

You are all muted for now.

If you haven't renamed your Zoom identifier to your real name, please do so now. It helps us take attendance.



Agenda

- Opening
- Input from Members
- Preventing/Controlling Invasive Plants
 - Aquatic
 - Shoreline Invasives
- 2022 water quality test results
- Watershed protection
 - Watershed surveys/remediation
 - Watershed Protection Program
- Outreach
- Financial summary
- Election of LAON Officers
- Closing



Getting started

Might be "Preaching to the choir," but...
 You can reach others: Friends, neighbors, visitors.

Need motion to accept last year's minutes, and 2nd.



LAON Board of Directors

- Sal Girifalco President
- Jim O'Brien VP (Watershed & Water Quality Testing)
- Tom Webster Treasurer & Data Base Administrator
- Paul Shook Secretary
- Norm Baker (Courtesy Boat Inspections CBI Coordinator)
- Jeanne Silverman
- Tom Curtis
- Lise Dietrich (Shoreline Invasives Chair)
- Susan Jacoby (Outreach Chair)
- Pat Daniels
- George Morton (Shoreline Invasives)
- Paul Shook (Water Quality Testing)
- Stephen Zeeman (Water Quality Chair)
- Chuck Frost
- Deb Partridge



Please Remember to Thank & Support our Sponsors

- Granite Ridge Estate & Barn
- Maine Beer Company
- Norway Savings Bank

- The Dock Guys
- The Woods of Maine
- White's Marina

The Town of Norway



Where do we stand?

- Do we believe our lakes are fragile due to two forever threats?
 - Invasive species
 - Watershed erosion
- Do we believe those threats have to be addressed proactively?
- Do you think LAON is on the right track and should go on?



Where does LAON Stand? Good news & Not So Good News

- LAON has developed solid programs
- Preventing and controlling Invasives:
 - Courtesy Boat Inspectors (CBI) Have made many saves
 - Invasive Plant Patrols Eyes on the Lakes (IPP)
 - Shoreline Invasives Control (SI)
 - Invasive Aquatic Survey (IAS)
 - Established rapid response contingency fund
- Watershed Erosion
 - Water testing program to determine lake health (results are a bit troubling)
 - Received 2 grants, applied for 3rd ...Lots of remediation projects
 - Education via workshops, one-on-one consulting, annual meeting, website
 - Ready to roll out LAON funded Watershed Protection Program Cost sharing incentives
- Outreach to inform wide group
 - Newsletter
 - Public events



Where does LAON Stand? Good news & Not So Good News

- However...
 - We are doing so much, we are stretched thin
 - LAON is rapidly approaching a critical phase Succession is a concern
 - Programs need more volunteers, and next crop of leaders
 - Board has been at it for many years (some have full time jobs)
 - Need new active members who can grow into leadership roles
- Where do you stand?
 - If able, we need you.
- Without active support, the LAON's programs are at risk!!!

As we discuss each, see where you can step in.

Where LAON needs your participation

- Courtesy Boat Inspector(CBI)
- Invasive Plant Patrols (IPP)
- Shoreline Invasives Control (SIC)
- Water Quality Testing
- Watershed Protection
- LAON Board of Directors
- Be an advocate of Lake Stewardship (all)

Your engagement is the key to the lakes' health & future





Member input

- Insert questions
- Open to the attendees via chat



Preventing and Controlling Invasives

A multi-pronged program

- Courtesy Boat Inspectors (CBI)
- Invasive Plant Patrols Eyes on the Lakes (IPP)
 - Shoreline Invasives Control (SI)
 - Invasive Aquatic Survey (IAS)



CBI prevents what no one wants!

2,400 inspections in 2022: Last lake visited not Penn ~ 800

Courtesy Boat Inspections (Norm Baker)







CBI – Purpose, Results and More...

<u>Why?</u> Keep invasive species out of Lake Penn – Our last line of defense (Boater is 1st)

- <u>How?</u> Voluntary inspections of boats in and out of Lake Penn.
- What: We have had several critical "saves" since 2017.

