

# Lemon Bay Aquatic Preserve

## SEACAR Water Quality Analysis

Last compiled on 09 January, 2025

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# Indicators

## Nutrients

### Total Nitrogen - Discrete

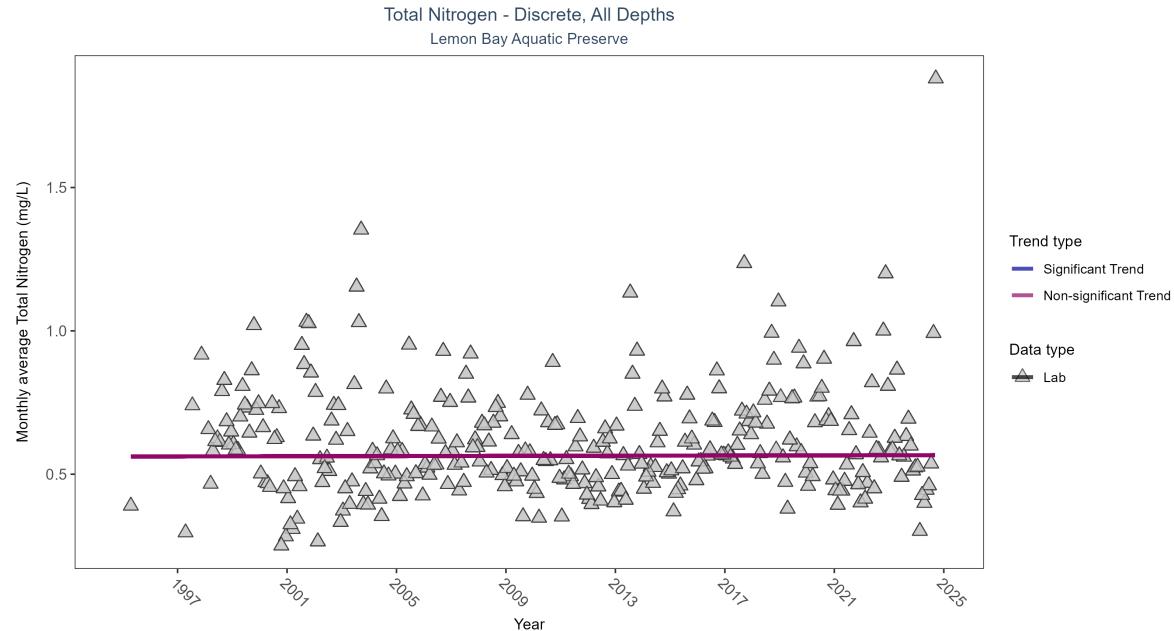


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	2930	29	1995 - 2024	0.555	0.0091	0.56174	0.00016	0.8240

