



Your Summer Rx: *Enjoy Clean & Healthy Lakes!*



Presented by NH LAKES
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July 27, 2021



There are approximately 1,000 lakes in New Hampshire!



Lakes are an integral part our quality of life, economy,
and natural heritage in New Hampshire.



There's something for nearly everyone when it comes to our lakes & ponds in summer!





















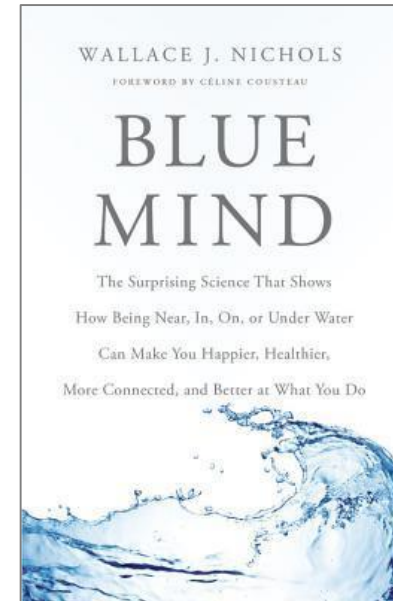
Clean & healthy lakes are good for us!



Being near, in, on, or under the water can make you happier,
healthier, more connected and better at what you do.



The Science of Blue Mind



Being near, in, on, or under water can also heal aspects of the mind.



your brain on a boat

Research shows how being on the water can make you happier and healthier

Americans are taking less vacation and nearly 80% report feeling stressed in their day.¹ We need to restore our minds more than ever. *Blue Mind* author Dr. Wallace J. Nichols finds that being on, in, or near the water brings vast cognitive, psychological and social health benefits. One of the best ways to achieve “Blue Mind” is on a boat.



Red Mind

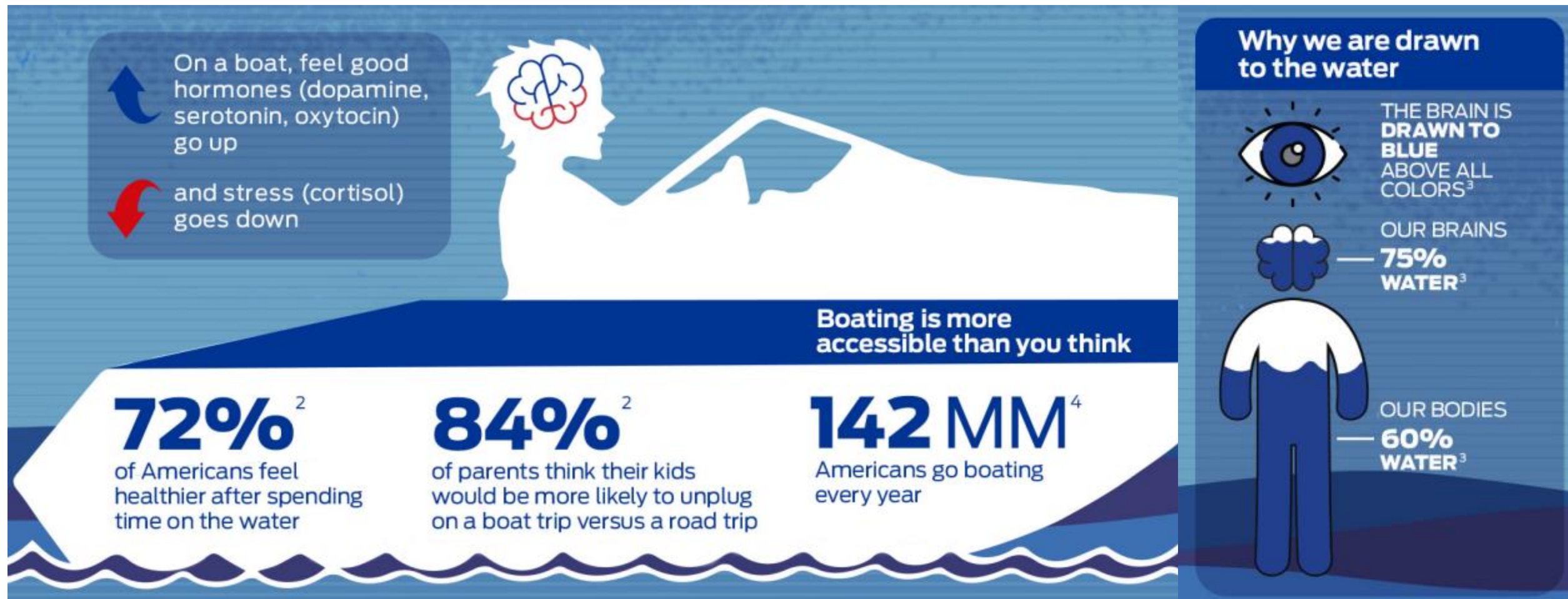
Stress, anxiety and fear cause high stress hormones.



