

Final Report

WI DNR Grant SPL 39919

Building Citizen-Agency Capacity for Lake Management

Submitted by the Grindstone Lake Association

November 20, 2019

## Introduction

In February 2019, the Grindstone Lake Association (GLA) was awarded a small-scale planning grant to coordinate actions needed to implement proposed lake protection plans and recommendations. In this grant, GLA proposed to hold a one-day workshop of lake homeowners, GLA board members, and relevant state, county, and tribal agency officials to discuss lake management priorities and identify opportunities and challenges associated with achieving those priorities. The outcome of the workshop, as proposed, would be a plan of action for various lake protection priorities, including a road map for citizen and agency involvement.

On July 27, 2019 at the Bass Lake Township Hall, 12 Grindstone Lake property owners, 4 GLA Board members, 4 state/tribal government representatives, and 2 consultants attended the 6.5-hour workshop. A copy of the workshop agenda is contained in the Appendix. Also, in the appendix is a map of Grindstone Lake with the property locations noted for the 12 households attending the workshop. Workshop participants came from virtually all areas of the lake.

The workshop consisted on two major parts. The first part of the workshop included presentations specific to Grindstone Lake by Max Wolter, Wisconsin DNR on fisheries; Dan Tyrolt, Lac Courte Oreilles Conservation Department on water quality; Scott Van Egeren, Wisconsin DNR on aquatic invasive species; Patrick Goggin, Wisconsin Lakes Partnership on Healthy Lake program opportunities; and Karen Mumford, GLA Board member of the Lake Association's membership and activities.<sup>1</sup> The second part of workshop was a work session on priorities and plans for addressing key challenges on Grindstone Lake.

## Findings

From the presentations made by workshop presenters, there were several important findings:

### Water Quality

- Water clarity, specifically Secchi Disk depth, has decreased over the past 25 years by an average of 4 inches per year (based on a statistically significant trend analysis)
- Other water quality parameters (Chlorophyll-A and Total Phosphorus) have varied from year-to-year, but no statistically significant trend has been identified in the data
- Phosphorus loadings to the lake are key factors in algal blooms and water quality
- Site specific criteria for phosphorus concentrations may be necessary to protect the dissolved oxygen-temperature habitat (two-story waters) in the lake

### Fishery

- Climate change is having a significant effect on the lake
- Walleye and smallmouth bass fish populations are healthy in the lake and are reproducing naturally
- Shoreline and habitat protections could improve both populations
- Muskellunge populations are declining
- The two-story fishery in Grindstone including Cisco is under threat as climate change increases water temperatures and dissolved oxygen decreases with algae and plant decay

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<sup>1</sup> A representative from Sawyer County was a confirmed participant but had to cancel at the last minute. Materials were sent to Scott VanEgeren, WI DNR, to present regarding aquatic invasive species.

### Aquatic Invasive Species

- Three aquatic invasive species are present in Grindstone Lake: curly leaf pond weed; Chinese mystery snails, and rusty crayfish.
- Eurasian water milfoil is present in Lac Courte Oreilles near to the entrance to Little Grindstone
- Aquatic invasive plants are transported between lakes on propellers, in live well waters, and bilge water
- Greater involvement of volunteers and paid workers at boat landings could help prevent introduction of invasive species into Grindstone Lake
- Management of lake water levels through the Billy Boy dam could be an effective tool in preventing aquatic invasive introduction to Grindstone Lake by boat transport directly from Lac Courte Oreilles

### Healthy Lakes

- Significant funding could be available through the Healthy Lake Program to address near shore land activities that may be contributing phosphorus to the lake
- Landowners could receive assistance (technical and financial) to address shoreline habitat and control erosion and phosphorus loadings to the lake

### Grindstone Lake Association

- Membership in the GLA has been at around 140 for the past several years. There are about 350 separate parcels around Grindstone Lake
- GLA has received grants from the WI DNR over the years for aquatic invasive species control through the Clean Waters Clean Lakes program. Monitoring times are limited and could be expanded with additional grant dollars and volunteer effort
- The Grindstone Lake Foundation, Inc. recently borrowed money from an anonymous property owner to obtain the land on the south side of the Lake near the boat landing that was formerly a cranberry bog. This 57-acre parcel could become a land conservation easement, if money is raised by the Foundation to pay off the loan. WI DNR grant funds may be available to assist in a portion of the loan payoff.
- GLA Board members are a group of dedicated volunteers, but they need help from others around the lake to assist in developing and implementing lake protection and lake management programs.