## Total Phosphorus - Discrete

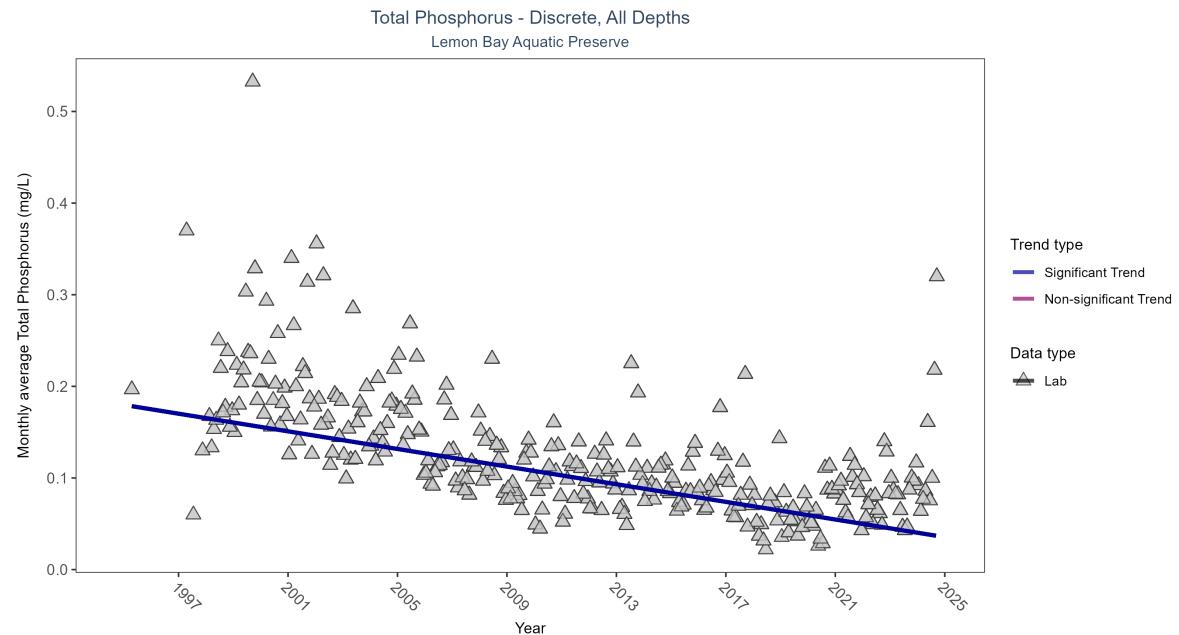


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	3093	29	1995 - 2024	0.088	-0.5406	0.17978	-0.00481	0.0000

## Water Quality

### Dissolved Oxygen - Discrete

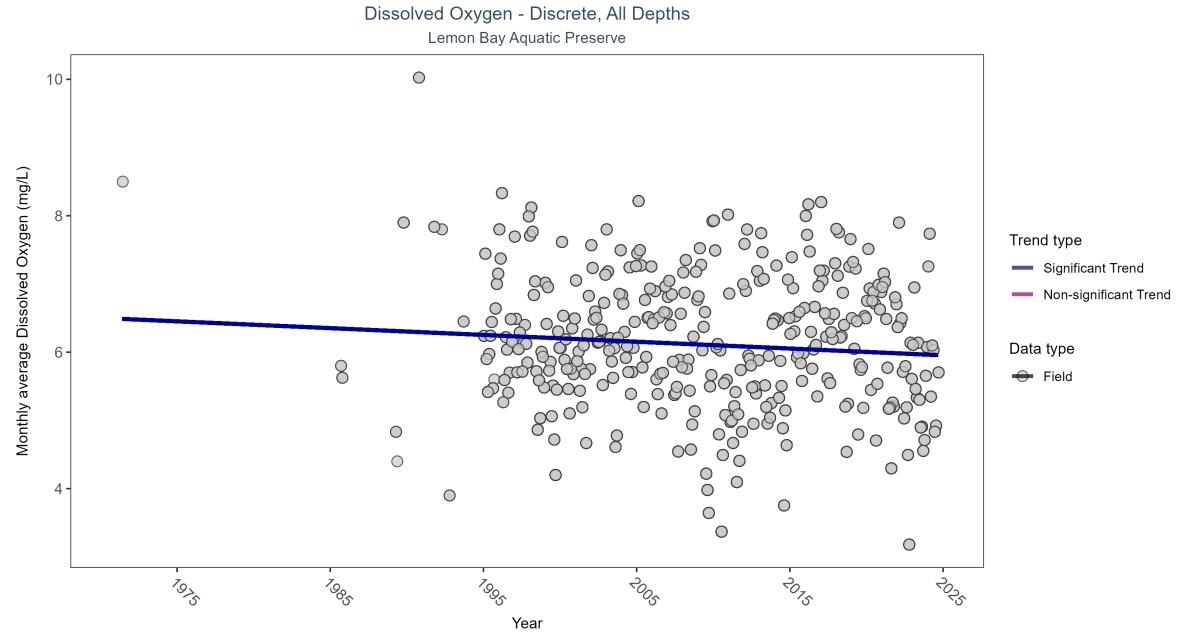


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	13482	37	1971 - 2024	6.1	-0.0707	6.49195	-0.00997	0.0423

