Lignumvitae Key Aquatic Preserve

SEACAR Water Quality Analysis

Last compiled on 06 March, 2025

Contents

Indicators

Nutrients

Total Nitrogen - Discrete

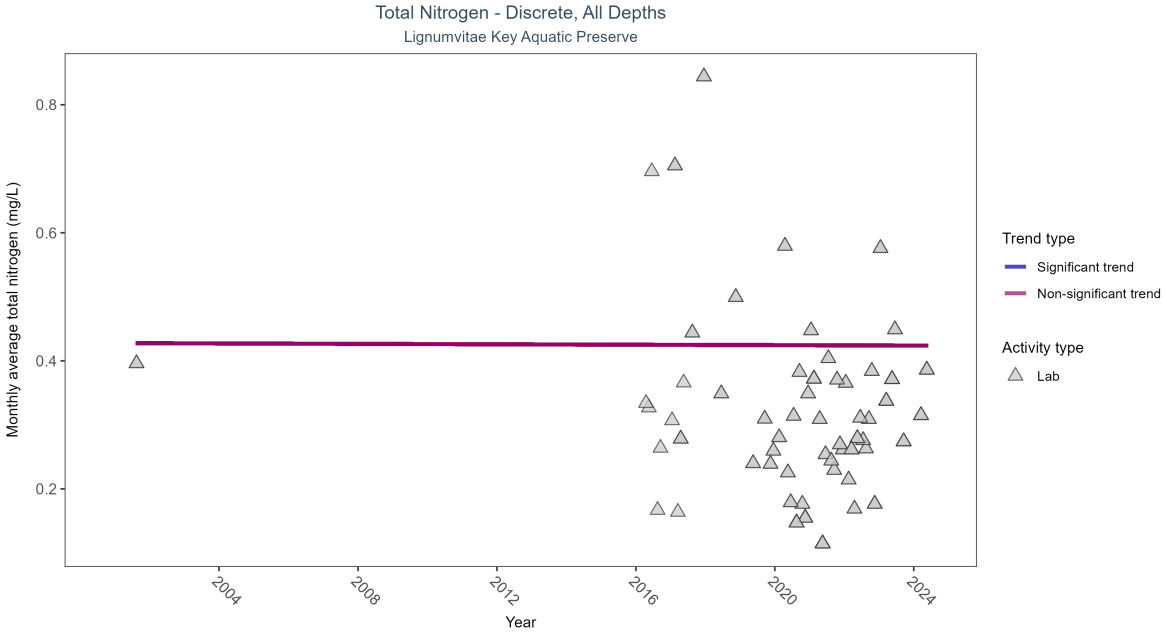
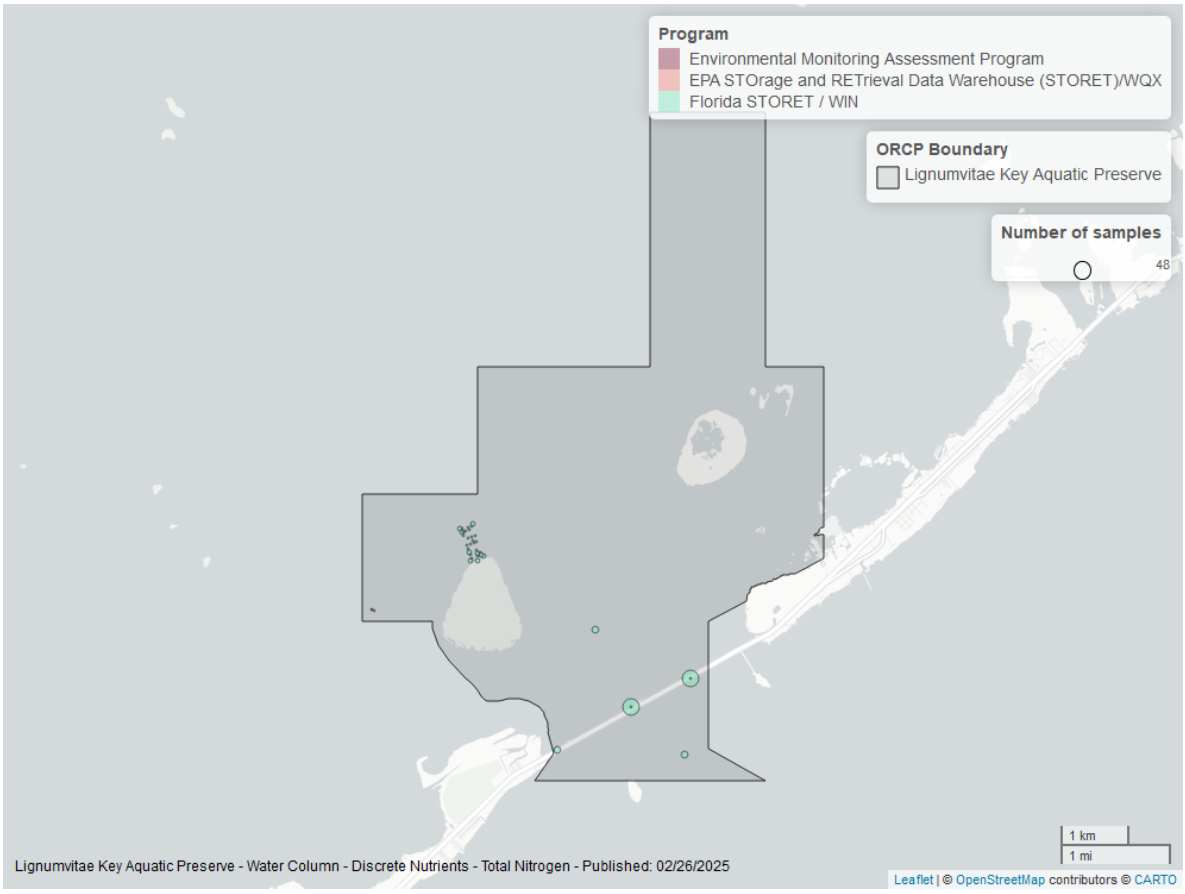


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

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	188	10	2001 - 2024	0.264	-0.0026	0.42769	-0.00017	1.0000


Program
Environmental Monitoring Assessment Program
EPA STOrage and RETrieval Data Warehouse (STORET)/WQX
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
48
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Nutrients - Total Nitrogen - Published: 02/26/2025
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Total Phosphorus - Discrete

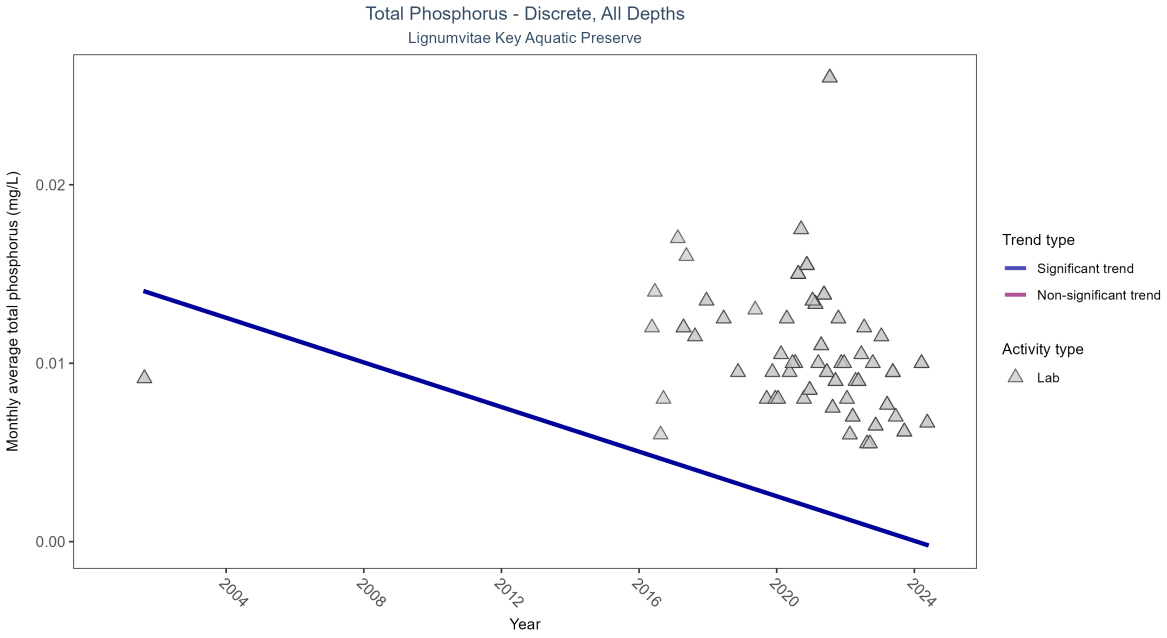
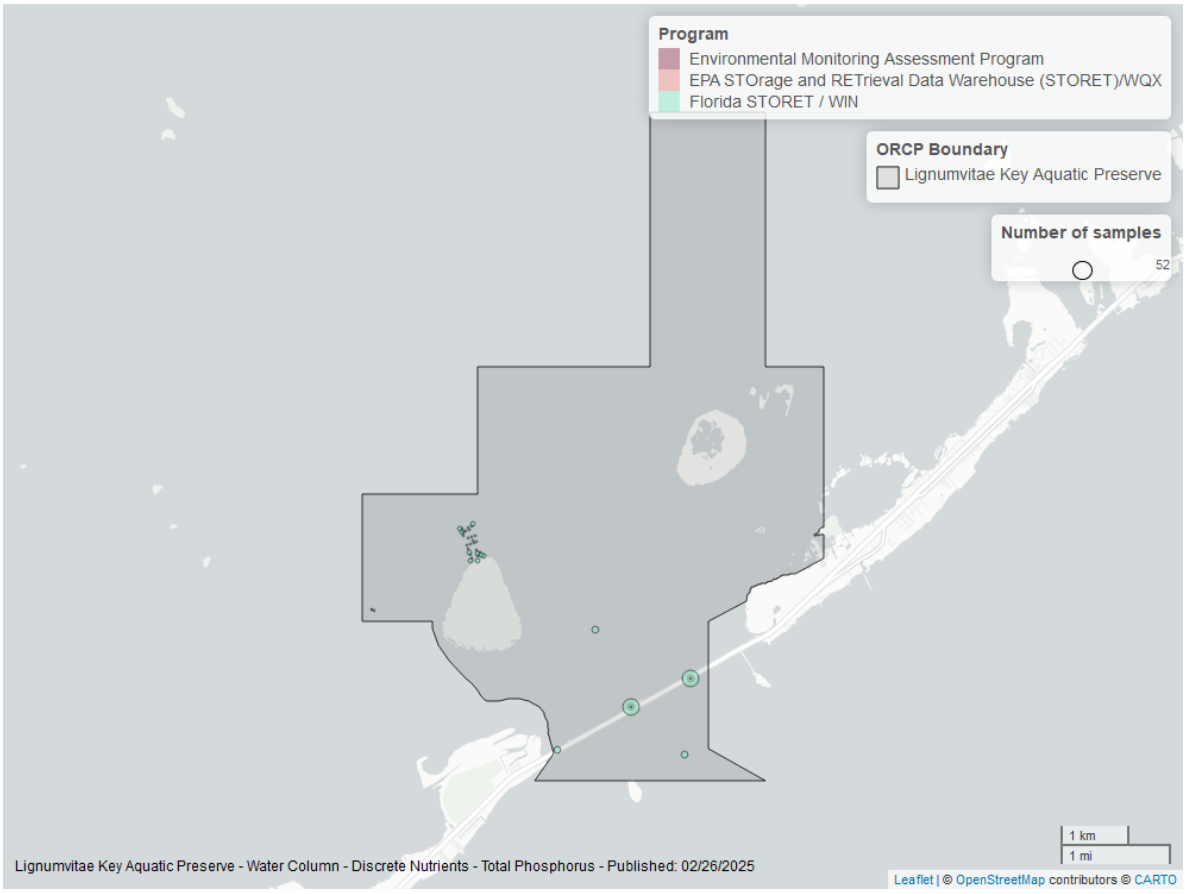


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	204	10	2001 - 2024	0.01	-0.2337	0.01442	-0.00063	0.0138


Program
Environmental Monitoring Assessment Program
EPA STOrage and RETrieval Data Warehouse (STORET)/WQX
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
52
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Nutrients - Total Phosphorus - Published: 02/26/2025
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Water Quality

