

## **Proactive Measures to Monitor the Water Quality of Lake Latonka:**

A recent article in the Sharon Herald brought attention to an algal bloom occurring at the Shenango Reservoir causing beaches to be closed. Consequently, the LLPOA Board along with Management determined it would be in the Associations best interest to monitor the Lake for any signs of harmful algal blooms. The potential for a harmful algal bloom is ever present when weather conditions result in elevated water temperatures along with the presence of high concentrations of nutrients. This past summer stretch of hot weather, little to no rainfall and the fact the Lake is surrounded by farmland presented ideal conditions for an HAB (Harmful Algal Bloom).

Algae are tiny organisms found in water bodies and in most cases are not harmful. They serve as a source of oxygen and food for animals living in water. Large dense algal blooms can occur when the conditions noted above are present. Such large blooms can affect the health of the ecosystem by creating dead zones as the massive amounts of algae die causing bacteria to decompose the organic matter. This decaying matter will deplete the oxygen from the water causing the fish and other organisms to become stressed. In most cases, this type of algae does not contain harmful toxins and although displeasing to the shoreline, they generally are displaced by the wave action and wind. In some cases where there is little flow such as in coves, these dying algal mats are harder to dissipate.

Harmful algal blooms are caused by blue-green algae that can produce toxins. These tiny organisms are natural to all waters but grow rapidly when the water temperatures are warm and stagnant. Loading with nutrients also accelerate the formation of the blue-green algal blooms. Should these blooms produce toxins, they can become dangerous and have the potential to remain dangerous after the algal bloom subsides. (A similar situation occurred in Lake Erie last year along the shoreline of Toledo, Ohio creating a serious health threat to the city's public water supply.)

With all these factors in mind, the Board authorized a systematic testing program as a mechanism to better monitor the Lake water quality. During the month of August several tests were taken and submitted to different labs for concurrence of the results. Fortunately, there were no toxins found in Lake Latonka at the time of the testing. It is important to note that laboratory testing is the only accurate way to verify the presence of harmful algal blooms.

Testing will continue as a means of tracking the water quality as well as identify any harmful bacteria that may enter the Lake. Members are reminded that high nutrient levels are a part of the problem and once again are asked to use due diligence to prevent any amount of pollution being deposited in the Lake. Members should refrain

from piping drainage ditches directly into the Lake, refrain from using any fertilizers on lawns, refrain from dumping leaves into ditches, refrain from mowing close to the shoreline, and especially depositing grass clippings in areas where the decay will enter the Lake. Simply washing your vehicles with phosphates in detergents can add nutrients to the Lake water as it flows over pavement and lawns and eventually ends up in the Lake. Although these appear to be small measures, when multiplied by the number of homes in the community, the impact is considerable. **It is up to all of us to protect our Lake.**

Future measures to monitor the water quality include consistent reliable testing and upstream surveys to determine if any measures can be promoted outside the Lake to assist in keeping the Lake clean and safe.

A number of articles are available on the World Wide Web addressing this issue as it is a worldwide problem for which there is no instant cure. Chemicals would have to be applied at such high rates that they could prove harmful to fish and other organisms. This course of action would also lead to enormous costs and ultimately be unsuccessful in solving our issues, which is why each and every Lake member must follow the above guidelines.

The Board and Management are committed to taking the necessary steps to maintain a healthy body of water and we ask every member to do the same.