

From Kellie Merrell

the President

Our societal expectations for the water quality and health of our lakes and reservoirs aren't keeping up with our capacity to protect and restore or rehabilitate them. We need



look no further than the United States Clean Water Act for an example of this. According to Robert W. Adler (2010), reports out of the United States

congressional committees sponsoring the Clean Water Act legislation in 1972, *“reflect a belief that the path to ecological integrity lay in the return to an optimum biological state or equilibrium condition that existed prior to human disturbance of aquatic ecosystems, and that any deviation from that pristine condition is presumptively bad and must be reversed.”*

While both the International Commission on Stratigraphy and International Union of Geological Sciences have not approved the term “Anthropocene” as an official subdivision of geologic time, we must acknowledge that in this era of human impact on our planet, managing our waters back to a ‘pristine’ state is unrealistic. As much as this pains me to say it, it is the truth we are facing as lake and reservoir managers. That said, we have developed a suite of tools that when applied in the right places, at the right times, informed by good monitoring and data, they can prevent further deleterious impacts and enhance the resilience of our lentic systems. Along those lines I’d like to put a plug in for the MoReCo Lake Management Framework published in the latest issue of *Lake and Reservoir Management*, which lays out a universal approach to pulling together all the necessary steps and tools to successful lake management (Cianci-Gaskill et al. 2024).

As lake managers, we know that prevention and protection is less costly than restoration work, and we must do more to save “the best of what’s left.” Yet, typically, protection takes a back seat to restoration and there is good reason for that, with 69 percent of U.S. lakes and reservoirs either eutrophic or hypereutrophic as of the 2017 U.S. Environmental Protection Agency National Lakes Assessment. We have moved beyond the protection phase and firmly into the rehabilitation phase for most of our lakes and reservoirs. Still, as we focus much of our limited time and resources on the great challenge of rehabilitating so many waterbodies, we must find a way to apply the “both/and” approach to the restoration and protection of our lakes and reservoirs.

Vermont is fortunate to have long-term water quality data sets going back to 1977 and to have developed several tools to address non-point source runoff, the treatment of sewage, removal of aquatic invasive species, treatment of internal loading, and protection of littoral habitat. In a 2018 *Lake Line* article, my fellow scientists and I at the Vermont Department of Environmental Conservation reported on the trends in phosphorus we were seeing in Vermont lakes by what trophic condition they were in the 1980s (Mathews, Merrell, and Thomas 2018). What we saw was that our efforts to rehabilitate and restore our eutrophic lakes were working and phosphorus was declining. We took this as evidence Vermont’s efforts to implement the Clean Water Act were working, while not returning them to a “pristine” state, we were helping them achieve a healthier, more resilient state. But all that focus on eutrophic lakes came at a cost to our oligotrophic lakes: We found that the vast majority of our oligotrophic lakes were increasing in phosphorus.

Six years later I’m happy to report that Vermont has embraced the “both/and” approach and several [Lake Watershed Action Plans](#) are focusing the use of tools developed for eutrophic lakes on the oligotrophic lakes with increasing phosphorus with the aim of turning these increasing trends around. Meanwhile, the efforts to restore impaired lakes in Vermont has not waned. Efforts are still strong to work at both the watershed and in-lake scales to rehabilitate lakes, yet like elsewhere, resources are limited to effectively “both/and” in lake management.

That’s why I’m excited that the NALMS board of directors voted to allocate funding to hire a government affairs consultant to help NALMS advocate for more funding for lakes and reservoirs at the U.S. national scale. I encourage you to read the update from the 314 Working Group, which highlights the progress being made to help NALMS forge more partnerships and build our organization’s capacity to not only advocate on behalf of U.S. lakes and reservoirs, but ultimately for North America’s lakes and reservoirs as well.

Kellie Merrell has been an aquatic ecologist with the Vermont Department of Environmental Conservation since 2001, where she monitors Vermont’s inland lakes for compliance with the Clean Water Act. Prior to that she worked for the Environmental Protection Agency monitoring estuaries from Maine to Virginia and in environmental consulting. At University of Maryland’s Horn Point Laboratory, she conducted submerged aquatic vegetation surveys and studied *Vallisneria americana* for her MS degree. She loves skiing with her dogs in Vermont, hiking the White Mountains of New Hampshire, and gunkholing with her small sailboat in Maine. ✨