Dissolved Oxygen - Discrete

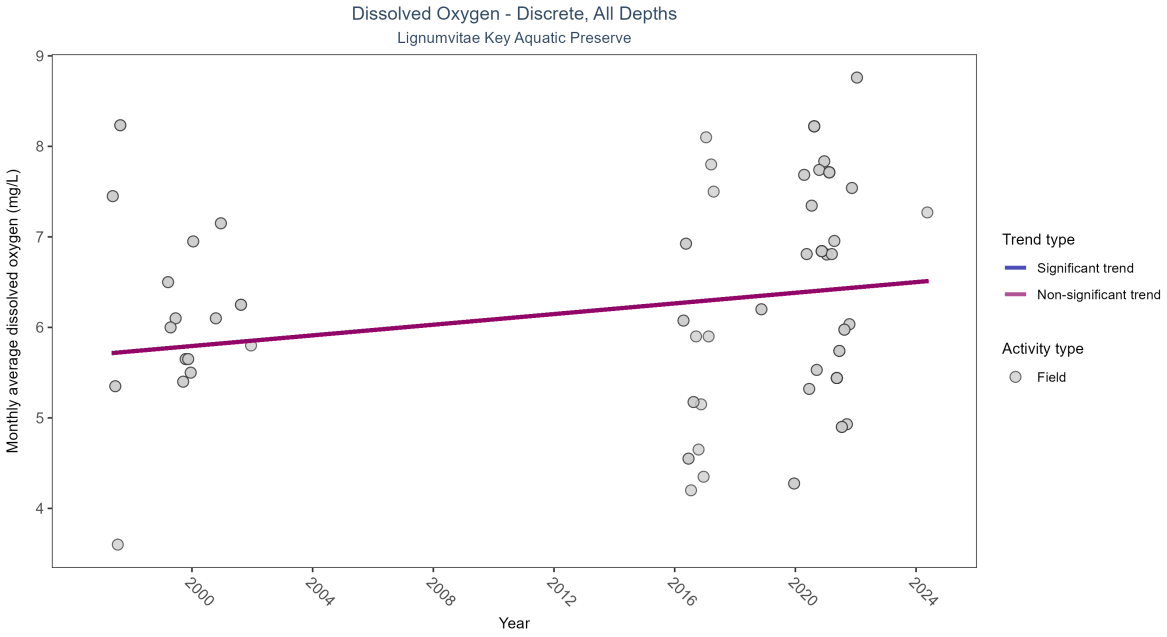
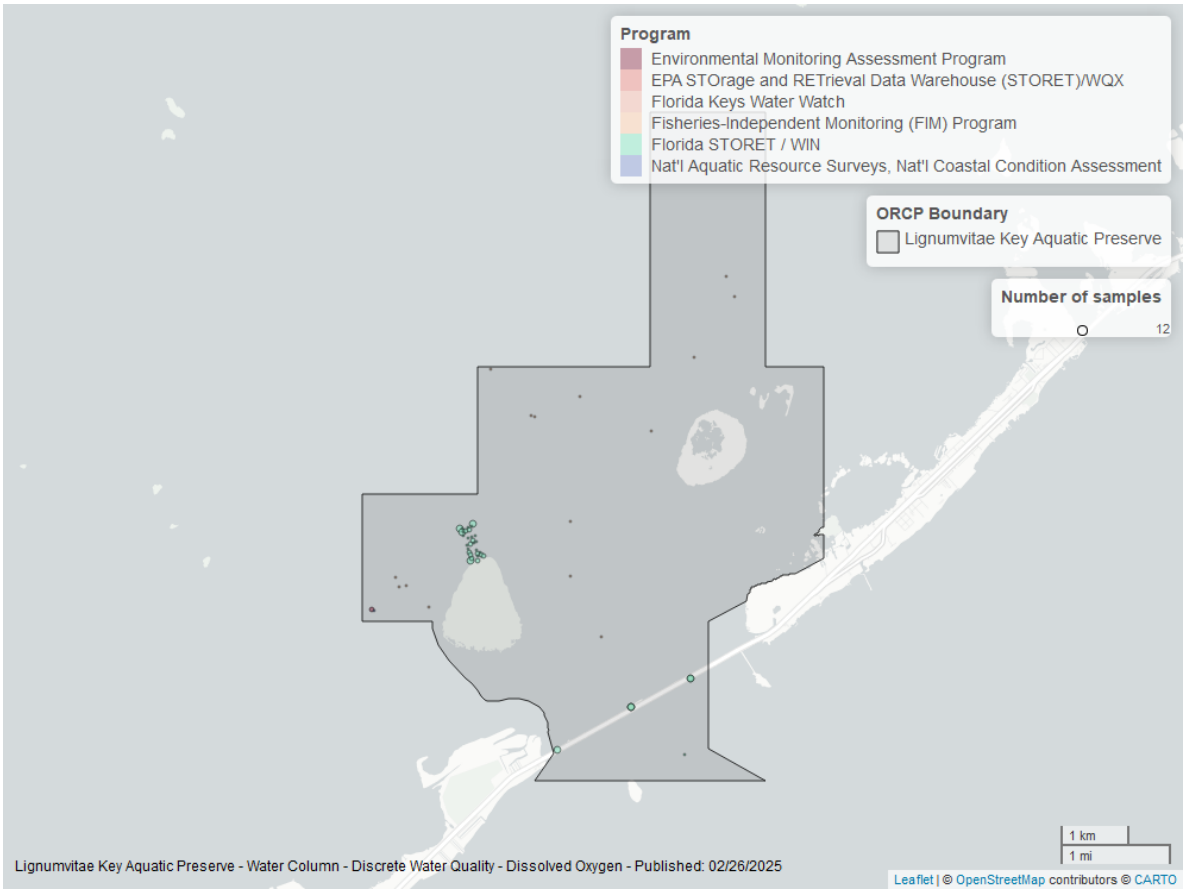


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

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	216	12	1997 - 2024	6.795	0.1748	5.70592	0.02941	0.3413


Program
Environmental Monitoring Assessment Program
EPA STOrage and RETrieval Data Warehouse (STORET)/WQX
Florida Keys Water Watch
Fisheries-Independent Monitoring (FIM) Program
Florida STORET / WIN
Nat'l Aquatic Resource Surveys, Nat'l Coastal Condition Assessment
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
12
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Quality - Dissolved Oxygen - Published: 02/26/2025
1 km
1 mi
Leaflet | © OpenStreetMap contributors © CARTO

Dissolved Oxygen - Continuous

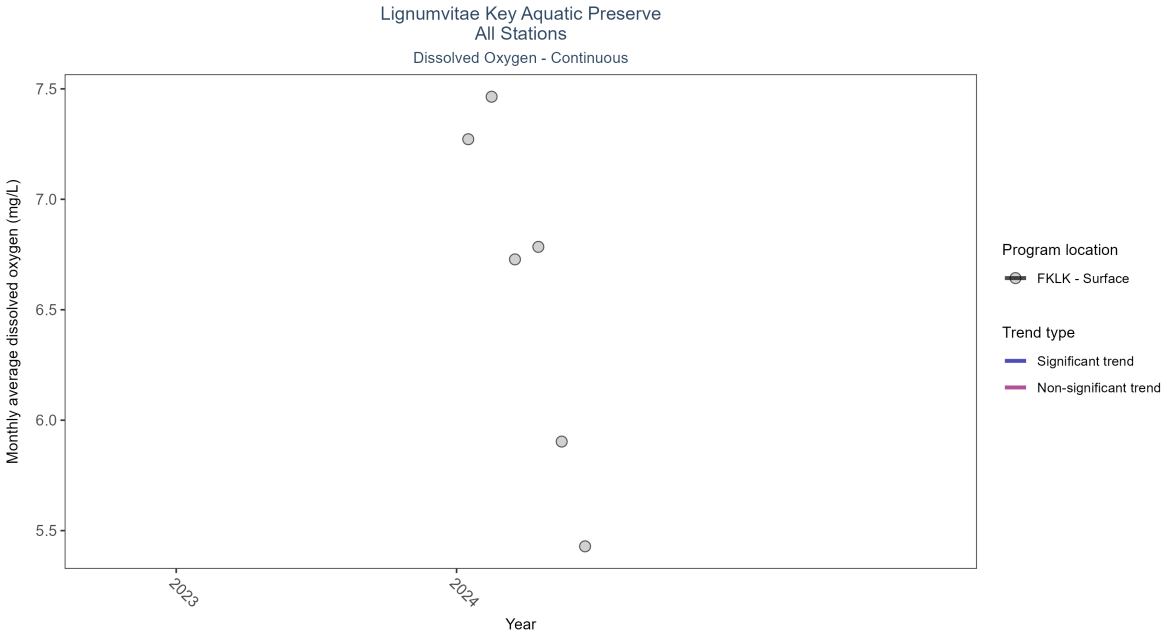
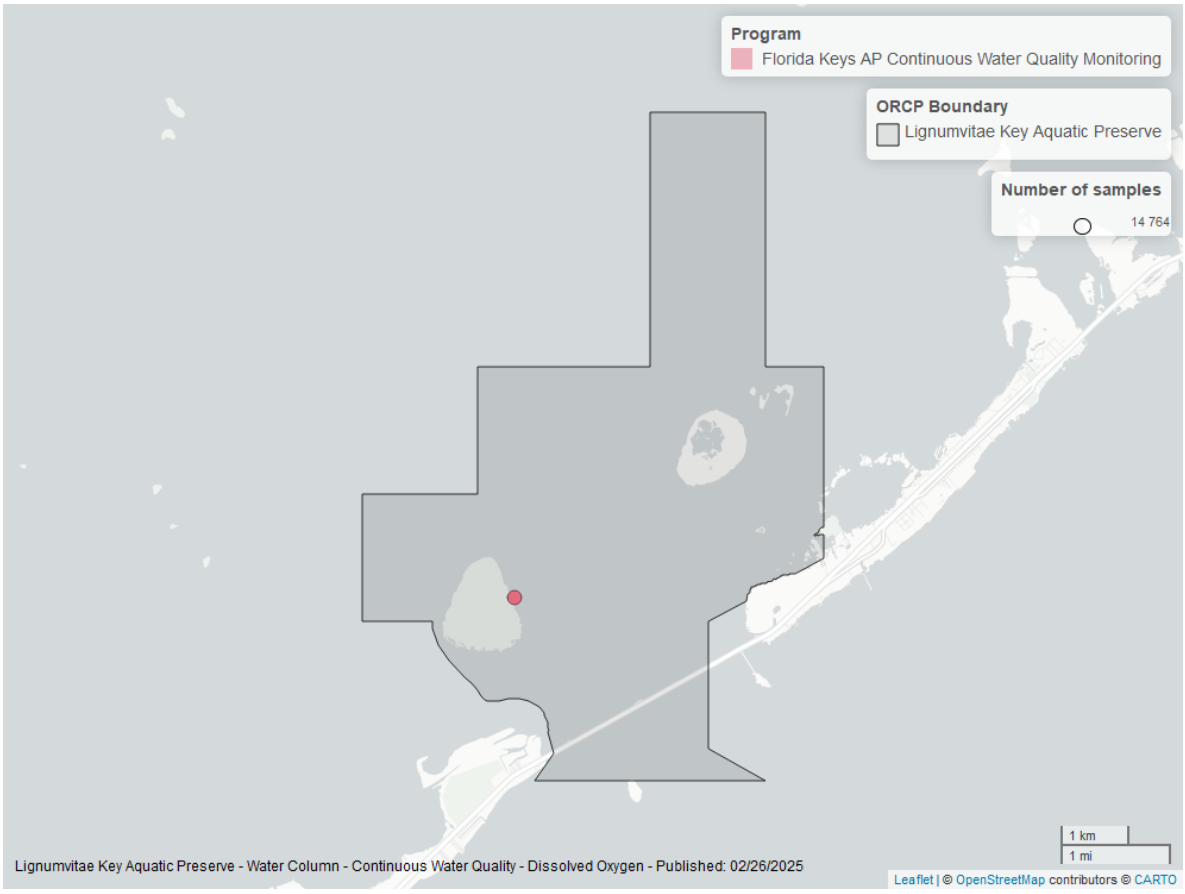


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	14764	1	2024 - 2024	6.4	-	-	-	NA


Program
Florida Keys AP Continuous Water Quality Monitoring
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
14 764
Lignumvitae Key Aquatic Preserve - Water Column - Continuous Water Quality - Dissolved Oxygen - Published: 02/26/2025
1 km
1 mi
Leaflet | © OpenStreetMap contributors © CARTO