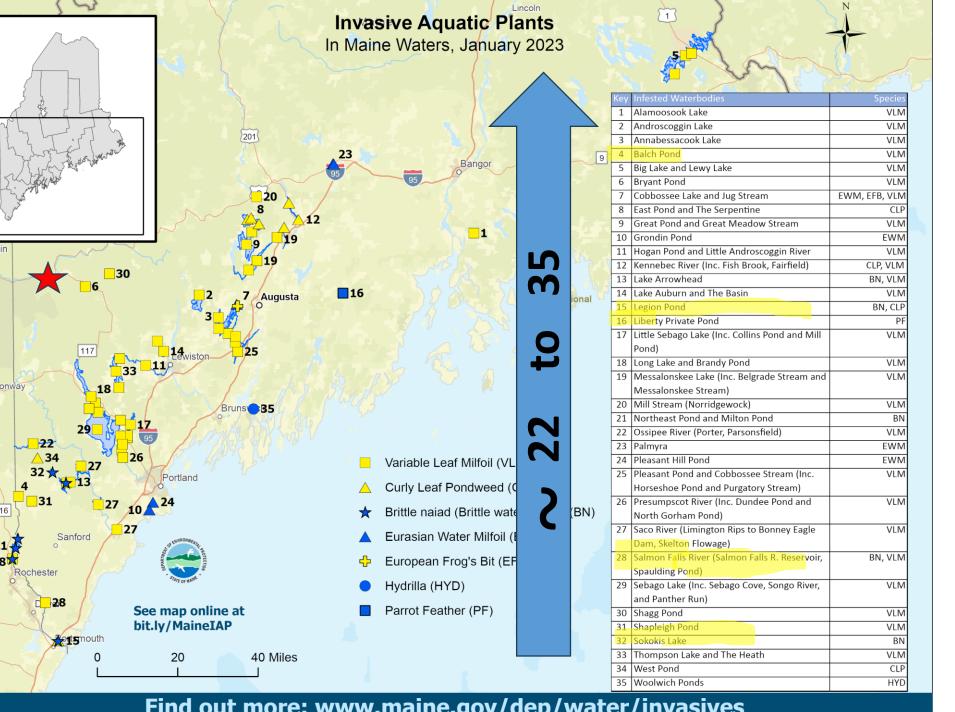
"2022 saw 19 saves statewide including a save on a boat entering the uninfested Pennesseewassee Lake in Norway, Maine." (quote from the Maine DEP website)

- Who: Inspectors 2023
 - Larry Levesque
 - Kurt Brown
 - Cheyanne Hill
 - Ray Gagne
 - George Morton (V)
 - Denise Whitely (V)
 - AND YOU!!!!



Previous Waterbody Visited

- Is the critical question asked at each boat inspection
- Lakes around us that have invasives
 - Thompson
 - Long and Brandy
 - Sebago Lake
 - Bryant Pont
 - Cobbossee Lake
 - Messalonskee (Belgrade)



Find out more: www.maine.gov/dep/water/invasives



2018 Save (Made the News, still taught at seminars).

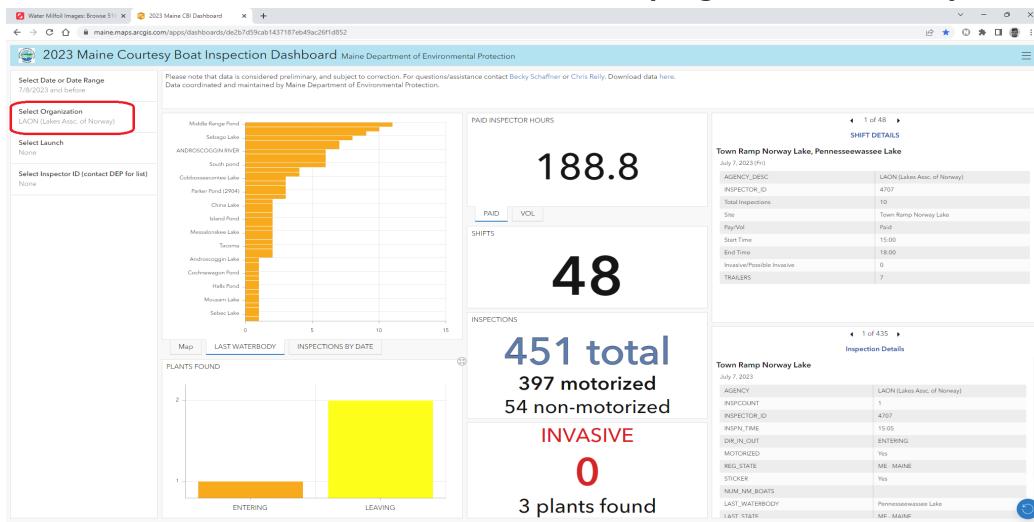
Eurasian Milfoil





Thanks to

BIG SHOUT OUT TO Chris Coffin for helping with data entry





Prevention – Your Role

- Every lake is a threat, every lake is vulnerable
- LAON doesn't inspect all boats

ALWAYS (For You, Visitors, Renters):

• Clean your boat and <u>anything that goes into the water</u> of any plants and debris.

Drain the boat and any compartments of standing water.

• Dry the boat prior to entering any new body of water (5 days). (or pressure wash @140° or wash with 10% chlorine)



Polling Question 1 - CBI

- 1. Can you assist the Courtesy Boat Inspector (CBI) program?
- a). I can be a volunteer inspector (not always needed, but we can't be sure we can find employees, so we need a backup team)
- b). I can help with CBI administration.
- c). Sorry, not able to help.



Next:

Attendance

Then: Shoreline Invasives (Lise Dietrich)



Polling Question 2 (Attendance)

- 2. Are you attending the LAON 2023 Annual Meeting?
- a) Yes
- b) No



Shoreline Invasives Coordinators: Lise Dietrich & George Morton

Why care?