## Dissolved Oxygen Saturation - Discrete

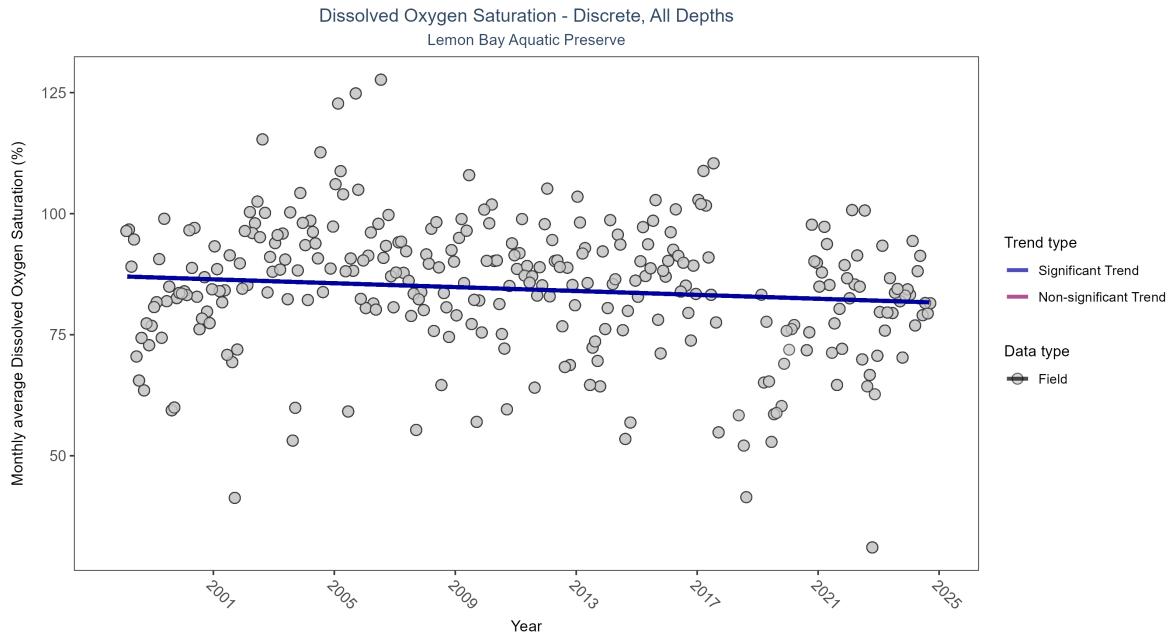


Table 4: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	4443	27	1998 - 2024	87	-0.1077	87.03607	-0.20046	0.0095

## Salinity - Discrete

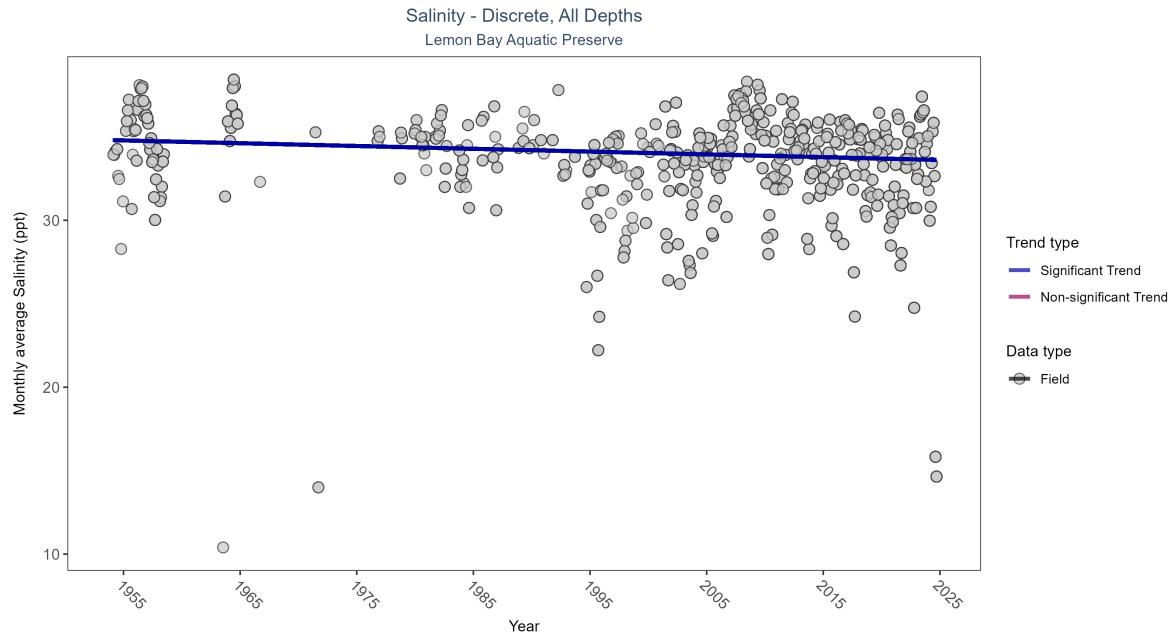


Table 5: Seasonal Kendall-Tau Results for - Salinity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
All	Significantly decreasing trend	10941	57	1954 - 2024	34	-0.0875	34.80114	-0.01674	0.0036

