

Fall, AM, Mist
Question - I ponder

Article I – PURPOSE

The purpose of the Association is to **preserve and protect Lower Nemahbin Lake** and its surroundings, and to **enhance the water quality, fishery, boating safety, and aesthetic values** of Lower Nemahbin Lake **as a public recreational facility** for today and for future generations.

LOWER NEMAHBIN LAKE

- The Lake is under threat(s)
- There are “known” threats & ..?
- We too - part of the problem
- Lake Association is ready
 - Only a “Tool“
 - Who ?

As Individuals - our Ability to effect change are limited
As a team - we can be very effective

I - WE - asking for:

YOUR TIME - YOUR WILLINGNESS TO CHIP IN

**Chip In -You are Needed
“Just a little”**

- 1- Dues \$40 - w/o being asked -Dec
- 2- Call List: Name, Street, email, phone
- 3 - Commit to do what you can
- Alternative: ↓ Quality of life, ↑ Cost,

Nobody is asking/expecting you to do more than you can
BE OPEN to Help - When you can -
IF called & can't - JUST SAY SO

LOWER NEMAHBIN LAKE



- Belongs to the Public
- NOT - our Lake
- 239 Acres - 36 feet deep
- Boat Ramp, Walk-ins
- Bass-sm/lg - Northern Pike, Walleye, Pan fish
- Health ?

Simple DNR Listing:

Disclosure:

I am not an aquatic specialist

This is my best understanding:

Water Quality

- Oligotrophic -Low Nutrients
Water Clear - Quality good
- **Mesotrophic** - Nemahbin
Mod. Nutrients - N2, Phos
Mod. biological activity
Water Quality - Fair
- **Eutrophic & Hyper-Eutrophic**
High nutrients - > Plants &
>Algae → >Nuisance



4 OFFICIAL Categories of Water Quality

#1 - typical Mountain lakes #2 - Technically - Fair - BUT -LN - > av lake
SE WI Let's keep it that way.

Recordings: Barbara & Forbes Hotchkiss (since 2011) -

Recently: Charlotte, Dean, Joan - 2018 added Phos & Chloride

Current Aquatic Invasives

Nemahbin

- ZEBRA MUSSEL Adhere surfaces, clog pipes, compete native snails & other filter feeders, *damage plankton*
- CHINESE MYSTERY SNAIL Rat lungworm parasite
**human meningo-encephalitis*



“Aquatic Invasive Species” abbreviated “AIS”

Both - Adhere

Plankton are Fish FOOD - a) Central to the food chain &

b) Eat bacteria & algae

Chinese Mystery Snail HARBORS

* “Inflammation of the lining of the brain”



- Spiny Naiad
- Curly-Leaf Pondweed
- *Eurasian Water Milfoil - (hybrid w Northern) (not pic)
- ***Starry Stonewort (Macro Algae)**

THREE invasive Water plants & One organism acts like plant

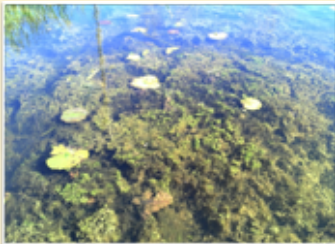
Plants: Spiny & Curly (Milfoil is not pictured)

Starry Stonewort - MACRO Algae - (same as) Brown Kelp - ocean

Plants - Have roots & a circulatory system

Macro Algae - No roots - No circulatory system - nutrition thru diffusion
basically Cell Colonies - generate “holdfasts” to grab onto the silt

TWO FORM DENSE LAKE MATS



- Starry Stonewort
“ Barrier Meadows ”
- Eurasian Water
Milfoil - surface spread

Both - spread by fragments ea branchlet/stem/single cell - a new plant/colony

EWM- spreads surface - Native milfoil stops at surface - Aug usually

SSW - Deep thick obstructing masses under water

Starry Stonewort* & EWM

- Block sunlight
- Destroy Native plants
- Destroy spawning beds
- Foul Motors - Impede boats
- Absorb phosphorous (fertilizer)
- Meadows - 6-8 ft thick*
- No Treatment *



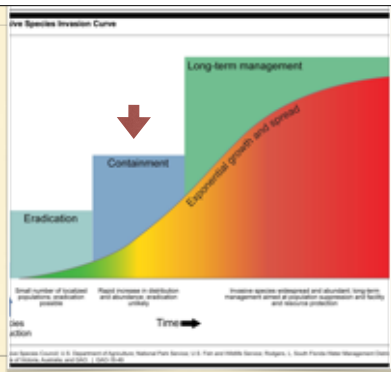
How serious?

see U tube videos - Lake Koronis - Minn
 much ongoing research, trials - no successes

We selectively pull to protect Native plants, to limit spread, under DNR guidance

AIS Invasion Curve

- Eradicate - too late
- Slow Further spread
- Prevent - new AIS
- Costs increasing !!
- Monitor - Manage
- Learn - Participate



A Typical Invasion Curve. * Containment & Management !!

