

Long-Term Monitoring

- Maintain an updated inventory of completed projects and properties eligible for cost-share assistance.
- Monitor changes in land-use conditions to identify potential problem areas and better target Best Management Practices (BMPs).
- Support the continuation of long-term trends monitoring by Wisconsin DNR relating to water quality, fishery and aquatic plant conditions.
- Monitor water quality conditions by tracking a range of parameters and biotic indicators.
- Support the continuation of annual fishery inventories by DNR fisheries biologists to track changes over time.
- Conduct aquatic plant inventories at least every 4-5 years to evaluate changes in the plant community.
- Monitor lake use to track long-term changes in boating behavior and recreational-use patterns.
- Survey opinions of property owners and lake users at least every several years.
- Synthesize and evaluate all available monitoring data at regular intervals to re-evaluate trends and diagnose emerging problems.
- Update management-planning findings and recommendations as needed.



LAKE DISTRICT PRESERVE

Recent accomplishments since expanding the Preserve include:

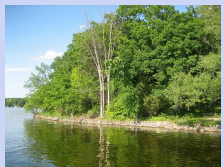
1. New welcome sign and kiosk
2. Donor-recognition and land-dedication ceremony
3. Conversion of 4.5-acre cropland parcel to prairie
4. Partnership with U.S. Fish & Wildlife Service and Wisconsin DNR to convert 26 acres of cropland to prairie (\$5,000 in grants pledged)



Do you enjoy working outdoors and being close to nature? Would you like to volunteer for a good cause right in your own backyard? If so, consider joining the Friends of the Preserve. This small but dedicated group regularly partners with the Lake District on various planning and restoration projects. To learn more, call Georgia Gomez-Ibanez at (608) 423-9898.

HOARD-CURTIS SCOUT CAMP

The Hoard-Curtis Scout Camp is working to protect and enhance nearly 900 feet of beautiful, undeveloped shoreline. We are actively pursuing the permits, grants and private funding necessary to move this exciting project forward. If you'd like to help, call Joel Winn at (920) 728-2652.



Ripples

Lake Ripley Management District  
N4450 County Rd. A  
Cambridge, WI 53523

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Ripples



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FROM THE HELM



Lake Ripley has changed in many ways over the years. It is certainly not the same as it was prior to the first land grants when Native Americans visited its shores to fish, hunt and bury their dead on the rises overlooking the lake. It is not the same as it was before Ole Evinrude invented the outboard motor, or before the arrival of pontoons and boatlifts. These changes are not good or bad in themselves. Rather, they make it clear that there will always be changes affecting the lake, and that we must plan for these changes and prepare for the challenges that might lie ahead.

For two years, we have been working on a new lake-management plan. Our first plan, completed nearly ten years ago, provided the ruler by which we measured our success, and the guide by which we planned for the future. It was time to reevaluate our progress, examine the new science, and set a course for the next ten years. Our earliest efforts focused on invasive weed growth back in the late '80s, and were a reaction to a crisis. Our current work remains driven by a well-thought-out plan, rooted in science, guided by community input, and observant of the needs of those who love and help care for our beautiful lake.

Over our 20-year history, we have accomplished a great deal in our commitment to preserve and protect Lake Ripley. The repair of thousands of feet of degraded shoreline and farm ditches has controlled erosion and reduced the amount of polluted runoff entering the lake. The purchase of the Lake District Preserve and restoration of area wetlands that filter the water entering the lake have been major achievements. Continued weed harvesting is meeting its objectives, and lake monitoring is still used to guide our actions. None of this would be possible without an effective lake manager, a dedicated Board, and an involved community. We thank all of you who have supported the Lake District with your time, your money and your ideas.

We must now remain vigilant, because there are always new and emerging threats that will need to be confronted. As new science and information become available, we will apply that knowledge to our goals and initiatives. We will continue to seek your input and ask for your help. I am confident that, as in the past, our community will step forward when needed. Fifty years from now, few will remember the names of the many individuals who have worked so hard to improve our lake and our community. It is enough to know that future generations will sit on the end of a pier, with their toes in the water, while the summer sun warms their face, and will remember with a smile the time they spent at Lake Ripley.