## Water Temperature - Discrete

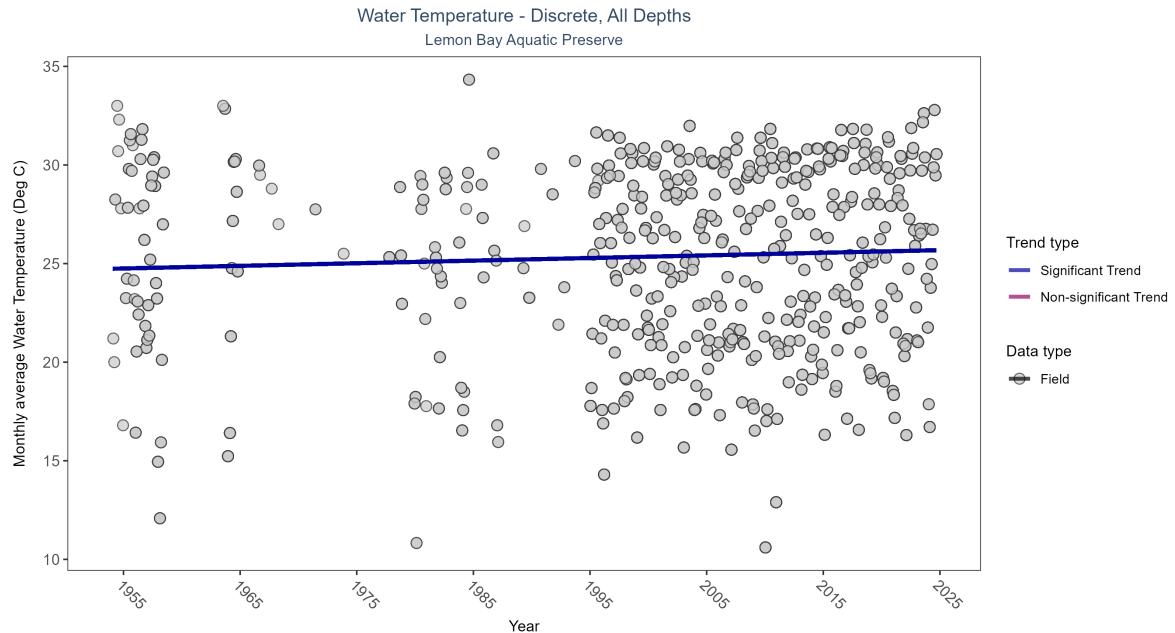


Table 6: Seasonal Kendall-Tau Results for - Water Temperature

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	14668	58	1954 - 2024	26.4	0.106	24.73793	0.01328	0.0006

