2025 New Hampshire Harmful Algal Bloom Season: Updates from NHDES

October 15, 2025
NH LAKES Webinar

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Photo credit: Georgia Bunnell, NHDES

On the Agenda

- 2025 program updates
- Cyanobacteria/Harmful Algal Bloom (HAB) resources
- NH Cyanobacteria Plan and Cyanobacteria Mitigation
- Looking Ahead

First……

A note about cyanobacteria in surface waters

Cyanobacteria are a normal part of the microscopic community in freshwater systems

In most waterbodies we see them as background components, low in abundance

When conditions are right, blooms can form

Our concern stems from the possible toxicity of cyanobacteria when blooms occur (Harmful Algal Blooms)

- Various toxins
- Various effects

2025 NH HABs by the Numbers

- 515 reports received by NHDES over the summer
- 499 cyanobacteria samples counted in NHDES lab
- 265 of the reports were listed on the Healthy Swimming Mapper
- 66 waterbodies with documented cyanobacteria blooms
- 7 cyanobacteria watches on 6 waterbodies
- 6 waterbodies had cyanobacteria warnings

2025 Program Changes/Updates

SIGNAGE

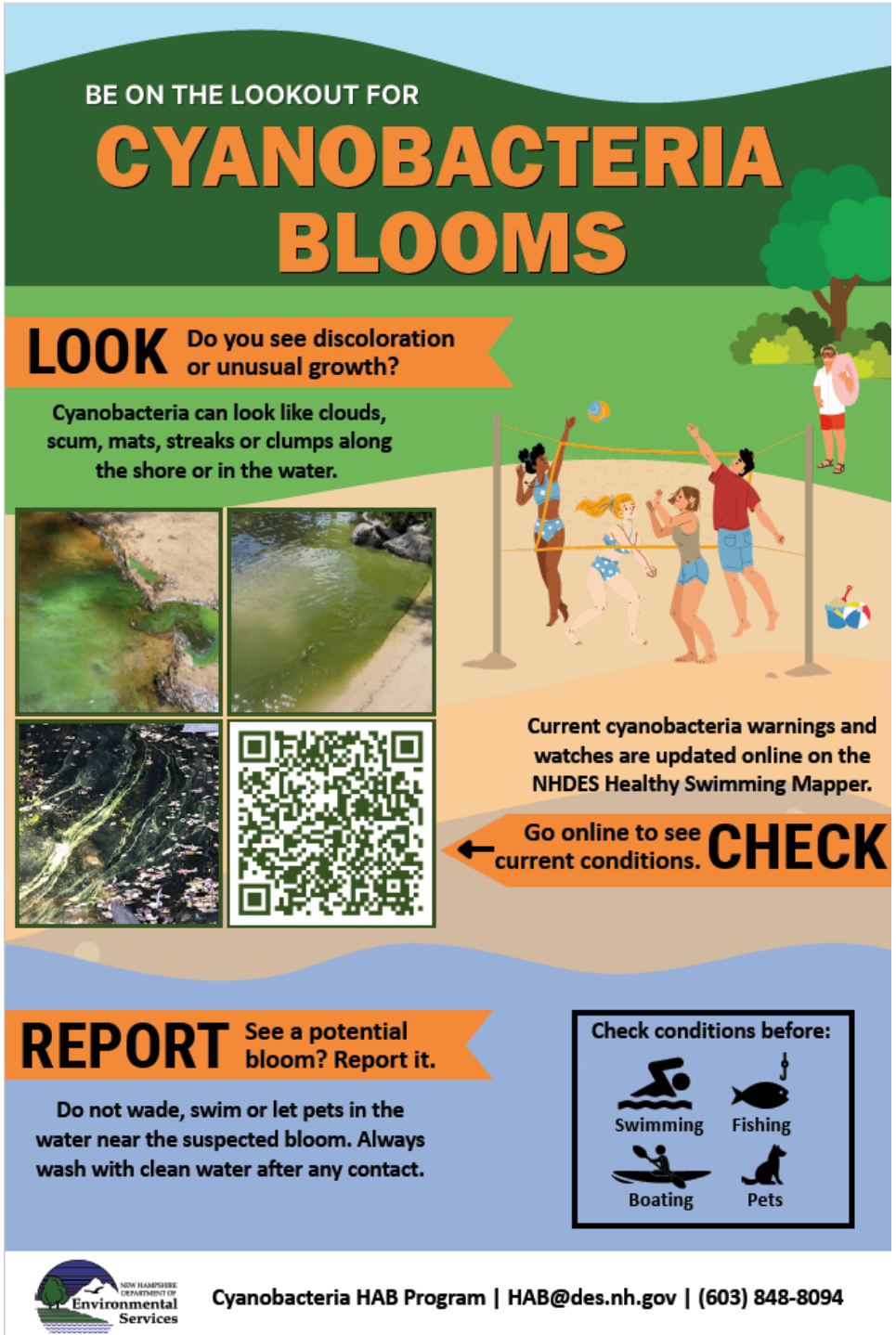
HEALTHY SWIMMING MAPPER

WARNINGS AND WATCHES

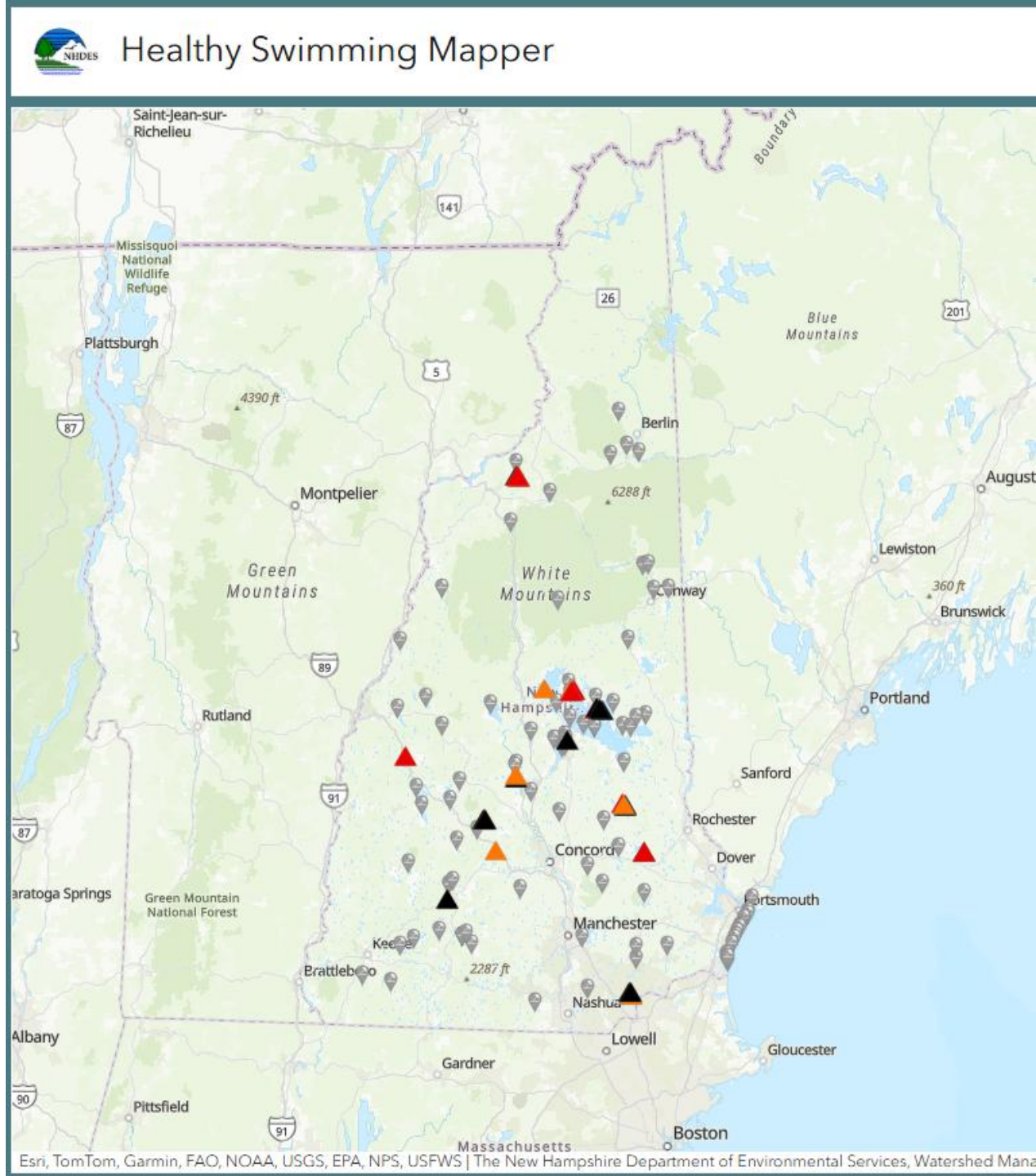
ELECTRONIC MESSAGES

SELF RISK ASSESSMENTS

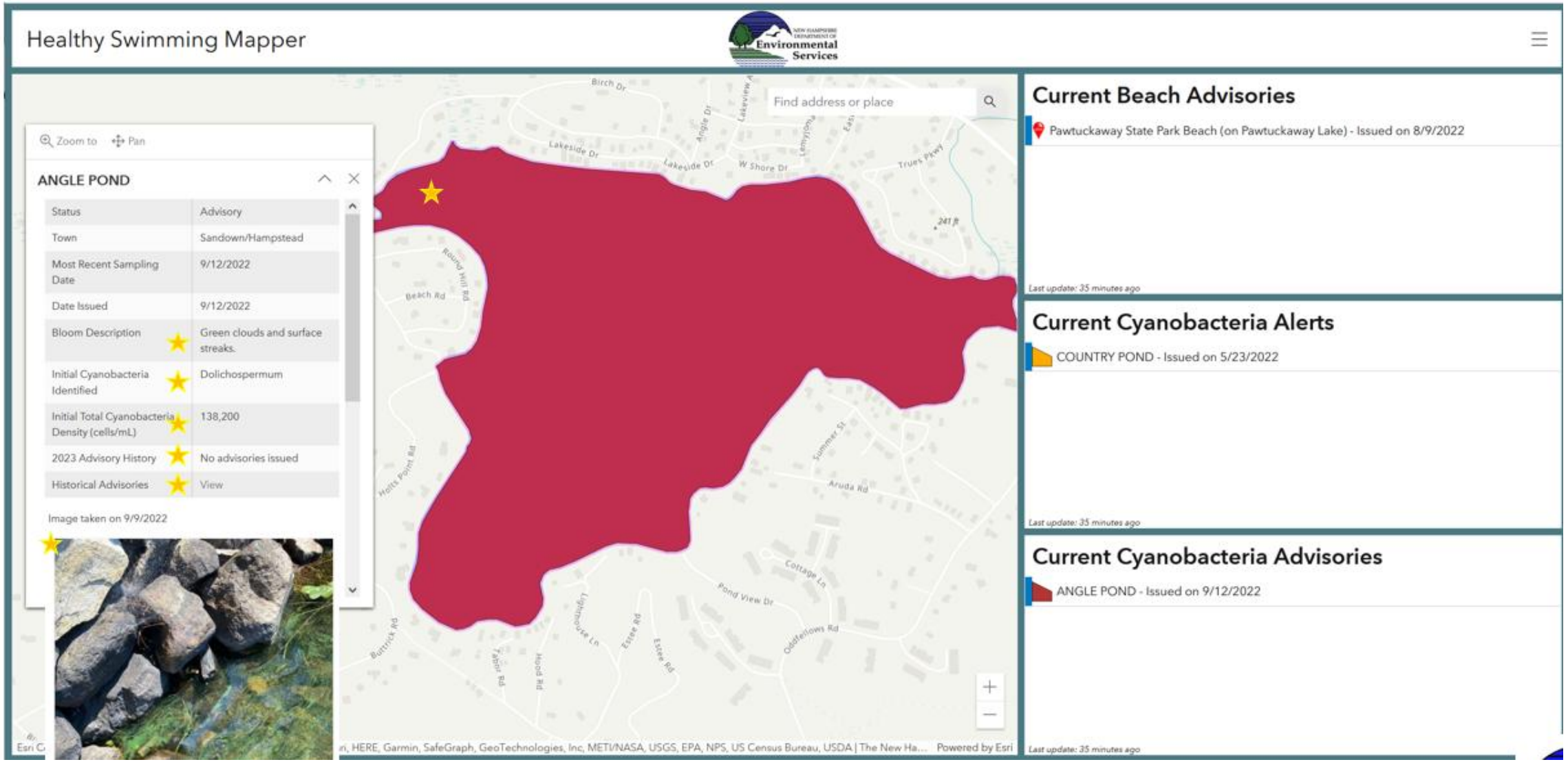
New Signage


BE ON THE LOOKOUT FOR
CYANOBACTERIA BLOOMS
LOOK
Do you see discoloration or unusual growth?
Cyanobacteria can look like clouds, scum, mats, streaks or clumps along the shore or in the water.
Current cyanobacteria warnings and watches are updated online on the NHDES Healthy Swimming Mapper.
Go online to see current conditions.
CHECK
REPORT
See a potential bloom? Report it.
Do not wade, swim or let pets in the water near the suspected bloom. Always wash with clean water after any contact.
Check conditions before:
Swimming
Fishing
Boating
Pets
Environmental Services
Cyanobacteria HAB Program | HAB@des.nh.gov | (603) 848-8094

