Protecting the Health of Our Lakes

LAKE WINNIPESAUKEE ASSOCIATION

Keep Winni Blue

The Lakes We Love

Clear, beautiful water, sandy beaches,
a gathering place for family and friends,
boating and fishing adventures,
an investment of money and time.

The Value of Winnipesaukee

Nelson A. Rockefeller Center for Public Policy at Dartmouth – estimates the value of Winnipesaukee at $17B

	Revenues
Property	
Property Assessments	16,457,417,397
Town Tax Revenue	216,502,454
Business	
Tourism	294,131,000
Boating	107,625,000
Fishing	1,641,944
Summer Camps	42,704,856
Water Supply	
Laconia Water Supply	1,532,410
Lakeport Dam	42,209,472

Our lakes are under threat

the risks of doing nothing

Economic Impacts

- Loss of recreation revenues
- Decline in property values
- Increased cost to address impairments
- Loss of opportunity revenues
- Public Health Risks and costs

Our lakes are under threat

the risks of doing nothing

Ecological Impacts

- Water clarity decline
- Algal and cyanobacteria blooms making it unsafe for people and pets
- Milfoil
- Loss of wildlife and habitat
- Loss of diversity of fisheries

Phosphorus is the overall driver of ecosystem health.

Lake Champlain: A case study

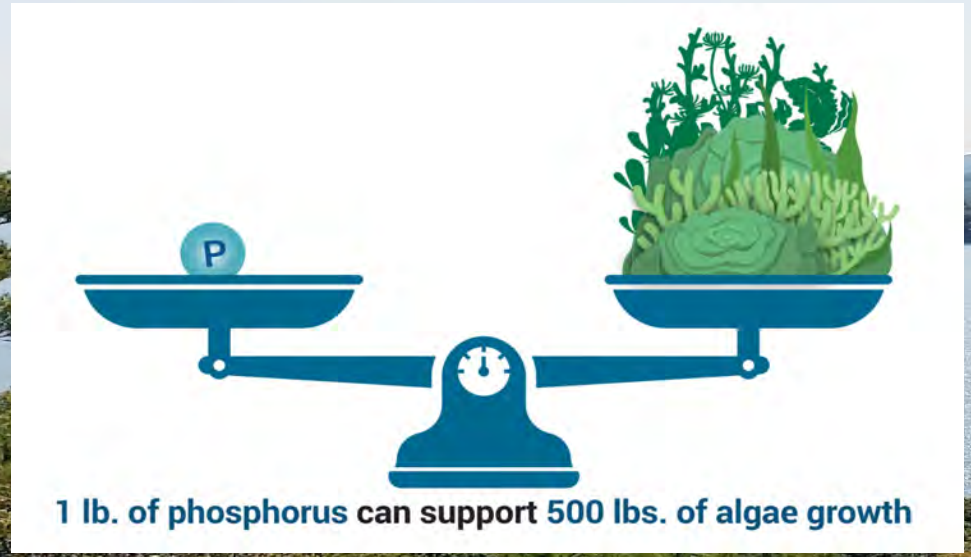
- Property values have declined by over 15%
- This = $150,000 for a $1M home
- Swimming and boating in many summers is no longer safe due to algae blooms
- **Cleaning up Lake Champlain is now costing Vermont $970M because the excessive nutrient loading was not addressed sooner**

Winnipesaukee: A case study

Phosphorus loading has increased 300% over natural background levels.

Resulting in an increase in…

- Cyanobacteria
- Filamentous Algae
- Variable Milfoil



It's the LOAD that's important!

Lake Waukewan/Winona Watershed

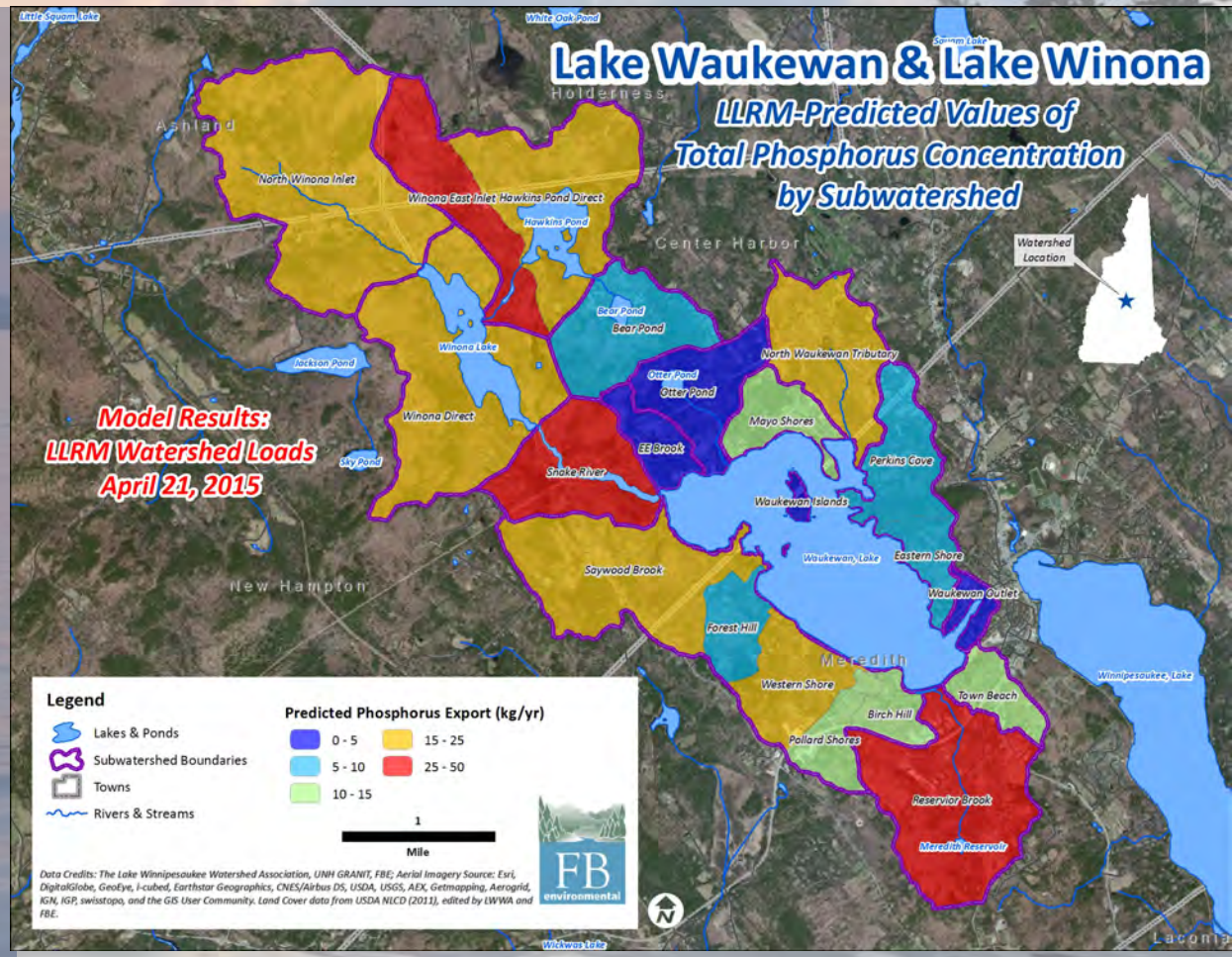
Watershed Size: 8,090 acres
Lake Waukewan – 928 acres

