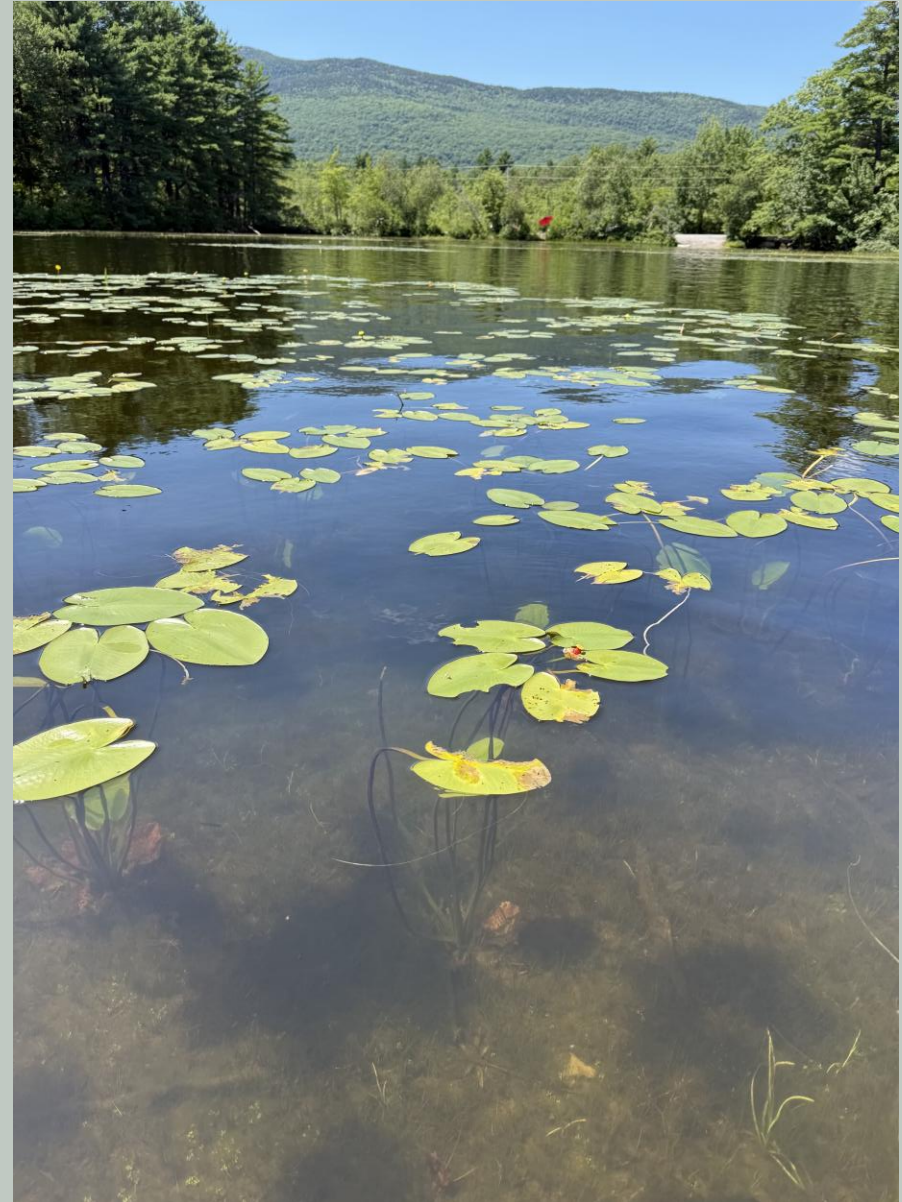

Thorndike Pond Water Quality Update 2026

Molly Mansfield

August 1, 2026

Volunteer Lake Assessment Program

Water Sampling Volunteer



Agenda



1. 2025 & 2026 June Results
2. Changes at NH DES Water Lab
3. *E. coli* - Recent High Numbers
4. Avoiding a Harmful Algal Bloom
5. Loon Health & Pesticides
6. What Can You Do to Help?

