

From Amy P. Smagula **the Editor**

The summer 2025 issue of *LakeLine* focuses on topics related to “Harmful Algal Blooms,” including various aspects of blooms, from forecasting to causal agents, and special characteristics of cyanobacteria. Our “Lakespert” reminds us that cyanobacteria are a natural part of



our plankton community that sometimes manifest as blooms under various circumstances.

Blake Schaeffer, Michael Paul, Donald Benkendorf, Gregg Serenbetz, Deron Smith, and John M. Johnston provide a brief overview of cyanobacteria and harmful algal blooms, and problems posed by blooms to the functional values of our surface waters. They go on to discuss a unique and valuable bloom forecasting approach to help identify harmful algal blooms before they become worse in a waterbody. With the aid of models and satellite data, scientists at EPA, along with other federal partners, built a predictive forecasting tool to help lake managers and others determine if a bloom is imminent in larger waterbodies across the United States. A future focus is to expand this forecasting tool to smaller waterbodies as well.

Gertrud Nürnberg highlights a number of simple approaches to determining if and how often cyanobacteria and HABs are occurring in a particular waterbody. She focuses on mostly surface blooms and includes a variety of tools or existing data sources that are readily available. Even simple data gathered by grassroots efforts can inform scientists of trends occurring within waterbodies.

LakeLine encourages letters to the editor. Do you have a lake-related question? Or, have you read something in *LakeLine* that stimulates your interest? We'd love to hear from you via e-mail, telephone, or postal letter.

In this issue, **Elizabeth Kelly** shares what happens to downstream waters when two hurricanes make landfall over parts of Florida, bringing with them large amounts of rainfall. Due to high water levels, releases from Lake Okeechobee in Florida were made to downstream waters. Elizabeth's article focuses on the time lapse between flood water release events, and downstream water quality parameters, including cyanobacteria populations.

George Knoecklein reviews the evolution of the science and understanding of gas vacuoles in cyanobacteria cells, as they relate to cyanobacteria buoyancy in the water column. He also discusses the impacts of climate change on cyanobacteria blooms.

In this issue, we have a guest “Lakespert,” Madeline Reilly, who is serving as the 2025 NALMS Education, Communications, and Outreach (ECO) intern. Madeline tackles the topic of cyanobacteria from an education and outreach perspective, to share facts and information about cyanobacteria and causes of blooms.

Also in this issue, our NALMS Executive Director, Philip Forsberg, prepared a conference preview for the NALMS 2025 Annual Symposium, to be held in Myrtle Beach, South Carolina, from November 4-7, 2025. To learn more about the conference, find the layout in this issue, or visit <https://www.nalms.org/nalms2025/>. Also, remember to snap some photos this summer, and submit your best shot to the NALMS 2025 Photo Contest.

Details on the contest are also included in this issue.

NALMS President, Victoria Chraibi, reminds us to spend time appreciating the values of our lake resources, whatever or wherever they. NALMS celebrates July as Lakes Appreciation Month and encourages everyone to take some time in or by a favorite lake.

We hope you enjoy this issue and have a great summer!

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Letter to Editor

Reading through the Spring 2025 issue of *LakeLine* (Watershed Work – Little Things Add Up) brought back a nagging peeve – we lack a meaningful critique of and guidance for the role of watershed management in restoring lake quality.

From the beginning (of NALMS and lake management categorically), it has been presumed that managing a watershed was a critical and necessary element of good lake management. While there is plenty of credible evidence that watershed disturbance and development has caused lake impairments (for nutrients and sediments mostly), there is little evidence that reversing the process using a “little things add up approach” or best management practices (BMPs) results in tangible, meaningful improvements to lake quality. To the contrary, the record suggests watershed management requires substantial pollution reductions involving major engineering interventions to achieve

(Letter to the Editor, continued on p. 29 . . .)