



**LAKES MANAGEMENT ADVISORY COMMITTEE**  
NH Lakes Management and Protection Program

New Hampshire Department of Environmental Services  
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**LMAC MEETING MINUTES**  
**April 1, 2021**  
**Online Meeting/Conference Call**  
**9:00 am to 11:00 am**

**Members Present**

David Packard, Chair  
Garret Graaskamp, V. Chair  
Shane Bradt  
Capt. Tim Dunleavy  
Tiffany Grade  
Mark Hemmerlein  
Shawn Jasper  
Janet Kidder  
Frank Lemay  
Jared Maraio  
Lisa Morin  
Dick Smith

**Representing**

New Hampshire Lakes Association  
Executive Director, F&G  
Scientific Community, UNH  
Commissioner, DOS  
Conservation Commission  
Commissioner, DOT  
Dept. of Agriculture, Markets & Food  
Planning Boards  
NH Business and Industry Association  
NH Travel Council  
State Conservation Commission  
Fishing Interests

**Term**

August 1, 2021 V  
Indefinite NV  
August 22, 2019 V  
Indefinite NV  
September 19, 2022 V  
Indefinite NV  
Indefinite NV  
August 1, 2023 V  
July 8, 2022 V  
August 1, 2022 V  
August 1, 2021 V  
November 17, 2019 V

**Members Absent**

Eric Feldbaum  
Jennifer Gilbert  
Rex Norman  
Bruce Temple  
Vacant  
Vacant  
Vacant

Commissioner, DNCR  
Director, Office of Strategic Initiatives  
Municipal Officials  
Fish & Game Commission  
NH Assn. of Conservation Commissions  
NH Association of Realtors  
Marine Dealers Association

Indefinite NV  
Indefinite NV  
August 1, 2021 V  
August 22, 2021 V  
August 22, 2022 V  
June 27, 2020 V  
August 22, 2017 V

**NHDES Staff Present**

Ted Diers Watershed Management Bureau  
Steve Landry Watershed Assistance  
Dave Neils Biology, Jody Connor Limnology Center  
Tom O'Donovan Water Division  
Tracie Sales Rivers and Lakes Programs  
Sally Soule Watershed Assistance – Coastal Watersheds

**Guests Present**

Michelle Davis NH LAKES

**I. Welcome, Roll Call, and Introductions**

Chair David Packard called the meeting, conducted via online meeting and conference call, to order at 9:03 am under the emergency provisions of RSA 91-A, New Hampshire’s Right-to-Know law, as allowed by Emergency Order 12 under Executive Order 2020-04 in light of the COVID-19 outbreak. Chair Packard conducted a roll call of LMAC members, invited any guests to introduce themselves, and welcomed all present.

Tom O’Donovan provided background on Dennis Deziel, NHDES’ new Assistant Commissioner.

**II. Consent Agenda**

1) Acceptance of January 11, 2021 LMAC Meeting Minutes

- **Frank Lemay motioned to accept the meeting minutes of January 11, 2021 as presented. Seconded by Jared Maraio. The motion passed unanimously with one abstention via roll call.**

LMAC Voting Members:	Approve Minutes
David W. Packard, Chair	Yes
Shane R. Bradt	Yes
Tiffany Grade	Yes
Janet Kidder	Abstain
Frank Lemay	Yes
Jared Maraio	Yes
Lisa Morin	Yes
Rex Norman	
Richard D. Smith	Yes
Bruce Temple	
Conservation Commissions - Vacant	
Realtors - Vacant	
Marine Trades - Vacant	

2) Notice of Surplus Land Disposals Not Near Any Lake – None

**III. Nippo Lake Management for Control of Cyanobacteria**

Dave Neils, Director of the Jody Connor Limnology Center, gave an overview of the planned application of aluminum at Nippo Lake, which is intended to restore the recreational use and ecological health of the lake. Nippo has had full blooms of cyanobacteria in at least eight of the last ten years due to high internal loading of phosphorus (P). Cyanobacteria requires P for growth. Aluminum controls cyanobacteria by binding with P, which makes it unavailable for cyanobacteria growth. Monitoring at Nippo showed that there was no dissolved oxygen over approximately half of the lake bottom, and P is released from the sediment into the water when there is no oxygen at the bottom.