## pH - Discrete

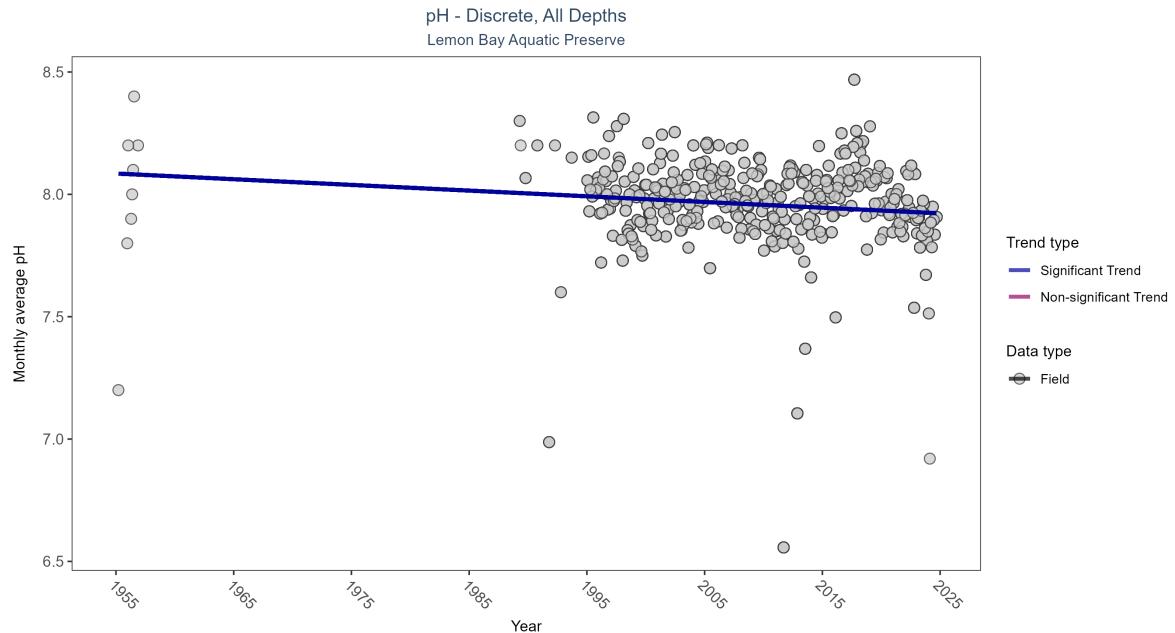


Table 7: Seasonal Kendall-Tau Results for - pH

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly decreasing trend	11903	37	1955 - 2024	8	-0.1125	8.08509	-0.00233	0.0018

## Water Clarity

### Turbidity - Discrete

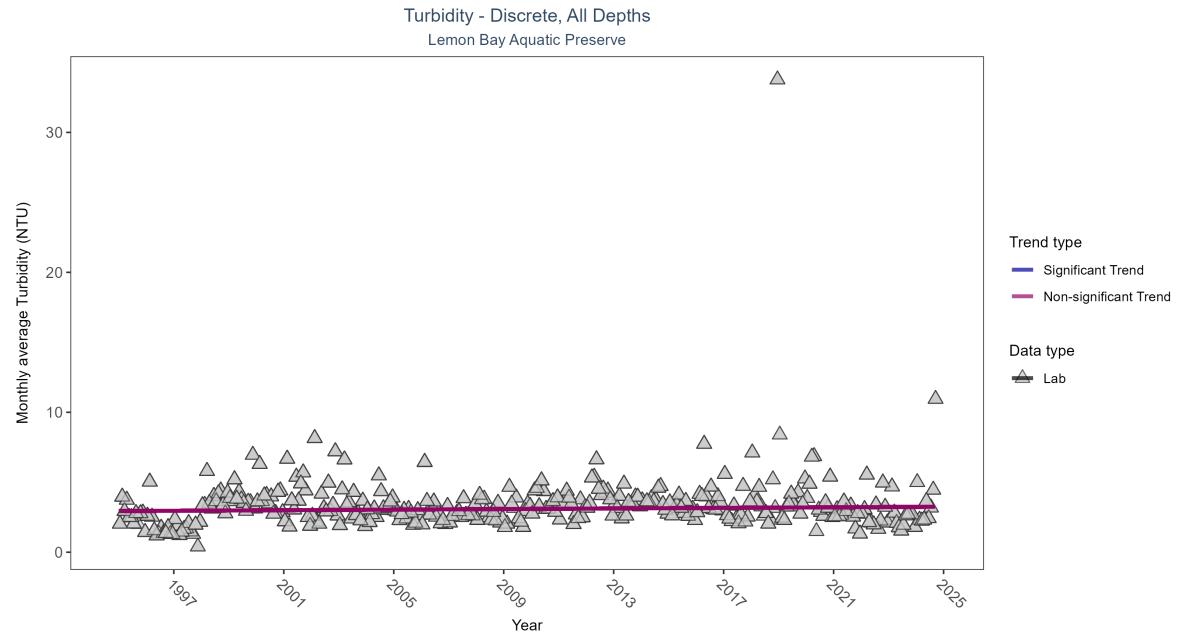


Table 8: Seasonal Kendall-Tau Results for - Turbidity

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	No significant trend	6001	30	1995 - 2024	2.6	0.0474	2.93924	0.01038	0.2109

