Bone Lake Management District
Polk County, Wisconsin

Bone Lake Comprehensive Lake Management Plan

2027 - 2036

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INTRODUCTION

This comprehensive lake management plan (CLMP) guides the activities of the Bone Lake Management District (BLMD). It was originally developed by the BLMD and approved by the Wisconsin Department of Natural Resources (WDNR) in 2009 and updated in 2015. This current, updated plan will be implemented over a ten-year period from 2027 through 2036. The plan was developed with guidance from an advisory committee. A series of three focus groups and a property owner survey also provided input for plan development. A Bone Lake Aquatic Plant Management (APM) Plan guides aquatic plant management and aquatic invasive species prevention and management. The CLMP was available for public review from June 6 through July 3, 2026. Notice of plan availability was announced in the Bone Lake Enews and the Inter-County Leader newspaper. One comment was received that encouraged the Bone Lake Management District to support fish stocking. The BLMD Board of Commissioners approved the CLMP on July 11, 2026.

Board of Commissioners

- Cary Olson, Chair
- Shelley Rose, Vice-Chair
- Karen Engelbretsen, Secretary
- Alex Chorewycz, Treasurer
- Mike Musial
- Andy Brown, Town of Bone Lake
- Doug Route, Polk County

Plan Advisory Committee

- Shelley Rose, Project Coordinator
- Cheryl Clemens, Project Consultant
- Phil Beck
- Deb Dawson
- Karen Engelbretson
- Ken Fjelstad
- David Hendrick
- Jeff Peterson
- John Ukura

Bone Lake Fact Sheets

Plan development was guided by a series of fact sheets which summarize information important to lake management. The following fact sheets are available on the BLMD web site: bonelakewi.com.

Bone Lake Management District

Shoreline Erosion

Fisheries and Wildlife

Focus Groups

Property Owner Survey 2025

Water Quality

Watershed

Action Plan

A more detailed action plan will be developed in a spreadsheet format. The action plan will outline how actions from this CLMP will be carried out over the next three-year period. The action plan will be updated annually.

Adaptive Management Approach

This plan will use adaptive management. The BLMD will evaluate and incorporate emerging technologies and new information to refine and adjust management approaches. Minor adjustments to plan actions will be made in the action plan. Significant changes, such as changes in objectives or new actions that require significant investment, will be documented as amendments to the plan to be reviewed by the BLMD Board and the Department of Natural Resources. A public review process will occur for plan amendments which will include an official public notice and a minimum 21-day review period.

CLMP Mission Statement

Bone Lake is a precious resource and one of the premier recreational lakes in this area. The overall mission of this comprehensive lake management plan is to maintain and enhance the health of Bone Lake to support clean water, wildlife, natural beauty, recreation, and sport fishing for decades to come.

Plan Structure

Goals are broad statements of desired results.

Objectives are the measurable accomplishments toward achieving a goal. Evaluation actions to measure progress toward plan objectives are included in the implementation and action plans.

Evaluation methods measure progress toward plan objectives.

Actions are the steps taken to accomplish objectives and ultimately goals.

Education Strategies include messages, and in some cases, audience and communication methods.

Bone Lake Management Plan Goals

Goal 1. Safeguard Bone Lake's water quality by mitigating the impacts of development and changing weather patterns.

Goal 2. Support safe, responsible recreation on Bone Lake while balancing recreational uses with the lake's ecological health.

Goal 3. Maintain and enhance Bone Lake's natural beauty.

Goal 4. Protect and enhance fish and wildlife habitat.

Goal 5. Foster a community culture of stewardship by improving awareness and understanding of lake issues and encouraging active participation.

Goal 1. Safeguard Bone Lake's water quality by mitigating the impacts of development and changing weather patterns.

Objectives

A. Reduce phosphorus (P) loading from external sources to Bone Lake (watershed and waterfront) by 5% (42 kg) or more.

   a. Reduce phosphorus loading from high priority waterfront lots (target 50% reduction on at least 20 lots).

   b. Harvest curly leaf pondweed to prevent phosphorus release.

   c. Reduce phosphorus loading from septic systems.

   d. Reduce phosphorus loading from watershed sources with a focus on agricultural practice installation in direct drainage areas.

B. Restore and protect natural vegetation along Bone Lake shorelines and in the watershed. Increase natural vegetation along the shoreline and in the buffer zone to 65% (current levels are 60% and 42% respectively).