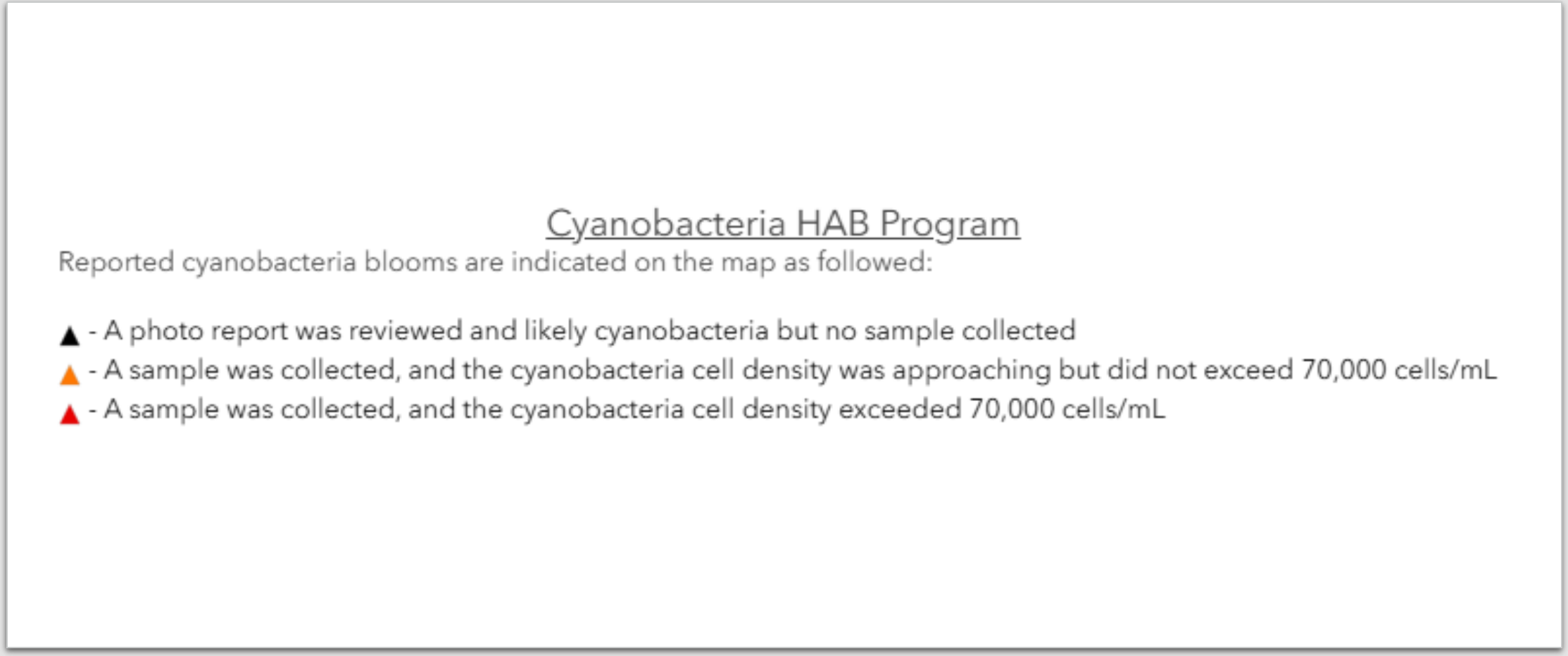
New Symbols on the Healthy Swimming Mapper



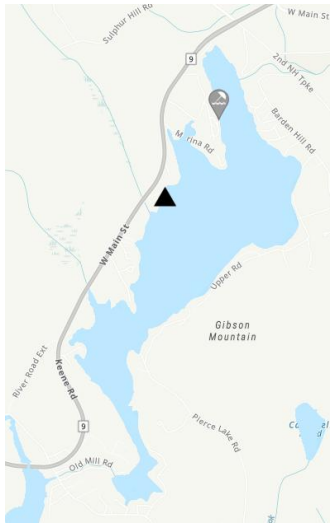
Previous Mapper Annotation



New Bloom Report Symbols



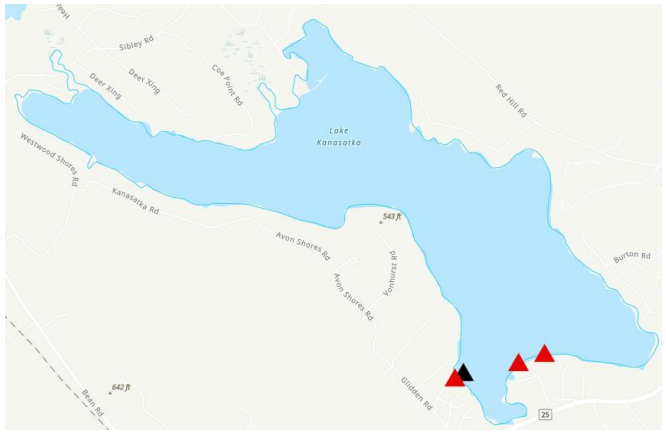
Report



Cyanobacteria Bloom Report: Franklin Pierce Lake

Date bloom observed	10/2/2025
Where on the waterbody is the bloom located?	Shoreline
Observer Vantage Point	Standing on the shoreline
What percentage of the waterbody are you able to observe at this vantage point (approximately)?	between 25% and 50%
What size is the bloom?	between 5% and 25%
How does the bloom appear?	Mixed - both surface scum and material through deeper water is observed
Sampling Information	Sample collecting and to be analyzed 10/6

