

Chimney-Felker Lake Health – Algae Update 2020

This past July (2020) the potential presence of blue-green algae on Chimney Lake was reported to the Chimney-Felker Landholders Association. Occurring in a relatively small zone on the south-west side of the lake, pictures were shared and samples taken by the resident who reported it. The association submitted the sample for testing. While the lake is well known by current residents to have 'regular harmless' algae blooms, this bloom had the appearance of cyanobacteria, a blue-green algae, which produces toxins known to be especially dangerous to small children, pets and anyone coming into direct contact with the substance. Toxins produced by these particular algae are deadly and not removed by boiling water. With packed campgrounds and many pets drinking from the lakes, along with the worry some residents may still be getting their household water from the lake, a heads up was sent out by email and Facebook to inform people of the potential presence, so they would be aware and know if they saw it, to avoid contact.

This was not the only report of 'strange algae' in 2020. A gasoline-like slick was noted on both Chimney and Felker lakes a couple of times this year, as well as thick mats of brown, green organic substance around the first campground on Chimney, near the dam, and at the outflow of Felker.

Test results show the algae were not the toxin-producing "bad-guys," which are rare and only known to occur under fairly specific conditions (lab results attached).

Harmless algae blooms have been observed and documented on the lakes in the past. Large brown-green mats were sampled in 2014/15 and associated with increased phosphorus levels in the water. Many factors contribute to algae blooms. Most notably nutrient availability, water temperature, sunlight and water flow. Warm, still, shallow water with long daylight hours and an abundance of "nutrients" can create the perfect storm where toxic blooms can occur.

The two main factors associated with increased algal growth in water bodies are (1) climate change and (2) eutrophication (excessive nutrients in water usually from agriculture runoff). With surface water temperatures shown to be increasing significantly in the region over the past few years, along with record rainfalls, creating flooding and septic system problems across the region, it is not surprising to have algal blooms occur.

While most algae (phytoplankton) are beneficial as both a food source and oxygen producer for life on the planet, large blooms which grow into thick mats can be dangerous to aquatic life and are notoriously known as agents of 'dead zones' in oceans and lakes across the globe. Beyond this, blooms occurring related to sewage contamination can have a whole host of bacterial, protozoal and other components capable of impacting the lake in harmful ways. We all have a role to play in preserving and protecting the waters of Chimney and Felker Lakes. While climate change is important to address as a collective, individual residents can make a big difference by doing their part to keep excess nutrients out of the lake. Be proactive about getting septic systems pumped. Consider upgrading 'grandfathered' systems which are not up to standard and never pump yard/household waters into the lake. Beyond this, all need to be extremely discerning about lawn and garden fertilizer use. The health of the lakes depends on us.