C. Build a community expectation that all waterfront owners take actions that support lake protection.

D. Identify and address threats to lake water quality beyond phosphorus and algae growth.

Evaluation

1. Continue citizen volunteer water quality monitoring including Secchi depth, total phosphorus, chlorophyll, and lake temperature and oxygen profiles. (OBJ A and B)

2. Track installation of waterfront, watershed, and septic projects (upgrade 5 systems/year) including estimates of phosphorus reduction for each project. (OBJ A)

3. Track participation in a Bone Lake Steward program at various levels. (OBJ C)

4. Track amount of harvested CLP and resulting P removal. (OBJ A)

5. Repeat shoreline inventory in 2035. (OBJ C)

Actions

Waterfront Property Owners

1. Continue an outreach program that encourages active participation. (OBJ A, B, C, D) **High priority**
    a. Complete a significant project for people to observe; create videos of the entire process/project and post on social media.
    b. Ask owners to self-report their positive lake practices; request photos of self-installed projects and provide incentive for providing them.
    c. Provide cooperative projects for kids and parents/grandparents.
    d. Promote projects on a neighborhood scale (doubles as social event).
    e. Use public access points to highlight waterfront conservation practices. Host gatherings to highlight them.

2. Provide assistance to property owners to encourage best practices. (OBJ A, B, C, D) **High priority**
    a. Offer hands-on assistance to owners to make projects and positive change easy. Use volunteers or contractors to help with installation and maintenance.
    b. Provide free native plants to encourage planting.
    c. Offer sample native planting plans for different types of shorelines and varying buffer depths and shapes. Include WDNR Healthy Lakes examples.
    d. Offer assistance for property owner maintenance of existing installed projects – on-site review, suggestions for improvements, available contractors.
    e. Provide on-site technical assistance and designs for property owners with potentially more complex projects. Technical assistance must be no-strings attached and non-regulatory.

3. Create a recognition program for property owners who follow lake stewardship practices. (OBJ A, B, C, D) **High priority**
    a. Start with survey for property assessment. Completed surveys can identify sites for awards and make recommendations for improvements.
    b. Give awards for various levels of stewardship.
    c. Include a category for properties under construction or redevelopment which addresses appropriate construction site erosion control and long-term runoff control.

4 Provide financial incentives (cost-sharing) to encourage installation of waterfront runoff practices. (OBJ A, B, C) **High priority**

5. Provide financial incentives to encourage upgrades of nonconforming septic systems. (OBJ C) **High priority**
    a. Investigate methods to identify older and potentially non-conforming systems and target them with the upgrade incentive.

Watershed and Tributary

6. Provide financial and technical assistance for installation of priority conservation practices in the watersheds in cooperation with the Polk County Land and Water Resources Department. (OBJ B) **Medium-high priority**

7. Create an operation and maintenance manual for installed watershed projects where the Lake District has responsibility. Include periodic inspection of all installed projects on private lands. (OBJ B) **High priority**

Land Protection

8. Identify and protect critical tracts of undeveloped lands through voluntary agreements/pledges, conservation easements, or land purchase. (OBJ B) **Medium-low priority**

Emerging Technologies

9. Monitor developments in the science/technology to control internal loading of phosphorus from lake sediments. **Medium priority**

Water Quality Education Strategy

Messages

a. Potential threats in lake water and what to avoid and how to adapt: blue green algae, bacteria, swimmer's itch.
b. How to reforest lands impacted by loss of trees to disease and insects.
c. Use birds and pollinators as motivators to increase natural vegetation.
d. Share one or two positive stories each year about people's experience with project installations.
e. Emphasize that shoreline changes are important for resilience during high runoff events and the legacy/example for future generations.
f. Impacts of waterfront runoff to lake water quality
g. How waterfront runoff practices protect water quality
h. Deter geese with a 10X35 planting. Use testimonials and photos.
i. Do not blow grass and leaves into the lake
j. Impacts of failing septic systems on lake water quality
k. Maintain your septic system properly (provide direction on how to do this)
l. Owners can choose how they wish to landscape with native plants
m. Discourage fertilizing lawns.
n. If you fertilize your lawn, use zero phosphorus fertilizer.

Goal 2. Support safe, responsible recreation on Bone Lake while balancing recreational uses with the lake's ecological health.