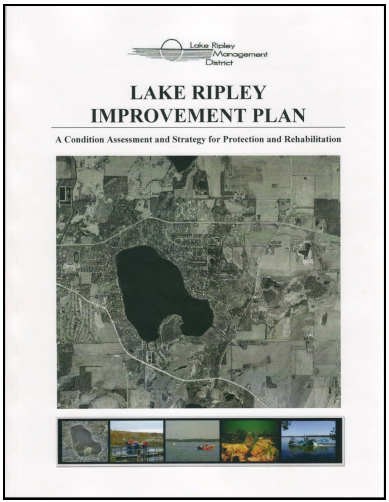
John Molinaro, Chair

A Clear Path Forward

"If you don't know where you are going, how can you expect to get there? An intelligent plan is the first step to success. The man who plans knows where he is going, knows what progress he is making, and has a pretty good idea when he will arrive." —Basil S. Walsh

Extensive information gathering, data crunching, lake modeling, public outreach, and critical self-examination have culminated in the recent adoption of our most updated Lake Ripley Improvement Plan: A Condition Assessment and Strategy for Protection and Rehabilitation. It is available through our website ([www.lakeripley.org](http://www.lakeripley.org)), or by visiting either the Cambridge Public Library or Lake District office. In this special edition of Ripples, we offer an introduction to our latest resource guide and strategy document. We hope you find it informative and useful.

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Excerpts from the Executive Summary are provided in the following pages. See the full Plan for a complete "State of the Lake" assessment, as well as information about:

- 1. The history of Lake Ripley since pre-settlement times
- 2. Recreational lake-use conditions
- 3. Water quality and algal conditions
- 4. Fishery and aquatic plant conditions
- 5. The Lake District Preserve
- 6. An analysis of the lake's major problems and threats
- 7. Results of lake modeling and public opinion surveys
- 8. The status of prior management recommendations
- 9. Current goals, objectives, measures and targets
- 10. Detailed descriptions of recommended actions

OUR MISSION

We work to preserve and enhance Lake Ripley's water quality, its fish and wildlife, and its overall ecological health, while ensuring public access and use of the lake that is safe, fair and practical.



A BOLD BUT ACHIEVABLE VISION

Scenic shorelands, good fishing, abundant wildlife and clean water are a part of our local culture. They are why many of us choose to live here, why tourists come to visit, and why area property values remain so strong. While our connections to and preferred uses of the lake may vary, all of us share in the responsibilities of its care. By investing in Lake Ripley's stewardship, we believe the community and future generations will be rewarded by a cleaner, safer, and healthier lake than would otherwise be possible.

We envision Lake Ripley as a clean and naturally scenic water body that improves regional property values, strengthens the local economy, maximizes opportunities for outdoor recreation, and contributes positively to our local quality of life. Specifically, we consider the following to be realistic expectations that we should strive to fulfill. Taken together, they represent an ambitious but practical vision for the future of Lake Ripley.

- High-quality aquatic plants and shorelands support a lake ecosystem that is rich in native flora and fauna.
- The lake and its surroundings abound with opportunities to view a diversity of native species and natural features that inspire learning and outdoor exploration.
- Recreation occurs in a shared manner that equitably balances the competing demands and expectations found among diverse users.
- The mix of lake uses is compatible with the general public interest, identified community priorities, and an objective assessment of the lake's carrying capacity.
- The lake is safe and attractive for swimming, and there are no beach closings due to high bacteria or potentially toxic blue-green algal blooms.

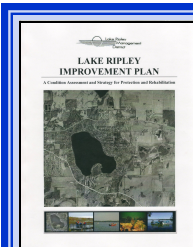
- The watershed that drains water to the lake contains protected, high-functioning wetlands and natural areas that help safeguard water quality and lake health.
- Area development and land-use practices utilize conservation measures that control soil erosion, reduce runoff, preserve wetlands, enhance groundwater recharge, and protect the lake.
- Residents, property owners, local governments and other stakeholders are aware of Lake Ripley's environmental, economic, recreational and cultural value.
- The community maintains a vested interest in the lake's long-term protection and rehabilitation, and is committed to making the necessary investments for the benefit of future generations.
- There is broad understanding and support of ongoing management designed to address problems and threats through cost-effective action.



