

Estero Bay Water Quality Assessment

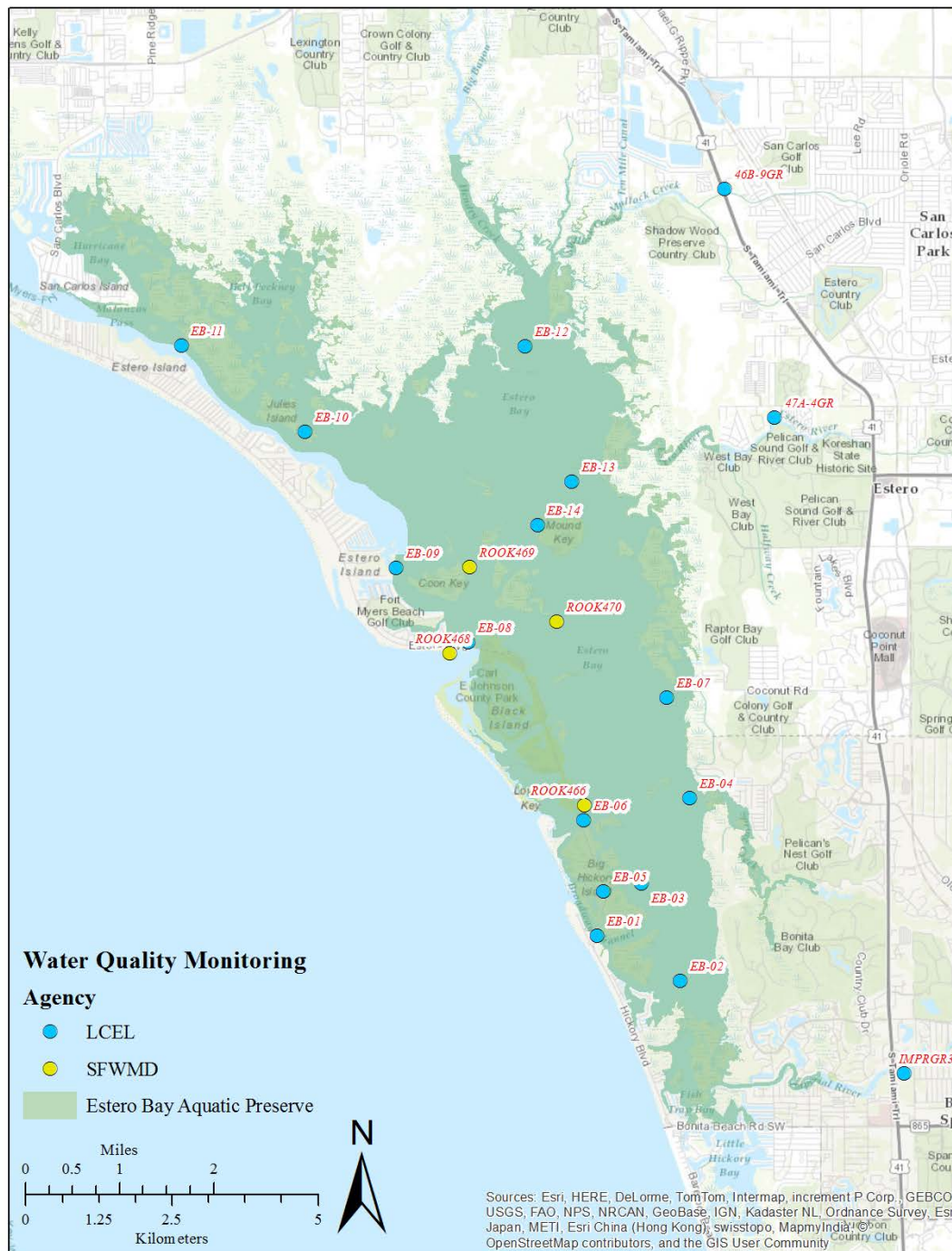
Water Year 2014



