# Rocky Bayou State Park Aquatic Preserve

## SEACAR Water Quality Analysis

### Last compiled on 09 January, 2025

## Contents

# Indicators

## Nutrients

### Total Nitrogen - Discrete

Total Nitrogen - Discrete, All Depths
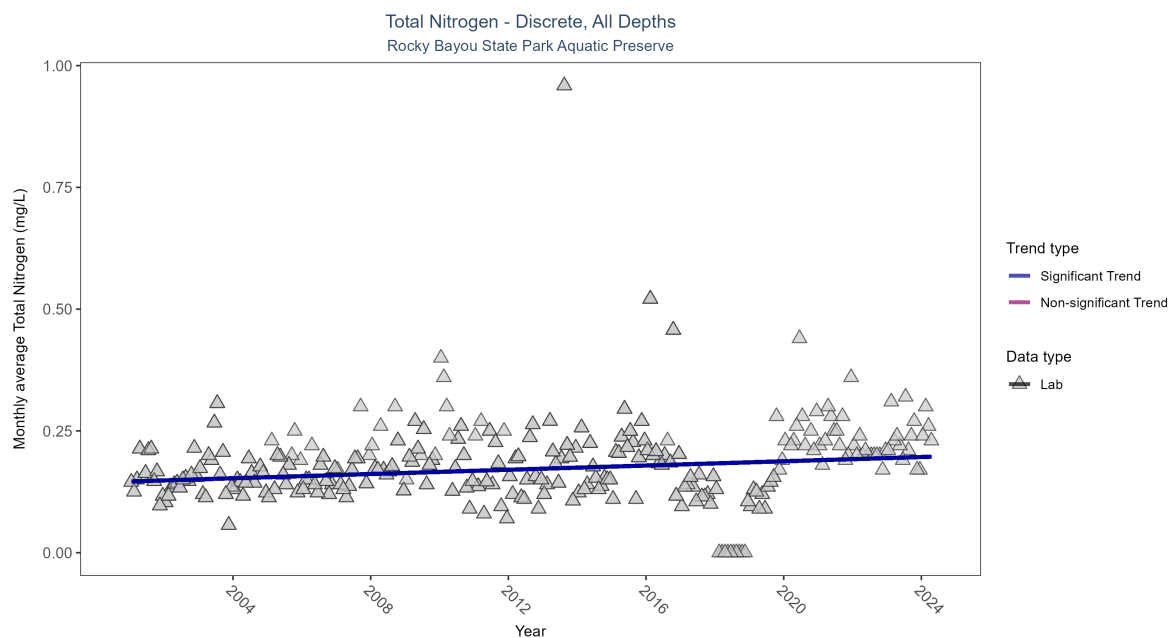Rocky Bayou State Park Aquatic Preserve



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

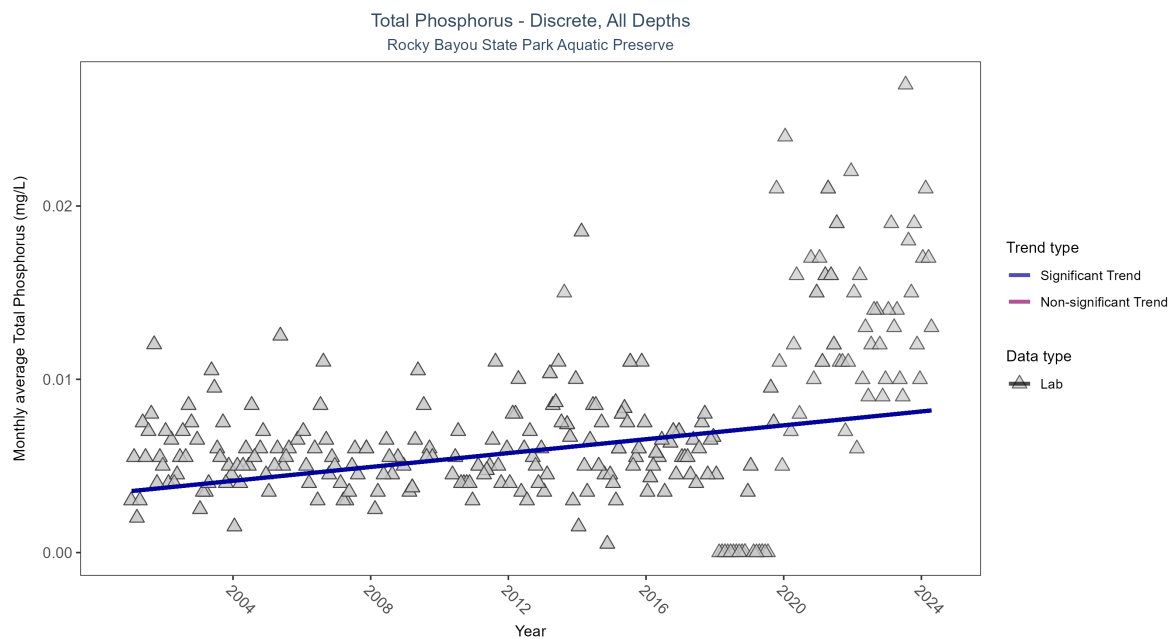| ActivityType | Statistical Trend | N-Data | N-Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---|---|---|---|---|---|---|---|---|---|
| Lab | Significantly increasing trend | 635 | 24 | 2001 - 2024 | 0.2 | 0.1611 | 0.14624 | 0.00218 | 0.0002 |

