Big Bend Seagrasses Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 30 September, 2025

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Indicators

Nutrients

Total Nitrogen - Discrete

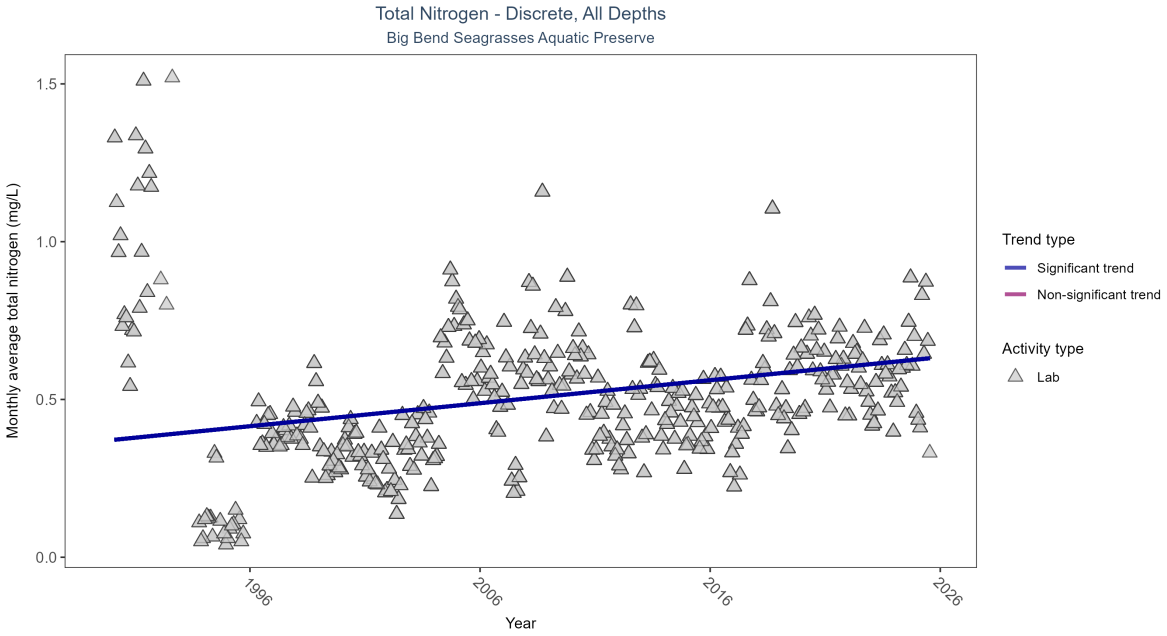

Figure 1: Scatter plot of monthly average total nitrogen over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only nitrogen values obtained from laboratory analyses (triangles) are included in the plot.

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	Significantly increasing trend	8222	36	1990 - 2025	0.466	0.2315	0.37151	0.00729	0

Monthly average total nitrogen increased by 0.01 mg/L per year.

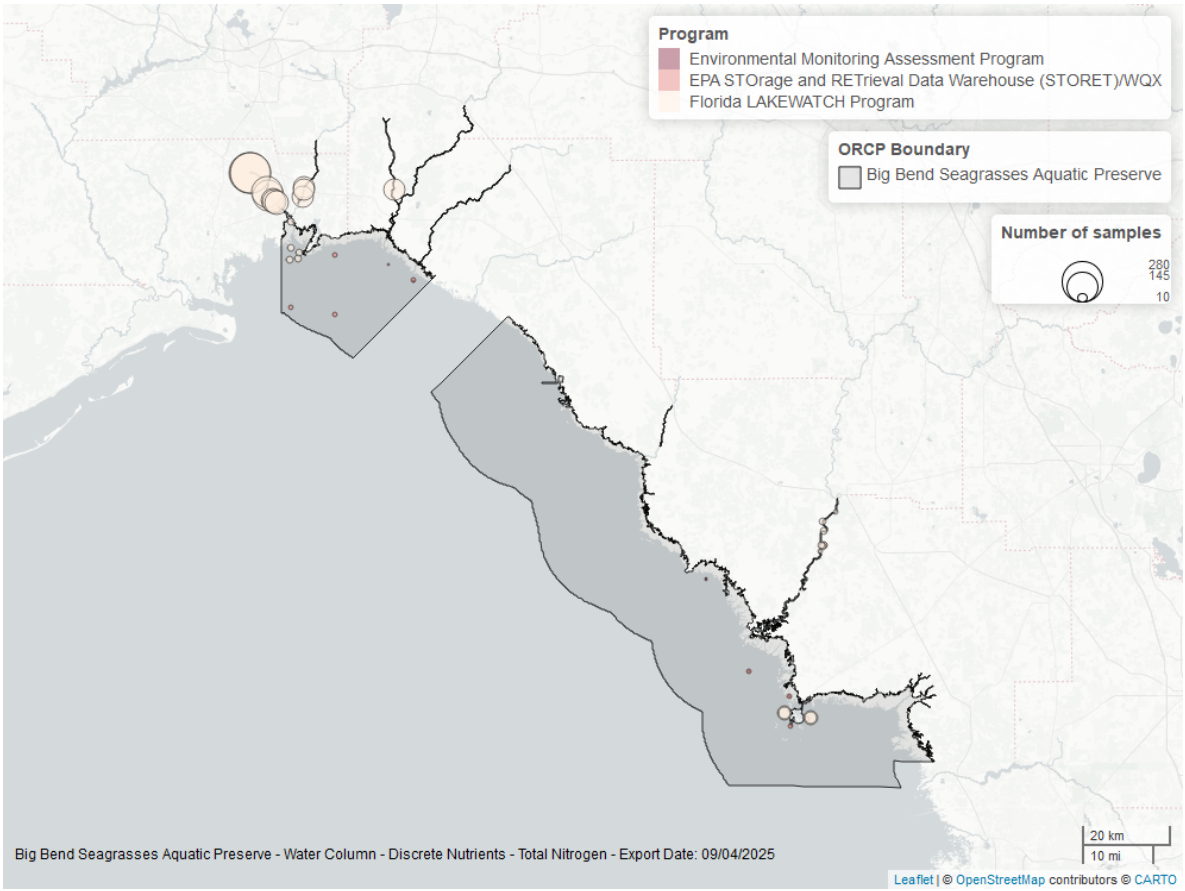

Figure 2: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Total Phosphorus - Discrete

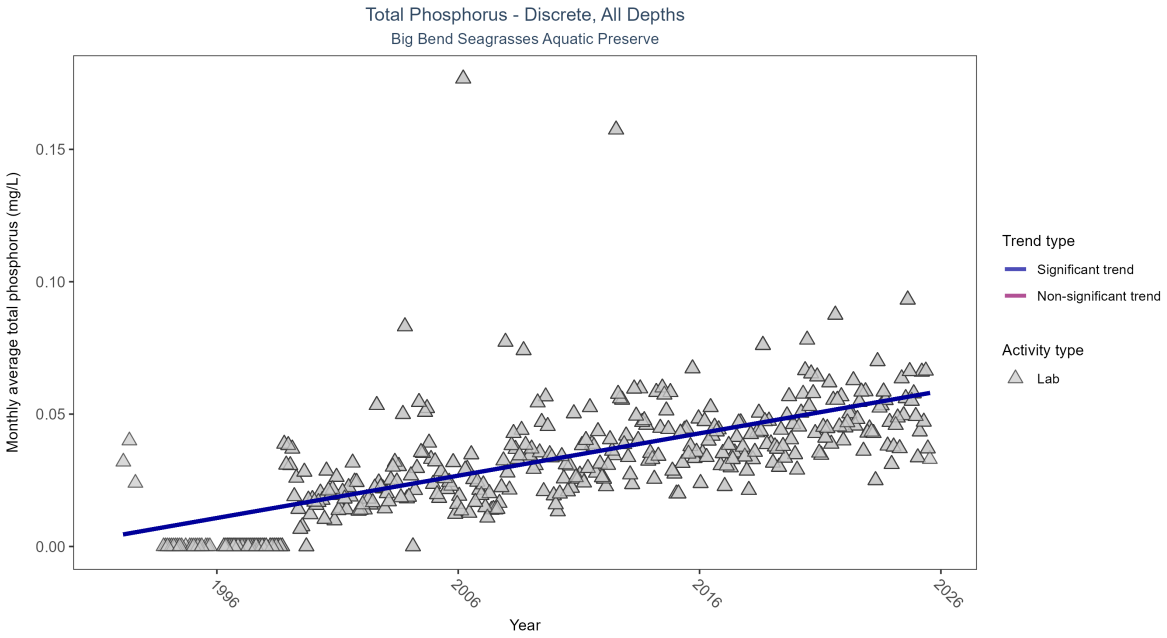

Figure 3: Scatter plot of monthly average total phosphorus over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only phosphorus values obtained from laboratory analyses (triangles) are included in the plot.

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	Significantly increasing trend	6513	34	1992 - 2025	0.032	0.60348	0.00437	0.0016	0

Monthly average total phosphorus increased by less than 0.01 mg/L per year.

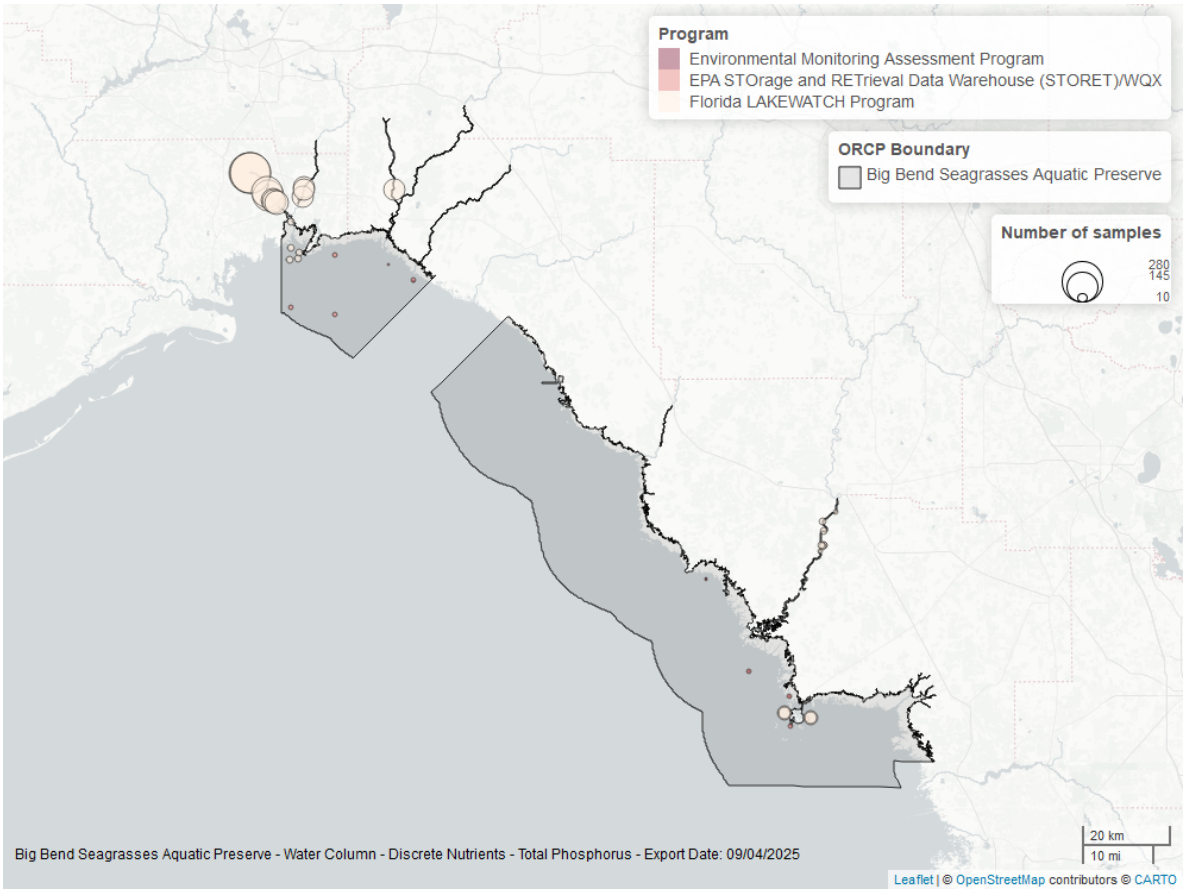

Figure 4: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Water Quality

Dissolved Oxygen - Discrete

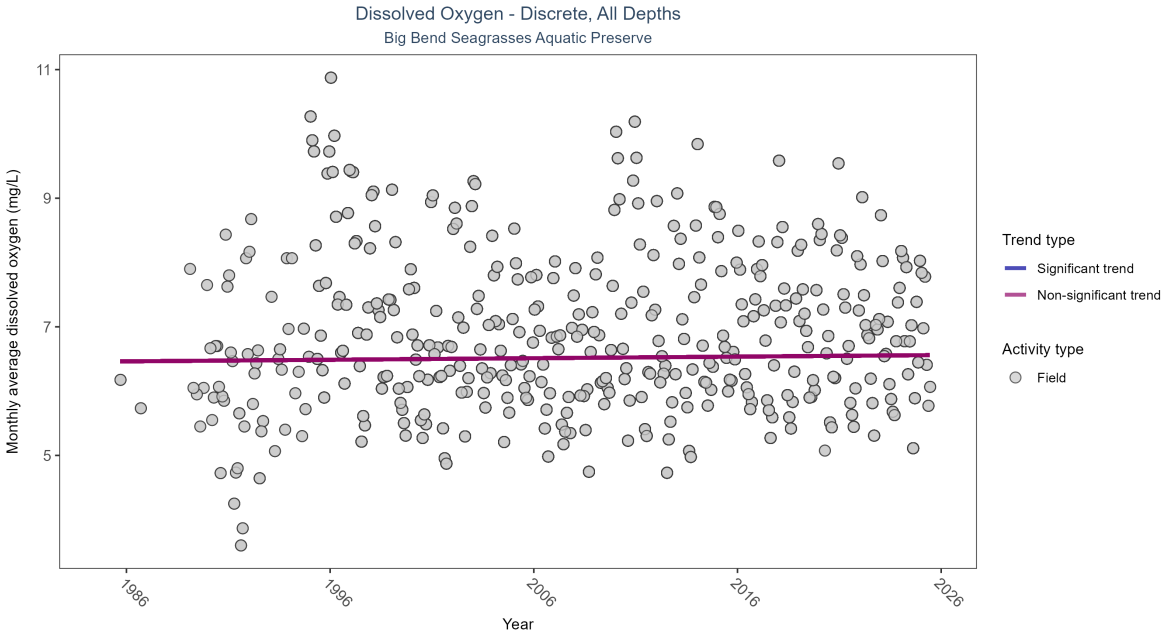

Figure 5: Scatter plot of monthly average dissolved oxygen over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only dissolved oxygen values measured in the field (circles) are included in the plot.

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	153189	39	1985 - 2025	6.71	0.02113	6.4604	0.00245	0.5065

Dissolved oxygen showed no detectable trend between 1985 and 2025.

