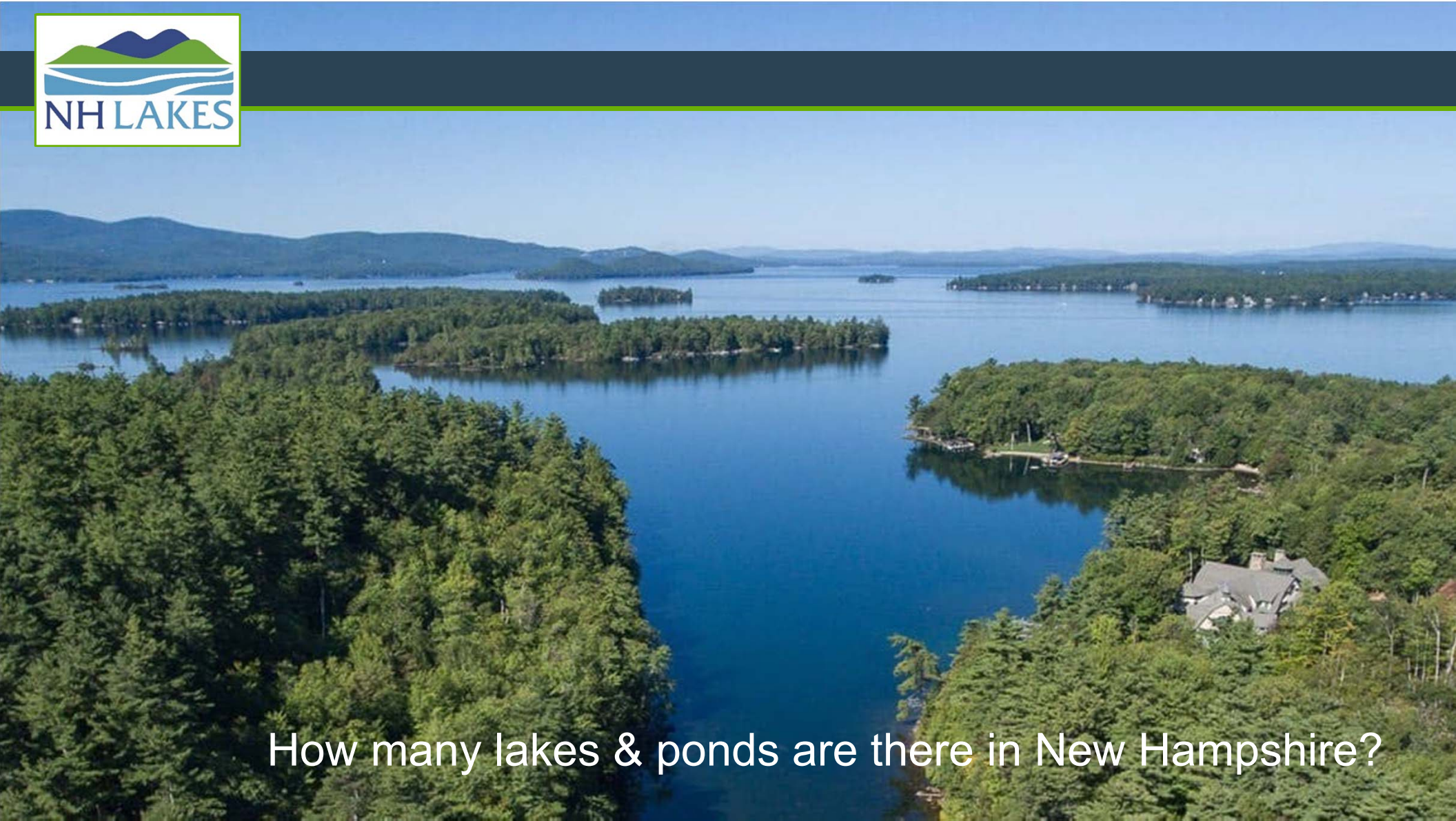


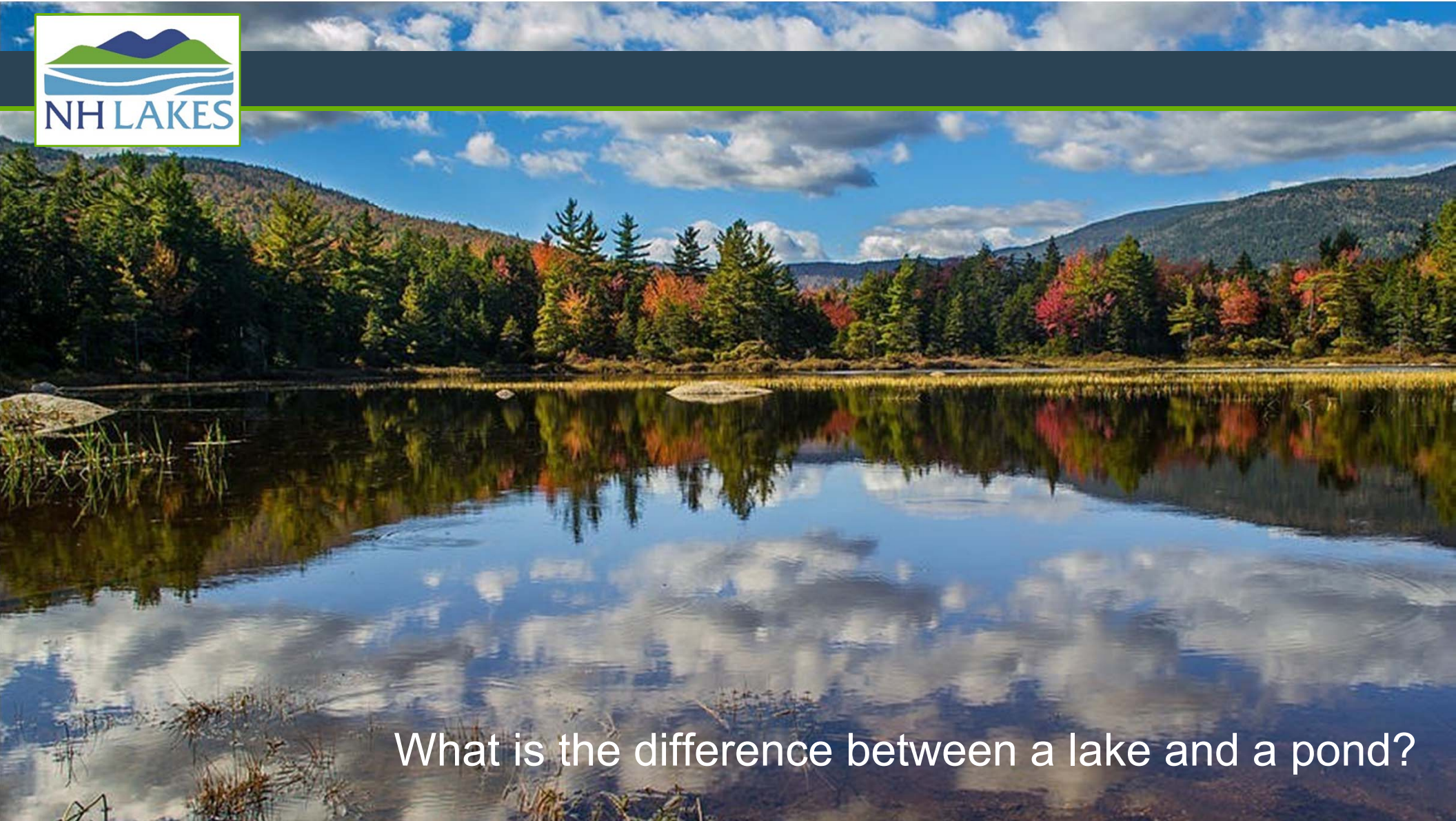


Joining Forces to Restore and Preserve the Health of Kingston and Newton's Lakes and Ponds!

