

# 2020 Lakes Congress Session Descriptions – Friday, May 29

## 9:00 a.m. – 9:45 a.m. Keynote Address

### Lakes as Sentinels of Climate Change (*Winnepesaukee Ballroom*)

*Presented by: Craig E. Williamson, Professor and Ohio Eminent Scholar of Ecosystem Ecology*

Climate change is warming the surface waters of lakes around the world. But does this matter? Does warming make a difference to water quality, to the aquatic organisms that live in lakes, to the humans that live around lakes, and to the ecosystem services that lakes provide to humans? Lakes are thus sentinels of not only climate change, but of changes in land use and other human activity within the surrounding terrestrial catchment. How can we use this knowledge of how lakes are responding to climate change to improve the effectiveness of our ability to protect and preserve water quality and wildlife in lakes, one of New Hampshire's most valuable assets? Join us for this inspiring keynote to find out how.

#### About our Keynote Presenter:

Craig Williamson is the Ohio Eminent Scholar of Ecosystem Ecology at Miami University in Ohio where he leads the [Global Change Limnology Laboratory](#). His expertise is in the ecology of ultraviolet (UV) radiation and climate change, with a current focus on the effects of changing water clarity on lakes. His research extends worldwide. He is the Chief Scientific Adviser of the Pocono Lake Ecological Observatory Network ([PLEON](#)), an outreach program on public education and monitoring of Pocono lakes. He is active in the Global Lake Ecological Observatory Network ([GLEON](#)) where he leads the [Climate Sentinels Working Group](#), and he serves on the United Nations Environment Programme Environmental Effects Assessment Panel ([UNEP EEAP](#)).

## 10:00 a.m. – 10:50 a.m. Concurrent Session I

### A. Paleolimnology: Studying the Past to Conserve Our Lakes into the Future

*Presented by: Lisa Donor, Associate Professor, Environmental Science and Policy and Center for the Environment, Plymouth State University*

Paleolimnology is the study of physical, chemical, and biological information preserved in lake sediments to track past changes in watersheds. Lisa and her team have studied the sediments of several New Hampshire lakes. Attend this session and find out what they have learned and how this information can be used to help conserve our lakes going forward.

### B. The State of Lakes and National Policies

*Presented by: Lisa Borre, Senior Research Specialist at the Cary Institute of Ecosystem Studies and North American Lake Management Society President-elect*

The health of lakes around the world are threatened by a decline in water quality due to climate change, harmful cyanobacterial blooms, invasive species, and other problems. Climate change is also having profound effects on lake health. Rising water temperatures, loss of winter ice cover, increased evaporation, and more extreme weather events are further complicating already challenging lake protection and restoration efforts. Now more than ever, we need to double down on lake and watershed management, including stronger protections for lake shorelines and riparian areas and implementing integrated, watershed-wide lake basin management, to address the challenges of today and to build resilience of lake ecosystems for the future. This session will provide background about the state of lakes and federal programs, including the Clean Lakes Program.

### C. Lakeside Septic Systems

*Presented by: Gary Spaulding, Owner & President Advanced Onsite Solutions, LLC*

At one time, waterfront property owners didn't have many options for septic systems; a 50-gallon steel drum with holes in the side was the best way get rid of wastewater. Wastewater technology has changed a lot since then and it continues to change each year. Gary will go over the technology that is available in New Hampshire and look at the pros and cons of the different systems available for waterfront property owners.

## 10:00 a.m. – 10:50 a.m. Concurrent Session I (continued)

### D. New Hampshire's Shoreland Act

*Presented by: Jason Aube, Shoreland Program Outreach Coordinator, New Hampshire Department of Environmental Services*

The New Hampshire Shoreland Water Quality Protection Act was enacted to strike a balance between wise development and protecting New Hampshire's lakes and shorelands. This workshop will provide a brief history of the Shoreland Water Quality Protection Act, an overview of the minimum standards, a review of the changes to the *Administrative Rules* that became effective on December 15, 2019, and the Shoreland Permitting process. Jay will also cover how the law is enforced and case studies will be reviewed to demonstrate how compliance is achieved.

### E. "On Background:" How to Talk to the Media

*Presented by: Sam Evans-Brown, Host Outside/In, New Hampshire Public Radio*

Dealing with reporters can be terrifying: they take your story and make it their own. But, the news media is not trying to ruin your day, they are attempting to perform a public service. This workshop will help you to understand what reporters are trying to do, how to talk to them, how to pitch them ideas, and what to do if you think you've been wronged by one.

## 11:00 a.m. – 12:00 p.m. Concurrent Session II

### A. Climate Change and New Hampshire's Loons

*Harry Vogel, Senior Scientist and Executive Director, Loon Preservation Committee*

As air temperatures warm and precipitation patterns change, New Hampshire's wildlife are being impacted. Harry will discuss how the Common Loon is facing increasing challenges in a warmer and wetter New Hampshire and what is being done to help loons cope with these challenges.