Tests:

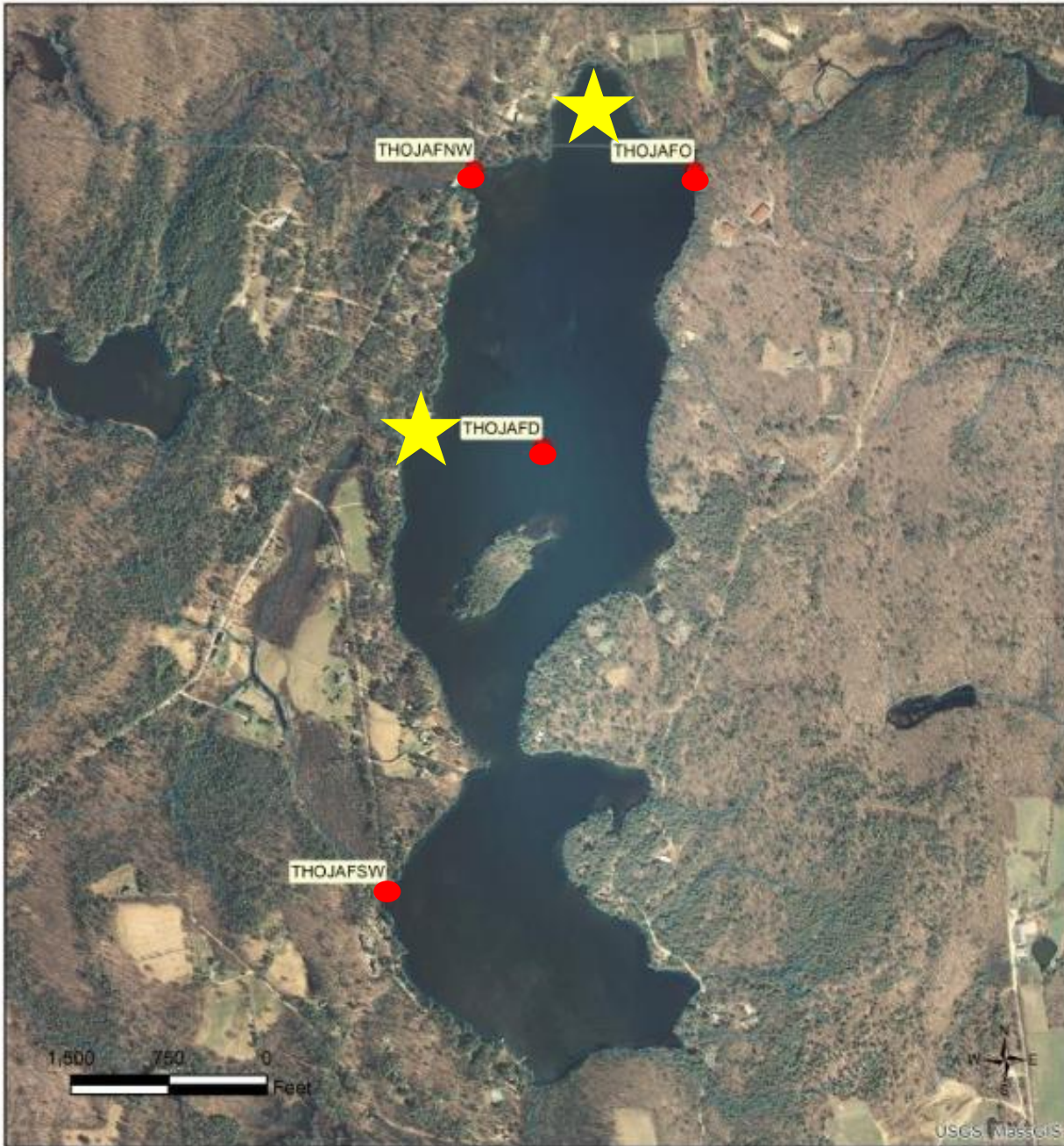
- Chlorophyll-A (algal abundance)
- Water Temperature & Color
- Dissolved Oxygen
- Oxygen Saturation Levels
- Water Transparency & Turbidity
- *E. coli* Bacteria Presence
- Alkalinity/pH Acidity
- Phosphorus Levels
- Chloride Levels & Conductivity