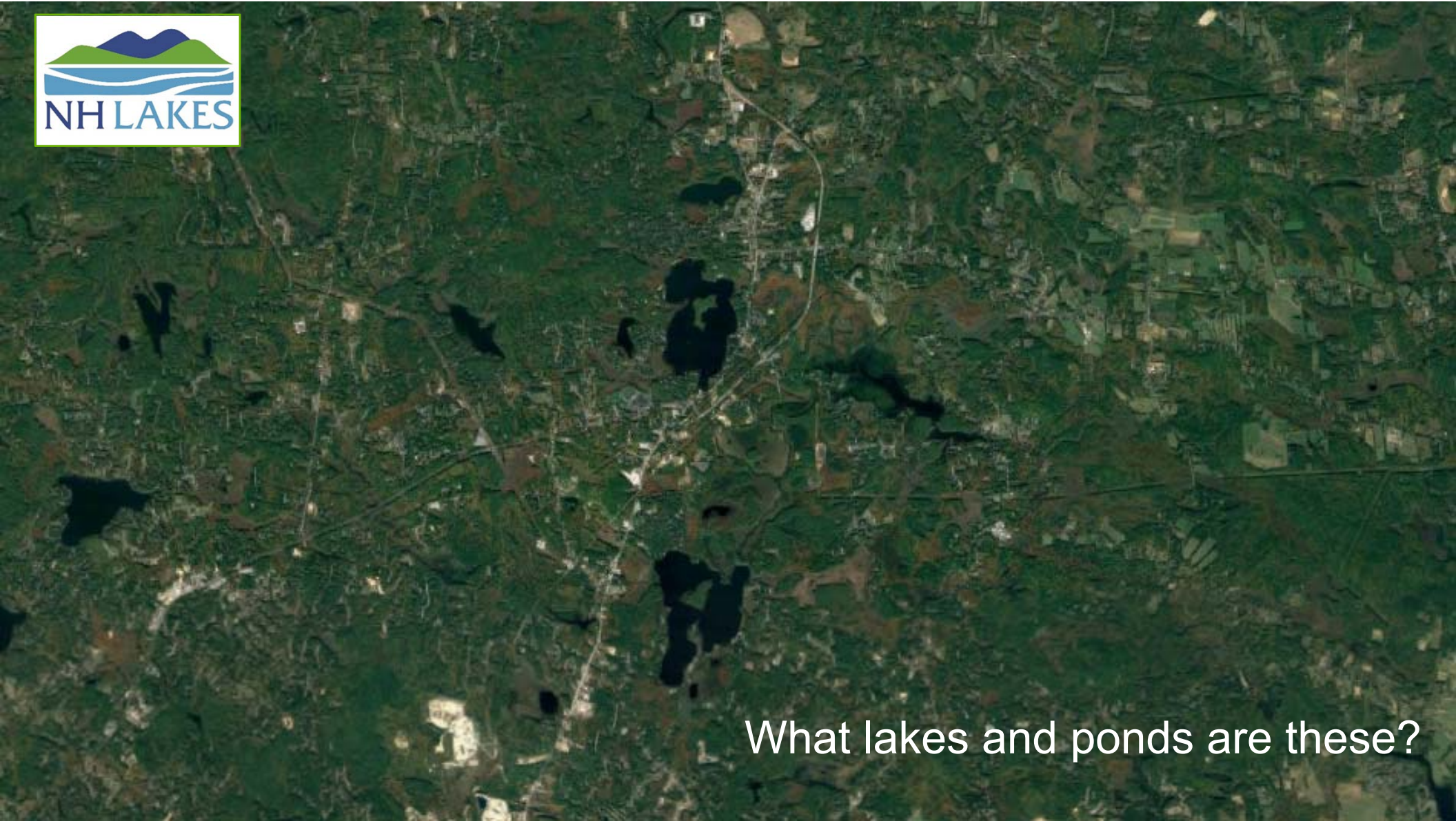
Presented by Andrea LaMoreaux
NH LAKES President
June 10, 2022



How many lakes & ponds are there in New Hampshire?



What is the difference between a lake and a pond?



What lakes and ponds are these?



Halfmoon Pond

Greenwood Pond

Great Pond

Long Pond

Powwow Pond

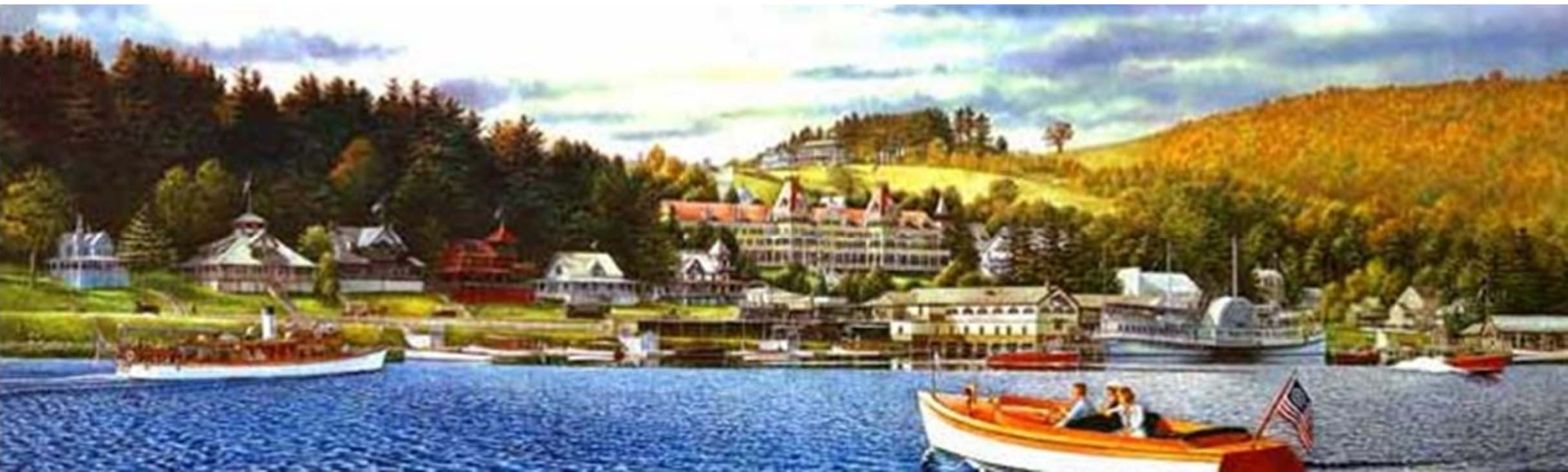
Angle Pond

Cedar Swamp Pond

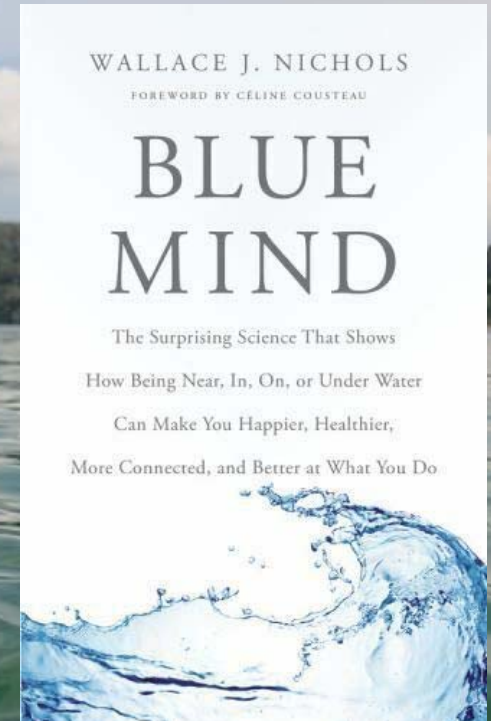
Bartlett Mill Pond

Country Pond

Bayberry Pond



Lakes & ponds are an integral part of New Hampshire's quality of life, economy, and heritage.



Clean & healthy lakes are good for us, the economy,
and the natural environment!