Additional information on land use changes over time in the watershed and population and demographic changes in lake property owners was not available. Several workshop participants thought this information would have been useful in further understanding the Lake and its residents.

In the second part of the workshop, participants developed a list of key challenges for Grindstone Lake. Table 1 lists all the issues identified by individuals at the workshop in the left column. Listed in the right column is the number of votes each topic received when workshop participants were asked to identify their top three challenges from this list.

The three key challenges identified by vote of the workshop participants were:

1. Greater engagement of lake property owners in efforts to protect the Lake
2. Prevention of aquatic invasive species
3. Mitigate phosphorus in the lake

**Table 1. Grindstone Lake Challenges**

| Issue   | Number of Votes |
|---|-----------------|
| Strategies to increase citizen engagement/lack of property owner involvement around lake (combined) | 11              |
| Mitigate Phosphorus   | 6               |
| Aquatic Invasive Species/AIS Prevention—specifically CLP and Eurasian Milfoil                       | 5               |
| Increase dissolved oxygen*  | 4               |
| Land use issues- location of phosphorus sources*  | 4               |
| Control shoreline erosion*  | 4               |
| Protect two-story fishery   | 4               |
| Swimmer’s Itch  | 4               |
| Muskie population decline   | 2               |
| Educating lake property owners on shoreline vegetation (native plants and aesthetics)*              | 1               |
| Reduce temperature of lake  | 0               |
| Reduce debris (grass clippings); Education on lawn management                                       | 0               |
| Getting players together; coordination  | 0               |
| Changes in nearshore habitat (reeds; seaweeds)  | 0               |
| Increasing intensity of rain events   | 0               |
| Watershed management/education  | 0               |

\* Could be included in “mitigate phosphorus” category

### Roadmap for Action

For the each of top three key challenges, small groups of participants explored the possible causes of the challenge, potential solutions to address the challenge, and the responsibilities and roles of various agencies and organizations in implementing those solutions. Since time was limited in this workshop, only two causes and two solutions were developed into a roadmap for action for each key challenge. The top two causes and top two solutions were similarly identified by a vote of workshop participants.

Tables 2, 3, and 4 provide the summaries prepared by small group discussions for the three key challenges to Grindstone Lake. Each group identified two important likely causes of the problem. For each of these problems, the groups identified up to three potential solutions and how those solutions could be implemented and by whom. These materials were presented to the larger group of participants at the workshop and the two top solutions were identified through a voting process. These top two solutions for each cause are indicated in **boldface** type below.

By completing these four examples for each key challenge, we hoped to identify and document the type of citizen-agency collaboration that would be needed to address the potential solutions to the three key challenges of phosphorus mitigation, community engagement, and aquatic invasive species prevention.

**Table 2. Causes, Solutions, and Roadmap for Citizen Engagement Challenges in Lake Efforts**

| Likely Cause                     | Potential Solution  | Who Involved and How  |
|----------------------------------|---|---|
| Lack of effective communication  | <b>Improve e-communication-website; facebook</b>            | <b>GLA: committee members; improve current communication</b>  |
|                                  | <b>Get Lakehome owner attention with universal concerns</b> | <b>GLA: current members identify concerns and write articles;</b><br><b>DNR: utilize state and other resources for information</b>  |
|                                  | Increase personal neighbor to-neighbor contact              | GLA: current members begin by reaching out to neighbors on either side of lake home   |
| Diverse population of landowners | <b>Create neighborhood groups</b>                           | <b>GLA: create person-to-person contact</b>   |
|                                  | Getting their attention with "hot topics"                   | GLA: Be more detailed and effective with communication, e.g., post 1 topic communication i.e. "swimmers itch"   |
|                                  | <b>Recognize there is an on-going need to reach out</b>     | <b>GLA: Develop "Welcome to the Lake" materials to be given to new owners of properties</b><br><b>Realtors: assist in getting the word out about the value of the lake</b><br><b>GLA: Socials</b> |