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THORNDIKE POND JAFFREY

VOLUNTEER LAKE ASSESSMENT PROGRAM

STATIONID	STATION NAME
THOJAFO	DEEP SPOT
THOJAFNW	NORTH WEST INLET
THOJAFO	OUTLET
THOJAFSW	SOUTH WEST INLET

1. Outlet
 2. NW Inlet
 3. SW Inlet
 4. Deep Spot
- ★ *E. coli*

Source: The data layers are derived from NHDES data and are under constant revision. NHDES is not responsible for the use or interpretation of this information. Not intended for legal use. NHDES Watershed Management Bureau Date: 2/17/2021



Testing Sites

Thorndike Pond

2025 & 2026 Testing Results

	July 2025	October 2025	June 2026	Standard
<i>E. coli</i> Bacteria	1 MPN (well below)	(none) <i>test once per year</i>	23 & 13 MPN (higher than normal)	88 MPN/100 ml
Phosphorus	6.7, 6.9, 7.3, 8.4, 12.1	6.8, 6.9, 7.2, 8.5, 19.1	7.20, 8.47, 10.6, 12.1, 12.4	Ave.: 11-20 ug/L
Dissolved Oxygen	3.48 - 7.76 mg/L	(none)	(none) <i>every other year</i>	> 5 mg/L
Oxygen Saturation	40.5 - 96.1 %	(none)	(none) <i>every other year</i>	Varies
Water Transparency	3.7 – 4.2 m (deeper)	4.3-4.36 m (deeper)	3.7-4.27 m (deeper)	3.3 m
pH	6.71-7.41	6.27-6.71	6.26-7.04	pH 6.5 - 8.0
Acid Neutralizing Capacity	3.9 mg/L	4.6 mg/L	4.5 mg/L	4.5 mg/L*

* Note: historically NH has low acid neutralizing capacity in water levels due to the granite bedrock; >2 – 5 is “endangered”

2025 & 2026 Testing Results

	July 2025	October 2025	June 2026	Standard
Chloride	3.46 mg/L	4.33-5.33 mg/L	5.1 mg/L	< 230 mg/L
Conductivity	29.20 - 30.46 uS/cm	26.88 - 33.53 uS/cm	30.74-36.36 uS/cm	42.3, <100 uS/cm
Water Temperature	21.4 - 24.7 °C (70.52-76.46 °F)	(none)	(none) <i>measured every other year</i>	Varies
Turbidity	0.73 – 0.96 NTUs	0.62 - 1.81 NTUs	0.74 – 1.61 NTUs	< 10 NTUs
Color	84 (highly colored)	29-37 (light tea color)	35 (light tea color)	0 - >80
Chlorophyll-A (algal abundance)	1.59 ug/L (good)	3.96 ug/L (good)	4.61 ug/L (good)	5.00 ug/L

Changes at NH DHHS/DES Water Lab

“The DES does have a General Fund back-of-budget reduction of \$3.0 million per year that will likely impact agency operations”

<https://nhfpi.org/resource/the-state-budget-for-fiscal-years-2026-and-2027/>

“The DHHS Public Health/Water Analysis Lab that runs our Total Phosphorus samples is severely understaffed and has requested that VLAP does not increase its sample load, at least for this summer. This is the case for all lakes in the program.”

Alyssa Daigle

Volunteer Lake Assessment Program Coordinator

- **DES Operations Funding**



- **DES Staffing**



- **2026 *E. coli* Testing**



- **Total Phosphorus Testing Fee**



“Due to budget restrictions and staffing shortages at the DHHS Public Health Lab, we won’t be able to offer *E. coli* testing through VLAP this summer.”