## Total Suspended Solids - Discrete

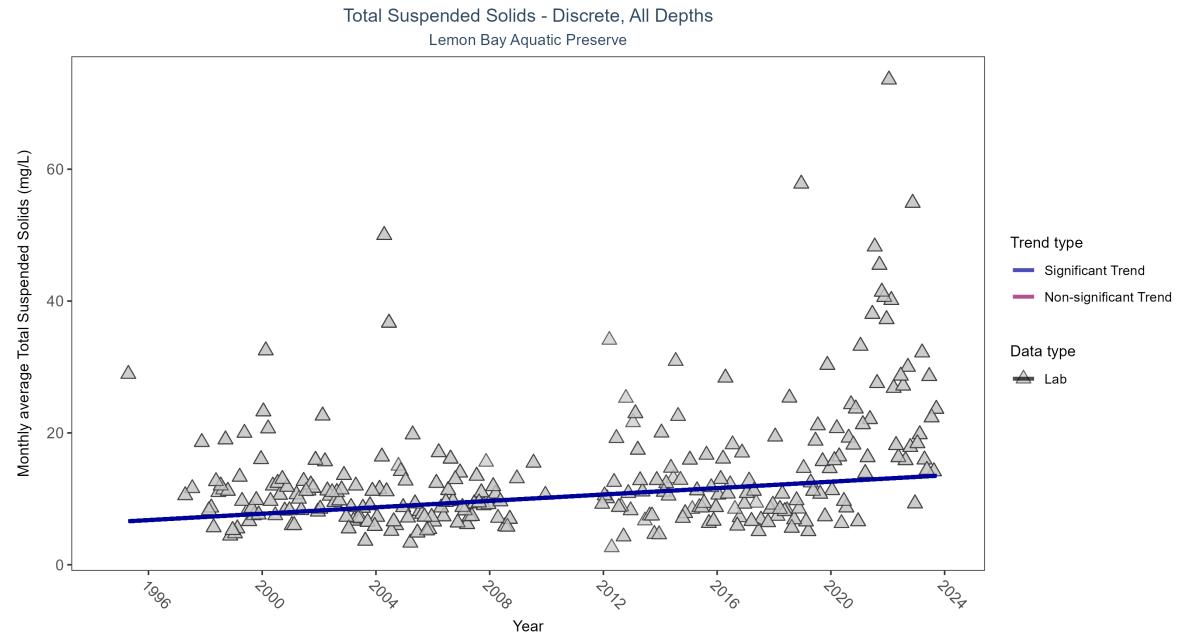


Table 9: Seasonal Kendall-Tau Results for - Total Suspended Solids

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly increasing trend	1165	27	1995 - 2023	10	0.228	6.53304	0.24268	0.0000

## Chlorophyll a, Uncorrected for Pheophytin - Discrete

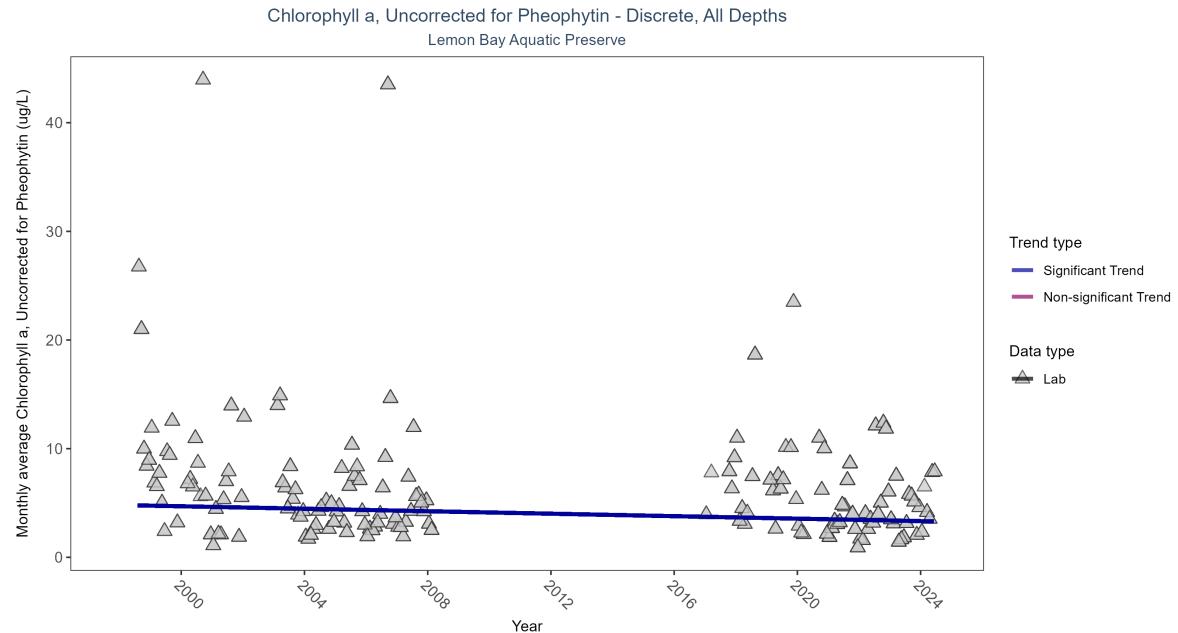


Table 10: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	861	19	1998 - 2024	3.8	-0.1307	4.81118	-0.05696	0.0313