- They spread easily
 - Crowd out natives
 - Removes food sources,
 - Block waterflow
 - Take over
 - Monoculture
- Only Lake Penn, for now

Invasive Plant Patrol (IPP) searches for shoreline invasive sites on all 4 lakes

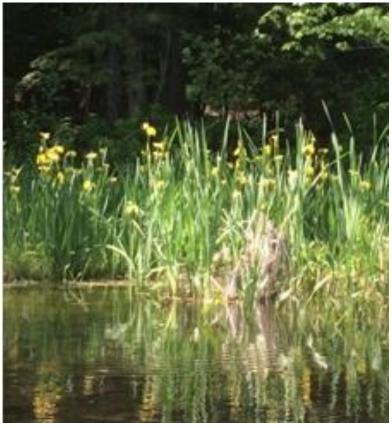


Our First Invader

YELLOW IRIS - INVASIVE



SINGLE FLOWER



EXTENSIVE STAND



SEED PODS

HARMLESS LOOKALIKES

WILD IRIS NATIVE, HARMLESS



YELLOW LILY HARMLESS





Dealing with the Yellow Iris

Locate	LAON's Invasive Plant Patrol (IPP) Team looks for and marks locations during the June bloom period		
Control And Remediate	Same techniques that you would use to control weeds in your garden: Collect flowers & seedpods ("deadhead") and dispose in town trash Cut back the leaves to reduce energy and nutrients passing to the roots Careful digging, ensuring the entire root system is removed and no particles are released to open water (LAON's remediation team) Covering with "benthic barriers" to kill the plants via excessive heat and lack of sunlight (LAON's remediation team)		



Other Interlopers

Purple Loosestrife



Blooms July - September

Water Forget-me-nots



Blooms June - July



What You can do

If you see what might be a Yellow Flag Iris, Purple Loosestrife, Water Forget-Me-Not:

- Email LAON a photo (try to include some identifying feature) with GPS Coordinates or nearby street address, along with your contact information.
- Place a driveway marker, if you can.
- Collect flowers, cut leaves, if you can.



Our Volunteers

Thanks to volunteers:

Invasive Plant Patrol (IPP) Team Jim and Sally Gibson Sherry Otterson George Morton

Need more volunteers for remediation





Polling Question 3 (SI- Shoreline Invasives)

- 3. How can you assist the Shoreline Invasives Control Program?
- a). I can help with remediation/removal (sometimes a little messy).
- b). I can help with SI administration.
- c). Sorry, not able to help.

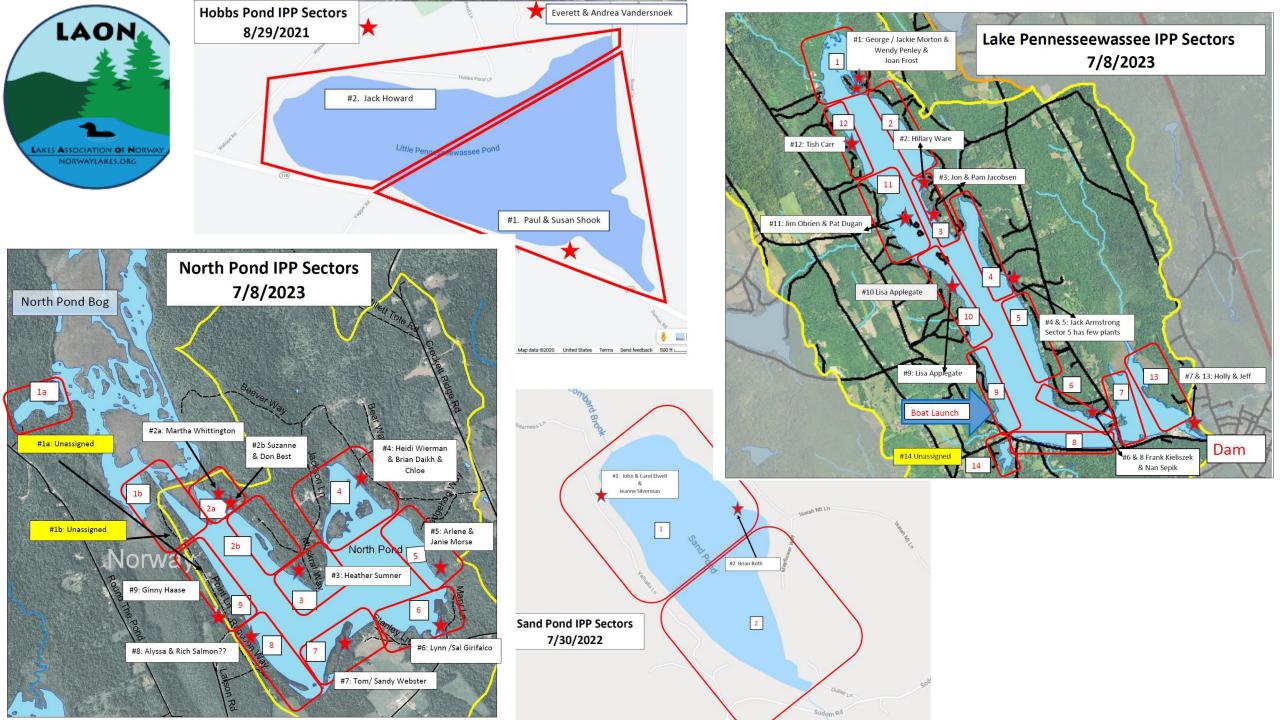


Eyes on the Lakes – Our Next Level of Protection

(Lynn Girifalco)

