Continuous Data Logger Processing App
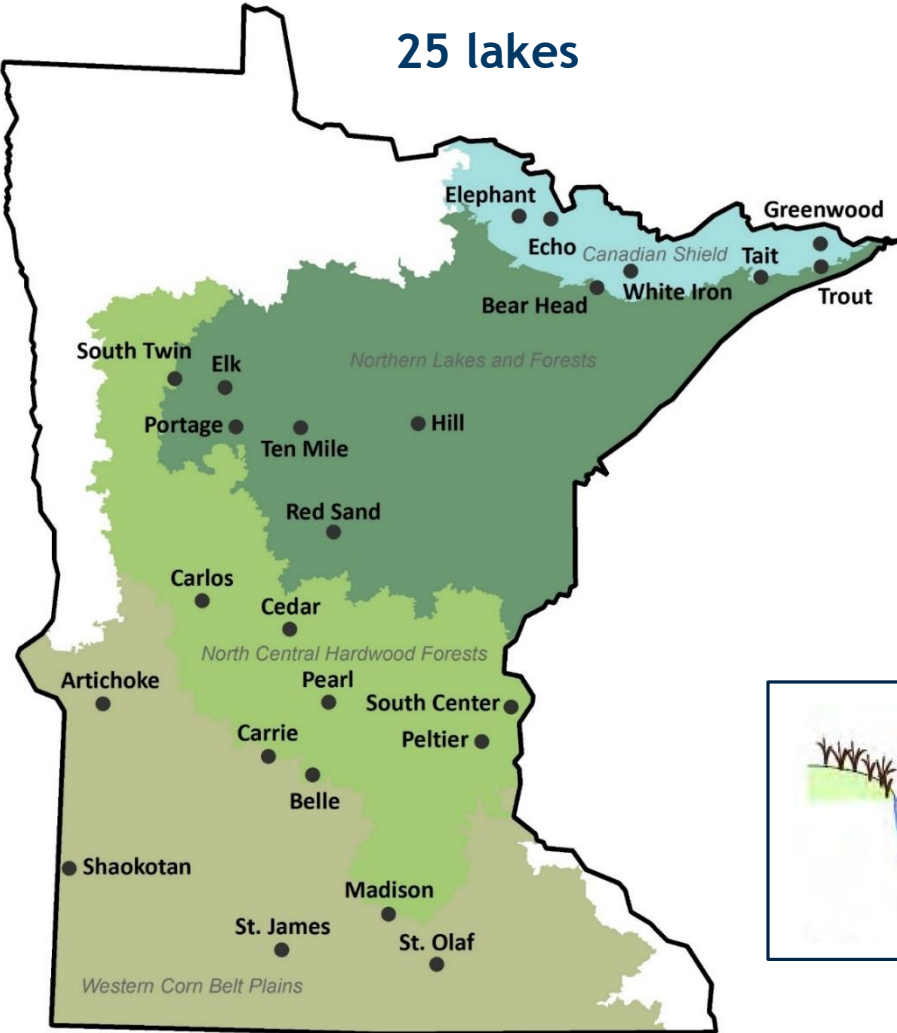
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dnr.state.mn.us/fisheries/slice/index.html

Sentinel Lakes Program

- Long-term lake monitoring program started in 2008

- Collaborative effort led by the Minnesota Department of Natural Resources and the Pollution Control Agency and teams with multiple other agencies and researchers

Sentinel Lakes Program

25 lakes

Lakes shown on Minnesota map:
Elephant, Greenwood, Echo, *Canadian Shield*, Tait, Bear Head, White Iron, Trout, South Twin, Elk, *Northern Lakes and Forests*, Portage, Hill, Ten Mile, Red Sand, Carlos, Cedar, *North Central Hardwood Forests*, Artichoke, Pearl, South Center, Carrie, Peltier, Belle, Shaokotan, Madison, St. James, St. Olaf, *Western Corn Belt Plains*

A gradient of conditions

Four ecoregions

Three Phosphorus Concentrations

Two mixing regimes

Sentinel Lakes Data

- Water Chemistry (PCA)
- Phytoplankton (PCA)
- Zooplankton (EWR)
- Macrophytes (EWR)
- Macroinvertebrates (EWR)
- Ice On/Off (CLM)

- Juvenile Fish (SLP)
- Littoral Fish (IBI)
- Pelagic Fish
  - Vertical gillnets (SLP)
  - Hydroacoustics (FRU)
- Standard Fish Surveys (FMA)

- Water Temperature (FMA & SLP)
- DO (SLP)
- Water Levels (EWR & SLP)

CLM – DNR State Climatology Office
EWR – DNR Ecological and Water Resources
FMA – Fisheries Management Areas
FRU – Fisheries Research Unit
IBI – Fisheries Index of Biotic Integrity Group
PCA – Minnesota Pollution Control Agency
SLP – Sentinel Lakes Program Staff