**Table 3. Causes, Solutions, and Roadmap for Aquatic Invasive Species Challenges**

| Likely Cause              | Potential Solution   | Who Involved and How  |
|---------------------------|--|---|
| Boat Launches             | Education, information, signage  | <i>GLA; LCO, DNR, COLA, UW System:</i><br>assemble materials from these sources;<br>identify grants for application and donors<br>for support   |
|                           | <b>Increase hours of people monitoring boat landings through: Volunteers, Interns</b><br><b>Provide Housing</b><br><b>Work with Healthy Lakes Initiative</b>   | <i>GLA; LCO, DNR:</i> coordinate additional grant funds and donor/membership funds to increase the number of paid hours or volunteer hours at boat landing (college student – summer job and internship credit)<br><i>LCO College and UW System:</i> source of students and/or internships                                |
|                           | <b>Improve resources available at boat launches:</b><br>1. Sprayer (possible low bleach solution)<br>2. Access to fresh water<br>3. Rakes and Hooks<br>4. Pressure Washer  | <i>Local Contractors:</i> used tools<br><i>Businesses:</i> donate \$\$ for sprayer, pressure washer, well, etc.<br><i>DNR:</i> grant funds for equipment, etc.  |
| Cross Lake Transportation | <b>Signage on both sides of the County Rd K bridge over stream connection to Lac Courte Oreilles</b><br>1. Lift motors<br>2. Clean off weeds<br>3. Back thrust<br>4. Identify infested areas<br><b>Place similar signs at all landings in surrounding area</b> | <i>GLA, Sawyer County, DNR, and COLA:</i><br>what can be on sign, where placed, how installed, property ownership for access<br><i>Bass Lake:</i> Sign at Spring Lake<br><i>DNR:</i> Buoy at entrance to Little Grindstone from Grindstone and LCO<br><i>UW-Extension:</i> Tim Campbell may help on messaging and signage |
|                           | <b>Chemically treat in Little Grindstone (\$1,000/yr)</b><br><b>Point Intercept survey (private company)</b>   | <i>GLA:</i> Aquathol K<br><i>Point intercept AIS company:</i> get bid for survey of AIS threatened areas<br><i>GLA and DNR:</i> apply for large-scale planning grant  |
|                           | Scuba or Rake Curly Leaf<br>Pondweed areas   | <i>GLA:</i> contact UW-LaCrosse Professor who does scuba control<br><i>Contractors:</i> others who may help<br><i>COLA:</i> Dash suction machine – are they purchasing one, could we share?   |

**Table 4. Causes, Solutions, and Roadmap for Phosphorus Challenges in Lake Waters**

| Likely Cause   | Potential Solution   | Who Involved and How  |
|--|--|---|
| Shoreline Land Use   | <b>Education awareness; demonstration sites; recruitment; show data on website to people</b>   | <i>GLA, LCO Conservation, WI DNR, UW-Extension, Sawyer Co Zoning and Conservation: identify potential funding and assistance in establishing demonstration sites (Healthy Lakes Program) and in developing information for website</i>  |
|  | <b>Provide help/assistance, work party to install buffers, native plantings, etc., (build community)</b>   | <i>GLA: provide education and recruitment<br/>UW-Extension and DNR: provide education and funding (Healthy Lakes)<br/>Sawyer Co Zoning and Conservation: provide technical assistance; native plant sale; provide support for design of native plantings and buffers<br/>LCO Conservation: provide technical assistance<br/>Landscape companies: design and installation<br/>Wisconsin Lakes: list of resources<br/>Local nurseries: provide plants<br/>Sawyer Co Zoning and Conservation/GLA: have native plant sale<br/>Sawyer Co: help with design</i> |
|  | Septic tank, holding tank and drainfield inspections; replacement; upgrades where needed   | <i>GLA: Who can do this? WI DNR? Private company?</i>   |
| Mitigate land use practices to accommodate changing weather patterns | <b>Protect bog from agriculture and development</b>  | <i>Grindstone Lake Foundation, GLA, WI DNR, Sawyer County, and Bass Lake Township: write grants, provide letters of support, assist with fundraising</i>  |
|  | <b>Healthy Lakes Program materials or those through a business to address changing precipitation and ice conditions due to changing weather patterns</b> | <i>Wisconsin Extension Healthy Lakes: provide information/education and funding</i>   |

**Conclusions**

At the end of the workshop, participants had identified key challenges to Grindstone Lake based on the best scientific information available at the scale of a single lake. Additional information related to land

use practices, land use changes, demographic changes in the watershed, and aquatic invasive species prevalence was needed to capture a more robust picture of the challenges, solutions, and action plans to protect Grindstone Lake.