Estero Bay Seagrass Protection and Restoration Steering
Committee

9/8/2014

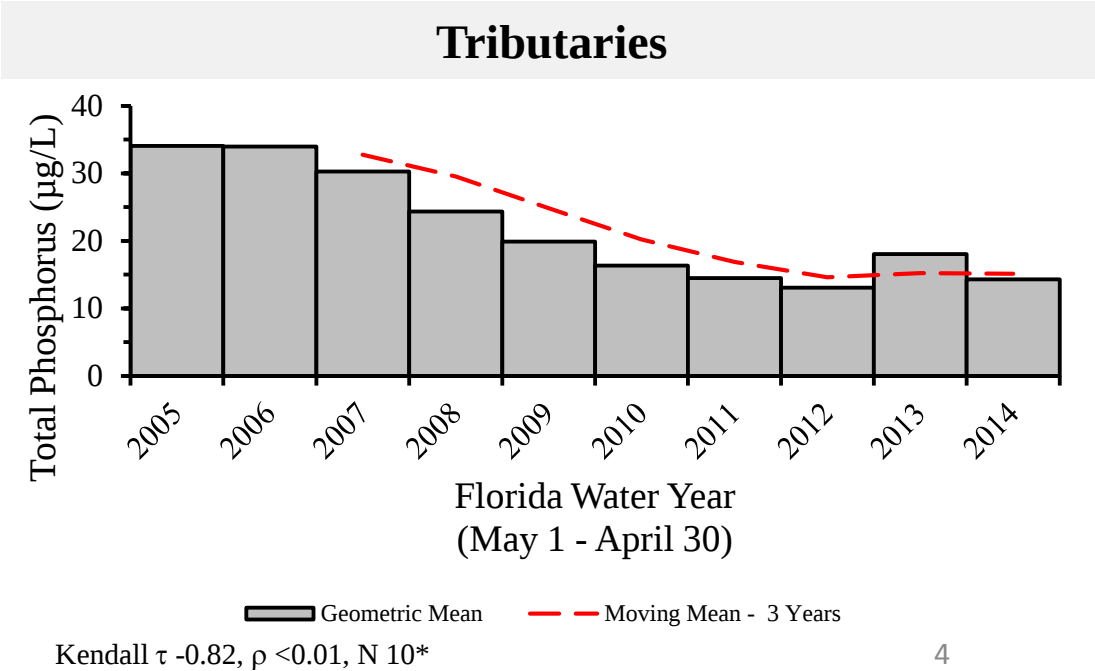
