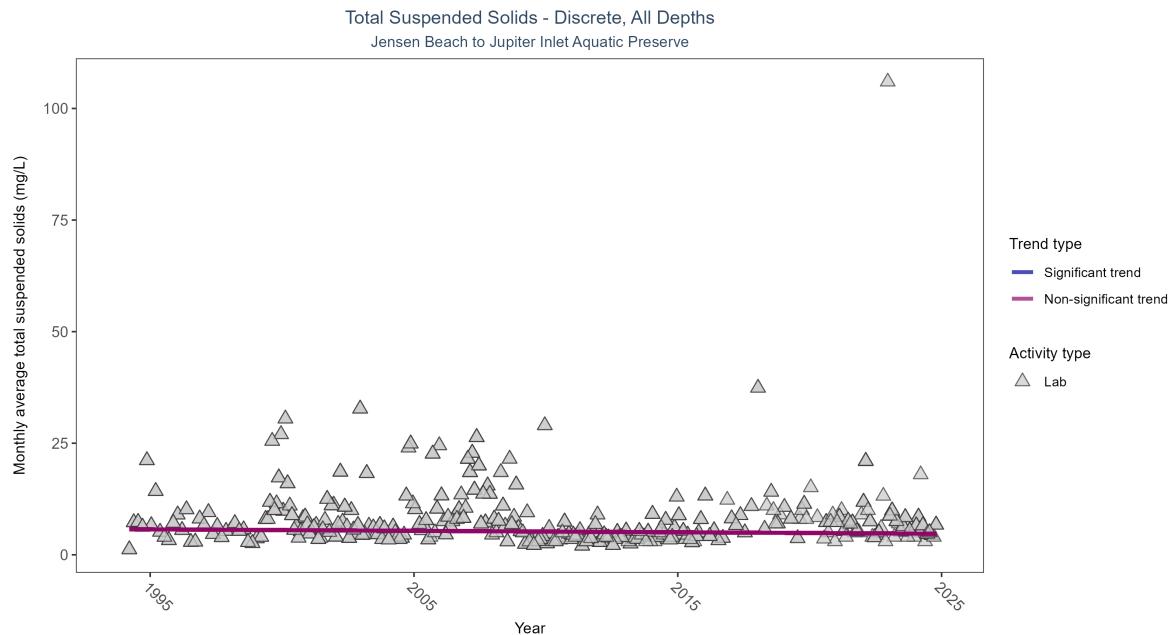
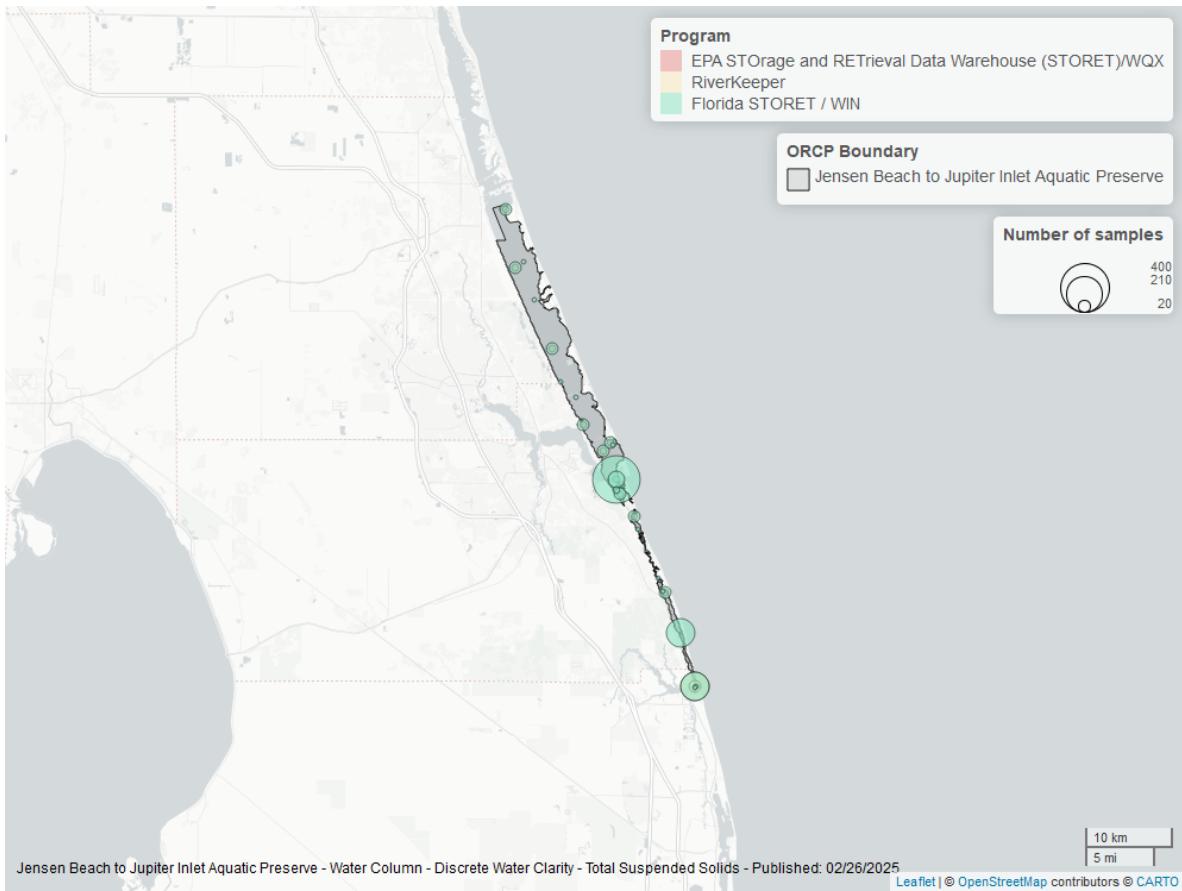