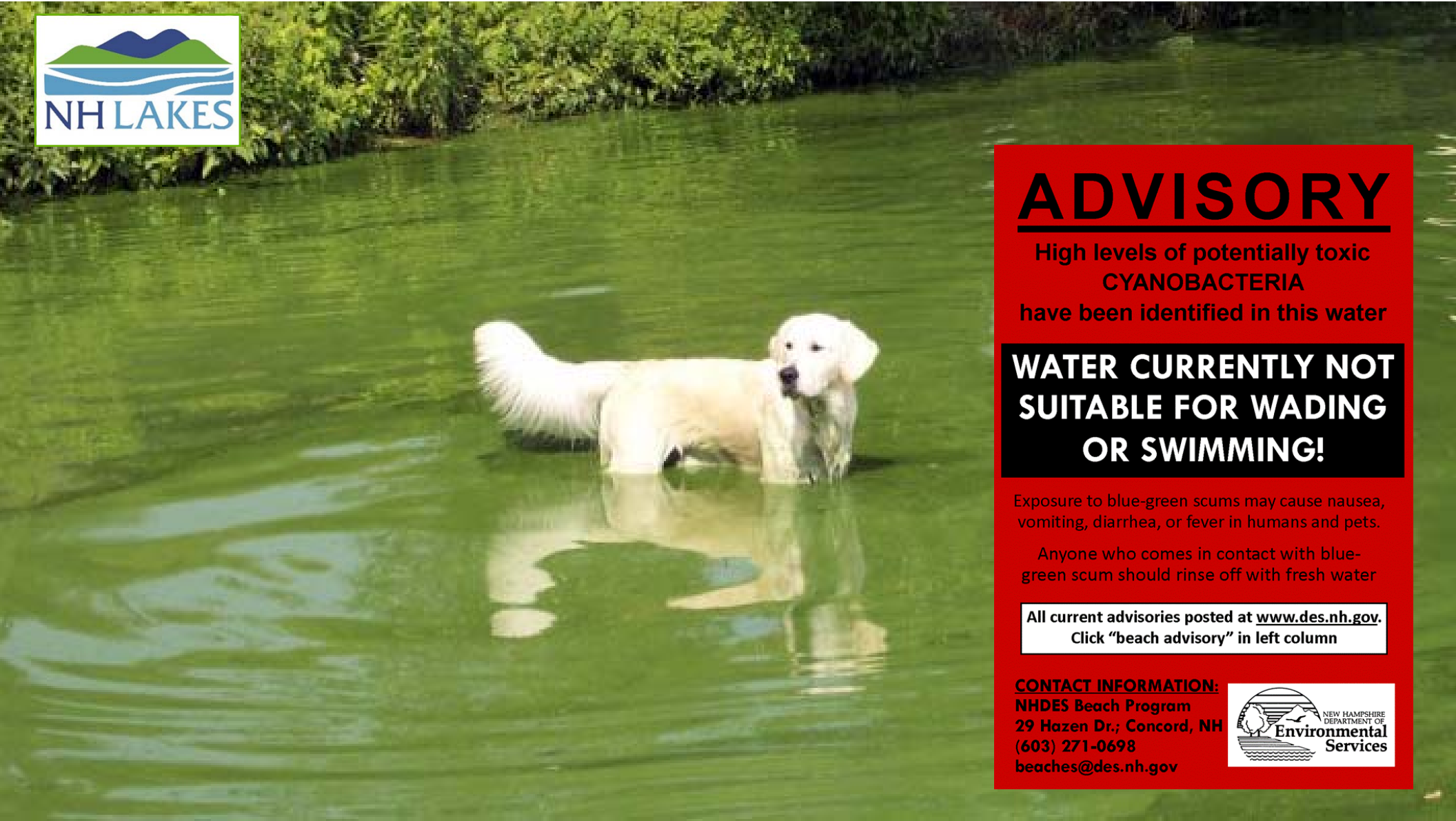


New Hampshire is home to some of the cleanest & healthiest lakes in the country.



But, our lakes are threatened.





ADVISORY

High levels of potentially toxic
CYANOBACTERIA
have been identified in this water

**WATER CURRENTLY NOT
SUITABLE FOR WADING
OR SWIMMING!**


Exposure to blue-green scums may cause nausea, vomiting, diarrhea, or fever in humans and pets.

Anyone who comes in contact with blue-green scum should rinse off with fresh water

All current advisories posted at www.des.nh.gov.
Click "beach advisory" in left column

CONTACT INFORMATION:
NHDES Beach Program
29 Hazen Dr.; Concord, NH
(603) 271-0698
beaches@des.nh.gov



A person with white hair, wearing a red shirt and dark pants, is sitting in a blue kayak on a calm lake. The scene is set during sunset or sunrise, with a golden glow on the water and a cloudy sky. The person is looking towards the right side of the frame. The water reflects the light from the sky and the person in the kayak.

One of the most irrational things we can do is pretend our lakes will take care of themselves.



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



~~To keep NH's lakes clean and healthy, now and in the future.~~
To restore and preserve the health of New Hampshire's lakes.





**Ann
O'Connor**
of Lake Kanasatka,
Moultonborough



Protecting the Lake
Through Lake-Friendly Living





NH LAKES is a rapidly growing community of people who recognize we all must do more to restore and preserve our lakes!



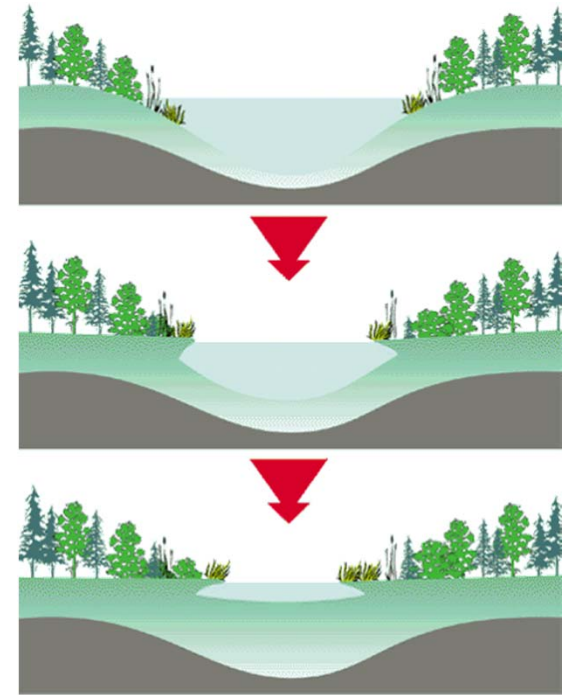
What are the trends in the health of
New Hampshire's lakes?



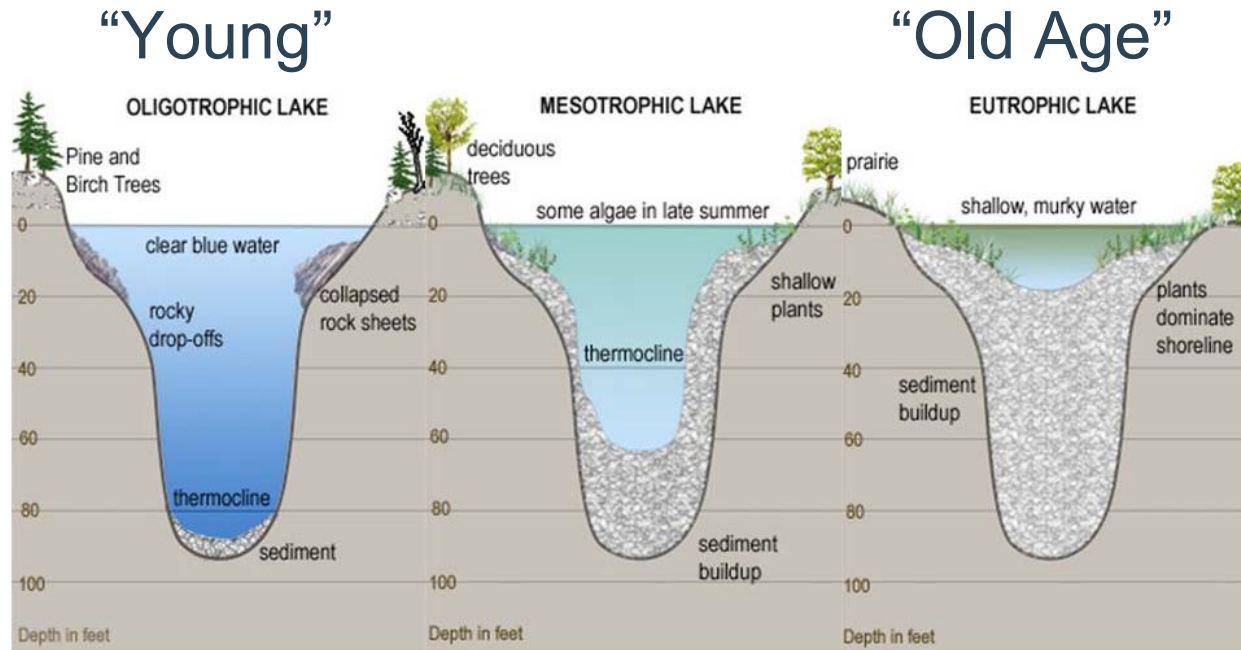
Did you know?!

Lakes, like people, age over time!

They naturally fill in with decayed plants, algae, sediment.



But, human activities speed up the lake-aging process (and bring in pollutants, too).