Dissolved Oxygen Saturation - Discrete

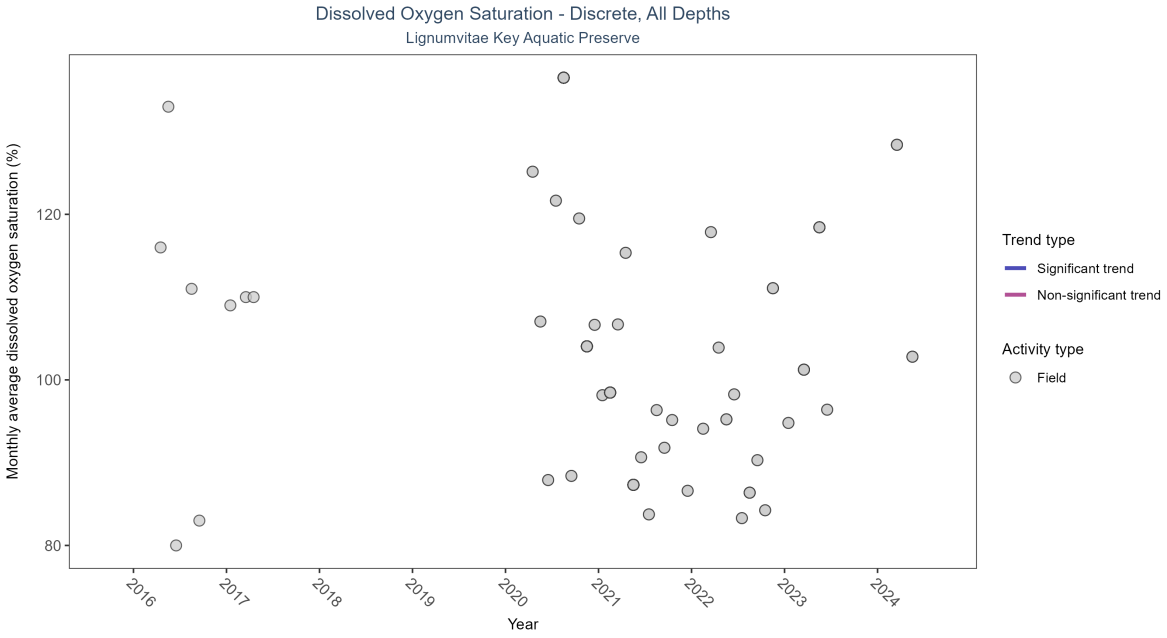
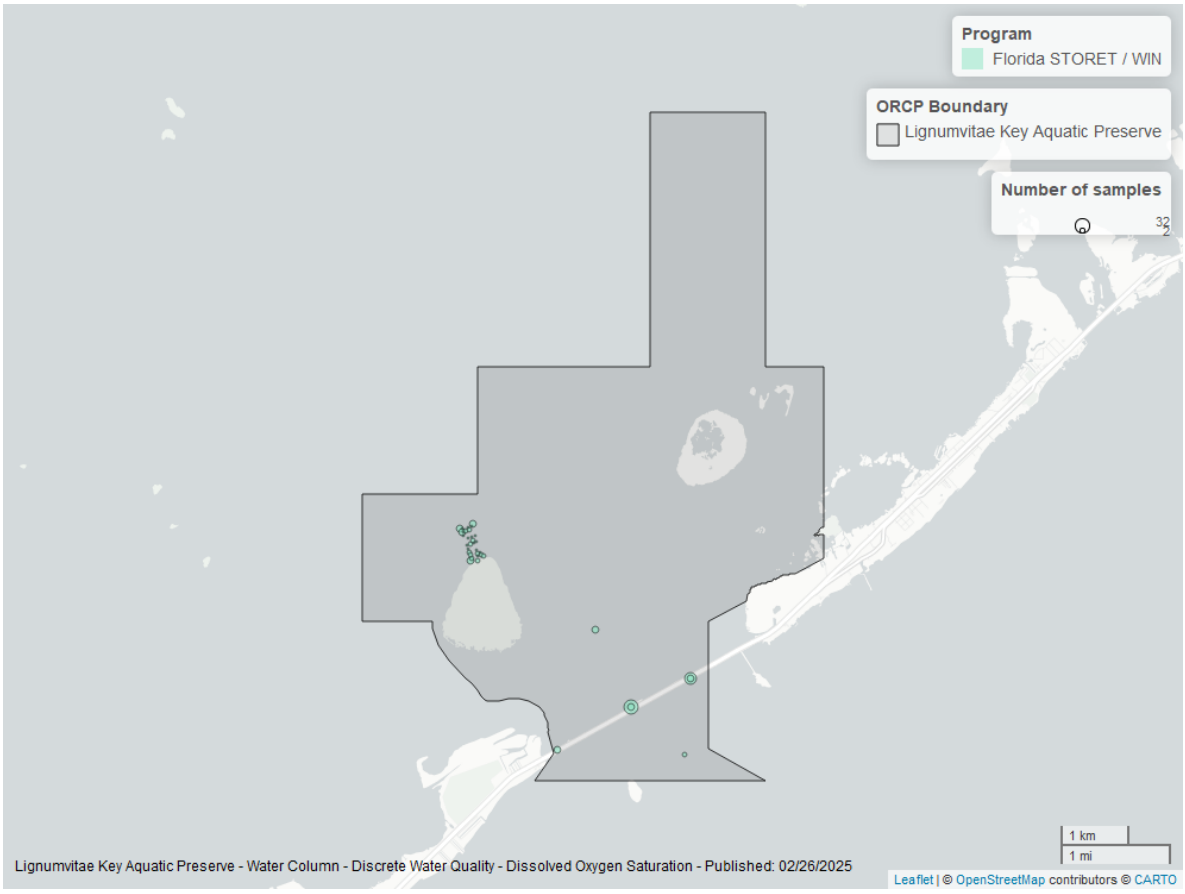


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Insufficient data to calculate trend	207	7	2016 - 2024	101.3	-	-	-	NA


Program
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
32
2
1 km
1 mi
Leaflet | © OpenStreetMap contributors © CARTO
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Quality - Dissolved Oxygen Saturation - Published: 02/26/2025

Dissolved Oxygen Saturation - Continuous

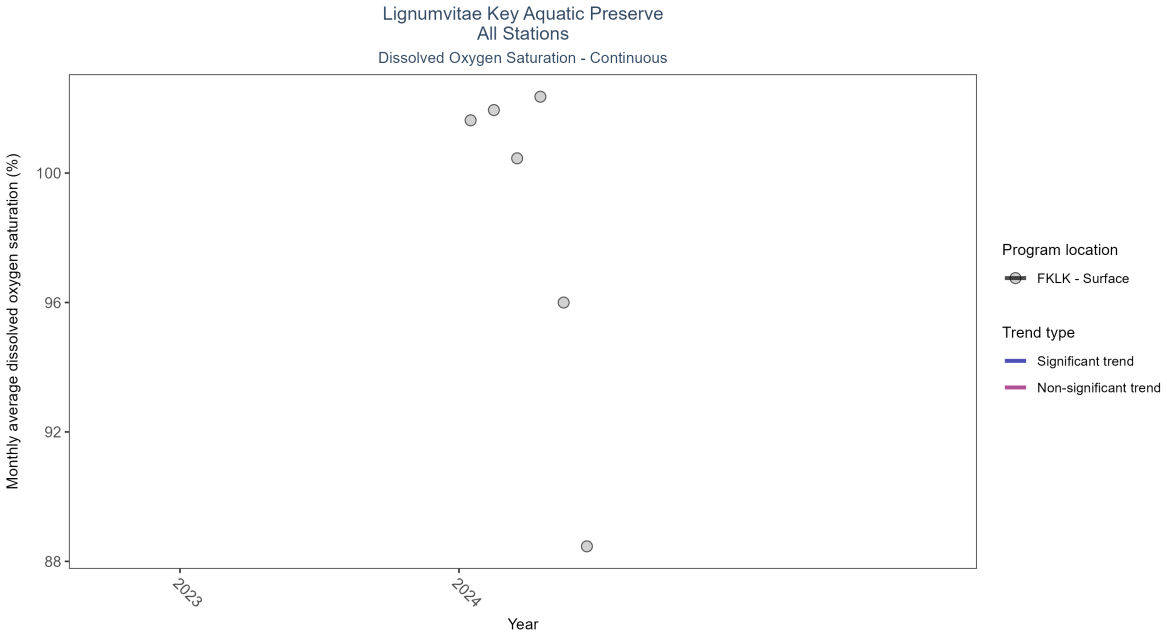
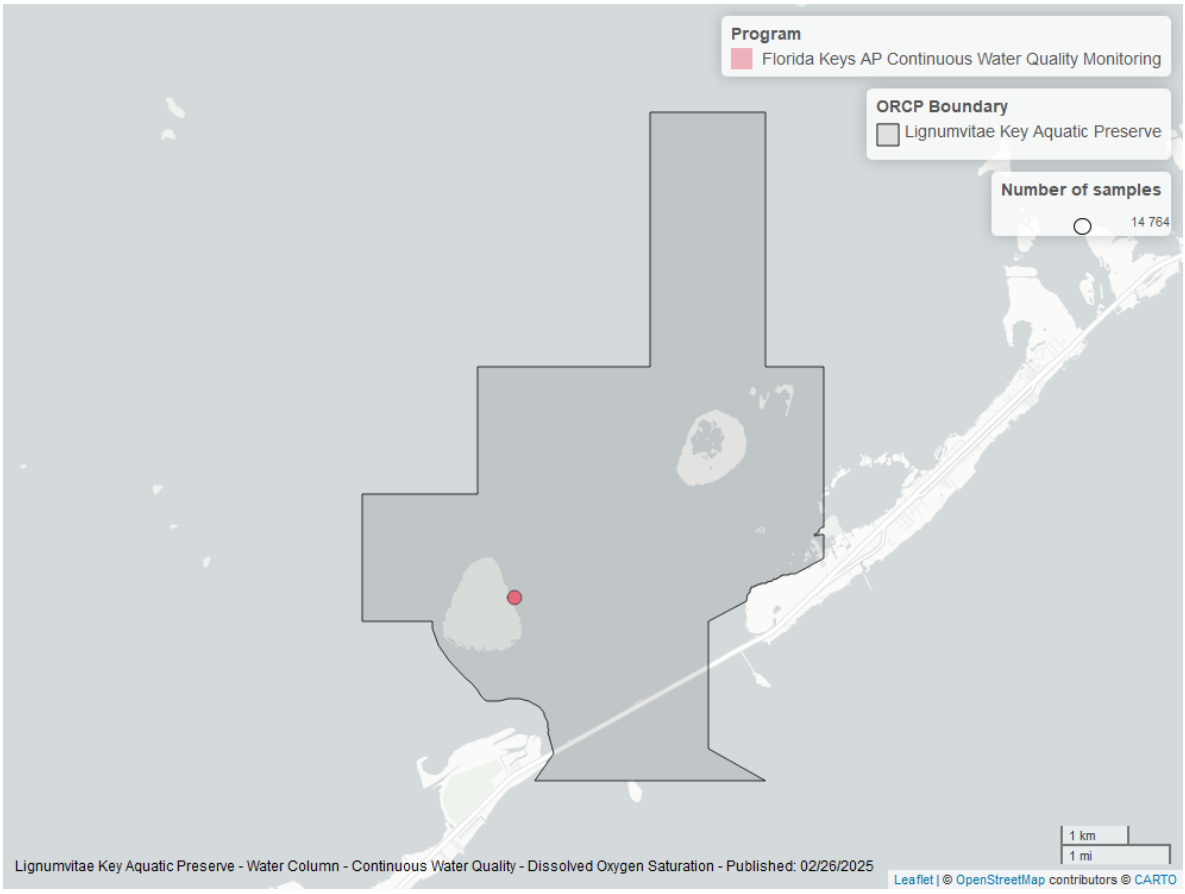


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	14764	1	2024 - 2024	93.1	-	-	-	NA


Program
Florida Keys AP Continuous Water Quality Monitoring
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
14 764
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Continuous Water Quality - Dissolved Oxygen Saturation - Published: 02/26/2025
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Salinity - Discrete

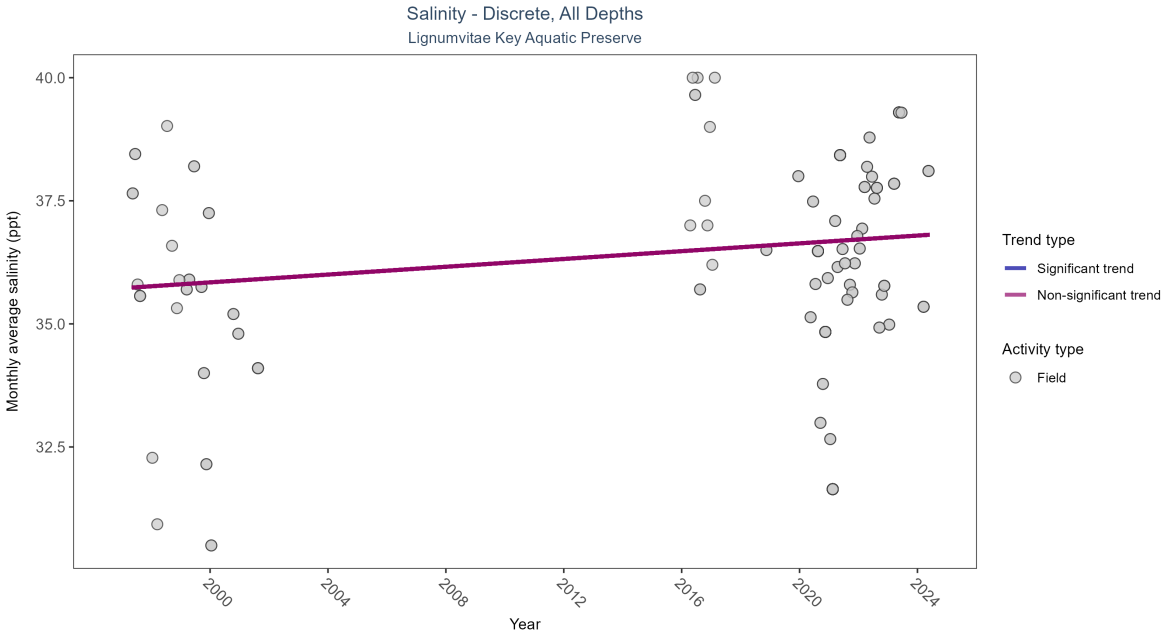
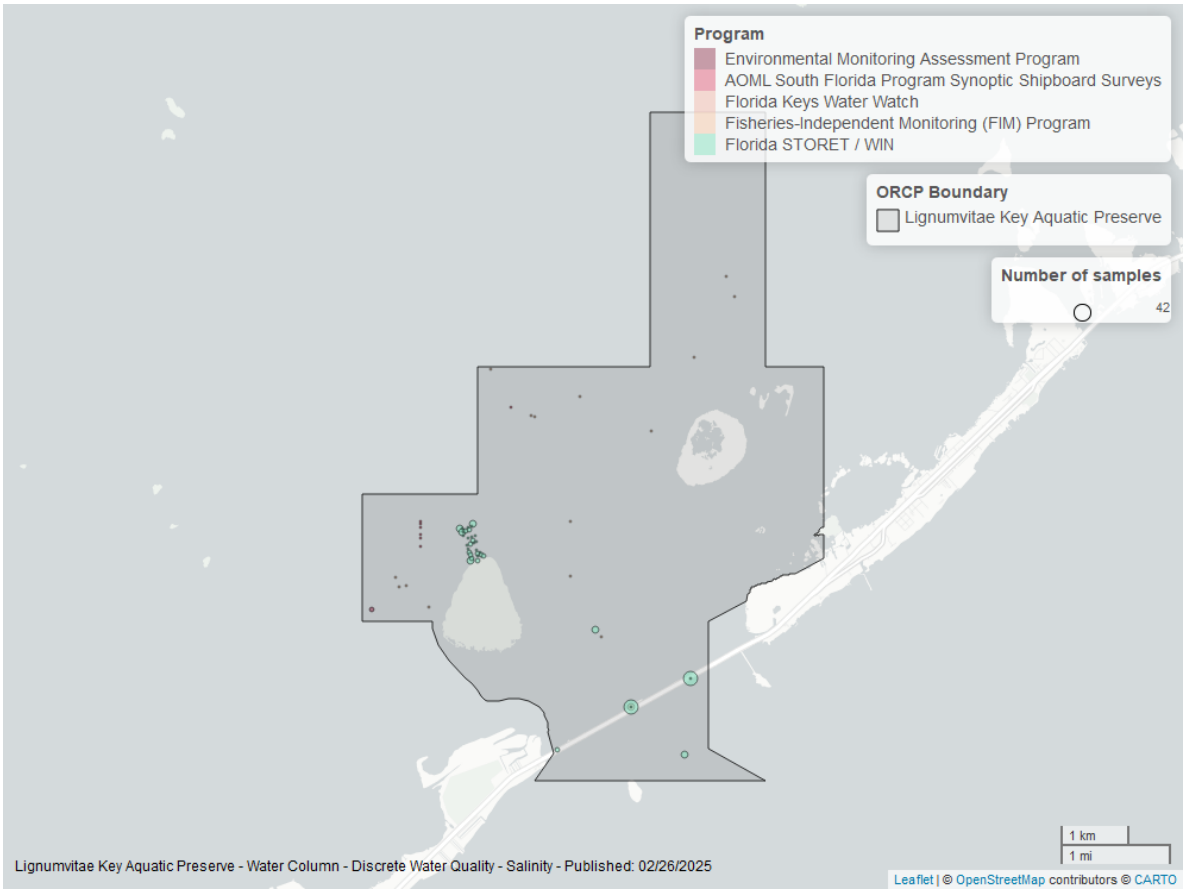