Table 11: Seasonal Kendall-Tau Results for - Total Suspended Solids

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	1206	31	1994 - 2024	6	-0.07168	5.72661	-0.03235	0.110298465469533854554917695622862



Chlorophyll a, Uncorrected for Pheophytin - Discrete

Chlorophyll a, Uncorrected for Pheophytin - Discrete, All Depths
Jensen Beach to Jupiter Inlet Aquatic Preserve

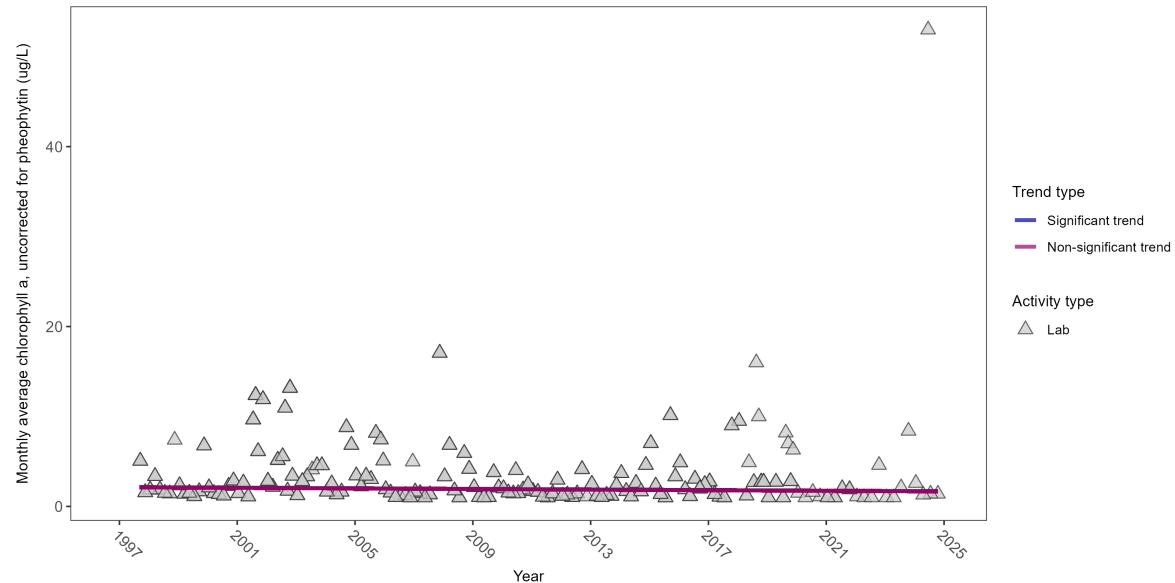
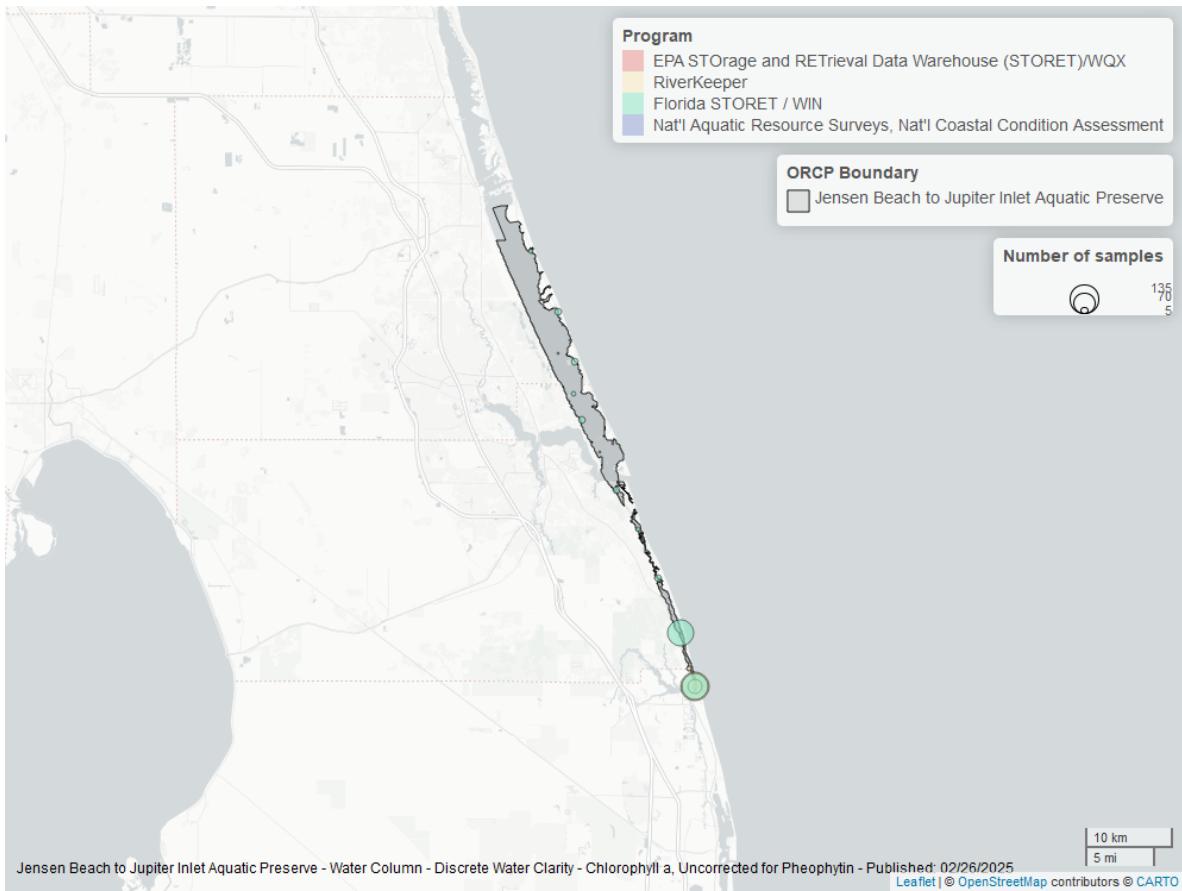


Table 12: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P	
Lab	No significant trend	478	28	1997 - 2024		1.95	-0.12068	2.14	-0.01667	0.06969851117089713443686350