Alyssa Daigle

Volunteer Lake Assessment Program Coordinator

High *E. coli* Levels – What We Know



- July 24 – Molly tested and found **23 MPN/100 mL** and **13 MPN/100 mL**
- July 29 – Town of Jaffrey twice a month testing found **117 MPN/100 mL** and **167 MPN/100 mL**
- NH State standard for freshwater beaches is **88 MPN/100 mL**
- Advisory is issued if any one freshwater sample exceeds **158 MPN/100 mL** or if two freshwater samples from one sampling event exceed **88 MPN/100 mL**

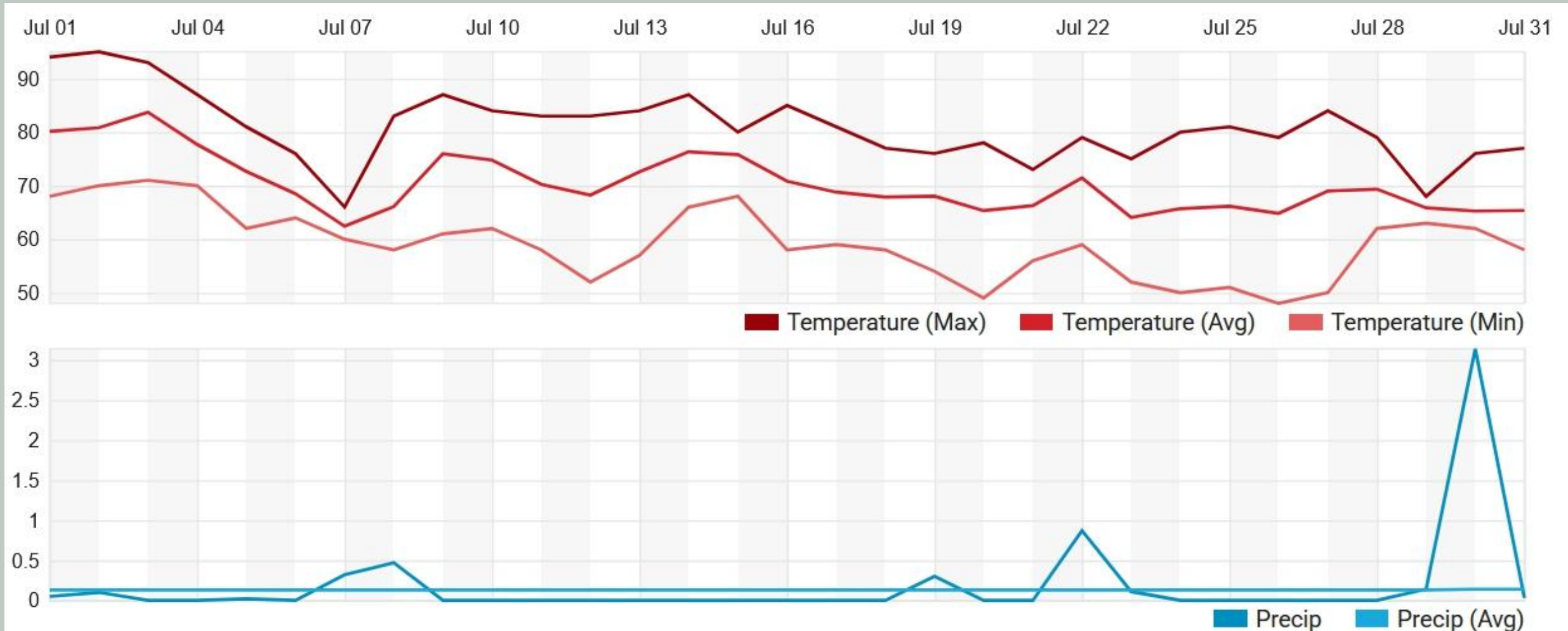
More About *E. coli* & Coliform Bacteria

- Coliform bacteria come from the fecal waste of warm-blooded animals (birds, humans, etc.)
- Some coliform bacteria can make us sick (and our pets too) so we don't want high quantities in the pond
- Gets into the pond through: rain events washing fecal material into the pond, septic leaks or failures, etc.
- Shattuck Park (town beach) had a bacteria closure in July 2020, may have been anomaly
- Historically our bacteria numbers have been very low – only 2008 and 2011 had high counts



