# Summary of the **Staples Lake Comprehensive Management Plan, 2022**

## **Plan Purpose**

Rehab District In 2021, the Staples Lake District received WDNR grant funding for planning and technical assistance to prepare a comprehensive management plan for Staples Lake. With input from lake and watershed residents through surveys and meetings, the plan assesses lake conditions and water quality, identifies problems and causes, creates a vision and goals for lake improvements, and provides an action plan with management recommendations. The plan will also strengthen the District's ability to secure grant funding for related projects in the future



## The Key Challenge – Algal Blooms

In Summer 2021, the appearance of Staples Lake was green on 75% of the water-monitoring dates and the water clarity depth averaged 2 feet as measured by Secchi disc. The green color is the chlorophyll and other pigments found in algae, which can grow very fast (or bloom) in slowmoving or stagnant waters during periods of high temperatures. Too much algae can cause a host of problems, including reduced water oxygen levels, promote bacteria growth, and create a disagreeable odor. This algae growth not only can degrade fisheries, but can also produce cyanobacteria (sometimes called blue-green algae) as shown in the picture, which can be toxic to humans, pets, and other animals.

Staples Lake is nutrient rich (hypereutrophic), largely due to phosphorus. The 2020 Staples Lake Phosphorus Report found that about 60% of the phosphorus in the Lake's water is from external sources (inflow from upstream), while the remaining 40% is internal loading from Lake's sediment. It is believed that the largest percentage of this external loading is from agricultural sources. The plan includes recommendations to explore the use of ultrasound technology to reduce algae blooms, while working with County land conservation offices to reduce external phosphorus loading from upstream. Once significant external-loading reductions are achieved, the Lake District can consider projects to reduce internal loading, such as alum treatment.

#### Vision Statement and Goals

Staples Lake is a relaxing, four-season, outdoor recreation destination. The Lake's scenic shorelines, abundant wildlife, healthy aquatic ecosystem, and clear water make Staples Lake a great place for low-intensity, water-based recreation, such as fishing, swimming, and kayaking, and for friends, family, and visitors to gather, live, and enjoy the "northwoods" setting.

#### **Priority**

- Goal: Remove Staples Lake from the Wisconsin 303(d) Impaired Waters List due to excess phosphorus and algal growth, while providing a healthy, balanced ecosystem for aquatic plants and fish.
- Goal 1: Staples Lake water quality and clarity is improved, the number of days that algae blooms occur is decreased, and the Lake is swimmable during most days of the summer.
- Goal 2: The aquatic plant community of Staples Lake will be healthy and balanced, while not impairing recreational enjoyment and navigation.
- Goal 3: Staples Lake will have great year-round fishing, with a healthy, balanced fishery and strive towards a distribution of species similar to the 1993 fish inventory with good Walleye, Perch, and Largemouth Bass numbers and size distribution.



Staples Lake Protection &

The following summarizes the plan's recommended actions that will be implemented as resources allow. Timelines are subject to change and some strategies require further research and analysis prior to implementation. **Dark green** denotes projects or actions that could occur at any time during these years, while **light green** denotes an ongoing activity; some ongoing activities may occur periodically or become future projects.

Strategy	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Notes
Water Quality Strategies - External Loading/Upstream												
1. Evaluate Opportunities for Ag Cons Practices (ACPF & STEPL)												District contracted with Polk County for this analysis
2. Support Regen Ag & Soil Health Outreach and Practices in Watershed												could include projects in future
3. Soil Testing & NMP Initiative												submit a WDNR Lake Mgmt Plan Imp grant in Fall 2022
4. Wetland Banking Effectiveness & Opportunities												contact WDOT & NRCS during Years 1-3
5. Encourage Stream Monitoring												WAV program
6. Engage Watershed Farmers, Farmland Owners, & Town/County Officials												initial engagement as part of Lake Mgmt Plan creation
7. Foster Lake Partnerships w/ Lake of the Woods & Long Lake groups												explore collaboration & cost sharing
Water Quality Strategies - Internal/At the Lake												
1. Ultrasonic Algae Remediation												Must first demonstrate safety to WDNR.
2. Shoreland BMPs & Habitat												potential Healthy Lakes grant projects
3. Watercraft Usage Signage												
4. Update Bathymetric Map												
5. Update Phosphorus Loading Study												in 5-10 years, if progress on external loading
6. Alum Treatment for Internal Loading												first achive a 50+% external P-loading reduction
7. Sediment Trap & Limited Dredging												may be 10+years
8. Staples Lake Water Quality Monitoring												continue current efforts
9. Shoreland Owner & District Member Awareness												continue/expand current efforts
Aquatic Plant Management & AIS Strategies												
1. Aquatic Plant Management												largely continue current; update survey in 5-10 yrs
2. AIS Education & Mitigation												consider participation in Clean Drains & Landing Blitz
3. AIS Monitoring												as part of lake water quality monitoring
Fishery Strategies												
1. Fish Sticks and/or Fish Cribs												potential Healthy Lakes grant project
2. Walleye Stocking												target 2024 for first years of stocking
3. Periodic Fish Surveys												2027 & every 9 years thereafter
4. Maintain Aeration System												continuing
5. Fisheries Education												continuing
Organizational & Capacity-Building Strategies												
1. Annual Lake Management Plan Review												provide a progress update at Annual Meeting
2. Form a "Lake Outreach Team" & Create Website												target 2023 for first annual Lake fundraiser
3. Lake Leaders Training												explore applying in 2023-2024; others in future
4. Encourage Polk County Landowners to Join the District												process dictated by State Statutes
5. Update the Management Plan												by 2023
6. Maintain District Records												continuing
7. Active District Commissioners												continuing