## Chlorophyll a, Corrected for Pheophytin - Discrete

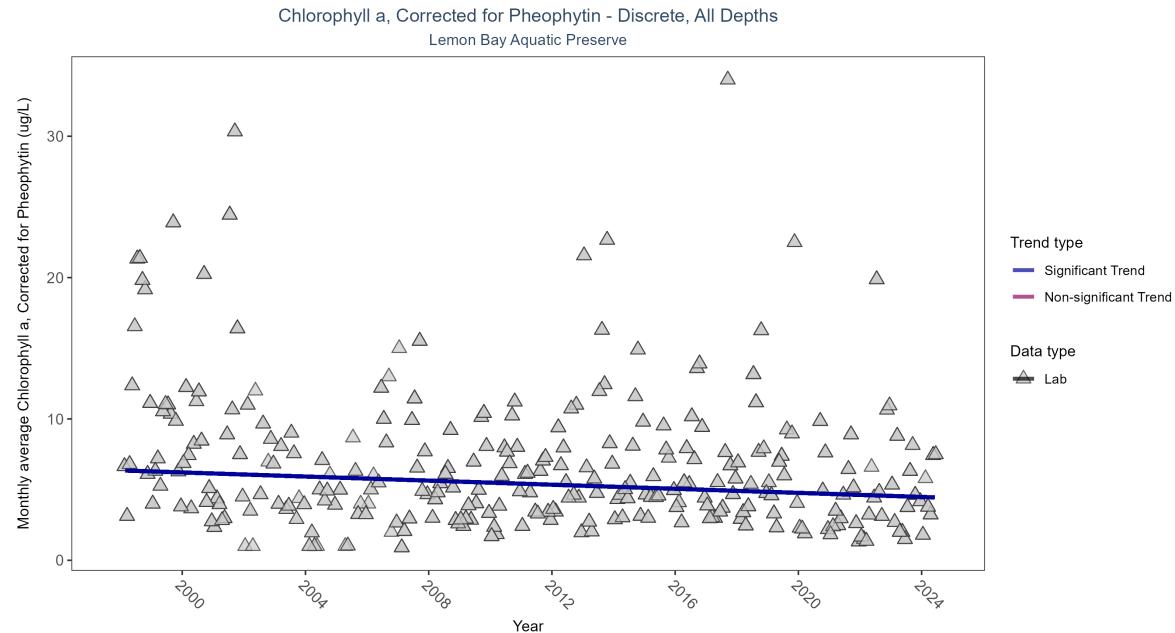


Table 11: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Significantly decreasing trend	1157	27	1998 - 2024	4.9	-0.1396	6.35942	-0.07222	0.0007