- CBI can never be 24/7, or foolproof, only on Penn
- Invasive Plant Patrol (IPP)
 - IPP teams get to know their sectors
 - Do while enjoying time on the water
 - "Eyes on the Lake" look out for plants that don't belong
 - Have patrols for all 4 lakes Thanks to volunteers
 - Some unpatrolled & over-extended areas need more Patrollers
- Begin with a Plant Paddle (August fun & easy)
 - Training on gathering plants
 - Use of "Quick Key" to identify possible threats









What <u>you</u> can do Protect <u>your</u> lake while recreating

- Attend a Plant Paddle (August). Then you can:
 - Join an IPP on your lake
 - You can even just learn the basics, and be on the lookout during normal lake activity – be additional "Eyes on the Lake"



Polling Question 4 (IPP)

- 4. Would you like to attend an Plant Paddle to help protect your lake (can be either full IPP, or casual observer)?
 - a) Yes
 - b) No
 - c) Maybe



Water Quality

Jim O'Brien, Paul Shook, Steve Zeeman



Our Water Quality Monitoring Efforts

Monthly measures in each lake

- Oxygen and temperature profile with depth
- <u>Total Phosphorus</u> concentrations which are an <u>important nutrient for algae</u> and so can help predict nuisance blooms
- <u>Chlorophyll</u> concentration as a measure of the <u>amount of algae</u>
- Secchi depth as a measure of water clarity
- Conductivity which can indicate inputs of pollutants, especially road salt
- pH is an indicator of lake chemistry and possible influence on what can grow
- Alkalinity is the buffering capacity of water and ability to resist acidification



Our Goal

Our goal is to keep lakes oligotrophic or low productivity (of algae)

• Many, but not all the indicators are oligotrophic

Trophic Status	Total Phosphorus (ug/L)	Chlorophyl (ug/L)	Transparency (Meters)
Ultra-Oligotrophic	<5	<2.5 (S)	>6 (S)
Oligotrophic	5-10	<8 (N,P,L)	>3 (N,P,L)
Mesotrophic	10-30 (S,N,P,L)	8-25	1.5-3
Eutrophic	30-100	25-75	0.7-1.5
Hyper-Eutrophic	>100	>75	<0.7

S = Sand, N = North, P = Penn., L = Little Penn.



2022 Key Lake Measures

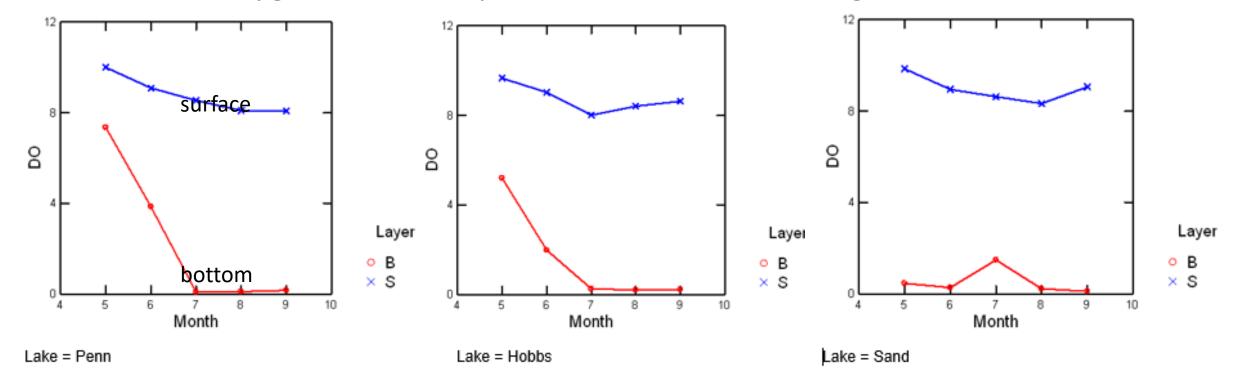
Lake	Average 2022 (2021/Historical)						
	Avg P	P Surf	P Bot		Chl	Secchi	
Sand Pond	14.5 (9.3,9.0)	4 (4.3/3)	25 (14	.4/15)	1 (2/2.5)	7.4 (7.	.3/7.4)
Little Pennesseewassee	21.1 (22.4/14.5)	7 (7/NA)	43.6 (3	37/19)	2 (3/4.5)	5.6 (5.	.8/5.6)
Pennesseewassee	14.5 (10.1/10.5)	7 (6/8)	22(14	.2/13)	3 (3/4.6)	5.2 (5.	.7/5.2)
North Pond	19.3 (24.5/25.5)	16.5 (15.6/17)	21.8 (33	.4/34)	4 (6/6.9)	3.2 (3.	.2/3.0)
* Historical data through 2018	can be found through :	https://www.lakesofmaine.org/index.html?r=1681319726					
Secchi - higher number is better		2022 Average vs Historical					
P - lower number is better		Improved	proved				
		Worsened	b				
		Too close to call					

