

From Julie Chambers the President

The theme of this issue of *Lakeline*, environmental DNA (eDNA) and genetics, is a timely follow-up to our previous edition which focused on the National Lake Assessment. eDNA has been incorporated into the National Aquatic Resource Surveys (NARS) as a



research indicator, enabling more comprehensive data on the biodiversity of lakes across the survey. It also supports the development of biological condition estimates for the nation's waterbodies, furthering the goal of assessing the status of, and changes in, water quality nationwide.

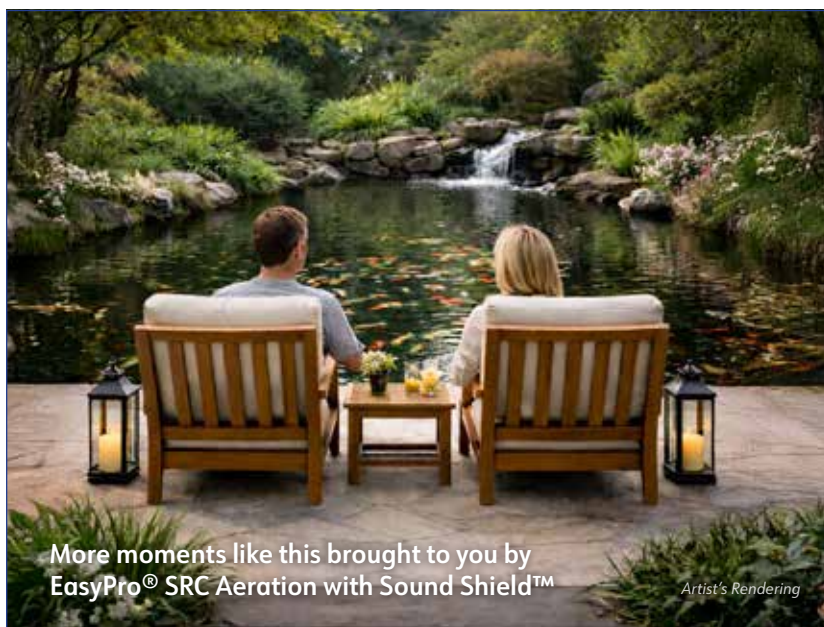
Monitoring programs often struggle with the limitations of collecting physical, visual, and other data types to identify the biodiversity and species present in systems, all while working within tight

budgetary constraints. Compounding this, identification has traditionally required specialized taxonomic expertise, which is often quite costly. These challenges have driven the search for alternative methods to monitor biodiversity, both qualitatively and quantitatively. Collection of eDNA samples offers one such alternative, with a wide range of applications. By taking advantage of the fact that organisms shed and leave behind DNA in the natural environment, eDNA analysis provides a sensitive, rapid, and cost-effective tool for detecting species presence in a given waterbody – offering valuable insight into a system's condition based on the organisms and biodiversity present.

In this issue, we explore how eDNA is reshaping the way we understand and manage lake ecosystems – from emerging applications to the growing role of genetics tools in long-term monitoring strategies. As eDNA methods continue to mature, they promise to complement, and in some cases transform, how monitoring

programs assess the health of our nation's waters.

Julie Chambers leads the Oklahoma Water Resources Board's Beneficial Use Monitoring Program (BUMP) Lake Monitoring section. She has 25 years of experience in statewide water quality management, from program design through data collection, management, reporting, and dissemination of information. Over the last 22 years her program has thrived and is responsible for conducting water quality studies, assessments, and bathymetric surveys on reservoirs across Oklahoma, as well as managing lake and wetland projects funded through federal grants and other contracts. Julie serves on the water quality steering committee for the EPA's National Lake Assessment as well as on several state technical workgroups focused on the assessment of lakes and field protocol development. Julie has been an active member of The North American Lake Management Society (NALMS) for 20 years serving on various committees and representing as past president since 2016. 🌟



More moments like this brought to you by EasyPro® SRC Aeration with Sound Shield™

Artist's Rendering

Performance you can trust but can't hear

EASYPRO™ DELUXE AERATION SYSTEMS

Game changing > 50% reduction in perceived loudness compared to competitors' compressors



Unchanged reliability and proven performance



All EasyPro® Deluxe Aeration Kits with Stratus™ SRC Compressors now include Sound Shield™ and cabinet with noise reducing foam.

Kits are available to easily retrofit existing Stratus™ SRC Compressors.



Hear the Difference!



EASYPRO
Pond Products

800-448-3873
EASYPRO.COM