Watershed/Lake Area: 8.7

- 13% Developed
- 84% Forested

Nutrient Loading – 677 lbs/yr total

- **Watershed Runoff – 475 lbs/yr (70%)**
- **Atmospheric – 91 lbs/yr (13%)**
- Waterfowl - 13 lbs/yr (2%)
- Septic Systems - 62 lbs/yr (9%)
- Internal Loading - 35 lbs/yr (5%)



It's the LOAD that's important!

Lake Kanasatka Watershed

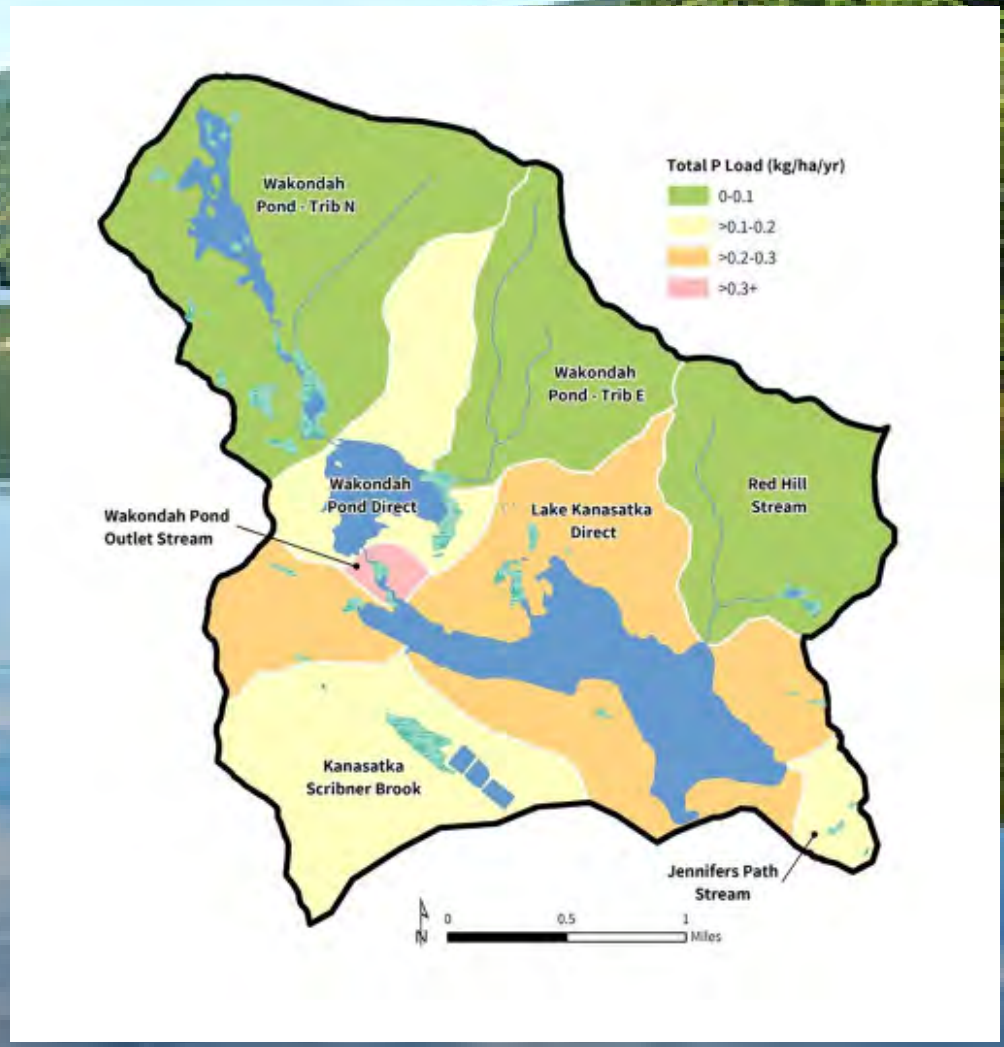
Watershed Size: 4,528 acres
Lake Kanasatka – 353 acres

Watershed/Lake Area: 12.8

12% Developed
80% Forested

Nutrient Loading – 645 lbs/yr total

- **Watershed Runoff – 375 lbs/yr (58%)**
- Atmospheric – 35 lbs/yr (5%)
- Waterfowl - 20 lbs/yr (3%)
- Septic Systems - 62 lbs/yr (10%)
- **Internal Loading - 154 lbs/yr (24%)**