Blue Mind

Calm, peacefulness, unity and happiness associated with water.

Blue Mind is the antidote to Red Mind





Boating resets our brains

- 💧 Water relaxes, restores & helps us reconnect



Boating induces creativity

- 💧 Feel-good hormones reduce stress & water-related play sparks creativity



Boating is awe-inspiring

- 💧 Awe & wonder change our bodies and minds for the better



Boating appeals to our senses

- 💧 Sight & sound of water increases brain & blood flow



New Hampshire is home to some of the cleanest & healthiest lakes in the country.



But, the health and our enjoyment of NH's lakes is threatened by:



invasive species



polluted groundwater
and runoff water



changing weather
patterns



What's the problem with invasive species?





What are aquatic invasive species?

- Plants & animals not natural (not native) to NH's waters
- They came from somewhere else (Europe & Asia)
- They cause environmental or economic harm
- They outcompete our native species for food & habitat

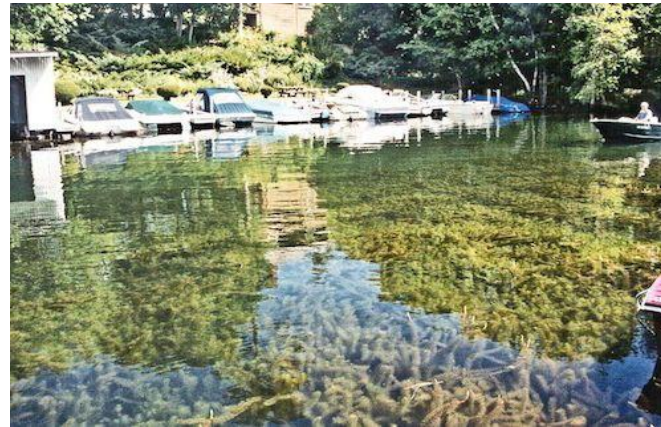




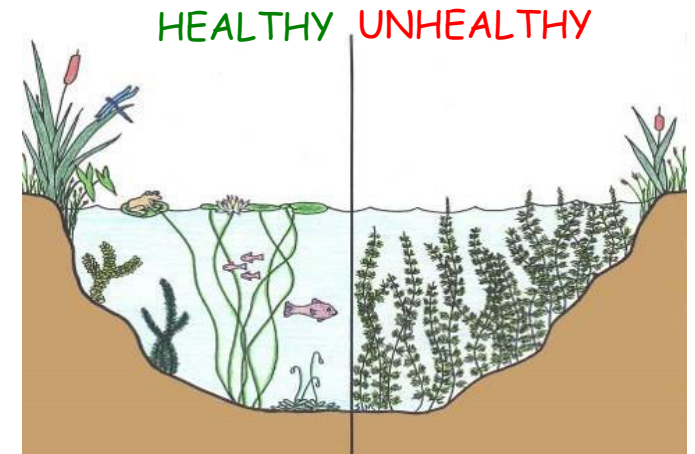
Aquatic invasive species infestations:



Make recreation dangerous
& unpleasant



Reduce shoreline
property values

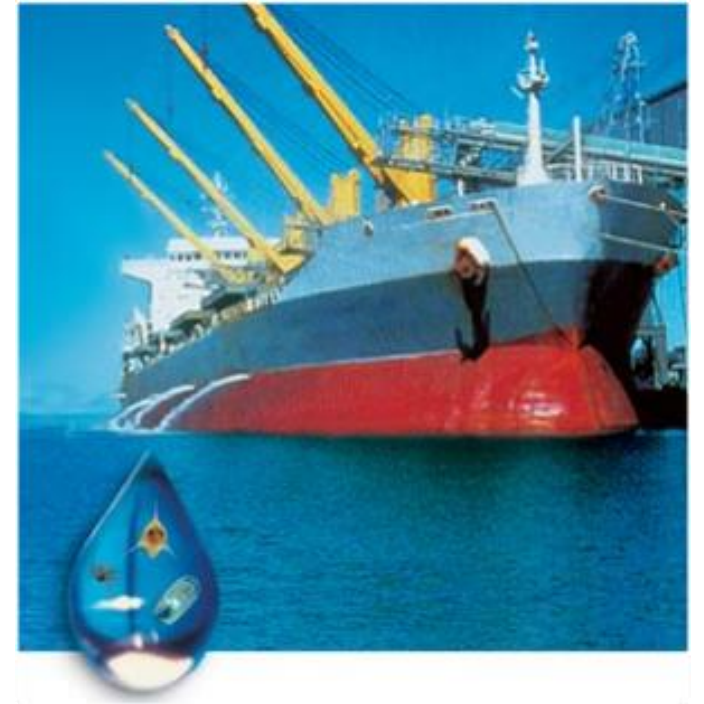


Disrupt the ecologic
balance



How did they get here?

- Many hitchhiked their way the US in the ballast water used to weigh down ships crossing the ocean
- Ballast water (and everything in it) is dumped out into the local waterbody when the ship reaches its destination





How do invasive species spread?



Some spread by hitching a ride in the gut or on the feathers or fur of birds and animals.



Some are spread by people dumping aquariums or leftover bait into lakes and streams.



MOST are spread from waterbody to waterbody on boats, trailers, and gear that have not been properly CLEANED, DRAINED, & DRIED.