# 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 increasing trend | 465 | 24 | 2001 - 2024 | 0.007 | 0.2622 | 0.00354 | 0.0002 | 0.0000 |

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# Water Quality

## Dissolved Oxygen - Discrete



Dissolved Oxygen - Discrete, All Depths
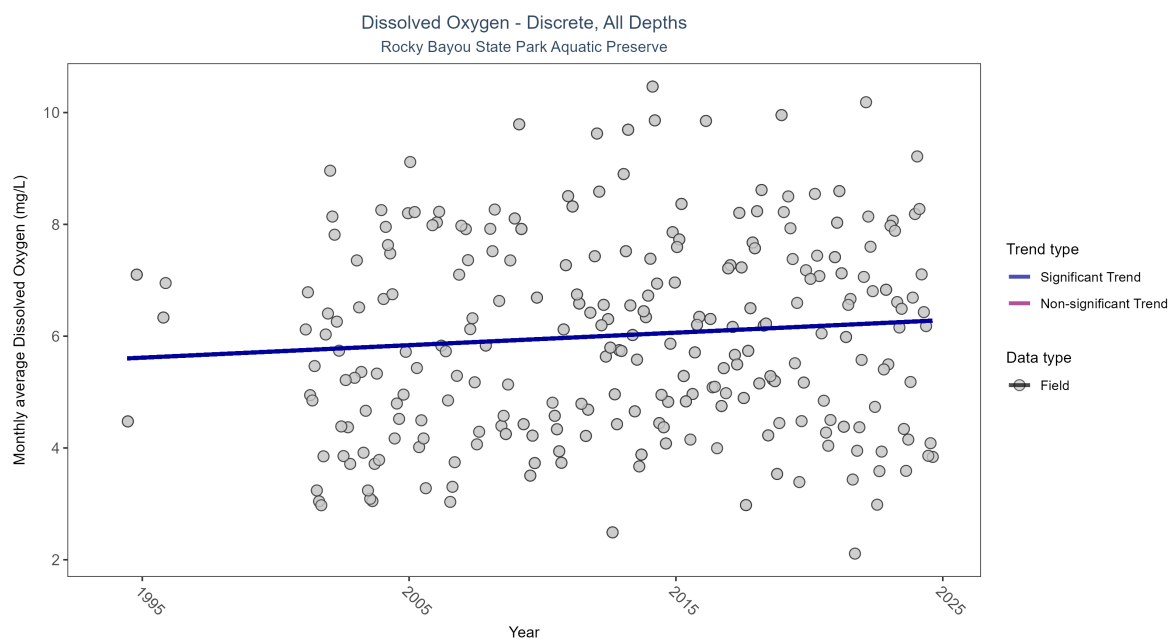Rocky Bayou State Park Aquatic Preserve

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 | Significantly increasing trend | 770 | 26 | 1994 - 2024 | 6.61 | 0.1158 | 5.59271 | 0.02236 | 0.0082 |