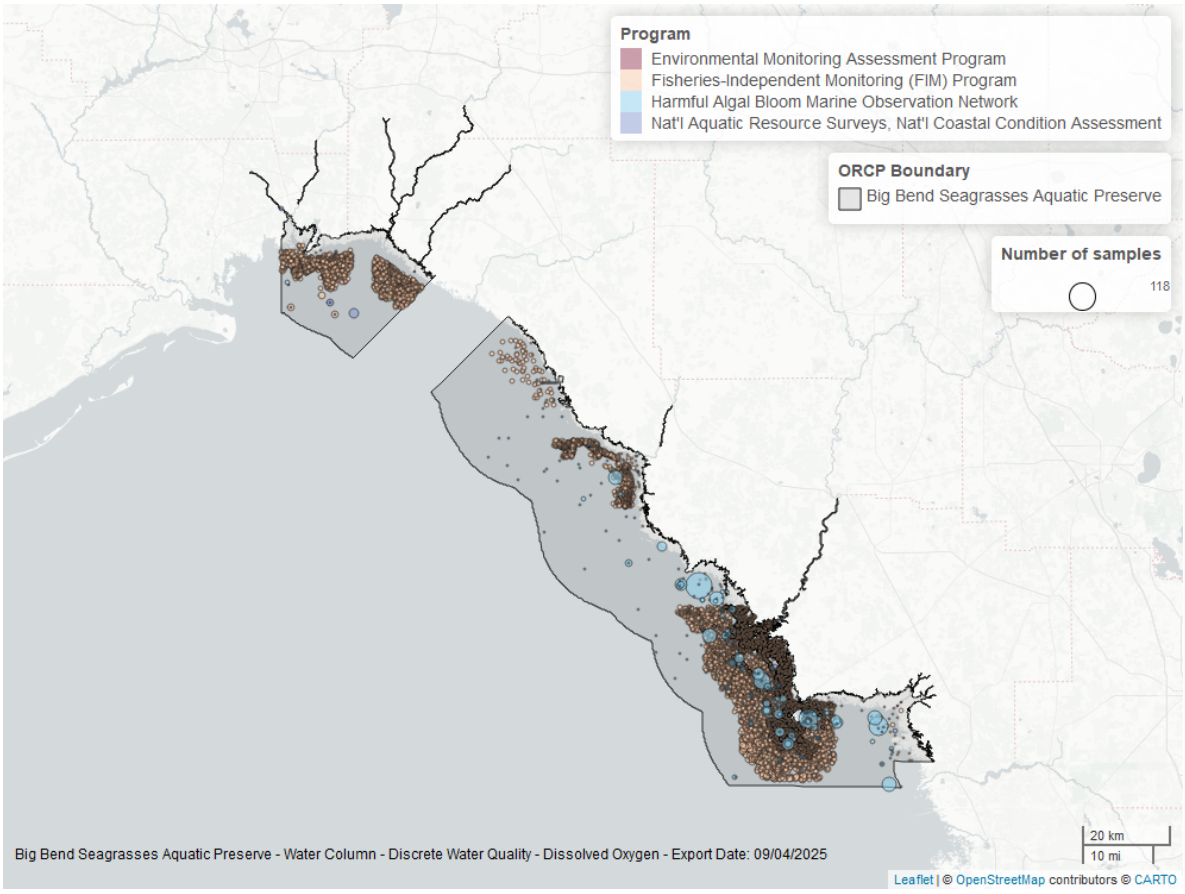

Figure 6: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Dissolved Oxygen - Continuous

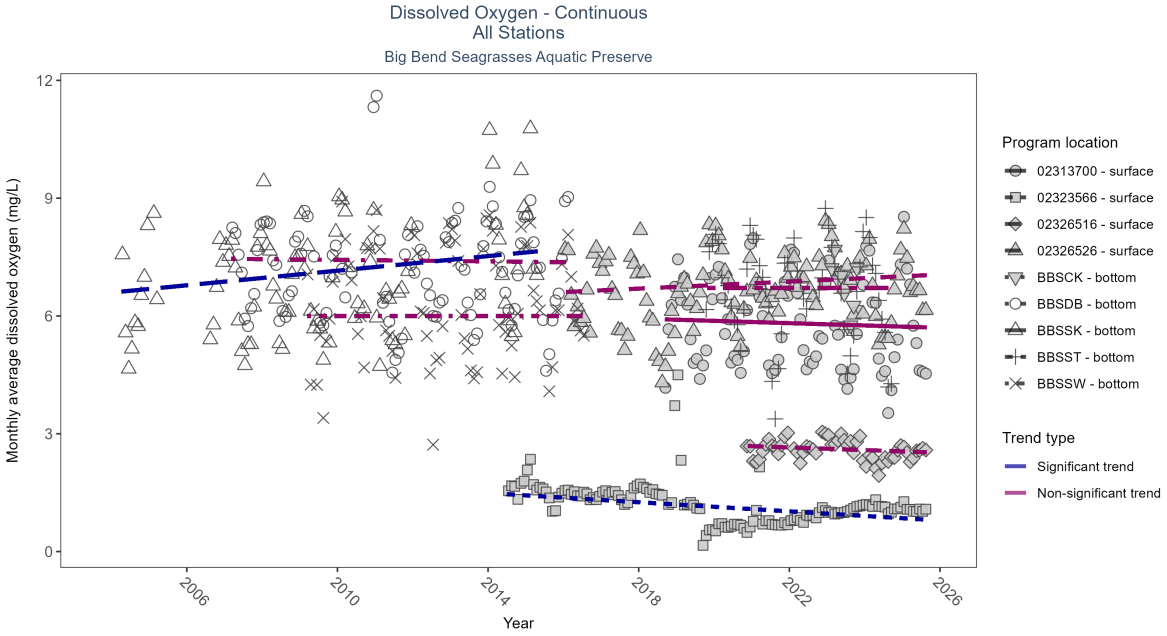

Figure 7: Scatter plot of monthly average dissolved oxygen over time at continuously monitored program locations. Each location is analyzed separately, with significant (blue) or non-significant (magenta) trend lines shown for time series that included five or more years of observations.

Table 4: Seasonal Kendall-Tau Results - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
02326526	No significant trend	3342	10	2016 - 2025	6.7	0.14	6.61	0.04	0.0549
02323566	Significantly decreasing trend	3879	12	2014 - 2025	1.1	-0.38	1.49	-0.06	0
02313700	No significant trend	2425	8	2018 - 2025	5.5	-0.12	5.93	-0.03	0.1723
02326516	No significant trend	1583	6	2020 - 2025	2.6	-0.2	2.72	-0.03	0.1262
BBSDB	No significant trend	184327	10	2007 - 2016	7.3	-0.05	7.46	-0.01	0.6066
BBSCK	Insufficient data to calculate trend	14788	1	2023 - 2023	6.7	-	-	-	-
BBSST	No significant trend	146149	6	2019 - 2024	6.9	-0.01	6.71	0	1
BBSSK	Significantly increasing trend	134287	10	2004 - 2015	7.1	0.28	6.6	0.09	0.0023
BBSSW	No significant trend	182327	8	2009 - 2016	6.2	0	6	0	1

At one program location, monthly average dissolved oxygen increased by 0.09 mg/L per year. At one program location, monthly average dissolved oxygen decreased by 0.06 mg/L per year. No detectable change in monthly average dissolved oxygen was observed at six locations. There was insufficient data to fit a model for one location.

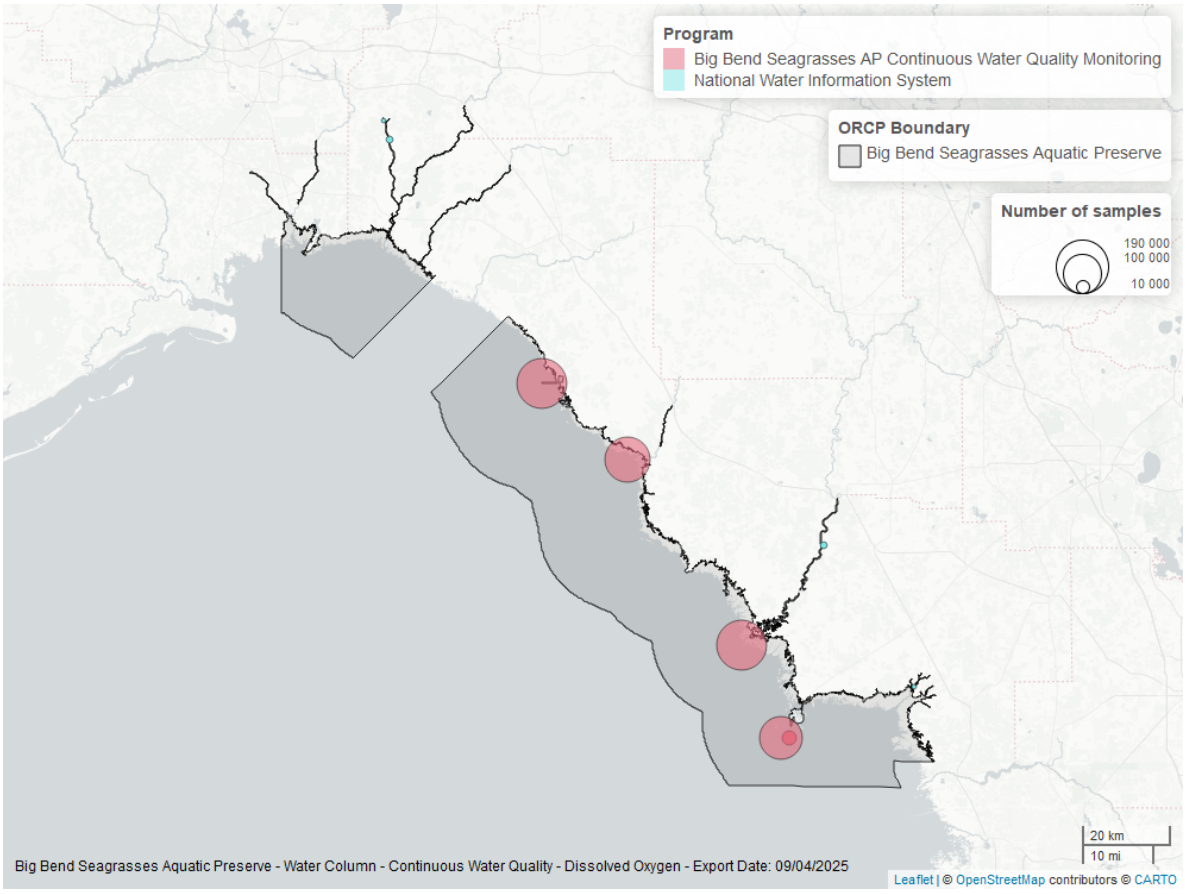

Figure 8: Map showing location of dissolved oxygen continuous water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Dissolved Oxygen Saturation - Discrete

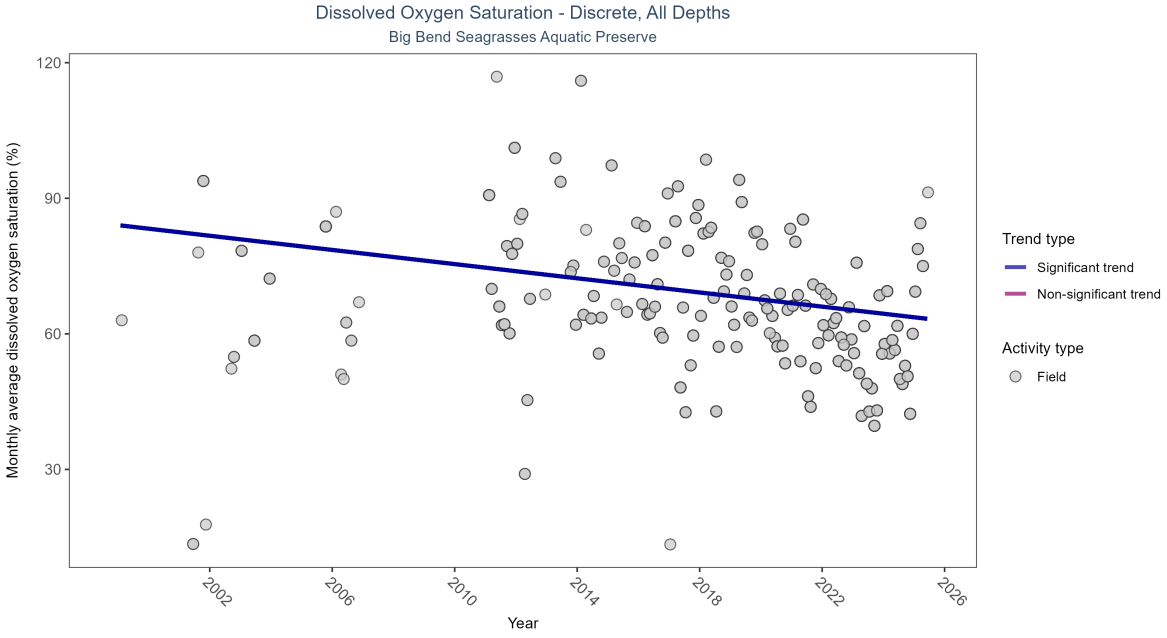

Figure 9: Scatter plot of monthly average dissolved oxygen saturation over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only dissolved oxygen saturation values measured in the field (circles) are included in the plot.

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 decreasing trend	1912	21	1999 - 2025	67	-0.21256	84.05593	-0.78413	7e-04

Monthly average dissolved oxygen saturation decreased by 0.78% per year.

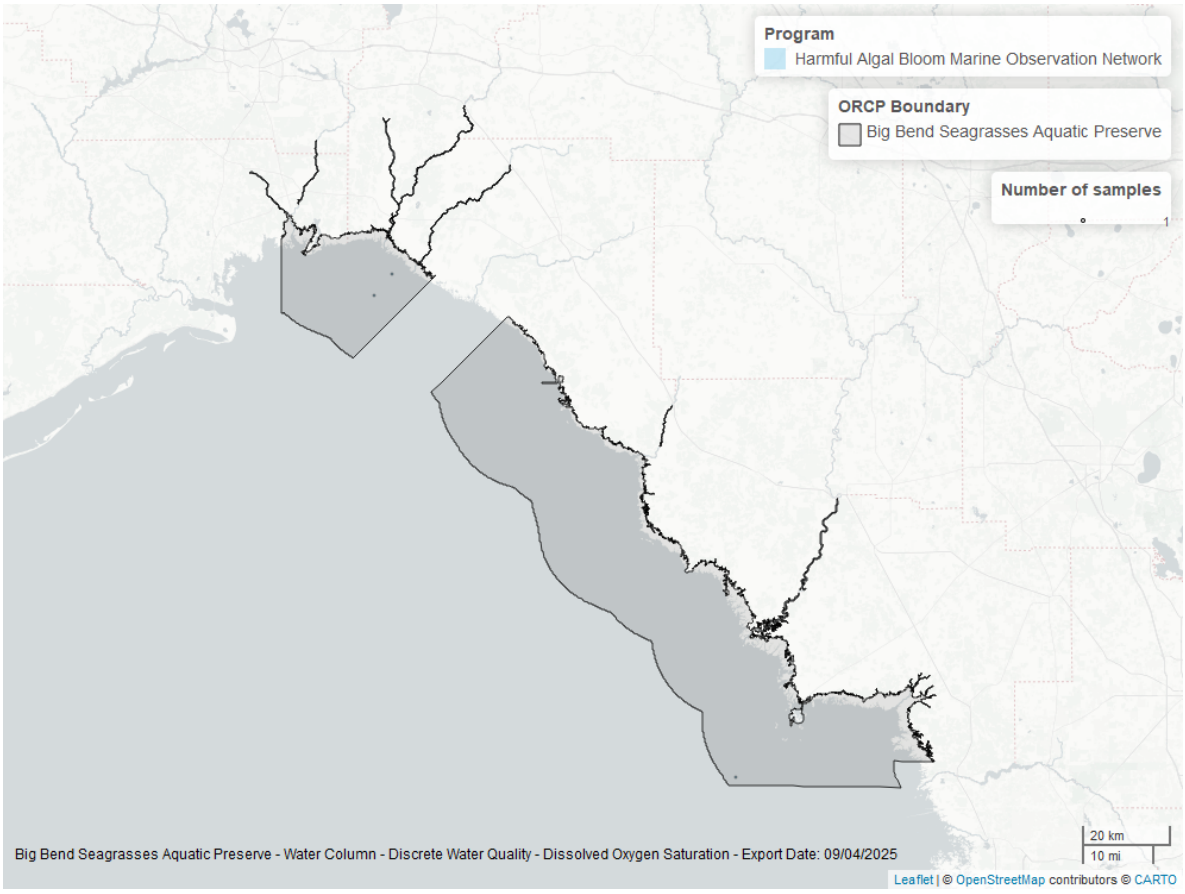

Figure 10: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Dissolved Oxygen Saturation - Continuous

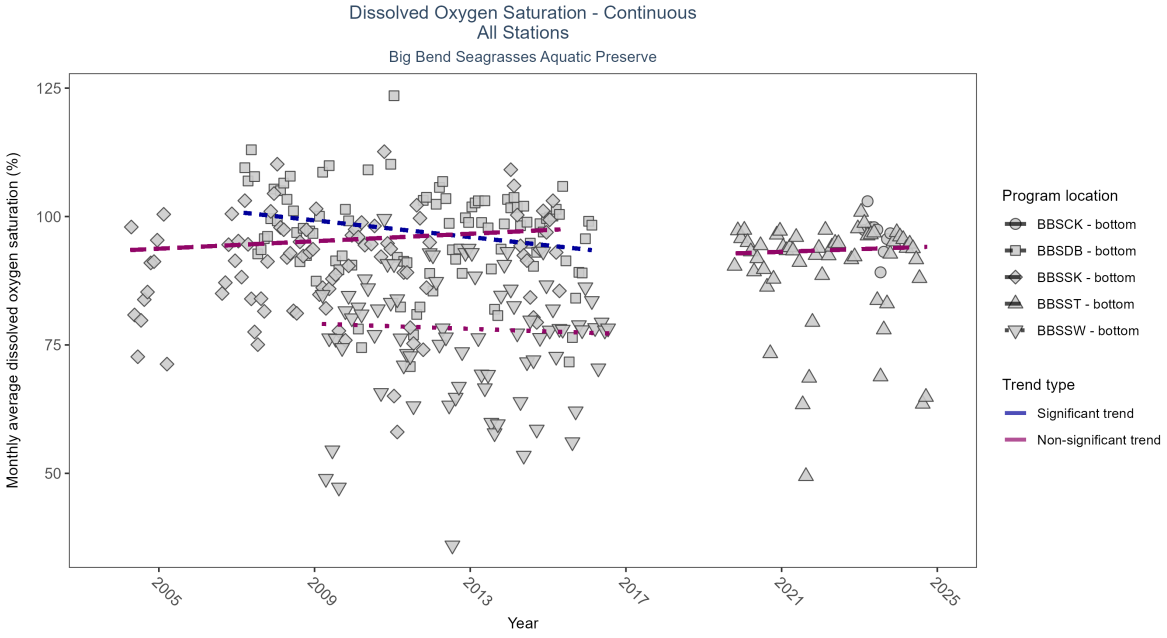

Figure 11: Scatter plot of monthly average dissolved oxygen saturation over time at continuously monitored program locations. Each location is analyzed separately, with significant (blue) or non-significant (magenta) trend lines shown for time series that included five or more years of observations.