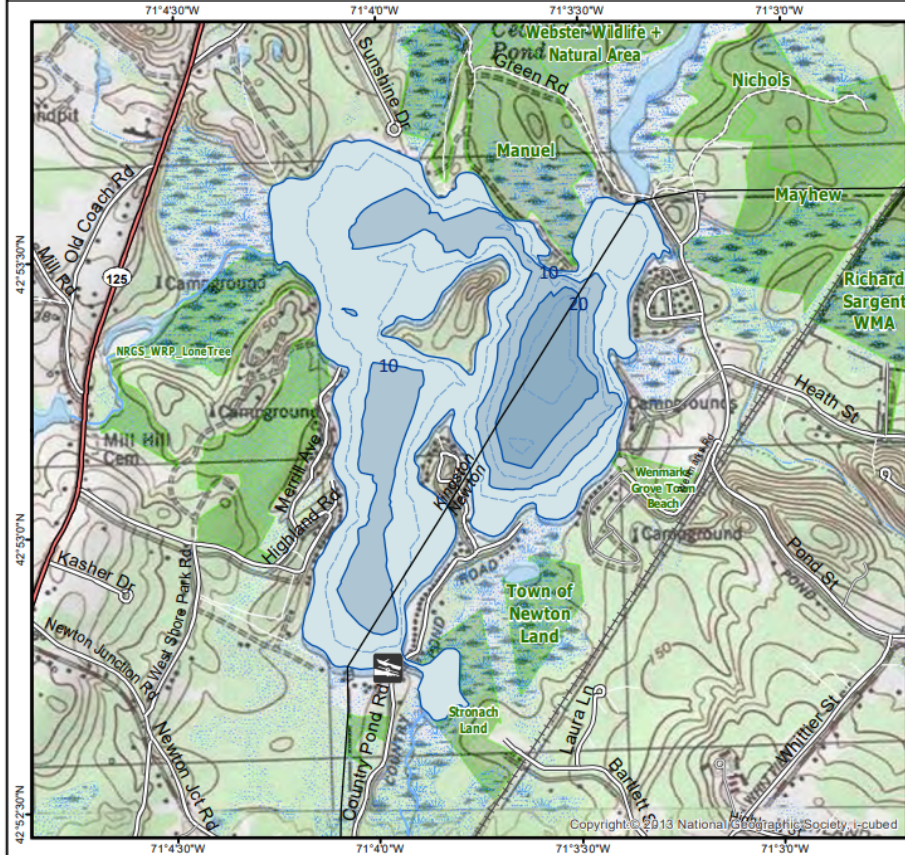


Country Pond: Mesotrophic
Great Pond: Mesotrophic
Greenwood Pond: Mesotrophic

Long Pond: Mesotrophic
Powwow Pond: Eutrophic



For fishing regulation information, please refer to the NHFGD Freshwater Fishing Digest. Contact: NHFGD Inland Fisheries Division, Concord
E-mail: fish@wildlife.nh.gov Phone: 603-271-2501



**COUNTRY POND
Kingston, Newton**

FISHERY: Warmwater ACRES: 306

TROPIC LEVEL: MESO

AVG. DEPTH: 16 MAX. DEPTH: 25

SPECIES: SMB, LMB, ECP, BBH, BC, BG, WP, AE, CSF, YP

ADDITIONAL INFO:

ACCESS: Town Beach, limited access

Please contact NH Dept of Safety, Marine Patrol for info. on water body/boat/motor restrictions: (603) 293-2037 www.nh.gov/safety

Public Water Access site

- Canoe/cartop
- Shorebank
- Ramp
- Bathymetric contour (feet)

Bathymetry provided by the NH Department of Environmental Services, Watershed Mgt Bureau

Town boundary	Cleared
Primary Route	Forest
Road or Street	Contour
Trail or other	Building
Stream or Shoreline	Source: USGS
Surface Water	Wetland
Conservation or Public land	Restricted Access Conservation

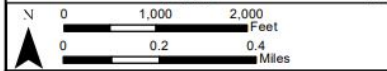
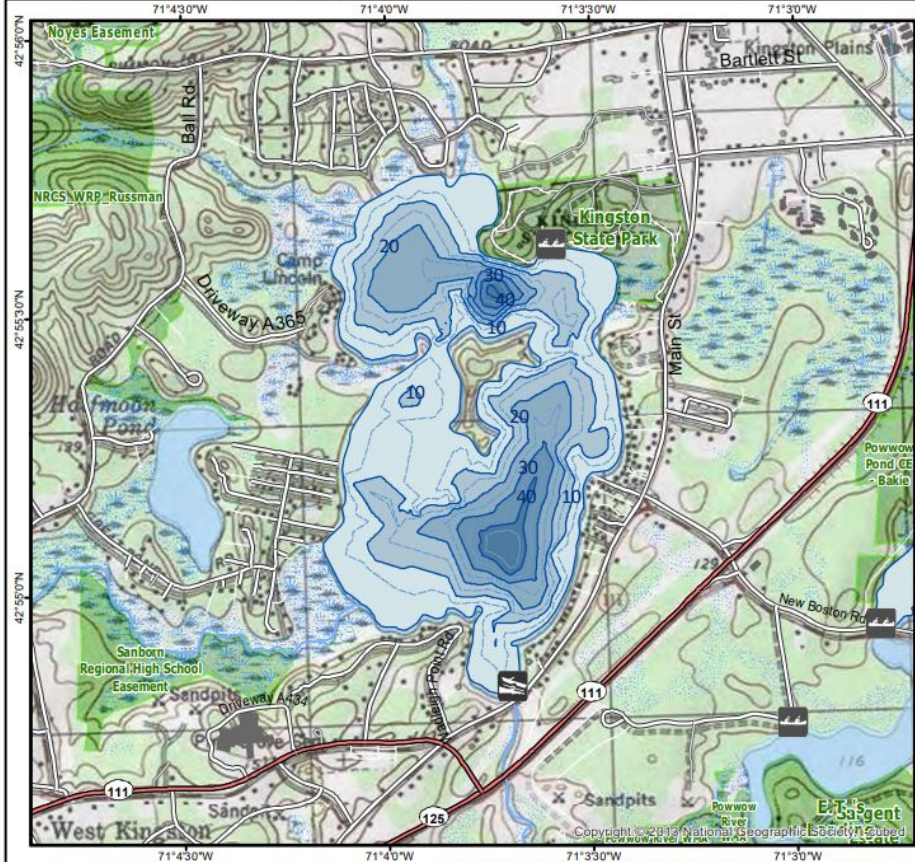
Directions:

Scale: 0 to 2,000 Feet / 0 to 0.4 Miles

Base map data from NH GRANIT at Earth Systems Research Center (UNH) and Open Street Map contributors. UNH, NH Fish & Game and the cooperating agencies make no claim as to the validity or reliability or to any implied uses of these data. NOT INTENDED FOR BOAT NAVIGATION.



For fishing regulation information, please refer to the NHFGD Freshwater Fishing Digest. Contact: NHFGD Inland Fisheries Division, Concord E-mail: fish@wildlife.nh.gov Phone: 603-271-2501



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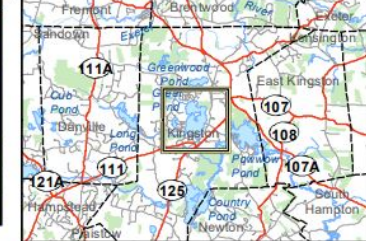
GREAT POND Kingston

FISHERY: Warmwater **ACRES:** 268
TROPHIC LEVEL: MESO
AVG. DEPTH: 21 **MAX. DEPTH:** 50
SPECIES: LMB,ECP,BBH,WP,BC, BG,YP,CSF

ADDITIONAL INFO:
 ACCESS: cartop only at Kingston SP; or town launch on Main St

Please contact NH Dept of Safety, Marine Patrol for info. on water body/boat/motor restrictions: (603) 293-2037 www.nh.gov/safety

- Public Water Access site**
- Canoe/cartop
 - Shorebank
 - Ramp
 - Bathymetric contour (feet)
- Bathymetry provided by the NH Department of Environmental Services, Watershed Mgt Bureau
- Town boundary
 - Primary Route
 - Road or Street
 - Trail or other
 - Stream or Shoreline
 - Surface Water
 - Wetland
 - Conservation or Public land
 - Restricted Access Conservation
 - Cleared Forest
 - Contour
 - Building
 - Source: USGS



Directions:



For fishing regulation information, please refer to the NHFGD Freshwater Fishing Digest. Contact: NHFGD Inland Fisheries Division, Concord E-mail: fish@wildlife.nh.gov Phone: 603-271-2501

GREENWOOD POND Kingston

FISHERY: Warmwater **ACRES:** 50
TROPHIC LEVEL: MESO
AVG. DEPTH: 7 **MAX. DEPTH:** 12
SPECIES: SMB,LMB,ECP,BBH,BC,YP

ADDITIONAL INFO:

ACCESS: Town Access

Please contact NH Dept of Safety, Marine Patrol for info. on water body/boat/motor restrictions: (603) 293-2037 www.nh.gov/safety