Table 7: Seasonal Kendall-Tau Results for - Salinity

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	260	14	1997 - 2024	36.295	0.1763	35.72409	0.03961	0.0957


Program
Environmental Monitoring Assessment Program
AOML South Florida Program Synoptic Shipboard Surveys
Florida Keys Water Watch
Fisheries-Independent Monitoring (FIM) Program
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
42
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Quality - Salinity - Published: 02/26/2025
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Salinity - Continuous

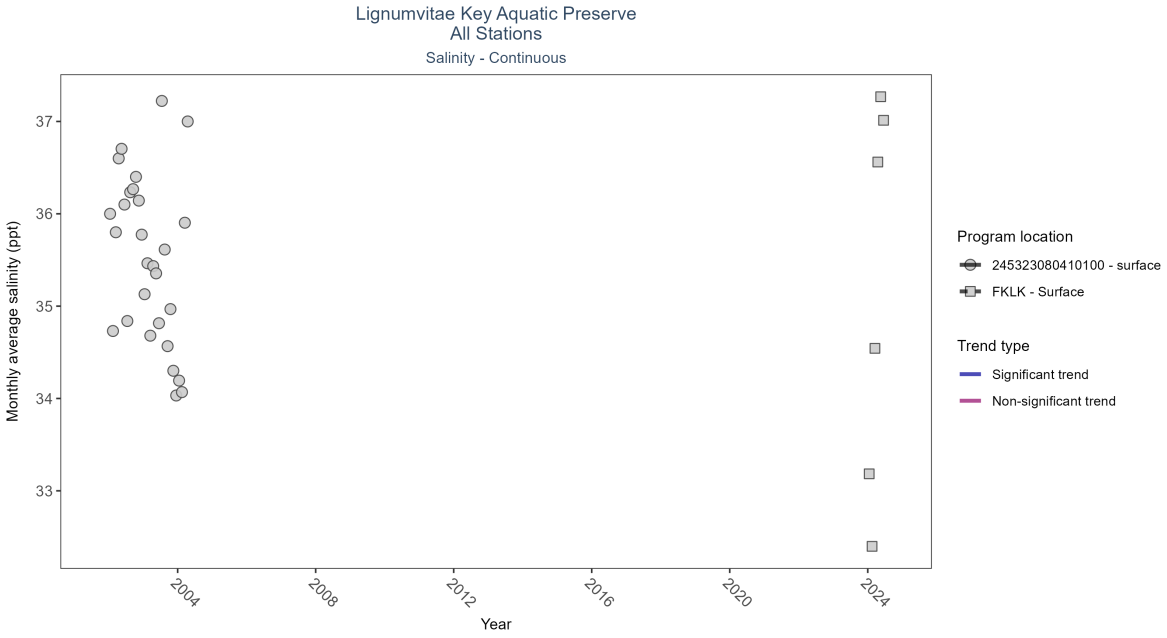
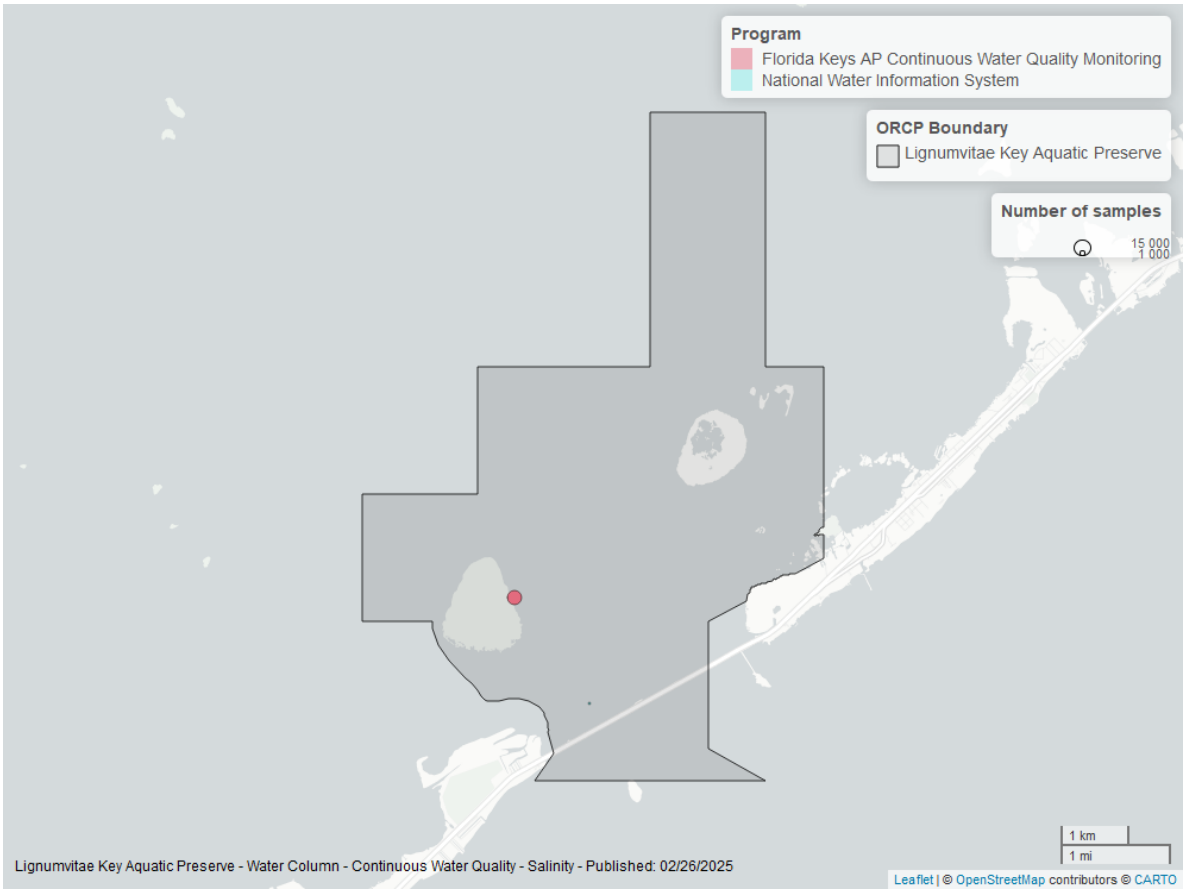


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
245323080410100	Insufficient data to calculate trend	746	3	2002 - 2004	35	-	-	-	NA
FKLK	Insufficient data to calculate trend	14756	1	2024 - 2024	36	-	-	-	NA


Program
Florida Keys AP Continuous Water Quality Monitoring
National Water Information System
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
15 000
1 000
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Continuous Water Quality - Salinity - Published: 02/26/2025
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Water Temperature - Discrete

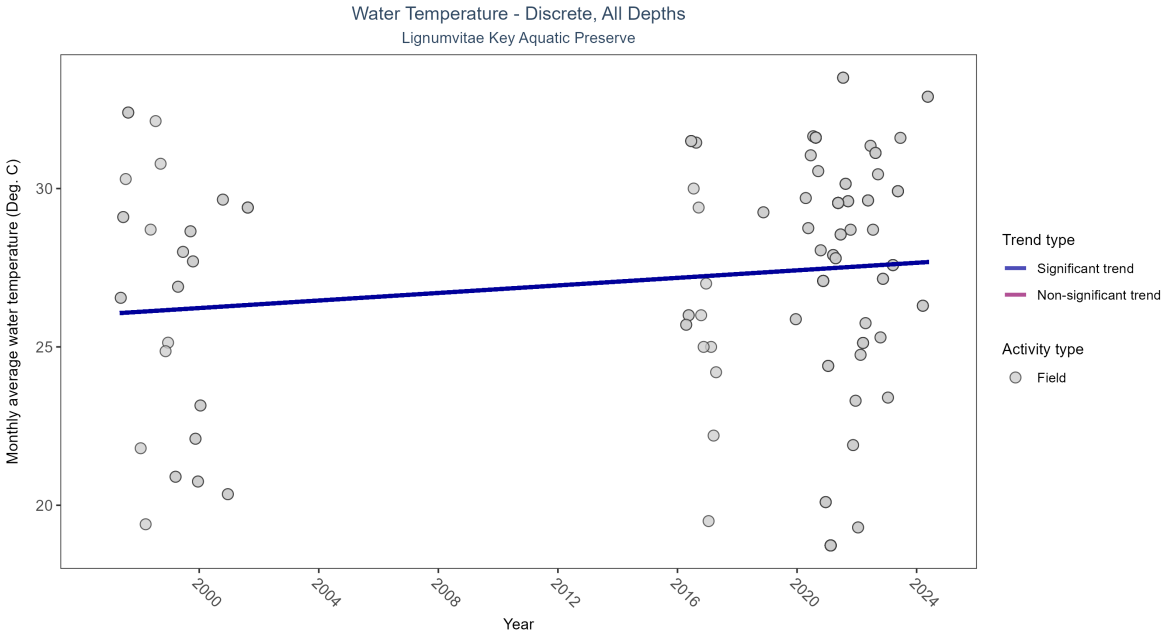
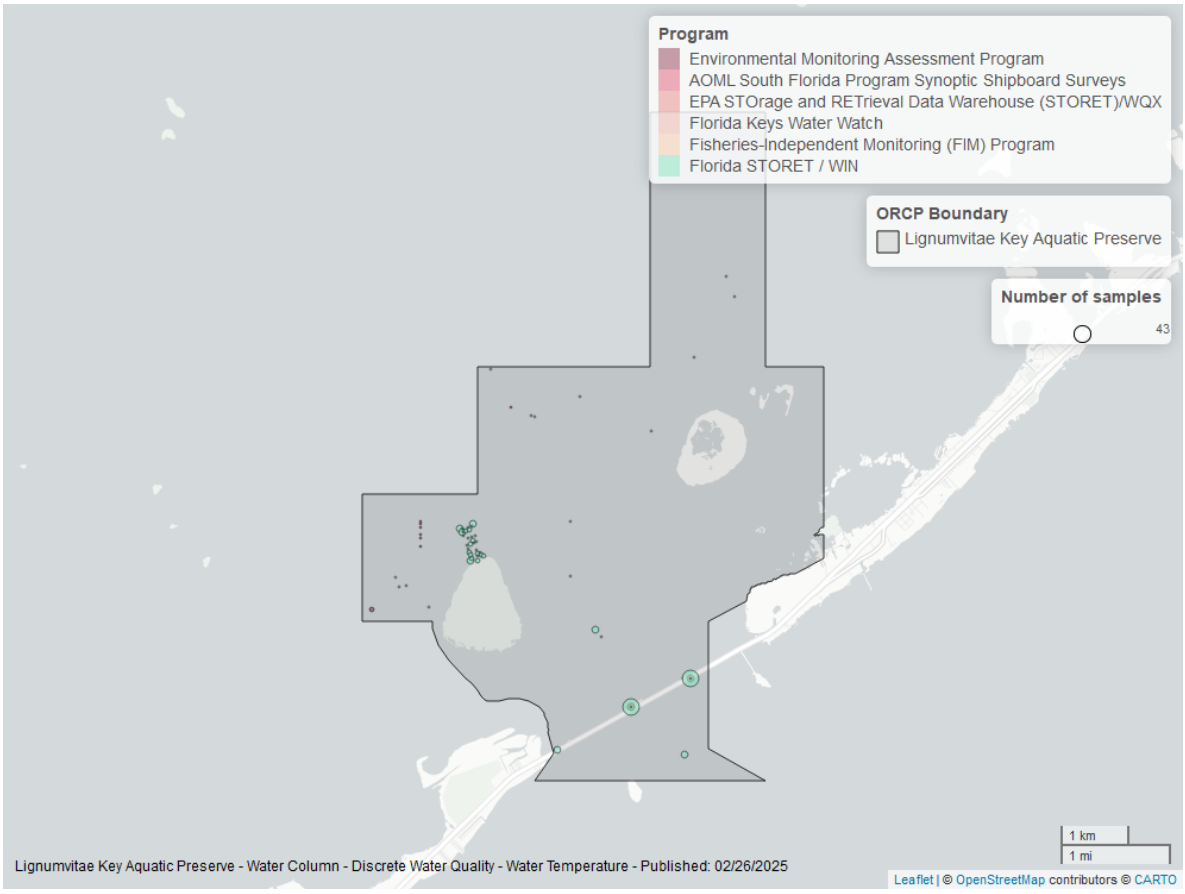


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	291	14	1997 - 2024	28	0.1634	26.04792	0.05957	0.0396


Program
Environmental Monitoring Assessment Program
AOML South Florida Program Synoptic Shipboard Surveys
EPA STOrage and RETrieval Data Warehouse (STORET)/WQX
Florida Keys Water Watch
Fisheries-Independent Monitoring (FIM) Program
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
43
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Quality - Water Temperature - Published: 02/26/2025
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Water Temperature - Continuous