E. coli – Was it a runoff event?

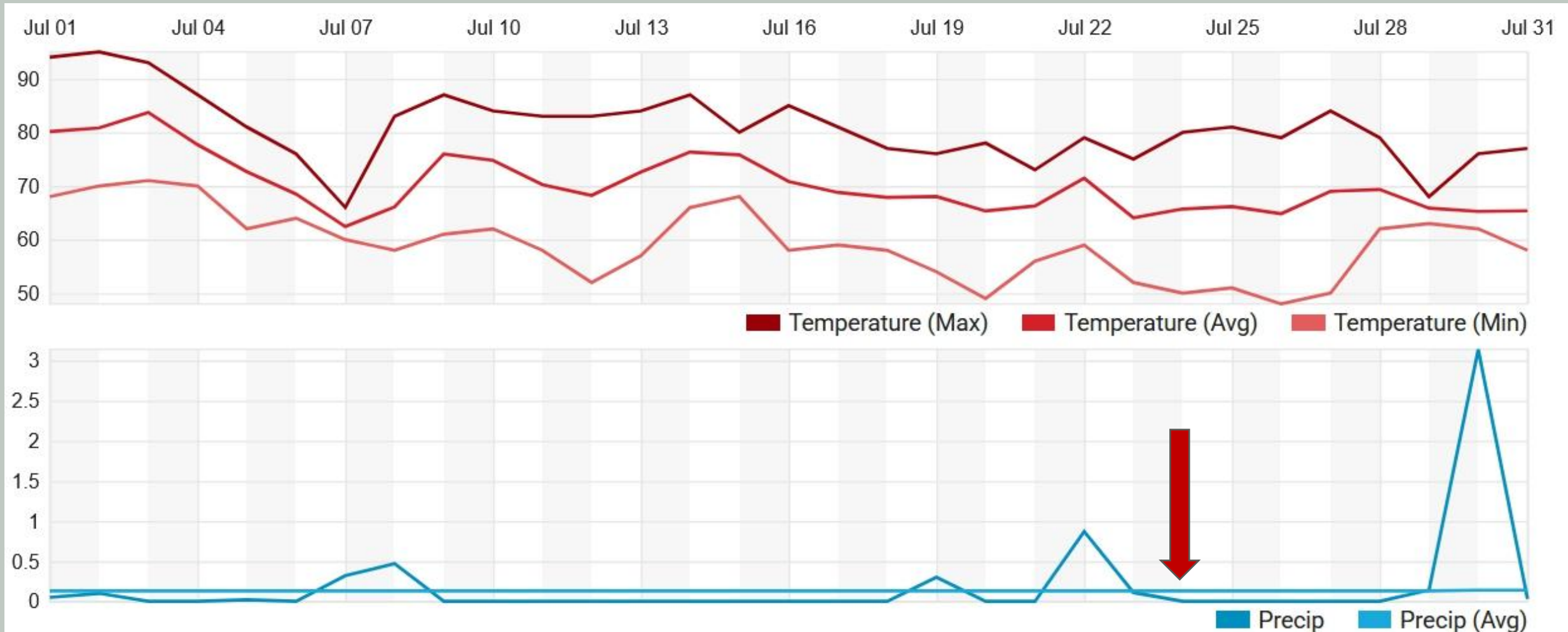
Jaffrey Airfield Silver Ranch Airport Station Historical Weather Data – July 2026



Source: <https://wu-next-prod.wunderground.com/history/monthly/us/nh/jaffrey/KAFN/date/2026-7>