Watch

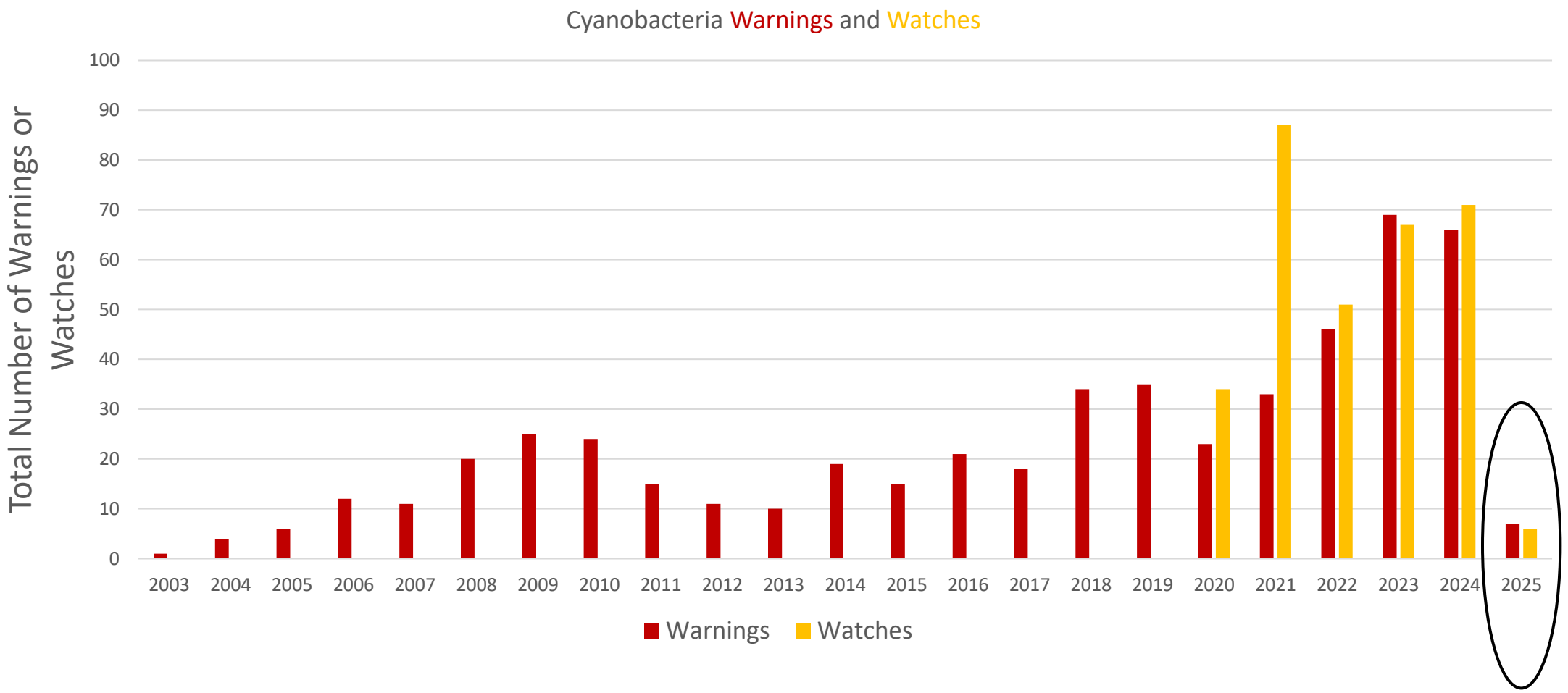


Date bloom observed	9/28/2025
Where on the waterbody is the bloom located?	Both shoreline and main body
Observer Vantage Point	While boating
What percentage of the waterbody are you able to observe at this vantage point (approximately)?	between 50% and 75%
What size is the bloom?	between 5% and 25%
How does the bloom appear?	Surface scum - solid scum of material throughout the waterbody's surface
Sampling Information	Sample collected 9/28: 730,000 cells/mL (Dolichospermum)

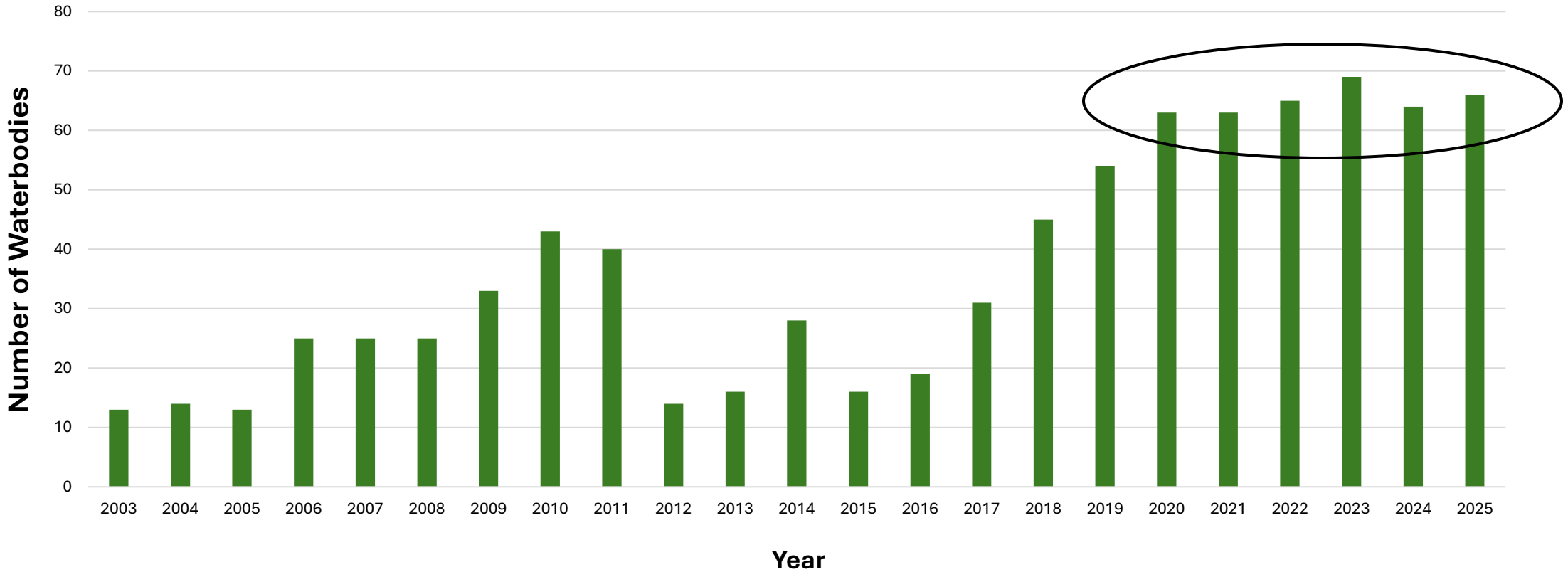
Warning

Where on the waterbody is the bloom located?	Both shoreline and main body
Observer Vantage Point	While boating
What percentage of the waterbody are you able to observe at this vantage point (approximately)?	75% or more
What size is the bloom?	between 50% and 75%
How does the bloom	Surface scum - solid

