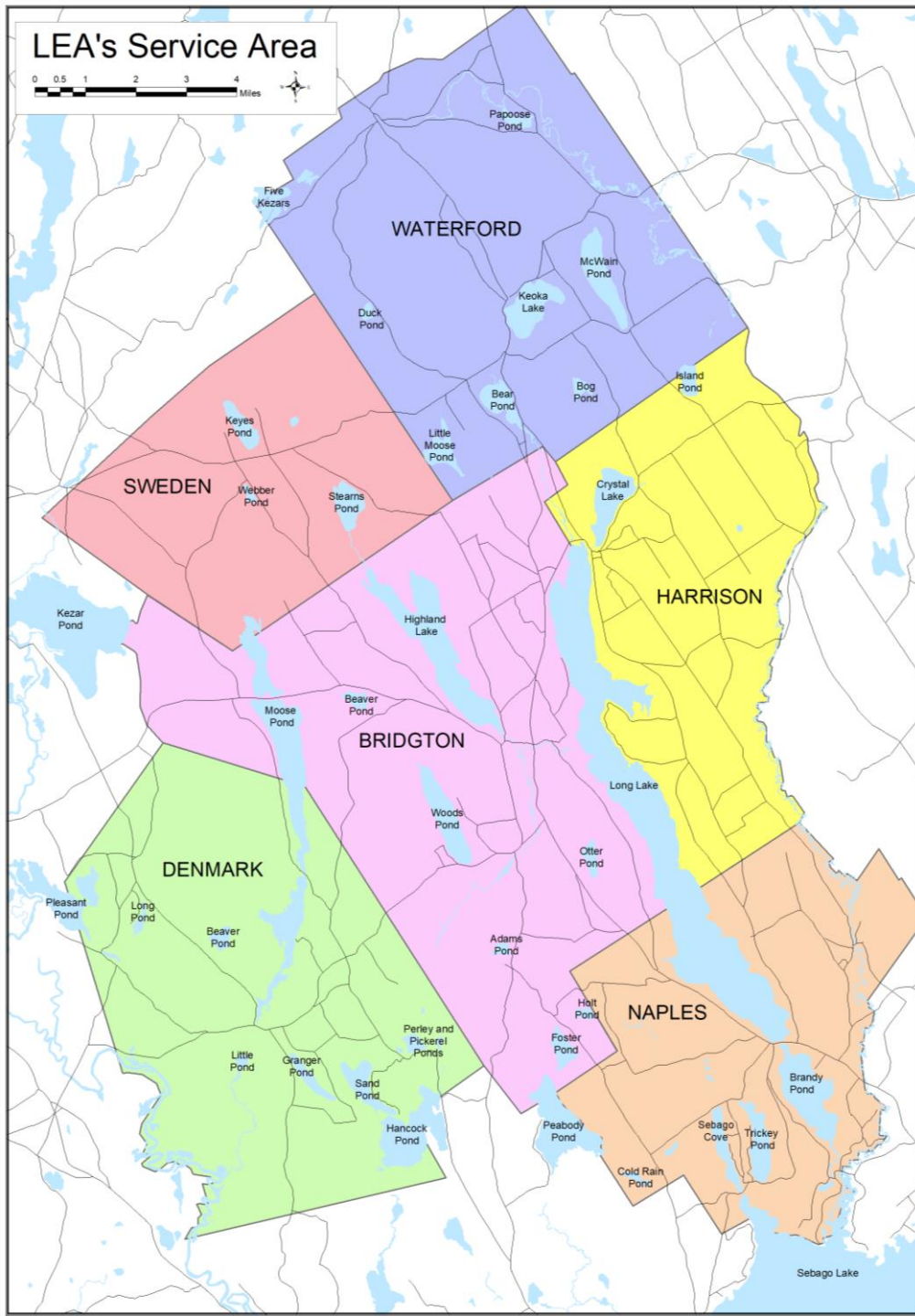# LAKES ENVIRONMENTAL ASSOCIATION
Protecting Maine Lakes Since 1970

2022 Casco Bay Monitoring Network Update

Maggie Welch – Limnologist – Lakes Environmental Association

Monitoring Program Overview

## Long-term monitoring program

Total phosphorus, chlorophyll-a, oxygen, clarity, temperature, pH, color, conductivity, alkalinity

Advanced monitoring programs

High resolution temperature monitoring, flourometer, loon productivity, acid rain monitoring, algae identification