Chlorophyll a, Corrected for Pheophytin - Discrete

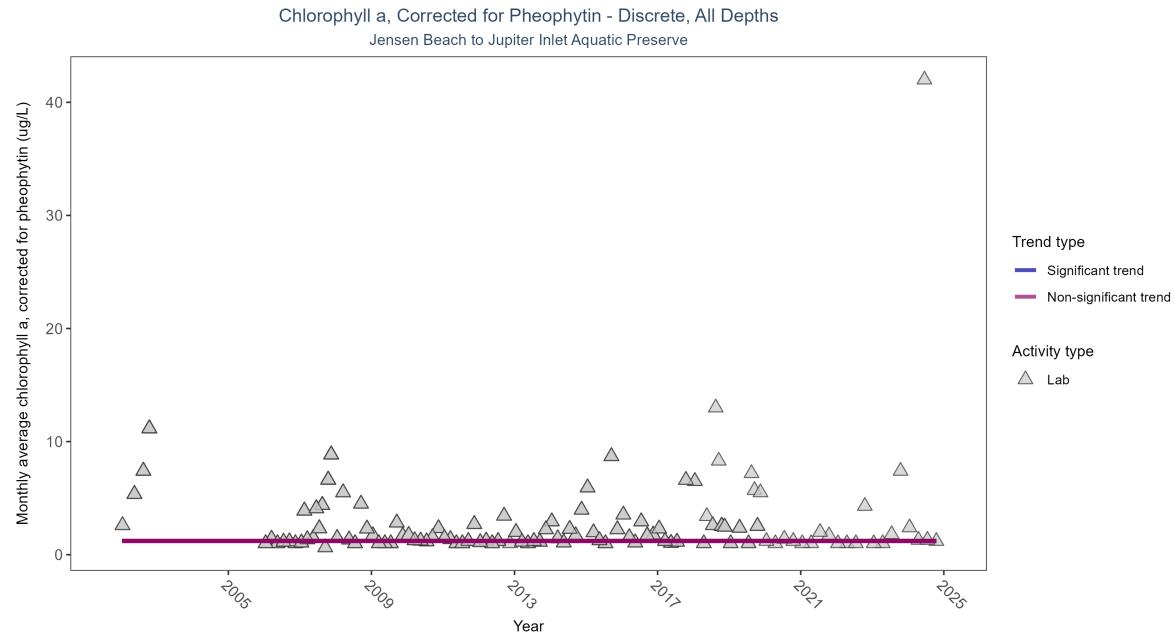
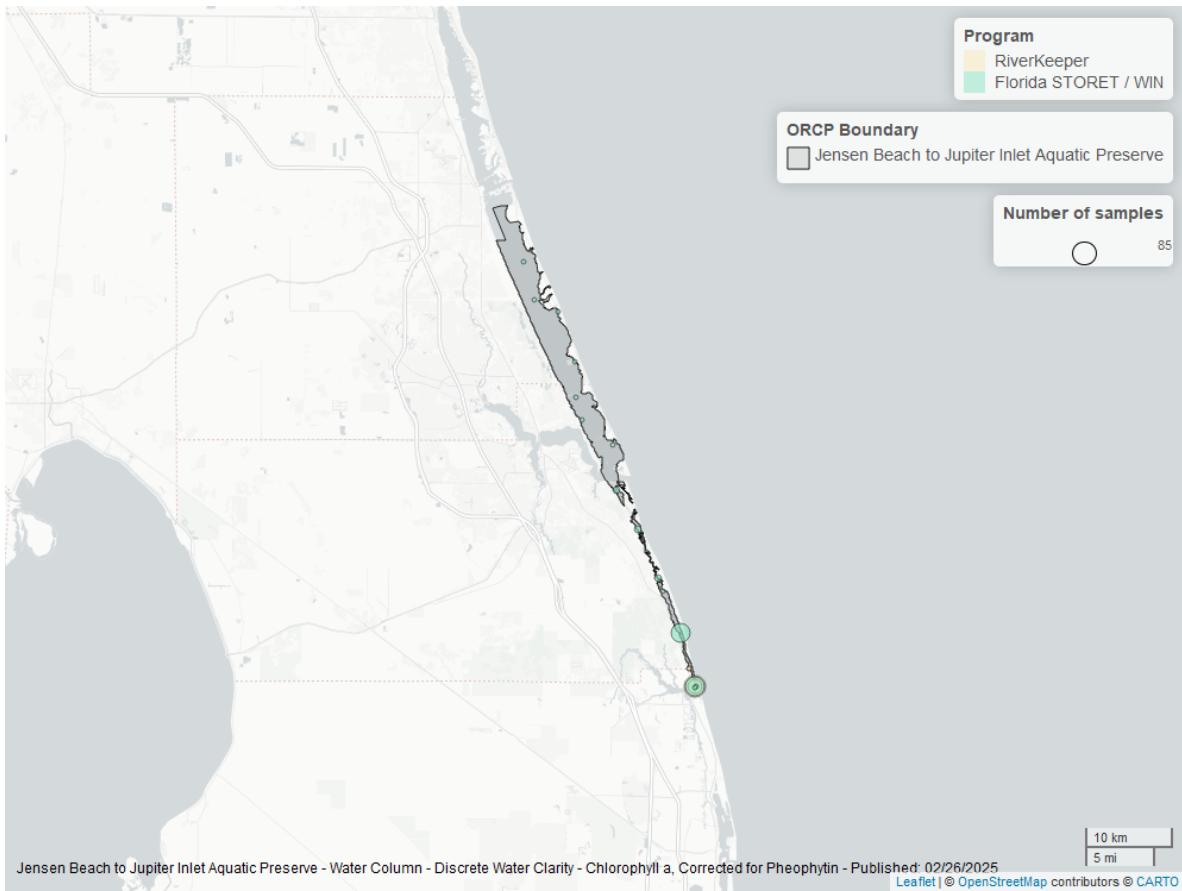