- Phosphorus is a concern for all the lakes (Goal is 5 to 10 Avg P)
- Concentrations higher than historical levels in the bottom waters-deep lakes
- Some improvement on North Pond



Internal Loading of Phosphorus

- Phosphorus is stored in the sediments of a lake
- The sediments can release phosphorus when dissolved oxygen drops to very low levels as we see in our deep lakes
- Oxygen levels drop due to accumulated organic matter



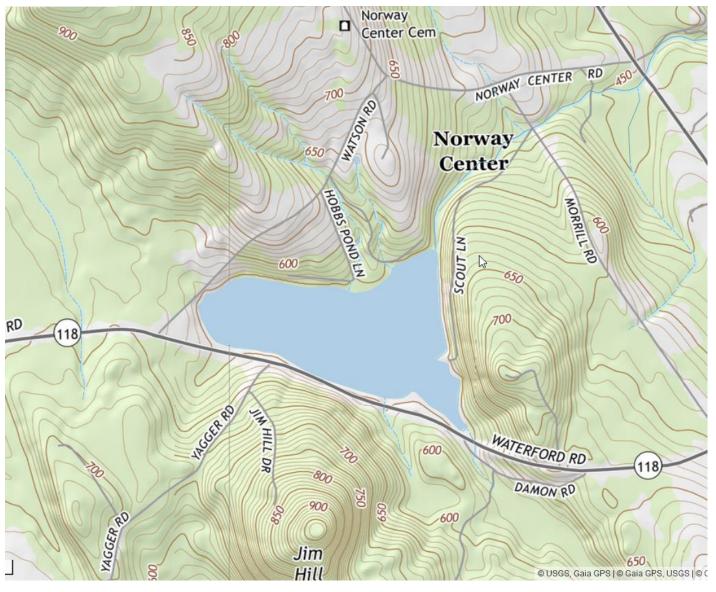


Preventing Algal Disasters – What is LAON doing?

- Conducted watershed surveys on North Pond, Lake Pennesseewassee and partially on Hobbs Pond to identify erosion problems.
- Remediation is complete on North Pond (promising results) and in process on Pennesseewassee
- Implemented increased testing on Hobbs Pond to identify potential phosphorus sources contributing to cyanobacterial blooms
- Progress limited by human resources
- BUT, it is up to each of us to prevent phosphorus from entering the lakes
 - Don't fertilize lawns
 - Plant buffers along the shoreline
 - Identify and eliminate erosional spots

Hobbs Pond (Little Pennessewassee Pond) Hobbs Pond Watershed 0.25 Miles

Hobbs Pond Watershed





Hobbs Pond Water Quality Trend

Total P Average May-Sept (PPB)

	2018	2019	2020	2021	2022
SURFACE	5	6	6	7	7
BOTTOM	18	23	20	38	44



- Total P near bottom significantly higher in 2021/2022
- Average Secchi clarity nearly 1 M lower in 2021/2022 than prior 3 yrs
- Cyanobacteria (Planktothrix) present in 2021 and 2022
 - 2021 visible approx. 3 week period mid July to early August
 - 2022 visible approx. 9 week period early July to mid September

Significant impact on everyone who uses the lake – home water use, swimming and recreation



Hobbs Pond

- DEP status changed to "Threatened" (grant eligible)
- Enhanced monitoring includes additional Phosphorus sampling and animal DNA testing
- Evaluating known erosion sites
- Investigating cow DNA detected in runoff
- Investigating possible solutions
- On schedule to plan and conduct full survey with DEP in spring 2024



Polling Question 5 (Water Testing Team)

We need more water testers. You get to use cool equipment like a Secchi disk, an oxygen meter, a depth finder, a wind gauge, a water depth sampler, and maybe they will let you use the lab...need I go on?

- 5. Would you like to become a trained member of the water quality team (collecting and processing samples).
 - a) Yes
 - b) No



Watershed Protection – Jim O'Brien & Sal Girifalco

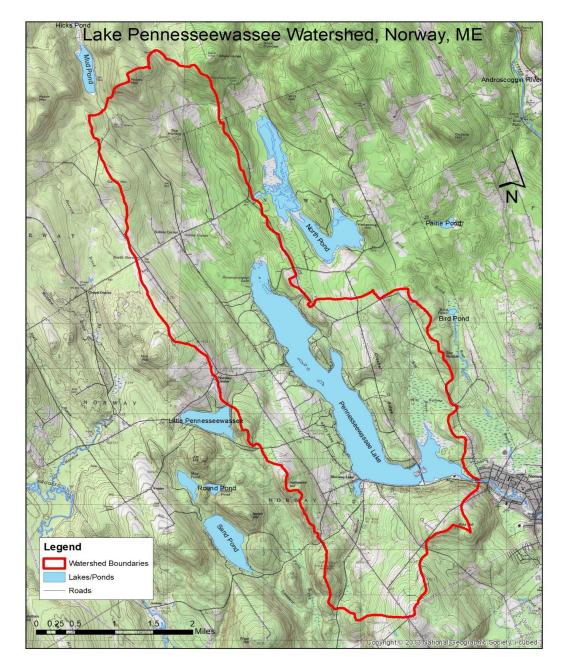
- Water quality is slipping increasing Phosphorus levels
- Primary cause erosion into our lakes
- Our watershed efforts are designed to reduce it.
- North Pond has decreased Phosphorus after remediation (the only lake to do so)
- 10 year plan for Lake Pennesseewassee

Why do we do it?