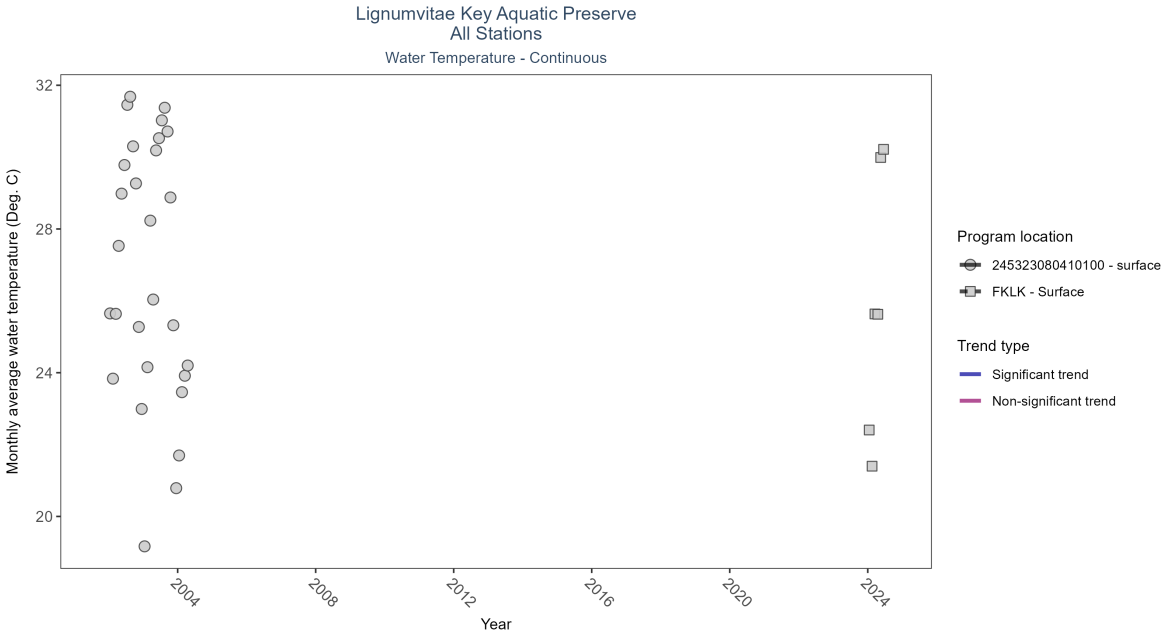
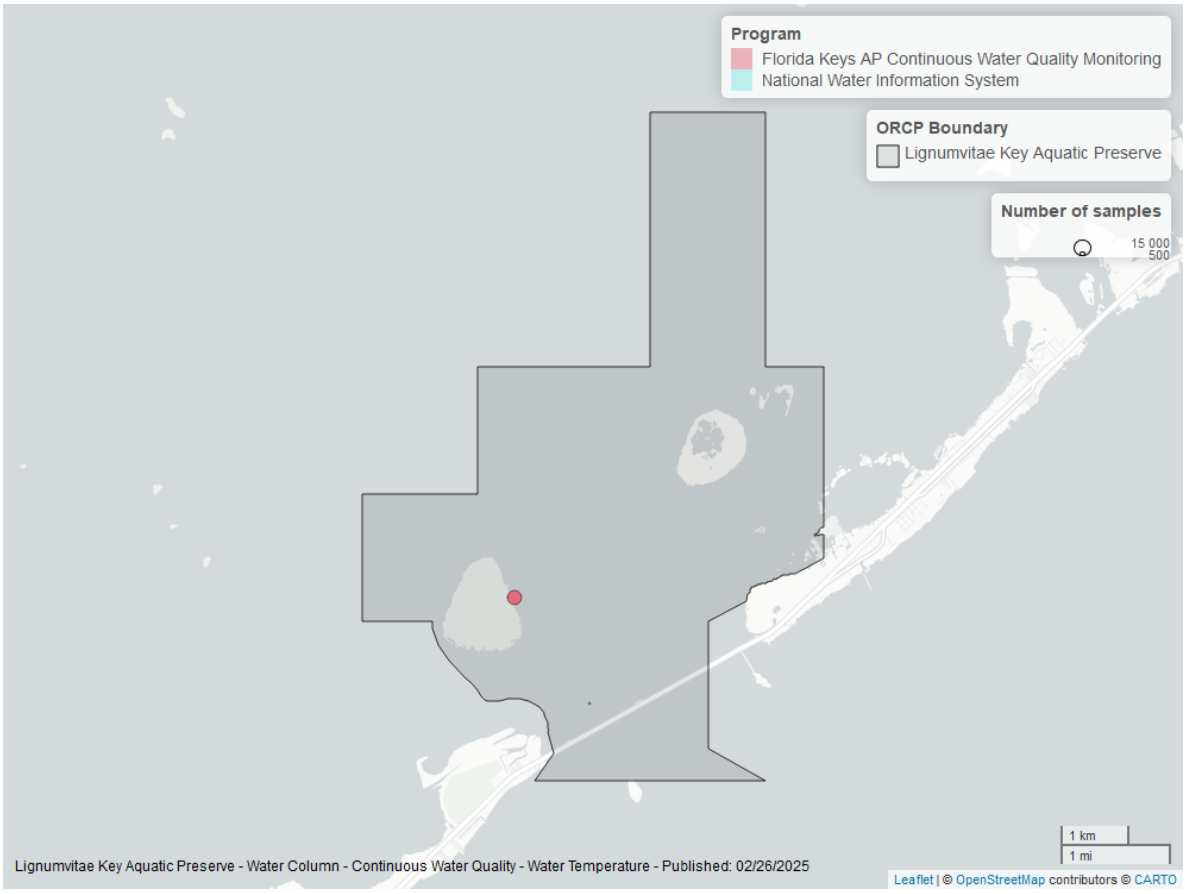


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
245323080410100	Insufficient data to calculate trend	791	3	2002 - 2004	27.9	-	-	-	NA
FKLK	Insufficient data to calculate trend	14756	1	2024 - 2024	25.9	-	-	-	NA


Program
Florida Keys AP Continuous Water Quality Monitoring
National Water Information System
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
15 000
500
Lignumvitae Key Aquatic Preserve - Water Column - Continuous Water Quality - Water Temperature - Published: 02/26/2025
1 km
1 mi
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pH - Discrete

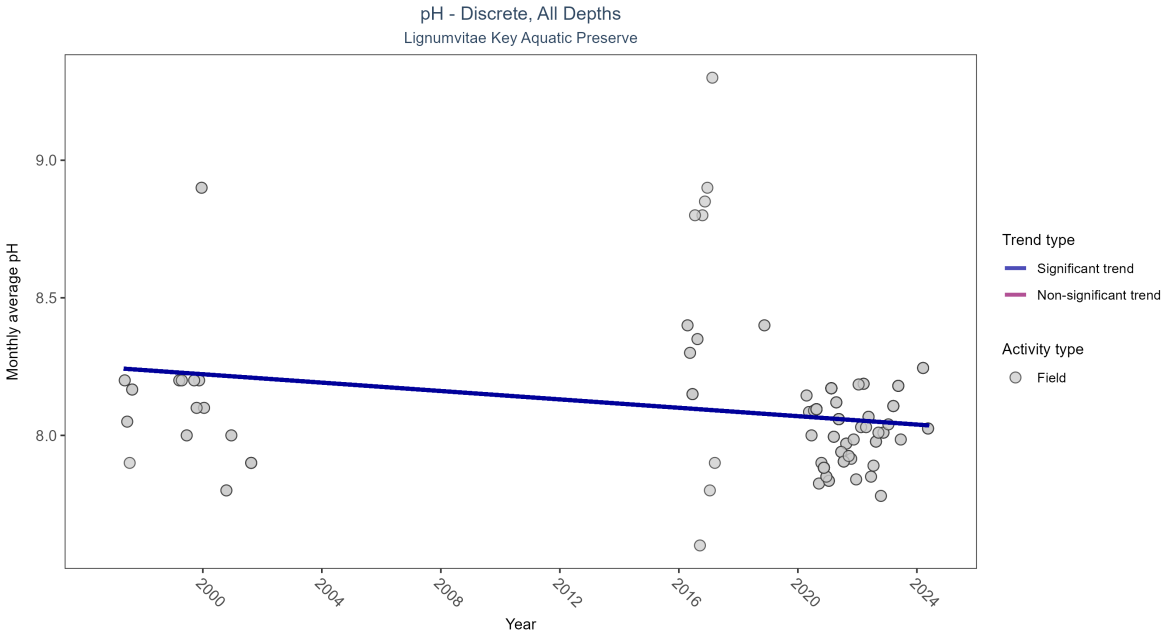
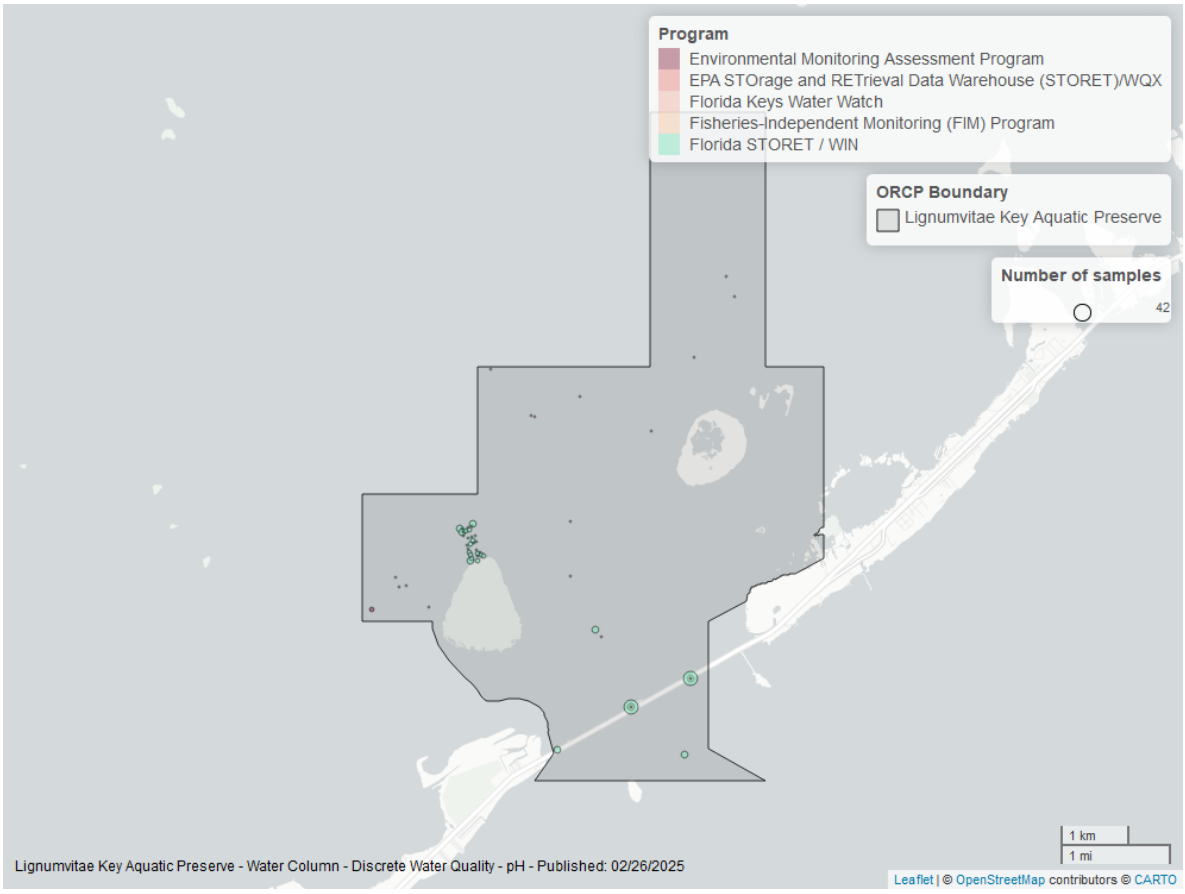


Table 11: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	281	12	1997 - 2024	8.07	-0.3237	8.24508	-0.00762	0.0046


Program
Environmental Monitoring Assessment Program
EPA STOrage and RETrieval Data Warehouse (STORET)/WQX
Florida Keys Water Watch
Fisheries-Independent Monitoring (FIM) Program
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
42
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Quality - pH - Published: 02/26/2025
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pH - Continuous