Table 13: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	345	20	2002 - 2024		1.4	0.0619	1.2232	0 0.4174317989346459922828103117



Secchi Depth - Discrete

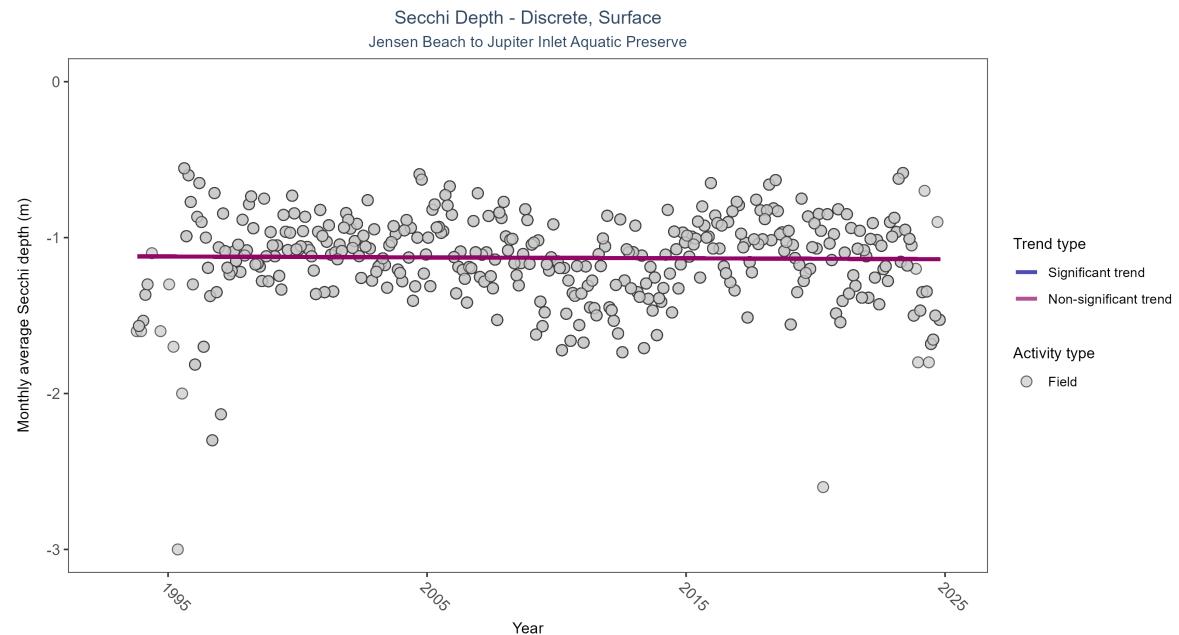
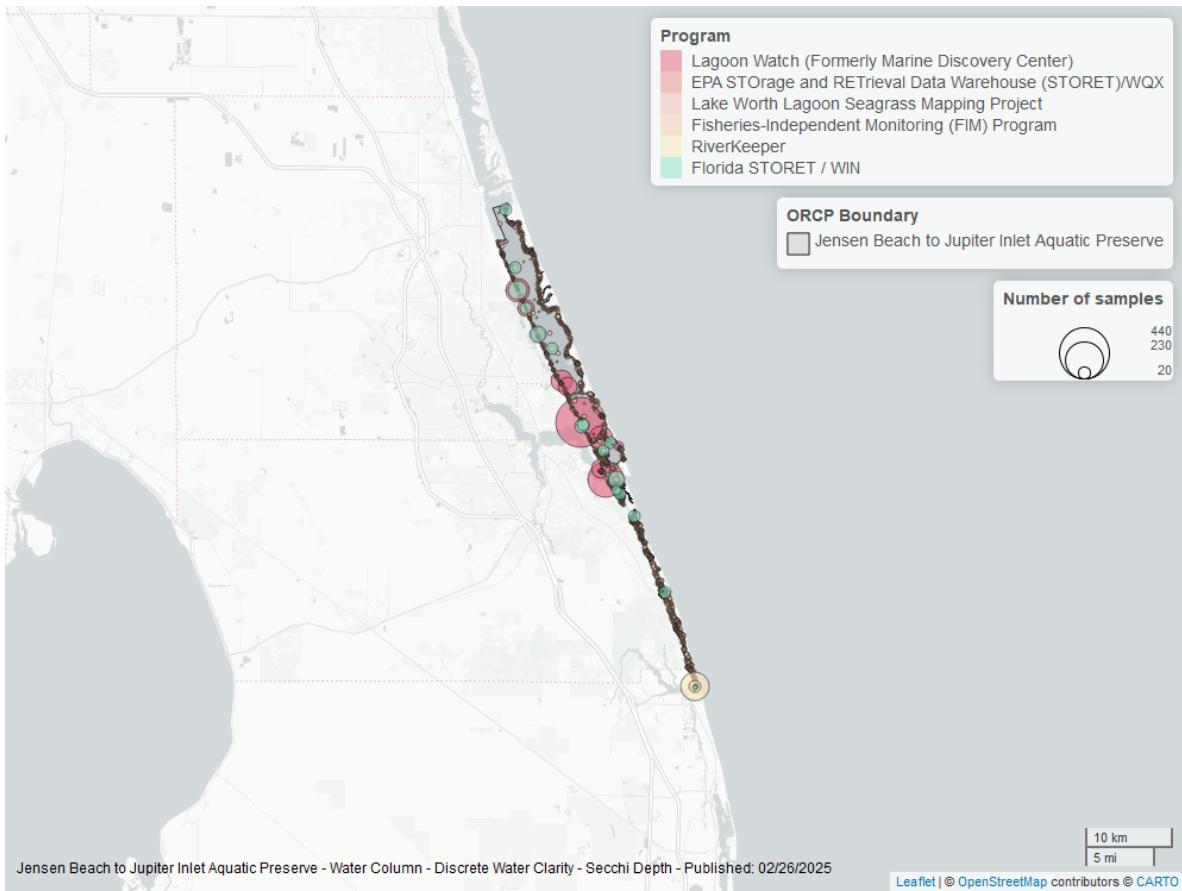