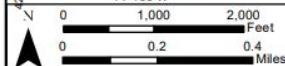
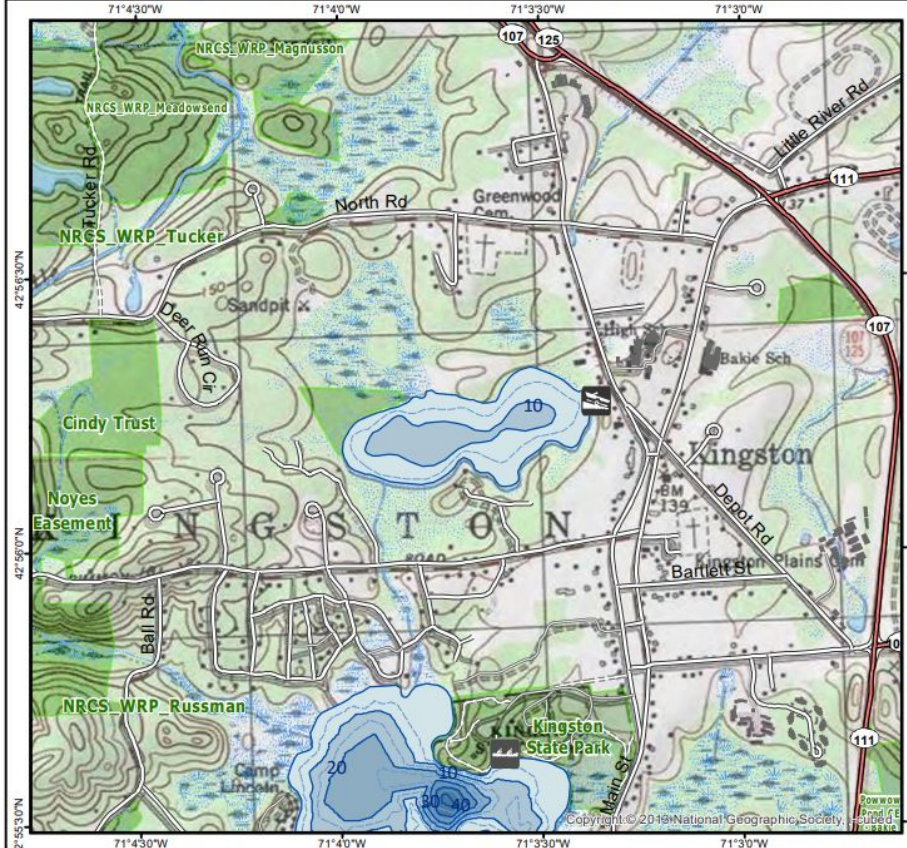
Public Water Access site

- Canoe/cartop
- Shorebank
- Ramp

Bathymetric contour (feet)

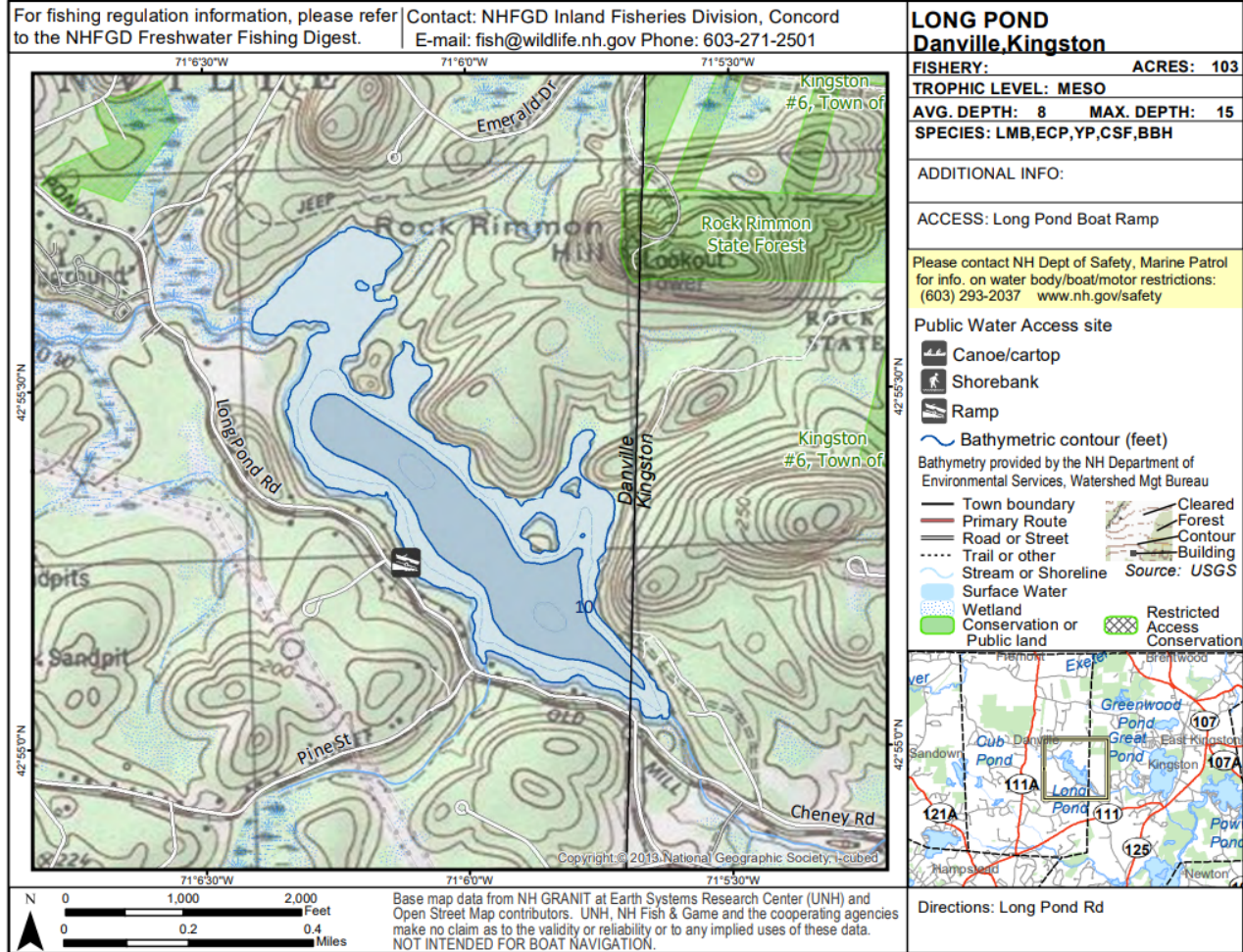
Bathymetry provided by the NH Department of Environmental Services, Watershed Mgt Bureau

- Town boundary
 - Primary Route
 - Road or Street
 - Trail or other
 - Stream or Shoreline
 - Surface Water
 - Wetland
 - Conservation or Public land
 - Restricted Access Conservation
 - Cleared
 - Forest
 - Contour
 - Building
- Source: USGS



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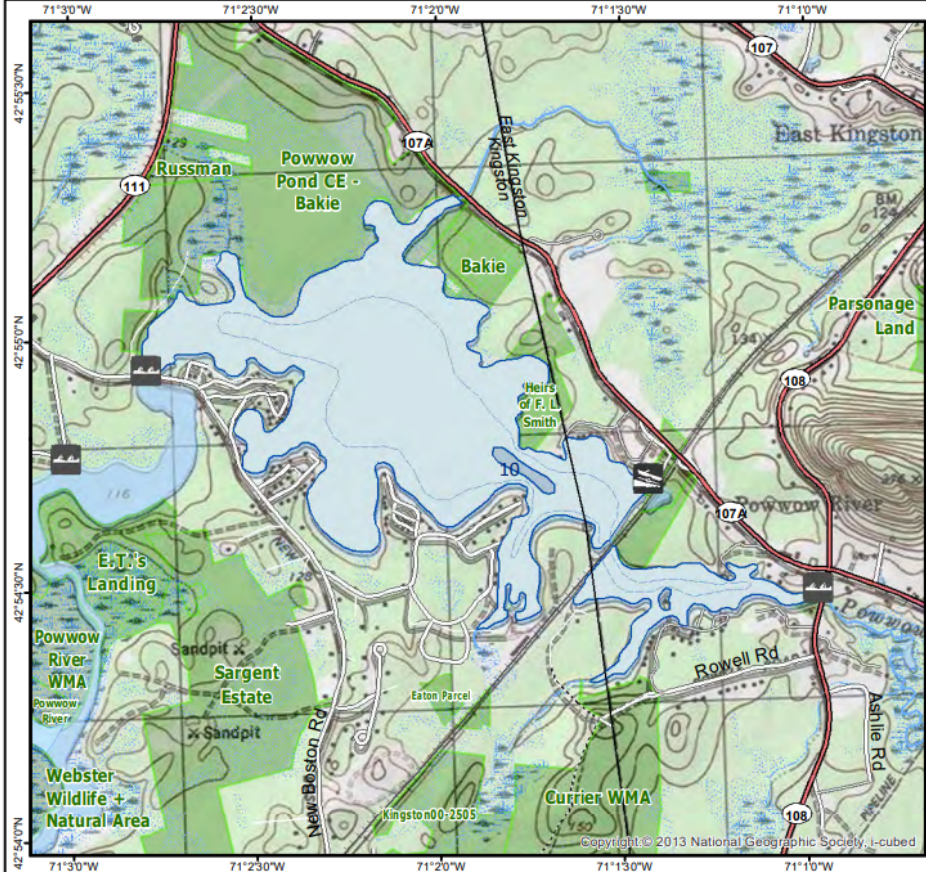
Directions: Church St