# Dissolved Oxygen Saturation - Discrete



Dissolved Oxygen Saturation - Discrete, All Depths
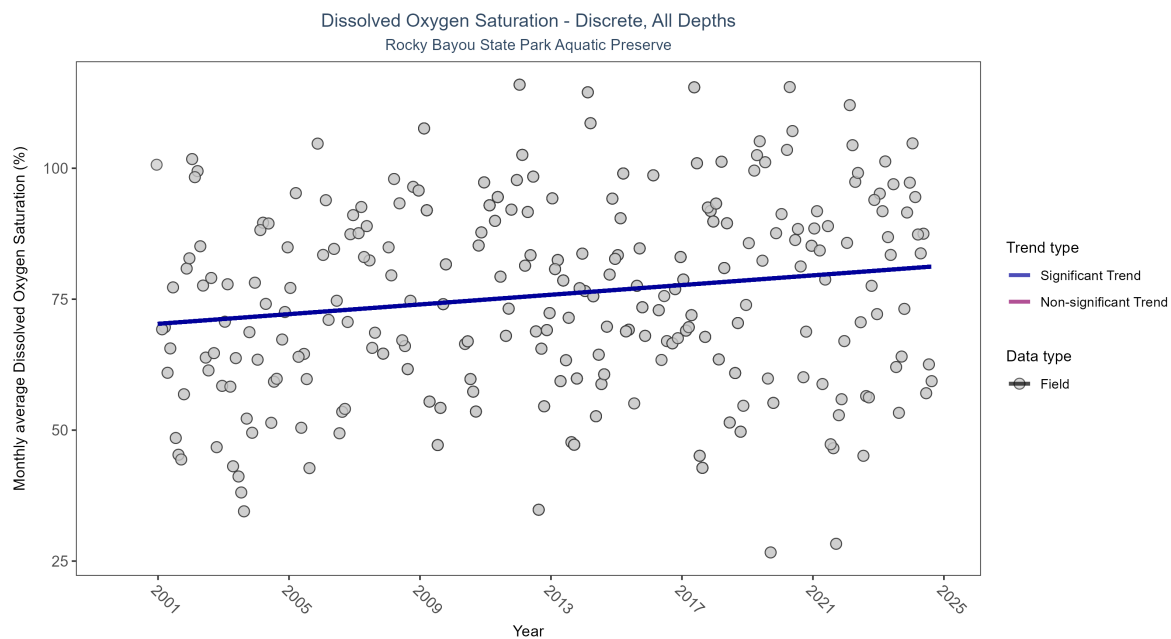Rocky Bayou State Park Aquatic Preserve

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 | Significantly increasing trend | 731 | 25 | 2000 - 2024 | 89.3 | 0.1513 | 69.83519 | 0.4625 | 0.0009 |

**Salinity - Discrete**



Salinity - Discrete, All Depths
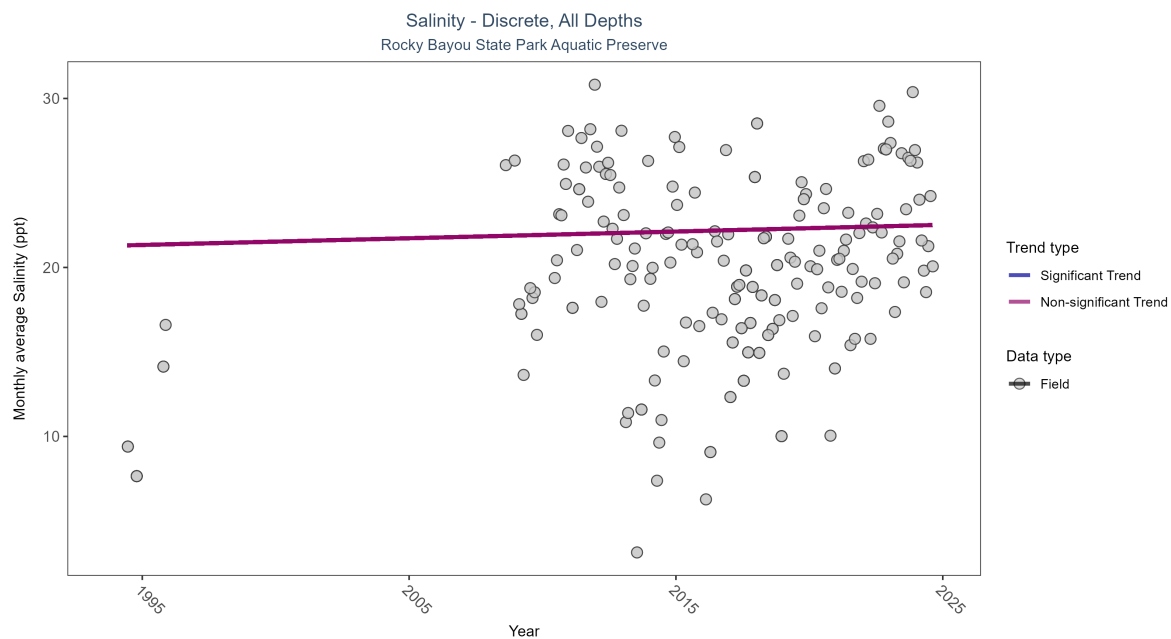Rocky Bayou State Park Aquatic Preserve