Aluminum has been used for decades around the country to control cyanobacteria, but only once before in New Hampshire, at Keyser Lake in 1984. Keyser Lake has not had a cyanobacteria bloom since it was treated.

Research determined that 34% of the phosphorus load in Nippo Lake was from internal loading, which is considered high, and 44% was from the watershed. The ecological health of the lake is expected to improve post-project, as measured through indicators like increased dissolved oxygen and a lack of cyanobacteria blooms.

The lake association, in partnership with NHDES Coastal Watershed Supervisor Sally Soule, resident land holders, and a private golf course, have already implemented best management practices and completed projects to reduce external P loads. About \$600,000 has been spent on Nippo Lake water quality improvements so far, from EPA section 319 grants, cash, and in-kind work. At this point, there are no additional areas within the watershed where it is possible to reduce P inputs into the lake, meaning the internal load is the primary source to address. The lake association was the primary instigator of the project.

This project proposes treating 56 ac., the area of the lake that is greater than 15' deep, in the spring of 2021. The alum (aluminum sulfate and sodium aluminate) is applied by barge (pontoon boat) as a surface injection in three phases. Phase 1 is a 10 ac. pilot plot on one day to test the process and monitor pH. Phase 2 will cover the remaining 46 ac. in four days. Phase 3 will occur a week later and over the whole area with a second dose over the course of another four days. Cost of the treatment is expected to be \$200,000.

A quarter of the lake will be treated each day, so fish and other mobile species can avoid the treatment areas. Invertebrates, zooplankton, and phytoplankton are already altered under existing conditions, and the floc (precipitate on the bottom) will be deeper than species like freshwater mussels live because treatment is in the deeper areas of the lake. Monitoring, especially for pH as aluminum is toxic to fish at high or low pH, will occur during treatment and over the following year.

The public hearing is April 20, 2021 at 2:00 PM, and the comment period closes May 7, 2021.

Chair Packard asked about any potential restrictions on use of lake or fishing during the treatment. Dave Neils described that there are no known risks to use during treatment, so no restrictions are listed in the permit. Aluminum is not bio-accumulative, so it will not be available to the food chain.

Mark asked about the permit type for this project. There is no existing permitting process for this type of project, which differs from most types of permitted projects in its temporary nature, the lack of a fixed discharge point, and its overall benefit to the waterbody. After consulting with EPA, NHDES issued a NH Water Quality Surface Water Discharge Permit under Env-Wq 300.

Garret asked how the internal loading at Nippo compares to other lakes in NH. Dave Neils described that most lakes do not have phosphorus budgets, but that the internal loading is likely not as high as Nippo. Developing a phosphorus budget for a lake requires an expensive, season-long monitoring effort. Nippo Lake is a demonstration project. Ted Diers clarified that such intervention will be rare because in most lakes external loading is an ongoing challenge.

Garret asked about the residual effects of treatment. Dave Neils described that enough aluminum will be added to bind the phosphorus long-term, making both unavailable to become toxins.

Dick expressed concern about putting chemicals in a waterbody, and that there may be effects we do not think to look for. He additionally commented that the lake does not currently have public access, and expressed concern about that in light of the expenditure of public funds.

#### IV. Lake-Related Legislation

1) Present and Discuss Revised Review of Legislation, Actions, and the LMAC Policy and Legislation Subcommittee – Postponed

2) Present and Discuss Revised LMAC Standing Legislative Positions – Postponed

3) 2021 Legislative Status and Positions

Tracie presented updates regarding several bills:

- HB99 (LMAC support): An amendment removes the bill’s language about seasonal platforms not obstructing a view. A letter of support was submitted, as the amendment was not a dramatic change to the values LMAC had expressed interest in.
- HB216 (LMAC support)/HB630 (LMAC track) – House Judiciary is likely killing both bills (or portions of those bills) that would allow boards and commissions to meet remotely.
- SB95 (LMAC track)– This bill contradicts itself: Part 1 would allow remote meetings, Part 2 would not except under emergency conditions.
- SB129 (not previously looked at by LMAC) – An amendment adds ‘appreciably’ to the phrase “...do not *appreciably* jeopardize the continued existence of such species...” and adds a mitigation fund similar to the ARM fund for unavoidable impacts to threatened wildlife and its habitat.