<p>LONG POND Danville, Kingston</p>	
FISHERY:	ACRES: 103
TROPIC LEVEL: MESO	
AVG. DEPTH: 8	MAX. DEPTH: 15
SPECIES: LMB,ECP,YP,CSF,BBH	
ADDITIONAL INFO:	
ACCESS: Long Pond Boat Ramp	
<p>Please contact NH Dept of Safety, Marine Patrol for info. on water body/boat/motor restrictions: (603) 293-2037 www.nh.gov/safety</p>	
Public Water Access site	
	Canoe/cartop
	Shorebank
	Ramp
	Bathymetric contour (feet)
<p>Bathymetry provided by the NH Department of Environmental Services, Watershed Mgt Bureau</p>	
	Town boundary
	Primary Route
	Road or Street
	Trail or other
	Stream or Shoreline
	Surface Water
	Wetland
	Conservation or Public land
	Restricted Access Conservation
	Cleared Forest
	Contour
	Building
<p>Source: USGS</p>	



For fishing regulation information, please refer to the NHFGD Freshwater Fishing Digest. Contact: NHFGD Inland Fisheries Division, Concord E-mail: fish@wildlife.nh.gov Phone: 603-271-2501

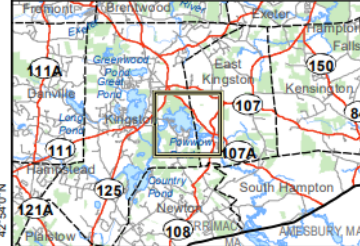


POWWOW POND East Kingston

FISHERY: Warmwater **ACRES:** 348
TROPHIC LEVEL:
AVG. DEPTH: 4 **MAX. DEPTH:** 11
SPECIES: SMB,LMB,ECP,BBH,BC, BG,YP
ADDITIONAL INFO: East Kingston ramp is Residents only
ACCESS: Cartop launch (W) or Trickling Falls Dam (E)

Please contact NH Dept of Safety, Marine Patrol for info. on water body/boat/motor restrictions: (603) 293-2037 www.nh.gov/safety

- Public Water Access site
- Canoe/cartop
 - Shorebank
 - Ramp
 - Bathymetric contour (feet)
- Bathymetry provided by the NH Department of Environmental Services, Watershed Mgt Bureau
- Town boundary
 - Primary Route
 - Road or Street
 - Trail or other
 - Stream or Shoreline
 - Surface Water
 - Wetland
 - Conservation or Public land
 - Cleared Forest
 - Contour
 - Building
 - Restricted Access Conservation
- Source: USGS



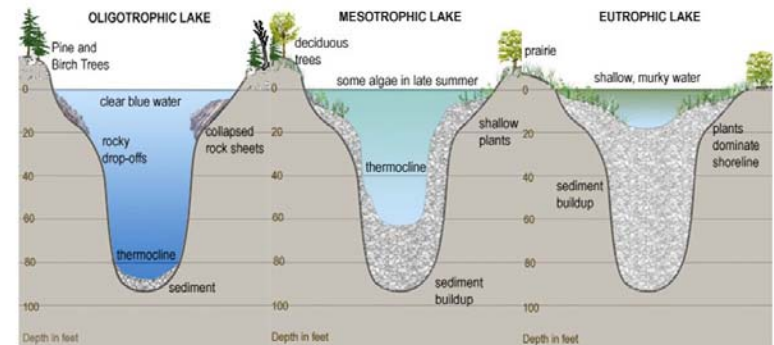
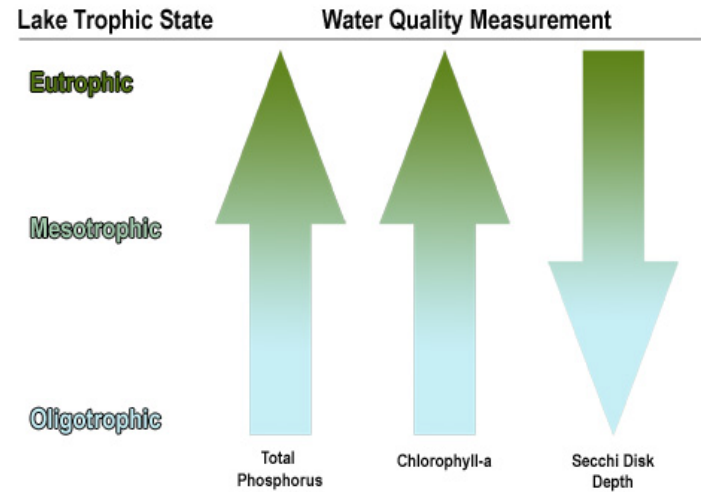
Directions: Rt 125 to New Boston Rd or Rt 108 near int Rt 107A

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Statewide Lake Trends in NH

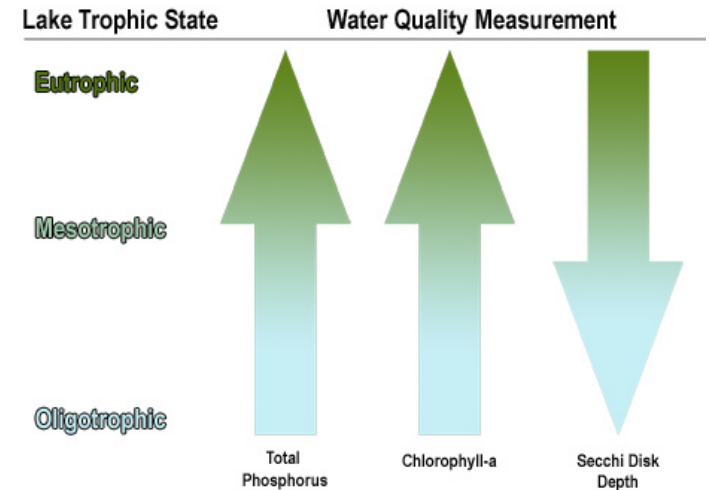
- Chlorophyll: Algae in the water
- Phosphorus: Nutrient for plant & algal growth
- Secchi Disk Depth: measure of lake clarity
- Conductivity: Ions in the water (salt, iron)





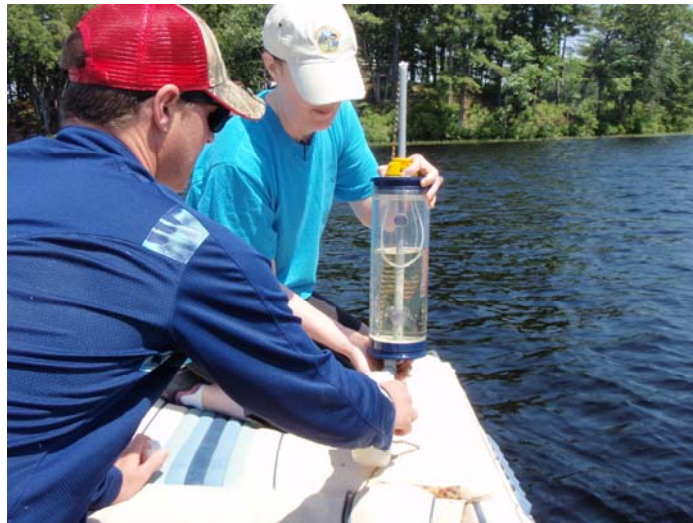
Statewide Lake Trends in NH (1991 - 2018)

- Chlorophyll: no trends
- Phosphorus: significant increase (worsening) in eutrophic waterbodies
- Secchi Disk Depth: significant decrease (worsening) in mesotrophic lakes
- Conductivity: significant increase (worsening) in mesotrophic and eutrophic lakes





How are the lakes & ponds in Kingston & Newton doing?