Table 5: Seasonal Kendall-Tau Results for - Salinity

| ActivityType | Statistical Trend | N-Data | N-Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---|---|---|---|---|---|---|---|---|---|
| All | No significant trend | 756 | 27 | 1994 - 2024 | 22 | 0.0502 | 21.2907 | 0.03974 | 0.2844 |

# Water Temperature - Discrete



Water Temperature - Discrete, All Depths
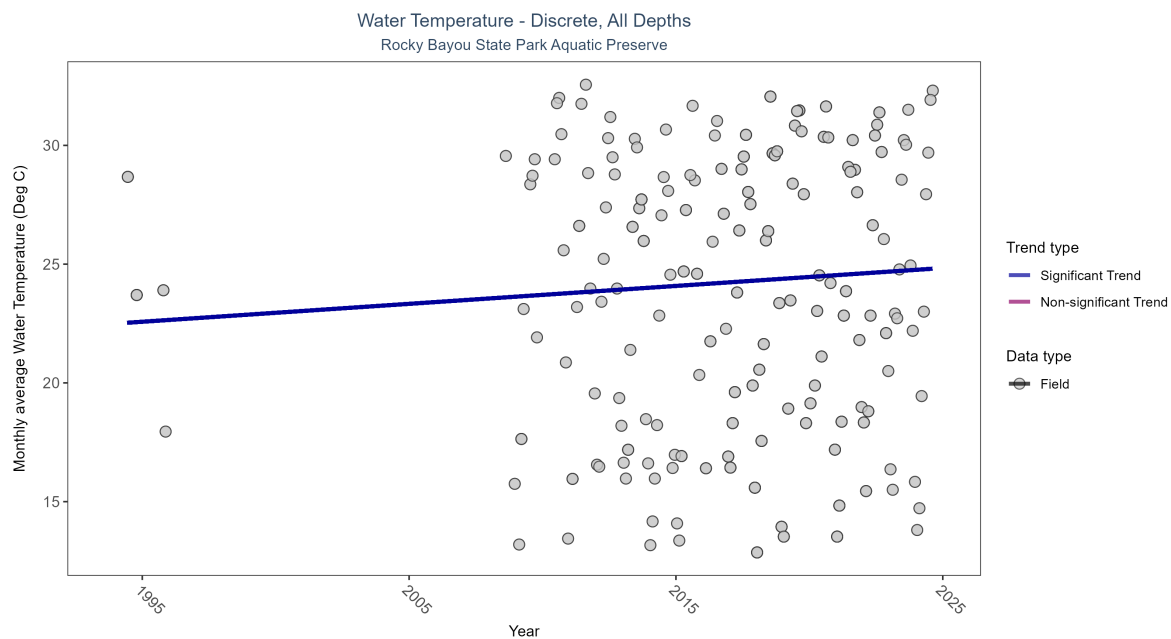Rocky Bayou State Park Aquatic Preserve

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 | 576 | 19 | 1994 - 2024 | 24.33331 | 0.1517 | 22.49902 | 0.0754 | 0.0063 |