Trends in Cyanobacteria Watches and Warnings



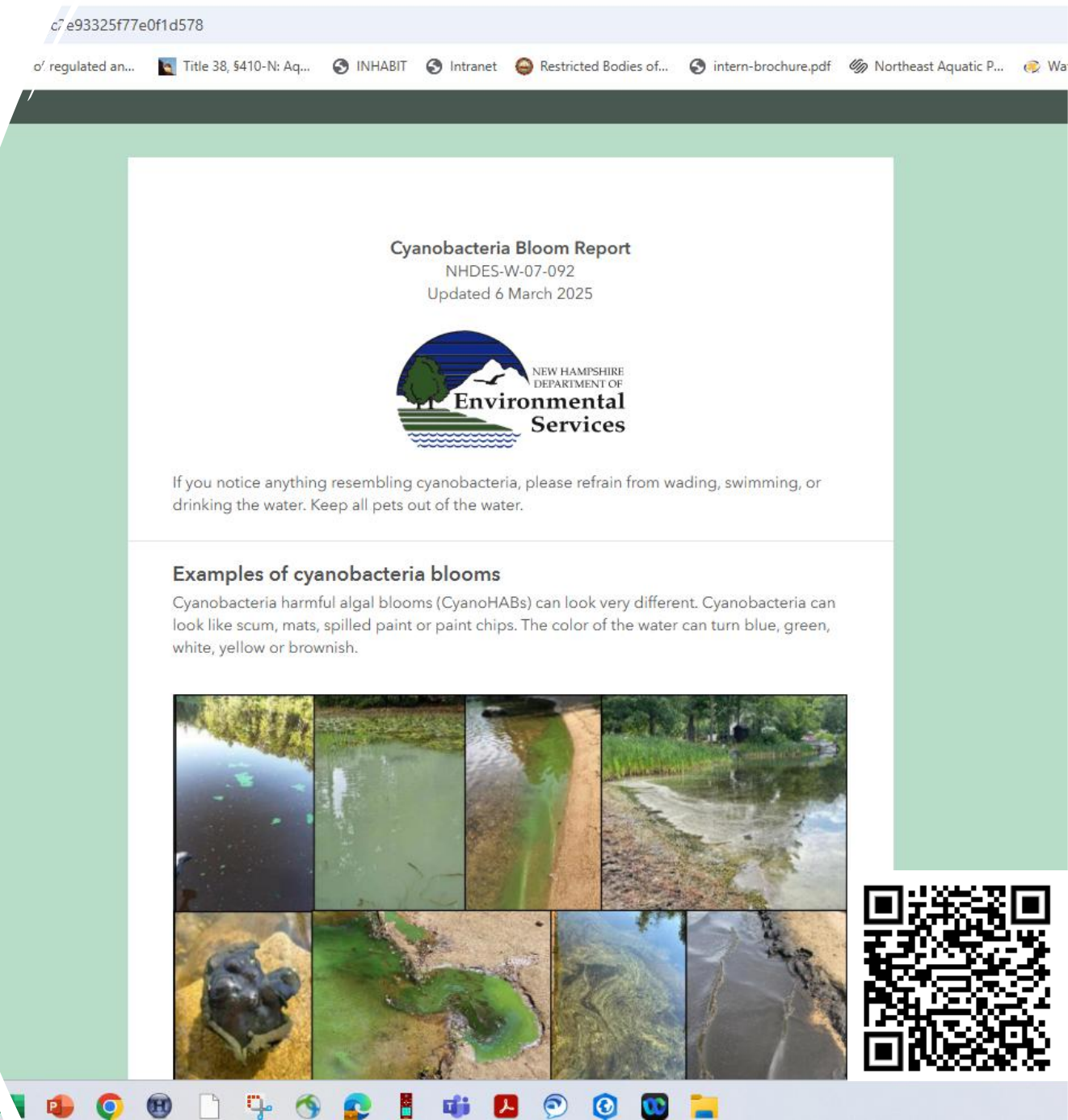
Waterbodies with Reported Blooms



More Questions Added to Bloom Report Form

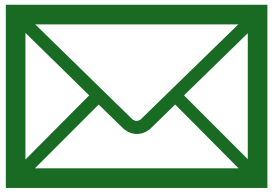
To help NHDES make a more informed decision about the bloom we added additional questions to the Bloom Report Form:

- Frame of reference
  - Observations from shore or boat
- Percent of waterbody seen/reported
  - As a general percent (small area versus part or most of lake)
- More detail on bloom appearance
  - Scum, water column, both, etc.



Cyanobacteria Bloom Emails

No more weekly statewide bloom update emails



***Waterbody-specific* emails were updated and are still sent when a bloom of any level is detected**

Sign up for waterbody-specific emails online at

Cyanobacteria Self Risk Assessment

- Two new video recordings available that discuss risk associated with HABs, and how to mitigate your personal risk:
  - **Full version (6:37 minutes):** https://www.youtube.com/watch?v=RJmY5BIt_q8&list=PLzaaFQKgZ-FioCCxV22Mul9cG3H7qgFnG&index=1&pp=iAQB
  - **Short version (2:57 minutes):** https://www.youtube.com/watch?v=7CkS2GONaaI&list=PLzaaFQKgZ-FioCCxV22Mul9cG3H7qgFnG&index=2&pp=iAQB

