FOR IMMEDIATE RELEASE – September 18, 2024

Media contact: Jill Kurtz, Communication Chair
Smith Mountain Lake Association
703-283-5813
communcation@smlassociation.org

SMLA Releases Results of Blackwater River Assessment

SMITH MOUNTAIN LAKE, VA – When Harmful Algal Blooms (HABs) affected SML in 2023, the Smith Mountain Lake Association (SMLA) decided to take action to better understand the conditions of the Blackwater River portion of the lake watershed. SMLA hired Princeton Hydro, LLC, a professional engineering and lake management firm, to conduct a watershed assessment for the Blackwater arm of SML. The report from that effort has just been released.

The "Blackwater River Sub Watershed and Phytoplankton Assessment" report shares the findings from the study conducted throughout the spring and summer of 2024. The report is an important step toward answering questions about the risk for future HABs at the lake and how to prevent future HABs.

Princeton Hydro's assessment provides a better understanding of land uses and conditions around the Blackwater. It also offers suggestions for mitigating nutrient loads with the intent of reducing future HABs.

Key findings include:

- A historic data review indicates that the nutrient phosphorus has been known to be coming from outside the lake from non-point sources. Phosphorus is widely accepted to be the primary fuel of cyanobacteria (blue-green algae) which can overgrow to cause HABs. Land use contributes large amounts of phosphorus to any system, whether it is urbanization, overuse of fertilizer, malfunctioning septic systems, or agricultural practices. Water quality monitoring data for phosphorus indicates that high levels of this nutrient can be found in all tributaries entering the SML system.
- Nutrient loading modeling was developed for each sub watershed of the Blackwater watershed. The estimated loads of nutrients being introduced into the watershed is reported. Based on these results, a series of specific watershed-based management techniques that can reduce the nutrient loads to a lake have been provided. These techniques vary from things individual homeowners can do to full stream bank restoration projects and public education about the value and importance of specific management practices.
- A limited sediment sampling effort indicates that the sediment type is more critical to the overwintering abilities of the cyanobacteria that cause HABs than other factors.

This new report supplements the knowledge gained through SMLA's Water Quality Monitoring Program, which has been operated by Ferrum College for 38 years. That work focuses on the trophic state of the lake based on water quality parameters.

The work done by Princeton Hydro will also assist the Virginia Department of Environmental Quality to conduct their own watershed-based assessment of the full lake, with the collaboration of Virginia Tech Water Resources and Research Center. That assessment will begin this fall.

The full report can be found at https://smlassociation.org/blackwater-river-assessment/

Princeton Hydro, LLC

Princeton Hydro is an engineering firm with vast experience in water resources engineering, lake management, floodplain and watershed modeling, dam removal and stream restoration. More about their work is found at their website, https://princetonhydro.com/

About SMLA

The Smith Mountain Lake Association (SMLA) mission is to keep Smith Mountain Lake clean and safe. SMLA is the longest serving advocate for the SML community. Activities help to retain the pristine beauty of Smith Mountain Lake and the vibrant local economy. SMLA is a nonprofit 501(c)(3). It is an all-volunteer organization that relies on memberships, donations and grants to support programs that keep SML clean and safe.