Several “next steps” were identified by the end of the meeting.

First, one participant has offered to serve as the communication leader for the Grindstone Lake Association. She would coordinate the identification of important messages that need to be sent to GLA members and develop materials for the GLA website.

Second, a small group of participants are looking into what is necessary to get signage up at either end of Little Grindstone to prevent AIS spreading into Grindstone from LCO and to remind boaters of the “no wake” zone in Little Grindstone. This last point is especially important for waterfowl (e.g., loons) who nest in the area and cannot tolerate high waves from boat wakes.

Third, GLA Board members agreed to pursue state funding through DNR for shoreline protection (Healthy Lakes Program) and needed planning and data gathering efforts for lake management implement grants (Large-scale lake planning grants). GLA will meet with DNR in Fall, 2019 to discuss applications for a lake planning grant and a Healthy Lakes grant consistent with the findings of this workshop. If these grant applications are approved, these efforts would be implemented in 2020.

## **Acknowledgements**

This workshop was supported by a Small-Scale Lake Planning Grant from the Wisconsin Department of Natural Resources (SPL 39919). The Grindstone Lake Association wishes to thank several key agency individuals who helped plan and facilitate this workshop: Scott Van Egeren, WI DNR; and Patrick Goggin, Wisconsin Lakes Partnership and UW-Extension. In addition, two other agency staff presented their last findings in their areas of specialty: Max Wolter, WI DNR fisheries; and Dan Tyrolt, Lac Courte Oreilles Conservation Department. We were also pleased to have the assistance of a consultant, Cheryl Contant, in developing the roadmap phase of the workshop and preparing this final report.

We wish to thank Karen Mumford, who took the lead in developing this small-scale grant application and organized our efforts in completing this work. We also extend our sincere appreciation to the following individuals who attended the workshop as participants in our brainstorming, prioritization, and planning sessions. These individuals include: Shawn Ahlgren, Steve Boger (GLA Board member), Donna Carlson (GLA Board member and President), Tom Gruencke, Carol Heinrich (Couderay Waters Land Trust), Sean Humphries, Martin Kreuzer, Bob Marquard, Jane Marquard, Dave McJoynt, Karen Mumford (GLA Board member), Bob Oesterreicher, Cindy Parker (GLA Board member and Secretary), Jim Scharl (Wisconsin Lake and Pond Resources), Lee Skelley, and Nancy Skelley.



# APPENDIX

## AGENDA

### GRINDSTONE LAKE PROTECTION AND PLANNING WORKSHOP\*

JULY 27, 2019

8:30 AM - 3:00 PM

Bass Lake Town Hall, 14412 W County Hwy K  
Patrick Goggin, WI Lakes Partnership, co-Facilitator  
Scott Van Egeren, WI DNR, co-Facilitator

- I. Continental Breakfast and Welcome - Goals of Workshop, Logistics for Day and Lunch
- II. Introductions
- III. State of Grindstone Lake and Agency Roles - Scott Van Egeren, WI DNR facilitator  
Sawyer County, Aquatic Invasive Species  
Dan Tyrolt, LCO Conservation Department, Water Quality  
Max Wolter, WI DNR, Fisheries  
Karen Mumford, Grindstone Lake Association, GLA roles and activities  
Patrick Goggin, Wisconsin Lakes Partnership, Extension and Grants
- IV. Break
- V. Identify Key Challenges to Grindstone Lake and Prioritize
- VI. Discuss Causes, Potential Actions, and Who Involved in Responding to Key Challenges (in small groups)
- VII. Lunch - The Boulevard
- VIII. Report Out from Small Group Work and Prioritize Actions Needed
- IX. Develop Action Plans for Each Key Challenge  
What can my agency/organization do and not do?  
What gaps exist in action?  
How do we fill the gaps?
- X. Summary and Next Steps

\* Funding for this workshop is provided by a small-scale lake planning grant from the Wisconsin Department of Natural Resources

Map of Workshop Participants' Lake Locations