To achieve our mission and vision, we have set forth five goals the Lake District remains committed to pursuing:

- Goal 1: Clean, clear water**
- Goal 2: Thriving, native aquatic life**
- Goal 3: Safe, fair and responsible lake use**
- Goal 4: Cost-effective management action**
- Goal 5: A well-informed and engaged citizenry**

Continue reading for a brief status report on each goal, and the objectives necessary to attain it. Also included are some representative metrics (or health indicators) combined with realistic targets that we can use to continually track and evaluate our progress. Finally, we conclude with a listing of specific action items that will put us on the right path forward. >>



Hole-punched, binder-ready copies of this Lake Ripley resource guide can also be purchased for about a \$30.00 printing charge. If you would like to place an order, call us at (608) 423-4537.

Land-Use Policy

- Advocate for policies that reward developers who incorporate green infrastructure and low-impact development (LID) practices.
- Advocate for policies at the Town and County levels that limit the amount of road salt applied to area streets.
- Advocate for policies at the Town and County levels that call for the use of grass swales, rain gardens and other measures to capture, infiltrate and treat street runoff (as opposed to curb-and-gutter systems that connect to storm sewer outfalls).
- Advocate for the adoption of a Town or County ordinance to regulate or prohibit the development of high-capacity wells where their operation could negatively affect Lake Ripley.
- Advocate for the development of walking and biking opportunities around the Lake Ripley area.
- Work with Town of Oakland to explore the possibility of strengthening existing construction site erosion-control rules and enforcement standards.
- Ensure that Lake District property annexed by the Village of Cambridge remains a part of and under the taxing authority of the District, and remains subject to shoreland zoning protections.
- Support the Town of Oakland's comprehensive growth plan (adopted 11-18-08), including limits placed on the eastward expansion of the urban service area within the Lake Ripley watershed.



Lake-Use Policy

- Maintain slow-no-wake and no-motor zoning ordinances in their current form.
- Support Town of Oakland's lake-patrol program, and advocate for continued enforcement during peak-use boating times.
- Discourage policies or actions that would increase motor boat access to the lake.
- Work with the Town of Oakland to explore an outdoor lighting ordinance, particularly if increased awareness fails to curb unnecessary light pollution on the lake.



Fish, Plant & Wildlife Management

- Use mechanical harvesting to cut and remove non-native, invasive lake weeds.
- Implement strategies that promote a diverse and thriving native plant community—both on shore and throughout the lake's shallow "littoral" zone—to protect water quality and enhance fishery habitat.
- Explore the feasibility of using spot herbicide treatments or hand pulling to more aggressively control curly-leaf pondweed colonies in East Bay.
- Support walleye stocking, carp-control efforts, and a thriving native aquatic plant community as biomanipulation



- tion" tools that can positively influence water quality.
- Protect Critical Habitat Areas by ensuring adequate enforcement of Town pier and boating ordinances, and by advocating for added protections if deemed necessary.
- Partner with Wisconsin DNR to complete a re-evaluation and re-mapping of Lake Ripley's Critical Habitat Areas, a process that was started in 2008.
- Work with Wisconsin DNR to revisit bag and size limits for bass, northern pike and walleye to ensure that policies are achieving stated objectives.
- Investigate the feasibility and potential effectiveness of installing a carp barrier in the outlet.
- Assist targeted landowners in securing federal permits to implement Humane Society-approved egg oiling, but only if needed to control nuisance, non-migrating geese populations. (Planting native lakeshore vegetation is another effective method for discouraging geese from accessing and congregating on residential lawns.)