## pH - Discrete



**pH - Discrete, All Depths**
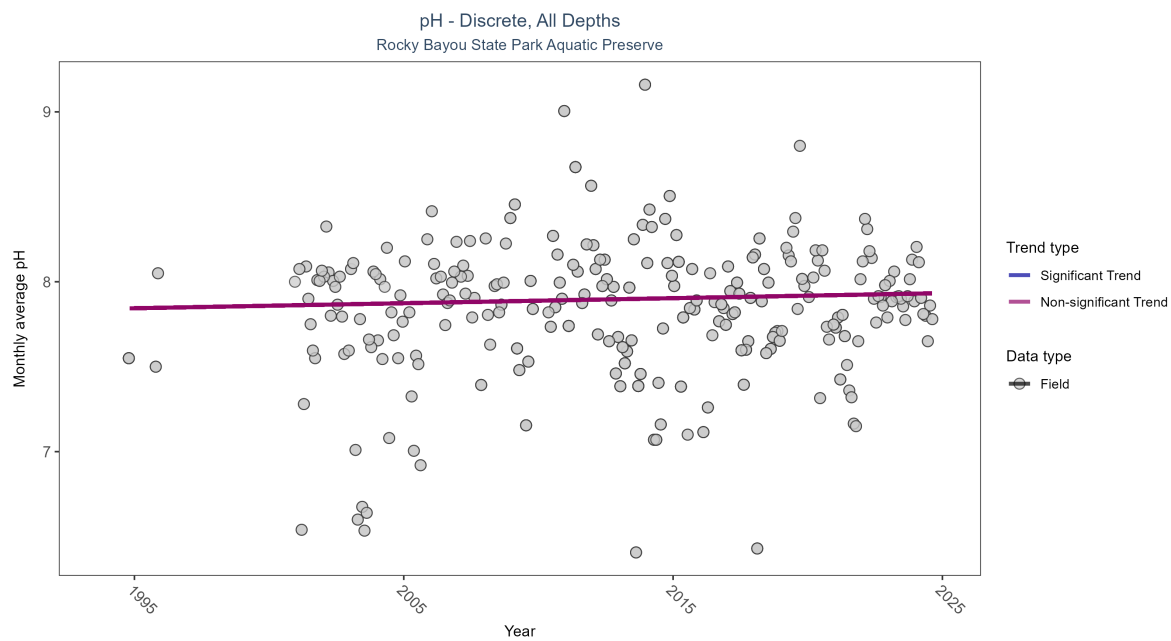Rocky Bayou State Park Aquatic Preserve

Table 7: Seasonal Kendall-Tau Results for - pH

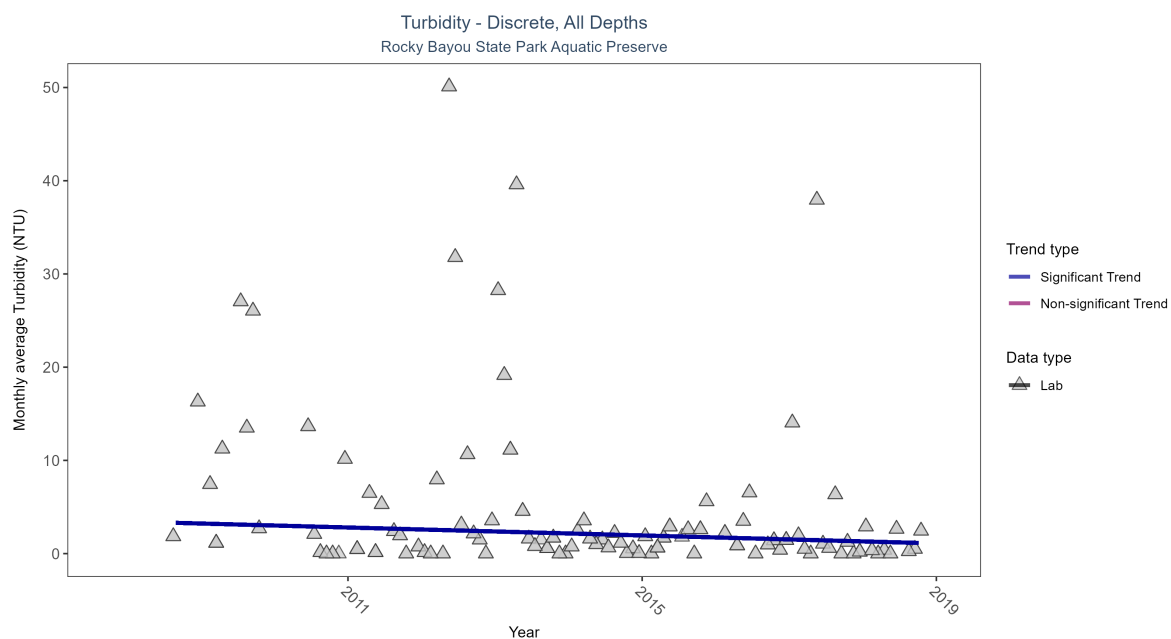| ActivityType | Statistical Trend | N-Data | N-Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---|---|---|---|---|---|---|---|---|---|
| Field | No significant trend | 766 | 27 | 1994 - 2024 | 7.9 | 0.049 | 7.84104 | 0.00297 | 0.2436 |