## Secchi Depth - Discrete

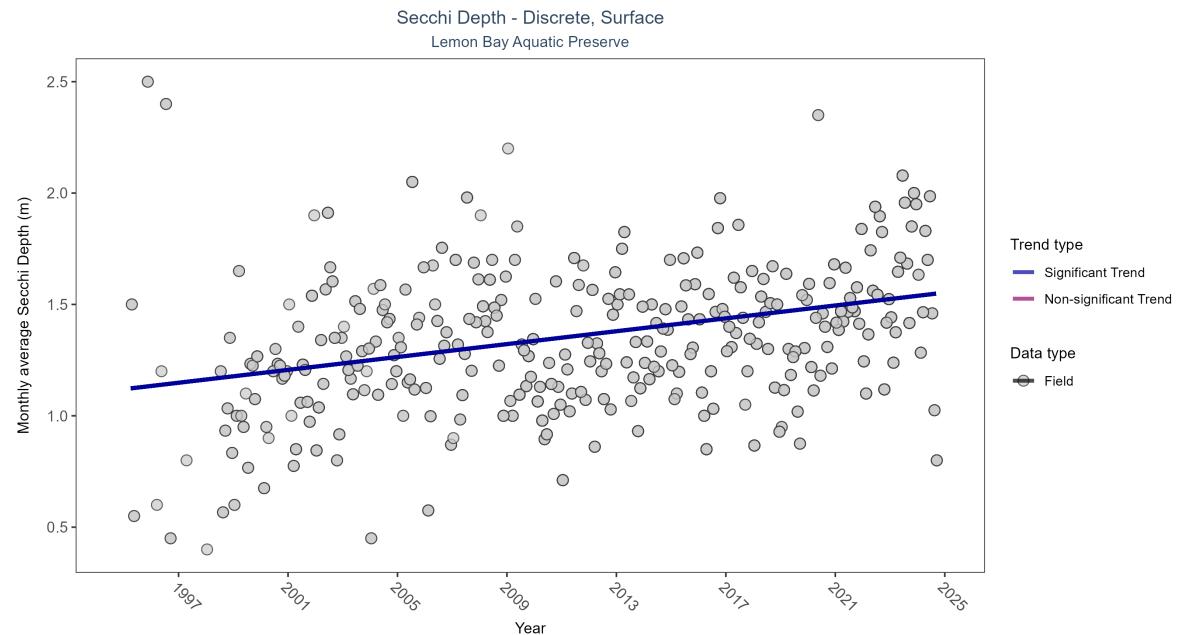


Table 12: Seasonal Kendall-Tau Results for - Secchi Depth

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Field	Significantly increasing trend	3046	30	1995 - 2024	1.3	0.2615	1.1195	0.01445	0.0000

## Colored Dissolved Organic Matter - Discrete

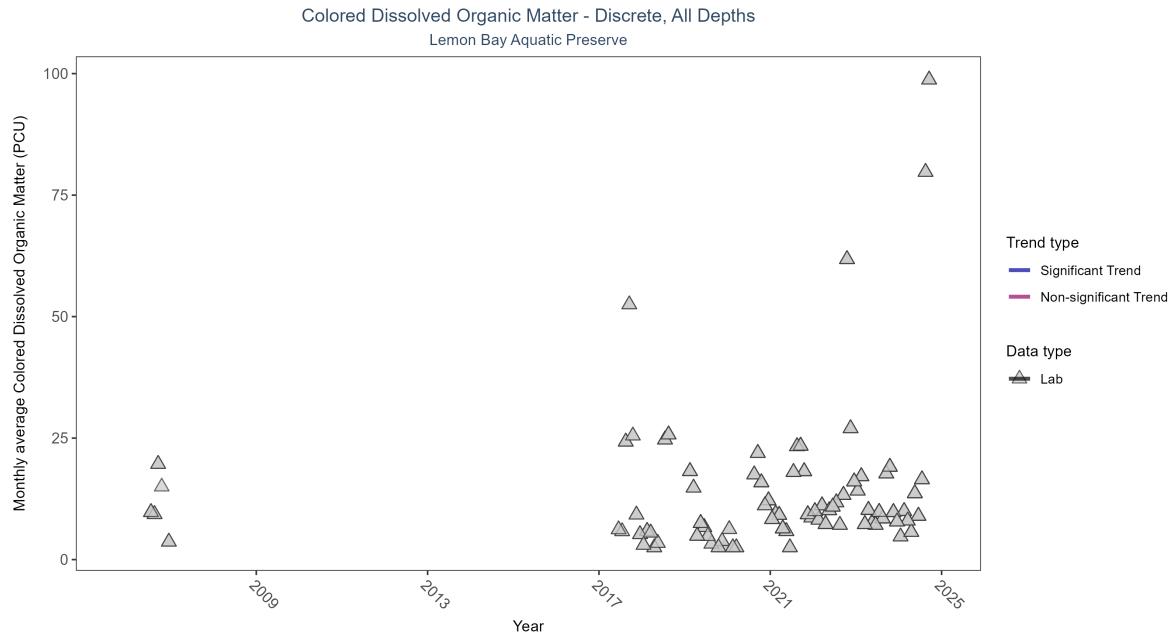


Table 13: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

ActivityType	Statistical Trend	N-Data	N-Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
Lab	Insufficient data to calculate trend	471	9	2006 - 2024	9.3	-	-	-	NA