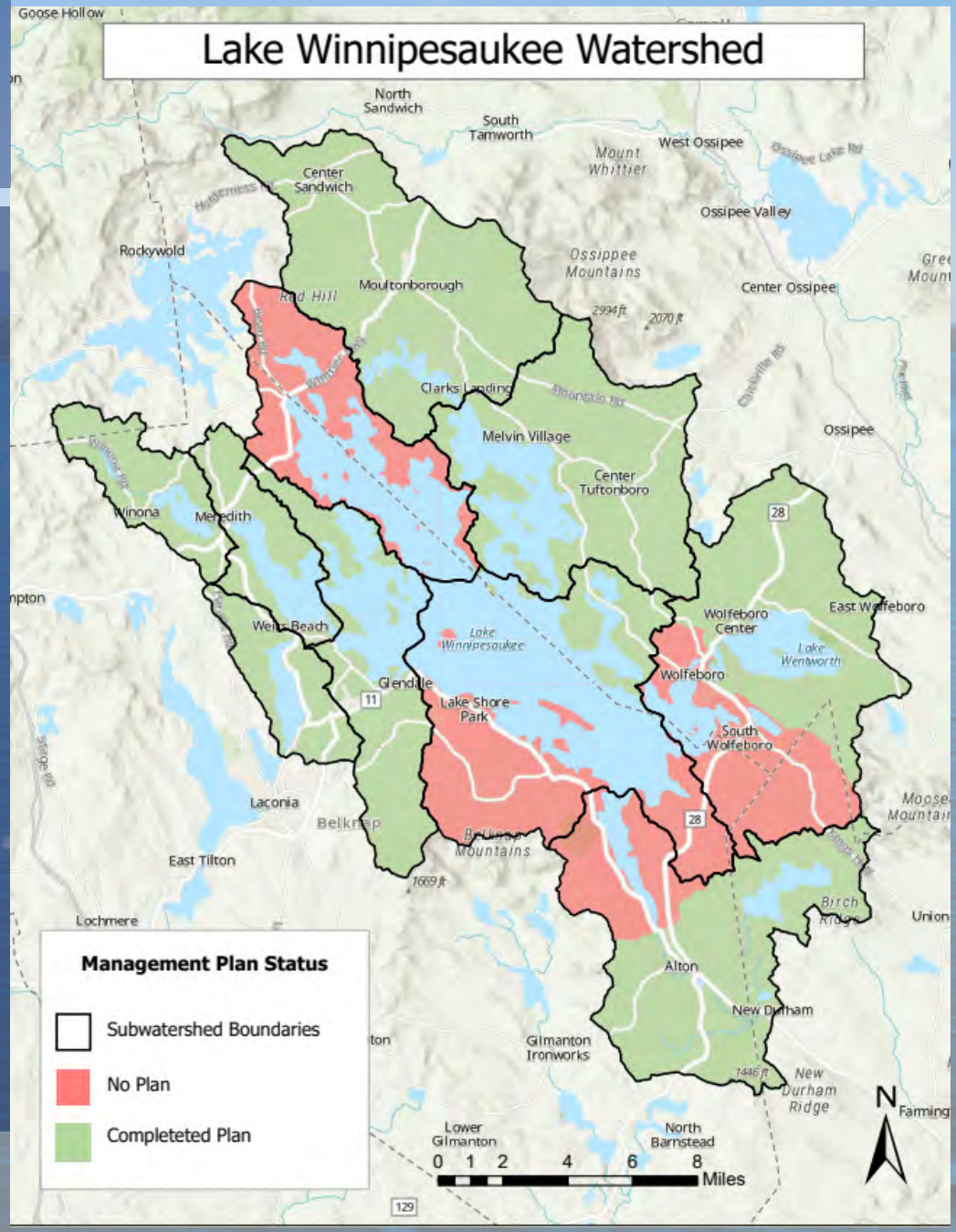


Watershed Management Plans

Action Plans identify and prioritize measures to reduce pollutant loading to the lake

- Recommendations to date:
  - Education and Outreach - 56
  - Wastewater - 31
  - Municipal Ordinances/Land Conservation - 86
  - Water Quality Monitoring – 45
  - 251 mitigation sites

- Investment of $588k - $254k in grants, $334k in financial and in-kind match



Shoreline Surveys: Lake Waukewan and Winona

- 2016: Watershed Management Plan
- Shoreline Survey Results (10+)
  - Waukewan: 125/215 Parcels
  - Winona: 22/88 Parcels
- Indicate shoreline conditions for those parcels may be detrimental to water quality

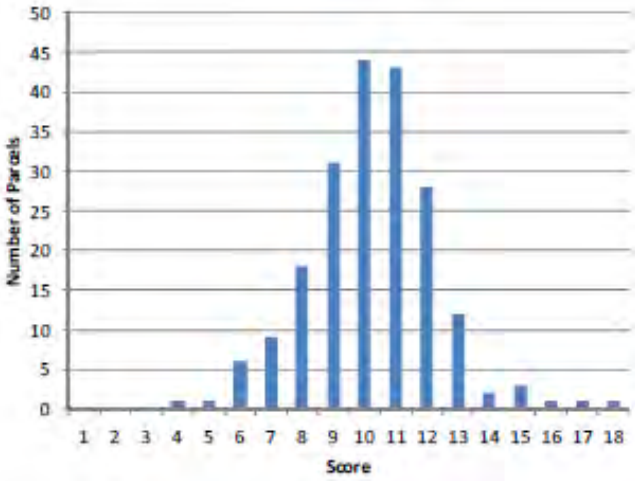


Figure 32. Lake Waukewan Parcel Scores

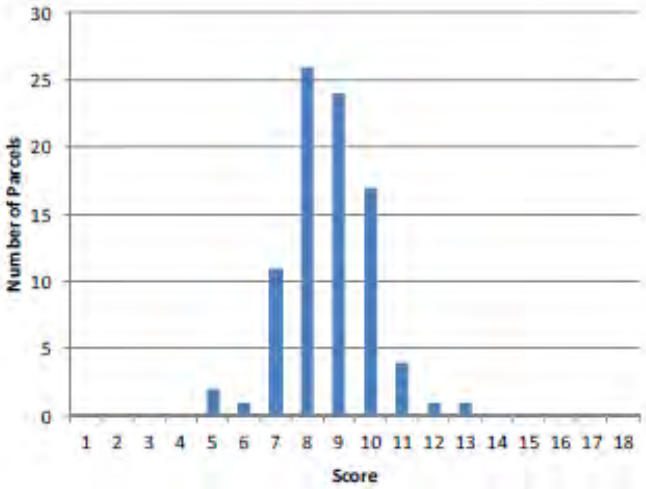


Figure 33. Lake Winona Parcel Scores

Be Winni Blue & LakeSmart

- Free, voluntary, non-regulatory evaluation to determine how lake-friendly your property is
- Simple, cost-effective recommendations
- Evaluation sections include:
  - Driveway and Parking Areas
  - Structures and Wastewater Treatment
  - Yard and Footpaths
  - Shoreline and Water Access

