PROTECT OUR PONDS

how can we help our ponds stay healthy?

OUR PONDS

While we get great enjoyment out of the ponds in our neighbourhoods, the primary purpose of the ponds is to collect stormwater from our streets, our yards and green spaces. They are designed to be large storage areas that help to prevent flooding by collecting water during major rain events, and slowly releasing it to the river at a rate that protects the downstream river banks from erosion. As rain and melt water flows over our lawns, driveways, and streets it picks up dirt, chemicals and organic matter and flows untreated into the ponds. The ponds form an important function, acting as a filter by capturing and removing nutrients, sediments and toxins before they enter our lakes and rivers. They also provide habitat for aquatic plants which in turn support birds, ducks and other wildlife we enjoy.

WHAT IS HAPPENING TO OUR PONDS?

Currently our ponds have high levels of nutrients like phosphorous and nitrogen that are driving the growth of algae and nuisance aquatic plants. These inputs also have an effect on the changes in water chemistry that occur such as dropping oxygen levels.

WHAT CAN I DO?

We all have a role to play in making sure our ponds stay healthy and clean. In fact, we cannot do it without you! Getting them back to a healthy state will require both a combination of treatment and a changing of habits. The choices we make when doing things in our yards, on our driveways and on our streets have direct impacts on the health of our ponds and the organisms that call them home. In order to keep our ponds looking their very best, take pride in our ponds!

THE ROLE OF RIPARIAN ZONES

Riparian zones refer to the area along the water where plants grow. This area extends from the shallows of the ponds where the bull rushes are, right up to the top of the bank. Healthy riparian zones usually found in wetlands and intact river forests contain a complex mix of aquatic plants, grasses, shrubs and trees. These zones play a very important role in the health of the ponds by:

- Filtering soil, nutrients and other pollution from runoff
- Decreasing the risk of floods
- Stabilizing pond banks and preventing erosion
- Providing habitat for wildlife
- Reducing the water temperature

Without healthy riparian zones, ponds are more vulnerable to nutrient loading resulting in excessive growth of algae and other nuisance aquatic plants. To protect the riparian zone you can help by not mowing right to the water's edge. Plant native grass and shrub species because they are tolerant to drought and their extensive root systems stop erosion.

ALL ABOUT ALGAE

Algae are an extremely important and natural part of the planet's ecosystem. Just like land based plants they produce oxygen and provide food and shelter for many species including ducks and tadpoles. There are many different kinds of algae in our ponds, and while some people may not find them attractive to look at, they typically do not pose a concern. However, when warm temperatures and nutrients combine, there may be a surge in algae growth called an algae bloom that you will recognize as a thick, green scum on the surface or hanging in the water column.

When algae begins to die off, micro-organisms in the water naturally will go to work to help the decay process. Unfortunately, if there is more organic material than the system can handle, the micro-organisms use up all of the available oxygen in the water and the decay process shifts to one where oxygen is not required. One of the by-products of this shift is an unpleasant odour. Another problem that can arise due to excessive nutrients is that blue-green algae (cyanobacteria) can form which can produce toxins harmful to animals and people.

NO DUMPING!

It is a common misconception that street drains lead straight to the wastewater treatment plant. Did you know that the drains on your street actually lead straight into the ponds? Rain, melt water and anything that is carried with it goes directly to our ponds untreated. Any organic material like yard clippings, soils that are not secured by plant roots, spilled chemicals and fertilizers are carried in this storm water to the ponds. Emptying pool water into the ponds also causes problems, by killing off the good micro-organisms that are helping the natural decay process in the ponds.

MANAGING YOUR IMPACT

We can limit the amount of nutrients in our ponds by being more conscious of our actions. Runoff containing fertilizer for lawns and flowerbeds is one of the main contributors to high nutrient levels. We can help our ponds stay healthy by limiting fertilizer use in our yards. We can also reduce nutrient loading by picking up any animal waste in our yards.

Protecting our ponds from garbage, litter, compost, lawn clippings and other things is also vital to their health. Consider leaving a riparian zone on your property. If you notice any garbage when you are walking along the trails, help out and pick it up. Remember that nearby storm drains and manholes lead directly to our ponds, so please don't dump anything down the drains.

THE IMPACT OF FERTILIZER

Unfortunately fertilizer fertilizes a lot more than your yard – it often ends up being carried by runoff into our ponds. Time your fertilizer application so that it does not coincide with a heavy rain event. Remember to sweep up any excess fertilizer that ends up on your driveway or sidewalk. Also consider alternatives to traditional fertilizers such as top dressing with compost which will slowly release nutrients to your lawn over the summer.

RM OF EAST ST. PAUL

QUESTIONS?

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WHAT IS THE RM DOING?

The RM is doing three things to help the ponds, that builds on actions taken over the past two years. The first is research. Water quality sampling over the summer will give us a better understanding of the complex chemistry that occurs in the ponds and help clarify where, when, and how nutrients are entering the ponds. This will help identify long-term options to improve the quality of the water. Clean Water Pro will be adding bacteria to some ponds to help the natural decay processes and reduce the layer of dead plants and other matter that has collected on the bottom of the ponds. The RM is investigating where adding oxygen to the water column may help the good micro-organisms continue their important work.

Follow along on our website for updates!
http://www.eaststpaul.com/