# Water Clarity

## Turbidity - Discrete



Table 8: Seasonal Kendall-Tau Results for - Turbidity

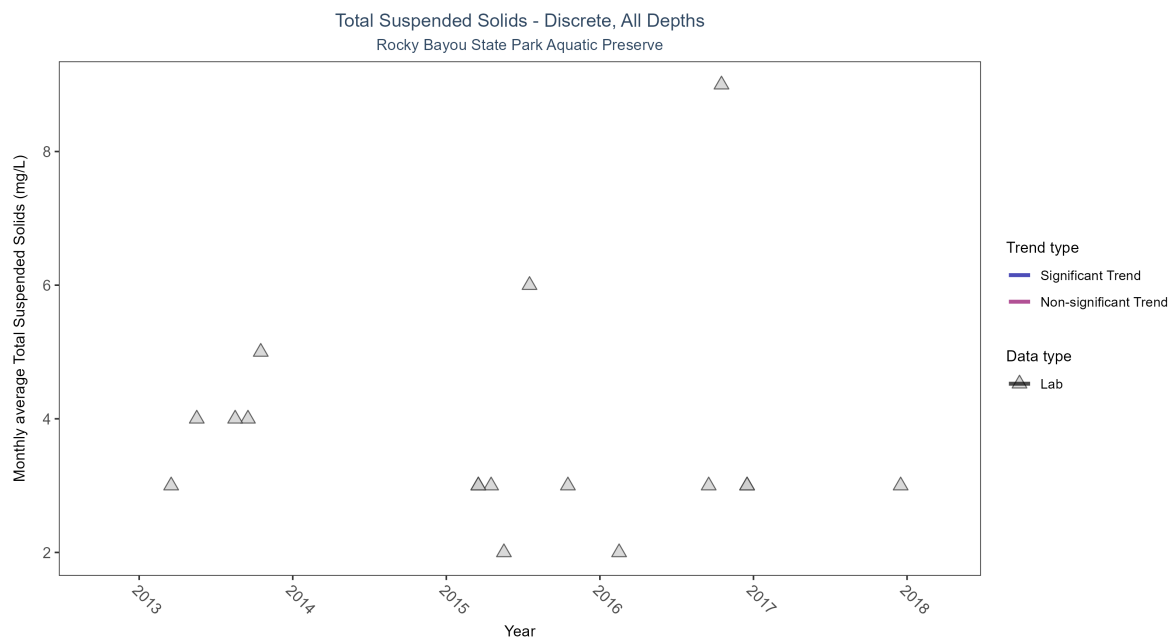| ActivityType | Statistical Trend | N-Data | N-Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---|---|---|---|---|---|---|---|---|---|
| Lab | Significantly decreasing trend | 222 | 11 | 2008 - 2018 | 1 | -0.2377 | 3.44167 | -0.21339 | 0.0034 |

# Total Suspended Solids - Discrete



Table 9: 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 | 17 | 4 | 2013 - 2017 | 3 | - | - | - | NA |

# Chlorophyll a, Uncorrected for Pheophytin - Discrete



Chlorophyll a, Uncorrected for Pheophytin - Discrete, All Depths
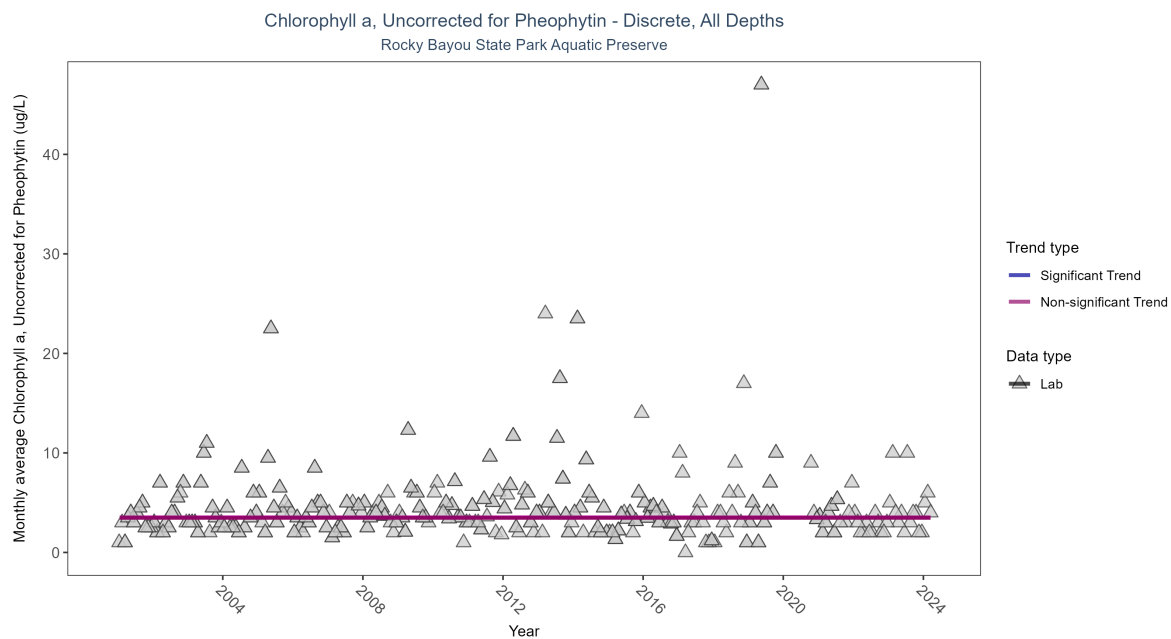Rocky Bayou State Park Aquatic Preserve

