

Top 5 Things You Can Do To Improve Lake Latonka Water Quality

- 1> **Riparian buffer.** The most ideal width of a riparian buffer is 15-feet. This would be along the lake, tributaries, drainage ditches or lake waterways. Many different plants work and provide beauty in the way of flowers and foliage all year. However simply allowing the grass to grow to a height of 12” also works and is completely free.
- 2> **Lawn fertilizer.** Limiting the use of lawn fertilizer, particularly within the 15-foot zone of the lake shore, tributaries, drainage ditches or water courses.
- 3> **Erosion control.** Minimize erosion and sedimentation by lining ditches with large stone or rock and installing silt type fencing when disturbing soil on your lot.
- 4> **Leaf and lawn clippings.** Do not blow leaves or grass clippings into the lake, drainage ditches, or waterways. Do not burn leaves close to the shoreline or in drainage ditches
- 5> **Goose control.** Do not feed the geese. Install goose deterrent fencing. Riparian buffers help in this regard. Report nesting geese to the office as soon as you notice them. Do not wash goose feces from docks into the lake.

Water quality of our lake is at the forefront these days. With all the news about blue-green algae affecting all areas of the globe, this concern is understandable. Climate variations, agricultural changes, and development of land all have impacts and influence the growth of different species of algal matter.

Algae is the oldest living organism on the planet and it comes in many different forms. Many are considered beneficial to sustain life in both cell development and food sources. However the focus is on the potential toxicity of non-beneficial algae, specifically blue-green and the various species that comprise this category of cyanobacteria.

A global problem of dealing with nuisance and potentially dangerous algal blooms, has prompted modern technology and science to develop methods and techniques in an attempt to control the growth and problems associated with large algal blooms.

Simple methods of control, which were common many years ago have lesser value in today’s world. Residual effects and governmental regulations play a key role in what can be done and what cannot be done. Chemical applications which were less regulated years ago, are now closely monitored. Attempts to kill existing algae cells in a water body have proven to not be effective in preventing future blooms. Unless repeated applications of chemical products are applied, the algae continues to come back, creating a repetitious cycle and frustration. Algae, has a proven ability to survive and exhibit a phenomena called “programed cell death”. When it is attacked by chemicals not all cells die off. It will repopulate itself to come back stronger and larger than it was previously. This is similar to the old saying that there is “force in numbers” and remaining cells quickly multiply and flourish.

Science has proven that a better and a long term solution is to focus on the prevention of nuisance algae (blue-green) by eliminating its food source and modifying water conditions which inhibit the release of legacy nutrients, thereby curtailing the growth and development of certain forms of cyanobacteria. This is a concept that prevents the trigger of programmed cell death of non beneficial

algae and allows the development of desirable algae in the form of diatoms. This becomes very technical and requires extensive monitoring and adjustments to control measures. Waterways and lakes are very dynamic living organisms, and are subject to both natural and manmade influences. Fortunately we have scientists and experts that specialize in this field. LLPOA has enlisted and are seeking out these experts that have the resources and abilities to stay on top of the dynamics of water quality and prescribe the most effective corrective actions as the conditions change.

It also comes down to the question of “what can a property owner do to help this situation” and preserve the future of our lake. One of the proven methods is to plant riparian buffers. These are areas normally planted along shorelines which help absorb water runoff which carry nutrients into the lake. However, due to the variables here at Lake Latonka, specifically the topography, it goes way beyond the normal lakefront property owner. Here at Latonka we have drainage ditches for storm water as well as many natural water springs which feed our lake. There are old septic tanks and drainage fields that leach nutrients via our natural springs directly into our lake. We have large agricultural areas with crops and farm animals that drain via the watershed. All these water courses carry nutrients directly into the lake, and have for many years.

Lawn fertilizers are made up of nutrients and herbicides are intended to be absorbed into the soil to provide a beautiful weed-free lawn. Not all of it gets completely absorbed and consequently gets washed into the drainage ditches and right to the lake.

Couple this with our topography and one can easily understand that it is not just the lakefront owners that need riparian buffers. There are landscaping methods that will allow for that beautiful lawn and capture the runoff before it gets to the drainage ditch, all the while providing beautiful landscapes and benefitting the quality of the water.

Soil erosion is the second contributor to nutrient loading into the lake. Some may argue it is the biggest contributor. Nonetheless, nitrogen and phosphorus molecules attach themselves to the soil sediments that is then carried by runoff water and deposited into the lake. Anything a property owner can do to prevent erosion leads to being helpful. LLPOA has embarked on a strong effort to control this erosion as evidenced by the lining of drainage ditches throughout the community with heavy stone. Significant improvements have been noticed and there is much more work that needs to be done.

Burning of leaves also contributes pollutants to the lake. We have recently learned through lake scientists, that burnt leaves contain high levels of potash (potassium), phosphorous and nitrogen byproducts that blue-green algae thrive on. This is a common practice that can still be done if a conscientious effort is applied to what happens to the residual products of the burning process. Simply put, it would be best to not burn the leaves and create compost piles instead, but if one must burn, please pay attention to where you are doing it to keep ashes from contributing nutrients to the lake.

Grass clippings and leaves in water ditches and the lake are a source of organic matter. Keeping these out of watercourses is a simple method to prevent unnecessary nutrients from entering our lake and feeding the algae. The ditches are not a disposal area. This also applies to blowing grass clippings onto the roadway. It all washes into the lake. A little effort here could help in a long-term solution.

Geese also contribute nutrients to the lake. The problem here is not the goose. It is the prize packages they leave behind (ever hear the term "loose as a goose?"). There are many proven and alarming facts about how much the average goose defecates per day. When this is multiplied by the number of geese it is astounding. This material is very high in phosphorous and ammonium nitrate which contributes to the food source of algal species. Lakefront owners are more affected by having this unwanted surprise in their lawns but all property owners are affected by the quality of the water. There are many methods to help control geese including addling of eggs, roundups, and both lethal and non-lethal methods with proper approvals and permits. Prevention is worth a pound of cure. Riparian buffers, goose deterring fences, mechanical methods such as laser lights all help control the geese from entering the shorelines and defecating. Although LLPOA has obtained permits to perform some of these control methods, the homeowner can also perform others themselves.

These are some things we as property owners can do to help control and improve the quality of the water in our lake that we all enjoy. We all benefit by having a clean safe lake, whether it is for water sports, fishing, enhanced property value or the beauty of our community. Please do what you can. It all adds up. And please remember just like algae, there is force in numbers.