Table 6: Seasonal Kendall-Tau Results - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
BBSDB	Significantly decreasing trend	183530	10	2007 - 2016	97.6	-0.3	100.88	-0.81	3e-04
BBSCK	Insufficient data to calculate trend	19834	1	2023 - 2023	95.7	-	-	-	-
BBSSK	No significant trend	134196	10	2004 - 2015	91.8	0.12	93.37	0.36	0.2612
BBSST	No significant trend	149203	6	2019 - 2024	93.3	0.08	92.61	0.26	0.4975
BBSSW	No significant trend	182158	8	2009 - 2016	75.8	-0.05	79.14	-0.25	0.6835

At one program location, monthly average dissolved oxygen saturation decreased by 0.81% per year. No detectable change in monthly average dissolved oxygen saturation was observed at three locations. There was insufficient data to fit a model for one location.

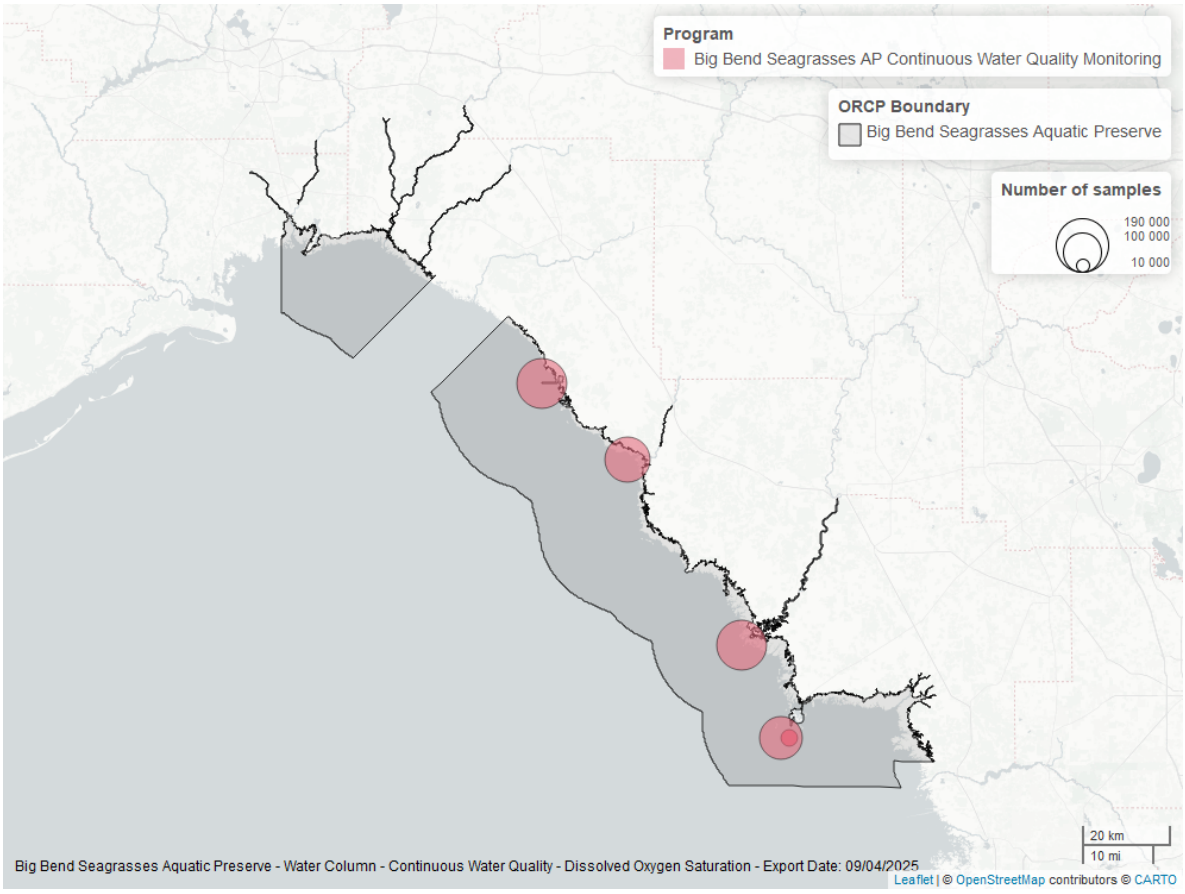

Figure 12: Map showing location of dissolved oxygen saturation continuous water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Salinity - Discrete

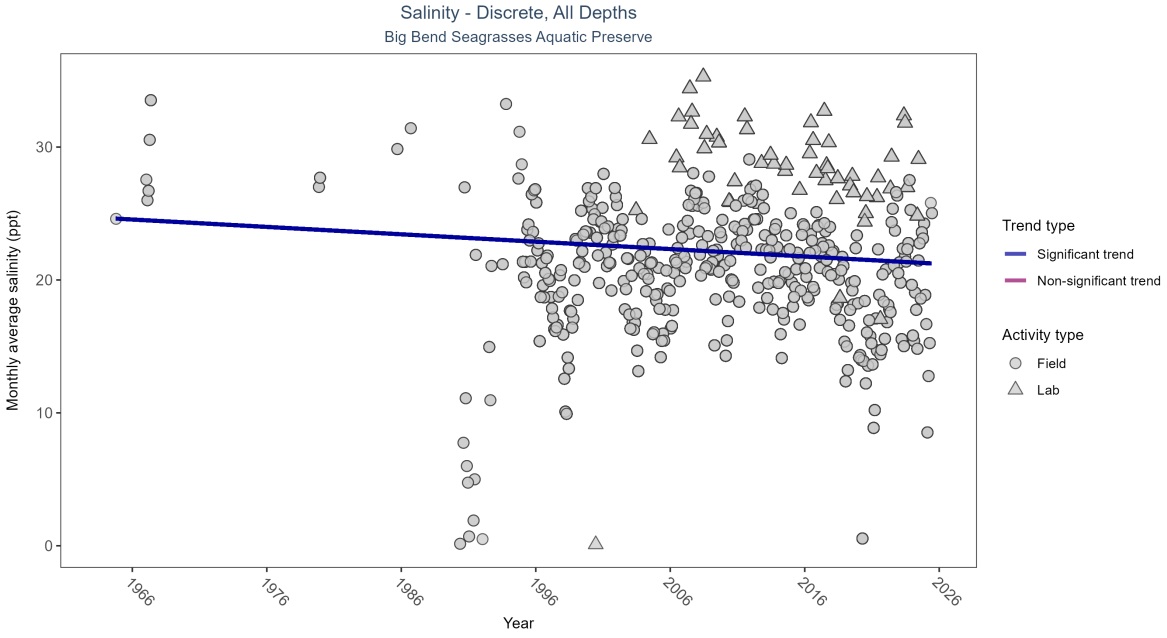

Figure 13: Scatter plot of monthly average salinity over time. If the time series included ten or more years of discrete observations, significant (blue) or non-significant (magenta) trend lines are also shown. Discrete salinity values derived from grab samples analyzed in the field (circles) or the laboratory (triangles) are both included in the plot.

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	Significantly decreasing trend	158388	41	1964 - 2025	23.3	-0.09664	24.65953	-0.0556	0.0062

Monthly average salinity decreased by 0.06 ppt per year.

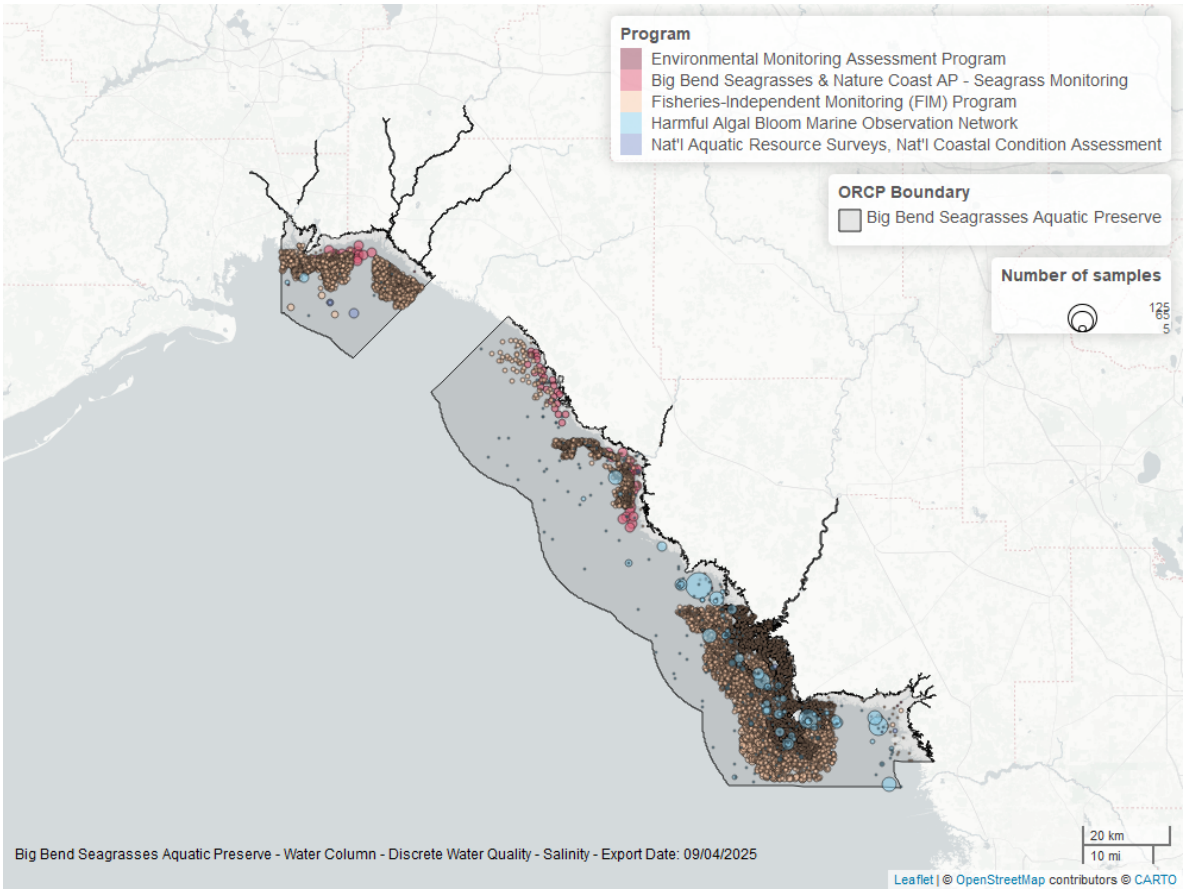

Figure 14: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Salinity - Continuous

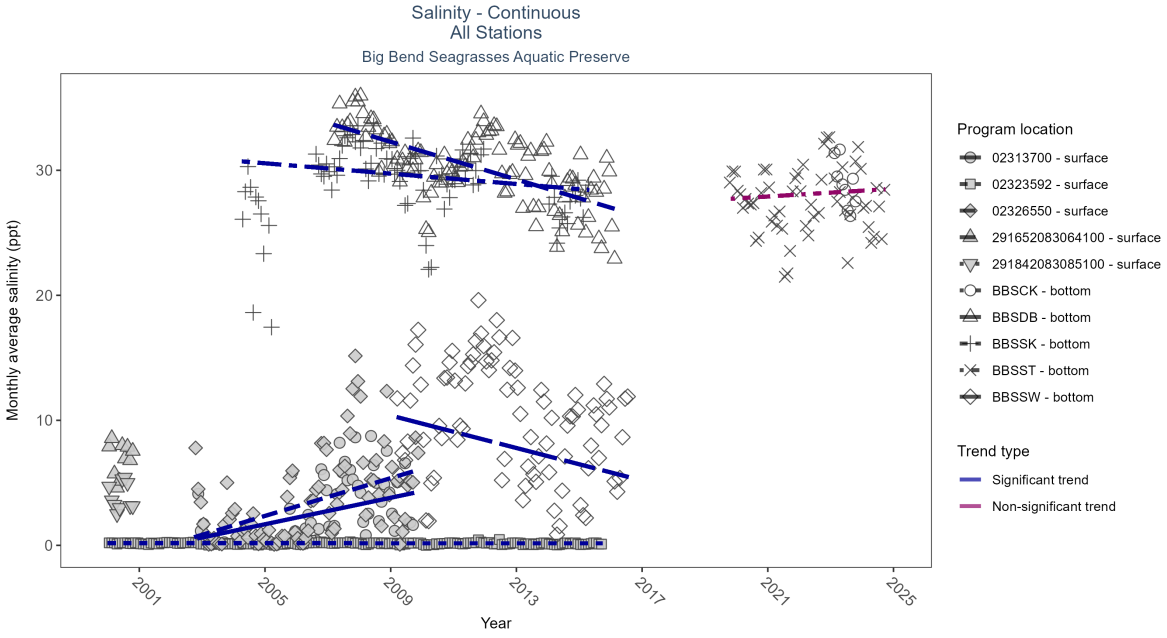

Figure 15: Scatter plot of monthly average salinity over time at continuously monitored program locations. Each location is analyzed separately, with significant (blue) or non-significant (magenta) trend lines shown for time series that included five or more years of observations.

Table 8: Seasonal Kendall-Tau Results - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
02323592	Significantly decreasing trend	6064	16	2000 - 2015	0.1	-0.13	0.18	0	0.0156
291652083064100	Insufficient data to calculate trend	827	1	2000 - 2000	6.7	-	-	-	-
02326550	Significantly increasing trend	2507	8	2002 - 2009	1.7	0.48	0.09	0.76	0
02313700	Significantly increasing trend	1601	7	2002 - 2009	2.1	0.52	0.1	0.53	0
291842083085100	Insufficient data to calculate trend	584	1	2000 - 2000	3.7	-	-	-	-
BBSDB	Significantly decreasing trend	265544	10	2007 - 2016	30.6	-0.53	33.78	-0.75	0
BBSCK	Insufficient data to calculate trend	14782	1	2023 - 2023	29.2	-	-	-	-
BBSSK	Significantly decreasing trend	178356	10	2004 - 2015	29.6	-0.22	30.77	-0.21	0.0197
BBSST	No significant trend	156720	6	2019 - 2024	28.5	0.08	27.59	0.15	0.516
BBSSW	Significantly decreasing trend	221696	8	2009 - 2016	7.5	-0.23	10.39	-0.65	0.016

At two program locations, monthly average salinity increased by 0.53 ppt per year at one site and by 0.76 ppt per year at the other. At four program locations, monthly average salinity decreased between less than 0.01 and 0.75 ppt per year. No detectable change in monthly average salinity was observed at one location. There was insufficient data to fit a model for three locations.