Be Winni Blue & LakeSmart

- Step One: Take the Self-Assessment
- Step Two: Receive a PDF with General Recommendations of Lake Friendly Practices
- Step Three: Request a Site Visit
- Step Four: Receive a PDF with Property Specific Recommendations

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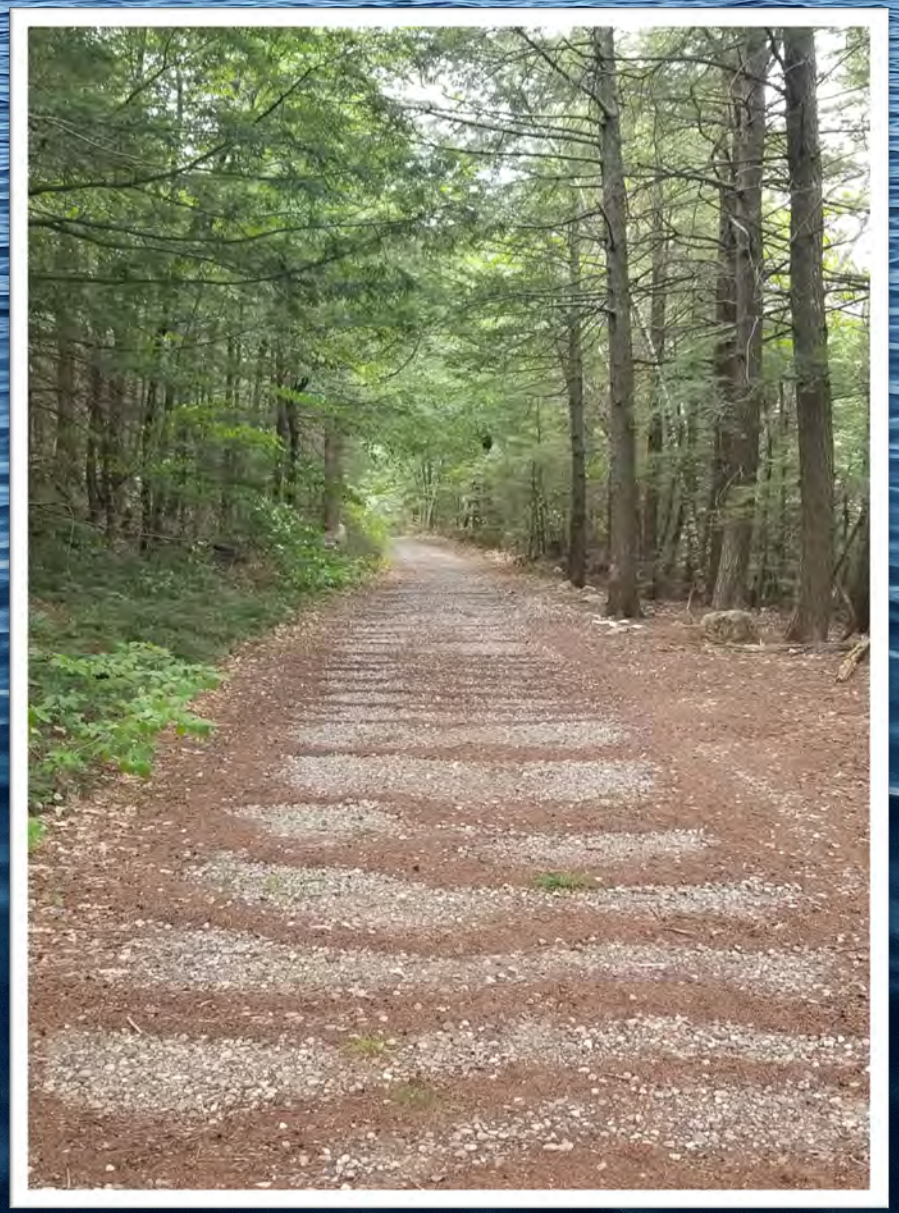
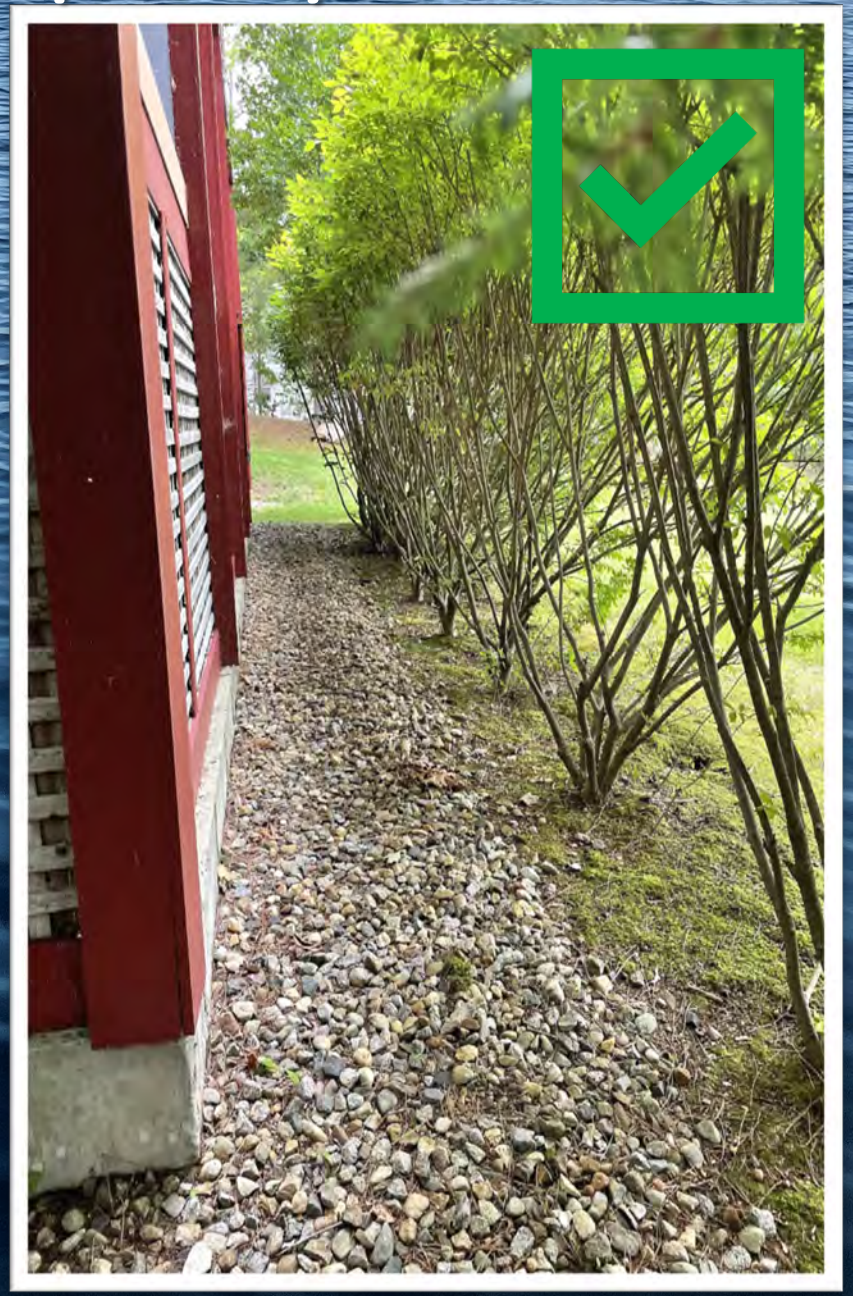
https://www.winnipesaukee.org/take-action/