#### V. LMAC Member “Info-mercial” – Jared Maraiio, Tourism Interests

Jared is the Sales and Marketing Director for the MS Mount Washington and a board member of the Lakes Region Tourism Association.

2020 was an “interesting” year, as business fell 60-70% across tourism-related sectors. The Mt. Washington cruise operated at 50% capacity, with a reduced number of cruises. Advance sales and reservations suggest a rebound for the coming summer season. Boat and real estate sales and real estate rentals are all up, but there is lingering uncertainty and potential imbalances between supply and demand. Scenic beauty, wildlife, and associated recreation are huge factors in people’s decisions to travel to NH, and the industry is interested in maintaining those draws. Tourism interests are concerned about wake boat legislation and would not want to see a ban.

The Mt. Washington’s business is tied to factors like lake level and drought management. They stopped cruises early in 2020 because of low lake levels. The presentation to the LMAC and RMAC in January helped him understand how the Dam Bureau manages lake levels during droughts.

In response to Chairman Packard’s request, Jared said that he can share outcomes from the Lakes Region Tourism Association’s meetings every other month.

#### VI. LMPP Updates – Tracie Sales

1. LMAC Membership

- Bruce Allen (NH Association of Conservation Commissions) has stepped down. Tracie is waiting for Governor and Council to process his resignation before contacting NHACC.

- Mary Truell (NH Association of Realtors) has stepped down. Tracie has contacted the Realtor's Assoc., and Mary said she would, too.
- The Marine Trades Association vacancy continues; recommendations are welcome.
- Shane acknowledged he needs to follow through on seeking a reappointment letter from UNH, as his term has expired.
- Dick's term has also expired. Tracie will follow up.
- Tracie highlighted four membership terms ending in August: Dave, Lisa, Rex, and Bruce T.

Tracie additionally summarized subcommittee membership (also available under LMAC forum):

- Policy and Legislation – Dave and Dick
- Instream Flow joint committee with RMAC – Dave. Additional members are welcome.
- Shoreland (never convened) – Dave, Shane, Jennifer (representing both Lakes & Rivers)
- Water Quality Indicators – Dave, Shane, Garret.
- State-owned land mapping (never convened) joint committee with RMAC – Shane, Rex

## 2. Instream Flow Update

Tracie summarized recent activity in the Instream Flow Program:

- The RMAC also approved the proposed priority rivers for protected instream flow (PISF) development that were presented in January. A joint hearing with the House and Senate committees has tentatively been scheduled for Thursday, April 29, 2021, 5:30 to 7:30 pm.
- NHDES interviewed three applicants for the PISF study contract on the Ashuelot and Isinglass rivers. All three are strong applications, but were a little different so NHDES has requested additional information to better compare applications.
- NHDES is watching drought monitor information, and remains concerned about low snowpack and limited spring rain so far.

## 3. Alteration of Terrain and Wetland Rule Changes

Tracie announced that NHDES and NH Fish and Game will host a virtual public hearing regarding possible rulemaking affecting the current Threatened and Endangered Species rules within the Alteration of Terrain Program on Thursday, April 8, 2021 at 2:00 p.m. Wetland rule changes are also coming, but have not been published at this time.

## VII. New Business and Action Item Review

### 1) New Business

Shane helped lead a virtual cyanobacteria conference on collaborative monitoring approaches. Interest exceeded capacity for the workshops and conference sessions. Recorded sessions can be found on the conference's webpage <https://blog.cyanos.org/cmc2021/>. He also mentioned the ITRC documents that Garret sent around, confirming that there are many cyanobacteria resources available for those interested.

### 2) Action Item Review

Staff will draft letters of testimony, and will share the notice of the Nippo Lake public hearing.

### 3) Next LMAC Meeting – Call of the Chair. Ideas are welcome for an LMAC site visit location.

**Chair Packard adjourned the meeting at 11:00 am.**