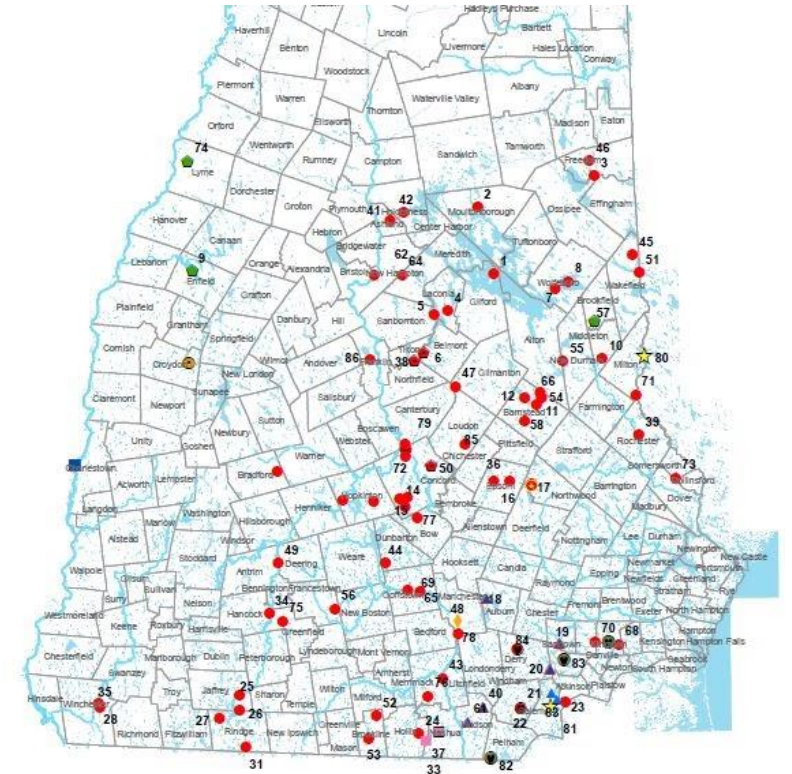




Aquatic invasive species infestations:

90 infested waterbodies

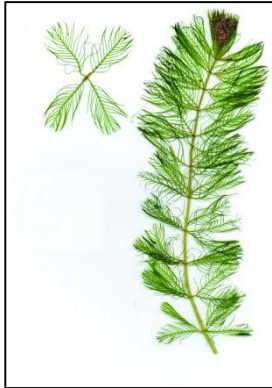
- 11 Rivers
- 79 Lakes and Ponds
- Some waterbodies have more than one species, a few have as many as 6 different invasives!



Aquatic invasive plants of concern in NH:



Variable Milfoil
(from Southern & Midwestern US)



Eurasian Milfoil
(from Europe & Asia)



Fanwort
(from Southern US & Latin America)



Water Chestnut
(from Europe & Asia)



Curly Leaf Pondweed
(from Asia, Africa, Middle East, Australia, Europe)



Hydrilla
(from Asia, Africa, Middle East, Australia, Europe)



Aquatic invasive animals of concern in NH:



Asian Clam
(from Asia)



Chinese Mystery Snail
(from Asia)



Quagga Mussel
(from Ukraine)



Spiny waterflea
(multiple on fishing line –
from Europe and Asia)



Zebra Mussel
(from Caspian Sea in Europe)



Aquatic invasive species infestations...



...can make for a bad day at the lake!



Aquatic invasive species:



(Photo courtesy of Squam Lakes Association)

Are labor-intensive, expensive, and difficult to control, and nearly impossible to get rid of once well-established in a waterbody.



Thanks to education, prevention, and management activities, the rate of invasive plant spread has slowed over the years but...



...the rate of invasive animal spread is on the rise.



The health and our enjoyment of NH's lakes is also threatened by:



invasive species



polluted groundwater
and runoff water



changing weather
patterns



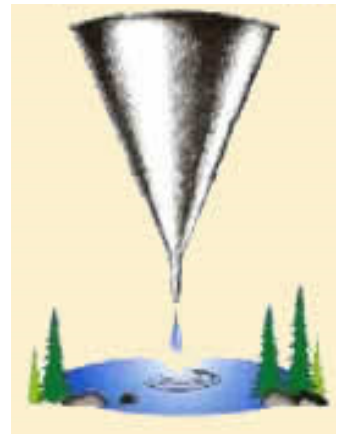
What's the problem with polluted runoff water?





Watershed Runoff

A **watershed** is an area of land that drains ('sheds') its water (rain, snowmelt, groundwater) from its highest points (hill tops) to its lowest points (river, lake, or ocean).



A watershed is a funnel!



Polluted Runoff Water



As naturally vegetated land is replaced with rooftops, roads, and driveways, rain and snow melt water travel across the landscape, picking up pollutants on the way to streams, rivers, lakes and, ultimately, the ocean.



Common Pollutants in Runoff Water



Bacteria: from pet waste on ground, failing septic systems, or wildlife

- Can make swimmers and pets sick and cause beach closures

Sediment: eroded from unstable stream banks and exposed soils

- Reduces water clarity, clogs fish gills, smothers habitat, contributes to mucky bottom which favors invasive plants, carries nutrients and metals

Nutrients: nitrogen & phosphorus from organic waste, fertilizers, and eroding soil

- Causes algal blooms and toxic cyanobacteria blooms
- Causes depleted oxygen when algae are decomposed (fish kills)



Common Pollutants in Runoff Water



Toxic Contaminants: motor oil, gasoline, pesticides, herbicides

- causes problems for aquatic organisms

Chlorides: from road salts and water softeners

- stresses aquatic organisms
- may make lake more susceptible to invasive species

Thermal Pollution: increased temperature

- accelerates algal and plant growth
- causes problems for aquatic organisms



Polluted Runoff Water



Nearly 90% of the water quality problems in our lakes can be attributed to polluted runoff water.