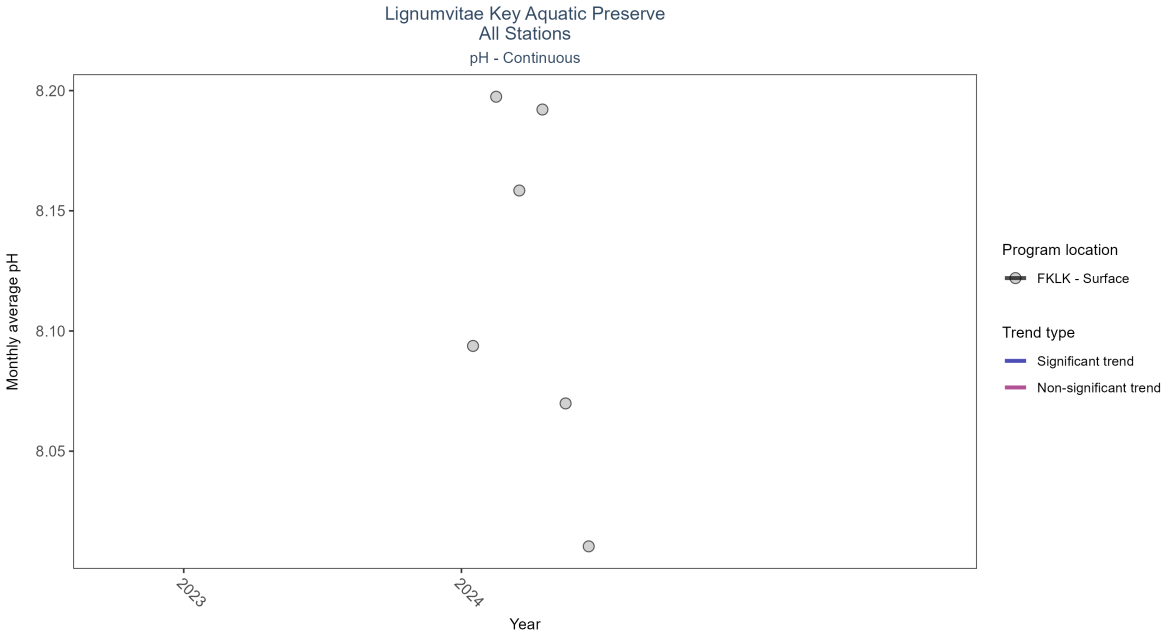
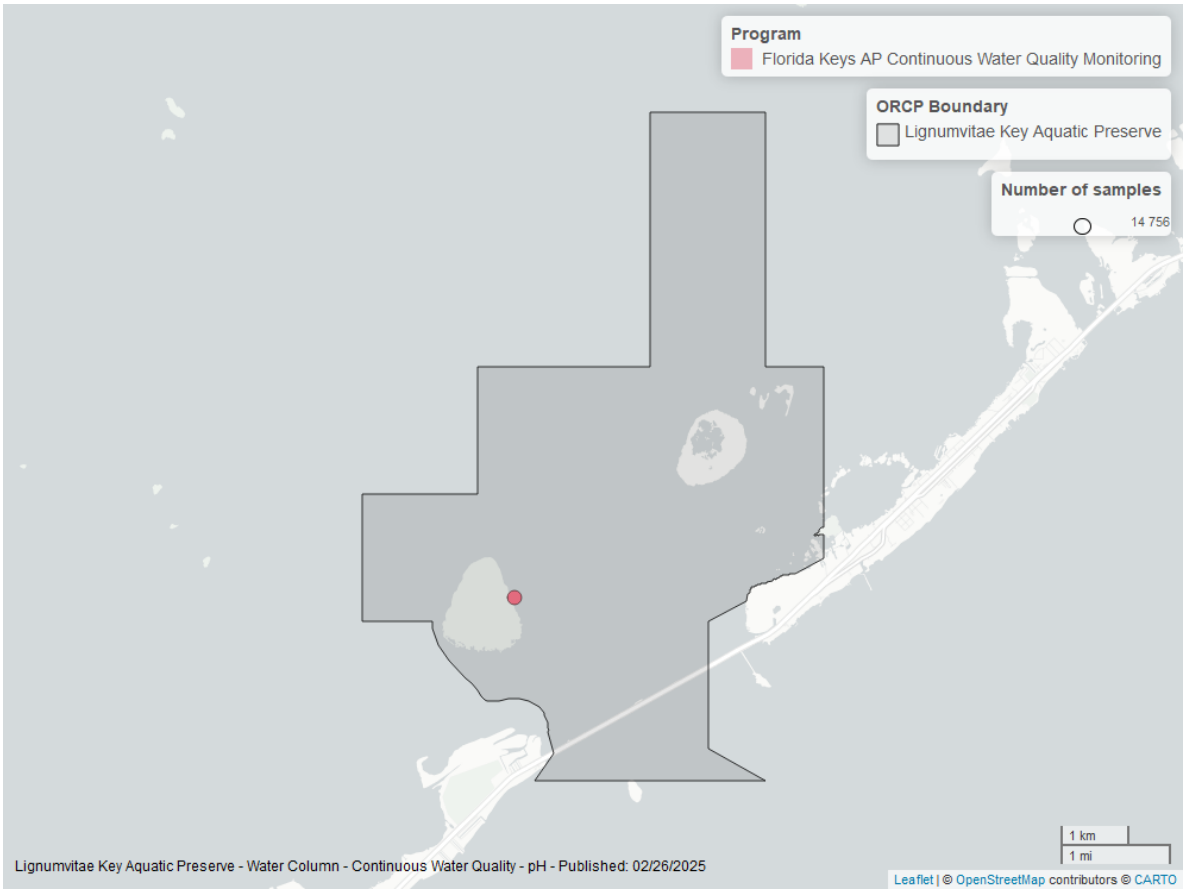


Table 12: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	14756	1	2024 - 2024	8.1	-	-	-	NA


Program
Florida Keys AP Continuous Water Quality Monitoring
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
14 756
Lignumvitae Key Aquatic Preserve - Water Column - Continuous Water Quality - pH - Published: 02/26/2025
1 km
1 mi
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Water Clarity

Turbidity - Discrete

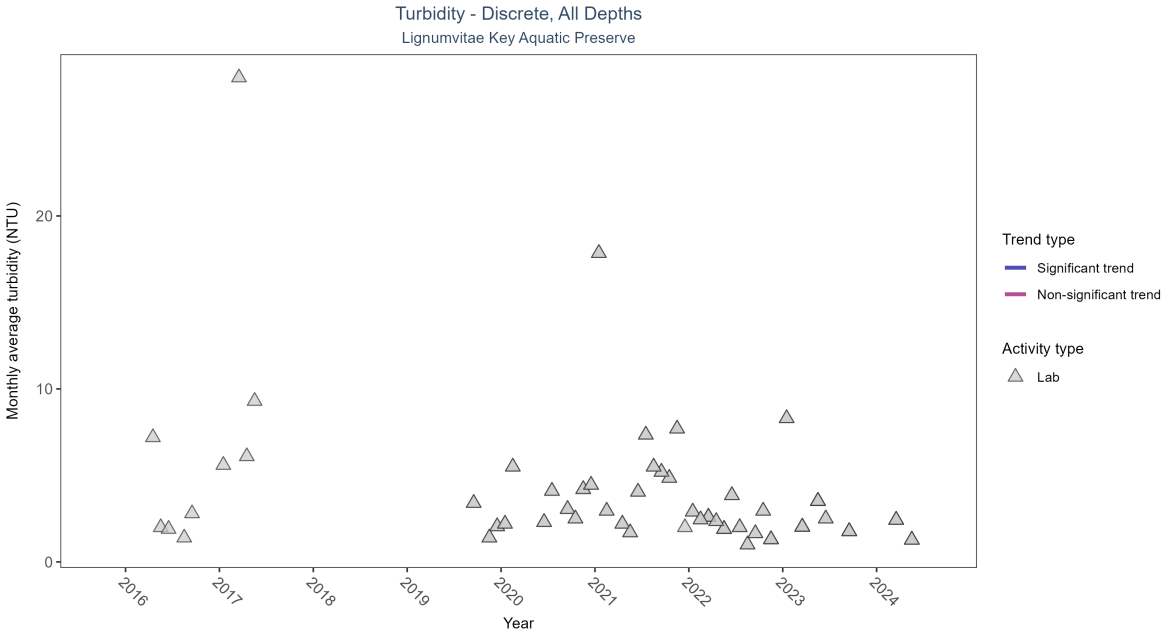
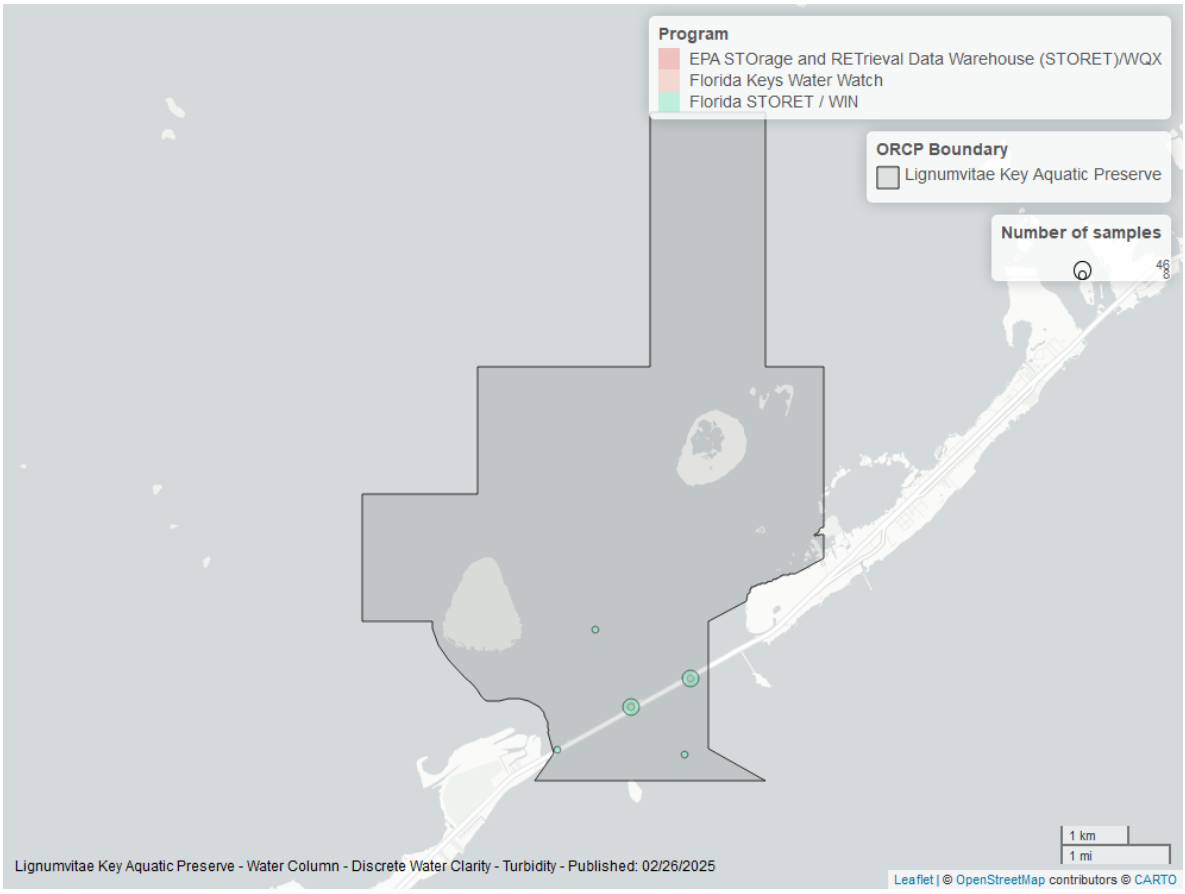


Table 13: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Insufficient data to calculate trend	110	8	2016 - 2024	2.25	-	-	-	NA


Program
EPA STOrage and RETrieval Data Warehouse (STORET)/WQX
Florida Keys Water Watch
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
46
8
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Clarity - Turbidity - Published: 02/26/2025
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Turbidity - Continuous

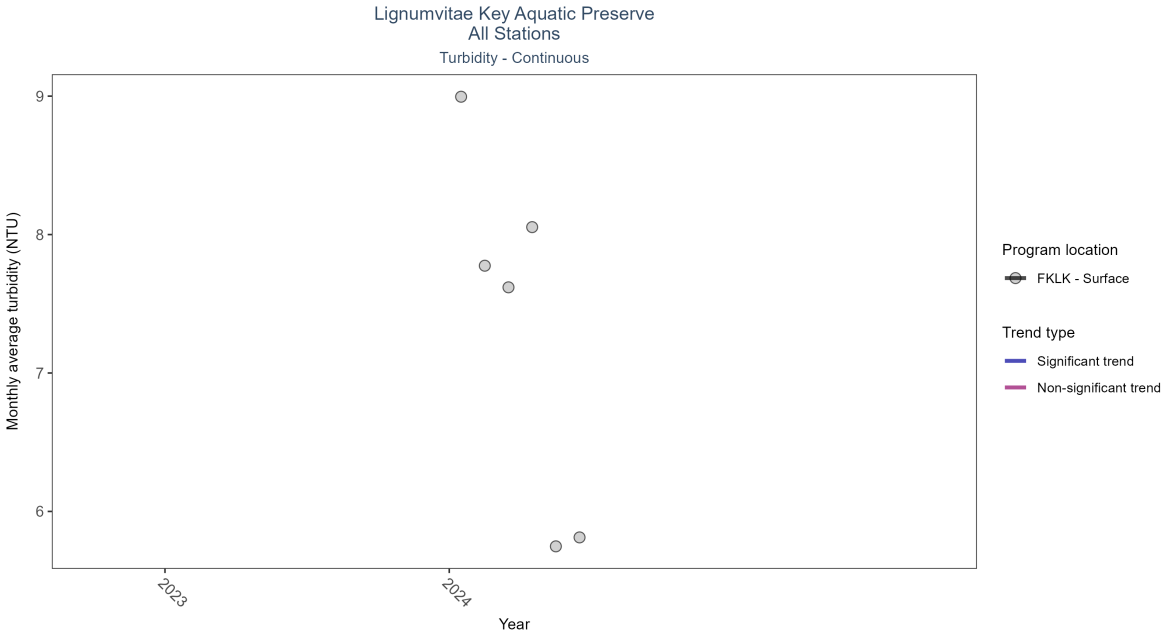
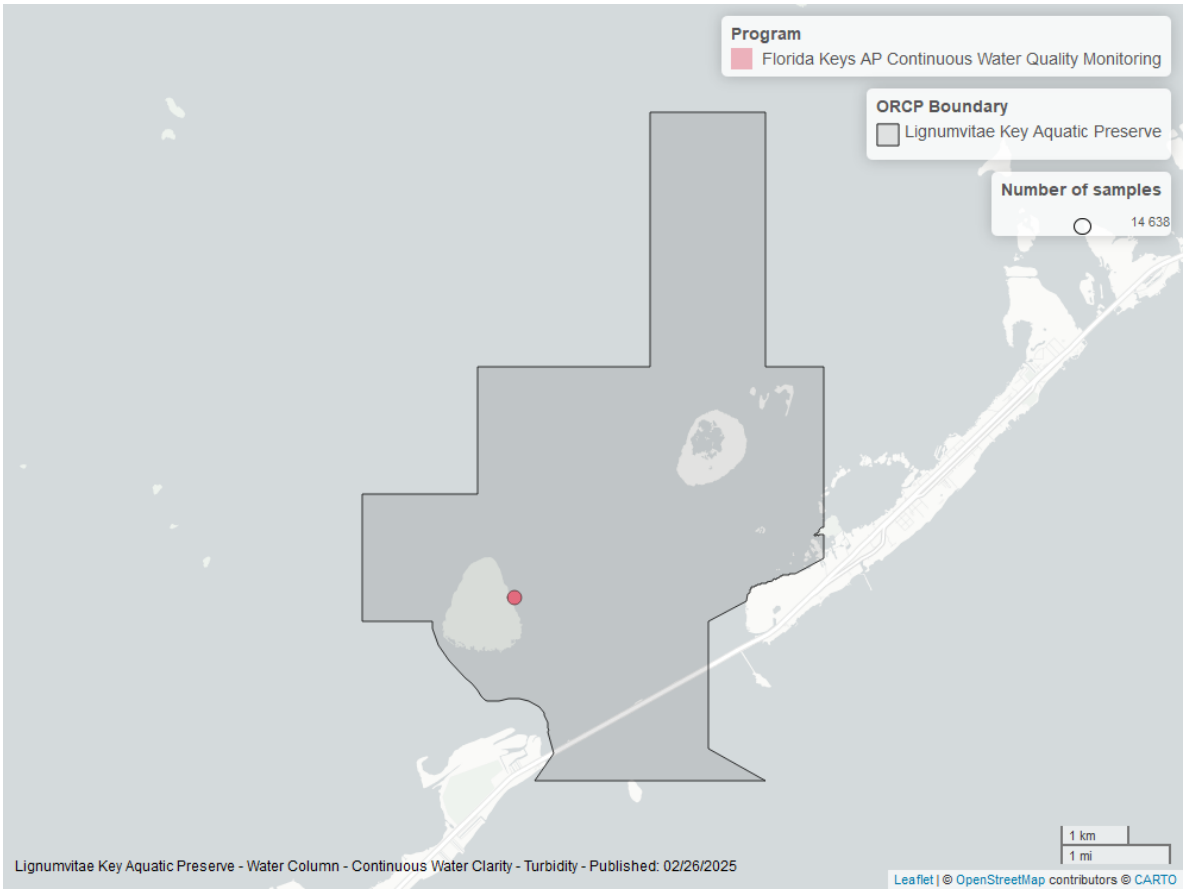