Erosion = Phosphorous = Algae

Lake Pennesseewassee Watershed Protection Project

- Phase I completed in 2022
 - 32 private and public roads sites
 - 13 lakefront property sites
 - Prevents 66 tons sediment/yr.
- Phase II grant application submitted in May
 - Budget
 - Total Phase II costs \$162.5k
 - Federal Funds \$94.7k
- Award decisions by Maine DEP in August
- For work completion between 2024 and 2025

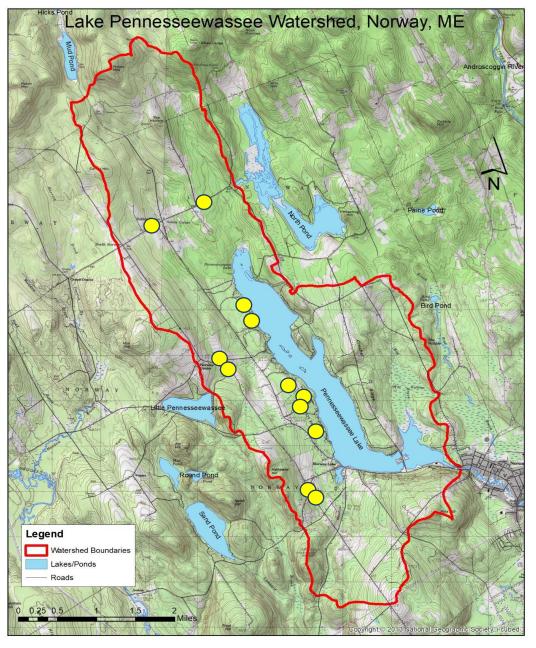




Phase II Focus Areas

- At least 16 high and medium impact NPS sites
 - Private and public roads
 - Residential sites with extensive work
 - Commitment from many property owners
- At least 12 residential sites





Phase II NPS Sites



Providing Solutions

- 900 volunteer hours contributed in Phase I – THANK YOU!
 - 350 of these were Sal and Jim
 - Need expanded management team for Phase II
- Need to go beyond Grant projects
- Next: New Watershed Protection Program





Watershed Protection Program (WPP) 2 Part Program

- Have done a lot to reduce Erosion & Phosphorus, but
 - Gov Grants too slow (can be 3 year process before spending money)
 - Gov Grants not guaranteed and a couple of leaders inadequate
 - Hobbs now Gov grant eligible, but \$ not available until 2026
 - Sand Pond not grant eligible

• Idea:

- Gov Grants are an incentive
- LAON funds its own incentive program
- Build Technical Support Team
- BOTH ARE NECESSARY
- Will we get participation?



Initial Thoughts on How WPP would work Preparation

- Establishes initial incentive amount (\$10,000)
- Define Process
 - Erosion has to impact one of our lakes
 - All projects need to be approved in advance and when completed
 - Property owners pay, then LAON reimburses up to 50%
 - Establish small oversight group. Could vary with the cost of the project (more expensive, more people involved with decision).
 - Hobbs and Sand Pond initially have some priority
- Provide Erosion evaluation workshop(s)
 - To educate property owners on what to look for
 - To find Technical Support Team volunteers
- Jim and Sal train Technical Support Team
 - Site visits (before and after remediation)
 - Mentoring
- Place guidance on determining erosion sites on website
- Communicate that we are ready to go!



Initial Thoughts on How WPP would work Execution

- Someone reports an erosion site (property, driveway, camp road)
- Support Team (pairs preferred) evaluates; makes recommendations
 - Remediation plan developed
 - Cost and impact evaluated Enough bang for the buck?
- For approved projects
 - Remediation could be done by property owner or contractor
 - Property owner pays remediation costs (materials, and/or contractor)
 - Approved projects reimbursed up to 50%
- Evaluate program for effectiveness and value
- Decide whether to continue program
- Self identified sites on Lake Penn could be used if we have surplus Phase II funds



Polling Question 6: Watershed Protection Program

6. Would you like LAON to implement the Watershed Protection Program?

- a). Yes
- b). No



Polling Question 7: Watershed Protection Support Team

- 7. Will you be part of the Technical Support team? We will not have program without a team.
- a). Yes
- b). No



Boat Wake (Sal)

- Part of fun on lakes, but an increasing issue (more traffic, bigger boats)
 - Need a Balance Follow laws & Guidelines
- Higher water level = more wake impact
- Why wake matters:
 - Hazardous to swimmers & other boaters (recent grandchild)
 - Erodes shoreline & releases phosphorus, which feeds algae
 - Damages property, including docks
 - Harms nesting birds, such as loons
- Most often a lack of awareness and attention No one wants to do harm
- Not only us, but visitors, renters