Table 14: Seasonal Kendall-Tau Results for - Secchi Depth

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	6176	32	1993 - 2024	-1	-0.01126	-1.11999	-0.00058	0.7867451153227515980859152477933



Colored Dissolved Organic Matter - Discrete

Colored Dissolved Organic Matter - Discrete, All Depths
Jensen Beach to Jupiter Inlet Aquatic Preserve

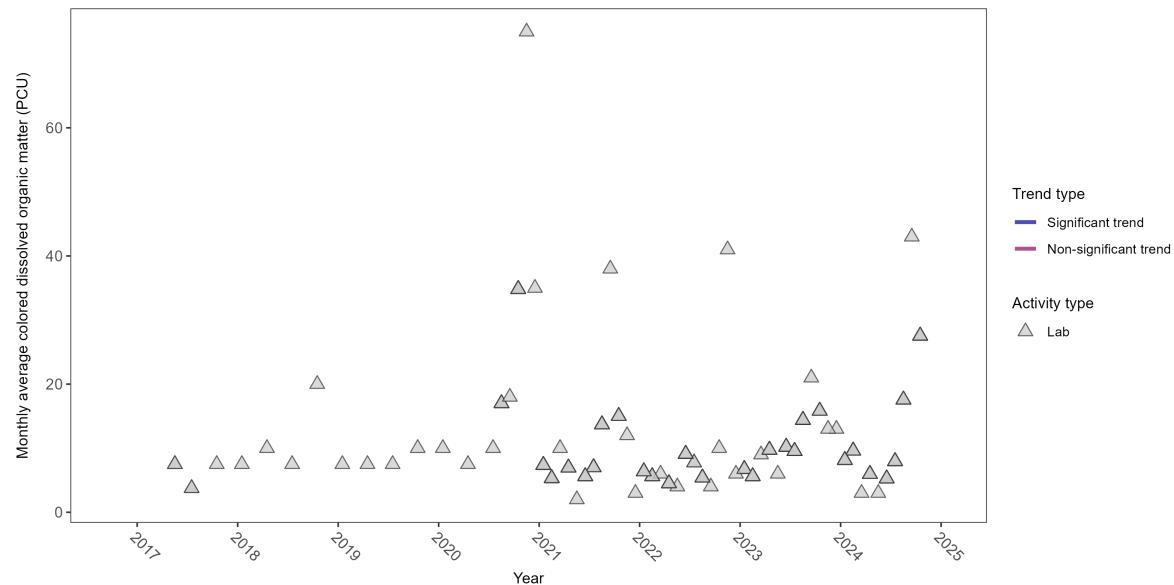


Table 15: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

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	329	8	2017 - 2024	7.5	-	-	-	NA