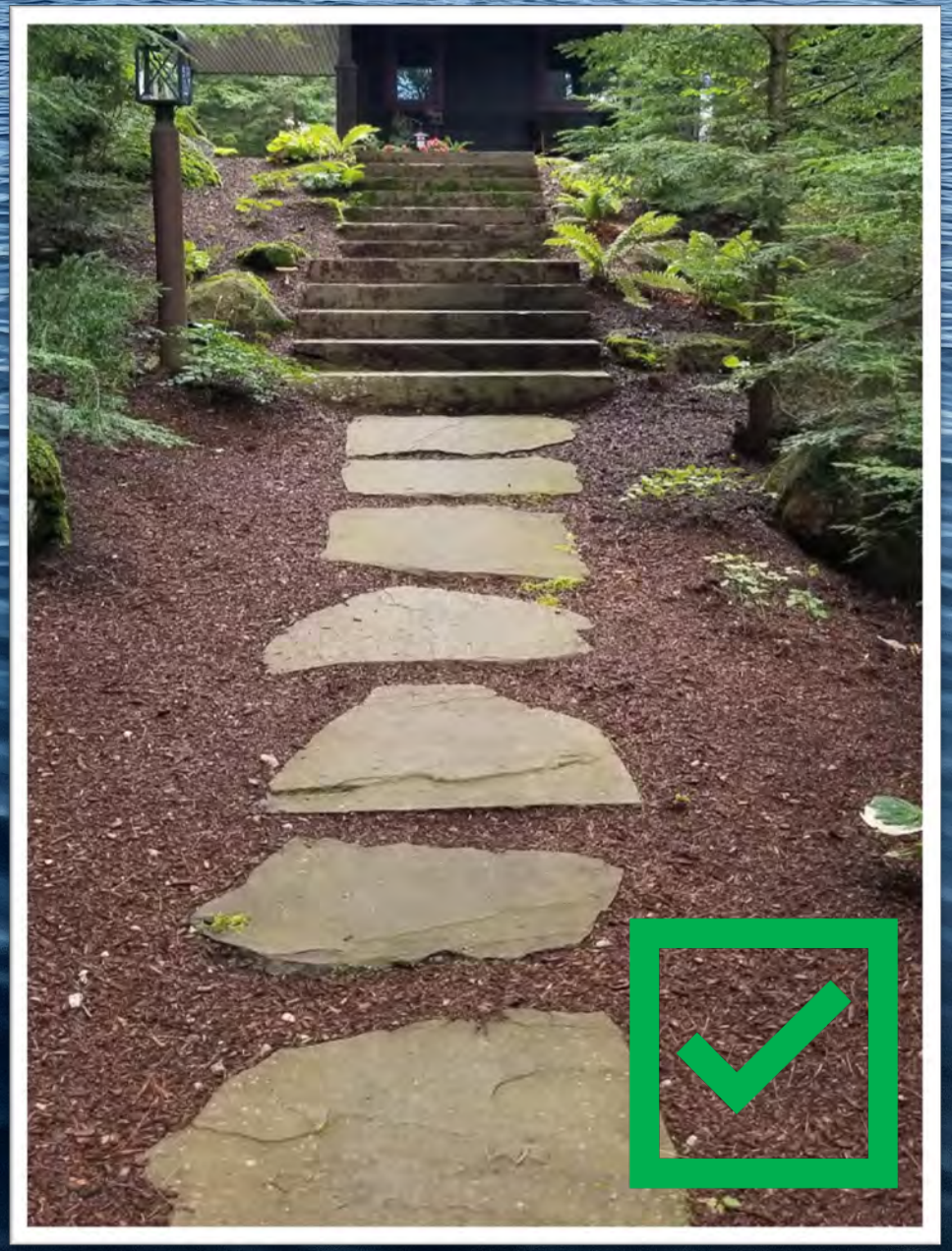
Driveway and Parking Areas



Structures and Septic Systems



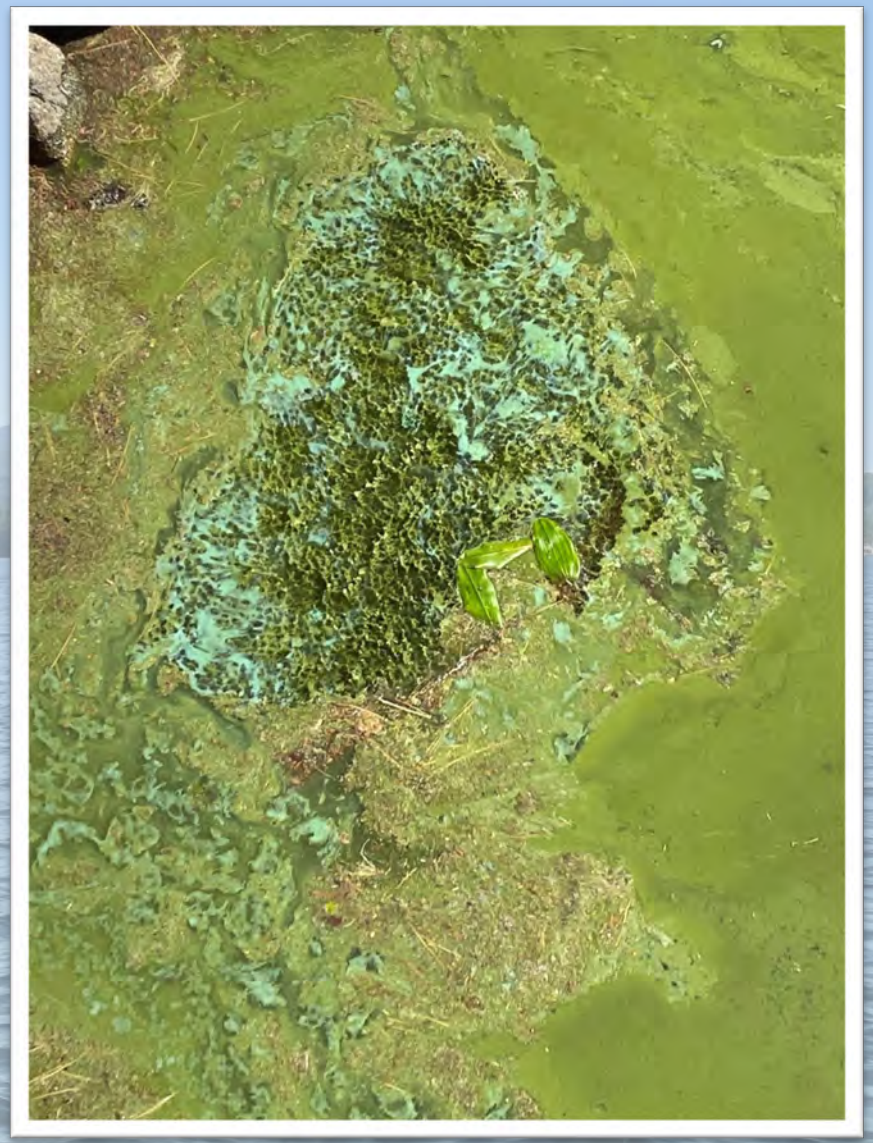
Yard, Recreation Areas and Footpaths



Shoreline and Water Access

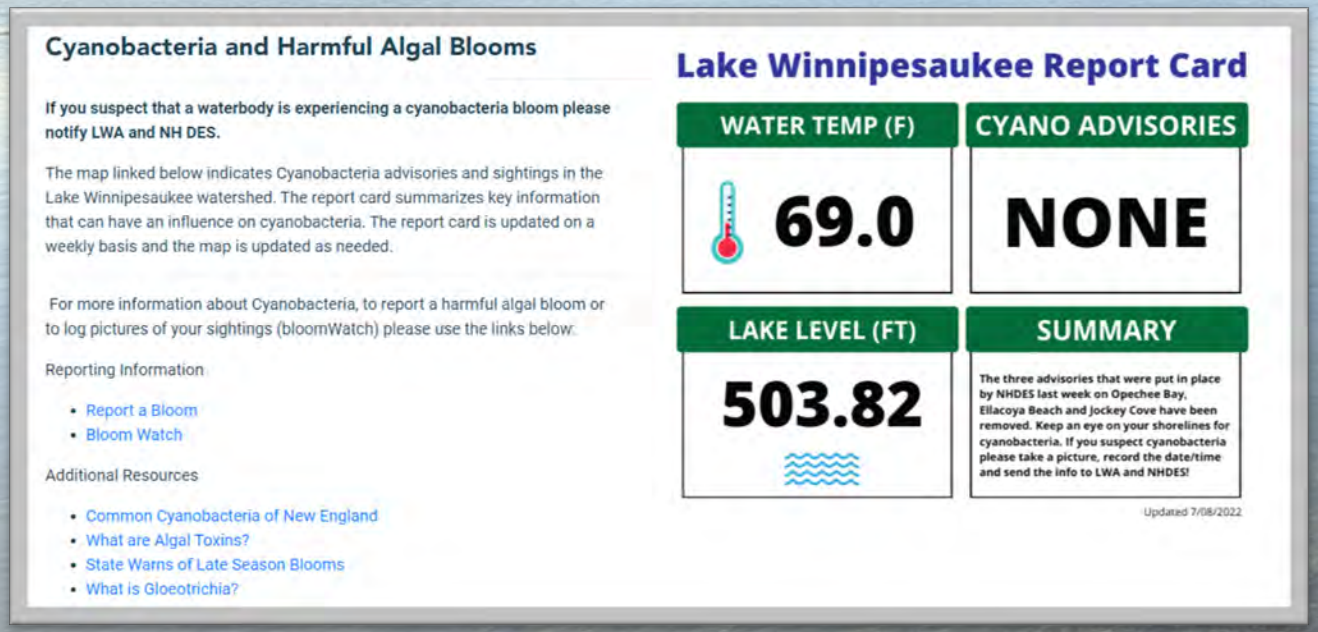
Cyanobacteria

- Naturally Occurring
  - 3.5 Billion Years Old
  - Photosynthetic Bacteria
- Growth Factors
  - Sunlight
  - Water Temperature
  - Nutrients (Nitrogen/Phosphorus)
- Potential to produce toxins
- Not all blooms are equal



Weekly Report Card and Cyanobacteria Map

- To track advisories and sightings
- Lake Winnipesaukee
  - 2021: 14 observations/0 advisories
  - 2022: 6 observations/3 advisories



Cyanobacteria and Harmful Algal Blooms

If you suspect that a waterbody is experiencing a cyanobacteria bloom please notify LWA and NH DES.