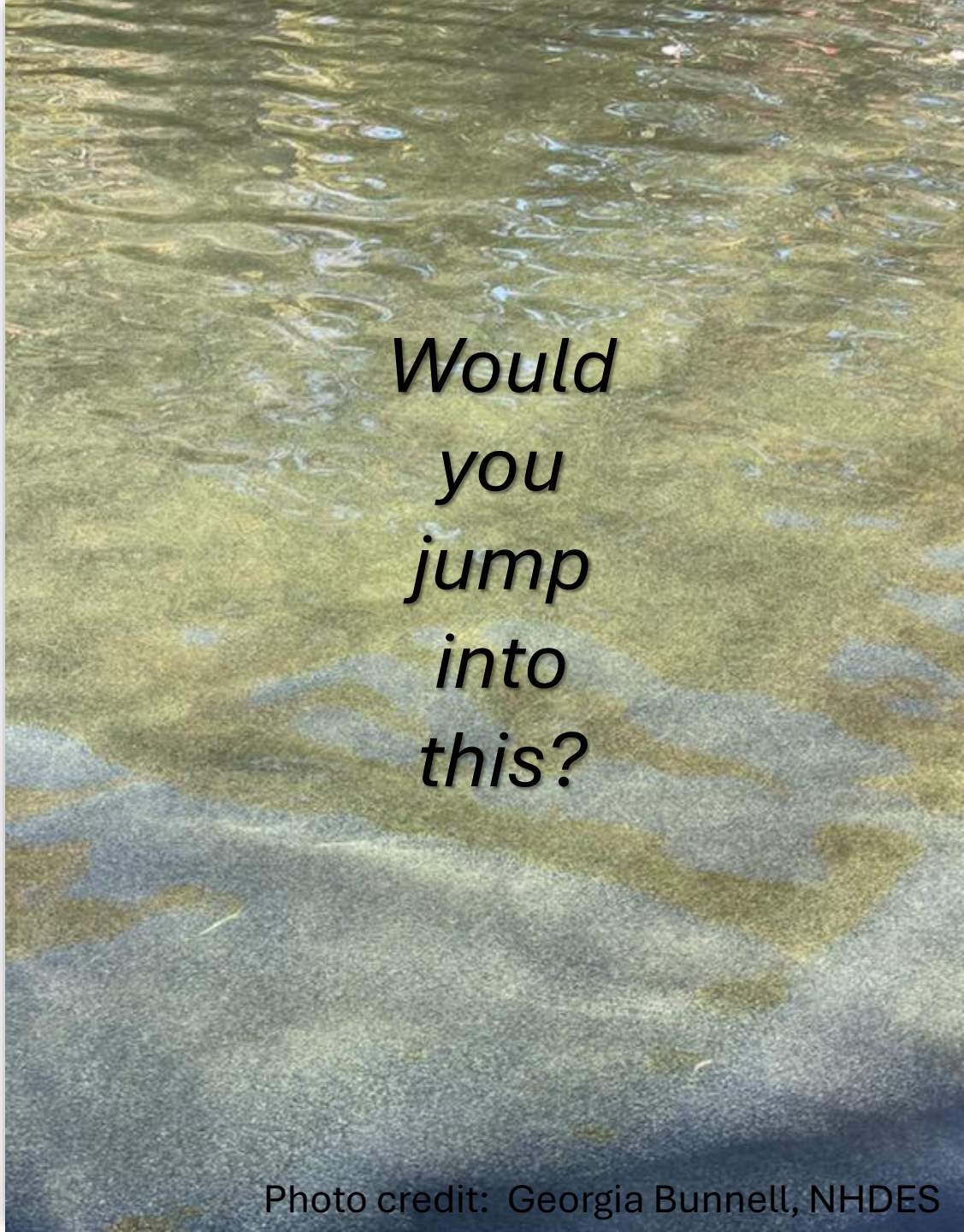


Photo credit: Georgia Bunnell, NHDES

Reasons for changes

Other States

Basis for Advisories

- There is currently no uniform federal regulation for cyanotoxins in recreational waters (just recommendations)
- 22 states use cell counts
- 24 states use cyanotoxin concentrations

Thresholds for action

- Vary widely among states
  - Based on visual observation of a bloom on the water
  - Based on various cell counts
  - Based on various cyanotoxins and their concentrations

Terminology

- Varies widely among states
  - *Watch, Warning, Alert, Closure, Caution, Advisory*

In NH

Information

- Provide more specific information on the location and severity of a bloom on individual waterbodies by using points where blooms are observed

Report

- Maintain a platform where observers can submit bloom report forms when possible cyanobacteria are observed

Update

- Update the Healthy Swimming Mapper regularly with current information

Empower

- Share information to help you make your own informed decision about waterbody usage

Self Risk Assessment

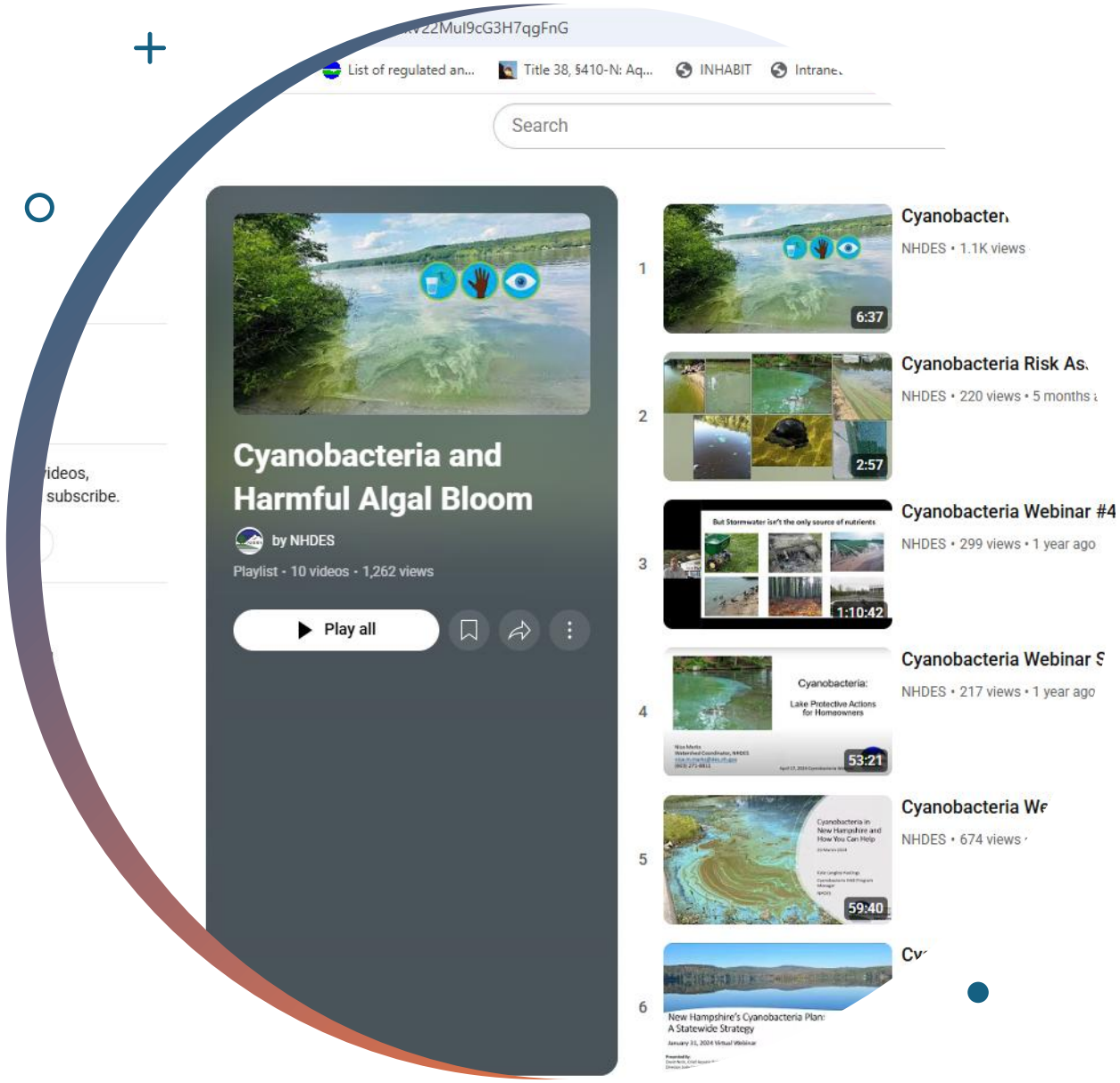
- Encourage individuals to do a self-risk assessment

Benthic cyanobacteria

something else to look out for!