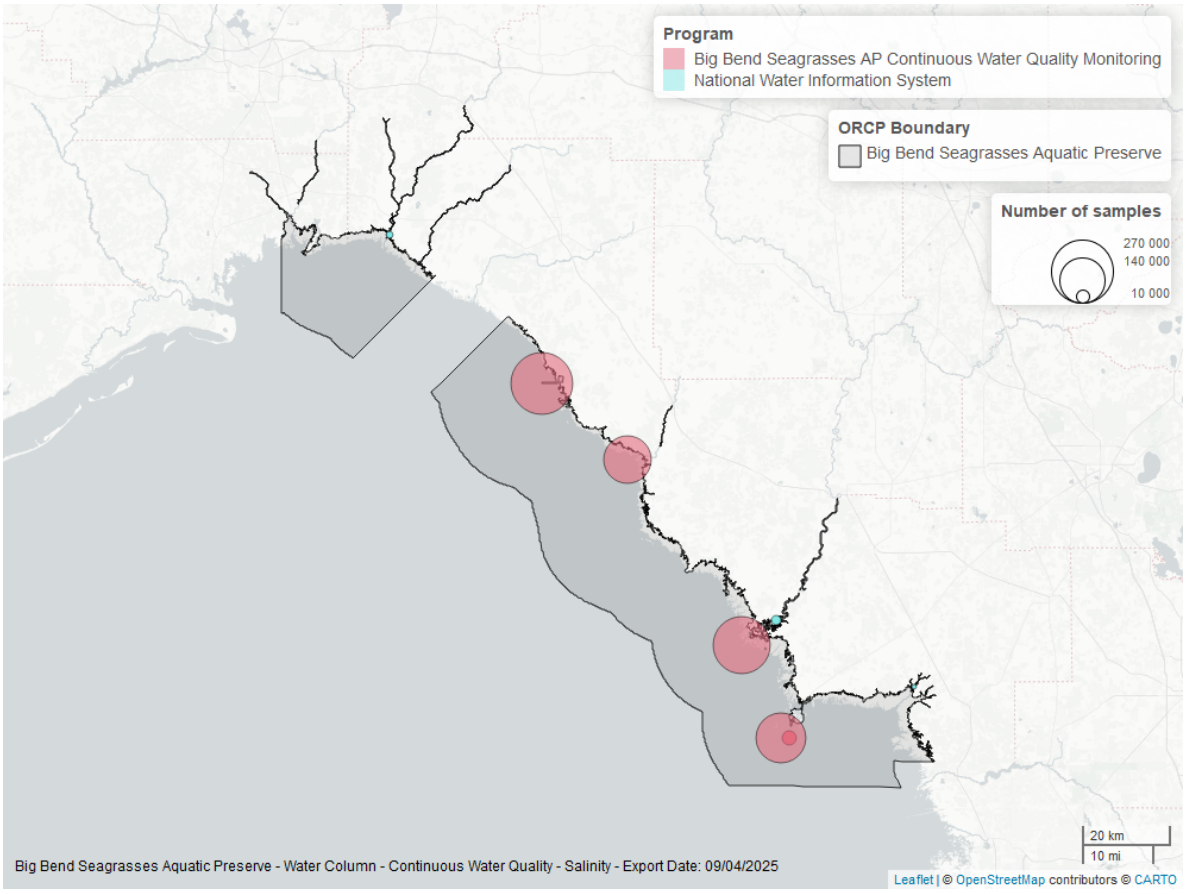

Figure 16: Map showing location of salinity continuous water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Water Temperature - Discrete

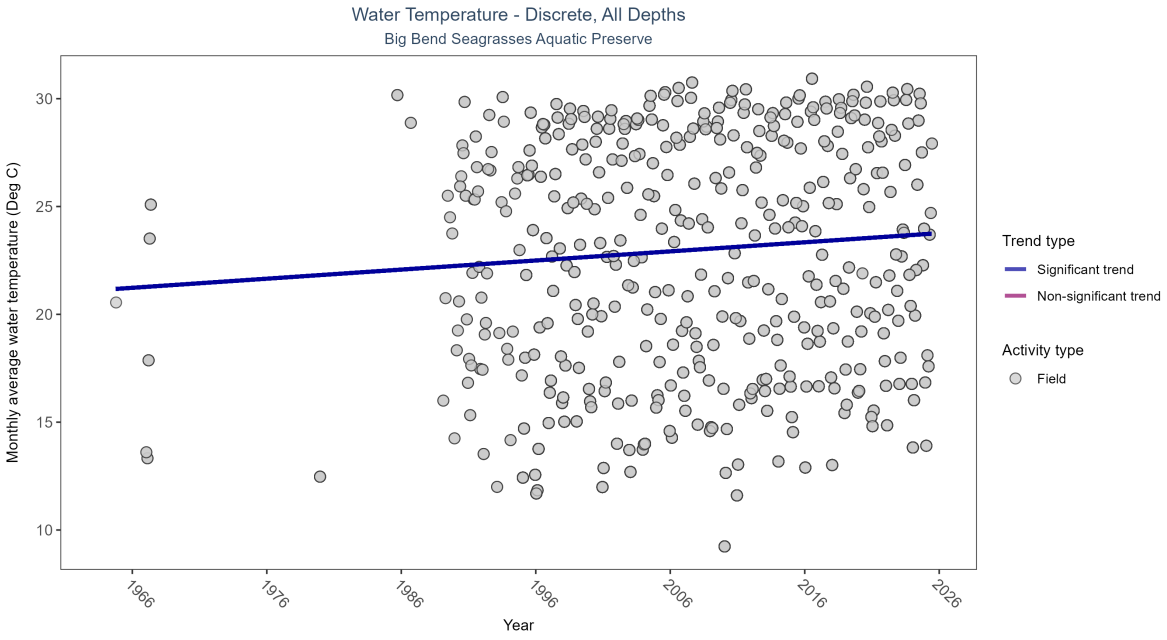

Figure 17: Scatter plot of monthly average water temperature over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only water temperature measurements taken in the field (circles) are included in the plot.

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	Significantly increasing trend	159977	42	1964 - 2025	24.1	0.22576	21.14632	0.04221	0

Monthly average water temperature increased by 0.04°C per year.

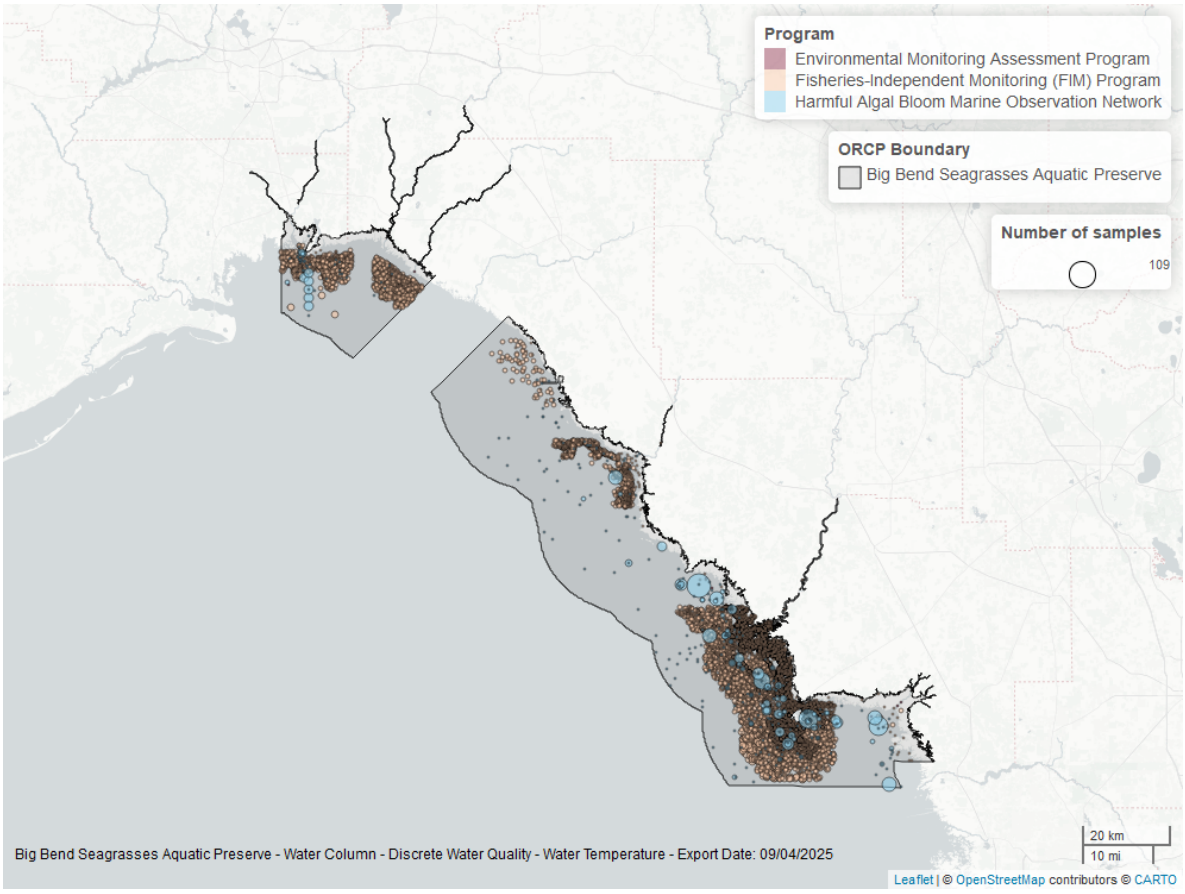

Figure 18: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Water Temperature - Continuous

National Water Information System - *7*

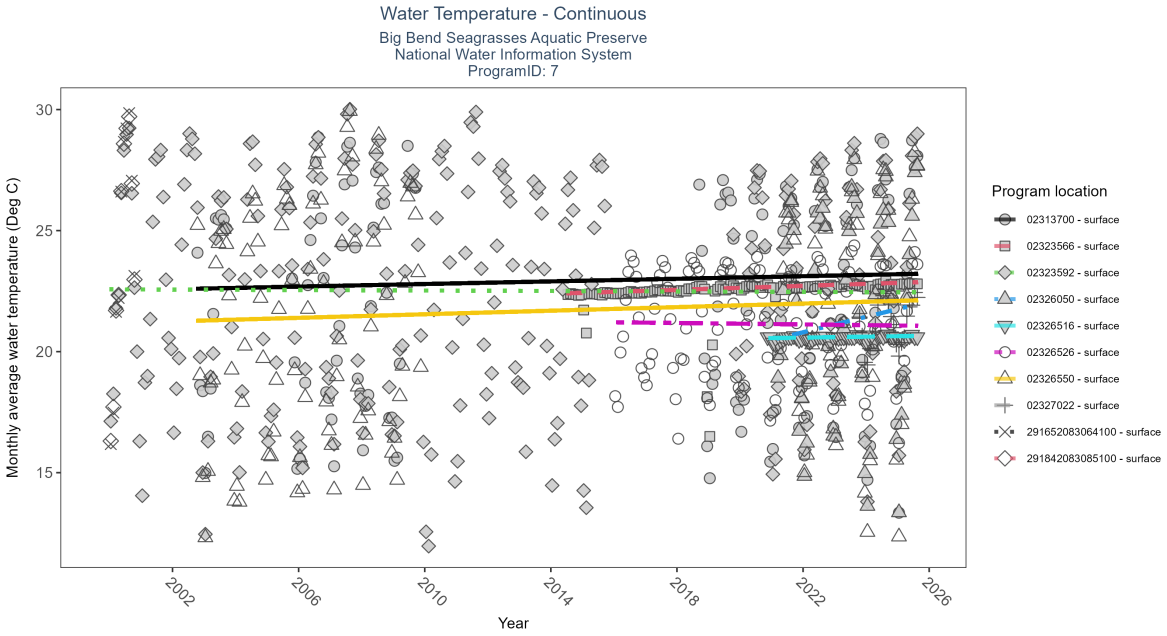

Figure 19: Scatter plot of monthly average water temperature over time at continuously monitored program locations. Each location is analyzed separately, with significant (blue) or non-significant (magenta) trend lines shown for time series that included five or more years of observations.

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
02326050	Significantly increasing trend	1695	5	2021 - 2025	21.9	0.32	20.48	0.32	0.0074
02326526	No significant trend	3399	10	2016 - 2025	21.6	-0.06	21.21	-0.01	0.4654
02313700	Significantly increasing trend	4097	15	2002 - 2025	23.0	0.14	22.58	0.03	0.0377
02323592	No significant trend	13025	23	2000 - 2025	23.3	-0.02	22.57	0	0.7205
02326516	Significantly increasing trend	1616	6	2020 - 2025	20.6	0.32	20.54	0.02	0.0107
02323566	Significantly increasing trend	4020	12	2014 - 2025	22.6	0.77	22.39	0.04	0
02326550	Significantly increasing trend	4930	13	2002 - 2025	22.4	0.21	21.25	0.04	0.0017
291842083085100	Insufficient data to calculate trend	542	1	2000 - 2000	23.1	-	-	-	-
02327022	Insufficient data to calculate trend	658	3	2023 - 2025	21.3	-	-	-	-
291652083064100	Insufficient data to calculate trend	473	1	2000 - 2000	26.1	-	-	-	-

At five program locations, monthly average water temperature increased between 0.02 and 0.32°C per year. At one program location, monthly average water temperature decreased by 0.37°C per year. No detectable change in monthly average water temperature was observed at five locations. There was insufficient data to fit a model for four locations.

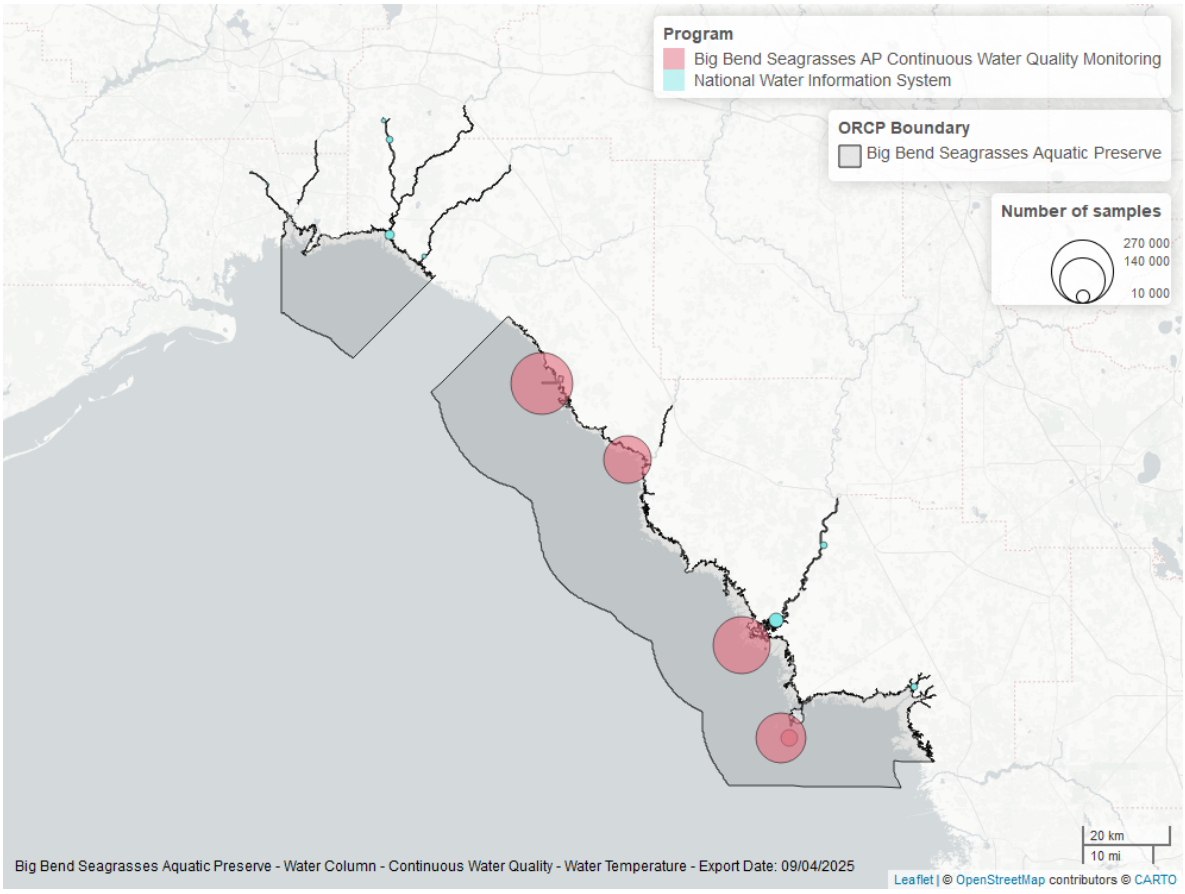

Figure 20: Map showing location of water temperature continuous water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Big Bend Seagrasses Aquatic Preserves Continuous Water Quality Monitoring - *471*