Table 14: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	14638	1	2024 - 2024	5	-	-	-	NA


Program
Florida Keys AP Continuous Water Quality Monitoring
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
14 638
Lignumvitae Key Aquatic Preserve - Water Column - Continuous Water Clarity - Turbidity - Published: 02/26/2025
1 km
1 mi
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Total Suspended Solids - Discrete

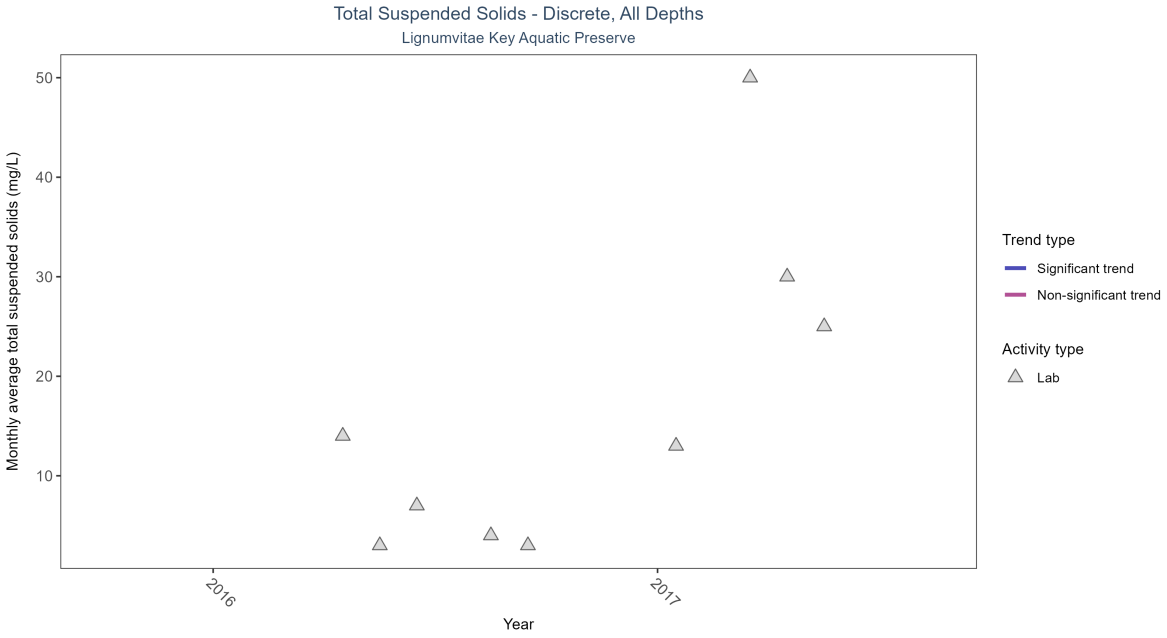
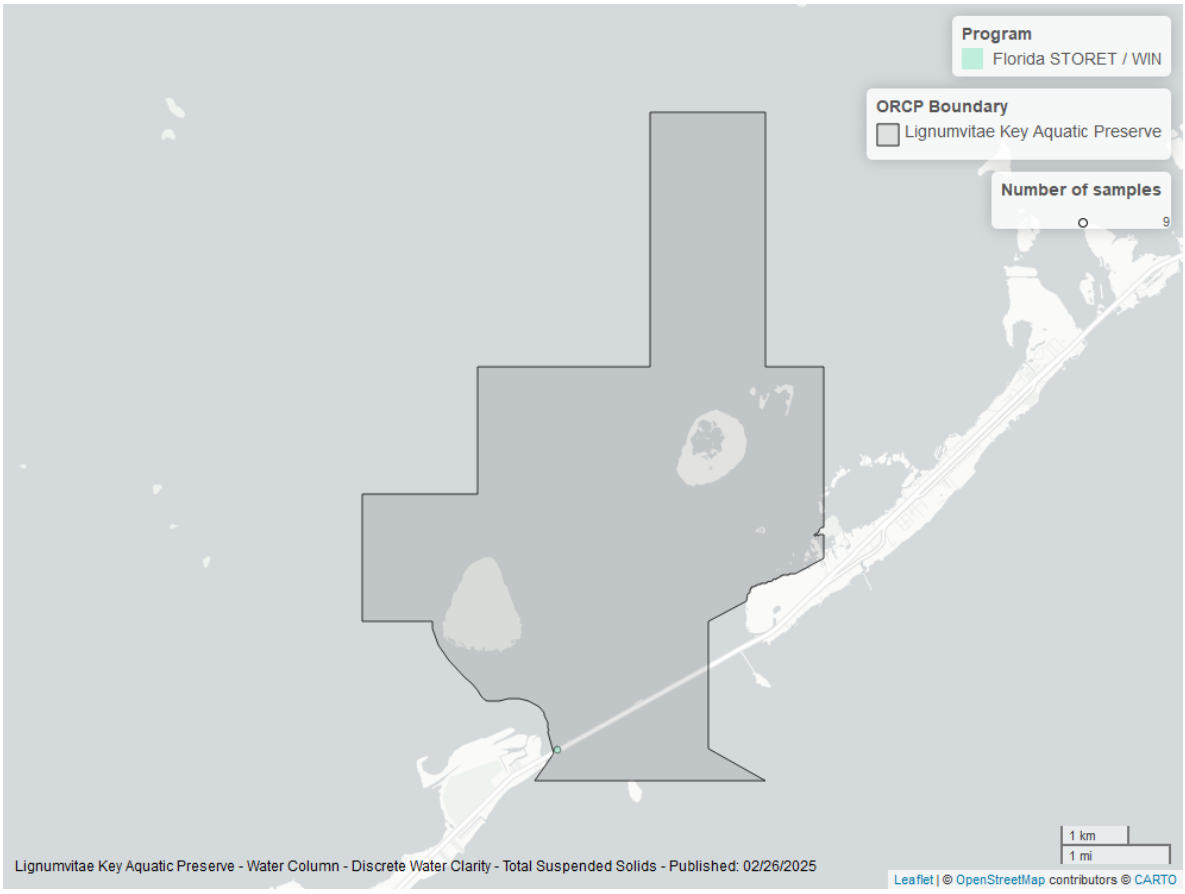


Table 15: Seasonal Kendall-Tau Results for - Total Suspended Solids

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Insufficient data to calculate trend	9	2	2016 - 2017	13	-	-	-	NA


Program
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
0
9
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Clarity - Total Suspended Solids - Published: 02/26/2025
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Chlorophyll a, Uncorrected for Pheophytin - Discrete

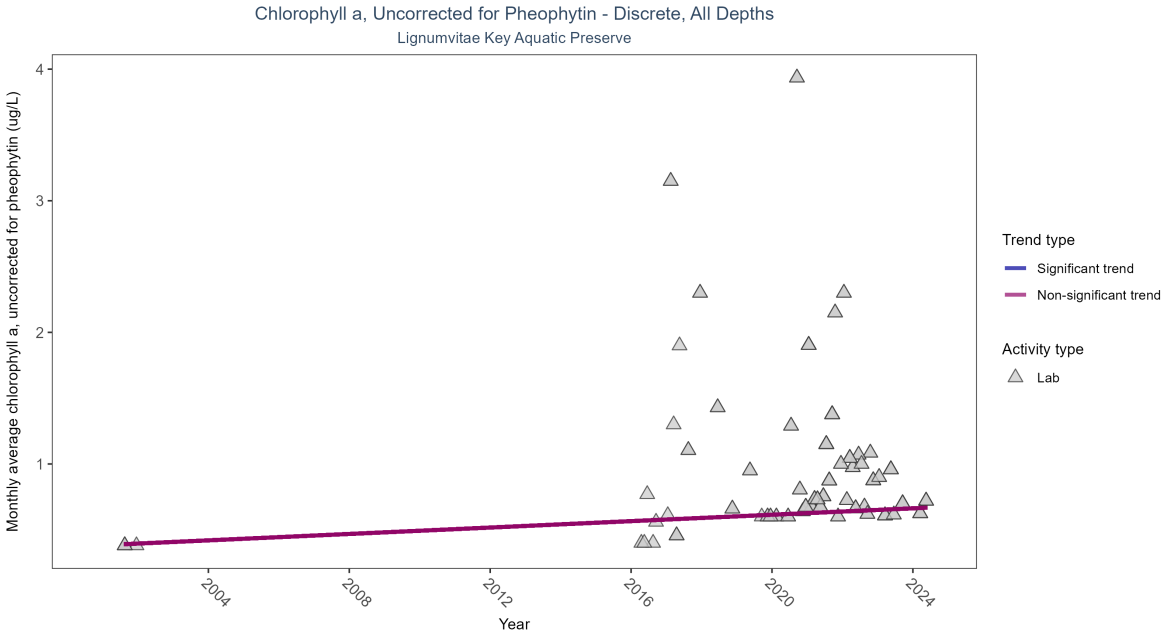
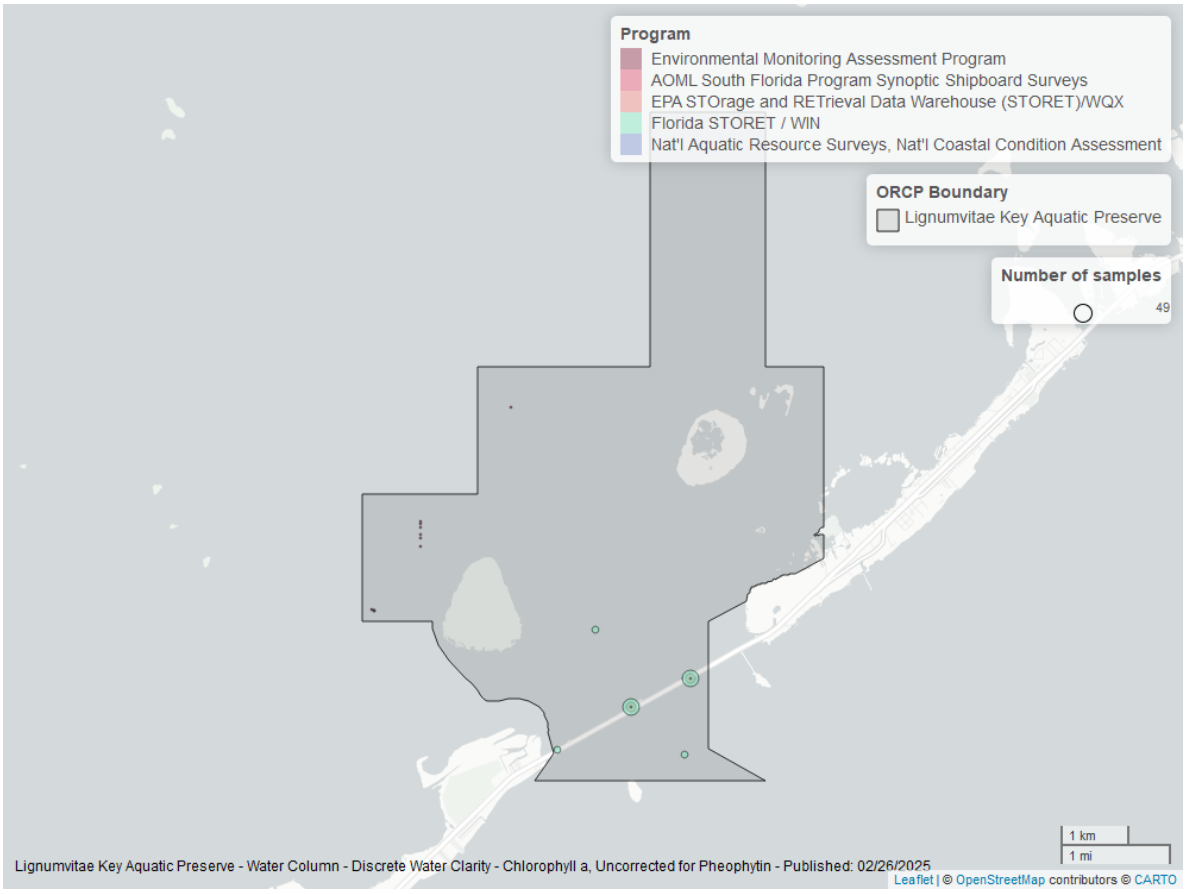