Issues that threaten our lakes are made worse by:



invasive species



polluted groundwater
and runoff water



changing weather
patterns



The most irrational thing we can do is pretend
our lakes will take care of themselves.



NH LAKES Story:



Founded in 1992, we're a nonprofit organization that is the voice for all of New Hampshire's 1,000 lakes.



Our mission is to keep NH's lakes, clean and healthy, now and in the future.

We work with partners, promote clean water policies and responsible use and inspire the public to care for our lakes.





We work with local groups, state legislators, and individuals to develop programs and policies and to inspire action to keep our lakes clean and healthy.





Our Programs:



Advocacy



Conservation



Outreach



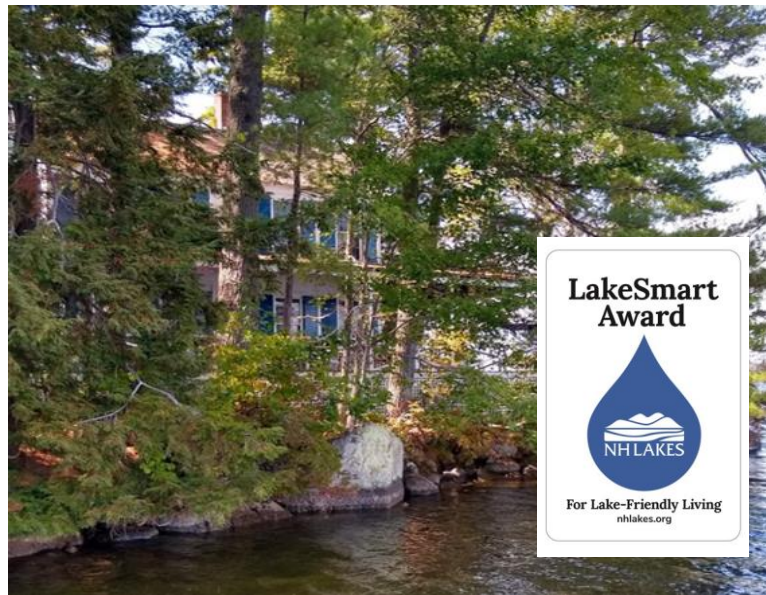
Just like lakes help keep us healthy,
we need to help keep them healthy, too!



Top Ten Ways You Can Help Keep New Hampshire's Lakes Clean & Healthy!



10. Keep lake shorelines, stream banks, and river banks vegetated!



Plants along waterways help keep the water healthy by absorbing and cleaning up polluted runoff water.

9. Avoid applying fertilizer or compost.



Fertilizer washed into the lake accelerates plant, algae, and cyanobacteria growth. If you feel the need to fertilize, get a soil test, and consider using phosphorus-free fertilizer.



8. Store and dispose of yard waste away from waterbodies.



Leaves, grass clippings, compost, ashes, and sawdust washed into waterways brings in nutrients that encourage plant, algae, and toxic algae growth, and contribute to “muck.”