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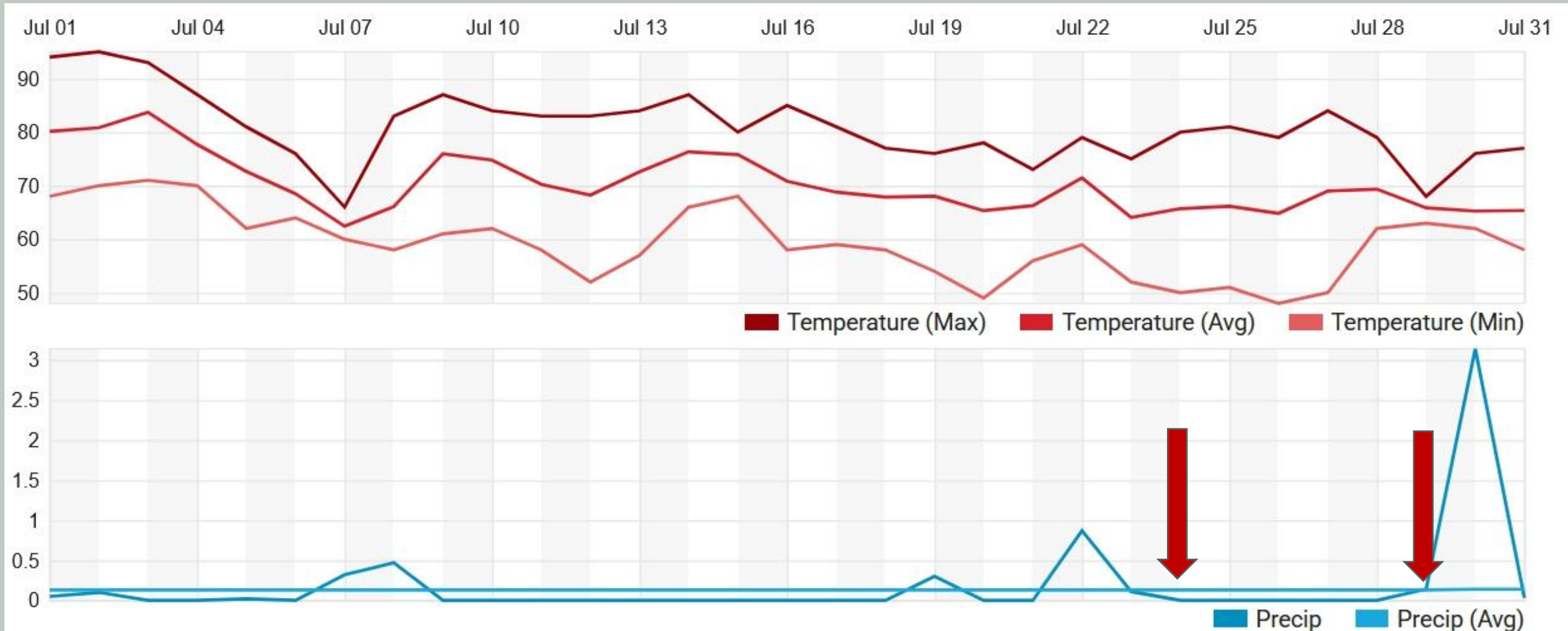
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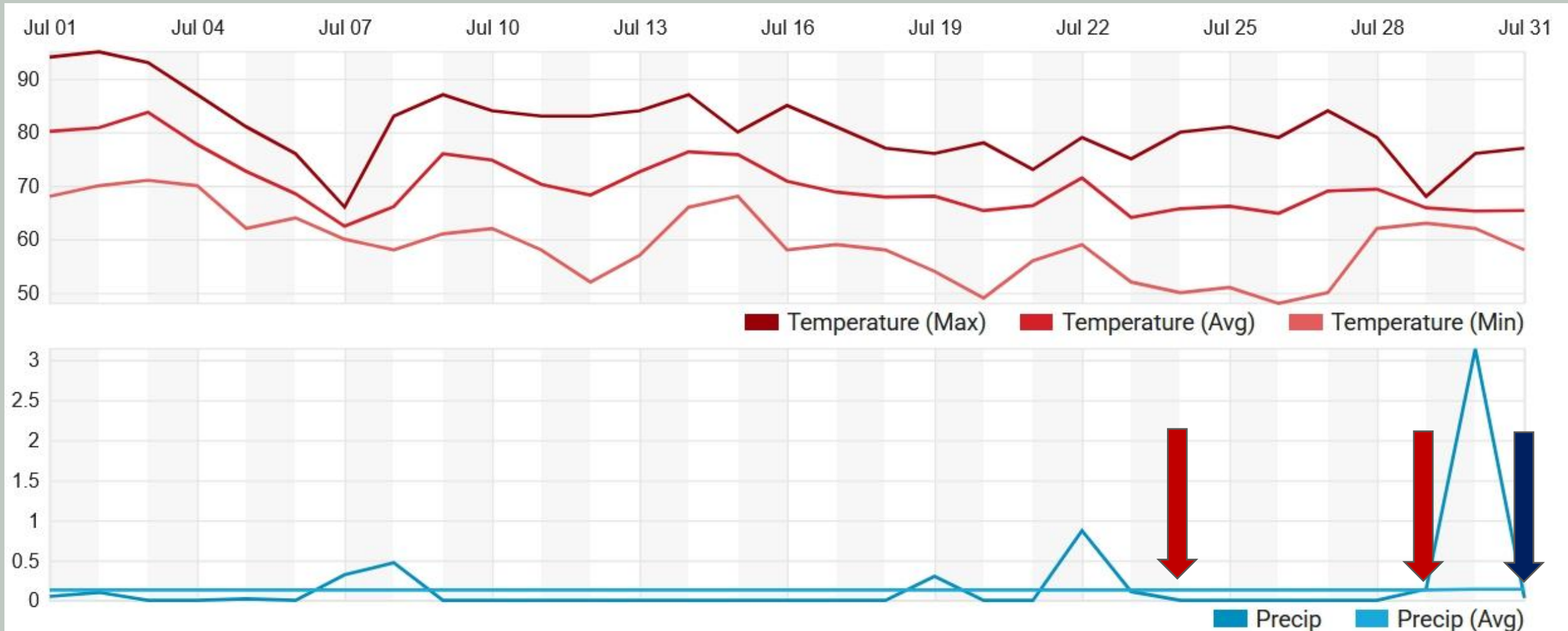
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E. coli – What now?