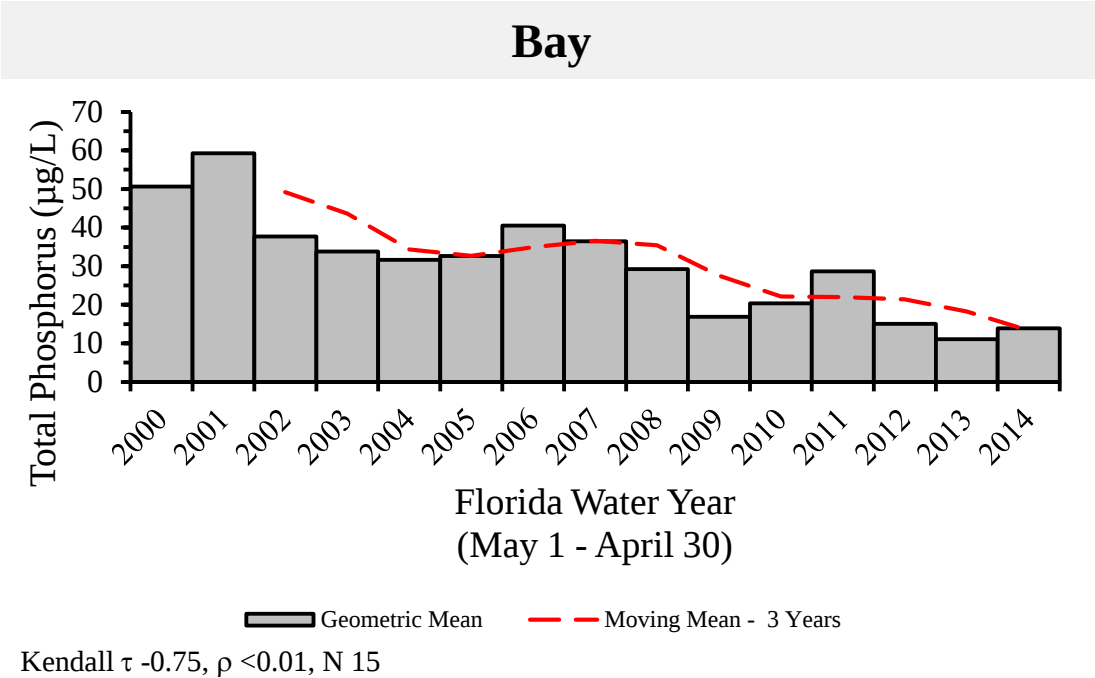
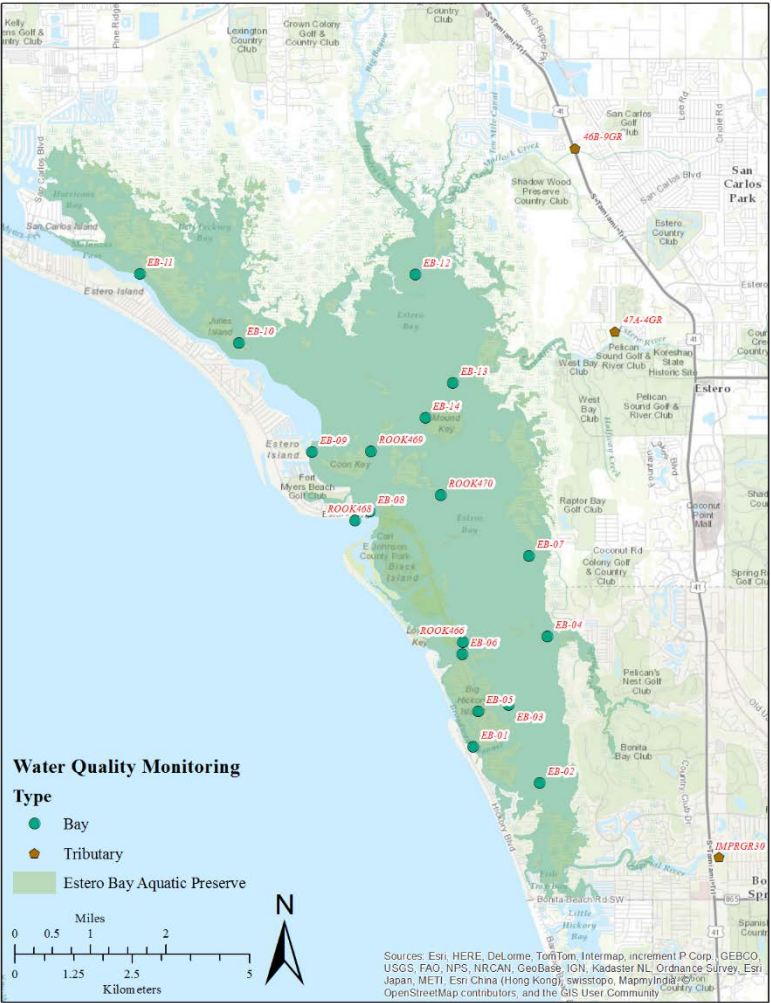
Paul Julian