Table 10: 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 | No significant trend | 452 | 24 | 2001 - 2024 | 3.5 | -0.017 | 3.49741 | 0 | 0.7800 |

# Chlorophyll a, Corrected for Pheophytin - Discrete



Chlorophyll a, Corrected for Pheophytin - Discrete, All Depths
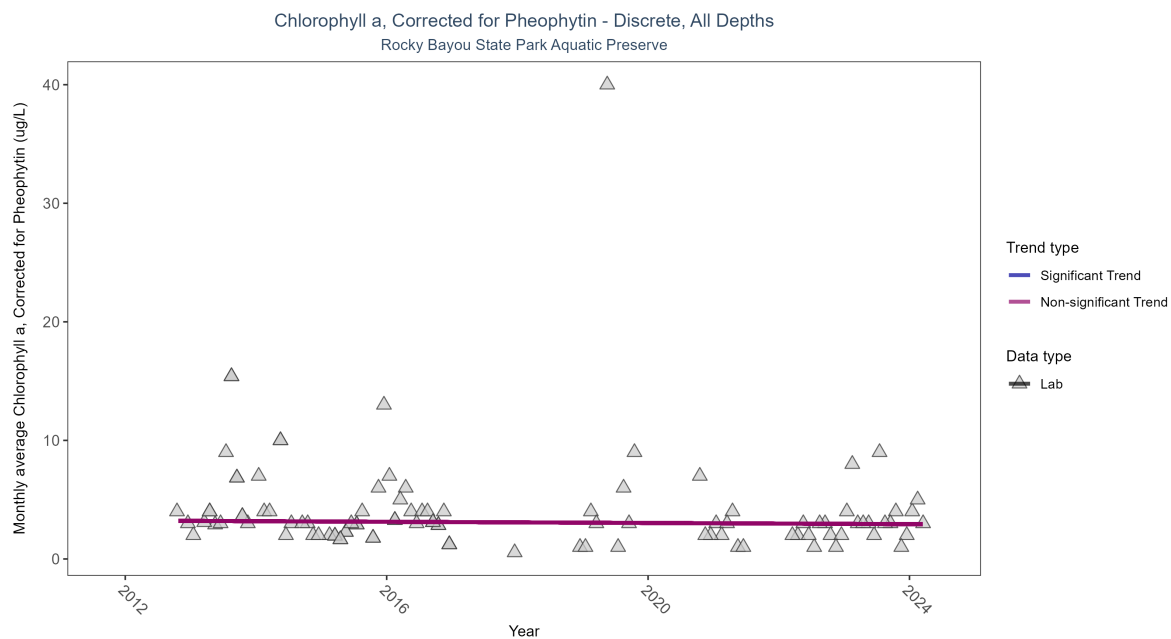
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Table 11: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

| ActivityType | Statistical Trend | N-Data | N-Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---|---|---|---|---|---|---|---|---|---|
| Lab | No significant trend | 103 | 13 | 2012 - 2024 | 3 | -0.1845 | 3.23571 | -0.025 | 0.0504 |