Public Outreach

- Explore using additional incentive programs to increase landowner participation rates in adopting cost-share-eligible practices.
- Utilize multiple forms of media and outreach techniques to enhance the public's ability to understand, evaluate and advocate for actions and policies that protect the lake.
- Organize paid or volunteer watercraft inspectors to educate boaters about aquatic invasive species.
- Maintain high-visibility signage at the public boat landing and other access locations.
- Ensure that the public is made aware of strategies or approaches to problems considered impractical, ill-advised, of questionable impact, or beyond the District's charge and authority.



Evaluation and Analysis

- Use computer modeling to identify realistic sediment/phosphorus reduction targets.
- Estimate the extent and sources of in-lake phosphorus recycling by developing more refined phosphorus and hydrologic budgets for the lake.
- Assist Wisconsin DNR and other permitting authorities to ensure a thorough evaluation of any future dredging proposals related to the inlet channel or Vasby's Ditch.



Capacity Building

- Encourage board members and staff to attend educational seminars, workshops, and lakes conferences.
- Utilize Board committees, citizen task forces, volunteer groups and student internships to increase the capacity of Lake District programs.
- Seek out grant opportunities and diverse partnerships to advance Lake District initiatives.





- Annual weed harvesting reports are maintained on staff hours, cutting areas, loads harvested, plant species collected, etc.
- Public opinion surveys are conducted every 5-7 years to track awareness and attitudes associated with ongoing management challenges and their proposed solutions.

GOAL 5: AN INFORMED, ENGAGED CITIZENRY



**Status:**  
Results of public opinion surveys show that most respondents feel well informed of issues related to Lake Ripley and its management. The Lake District seeks to communicate with and solicit participation from its constituents using multiple media outlets. These include public meetings and hearings, dissemination of printed materials (such as this newsletter), E-bulletins, newspaper articles, educational workshops, Web postings, and lake and watershed tours—among others. Social-marketing strategies are also being piloted as a way of increasing the effectiveness of these communications, and to improve participation rates in the landowner cost-sharing program.

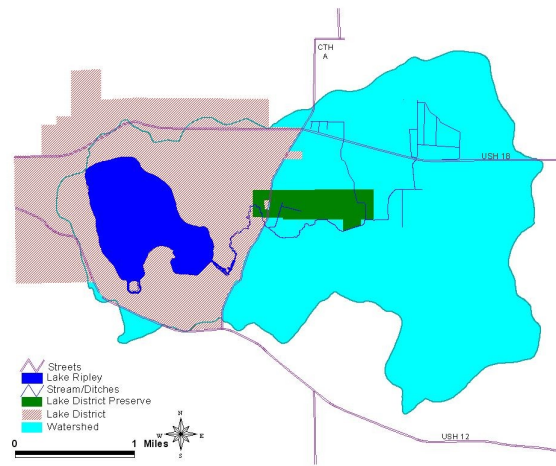
- Objectives:**
1. Maintain open lines of communication with constituents, watershed property owners, and affected stakeholders using diverse media outlets.
  2. Use the *Ripples* newsletter as the primary means of information sharing.
  3. Actively solicit community participation and involvement in protection and rehabilitation efforts.

- Health Indicators:**
1. Outreach tools  
**Targets:**
    - A minimum of three Ripples newsletters are disseminated each year.
    - E-bulletins are used as needed to distribute announcements and time-sensitive information.
    - The District website is updated at least quarterly; meeting minutes are posted once approved.
    - ‘Welcome Wagon’ packets are mailed on at least a quarterly basis to new property owners.
    - All meeting agendas and annual budgets are posted and published on a timely basis.
    - Board meetings and public hearings are well publicized and aired on local cable TV.

2. Public survey input  
**Target:** Opinion surveys give favorable reviews for quality of outreach materials and effectiveness of communication strategies.
3. Volunteer and landowner participation  
**Targets:**
  - Mechanisms are in place for attracting and retaining volunteers to support District programs.
  - A critical mass of targeted landowners adopt recommended conservation measures due to outreach and incentive efforts.
  - School groups are solicited to participate in service-learning projects.

RECOMMENDATIONS

The following is a bulleted list of strategy recommendations intended to further our overall mission, goals and objectives. They are intended to safeguard the Lake Ripley resource, strengthen area property values, and enhance the overall quality of life of those living around the lake.