### B. The State of Lake Advocacy in New Hampshire

*Presented by: Tom O'Brien, President, NH LAKES*

So what happened in the 2020 legislative session that affects our lakes and ponds? What are the core issues NH LAKES advocates on? Attend this session and find out. Tom will provide a summary of the 2020 legislative session and how NH LAKES participated in the process.

**C. Putting Our Lakes on a Low Salt Diet**

*Presented by: Dave Neils, Chief Aquatic Biologist, New Hampshire Department of Environmental Services; and Chris Avery, Salt Reduction Program Coordinator, New Hampshire Department of Environmental Services*

A recent analysis of data from the Volunteer Lake Assessment Program has indicated that approximately forty-one percent of the waterbodies in the program have a worsening trend in specific conductance which can be partially linked to deicing materials. As our climate changes, it is likely our deicing needs will change as well. Dave and Chris will discuss how efforts by property owners to curb the use of deicing materials will be important as will programs that educate commercial deicing applicators and property owners. The New Hampshire Green SnowPro Program is one such program that includes over 1,500 certified contractors and has received a great deal of support statewide.

**D. Cyanobacteria and New Hampshire's Lakes**

*Presented by: Amanda McQuaid, Harmful Algal and Cyanobacterial Bloom Program Coordinator, New Hampshire Department of Environmental Services*

Cyanobacteria live in waterbodies around the world, including New Hampshire's lakes. Because cyanobacteria are capable of producing toxins that are harmful to people and pets, the New Hampshire Department of Environmental Services informs the public when cyanobacteria blooms occur. During 2019, 35 cyanobacteria advisories were issued for 30 different waterbodies. Attend this session and find out what cyanobacteria blooms look like and what advisories mean for recreation and drinking water purposes. Amanda will also briefly discuss what we might expect with cyanobacteria blooms as the climate changes.

**E. Taking the Lead: Lake Associations' Roles in Watershed Management Plan Development and Implementation**

*Facilitated by: Sara Steiner, Volunteer Lake Assessment Program Coordinator, New Hampshire Department of Environmental Services*

Creating a Watershed Management Plan can be a daunting task. Where do you start? Who should be involved? How do you implement it? Join us as three lake associations share their experiences.

**Talk 1: Harnessing Local Expertise to Develop a Watershed Management Plan on a Small Budget**

*Presented by: Joan Gorga, Town of Antrim Recreation Department*

Gregg Lake in Antrim hosts a popular public beach, boat launch, and clusters of mostly seasonal homes scattered along its shores. The Gregg Lake Association is open to all who have an interest in the lake's future, but dues are low and money is scarce. In 2016, concerns about unprecedented algal blooms led to stepping up water quality monitoring and proposing development of a watershed management plan (WMP).

Those who volunteered to join the effort represented many levels of local government, as well as lake homeowners, with varied levels of expertise. We realized the more we did ourselves, the better we'd understand how to protect our lake for the long term. We restricted grant funds requested for WMP development to areas where professional guidance was needed; our volunteer efforts would be a more-than-sufficient match and no money was required from the town or lake association.

To develop support and gather input, we used every opportunity to speak or write about the project. We included critical stakeholders, such as the town Road Agent, from the beginning. We visited homes to survey septic systems and listened to comments and suggestions. We analyzed our own data and presented it to the public. Our upcoming challenge is to balance strong desires to act immediately with composing a manageable long-term plan to protect Gregg Lake's water quality.

## **Talk 2: Messer Pond's Watershed Management Plan: From Start to Finish – Lessons Learned**

*Presented by: John Doyle, Messer Pond Association*

Watershed planning is a long-term effort requiring a group's commitment to get the job done. What does it take for a small lake community to succeed at developing and implementing a watershed management plan? What challenges do they face and how do they harness and retain the support of local and state groups to work towards a common goal?

Messer Pond in New London has monitored water quality since 1996. Trends indicated a significant decline in water clarity, with nutrient and chlorophyll levels fluctuating above acceptable thresholds for mesotrophic lakes. In 2012, water quality assessments shifted from full-support to non-support in the category of Aquatic Life Use for parameters phosphorus, chlorophyll-a and pH. Messer Pond was officially listed as impaired in the 2012 305(b)/303(d) report. In response, the Messer Pond Protective Association (MPPA) initiated the watershed management planning process in 2013.

A small volunteer association, the MPPA has been involved every step of the way, from hiring a consultant, conducting advanced sampling, developing education and outreach programs, applying for grants, and raising funds. The MPPA continues to work with local and state organizations to spearhead and implement plan recommendations and share valuable experience and lessons learned with similar small organizations thinking of tackling the development of a watershed management plan.