Table 16: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	166	10	2001 - 2024	0.7	0.1047	0.3831	0.01217	0.4367


Program
Environmental Monitoring Assessment Program
AOML South Florida Program Synoptic Shipboard Surveys
EPA STOrage and RETrieval Data Warehouse (STORET)/WQX
Florida STORET / WIN
Nat'l Aquatic Resource Surveys, Nat'l Coastal Condition Assessment
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
49
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Clarity - Chlorophyll a, Uncorrected for Pheophytin - Published: 02/26/2025
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Chlorophyll a, Corrected for Pheophytin - Discrete

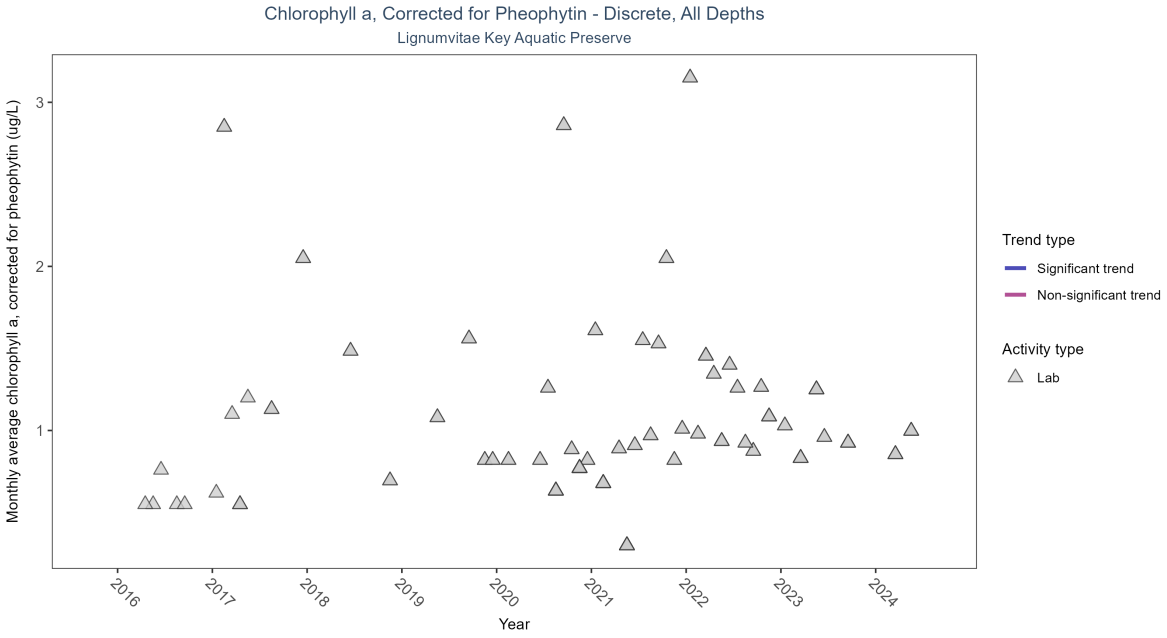
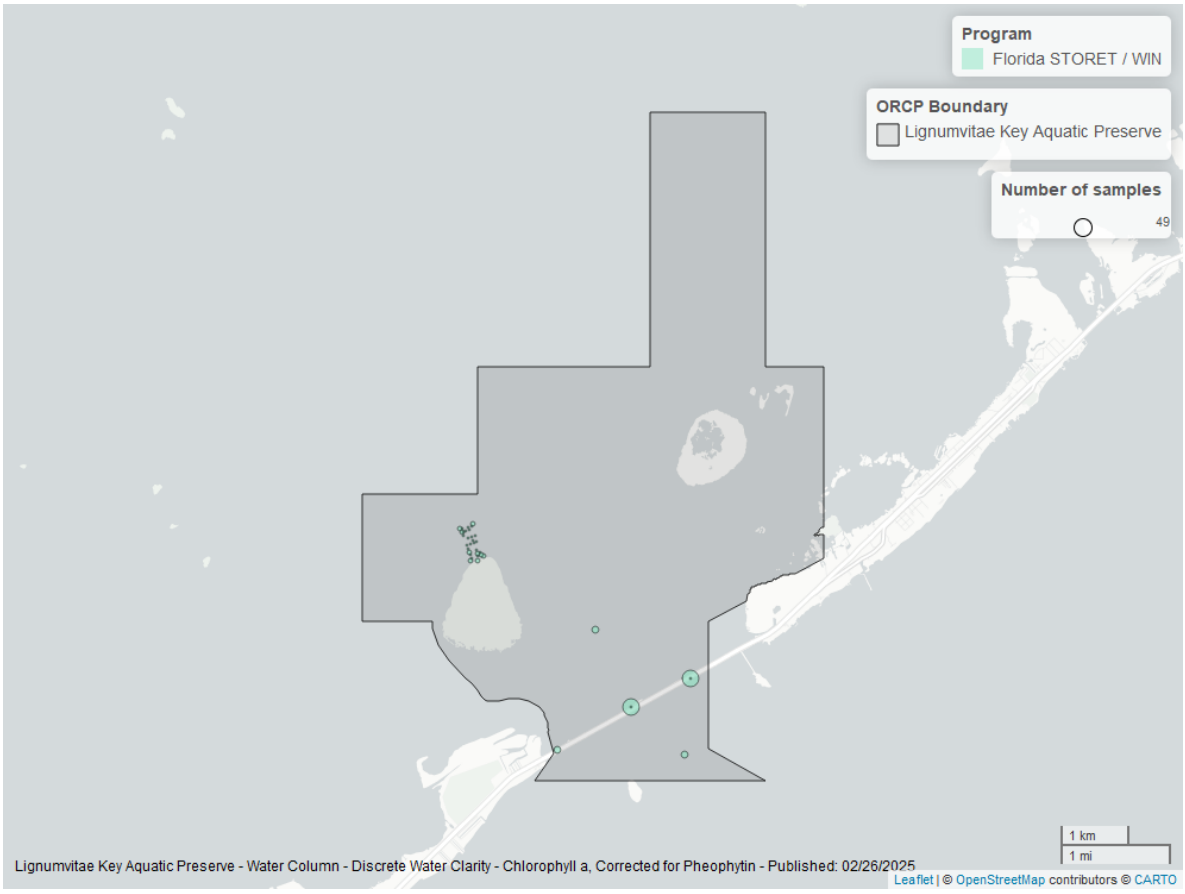


Table 17: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Insufficient data to calculate trend	183	9	2016 - 2024	0.82	-	-	-	NA


Program
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
49
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Clarity - Chlorophyll a, Corrected for Pheophytin - Published: 02/26/2025
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Secchi Depth - Discrete

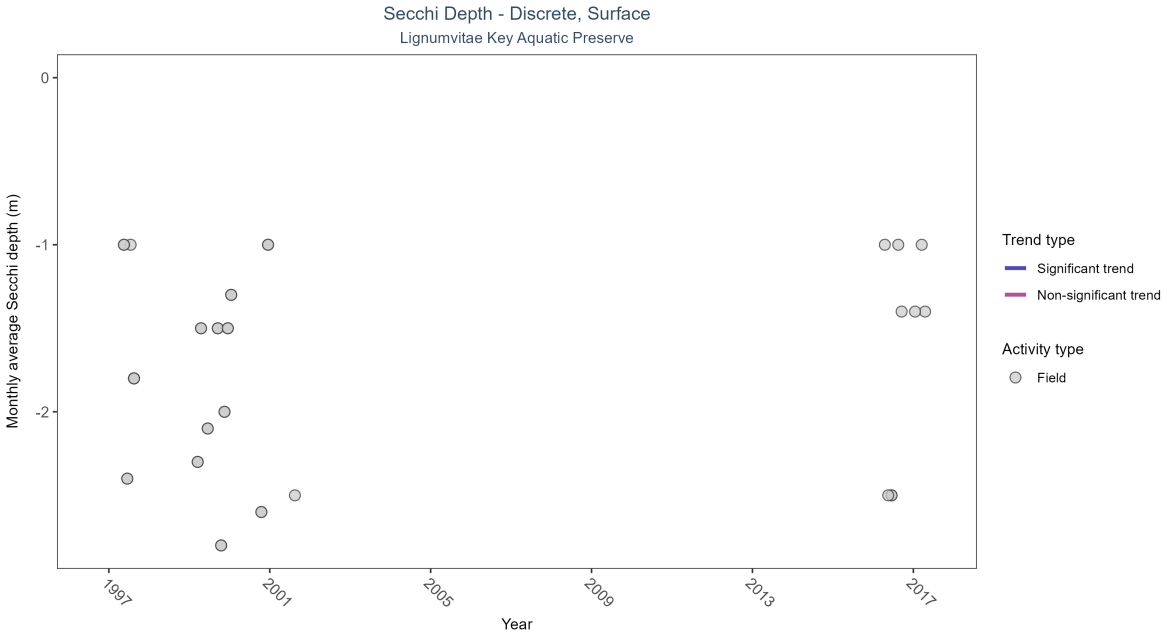
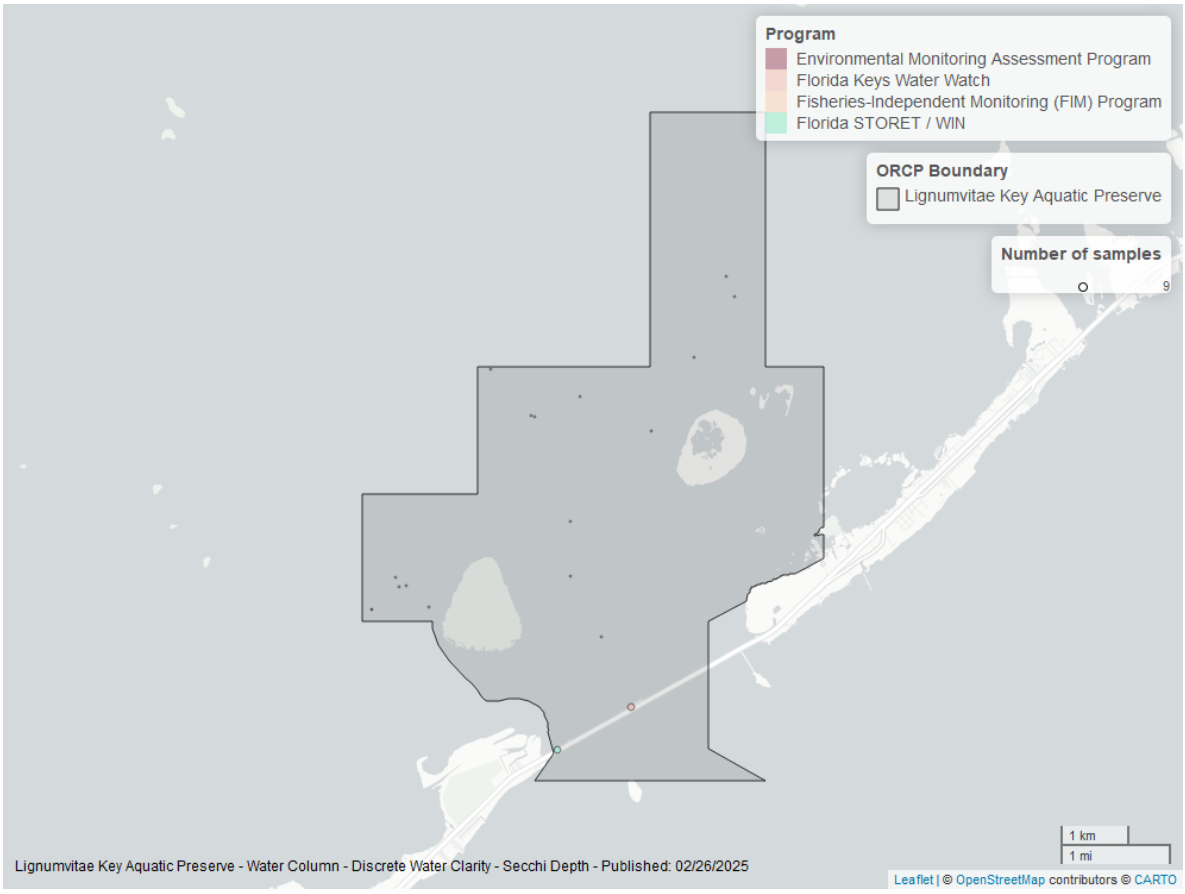


Table 18: Seasonal Kendall-Tau Results for - Secchi Depth

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Insufficient data to calculate trend	38	6	1997 - 2017	-1.5	-	-	-	NA


Program
Environmental Monitoring Assessment Program
Florida Keys Water Watch
Fisheries-Independent Monitoring (FIM) Program
Florida STORET / WIN
ORCP Boundary
Lignumvitae Key Aquatic Preserve
Number of samples
9
1 km
1 mi
Lignumvitae Key Aquatic Preserve - Water Column - Discrete Water Clarity - Secchi Depth - Published: 02/26/2025
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