- Watershed Conservation**
- Continue the restoration and improvement of the 167-acre Lake District Preserve at the lake's inlet.
  - Provide project design, permitting and cost-sharing assistance to eligible landowners for the implementation of Best Management Practices (rain gardens, shoreline restorations, conservation farming methods, etc.).
  - Partner with targeted landowners to protect identified “critical areas” and improve wetland function.
  - Encourage the planting of native trees throughout the watershed, particularly along the lakeshore.
  - Consider providing free soil tests as a service to both residential and agricultural landowners for the purpose of reducing fertilizer use.
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GOAL 1: CLEAN, CLEAR WATER



*"I never drink water because of the disgusting things fish do in it."*

W.C. Fields



**Status:**  
Landscape condition and land uses within a 7-square-mile watershed directly affect Lake Ripley's water quality. How we use the land dictates the amount of runoff and pollutants that get delivered to the lake. This can be demonstrated by looking at the fossilized evidence taken from sediment cores extracted from the lake bottom. Coring results indicate much better water quality prior to 1870 when large-scale land clearing and wetland drainage began in earnest. Water quality then rapidly declined in response to increased soil-erosion rates. It was not until the 1950s when erosion rates and lake conditions first began to stabilize, primarily due to improved agricultural erosion-control practices. Evidence of further improvements did not begin until after 1990, following the formation of the Lake District and the widespread implementation of watershed-conservation measures. Computer modeling suggests that continued phosphorus loading—the drivers of algal growth and poor water quality—mostly originates from row-cropped agriculture (70%) and higher-density urban areas found around the lake (17%).

Long-term monitoring reveals that Lake Ripley has routinely exceeded its desired Trophic State Index (TSI). TSI is a water quality index ranging from 1-100, with values less than 50 being desirable for most lakes. The index is used as a well-accepted indicator of overall lake health. TSI is based on the lake's phosphorus concentration (plant nutrient), chlorophyll concentration (algal pigment) and water clarity. A combination of high phosphorus, high chlorophyll and low water clarity translates into poor lake conditions. Monitoring records show that water quality has ranged from poor to very good, with TSI values frequently in the 50s, particularly following periods of high runoff. Prior to 1870 (pre-settlement), TSI values were closer to 40. Fortunately, there is now strong evidence that improvements are being made through the implementation of watershed Best Management Practices (BMPs). BMPs are used to control soil erosion, reduce storm runoff, and eliminate pollution sources.

- Objectives:**
1. Reduce pollutant delivery, especially phosphorus and sediment from construction sites, existing urban areas, and row-cropped farm fields.
  2. Minimize lakebed disturbances that contribute to sediment re-suspension (murky water) and the release of phosphorus that creates algal blooms.
  3. Protect and restore groundwater-recharge zones, wet-

- lands and shorelands that help filter polluted runoff.
4. Maximize the capacity of the 167-acre Lake District Preserve to absorb runoff and protect Lake Ripley's only inlet stream.

- Health Indicators:**
1. Trophic State Index (TSI)  
**Targets:**
    - TSI < 50
    - Summer mean total phosphorus < 24.0 µg/L
    - Summer mean chlorophyll < 7.3 µg/L
    - Summer mean water clarity ≥ 6.5 ft
  2. E. coli (*Escherichia coli*) bacteria levels  
**Target:** < 235 cfu/100 ml (no beach closings)
  3. Macroinvertebrate diversity as a biotic indicator  
**Target:** Macroinvertebrates (aquatic insects, snails, etc.) in the lake's inlet and outlet streams are comprised of diverse species, particularly those intolerant to pollution and poor water quality.
  4. Watershed landscape condition  
**Targets:**
    - Rural land uses are retained outside the Town's urban service boundary (east of County Rd. A).
    - Shoreland “buffers” are increased along all shoreline, stream and drainage-ditch corridors.
    - Remaining wetland acreage is protected around the lake; filled or drained wetland acreage is restored whenever feasible.
    - Agricultural acreage under conservation farming practices is increased, including acreage subject to no-till cropping and nutrient-management planning.
    - Number of rain gardens and rain barrels used in residential areas is increased.
    - Eroding drainage ditches that connect to the inlet tributary are repaired or plugged.
    - Total annual phosphorus loading is reduced by about 19% to maintain a TSI below 50.