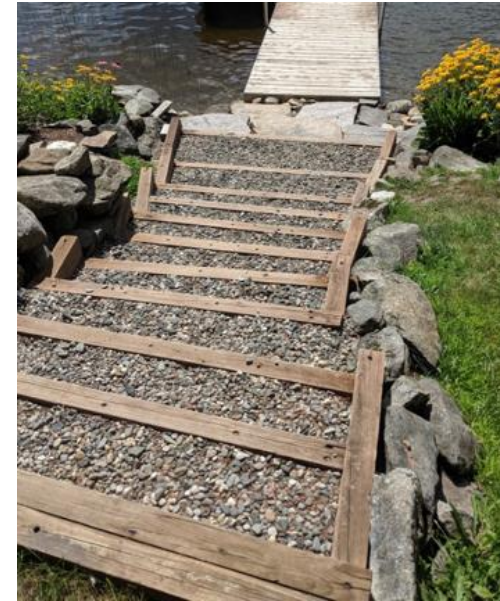


7. Wash boats, cars, and pets away from waterbodies.



Soaps and shampoos add nutrients and other pollutants to the lake. Even camp soaps and biodegradable soaps may contain pollutants.

6. Stabilize footpaths to the water.



This prevents soil from being washed into the water and provides for safe access.



5. Inspect your septic system tank area and leach field for signs of malfunction—soggy areas, bright green grassy areas, and odors.



If you have any concerns, or if it has ‘been a while’ since the system has been inspected/pumped, reach out to a certified professional. Malfunctioning systems can pollute lakes with nutrients and bacteria.



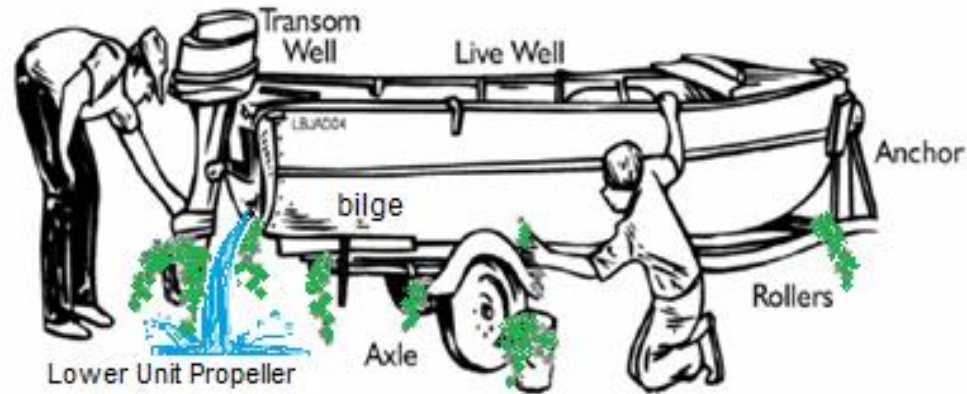
4. Keep shorelines clean by not feeding waterfowl.



Waterfowl waste contains nutrients that accelerate the growth of a plants, algae, and cyanobacteria in the lake.



3. Clean, drain, and dry, your boats, trailers, and gear between waterbodies.



This will help prevent the spread of invasive species from waterbody to waterbody.



2. Join your local lake or watershed protection group!



If your favorite lake does not have a local group protecting it, contact NH LAKES and we can help you form one!



1. Support NH LAKES!



NH LAKES is the only publicly-supported nonprofit organization working to keep all of New Hampshire's lakes clean and healthy.



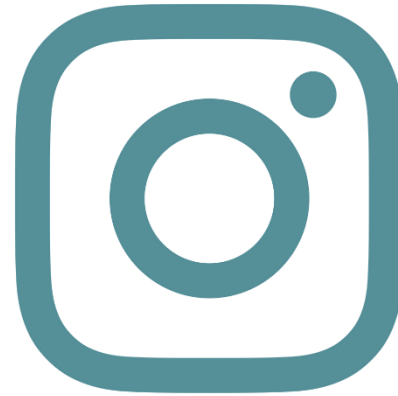
Find out how you can do your part to help keep New Hampshire's lakes clean and healthy!



www.nhlakes.org



Follow us on social media!



There are many ways to stay connected with NH LAKES!



Together, we can keep our lakes healthy,
and they will keep us healthy, too!



Thanks for jumping in and doing your part!

