

On Saturday June 20<sup>th</sup> the Lake Gaston Weed Control Council (LGWCC) was made aware of a mussel die-off event that was occurring in several areas of Lake Gaston that are currently being treated for Lyngbya, an aquatic invasive algae species. In response, staff from NC State University and the NC Wildlife Resources Commission surveyed several locations and documented recent mussel mortality both inside and outside of the treatment areas. It is common to see some level of mussel mortality in lake populations during summer months when water temperatures rise and mussels experience thermal stress. However, for the mussels within the algaecide treatment areas, the temperature stress was likely exacerbated by the additional stress of exposure to the copper-based algaecide used in the Lyngbya treatment, which resulted in increased mussel mortality within those areas.

The algaecides used in Lake Gaston for Lyngbya control are registered and approved for use in surface water by the USEPA and the states of NC and VA. At high enough levels, these copper-based algaecides can negatively impact aquatic organisms through disruption of respiration processes and are thus limited by the EPA in the amount of copper that can be applied during each treatment. The LGWCC is currently treating 300 acres of Lyngbya at 38 sites and all treatments are applied at rates below this maximum EPA level in an attempt to minimize unwanted negative impacts to aquatic organisms. The EPA does not identify any risks for human exposure to these algaecides because copper is naturally regulated within the human body. These products are EPA approved for use in drinking water reservoirs and do not have water use restrictions following application for swimming, fishing, or irrigation.

Lyngbya is a growing problem within Lake Gaston and has a host of negative impacts from both a human health and ecological perspective. However, treatment protocols are designed to balance the control of this noxious algae species while minimizing negative impacts to native aquatic organisms. Therefore, prior to any future treatments, additional restrictions will be put in place to reduce the potential of mussel exposure to the algaecide and future treatments will be monitored closely.

Please direct any questions or concerns to Jessica Baumann, Extension Associate for NC State's Aquatic Plant Management Group, at [aquaticplants@ncsu.edu](mailto:aquaticplants@ncsu.edu).