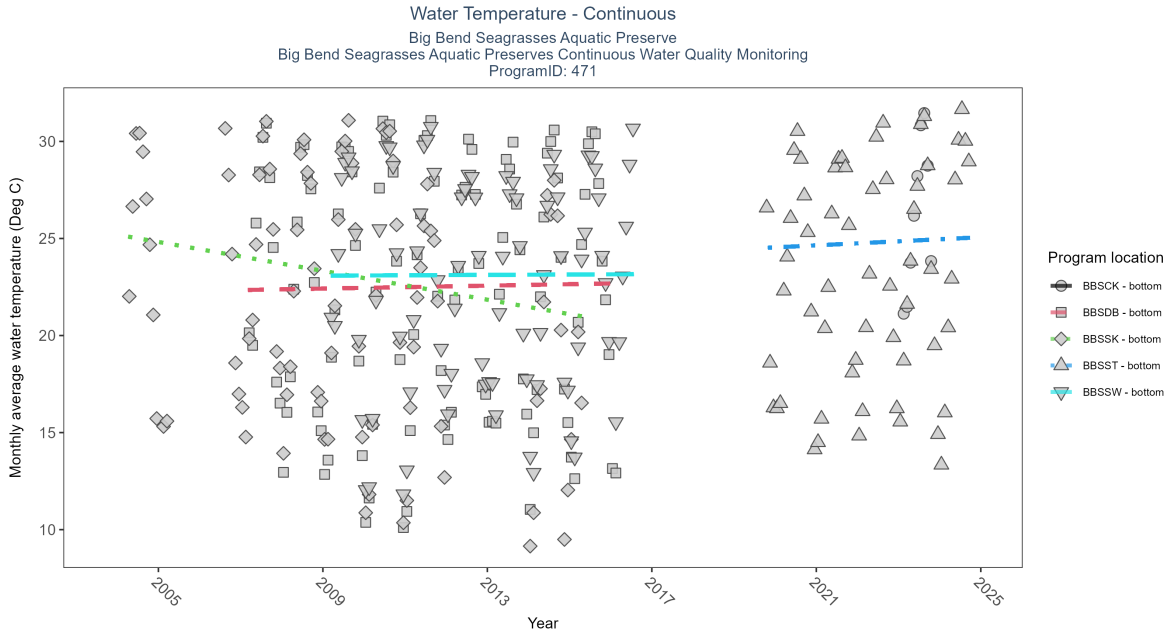

Figure 21: Scatter plot of monthly average water temperature over time at continuously monitored program locations. Each location is analyzed separately, with significant (blue) or non-significant (magenta) trend lines shown for time series that included five or more years of observations.

Table 11: 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
BBSDB	No significant trend	265988	10	2007 - 2016	23.2	0.08	22.34	0.04	0.2922
BBSCK	Insufficient data to calculate trend	22232	1	2023 - 2023	26.4	-	-	-	-
BBSSK	Significantly decreasing trend	179213	10	2004 - 2015	21.7	-0.33	25.19	-0.37	2e-04
BBSST	No significant trend	163227	6	2019 - 2024	23.5	0.1	24.44	0.1	0.516
BBSSW	No significant trend	227996	8	2009 - 2016	23.7	0.02	23.09	0.01	0.9025

At five program locations, monthly average water temperature increased between 0.02 and 0.32°C per year. At one program location, monthly average water temperature decreased by 0.37°C per year. No detectable change in monthly average water temperature was observed at five locations. There was insufficient data to fit a model for four locations.

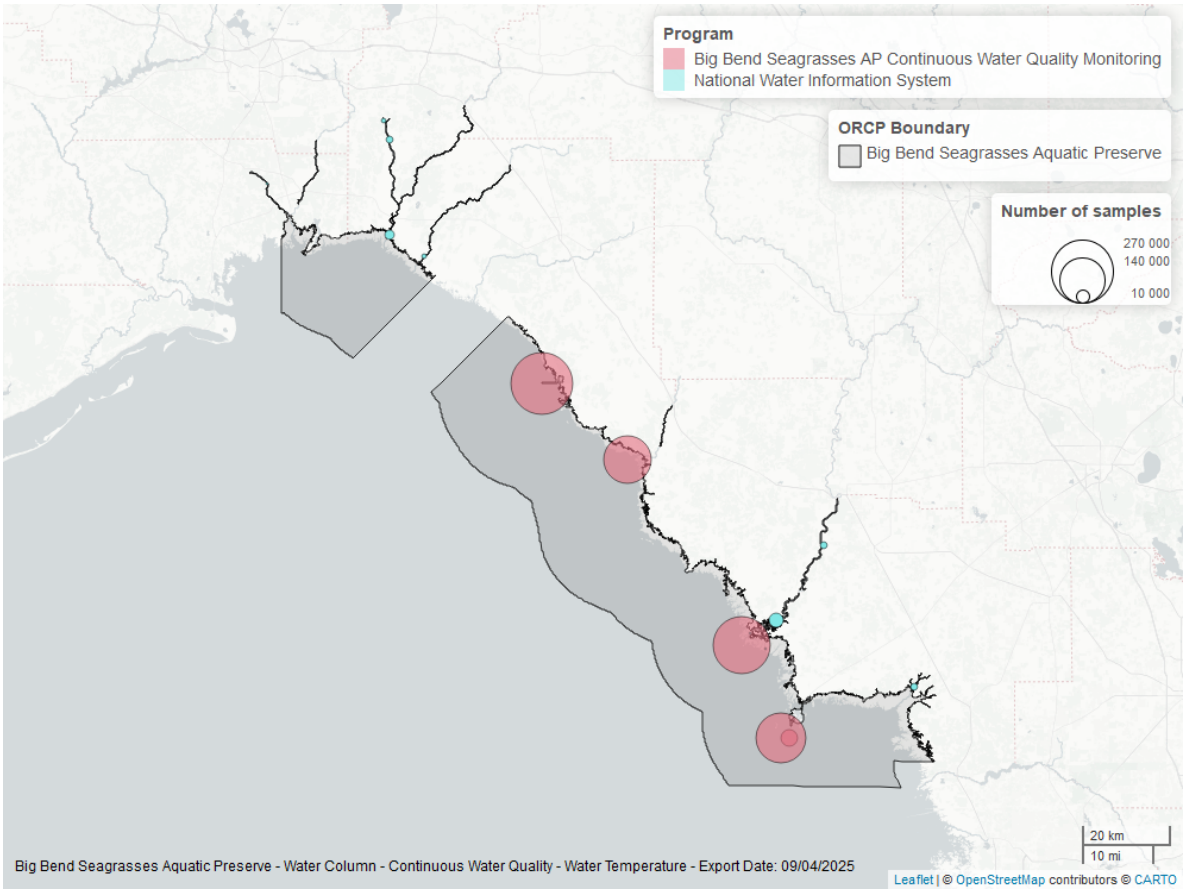

Figure 22: Map showing location of water temperature continuous water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

pH - Discrete

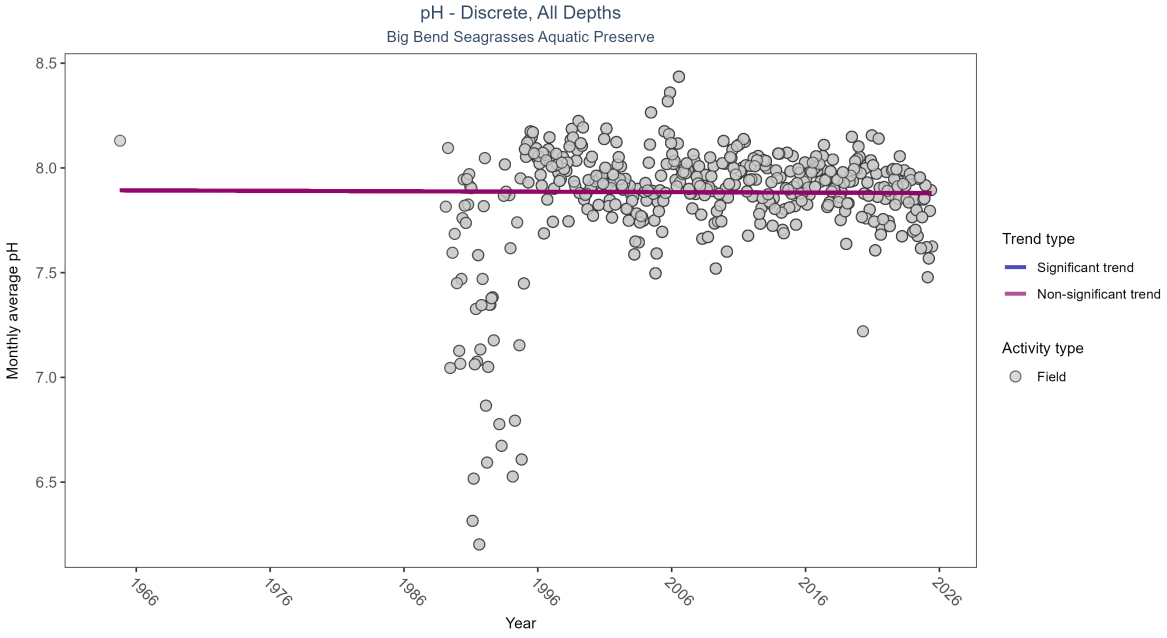

Figure 23: Scatter plot of monthly average pH over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only pH values measured in the field (circles) are included in the plot.

Table 12: 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	110554	38	1964 - 2025	8	-0.01123	7.8931	-0.00021	0.8406

pH showed no detectable trend between 1964 and 2025.

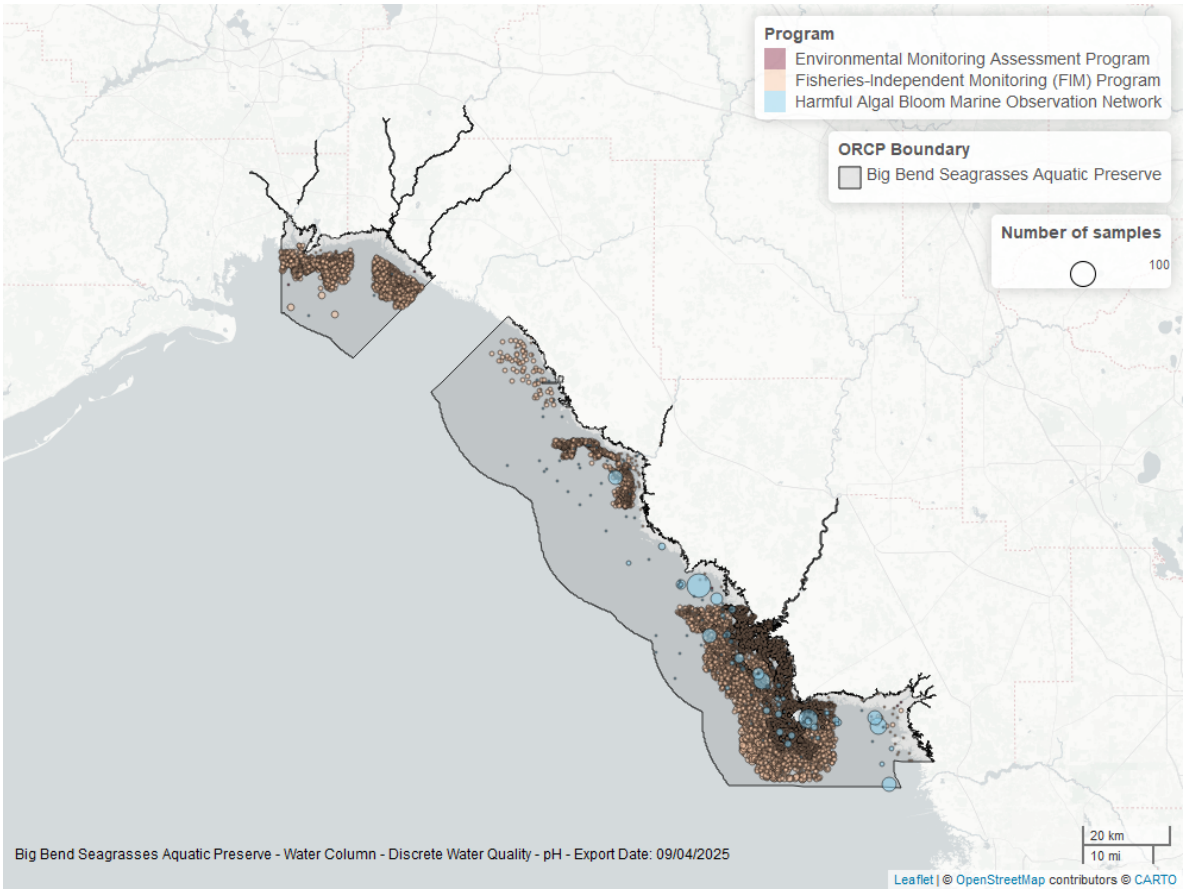

Figure 24: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

pH - Continuous

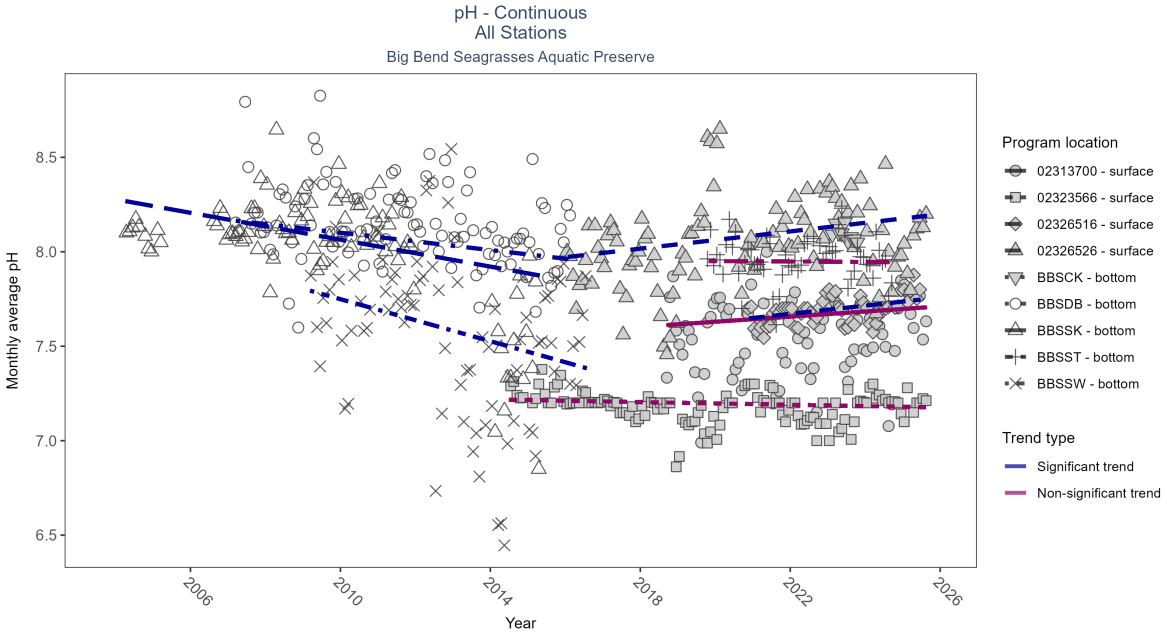

Figure 25: Scatter plot of monthly average pH over time at continuously monitored program locations. Each location is analyzed separately, with significant (blue) or non-significant (magenta) trend lines shown for time series that included five or more years of observations.