Bottom Line

Time

Vertical Line

Exponential:

- 1- Growth
- 2- Difficulty (Complexity) to treat
- 3- Cost \$\$ to manage !

OUR ROLE - AIS SPREAD



- Transport - Lake to Lake
- Aid - Fragmentation
- Damage - Lake Floor
- Debris - Decomposing
- Nutrients

How our Actions Add to the problem

Clean Boats Clean Waters

- Inspect/Remove - motor, anchor, trailer?
- Drain boats, live wells, ballast, equipment?
- Never move live Fish/eggs/plants?
- Dispose - Bait in Trash

TO DO:

Teach Kids & Family - Discuss w friends, neighbors
Before launching / before traveling the roads
... or leave bait w another fisherman at that lake -
Use only "in-state" bait shops!

Do I: **NO**

- Rake leaves, grass, plants into lake
- Pull Aquatic plants & leave in the lake
- Gouge Shallow Areas w Propeller
- Drop-Drag anchor Drive thru Invasives

Pull INVASIVES then SEED the lake w FRAGMENTS !!!!

Dig out natives - lays the groundwork for invasive

Any VEGETATION - adds Nutrients

More decaying plants - more Muck

Aquatic plants - feather light when dry - Easy to dispose of - good fertilizer

Nutrients - Role in the Cycle

NUTRIENTS = GROWTH

- ↑ Plants - Invasives* / Algae
- ↓ Decay - Food -> plants/ algae / bacteria
- Oxygen - used up by Bacteria
- Plant & Algae *Release* Phosphorous
- Deplete O² ↓ Fish ↓ Native Plants

Nutrients feed the Invasive cycle - provide a head start to Invasives

Invasives - grow more rapidly than natives + EWM season earlier than natives

SSW absorbs phosphorous then releases it -

Nutrients feed the Invasive cycle

MORE GROWTH

- Crowd Out Natives
- Less Diversity
- More Muck
- Algae Bloom (B-G)
(cyanobacteria) - **Eutrophic !**
Neurotoxins* pets



Algae Bloom - pea soup appearance = Deteriorating conditions
excess nutrients & Eutrophic conditions

Algae Toxins ingested are Fatal to **Dogs**: poison hotline in references

No antidote - 15 min to sev days

Do not Swim or Wade - Shower if you do !

poison hotline in references

The Solution ?

- The STATE? - The answer to all our problems !
- The VISITORS? - can they even imagine !
- Who is most invested ?
- DNR & Waukesha County are Critical Partners



Who has the most to lose ?! Protect your Investment !

The Wisconsin Lakes Partnership - Critical Triangle of cooperation

1 Extension Lake Program UW Steven's Point

2 Dept of NR - Research, Tech expertise, if needed regs

3 Wisconsin Lakes - mobilizes citizens 15,000 WI Lakes

Lakes - require - organization, planning, cooperation/coordination - expertise

Lake Communities

- Management District - Upper Nemahbin
- **Lake Associations** - Voluntary
 - LNLA Incorporated 2009
 - Limited ability to affect change

See reference: **People of the Lakes** - on line

Dominant form - Districts e.g. Upper Nemahbin - larger than just the lake

Voluntary forms - Assoc. - early forms usually limited to shape of the lake e.g.