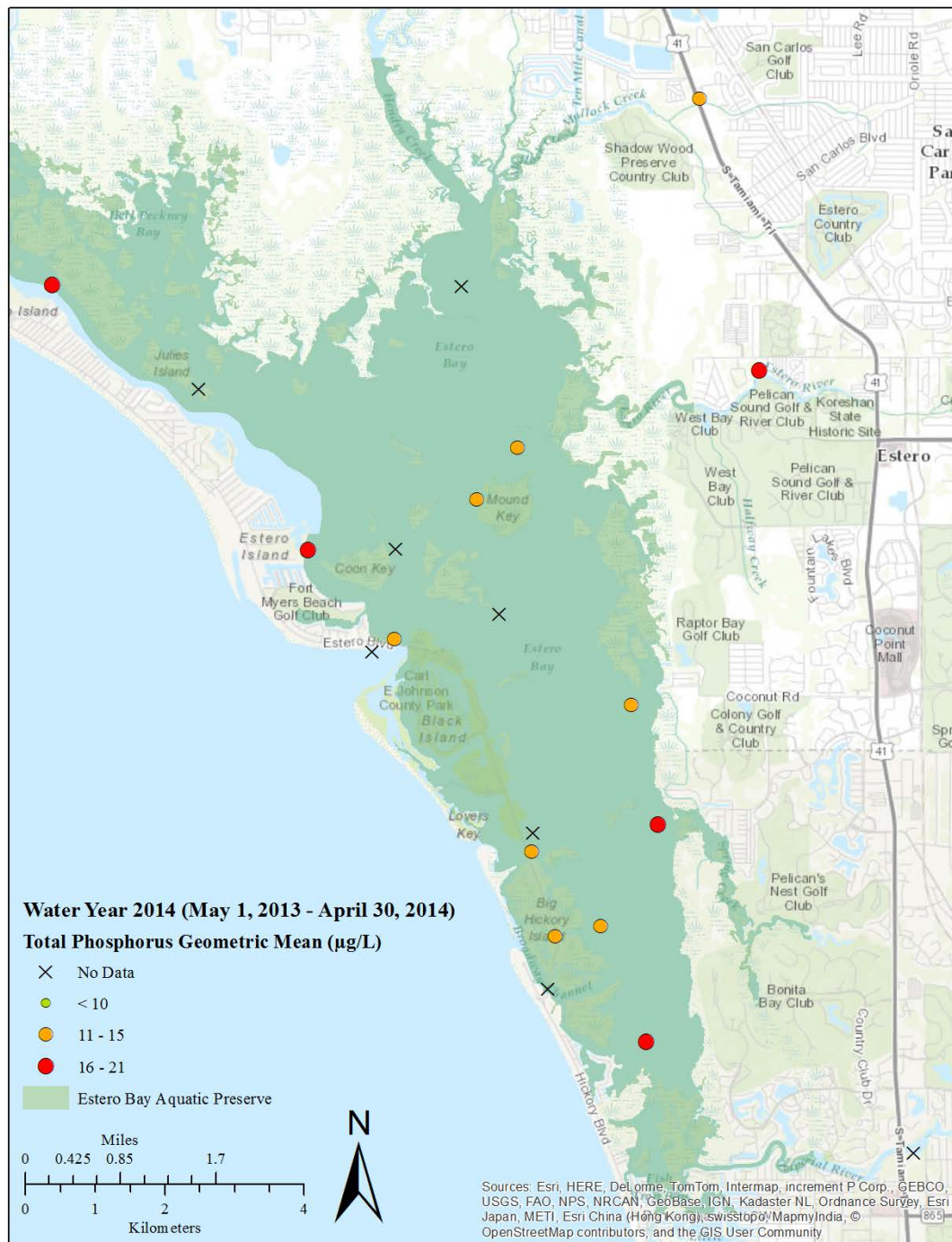


Data Analysis

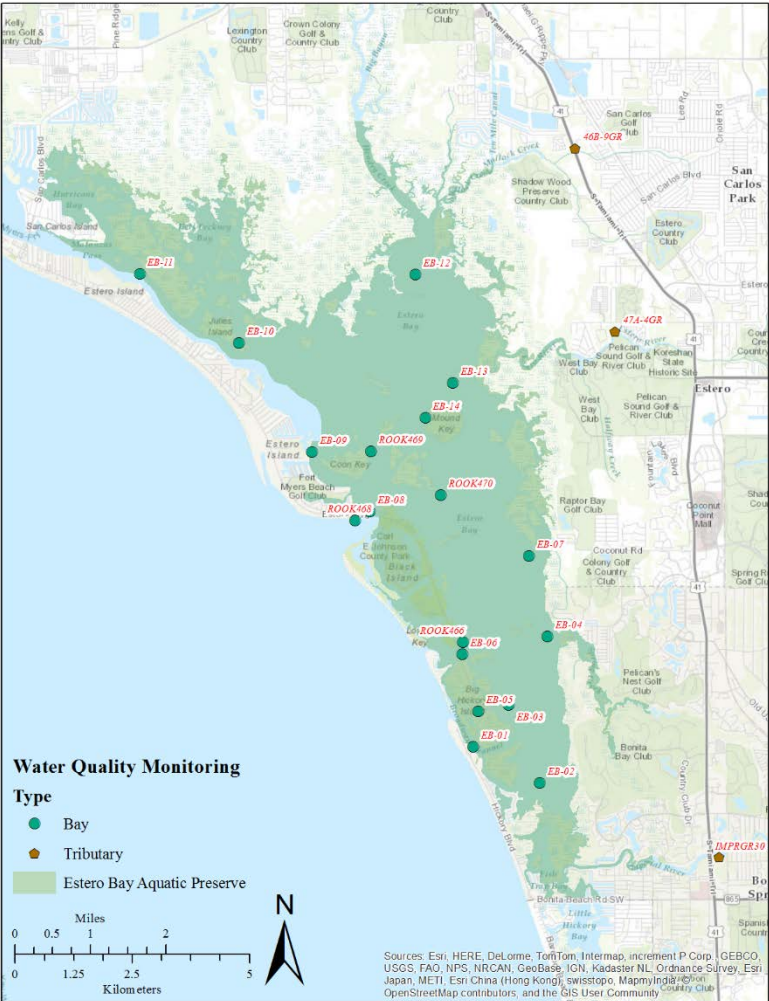
- Data was retrieved from South Florida Water Management District and Lee County Environmental Laboratory.
- Data with fatal qualifiers (i.e. exceed hold time, not properly preserved, etc.) were removed.
- Only sites with data points in both the wet (May – October) and dry (September – April) were used in the analysis.
- Trend analysis was performed on regional total phosphorus (TP) and total nitrogen (TN) geometric mean values for each region (Bay or Tributary).