Table 13: Seasonal Kendall-Tau Results - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
02326516	Significantly increasing trend	1485	6	2020 - 2025	7.7	0.4	7.63	0.02	5e-04
02326526	Significantly increasing trend	3148	10	2016 - 2025	8.0	0.19	7.97	0.02	0.0158
02323566	No significant trend	3666	12	2014 - 2025	7.2	-0.13	7.22	0	0.0573
02313700	No significant trend	2388	8	2018 - 2025	7.6	0.16	7.6	0.01	0.1127
BBSDB	Significantly decreasing trend	250183	10	2007 - 2016	8.1	-0.28	8.17	-0.02	4e-04
BBSCK	Insufficient data to calculate trend	18185	1	2023 - 2023	8.1	-	-	-	-
BBSST	No significant trend	153335	6	2019 - 2024	8.0	-0.01	7.95	0	0.9412
BBSSK	Significantly decreasing trend	168278	10	2004 - 2015	8.1	-0.37	8.28	-0.04	0
BBSSW	Significantly decreasing trend	224733	8	2009 - 2016	7.6	-0.29	7.8	-0.06	0.0017

At two program locations, monthly average pH increased by 0.02 pH units per year. At three program locations, monthly average pH decreased between 0.02 and 0.06 pH units per year. No detectable change in monthly average pH was observed at three locations. There was insufficient data to fit a model for one location.

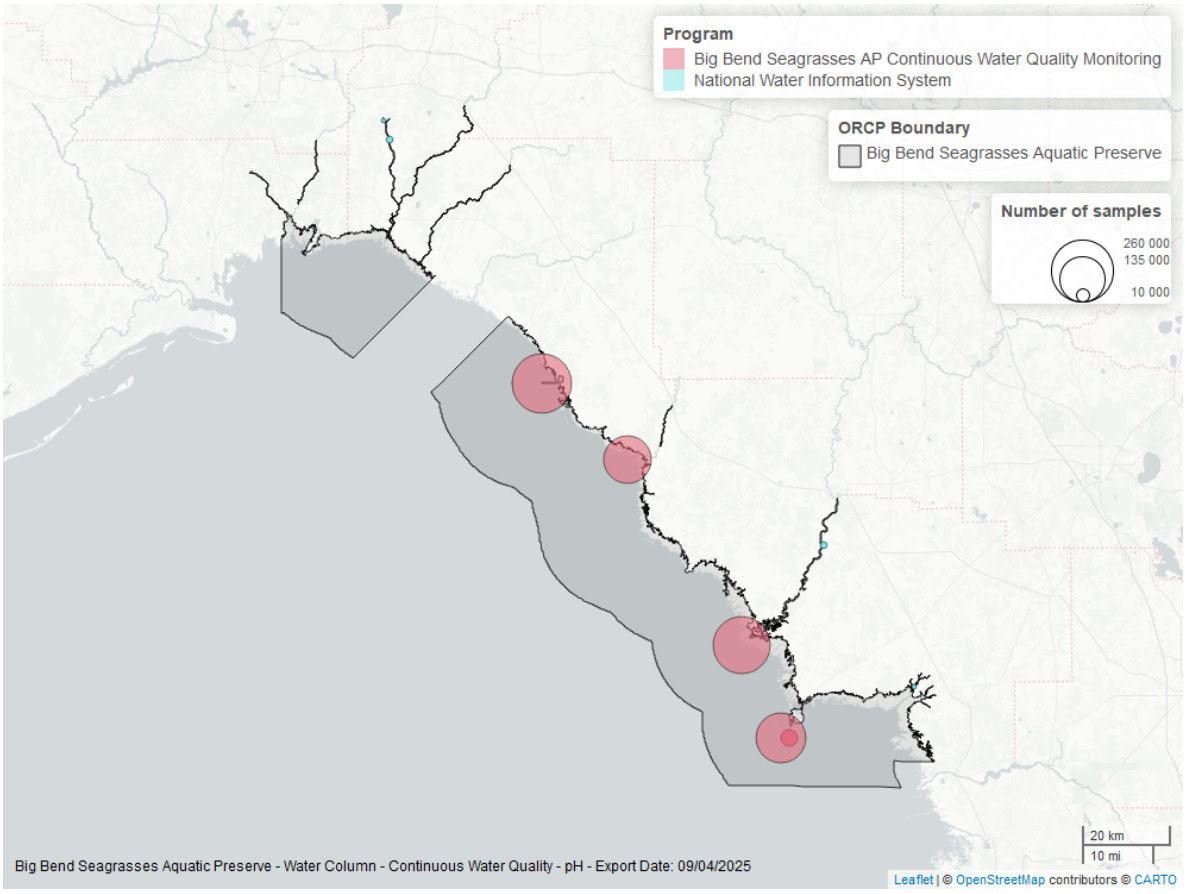

Figure 26: Map showing location of ph continuous water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Water Clarity

Turbidity - Discrete

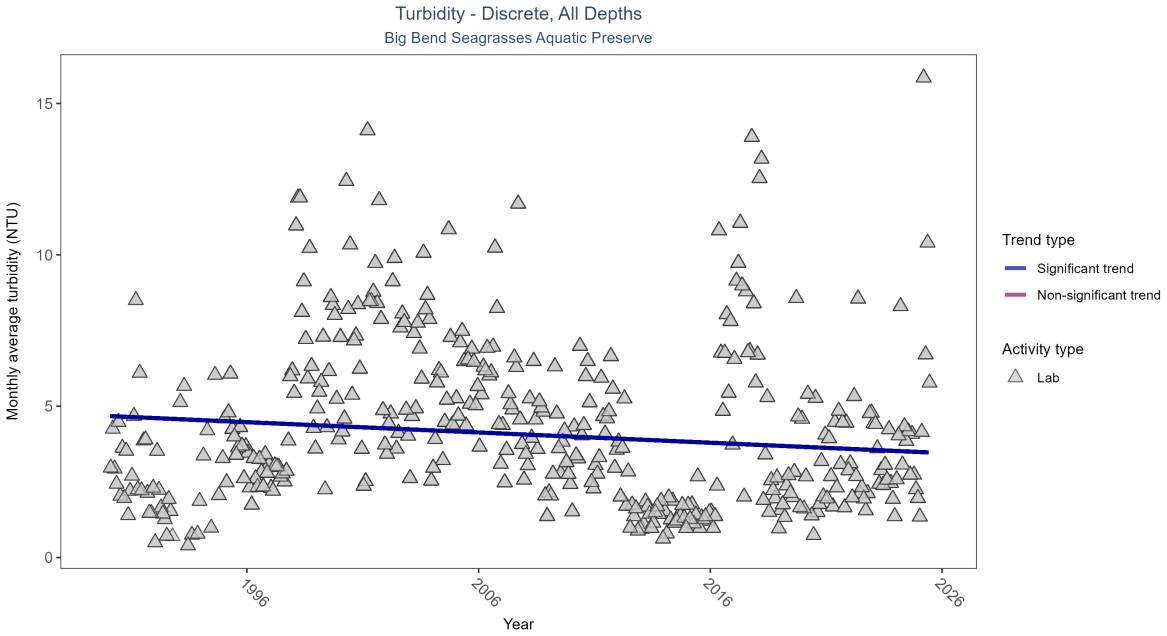

Figure 27: Scatter plot of monthly average turbidity over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only turbidity values measured in the laboratory (triangles) are included in the plot.

Table 14: 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	42959	36	1990 - 2025	3.4	-0.10162	4.67542	-0.03395	0.0033

Monthly average turbidity decreased by 0.03 NTU per year, indicating an increase in water clarity.

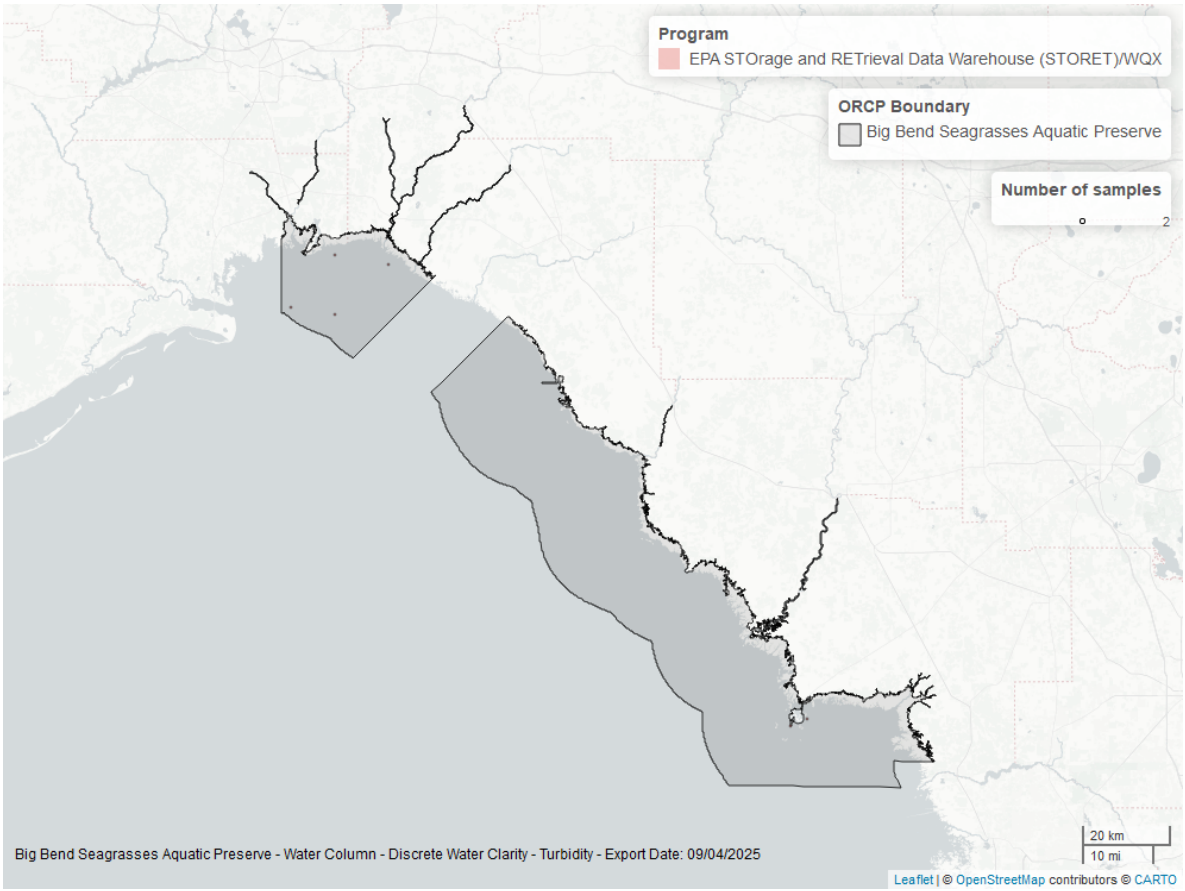

Figure 28: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Turbidity - Continuous

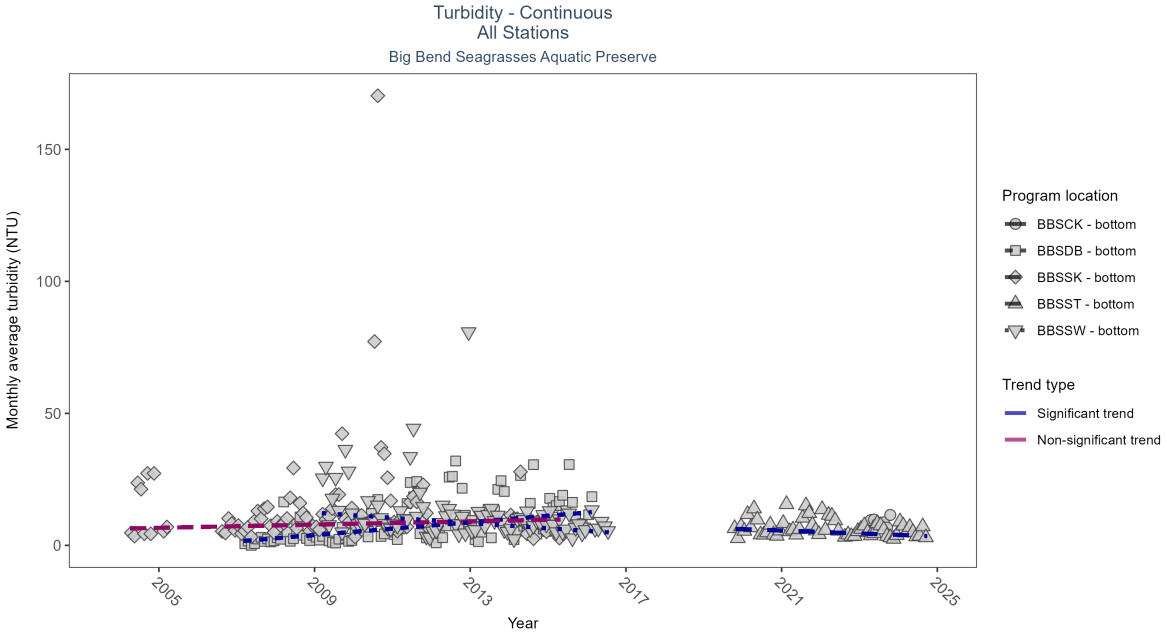

Figure 29: Scatter plot of monthly average turbidity over time at continuously monitored program locations. Each location is analyzed separately, with significant (blue) or non-significant (magenta) trend lines shown for time series that included five or more years of observations.

Table 15: Seasonal Kendall-Tau Results - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
BBSDB	Significantly increasing trend	224613	10	2007 - 2016	1	0.49	1.47	1.22	0
BBSCK	Insufficient data to calculate trend	23243	1	2023 - 2023	7	-	-	-	-
BBSSK	No significant trend	165043	10	2004 - 2015	5	0.11	6.35	0.3	0.1867
BBSST	Significantly decreasing trend	157393	6	2019 - 2024	4	-0.31	6.73	-0.55	0.0115
BBSSW	Significantly decreasing trend	202699	8	2009 - 2016	6	-0.35	12.41	-0.99	1e-04

At one program location, monthly average turbidity increased by 1.22 NTU per year. At two program locations, monthly average turbidity decreased by 0.55 NTU per year at one site and by 0.99 NTU per year at the other. No detectable change in monthly average turbidity was observed at one location. There was insufficient data to fit a model for one location.

