

Your Lake's Health



Quality lake waters provide scenic diversity, recreational opportunities, fish/wildlife habitat and other elements that contribute to our "quality of life".

When we alter pristine watersheds by clearing land, building homes and other structures increasing the number of people living there, we disrupt "Mother Nature's purification processes. We all introduce contaminants into the watershed that are a threat to our pond's water quality.

We, jointly, share a responsibility to know and take the actions that will minimize our impacts and protect the water quality of our ponds.

Phosphorus is Pond Enemy #1

The biggest culprit is phosphorus and we, with our actions, are the source. We don't have rivers bringing it to the ponds. It can over-fertilize our ponds causing excessive amounts of algae. Algae blooms color the water reducing transparency; cause shifts in dissolved oxygen content and can have an unpleasant odor when they decompose. Ultimately the blooms can destroy the pond's water quality and property values around the pond.

In addition to salt, oil, gas and metals from roads; septic effluent, pesticides, fertilizers and other contamination contributors (agricultural run-off, animal waste) bring unwanted phosphorus to the lake or pond.

Invasive Weeds are Pond Enemy # 2

Many non-native aquatic plants are capable of spreading aggressively and producing dense vegetative covers that interfere with boating, swimming and fishing. They can out compete native species and produce large amounts of decaying matter that are destructive to pond health.

Some Phosphorus comes from the lake bottom

As the phosphorus containing algae concentrations decay and settle on the bottom, it becomes available for regeneration by the actions of zooplankton or detritus grazing residents.

This self-contained source also eliminates the availability of some phosphorus that is buried deep enough in the sediments. The burying is Mother Nature's basic phosphorus removal technique.

Agricultural Sources

The discharge of irrigation and harvesting water from cranberry bogs has a significant potential to add phosphorus from bog fertilizers and pesticides to a lake.

A Falmouth study that measured phosphorus concentrations before and after the release of bog water to a pond revealed a 4-fold increase in the pond's concentration of this nutrient following release. The pond was relatively small in comparison to the bog area. It is, however, a valid demonstration of potential agricultural impact.

Run-off is a major delivery mechanism

Although groundwater can transport phosphorus to water bodies the major problem is surface water pick-up of fertilizers, organic and inorganic materials, soil, road dust, animal wastes, etc and then flowing to the lake.

Preventing the contaminant availability for pick-up and transport by surface water run-off is the first line of defense. If, for example, we limit the amount of lawn fertilizer we use and make certain none slips onto the pavement to become part of run-off we are exercising a knowledge and application of pond protective measures

Buffer Zones are Important

The maintenance of a buffer zone at the edge of a pond cannot be overstated. Run-off is a major source of phosphorus contamination that can be reduced via a vegetated buffer zone.

Phosphorus in surface water seeping into vegetated buffers can bind to the soil particles and be recycled by the vegetation instead of entering the pond. A wider buffer is better. Something is better than nothing!!!!



Do's And Don'ts

Do wash boats and trailers prior to launching.	Aquatic weeds can be transported from one lake to another on boat hulls or trailers.
Don't empty aquariums into your local pond.	Many retail aquarium plants are exotics, invasive species that can seriously degrade water bodies.
Do maintain a vegetated buffer zone between your property and the lake or pond.	Run-off seeping into a vegetated buffer strip can have its phosphorus held in the soil and reused by the vegetation in the strip, preventing it from contaminating the pond.
Do use non-phosphate dishwasher detergents.	Phosphorus based detergents are an avoidable item. If you must use it use less.
Don't dispose of paint, paint thinners or chemicals on the ground or in a septic system.	In a septic system they harm needed bacterial action and in the ground they flow with the groundwater.
Do maintain vegetated areas and avoid exposure of bare soil.	Disturbing these areas contribute to harmful run-off and erosion products containing phosphorus.
Don't wash cars or pets near lakes or ponds where rinse water will flow to the pond.	Another form of run-off to be avoided.
Don't build new beaches.	Use temporary docks or floats. Sand contains phosphorus.
Don't allow water to flow off roads into lakes	Water from roads contains sediment, pollutants and phosphorus.
Do maintain septic systems by pumping on a scheduled basis.	If settled solids are not removed they will get into your leach field and clog it.
Don't use products that claim to clean your septic tank without pumping.	These products can clog your leach field and may contain chemicals harmful to groundwater
Don't install or use a garbage disposal unit.	In-sink garbage disposals can overburden a septic system.
Do plant woody vegetation along shores.	Plant roots stabilize shorelines, minimize erosion and help take up phosphorus.
Don't place organic materials such as leaves or branches into the water.	Organic debris will add contaminants directly to the lake.
Store hazardous materials in a location where any spills will be contained before they can enter the ground.	Contained spills can be cleaned easily compared to spills into the ground that will contaminate groundwater that flows to the lake.
Don't allow pets to deposit wastes where run-off is a potential.	You can't pick up liquid waste products that coat the affected area and are later washed into the water body with rainfall.

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