Total Phosphorus

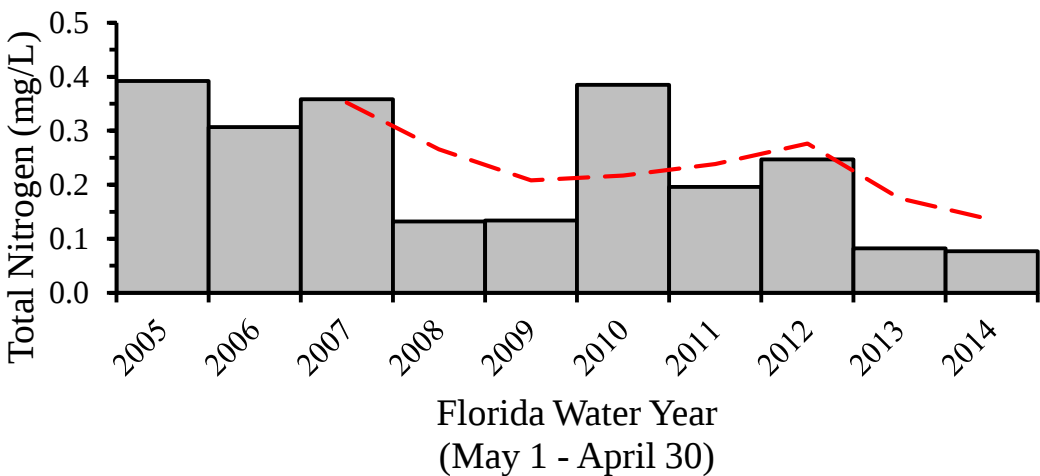




Total Nitrogen



Bay

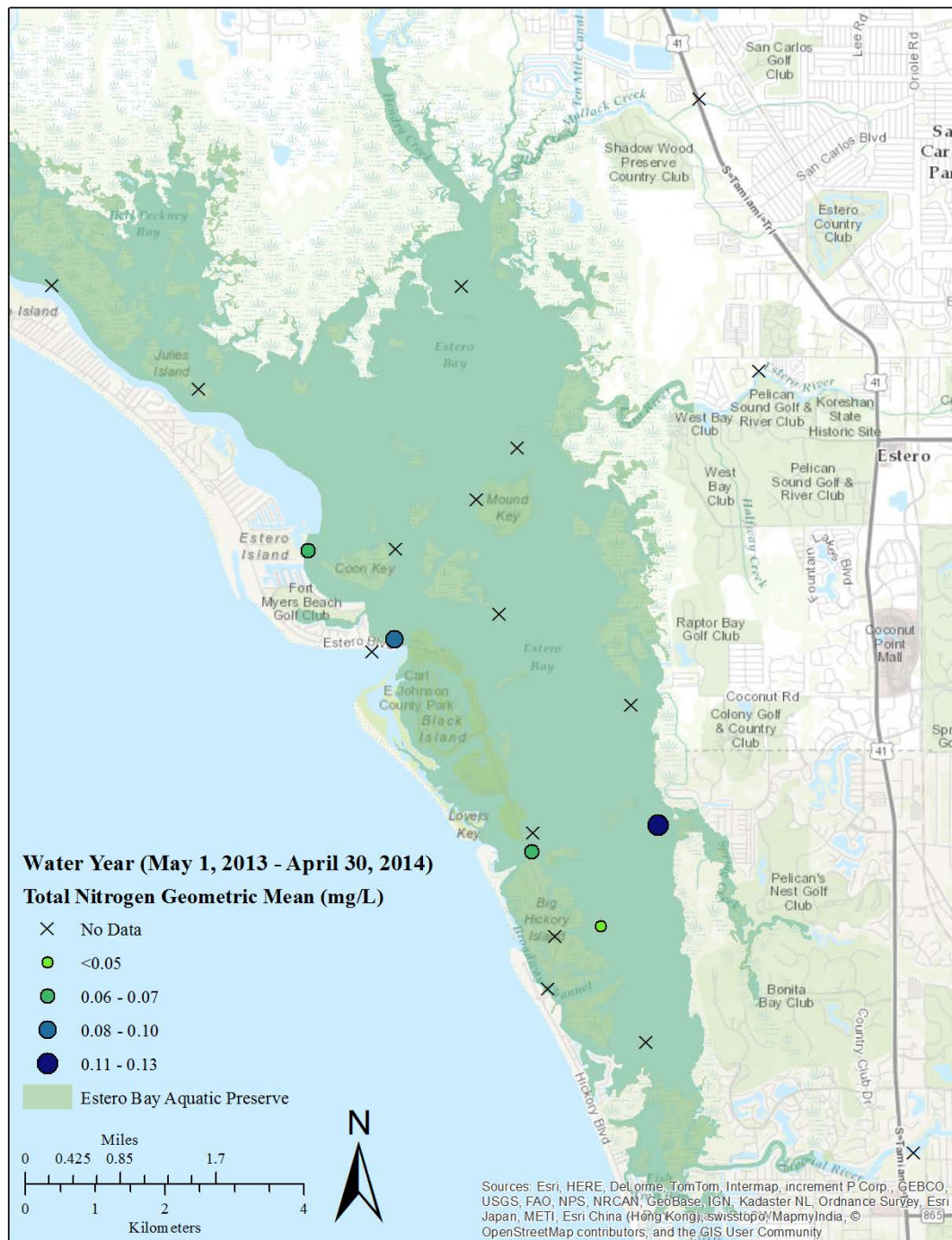


Geometric Mean Moving Mean - 3 Years

Kendall τ -0.51, $\rho < 0.05$, N 10*

Tributaries

No tributary
Total Nitrogen
Data Available



Conclusions

- Total Phosphorus
 - Annual geometric mean concentrations have significantly decreased in both Estero Bay proper and Tributaries.
- Total Nitrogen
 - Annual geometric mean concentrations have significantly decreased in Estero Bay from WY2005 to WY2014.
- Additional work
 - Additional parameters will be assessed.
 - Address data gaps.