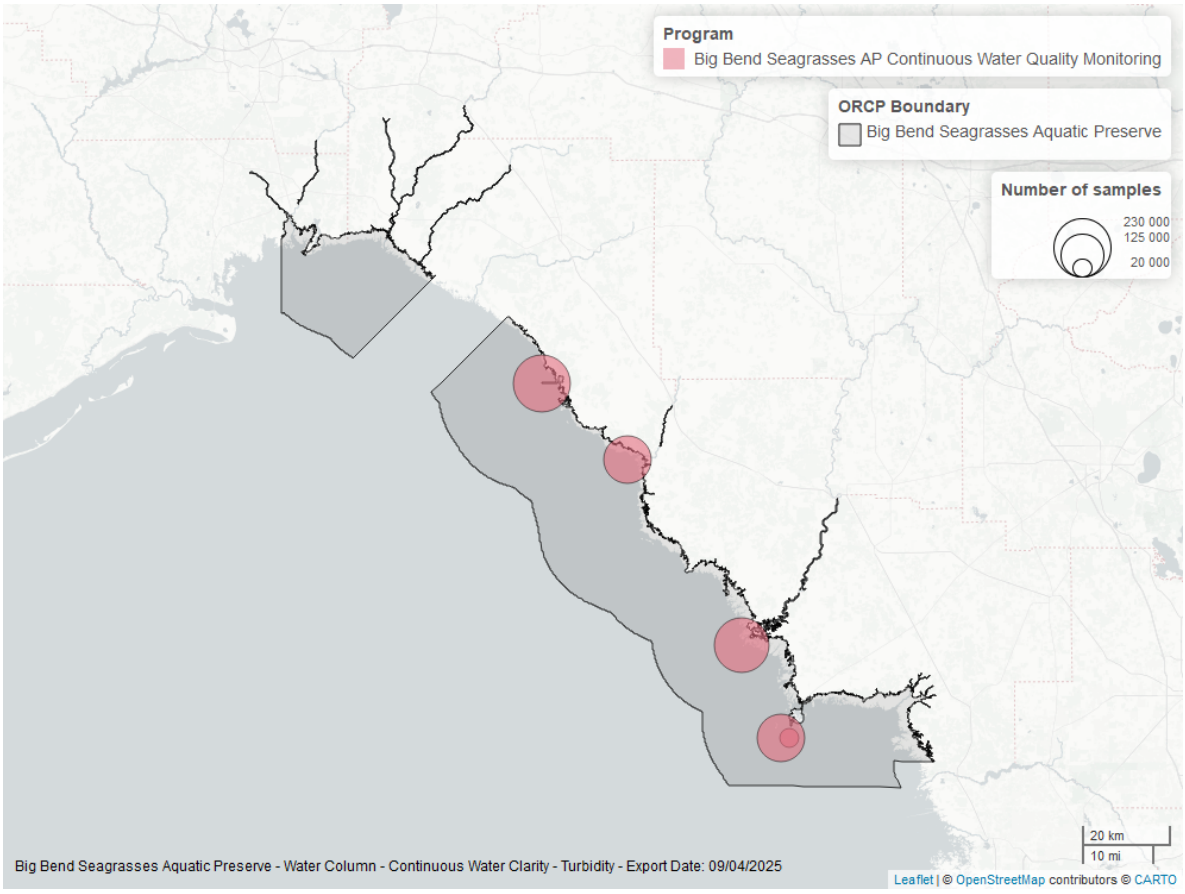

Figure 30: Map showing location of turbidity continuous water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Total Suspended Solids - Discrete

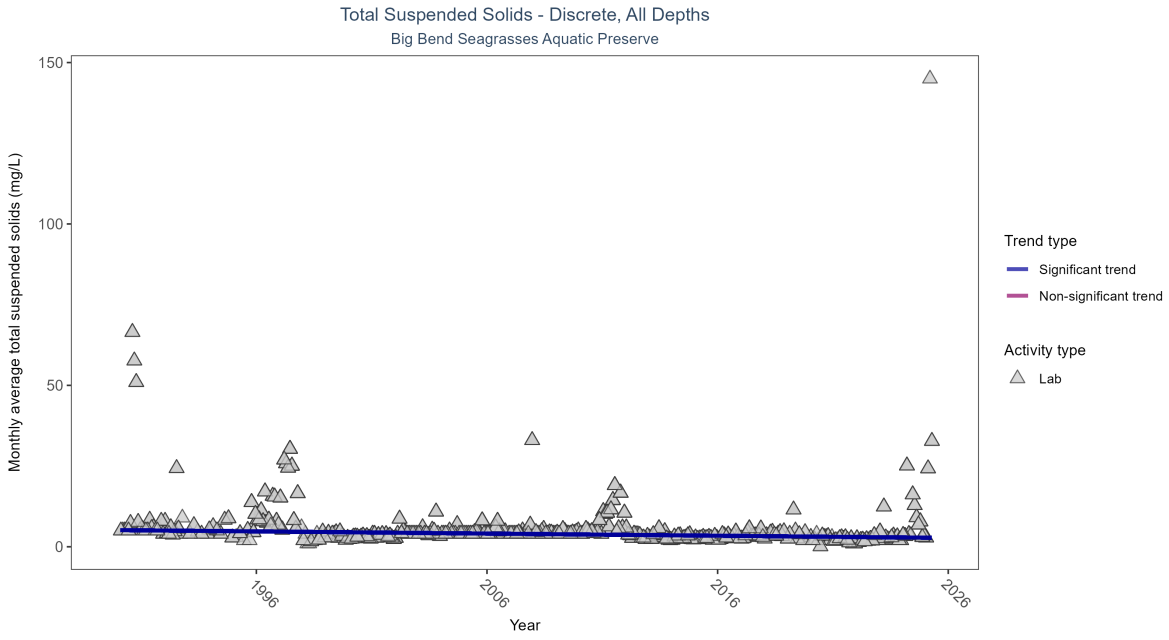

Figure 31: Scatter plot of monthly average total suspended solids (TSS) over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only TSS values obtained from laboratory analyses (triangles) are included in the plot.

Table 16: 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	3003	36	1990 - 2025	4	-0.30015	5.15595	-0.06667	0

Monthly average total suspended solids decreased by 0.07 mg/L per year, indicating an increase in water clarity.

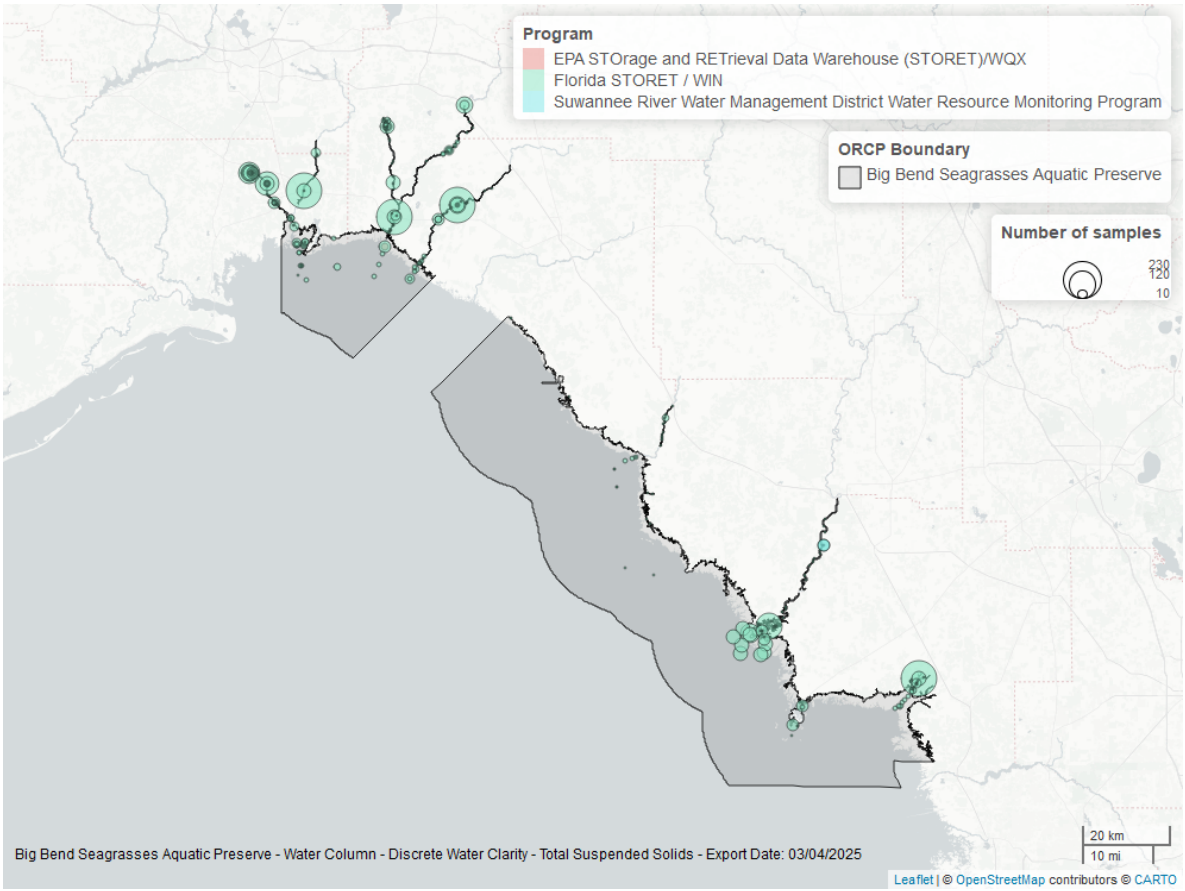

Figure 32: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Chlorophyll a, Uncorrected for Pheophytin - Discrete

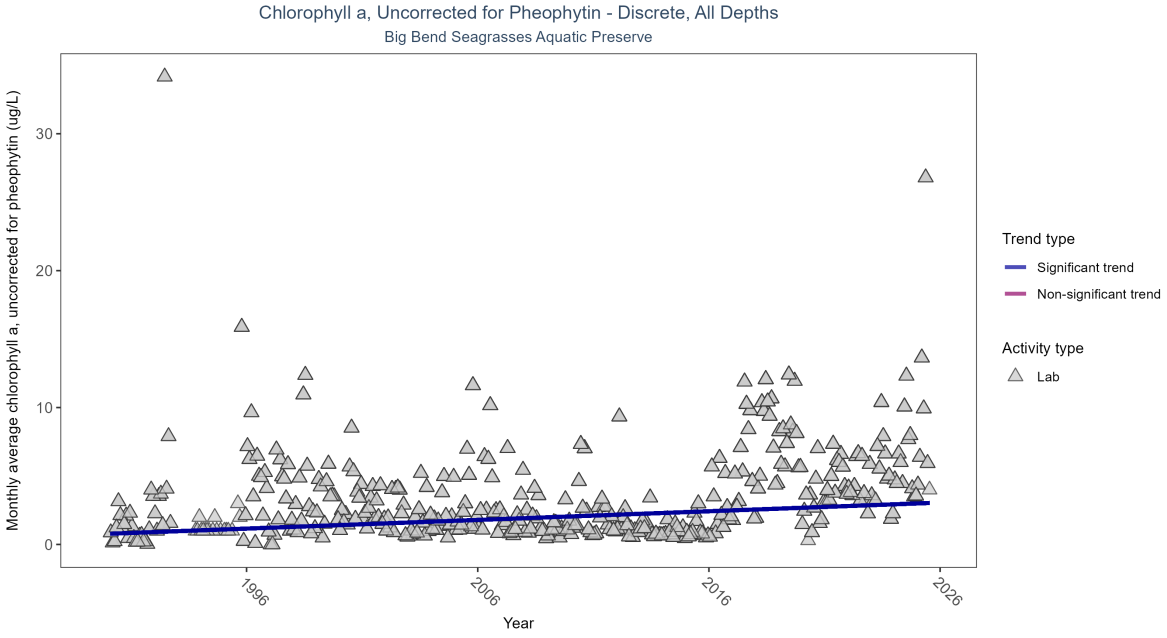

Figure 33: Scatter plot of monthly average levels of chlorophyll a, uncorrected for pheophytin, over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only laboratory-analyzed chlorophyll a (triangles) is included in the plot.

Table 17: 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 increasing trend	6287	36	1990 - 2025	1.2	0.22213	0.7769	0.06333	0

Monthly average chlorophyll a, uncorrected for pheophytin, increased by 0.06 µg/L per year, indicating a decrease in water clarity.

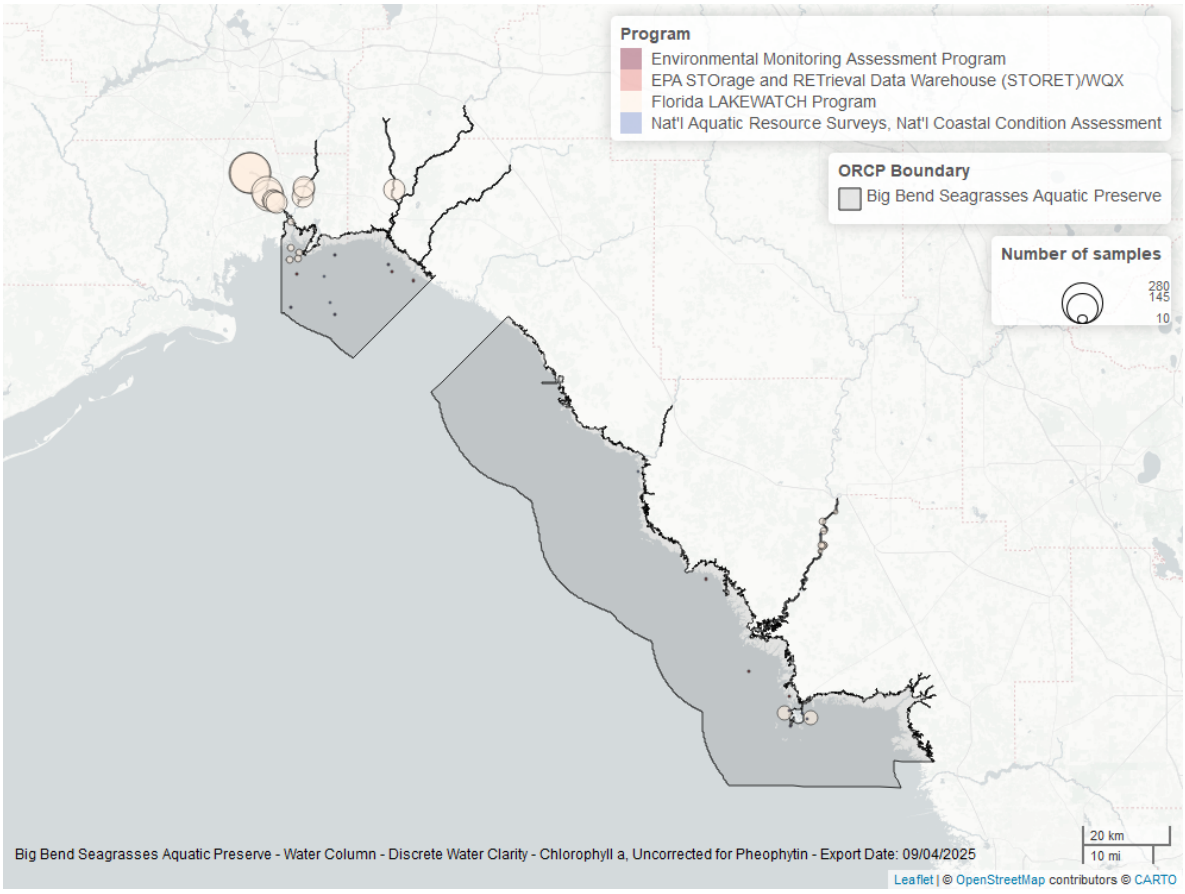

Figure 34: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Chlorophyll a, Corrected for Pheophytin - Discrete

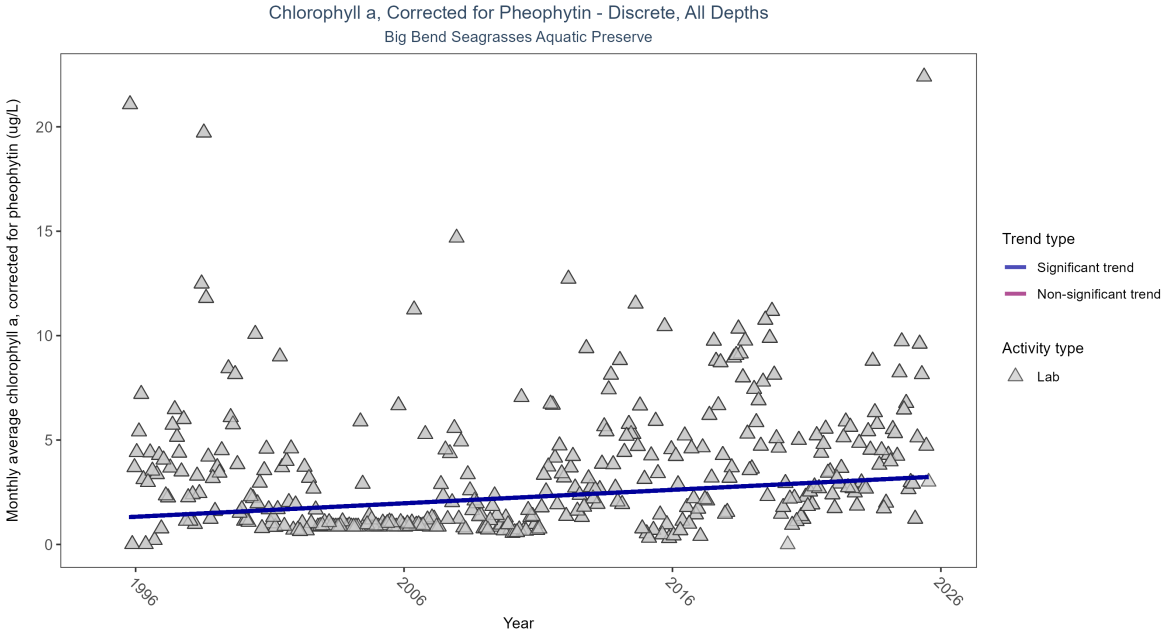

Figure 35: Scatter plot of monthly average levels of chlorophyll a, corrected for pheophytin, over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only laboratory-analyzed chlorophyll a (triangles) is included in the plot.