GOAL 2: THRIVING, NATIVE AQUATIC LIFE



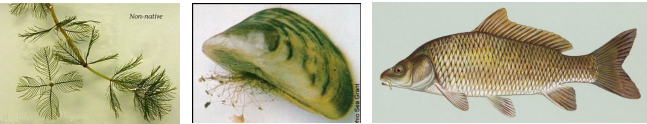
**Status:**  
Lake Ripley is home to a diverse assemblage of aquatic flora and fauna. Some indigenous species documented in and around Lake Ripley are listed as rare or endangered,

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while other newer arrivals are classified as non-native and invasive. All require particular habitat conditions and have varying sensitivities to pollution, habitat loss and other disturbances. A rich diversity of native aquatic plants and fish indicates good lake health, whereas their absence or replacement by non-native species can be a sign of trouble.

Wetlands and shallow, near-shore "littoral" areas are particularly important for sustaining much of the aquatic life found in Lake Ripley. Since the early 1900s, over a third of the wetlands around Lake Ripley have been drained or filled. Wetland loss causes hydrologic instability, reduces clean spring flow to the lake, increases the rate of runoff and pollutant delivery, and reduces vital habitat for fish and wildlife. Our biologically-rich shallows and shorelands remain threatened by shoreline development, beach grooming, sand dumping, and near-shore motor boating.



Lake Ripley's aquatic invasive species (AIS) include Eurasian watermilfoil, zebra mussels and common carp. Aquatic plant inventories show that milfoil has been on the decline since it peaked in the late '80s, due in part to weed harvesting. This aggressive weed grows in thick mats and reduces overall biodiversity and lake health if left unchecked. As for the fishery, surveys show fairly stable populations of all species, with carp currently comprising a small fraction of the overall community. Zebra mussels were a relatively recent introduction, and are still sustaining high numbers after their apparent peak in 2008. Other AIS that pose immediate threats due to their discovery in area lakes and ponds include the spiny waterflea, quagga mussel and New Zealand mudsnail—among others. Many problem species enter the Great Lakes through transoceanic shipping, and spread to inland lakes via transient boat traffic.

**Objectives:**

- 1. Protect and restore native fish and wildlife habitats found in and around the lake.
- 2. Reduce the potential for the introduction and spread of aquatic invasive species.
- 3. Manage existing biological communities in a manner that supports identified goals and priorities.

**Health Indicators:**

- 1. Aquatic plants
  - Targets:**
    - Stable or increased *native* species richness (total number of species).
    - Eurasian watermilfoil and other non-native species comprise a small and decreasing fraction of the overall plant community.
    - The aerial extent of bulrush and lily pad beds is maintained or restored where once present.
    - No further fragmentation or disturbance of Critical Habitat Areas."

2. Fish

- Targets:**
  - Stable or increased *native* species richness (total number of species).
  - Sustained presence of previously inventoried "sensitive" species, including the lake chub-sucker, least darter and pugnose shiner.
  - Carp represent a small and decreasing fraction of the overall fishery.
  - Desired size-frequency distributions are maintained for sport fish populations.
  - Increased number of near-shore tree-drops to serve as coarse woody habitat.
  - Increased number of native trees growing near the shoreline to provide cover, food, and future recruitment of coarse woody habitat to the lake.
  - Maintenance of water quality conditions sufficient to sustain pollution-sensitive biota.

3. Wetlands

- Targets:**
  - No further loss of existing wetland acreage.
  - Existing wetlands are protected and restored to their fullest functional value.
  - Wetland acreage and function are returned (when feasible) to areas subjected to past hydrologic manipulation.