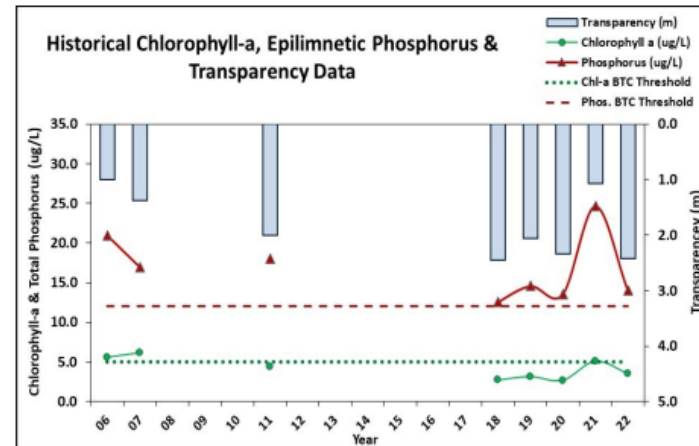
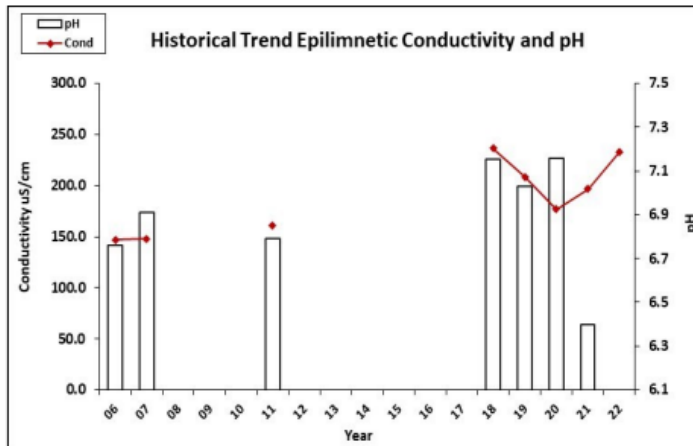
Dedicated volunteers partner with the NH Dept. of Environmental Services to assess the health of lakes and ponds in your community.



Country Pond (VLAP, 2022)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Parameter	Trend
Conductivity	N/A	Chlorophyll-a	N/A
pH (epilimnion)	N/A	Transparency	N/A
		Phosphorus (epilimnion)	N/A



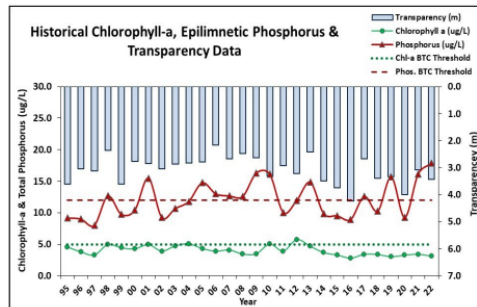
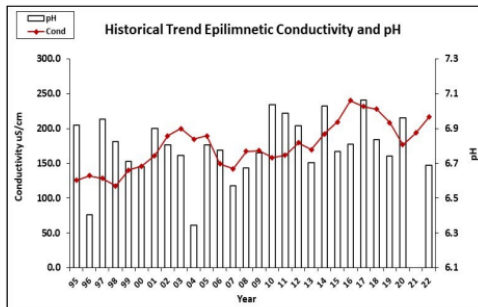


Great Pond (VLAP, 2022)

North Deep Spot

HISTORICAL WATER QUALITY TREND ANALYSIS

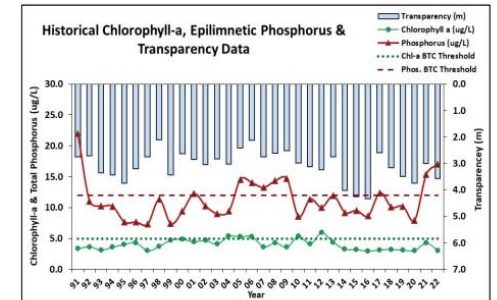
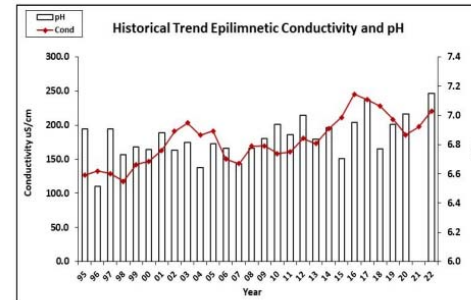
Parameter	Trend	Parameter	Trend
Conductivity	Worsening	Chlorophyll-a	Improving
pH (epilimnion)	Stable	Transparency	Stable
		Phosphorus (epilimnion)	Stable



South Deep Spot

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Parameter	Trend
Conductivity	Worsening	Chlorophyll-a	Stable
pH (epilimnion)	Stable	Transparency	Stable
		Phosphorus (epilimnion)	Stable

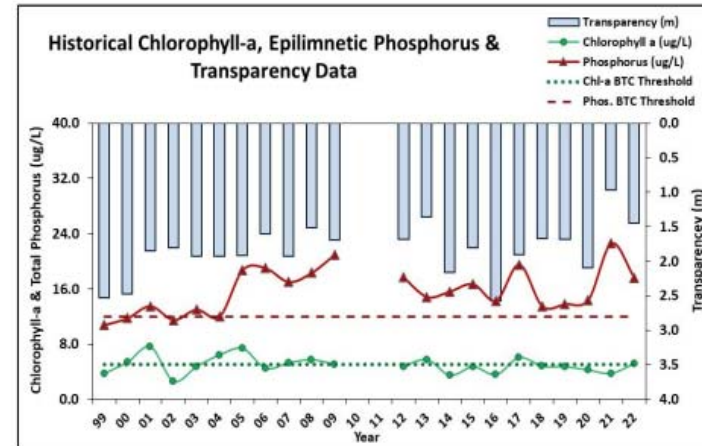
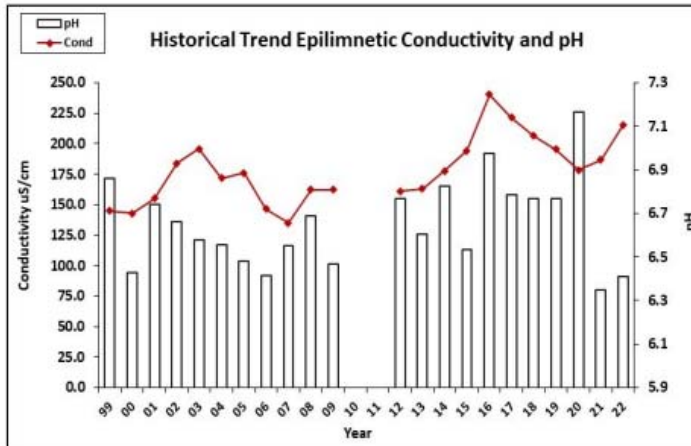




Powwow Pond (VLAP, 2022)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Parameter	Trend
Conductivity	Worsening	Chlorophyll-a	Stable
pH (epilimnion)	Stable	Transparency	Stable
		Phosphorus (epilimnion)	Worsening





Cyanobacteria Bloom History:




ADVISORY
High levels of potentially toxic
CYANOBACTERIA
have been identified in this water

**WATER CURRENTLY NOT
SUITABLE FOR WADING
OR SWIMMING!**

Exposure to blue-green scums may cause nausea,
vomiting, diarrhea, or fever in humans and pets.
Anyone who comes in contact with blue-
green scum should rinse off with fresh water.

All current advisories posted at www.des.nh.gov.
Click "beach advisory" in left column

CONTACT INFORMATION:
NHDES Beach Program
79 Hazen Dr., Concord, NH
(603) 271-0698
beaches@des.nh.gov



Country Pond: 201 advisory days (2004 – 2021)

Great Pond: 200 advisory days (2009 – 2021)

Greenwood Pond: 200 advisory days (2004 – 2022)



What's the problem with invasive species?





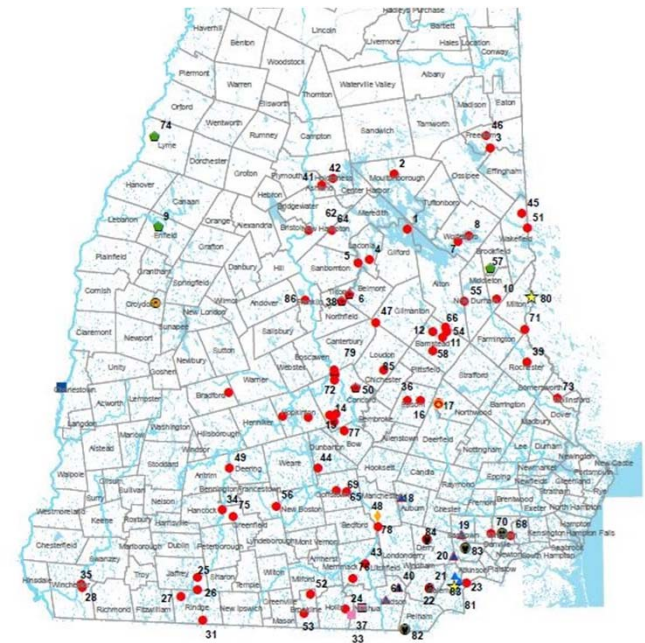
Aquatic invasive species infestations in NH:

91 infested waterbodies

– 11 Rivers

– 80 Lakes and Ponds

– Some waterbodies have more than one species, a few have as many as 6 different invasives!