The map linked below indicates Cyanobacteria advisories and sightings in the Lake Winnipesaukee watershed. The report card summarizes key information that can have an influence on cyanobacteria. The report card is updated on a weekly basis and the map is updated as needed.

For more information about Cyanobacteria, to report a harmful algal bloom or to log pictures of your sightings (bloomWatch) please use the links below:

Reporting Information

- Report a Bloom
- Bloom Watch

Additional Resources

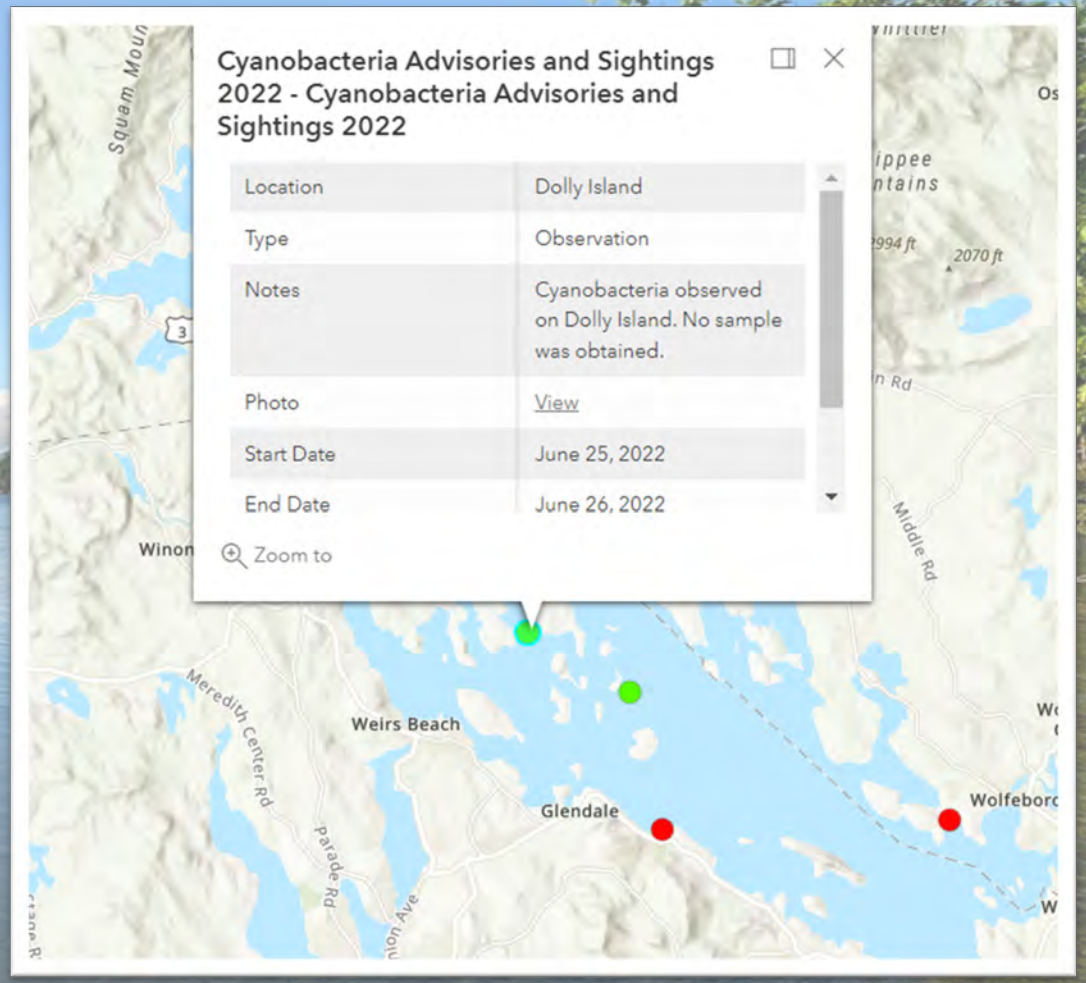
- Common Cyanobacteria of New England
- What are Algal Toxins?
- State Warns of Late Season Blooms
- What is Gloeotrichia?

Lake Winnipesaukee Report Card

WATER TEMP (F)	CYANO ADVISORIES
69.0	NONE

LAKE LEVEL (FT)	SUMMARY
503.82	The three advisories that were put in place by NHDES last week on Opechee Bay, Ellacoya Beach and Jockey Cove have been removed. Keep an eye on your shorelines for cyanobacteria. If you suspect cyanobacteria please take a picture, record the date/time and send the info to LWA and NHDES!

Updated 7/08/2022



Who Should You Contact to Report a Bloom?