Why we should all care about boat wake

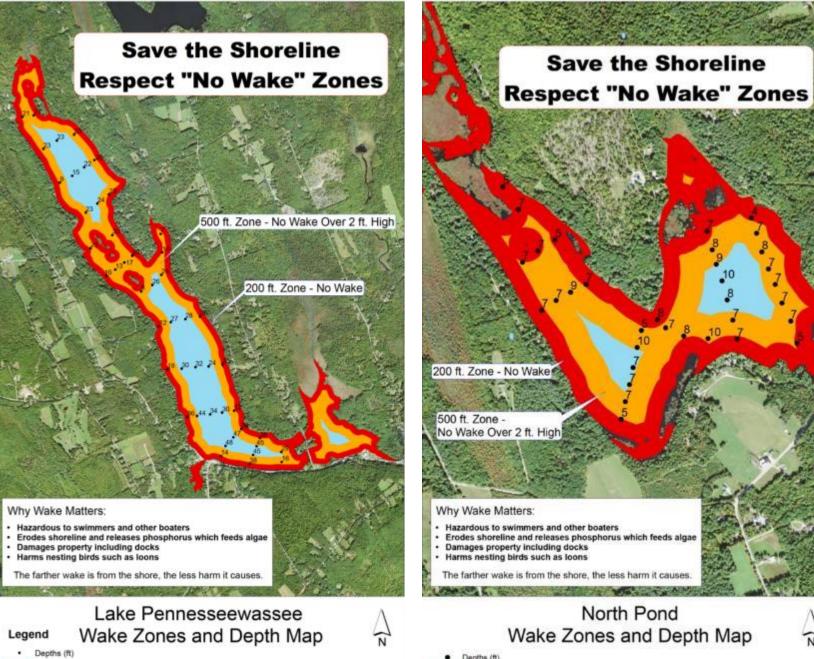


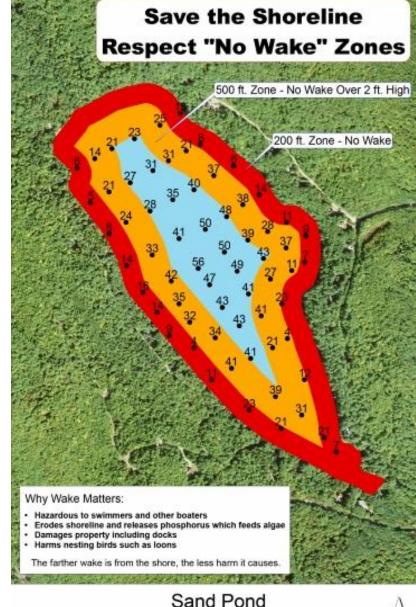
Waves erode shorelines and deposit nutrient laden soil directly into the lake



Wake Guidelines

- Wake diminishes with distance, so the farther from shore, the less damage.
- Look to see if wake is hitting the shore. If it is, it is eroding.
- State law: "Headway speed" within 200' of any shore. Really means no wake.
- From research done on other Lakes, a good guide is not to have wake higher than 2' if within 500' of shore. Not ideal, but a compromise.
- Using the above information, developed "Wake Zone & Depth Zone Maps"
- It's difficult, but communicate this to others.





200 ft Zone - No Wakes

500 ft Zone - No Wakes Over 2 ft. High

Wake Zones and Depth Map

 Depths (ft) 200 ft Zone - No Wakes 500 ft Zone - No Wakes Over 2 ft. High

Wake Zones and Depth Map

 Depths (ft) 200 ft Zone - No Wakes 500 ft Zone - No Wakes Over 2 ft. High





Wake Zone & Depth Maps

- For the 3 lakes that have boat wake issues
- Map in holders at Lake Penn & North Pond (awaiting Sand Pond location)
- Have 8 ½ x 11 laminated copies for boaters at
 - Norway Marina
 - White's Marina



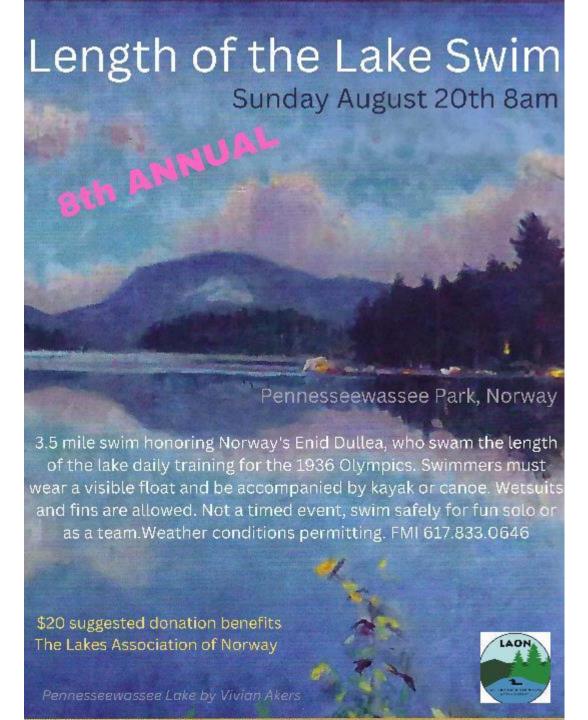
Outreach (Susan Jacoby)



Music & Art Show









Polling Question 8 (Length of the Lake Swim)

- 8. Would you like to support the Length of the Swim event?
 - a) Yes, as a swimmer (can be teams)
 - b) Yes, as a safety boater
 - c) No



What you do: It's easy to get complacent See "Keep lakes healthy" on our website

(<u>www.norwaylakes.org</u>) for water test results, boating and erosion control suggestions.

