

Archive for the 'Environmentally Friendly' Category

TRASH CONTAMINATION OF WATERWAYS

Monday, August 25th, 2008

All of us have probably been witness to trash contamination of our waterways and perhaps some of us have even been guilty of contributing to this continuing problem.

Pollution of all types to our environment has been an issue which has become an increasing worldwide concern these days. While many types of pollution—some of which may be contributing to global warming, to the depletion of the protective atmospheric ozone layer, and to other potential unhealthy living conditions—may be difficult for individuals to control, waterway contamination is a form of pollution which we, as individuals, can control.

Not only are trash contaminated waterways an eyesore but trash in certain waterways, especially in storm water management areas, better known as retention ponds, is responsible for additional costs of removal for property owners and taxpayers—which is all of us!

Since Americans everywhere reside in community developments where more and more emphasis is being placed on a “friendly environment,” both natural and manmade ponds and lakes are desired residential amenities. Further, many of those waterways are being enhanced by the installation of decorative, eye appealing floating aquatic fountains.

Waterway trash contamination often starts with the careless disposal of trash—especially discarded plastic grocery bags which are frequently wind blown into storm water drains which eventually end up in retention ponds. Drainage into street side storm water drains can also be impeded by trash clogging those structures.

Continued costly trash removal from waterways is required not only for aesthetic considerations but also to ensure the operation of fountains is not compromised. These fountains have submerged intake structures as their source of water. Sunken trash frequently clogs intakes resulting in decreased fountain function, possible costly fountain pump breakdown and damage, and the expense for the necessary removal of trash from underwater fountain intakes.

Waterway trash contamination may have an additional detrimental effect on aquatic animal life which may ingest or become enmeshed in trash—an unfortunate event which could result in their death.

Finally, much of the unnecessary waterway trash contamination consists of plastic materials notably plastic grocery bags which are especially harmful and which are not biodegradable. As a result much unwanted and unsightly plastic materials may persist in waterways for years.

Waterway trash contamination is literally “in your hands;” let’s ensure trash is properly disposed of—and our waterways are not appropriate “trash receptacles!”

Charles Aquatics, Inc. takes special pride in their waterway trash removal service which is regularly provided at no extra cost to all its clients with aquatic management agreements.

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ENVIRONMENTALLY “FRIENDLY” CONTROL OF ALGAE

Tuesday, August 12th, 2008

WITH THE LG SONICR ALGAE CONTROL UNIT

Since algae are found worldwide in both fresh and salt water as well as on land, control of or perhaps a more fitting term, “management of algae growth” continues to be a vexing problem for waterway owners who want their ponds, swimming pools and lakes to be pristine and free of unsightly surface and subsurface algae.

Since aquatic algae exist in many forms ranging from single cell microorganisms to multicellular, filamentous mat forming types to more complicated macrophytic types (of which some of the latter are even beneficial to the underwater environment), many techniques to manage or control algae growth are available.

Before attempts are made to control the growth of the many forms of aquatic algae, waterway owners must understand that despite the reputation of most algae as troublesome eyesores in ponds and lakes, many algae also provide a number of beneficial contributions to waterways. Like most aquatic plants, algae through their life processes employing chlorophyll utilize carbon dioxide from the water and produce oxygen, the element essential to most life forms. In addition many types of algae utilize (and thereby rid) potentially noxious nutrients from waterways; other algae provide food for some animal life.

Probably the most negative aspect of excessive algae growth commonly known as an “algae bloom” which result from a rapid, uncontrolled proliferation of some forms of algae which in turn causes a precipitous depletion of oxygen levels in waterways. Unfavorable outcomes are the ensuing death and decomposition of the “algae bloom” as well as the death of aquatic animal life forms also dependent upon oxygen for survival.

Since sunlight is essential for algae life processes, certain blue dyes have been introduced into waterways with a degree of success in limiting algae growth. Specifically formulated chemicals termed algaecides have provided the main techniques for the management of algae growth. Among the historically more cost effective cell toxic algaecides are the liquid and granular copper products (primarily copper sulfate) and the contact acting liquid and granular endothall products. All chemical algaecide applications must be carefully “customized” to the type algae targeted as well as to the amounts of algaecide applied since dead and decomposing algae cells severely deplete water way oxygen levels essential for fish and other aquatic life form’s survival. Another chemical means of algae management is with the use of aluminum sulfate (not classified

as an algaecide) which precipitates phosphorous, an element found in waterways which is essential for algae growth.

Physical or mechanical removal of algae remains a technique of limited effectiveness because of its high cost and since it is usually limited to the collection and removal of already dead algae mats floating on the surface of waterways.

More recent research into biological techniques to manage algae growth has centered upon the manipulation and / or reduction of nutrients found in waters (especially the nutrients phosphorous and nitrogen which are essential for algae growth). Young genetically sterilized aquatic weed eating triploid grass carp have also been shown to feed on mat forming algae as have tilapia which are somewhat effective in algae control and management,

While the general public is probably more familiar with the employment of ultrasound instruments in medicine, ultrasonics, a relatively new physical science which arose from the development of echo ranging sound / “SONAR” devices used to locate submarines in World Wars I and II, has also been successfully adapted to the field of algae management. Recent biological research has led to the findings that complex patterns of underwater ultrasonic vibrations (sound waves beyond human and animal perception and having no harmful effect on humans, animals or plant life other than most forms of algae) can cause the death of many types of algae. The mechanism of destruction of algae cells is by ultrasonic vibrations causing vacuoles within algae cells to tear apart resulting in algae cell death. The ultrasonic vibrations generated by a household 120 volt powered transducer which can travel up to 150 meters are especially effective against “roaming” air and rain transported algae and blue-green / cyanobacteria forms.

Water proof transducers of the LG Sonic algae control units marketed by Charles Aquatics, Inc. were designed and created by KLG Sound, the device’s manufacturer, to create resonating sound waves at the optimum frequency to cause algae death. The LG Sonic algae control device’s family is made up of a number of models for installation and for applications in lakes and ponds, irrigation reservoirs, swimming pools, drinking water storage impoundments, water works cooling towers, and waste water treatment plants.

LG Sonic algae control units, all of which operate “24/7” for algae management, are cost effective, are environmentally friendly, have very low energy consumption, require minimal maintenance, provide major reductions in the need for algaecides, and can be energized by solar power.

Charles Aquatics, Inc. can provide clients current color brochures and complete information on the cost, as well as the full range of applications of the LG Sonic algae control units upon request at Toll Free 1-866-990-0044.

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