Exotic Species Infestations:

Country Pond: European naiad

- Management plan developed

Great Pond: Asian Clam, Chinese mystery snail

- No management recommendation

Greenwood Pond: Chinese mystery snail

- No management recommendation

Long Pond: Variable milfoil, fanwort

- Management: herbicide treatment, suction harvesting

Powwow Pond: Variable milfoil, European naiad

- Management: herbicide treatment and hand removal



Variable Milfoil



European naiad



Fanwort



Asian Clam



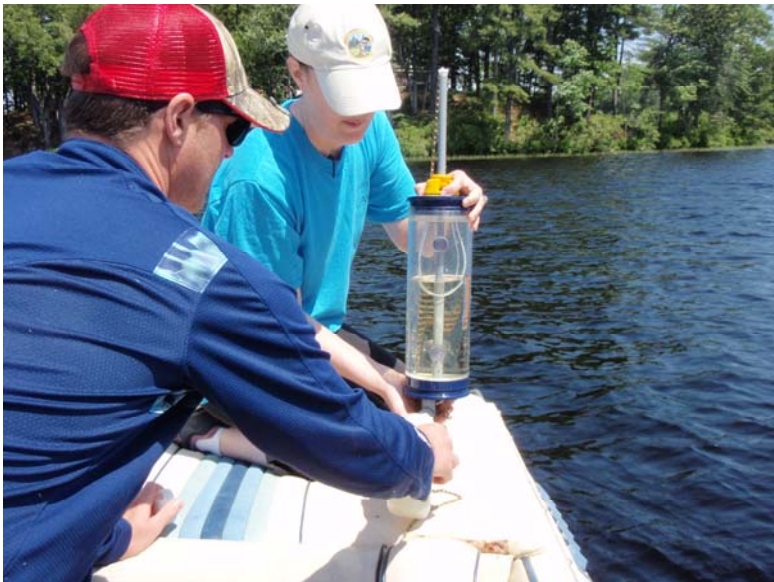
Chinese Mystery Snail



Let's join forces to help restore & preserve the health of all the lakes and ponds in your community!



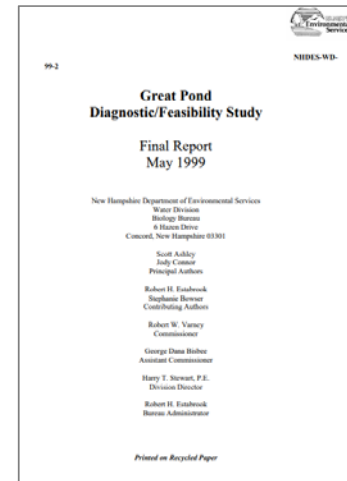
Ways to restore & preserve the health of your lakes & ponds!



Continue to support and participate in the important work that is already being done!



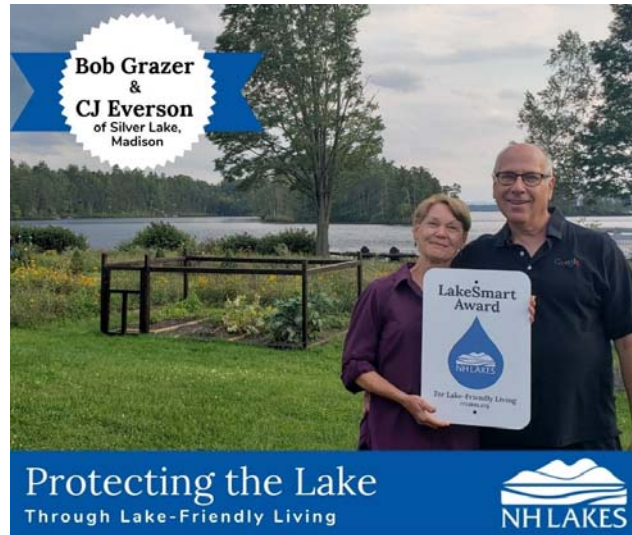
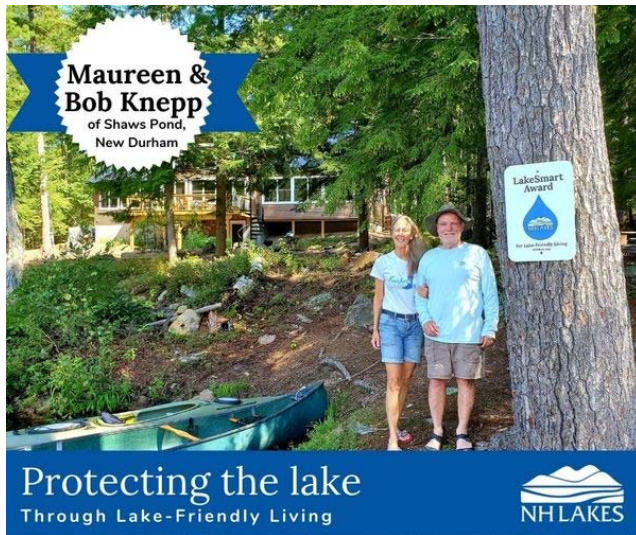
If a Watershed Management Plan has been developed, follow it!



If there isn't a plan or it's outdated, work with DES to develop or update a plan!

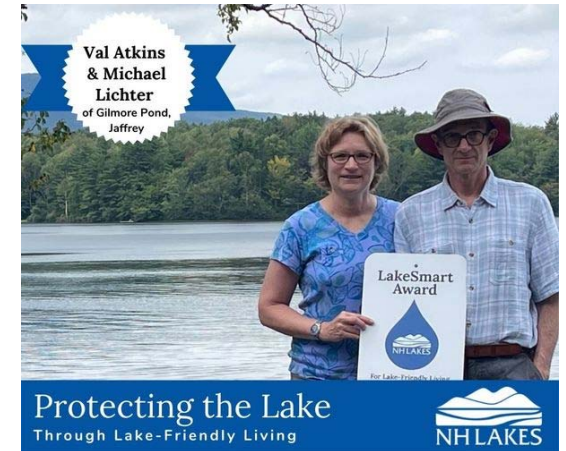


Bring the LakeSmart Program to your property!





LakeSmart is an education, evaluation, & recognition program that helps property owners live and recreate in a lake-friendly way.



It is free, voluntary, and non-regulatory.
No one will get “in trouble” by participating!



Driveway & Parking Areas



Driveway and parking areas are minimized.
Water is diverted into stable areas where it soaks into the ground.
Winter de-icing products are minimized and swept up.



Structures & Onsite Wastewater Treatment Systems



Wastewater treatment system is regularly maintained.

Phosphate-free cleaning products & salt-free water softeners are used.

Water runoff from roof soaks into the ground.



Yard, Recreation Areas, & Footpaths



Lawn area is minimized. Fertilizers, pesticides, & herbicides not used.
Size & number of footpaths are minimized. They are stable & curved.
Areas for socializing & recreation are identified & minimized.



Shoreline & Water Access



Healthy and diverse area of vegetation along the entire shoreline.

Man-made beaches are perched.

Boat storage areas are defined and limited.



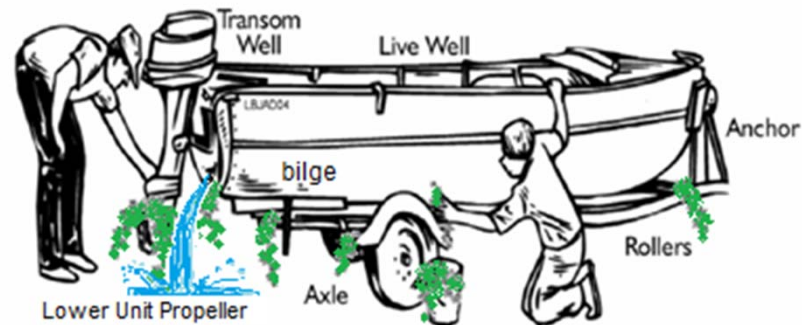
Shoreline & Water Access (in the water, too!)



The shallow water area is left natural.
Ducks, geese, and wildlife are not fed.
During the winter, bubblers only open small areas of water.



Shoreline & Water Access (in the water, too!)



Boating habits minimize wave disturbance to shoreline & lake bottom.
Aquatic invasive spread prevention actions are taken.
Lead-free fishing tackle is used.



Deliver the LakeSmart Program to Your Community!



NH LAKES will train & support your volunteer team!



One of the most irrational things we can do is pretend our lakes, including the lakes in your community, will take care of themselves.



Our Vision:

A New Hampshire where all our lakes, including the lakes in Kingston and Newton, are clean and healthy and caring for them is a way of life.