Maine Lake Science Center

GLEON automated buoys, winter lake monitoring, bathymetry, nutrient analysis, flow imaging microscopy, Gloeotrichia monitoring, sonde profiles, photosynthetically active (or available) radiation (aka: 'light') profiles, cyanotoxins analysis (Abraxis test strips), E.coli monitoring
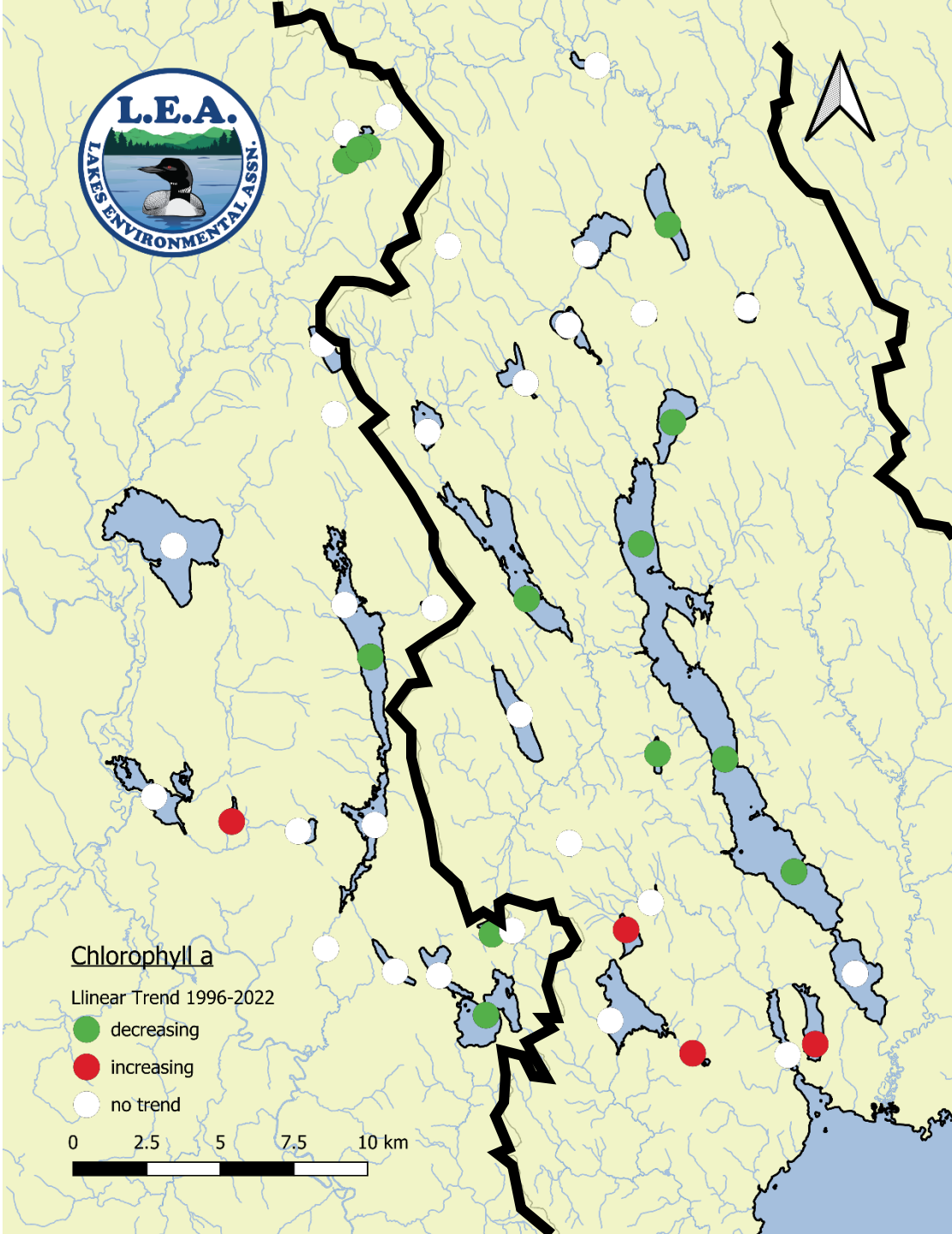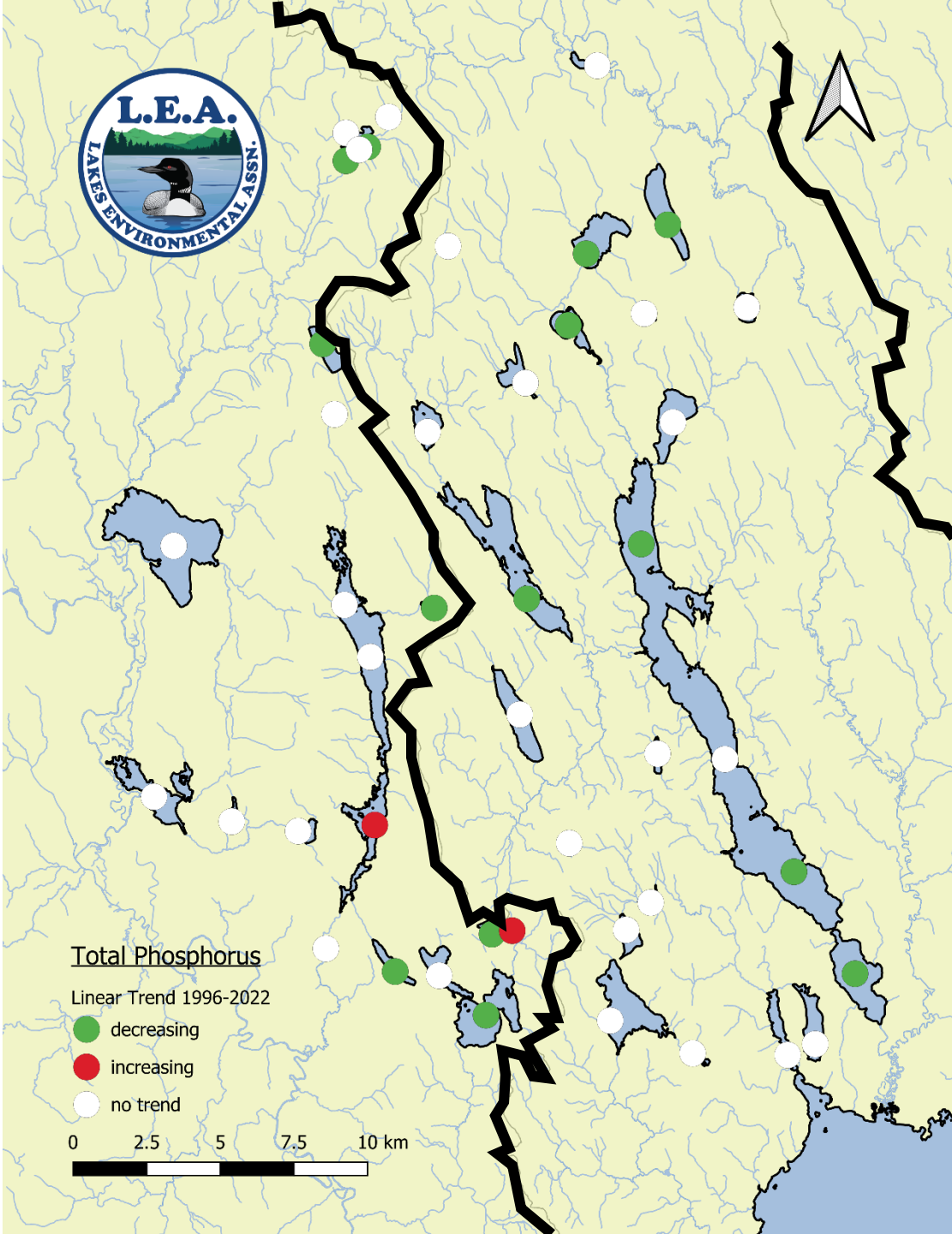
Chlorophyll-a Trend