# Secchi Depth - Discrete



Secchi Depth - Discrete, Surface
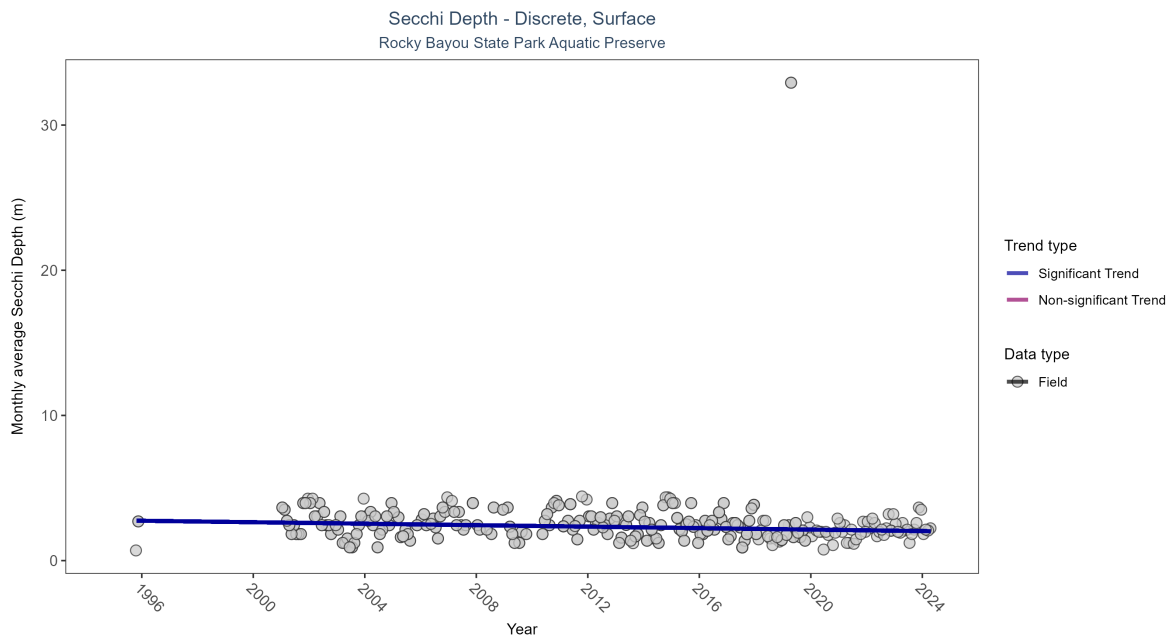
Rocky Bayou State Park Aquatic Preserve

Table 12: Seasonal Kendall-Tau Results for - Secchi Depth

| ActivityType | Statistical Trend | N-Data | N-Years | Period of Record | Median | tau | SennIntercept | SennSlope | p |
|---|---|---|---|---|---|---|---|---|---|
| Field | Significantly decreasing trend | 458 | 25 | 1995 - 2024 | 2.4384 | -0.1678 | 2.77026 | -0.0254 | 0.0003 |

## Colored Dissolved Organic Matter - Discrete



Colored Dissolved Organic Matter - Discrete, All Depths
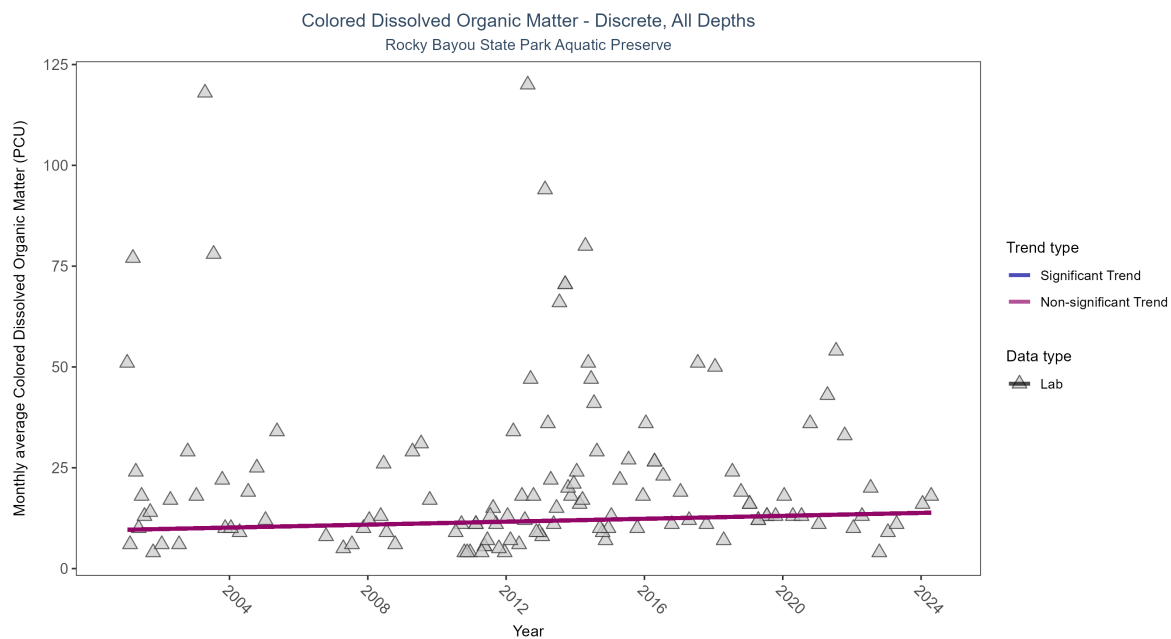Rocky Bayou State Park Aquatic Preserve

Table 13: 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 | No significant trend | 128 | 24 | 2001 - 2024 | 13.5 | 0.0916 | 9.62163 | 0.18182 | 0.3155 |