Objectives

A. Watercraft users practice safe navigation.

B. Shallow water hazards are identified.

C. Protect the lake's ecological health from potential adverse impacts of recreational use.

Actions

1. Maintain buoys in approved locations on shallow water reefs and points. (31 buoys are currently approved for installation). (OBJ A and B) **High priority**
2. Continue Kids Don't Float program. (OBJ A**) High priority**
3. Provide education for lake residents and visitors. (OBJ A, C)
4. Consider volunteer group to educate boaters of safe, courteous boating practices. (OBJ A, C) **Medium priority**
5. Encourage increased boat patrol and enforcement by WDNR, the Bone Lake Management District and/or Polk County Sheriff. (OBJ A) **Low priority**

Recreation Education Strategy

Messages

a. Information about lake levels
b. Describe why shallow buoys are installed and where they are located.
c. Importance of reflectors on all ice houses left overnight
d. There are limited areas of the lake where wake sports can be practiced safely with minimal impacts to lake sediments and shorelines. Follow recommended distance from shore and depths.
e. Wake sports can negatively impact the lake's ecological health and other recreational uses such as motorized and non-motorized boating, fishing, and swimming.
f. Observing slow-no-wake speeds helps ensure safety for everyone around the lake. It is illegal in Wisconsin to:
    i. Operate a motorboat within 100 feet of any shoreline, swimmer, dock, raft, pier, or restricted area on any lake at greater than "slow, no wake speed."
    ii. Operate a PWC at greater than "slow, no wake speed" within 200 feet of shoreline, and within 100 feet of swimmer, docks, raft, piers or restricted areas.

Methods

- Map/boating viewer app of appropriate wake sporting areas

Goal 3. Maintain and enhance Bone Lake's natural beauty.

Natural beauty includes enjoying views of wildlife, plants, trees, clear water, quiet solitude, a variety of scenery, and views of the sunset, night sky, and the lake. Where development occurs, it is preferable to have minimal views of buildings.

Objectives

A. Maintain undeveloped natural areas on private and public land.

B. Enhance natural beauty of developed areas.

C. Preserve and enhance the opportunity to observe the beauty of the night sky.

D. Increase understanding of noise pollution around the lake.

Actions

1. Provide education for lake residents. (OBJ A-D) **High priority**
2. Identify potential priority lands to protect natural beauty. (OBJ A) **Medium-high priority**
3. Consider land protection methods such as land purchase and conservation easements to preserve undeveloped lands. (OBJ A) **Medium-low priority**

Natural Beauty Education Strategy

Messages

a. Consider leaving natural vegetation in place on developed and undeveloped parcels along the lake.
b. Check Polk County zoning regulations prior to clearing property for development.
c. To reduce the visual impact of structures along the shore, add plants and use muted building colors.
d. Install shielded lights that reduce glare and increase safety in shoreland area.
e. Please be considerate of your lake neighbors. Turn it down a notch, leave time for quiet. Observe quiet hours before 9 a.m. and at and after sunset.
f. Reforest edges of developed properties adjacent to undeveloped forest parcels.

Goal 4. Protect and enhance fish and wildlife habitat.

Objectives

A. Reduce sedimentation from shoreline erosion with an emphasis on using native vegetation and reducing the impact of boat wakes.

B. Restore and protect natural vegetation along Bone Lake shorelines and in the watershed. Increase natural vegetation along the shoreline and in buffer zone to 65% (current levels are 60% and 42% respectively)

C. Homeowners protect and restore important wildlife habitat elements.

   i. Standing snags and dead trees

   ii. Woody debris in the water

   iii. Aquatic vegetation, especially emergent and floating

   iv. Wetlands and vernal pools

   v. Nest boxes

   vi. Sensitive areas

D. Reduce the use of lead tackle, insecticides, and poisons.

E. Engage at least 100 property owners in observing, recording, and reporting their wildlife encounters.

Evaluation

1. Repeat shoreline inventory (2035 – OBJ B and C)
2. Repeat aquatic plant point intercept survey (2030 – OBJ C)
3. Repeat sensitive area study (2035 – OBJ C)
4. Track participation in various activities (e.g., nest boxes installed, stabilization projects completed) using self-reporting including photographs and videos where possible. (OBJ A, D, E)

Actions

1. Create a recognition program for property owners who follow lake stewardship practices. (OBJ A – E) **High priority**
   a. Start with survey for property assessment. Completed surveys can identify sites for awards and make recommendations for improvements.
   b. Give awards for various levels of stewardship.
   c. Include a category for properties under construction or redevelopment which addresses appropriate habitat protection and enhancement.
2. Create demonstration sites to illustrate various shoreline stabilization measures. Create BLMD incentives to support these sites. (OBJ A) **Medium-high priority**
3. Partner with Polk County tree planting program and DNR forest management programs. Offer cost share for planting and tips for what trees to plant where. (OBJ B and C) **Medium-high priority**