LNLA - Imp. Start! - but limited participation, ability to affect change -

2014 - Board foresight: Need broader input, fresh perspective, integration w other lake organization, DNR, County etc

“QUALIFIED” LAKE ASSOCIATION - 2014

- Eligibility*: Anyone ... within 1 Mile of the lake Resides, owns, leases ... 1 mo/year
- Purpose: Protection & Improvement ... of ... inland Lake for the General Public
- State Grants* \$ - 75:25

Simple change to Membership Bylaws - larger surrounding community
Required by the DNR - Anyone within a mile of the lake !
(Districts can be much larger !)
Not a member = no voice - no vote
KEY BENEFIT: Access to GRANT \$ & TECHNICAL Support

LNLA WAS PREPARED ! 2019



25 Aug *Starry Stonewort
8 Oct DASH - Eco Water
DNR- Waukesha- UN- LN
6 weeks !
\$19,000 State Grant

*ED - End of season - Freeze due - Unique: isolated colony - PULL or Not - Full Consultation w DNR AIS specialists - Notifications: Brd - Public - U New. - Low Nash., Grant applic., Contracting, BRD - review, approval, funding our share \$\$ Co. Close Ramp - Disposal - Jim interrupted “vacation” Europe - entire board, Ed, Maggie & Mat, Heidi Bunk -other DNR, Co Parks & Rec, Pat Eco-Waterways

ASSOCIATION = VOLUNTARY



- *Decisions by members*
- *No Taxes*
- **Time & \$*

Voluntary = Volunteers
Be at the table Be involved -
Offer a little time & effort
Each Household that accesses the Lake has a stake-
a responsibility to learn, to protect, to participate

PROTECT YOUR INVESTMENT

4 Hours a year ? 30 min - hr or 2?

Invite neighbors, kayak shoreline, water sample

Phone calls, Deliver Notices, Write a ¶

Update Directory, Spreadsheet, Word processing

Calendar your Dues Payment (e.g. w/ Dec bills)

SIGN onto the CALL LIST

Tell your neighbors why you belong, what you learned,
Mailings \$\$\$ - email & phone are critical for communication
Write a Paragraph - water safety, fishing regs, history of the area,
Help w website - a newsletter - attend a conference
Some can do more - help plan an event - organize a committee,
No one will ask you to do more than you can
Street, Name, Email, Phone # = CALL LIST

EDUCATE YOURSELF, FAMILY, NEIGHBORS



- Healthy Lakes Conference - Annual - Oconomowoc-Lake Country Clean Waters
- Wisconsin Lakes & Rivers Convention - Annual April - 2 1/2 days - Stevens Point
- Lake Tides <https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/resources/newsletter/default.aspx>
- UW Citizen Lake Monitoring Network <https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/programs/clmn/default.aspx>

OTHER THINGS you Can do:

Healthy Lake Conference, Friday September 17, Oconomowoc Comm. Center

Asked Myself - Now I ask you to ask yourself ? IF NOT ME WHO?

Sign onto the **Call List** - Offer what you can.

When
Friday, September 17, 2021 from
8:30 AM to 3:00 PM CDT

Where
Oconomowoc Community Center
222 W. Wisconsin Avenue
Oconomowoc, WI
94 Join in via Zoom

Registration Contact
Beth Hinkle-Jacy
Tel: From Oconomowoc
(262) 389-0567
info@oconomowoccommunity.org

4th Annual Healthy Lakes Conference
Friday, September 17, 2021 • 8:30 am - 3:00 pm
Oconomowoc Community Center
222 W. Wisconsin Avenue

Agenda

- 8:30 am - 9:00 am Registration and Sign-in
- 9:00 am - 9:30 am Welcome Remarks - An Overview of Local Watershed Issues
- 9:30 am - 10:00 am Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 10:00 am - 10:30 am Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 10:30 am - 11:00 am Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 11:00 am - 11:30 am Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 11:30 am - 12:00 pm Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 12:00 pm - 12:30 pm Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 12:30 pm - 1:00 pm Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 1:00 pm - 1:30 pm Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 1:30 pm - 2:00 pm Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 2:00 pm - 2:30 pm Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed
- 2:30 pm - 3:00 pm Presentation: Healthy Lakes - How to Stay Healthy in Your Watershed

IF NOT ME - WHO?



LOWER NEMAHBIN LAKE ASSOCIATION

J PAUL KEENAN, 9 AUGUST 2021

REFERENCES

<https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/default.aspx>

UW Stevens Point, Extension Lakes - College of Natural Resources

<https://wisconsinlakes.org> - WI Lakes Partnership

<https://dnr.wisconsin.gov/topic/Lakes> - DNR

<https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/programs/cbcw/default.aspx> - Clean Boats Clean Waters

<https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/organizations/guide.aspx> - People of the Lakes

Poison Hot line 855-764-7661

<https://starrystonewort.org/facts/>

<https://starrystonewort.org/videos/>