26 test sites visited 8 times each

19 test sites visited 1 time each

chl-a samples analyzed in 2022: 254

Mean chl-a concentration for all lakes:
2.7 PPB

Chl-a concentration range:
1 PPB – 24 PPB

Chlorophyll a

Llinear Trend 1996-2022

● decreasing
● increasing
○ no trend

0   2.5   5   7.5   10 km
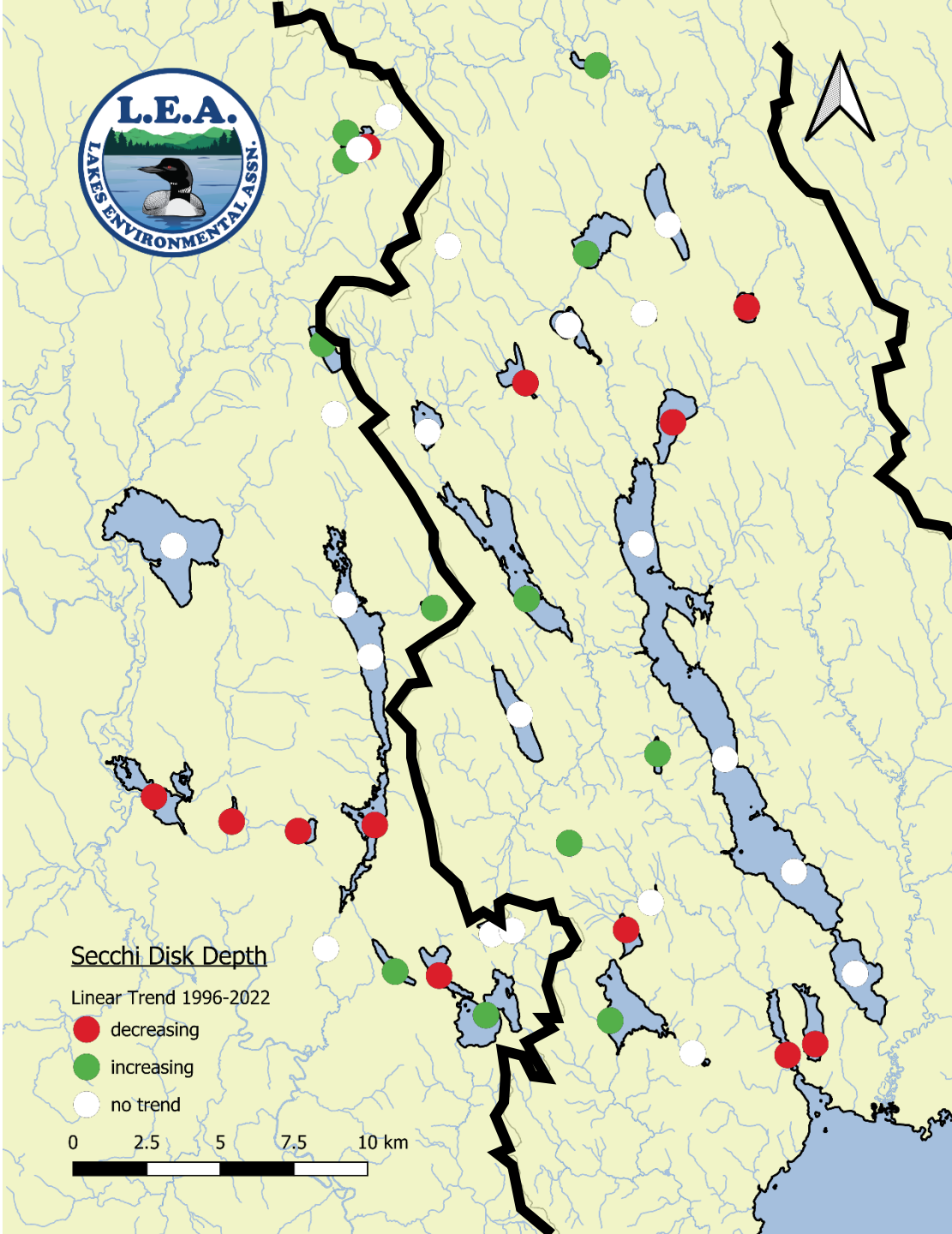
Total Phosphorus Trend

26 test sites visited 8 times each

19 test sites visited 1 time each

total phosphorus samples analyzed in 2022: 254

Mean total phosphorus concentration for all lakes: 7.0 PPB

Total phosphorus concentration range: 2 PPB – 23 PPB

Total Phosphorus

Linear Trend 1996-2022

● decreasing
● increasing
○ no trend

0   2.5   5   7.5   10 km

Clarity Trend

26 test sites visited 10 times each

19 test sites visited 1 time each

secchi readings in 2022: 316

Mean secchi for all lakes: 6.4 meters

Secchi range: 1.27 meters – 12.00 meters

Secchi Disk Depth

Linear Trend 1996-2022

- 🔴 decreasing
- 🟢 increasing
- ⚪ no trend

0   2.5   5   7.5   10 km

For info about specific lakes and ponds or to learn more about our monitoring programs please visit our website

Water testing reports

https://mainelakes.org/water-testing-report/

Near real-time buoy data for Long and Highland lakes

https://mainelakes.org/news_article/view-live-water-quality-data/

Information about individual lakes

https://mainelakes.org/lake-information/