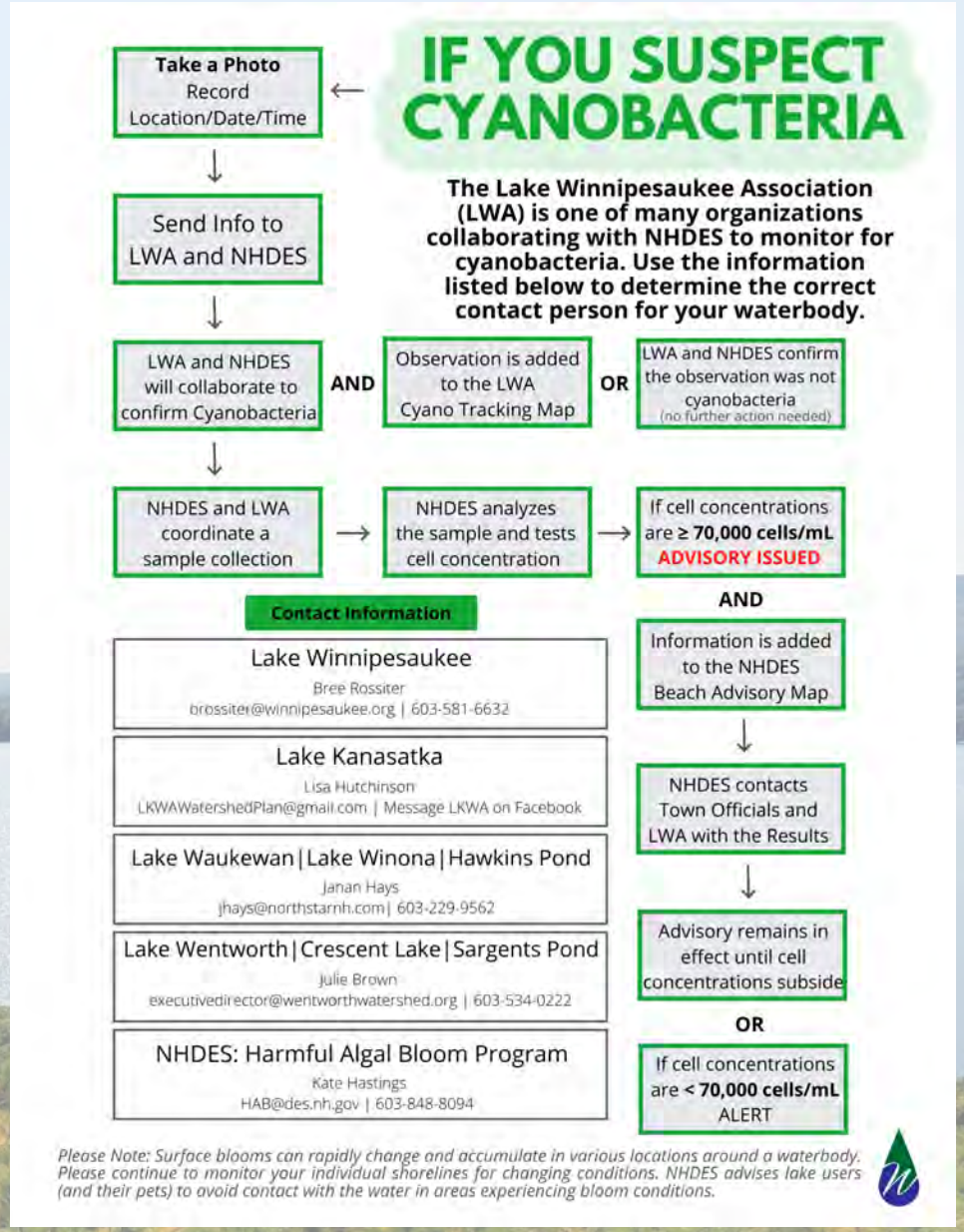
1. Take a Photo
2. Record the Location/Day/Time
3. Send Info to LWA and NHDES

NHDES HAB Hotline: (603) 848-8094

NHDES HAB Email: HAB@des.nh.gov

LWA Call/Text: (603) 581-6632

Email: brossiter@winnipesaukee.org



Check Your Supplements and Food Products

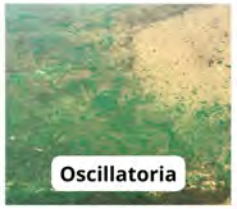
How you can help.

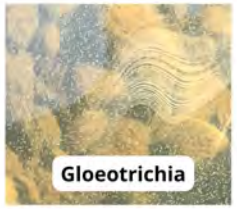
1. Take simple actions to reduce your phosphorus footprint
   - **Sign up for a ‘Be Winni Blue and LakeSmart’ site visit**
   - **Plant native shrubs along the shorefront**
   - **Let your lawn rewild**
2. Tell your neighbors and friends
3. Become a member of your local lake associations

Cyanobacteria Guidance Document

IS THAT CYANOBACTERIA?

PLEASE HELP US IDENTIFY POTENTIAL BLOOM FORMATIONS IN OUR WATERBODIES!





Are you seeing something different than the pictures above? Filamentous algae, pollen and didymo can sometimes be confused with cyanobacteria.

Please note that not all cyanobacteria blooms look alike and are often mixed in with pollen or other algae. This document is to be used for general guidance only. If you suspect a bloom please stay out of the water. NHDES advises lake users and their pets to avoid contact with the water in areas experiencing elevated cyanobacteria cell conditions.

LAKE WINNIPESAUKEE ASSOCIATION

Keep Winni Blue

IF YOU SUSPECT CYANOBACTERIA

Take a Photo
Record Location/Date/Time

↓

Send to Janan Hays and NHDES
(Use the info below)

↓

Janan and NHDES will confirm Cyano Observation

OR

Janan and NHDES confirm the observation was not cyanobacteria
(no further action needed)

↓

NHDES and Janan coordinate a sample collection → NHDES analyzes the sample and tests cell concentration → If cell concentrations are **≥ 70,000 cells/mL**
ADVISORY ISSUED

AND

Information is added to the NHDES Beach Advisory Map

↓

NHDES contacts Town Officials and (NAME) with the results

↓

Advisory remains in effect until cell concentrations subside

OR

If cell concentrations are **< 70,000 cells/mL**
ALERT ISSUED

Many organizations collaborate with NHDES to monitor for cyanobacteria. Use the information listed below to determine the correct contact person for your waterbody.

Contact Information

Lake Winnipesaukee
Bree Rossiter
brossiter@winnipesaukee.org | 603-581-6632

Lake Kanasatka
Lisa Hutchinson
LKWAWatershedPlan@gmail.com | Message LKWA on Facebook

Lake Waukewan | Lake Winona | Hawkins Pond
Janan Hays
jhays@northstarnh.com | 603-229-9562

Lake Wentworth | Crescent Lake | Sargents Pond
Julie Brown
executivedirector@wentworthwatershed.org | 603-534-0222

NHDES: Harmful Algal Bloom Program
Kate Hastings
HAB@des.nh.gov | 603-848-8094

Please Note: Surface blooms can rapidly change and accumulate in various locations around a waterbody. Please continue to monitor your individual shorelines for changing conditions. NHDES advises lake users (and their pets) to avoid contact with the water in areas experiencing bloom

Contact Information

Pat Tarpey
President
Lake Winnipesaukee Association

ptarpey@winnipesaukee.org

Bree Rossiter
Conservation Program Manager
Lake Winnipesaukee Association

brossiter@winnipesaukee.org

Thank You!

www.winnipesaukee.org

603-581-6632