**GOAL 3: SAFE, FAIR AND RESPONSIBLE LAKE USE**



**Status:**

While Lake Ripley is of modest size, it is both a popular and accessible recreational destination that can support a range of activities. This popularity has created challenges as different user groups compete for time and space on the lake. Public opinion surveys consistently reveal that boat traffic and congestion routinely interfere with people's use and enjoyment of the lake. According to a 2003 recreational boating study, Lake Ripley's estimated carrying capacity was regularly exceeded during peak-use times.

Such high-intensity lake use, combined with the expansion of access facilities, can create a host of safety and environmental problems. A number of boating and lakeshore-development policies are in effect at the state and local level to help address these concerns. These pertain to slow-no-wake zones and time periods, as well as shoreland zoning provisions that regulate certain development projects near the lake.

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**Objectives:**

- 1. Minimize the potential for conflict by supporting policies that fairly balance competing recreational demands.
- 2. Promote recreational uses and intensities that are compatible with the lake's physical, ecological and social carrying capacities.

**Health Indicators:**

- 1. Public access
  - Target:** The current level of public access is maintained with no expansion or increase in the number of public boat-access facilities.
- 2. Private pier development
  - Targets:**
    - Pier sizes, densities and number of mooring spaces meet Wisconsin DNR standards.
    - No further pier development (except for the repair, maintenance or replacement of existing piers) in designated "Critical Habitat Areas."
- 3. Boating densities
  - Target:** Boating does not exceed estimated carrying-capacity thresholds.
- 4. Law enforcement
  - Target:** Lake rules are enforced through regular Town of Oakland police patrols during the boating season, with emphasis on summer weekends and other peak lake-use periods.
- 5. Public survey input
  - Target:** Opinion survey results reflect favorable reviews regarding the lake's overall recreational atmosphere (i.e., fairness of rules, perceived compliance levels, degree of crowding, adequate enforcement, etc.).

**GOAL 4: COST-EFFECTIVE MANAGEMENT ACTION**



Your 2009-2010 Board of Directors and staff. Front row (left to right): John Molinaro, Georgia Gomez-Ibanez, Jane Jacobsen-Brown and Gene Kapsner. Back row (left to right): Dennis McCarthy, Walt Christensen, Mike Sabella and Paul Dearlove.

**Status:**

In 1991, the Lake District began operating under the authority of Chapter 33 of the Wisconsin Statutes. It is a local, special-purpose unit of government that serves property

owners living around the lake. Its mission is to preserve and enhance Lake Ripley's water quality, its fish and wildlife communities, and its overall ecological health, while ensuring safe, fair and practical lake use. To accomplish this mission, the Lake District engages in a number of tax- and grant-supported programs in accordance with approved management plans and operating permits. A 7-member Board of Directors is responsible for overseeing the affairs of the District, with program implementation carried out by a full-time lake manager. Staff also consist of two part-time weed-harvesting employees.

**Objectives:**

- 1. Management actions advance stated planning goals.
- 2. Management programs are appropriately targeted and cost-effective.
- 3. Monitoring is routinely conducted to evaluate resource conditions and management progress.
- 4. Funding and staffing resources are sufficient to implement recommended actions.
- 5. The latest science, strategy guidance and technologies are fully utilized as they become available.

**Health Indicators:**

- 1. Management-planning directives
  - Target:** Plan recommendations are regularly reviewed, implemented and updated.
- 2. Lake District operating budget
  - Target:** The budget provides for sufficient resources to implement recommended management activities necessary to achieve identified goals.
- 3. Public survey input
  - Target:** Realistic management expectations are maintained, and programs are viewed as effectively addressing community priorities.
- 4. Monitoring-data archives
  - Targets:**
    - The lake's shoreline is videotaped every few years to document shoreline conditions.
    - A census of piers, boat lifts, rafts and moored watercraft is conducted annually.
    - On-lake boat counts and lake-use documentation is collected each boating season.
    - Water-clarity measurements are taken at least twice per month (May to September).
    - Basic water chemistry is evaluated at least three times per year.
    - Invasive species information (locations, population estimates) is collected per DNR guidelines.
    - Documentation of cost-shared practices and estimated pollutant reductions is maintained as projects are completed.
    - Aquatic plant inventories are performed every 4-5 years.

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