- Town of Jaffrey tested again on 7/31 (yesterday)
- Town expects test results by Monday and will update everyone on the town website and Facebook pages
- If possible, the town will share what may have caused this event



<https://weillcornell.org/news/e-coli-infection-how-to-stay-safe>

Avoiding a Harmful Algal Bloom (HAB)



- None on record for Thorndike Pond so far
- Other NH lakes and ponds have had harmful algal blooms this year
- The last 5 years have broken state records for harmful algal blooms in NH

Harmful Algal Blooms

SMALL BLOOMS

- Can clear naturally
- Can clear with some interventions
- Temporary restrictions on water recreation
- Temporary toxin warnings
- Short term health effects

LARGE BLOOMS

- Long term or permanent “Lake Death”
- Human health hazards, in water and in air near pond
- Lethal to smaller animals
- Decreased quality of life near pond, damaged ecosystem
- Well water contamination
- Property value decreases

Loon Health & Pesticides

Pepper & Lisa shared an article about recent NH research about loons and how PFAS chemicals and heavy metal pollution in the environment harm them

Thorndike Pond wasn't part of the loon egg study; we could do environmental testing for these pollutants

These pollutants harm us too!

<https://newhampshirebulletin.com/2026/07/14/th-e-more-researchers-look-the-more-contaminants-they-find-in-new-hampshires-loons/>



How You Can Help:

- **Weed watching** - Contact: David Nash
- **Lake hosting** - Contact: Jim Potter
- **Lake Smart Training** - Contact: Amy McGregor-Radin

- Get your **septic tank** inspected
- Do **NOT** put fertilizers on your property
- Keep a **vegetation buffer** around the pond's edge
- Strategically **direct rain water to filter** through soil, not runoff
- Thoroughly research **pesticides and pet medications** and avoid those that disrupt pond ecosystems
- **Monitor pond ice OR donate caught fish** for mercury testing
- **VOTE** to support DES funding and lake-friendly legislation

Questions?

Thank you

603-801-0110

mansfieldme@gmail.com