4. Hold Discovery Day and other events involving children and their families (e.g., nesting box building/painting, fish printing). (OBJ A – E) **Medium-high priority**
5. Distribute or sell native plants to plant near the Bone Lake shoreline. Identify nurseries able to provide native plants. (OBJ B) **Medium-high priority**
6. Establish no-wake zones along the small island and near the northern sedge/meadow/tamarack lowland. (OBJ A) **Medium priority**
7. Encourage DNR, BLMD, and/or Polk County enforcement of state no-wake zone requirements. (OBJ B) **Medium priority**
8. Distribute nesting boxes. Self-report installations with photos and location. (OBJ A) **Medium priority**
9. Have a BLMD presence at fishing tournaments. **Medium priority**
10. Give away non-toxic tackle. (OBJ F) **Medium-low priority**
11. Distribute and encourage residents to use wildlife tracking forms. (OBJ C) **Medium-low priority**
12. Consider land protection methods such as land purchase or conservation easements to preserve undisturbed parcels of woodland. (OBJ B) **Low priority**

Wildlife Education Strategy

Messages

a. Consider leaving natural vegetation in place on developed and undeveloped parcels along the lake.
b. Check Polk County zoning regulations prior to clearing property for development.
c. Reforest edges of developed properties adjacent to undeveloped forest parcels.
d. Do not use lead tackle. Lead tackle threatens three high profile bird species: Bald Eagle, Trumpeter Swan, and Common Loon.
e. Wake boats should operate at least 500 feet from shore and in water 20 feet and deeper. Share map of this area.
f. Options for restoring shorelines impacted by ice push including leaving ice ridge in place.
g. Do not discard leaves and grass clippings in the lake. They may smother near shore habitat as they break down.
h. Sensitive areas provide critical in-water habitat elements, particularly aquatic plants. Some have changed drastically over the years.
i. Describe critical habitat elements and their importance: aquatic plants, natural vegetation near the shoreline, woody debris in-lake, leaning lakeshore trees, standing dead trees, wetlands and vernal pools, and large tracts of forest.
j. Describe harmful effects of poisons: glyphosate, pre-emergent herbicides, mosquito spray, rodent poisons.
k. Encourage installation of purple martin colonies and other ways to support endangered bird populations.

Goal 5. Foster a community culture of stewardship by improving awareness and understanding of lake issues and encouraging active participation.

Objectives

A. The Lake District has the volunteers needed to carry out the lake management plan.
B. BLMD members participate in Lake District educational events.
C. Bone Lake property owners recognize the importance of lake stewardship.

Evaluation

1. Track Volunteer participation on committees, member participation at events, and participation in the lake stewardship program at various levels. (OBJ A-C)
    a. Volunteer base is sufficient to support lake management activities with at least 30 active volunteers annually and 90% of volunteer roles needed for plan implementation filled.
    b. Increase BLMD member participation in Lake District educational events by 10% every year, with a minimum of 125 members (25% of BLMD properties) participating in at least one event each year.
    c. Targets for various stewardship levels will be established with lake stewardship program development.

Actions

1. Hold North Landing events to encourage involvement: (OBJ A) High priority

    - Promote the plan and generate engagement / participation in committees.
    - Hold in late June, potentially one weekday and one weekend event.
    - Develop and distribute clear job descriptions for volunteer roles, including "neighborhood captains," to facilitate broader participation.

2. Hold more BLMD community / social events with lake messaging, fun activities. (OBJ A – C) **High priority**
3. Hold neighborhood events with lake stewardship component. (OBJ B and C) **Medium-high priority**
4. Establish neighborhood volunteer captains to share information. (OBJ A – C) **Medium-high priority**
5. Hold events in cooperation with local businesses. (OBJ A – C) **Medium-high priority**
6. Support volunteers with leadership development opportunities such as support for lake conferences, sharing educational events, recognition in lake stewardship award, etc. (OBJ A) **Medium-high priority**
7. Encourage youth and adult to capture and share videos (potentially through social media). (OBJ A – C) **Medium priority**

Outreach Education Strategy

Audiences

- Lake owners: year-round and seasonal residents
- Focus on children and their families
- Lake visitors
- Renters/owners of short term rentals (only about 4% of properties are rented out)

Methods

- Bone Lake biannual newsletter
- Annual meeting: committee booths and demonstrations (e.g., erosion demonstration, plant identification, QR code mapping). Investigate the possibility of working with Polk County LWRD, Wisconsin Lakes, or UW-Extension for interactive demonstration materials and/or speakers
- Website – under redesign including pop-up "sign up for messages"
- Facebook or other social media – link important content
- Bone Lake Enews

Notes

- Need to repeat messages for everyone.
- There are always new residents and visitors.

Messages

The Lake District needs your help to maintain and enhance the health of Bone Lake to support clean water, wildlife, natural beauty, recreation, and fishing.

Additional messages are identified under the other plan goals.