Lakes Association of Norway							
WHO WE ARE SUPPORT	KEEP LAKES HEALTHY OUR A	AREA CONTACT US					
	WATER QUALITY INFORMATION						
Who We Are	WAKE ZONE & DEPTH MAPS	nealth and beauty of Norway's four lakes: Sand Pond, Hobbs Pond, North Pond					
LAON is an all-volunteer group	WATERSHED PROGRAM						
and Lake Pennesseewassee. We courage responsible recreation, a	PREVENTING INVASIVE SPECIES	invasive plants and pollutants, monitor and report on each lake's condition, en- reness campaign to reach our entire watershed community.					
,	HOW BOATERS CAN HELP						
Of course, the key to our lakes plants and debris from all boats a	HOMEOWNED TOOLKIT	r members: <u>Controlling erosion</u> on their properties and roads. <u>Removing all</u> to protect other people, our shoreline, and property (state law requires minimum					
wake within 200′ of land).	LAKE SMART						
0	t' f'- -' - t t						

Our **members enjoy** swimming, boating, fishing and other water sports during the summer and ice fishing, snowmobiling, cross country skiing and skating on the lakes all winter.

- .



Polling Question 9– Website management

9. Will you be able to help manage LAON's website?

- a). Yes
- b). No
- c). Maybe



Financial Snapshot

- Financial condition is stable
- Dues/donations are on target
- Increased water quality testing costs (higher costs + Hobbs Pond special testing)
- \$10,000 for Watershed Protection Program
- CBI expenses to increase because of increased minimum wage and tight job market
- No Invasive plant survey expenses in 2021 or 2022 (Covid and Injury)
- Invasive plant survey expense to increase:

2023 (\$8,000) and 2024 (\$10,500)



DUES BY LAKE/POND

		2022		2023			20220//	2023\$/	
	Potential	Dues	0/	Dues	Dues	%	Dues	•	2023\$/
Lake/Pond	Donors	Payers	%	Amount	Payers	70	Amount	2022/0	20223
HOBBS POND	41	11	26.8%	\$1,005	14	34.1%	\$1,260	127.3%	125.4%
NORTH POND	89	21	23.6%	\$1,460	11	12.4%	\$780	52.4%	53.4%
PENNESSEEWASSEE	292	115	39.4%	\$16,981	106	36.3%	\$15,169	92.2%	89.3%
SAND POND	62	16	25.8%	\$2,600	17	27.4%	\$2,750	106.3%	105.8%
TOTAL	484	163	33.7%	\$22,046	148	30.6%	\$19,959	90.8%	90.5%
			_						
Created:	7/14/2023								



2023 REVENUE

	JANUARY 1, 2023	JULY 14, 2023	
Norway Savings Bank Balance	\$ 154,378.04	\$ 176,407.37	
Revenue	PROJECTED	JULY 14, 2023 STATUS	
Individual Contributions	22,000.00	19,199.00	
Sponsorships	3,000.00	2,175.00	
Town Payment	12,000.00	-	
Grants	7,633.00	3,493.00	
Amazon Smile	192.50	192.50	
Merchandise Sales	100.00	25.00	
Operating Fund Revenue \$ 44,9		\$ 25,084.50	



2023 EXPENDITURES/ FUND BALANCES

EXPENDITURES	PROJECTED				JULY 14, 2023 STATUS	
Water Quality Testing			14,150.00		1,357.00	
2023 Invasive Plant Survey	8,000.00					
2023 Water Quality Analysis	6,150.00					
Boat Inspections			14,300.00		118.28	
Buoy Placement & Removal			700.00		399.00	
Watershed Remediation			10,000.00		-	
Outreach			2,500.00		774.00	
Administrative			500.00		387.90	
Merchandise for Resale			100.00		18.99	
Other Expenditures			-		-	
Total Expenditures		\$	42,250.00	\$	3,055.17	
	PROJECTED		STATUS			
	DECEMBER 31, 2023		JULY 14, 2023			
Norway Savings Bank Balance		\$	157,053.54	\$:	176,407.37	
FUND BALANCES						
Watershed Remediation Fund			9,339.76		9,339.76	
Water Quality Test Equipment Fund			\$6,000.00		6,000.00	
Water Quality Emergency Remediation Fund			\$25,000.00		25,000.00	
Operating Fund Balance		\$	116,713.78	\$:	139,560.61	



AmazonSmile

- Gone.
- Thanks for participating



Nominate & Elect Officers

- Sal Girifalco President
- Jim O'Brien Vice President
- Tom Webster Treasurer
- Paul Shook Secretary
- Other Candidates??? Please "Chat" and "Raise Hand"



Please email any suggestions on the meeting. We want to fit your needs.

Be Well Stay Safe Have a Great Summer