Table 18: 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 increasing trend	4920	31	1995 - 2025	1.1	0.18637	1.26069	0.06452	0

Monthly average chlorophyll a, corrected for pheophytin, increased by 0.06 µg/L per year, indicating a decrease in water clarity.

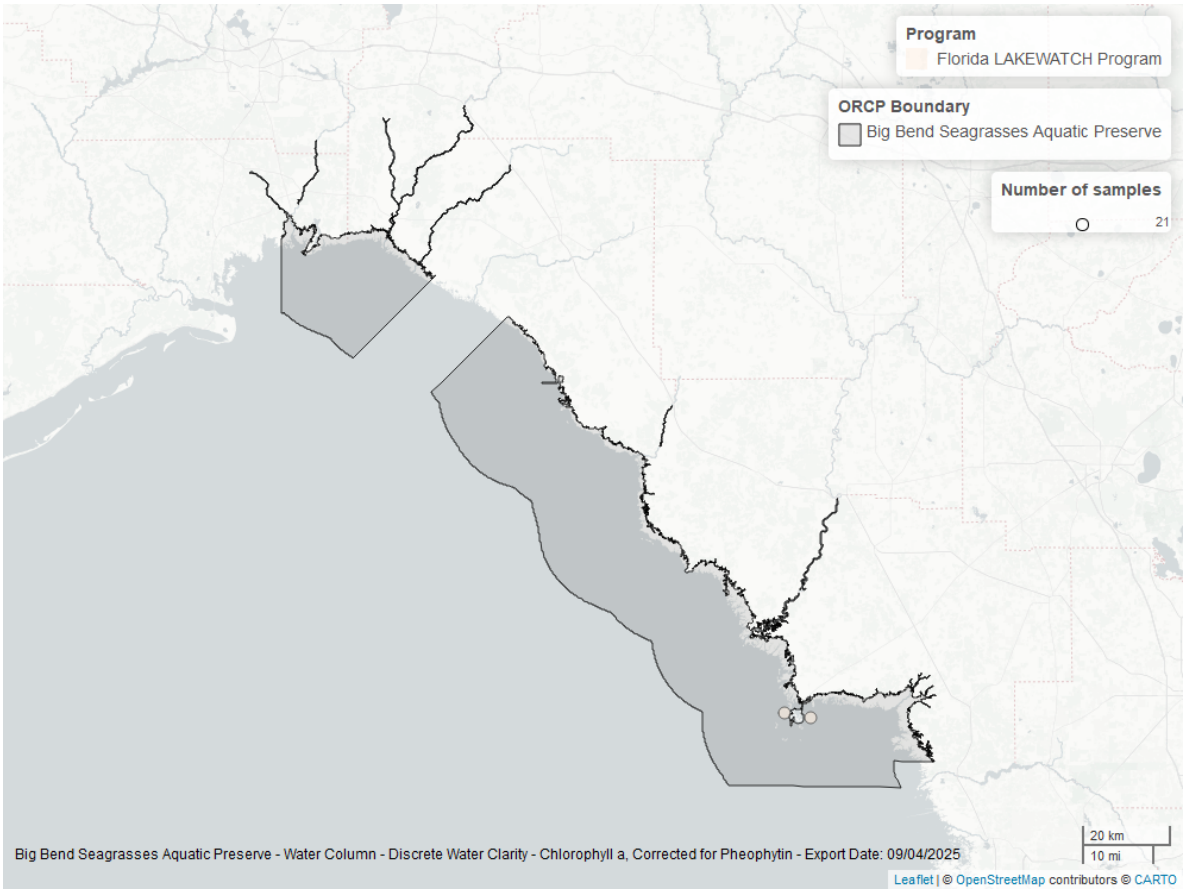

Figure 36: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Secchi Depth - Discrete

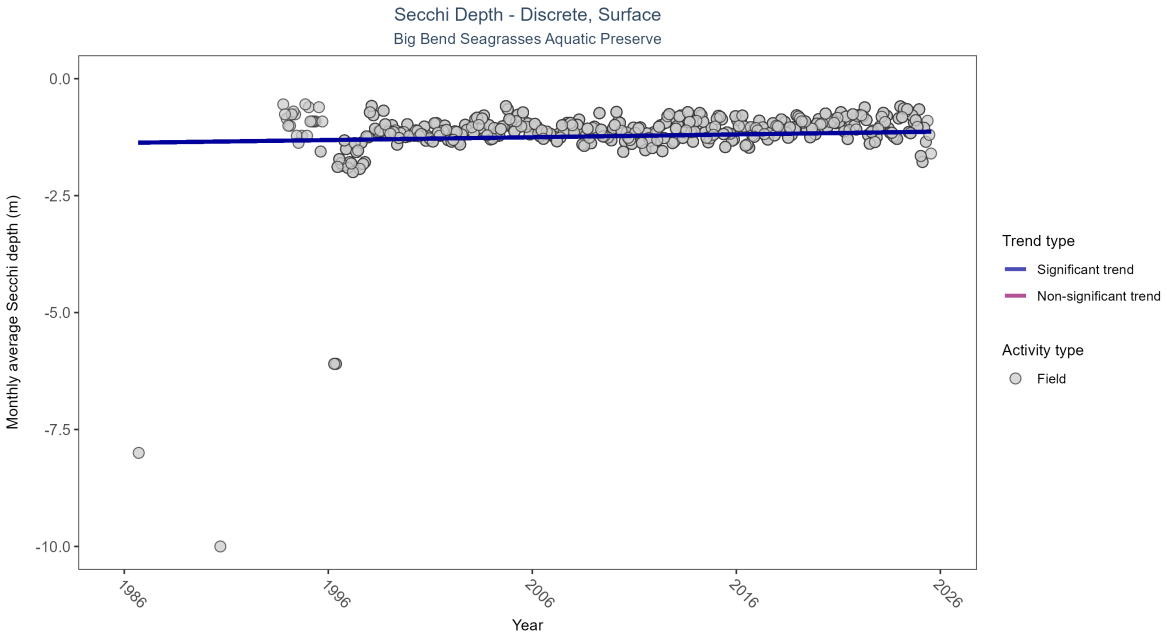

Figure 37: Scatter plot of monthly average Secchi depth over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Secchi depth is only measured in the field (circles).

Table 19: 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	Significantly increasing trend	62713	37	1986 - 2025	-0.9	0.12827	-1.37205	0.00602	4e-04

Monthly average Secchi depth became shallower by 0.01 m per year, indicating a decrease in water clarity.

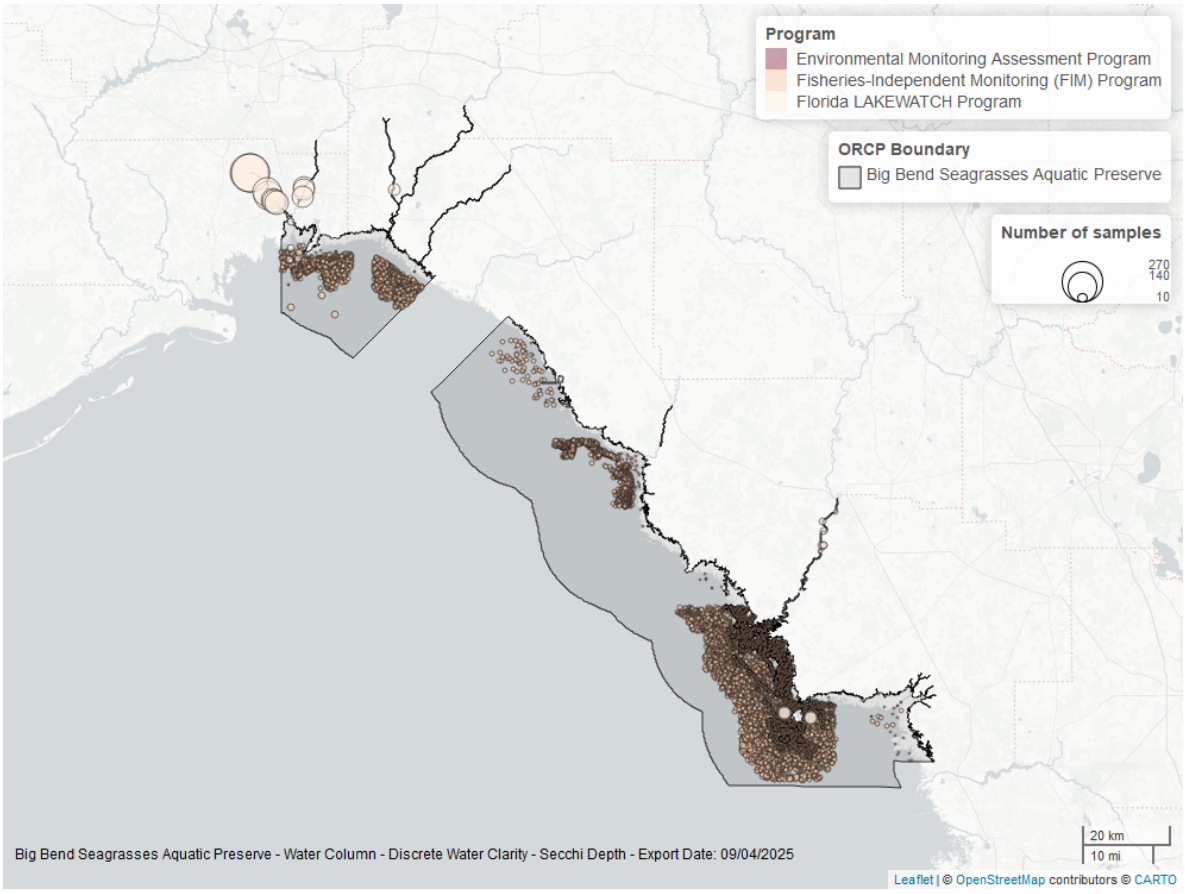

Figure 38: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.

Colored Dissolved Organic Matter - Discrete

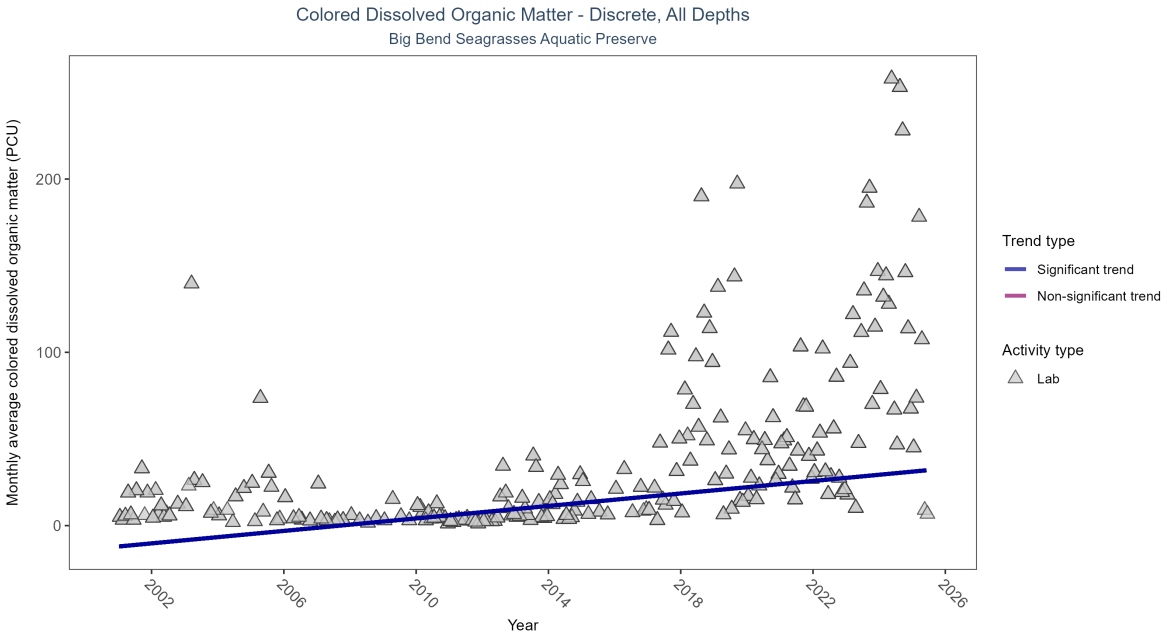

Figure 39: Scatter plot of monthly average colored dissolved organic matter (CDOM) over time. If the time series included ten or more years of discrete observations, a significant (blue) or non-significant (magenta) trend line is also shown. Only laboratory-analyzed CDOM (triangles) is included in the plot.

Table 20: 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	Significantly increasing trend	2889	25	2001 - 2025	17.6	0.4847	-12.05154	1.8	0

Monthly average colored dissolved organic matter increased by 1.8 PCU per year, indicating a decrease in water clarity.

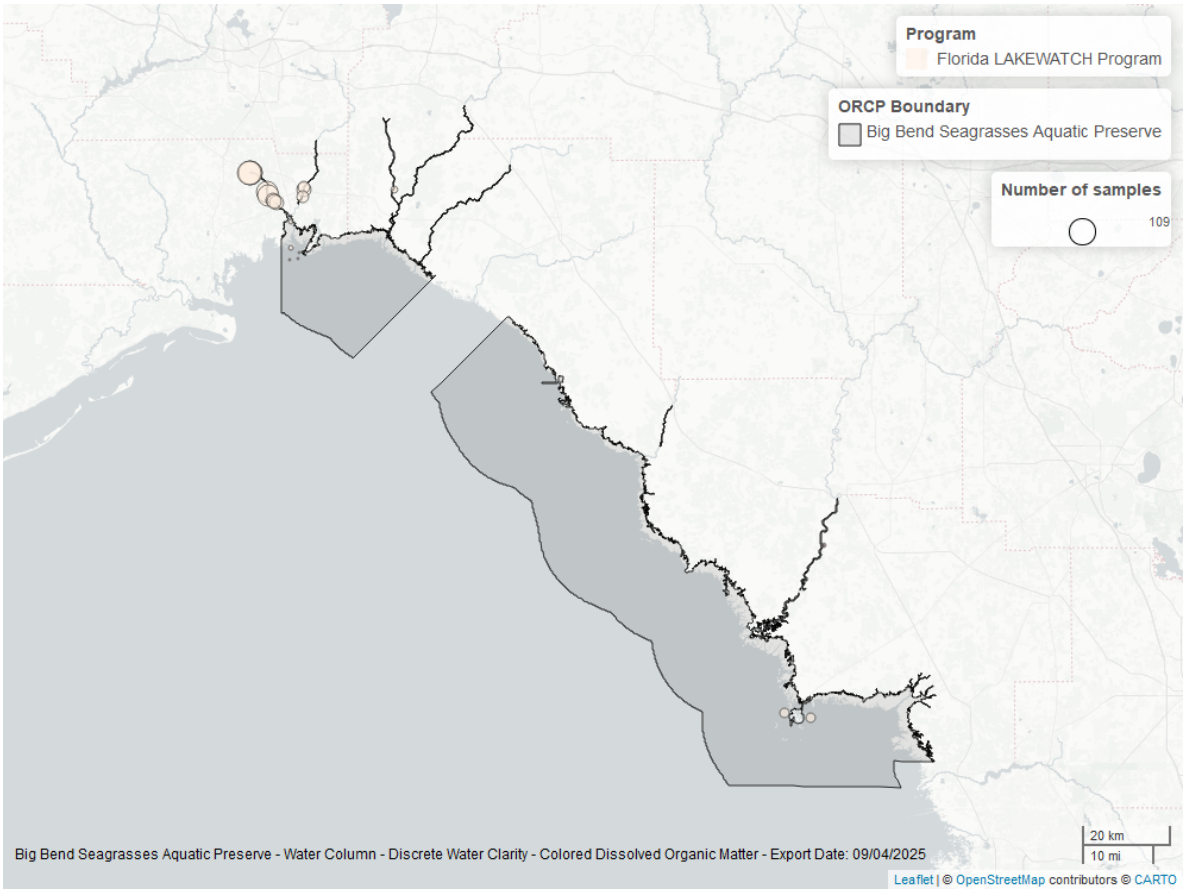

Figure 40: Map showing location of discrete water quality sampling locations within the boundaries of *Big Bend Seagrasses Aquatic Preserve*. The bubble size on the maps above reflect the amount of data available at each sampling site.