## **Talk 3: Outdated and Incomplete: How Can We Get Community Support and Funding to Update a Watershed Management Plan?**

*Presented by: Kathleen Curwen, Eastman Lake Association*

Eastman Community Association in Grantham was founded in 1971 and the Eastman Community Lakes and Streams Committee has monitored water quality since 1987. Eastman's watershed is mainly forested with 1,450 residences built on 3,600 acres around the 1-mile by 2-mile lake. Eastman contains 13 miles of paved and 42 miles of unpaved roads that the community plows and salts each winter, and is also bordered by Interstate 89 and a busy local road.

Eastman developed a Watershed Management Plan (WMP) in 2009. The community then implemented plan recommendations to manage polluted runoff water, reduce nutrient loading, increase sampling to identify chloride/conductivity hot spots, and reduce chloride loading. Efforts resulted in the pond's trophic classification improving from eutrophic in 1987 to mesotrophic in 1999 during which time there were measurable improvements to water quality.

Recent changes in watershed characteristics and water quality have indicated the need to re-evaluate the WMP. More frequent and severe storms are moving sediment into the lake despite the community-wide adopted BMPs, and chloride levels are rising at an alarming rate. Educating the community and persuading the Board of Directors and the CFO of the Eastman Community Association to budget for the cost of updating the WMP has been a challenge. After three years, public meetings, lobbying, and fund-raising, work to update the WMP will begin in 2019.

## 12:10 p.m. – 12:50 p.m. Lunch Table Discussion Topics! – Winnepesaukee Ballroom

**Networking opportunity back by popular demand!** During the lunch session, we will offer the opportunity for attendees to sit together in the Winnepesaukee Ballroom at designated tables to discuss specific lake-related topics. See the signs on the tables and the insert in the conference folder for more information.

## 1:00 p.m. – 2:30 p.m. Concurrent Session III

### A. Communicating About Climate Change - Webinar

*Presented by: Eric Eckl, Owner, Water Words That Work*

Conservation organizations are increasingly weaving climate science into their efforts to protect land and water. In this webinar session, you will explore climate change knowledge, attitudes, and beliefs in America. You will discover how your stakeholders fit into that picture and how to deliver messages that work for them.

This webinar session will be limited to 20 attendees to ensure a high quality, interactive experience. Sign up early to reserve your spot!

### B. Connecting Climate Change Impacts and Lake Health: Taking Steps to Promote Resiliency

*Presented by: Sherry Godlewski, Climate Change Adaptation and Resilience Manager, New Hampshire Department of Environmental Services; and, Laura Diemer, Project Manager and Monitoring Lead, FB Environmental Associates*

Sherry and Laura will discuss the various climatic changes occurring globally, nationally, and the impacts we are experiencing here in New Hampshire. Local data from New Hampshire Climate Assessments and predicted future trends will be presented. They will focus on impacts to our lakes and implications for lake health. Ideas and tools for tracking lake health over time, in the context of climate change, as well as strategies for creating more resilient lake watersheds, will be shared.

### C. Creating a New “Norm” of Lake-Friendly Living on Your Lake

*Presented by: Krystal Costa Balanoff, Conservation Program Coordinator, NH LAKES; Steve Avery, President & Local LakeSmart Program Coordinator, Deering Lake Improvement Association*

Learn how communities are using the social science behind the LakeSmart Program to establish a new conservation ethic of lake-friendly living. Krystal will explain how this education, evaluation, and recognition program inspired property owners to take action during the 2019 pilot season. Steve will share why the Deering Lake Improvement Association adopted the LakeSmart Program, and how they hope the program will help their lake community achieve their goals. Learn how to tailor the LakeSmart Program to your group and community to keep your lake clean and healthy, now and in the future.

**D. Aquatic Invasive Species Open Forum - Question and Answer Session**

*Presented by: Amy Smagula, Exotic Species Program Coordinator, New Hampshire Department of Environmental Services*

This session will be an open forum for discussion and questions and answers with the state's Exotic Species Program Coordinator. There never seems to be enough time for unstructured discussion around the topic of aquatic invasive species (AIS), to answer the questions you want answered. Bring your questions about AIS in New Hampshire, and learn how biologists are tracking and managing AIS.

**E. Building a Better Membership Program from the Lakebed Up**

*Presented by: Erin Graichen, Membership Coordinator, NH LAKES*

In membership recruitment and retention, there's always something new to learn! Erin Graichen, NH LAKES Membership Coordinator, will share best practices and ideas for building a robust and sustainable membership. Bring your questions—there will be time to discuss solutions and share ideas with other association leaders facing the same challenges.