HABs Resources

Photo credit: Georgia Bunnell, NHDES



Cyanobacteria Playlists

- View an array of recorded presentations on cyanobacteria and Harmful Algal Blooms on the NHDES YouTube channel
- Specific Playlist created for HABs

Cyanobacteria Webinars

Webinar 1- Overview of the New Hampshire Statewide Cyanobacteria Plan

https://www.youtube.com/watch?v=grSjXvvUgEk&list=PLzaaFQKgZ-FioCCxV22Mul9cG3H7qgFnG&index=6&pp=iAQB

Webinar 2- Cyanobacteria in NH and How You Can Help

https://www.youtube.com/watch?v=1IV_K-9FFkg&list=PLzaaFQKgZ-FioCCxV22Mul9cG3H7qgFnG&index=5&pp=iAQB

Webinar 3- Lake Protection Actions for Homeowners

https://www.youtube.com/watch?v=7idHxzK2rO0&list=PLzaaFQKgZ-FioCCxV22Mul9cG3H7qgFnG&index=4&pp=iAQB

Webinar 4- Lake Protection Actions for Municipalities

https://www.youtube.com/watch?v=OPQJfFF_NsE&list=PLzaaFQKgZ-FioCCxV22Mul9cG3H7qgFnG&index=3&pp=iAQB

Cyanobacteria Mitigation

Photo credit: Georgia Bunnell, NHDES

NH Cyanobacteria Plan: A Statewide Strategy & Mitigation Fund (CMF) and Other Grant Funds

Some History- New Hampshire's Cyanobacteria Plan: A Statewide Strategy

- House bill 1066, passed in the 2022 legislative session, directed NHDES to develop a plan to prevent the increase of, and eventually control, cyanobacteria blooms in New Hampshire's waterbodies.
- Plan published in November 2023
  - includes input from a 17-member advisory committee and specifies the actions needed to achieve the legislative directive.
- The plan describes four strategies:
  - **Strategy 1: Develop policies and practices to reduce, control and prevent the nutrient inputs that cause cyanobacteria blooms.**
  - **Strategy 2: Advance education/outreach efforts.**
  - **Strategy 3: Enhance monitoring.**
  - **Strategy 4: Identify best practices for public drinking water supplies.**

Scan to link to online version of statewide plan

Cyanobacteria Mitigation Fund (CMF)

- One of the outcomes of the Cyano Plan was to secure funding for mitigation efforts to combat cyanobacteria blooms
- NHDES announced the availability of this new grant program in January 2023, which is funded from a one-time legislative appropriation of $1 million, as well as a one-time allocation of American Rescue Plan Act funds.
- Under RSA 485-A:59, NHDES is authorized to administer the Cyanobacteria Mitigation Program to assist municipalities, community and non-profit groups and lake and river watershed associations, to reduce the number of chronic and extended cyanobacteria blooms that are a threat to the long-term health and recreational values of state waterbodies.

CMF Grant Awards*

- 2024- Lake Kanasatka Aluminum Treatment- $500,000
- 2025- Province Lake Stormwater Engineering Plan- $50,000
- Balance available- $233,244 to grant

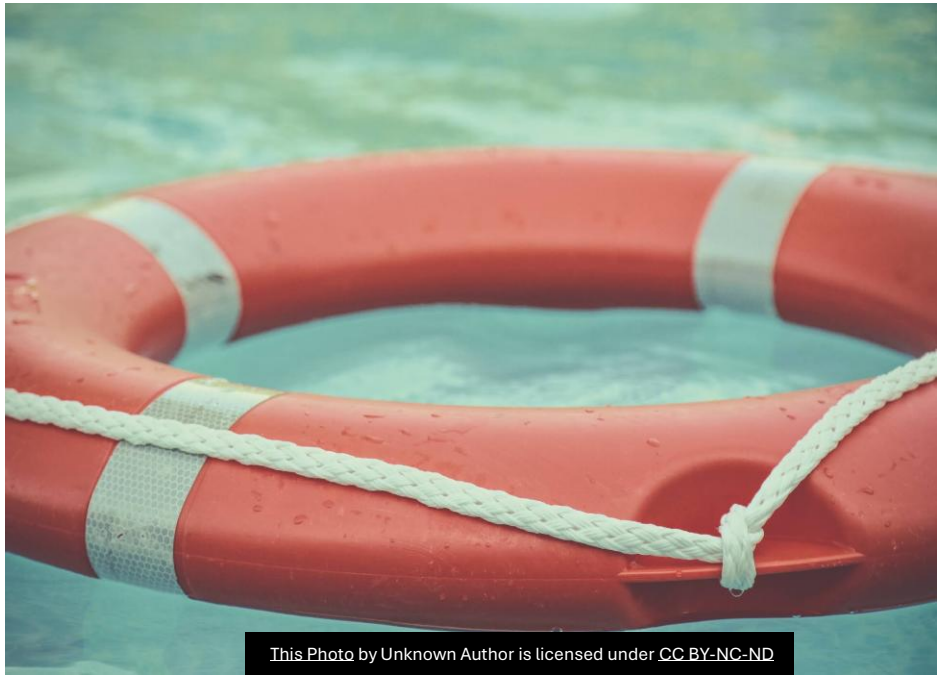
*a portion of the legislative award was earmarked for supplies and equipment and other administrative costs for the NHDES Harmful Algal Bloom Program

Additional One-Time Grant Awards (ARPA direct to CMF)

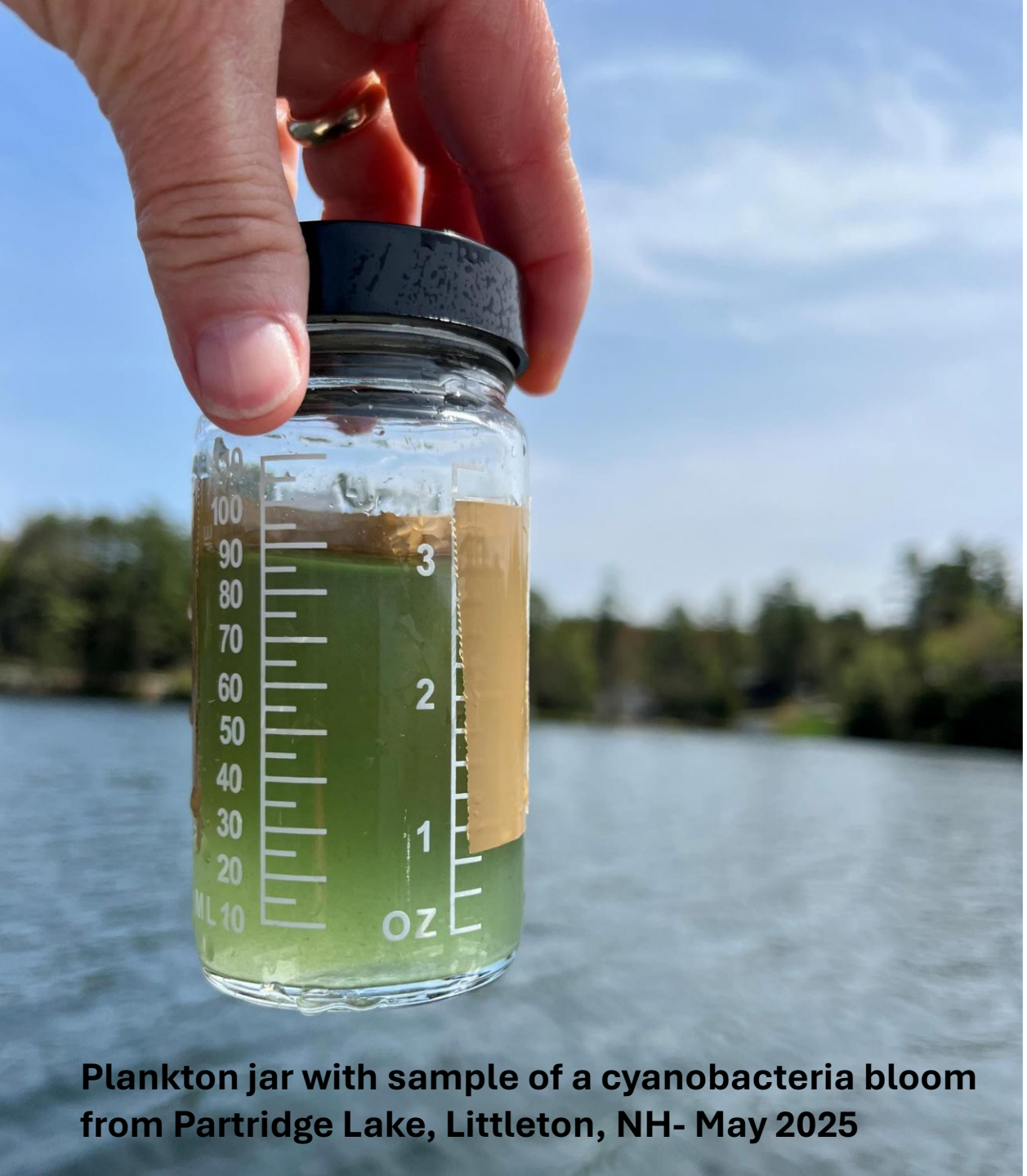
One-time American Rescue Plan Act (ARPA) for cyanobacteria mitigation efforts in 2024:

- 2024- Tucker Pond Erosion/Stormwater Mitigation- $185,970
- 2024- Partridge Lake Aluminum Treatment- $270,930
- 2024- Province Lake Shoreline Vegetation Project- $9,600

- *Extra- 2024- NH LAKES Association- $500,000 (to use for awards to sub-grantees based on NHDES input- see next slide)*



All funds from this award have been encumbered and are in the process of being spent down before August 2026.



Plankton jar with sample of a cyanobacteria bloom from Partridge Lake, Littleton, NH- May 2025

CMF Eligibility

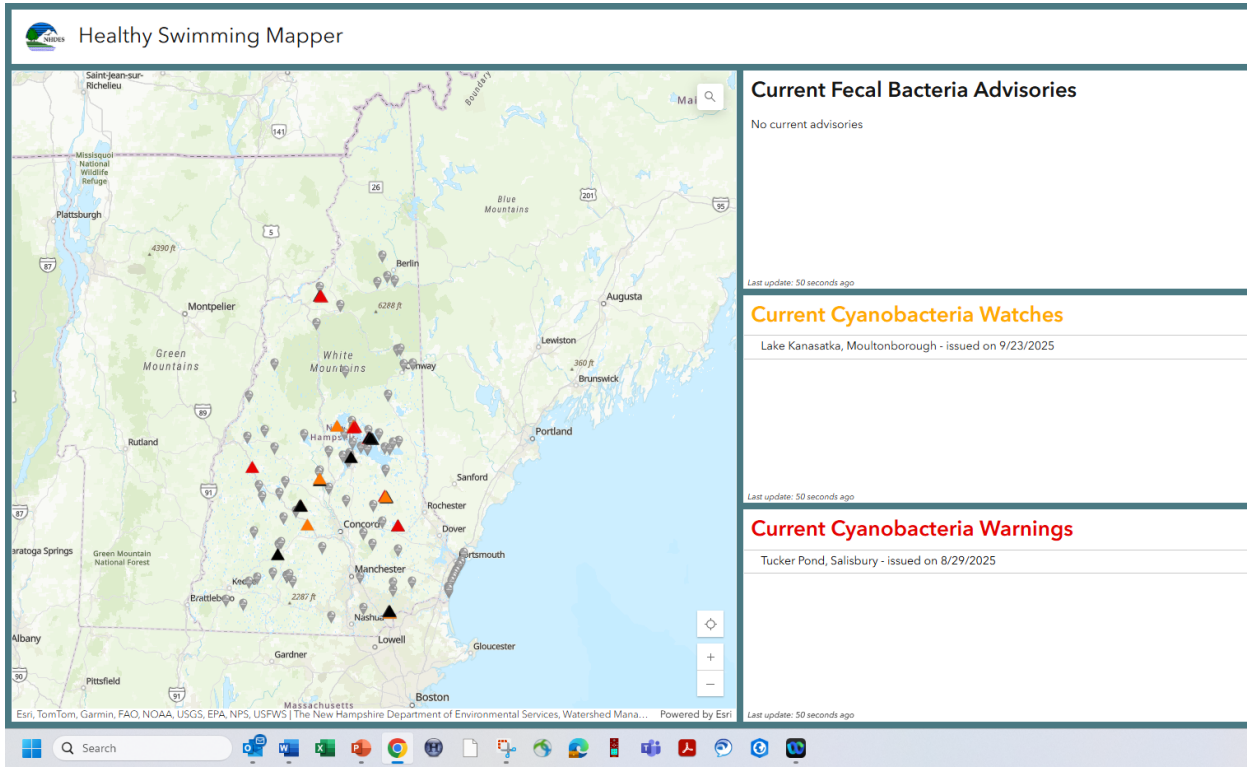
- All applicants must meet eligibility requirements as outlined in Env-Wq 2300
  - https://www.des.nh.gov/rules-and-regulatory/administrative-rules?keys=env-wq2300&purpose=&subcategory=
- An eligibility request can be found online at https://onlineforms.nh.gov/app/#/formversion/febfce94-6c73-4236-b9c0-c10be9b59017?FormTag=NHDES-W-07-095
- Grant applications are reviewed by a team of NHDES staff from the Watershed Management Bureau

Looking Ahead

- $233,244 is available to grant for eligible applicants/projects. That's it.
- There are many eligible waterbodies on the impaired waters list for cyanobacteria/cyanotoxins.
- A bill (HB105) in the 2025 NH legislative session to add funds to Cyanobacteria Mitigation Fund, but no guarantee of passage:
  - A lake license plate is proposed in the legislature which will generate some revenue each year (in Senate Finance right now). Retained by Senate Transportation. **Executive session on bill scheduled for 10/23/25.**
- *There are no other additional guaranteed funds on the horizon.*

Continuous Process Improvement….Future Changes

- Need to hire a program coordinator to take program to the next level
- Consider eliminating “watch” and “warning” categories and stick with just color-coded points for bloom reports
- If just points in the future, include a list of Bloom Reports on right side of Healthy Swimming Mapper with each listing linking to the lake on the map, for ease of finding detail on each site
- Continue to carry out the elements of the *New Hampshire Cyanobacteria Plan: A Statewide Strategy*



Questions?

All images courtesy of https://cfb.unh.edu/phycokey/phycokey.htm

Thank you!

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