



# Notes from the Field: Expanded Lake Monitoring

Carver County Water Management Organization

Citizens Advisory Committee Meeting

5/28/2024





# Presentation Overview

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- Informational item only
- No committee action required

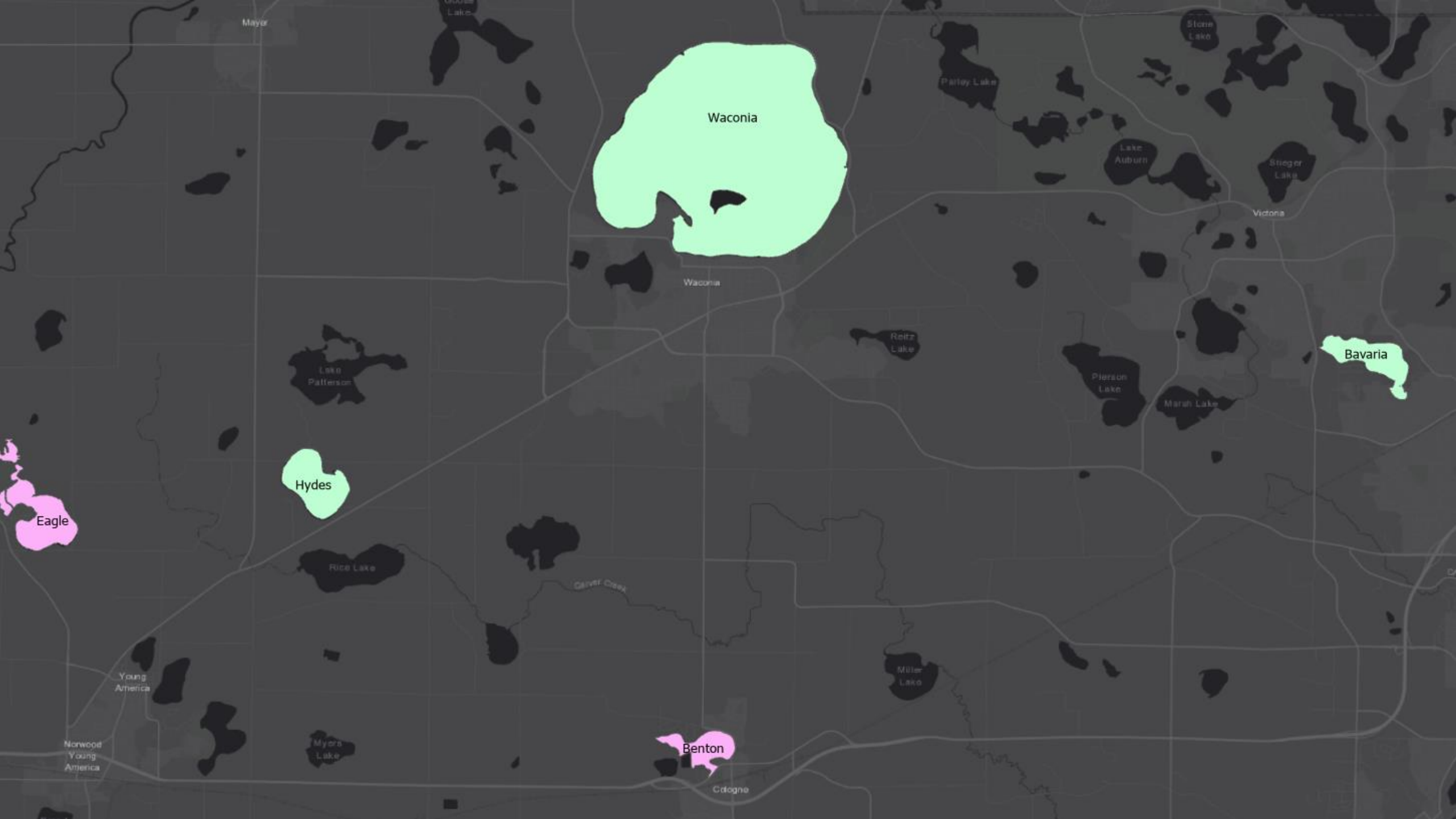
# What We Monitor At Each Lake

- Parameters Monitored
  - **Total phosphorus** and Total Kjeldahl nitrogen (nutrients)
  - **Chlorophyll-a** (algae)
  - Chloride (pollutant)
  - **Water transparency** (Secchi depth)
  - Temperature, dissolved oxygen, pH, and specific conductance
  - Water level
- **Parameters used to determine nutrient impaired lakes**



# Expanded Monitoring

- Funding from a Monsanto settlement with the County
- Phytoplankton community
  - Base organism of the food web, human health implications (HABs)
- Zooplankton community
  - Primary consumers, consumed by small predators
- Dissolved organic carbon
  - Dissolved organic compounds from plants & algae (tea), base of the food web
  - Can alter nutrient levels, pH (can acidify water) & light absorption
- Nitrate & nitrite
  - Nitrate compounds that can be readily used by plants and algae



Waconia

Waconia

Bavaria

Hydes

Eagle

Benton

Mayor

Quinn Lake

Stone Lake

Parley Lake

Lake Auburn

Stieger Lake

Victoria

Reitz Lake

Pierson Lake

Marsh Lake

Lake Patterson

Rice Lake

Oliver Creek

Miller Lake

Young America

Norwood Young America

Myers Lake

Cologne



# Overall Goal

- **Study the impact of nitrogen in lake ecosystems**
  - **Monitor how nitrogen compounds transition seasonally**
- **Study annual fluctuations of new parameters**
  - **2–3 year study**
- **Characterize correlations between phytoplankton and zooplankton communities with old and new parameters**
- **MPCA is assisting with how to interpret our results**
  - **Winter**





# Questions

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