



Ph: 902-838-3351; Email: sea@pei.aibn.com; Website: www.seapei.org

WELCOME to SEA's – Environment Message of the Month:

Here you will read about important topics, issues and concerns that we think will be of interest to you, the reader. You will learn about the activities and projects SEA is doing to protect and enhance the environment and how you can become involved in making southeastern PEI a better place to live, work and play.

Rivers, Headwaters, and Estuaries – What's the connection and why should we care? –

Eutrophication...now there's a fancy word used by biologists and scientists, but why should we care about it? Well, because it describes one of the most serious environmental threats in the world today. At its core, it really is quite simple to understand but what is not so simple is...how do we stop it?

Fertilizer is principally made up of nitrogen, phosphorus and potassium (N-P-K) in various ratios. It is essential for growing plants because it is full of added nutrients which make plants more productive. Whether fertilizer comes from manure, from the bag you just bought at the store, from the large manufacturer for spraying on commercial crops, or from sewage discharge, all have nutrients that can end up in nearby waterways, especially during heavy rainfall events. When this 'fertilized' water runs off the land and into rivers and streams...that is where the trouble begins.

Instead of this fertilizer helping the plants grow on land, they are now fertilizing huge crops of sea vegetation in waterways across the Island. They contribute to the algal blooms we see at the *Harvey Moore Wildlife Sanctuary* (Milltown Cross) and *MacLure's Dam* (Murray River), and they increase the growth rate of water plants like *Elodea canadensis* (*Canadian waterweed, pondweed*) and sea lettuce which have been major problems in places like Knox's Dam (Montague) and other estuaries around the SEA Management Region.

When these plants die, decay and breakdown over time, they steal valuable oxygen from the water creating anoxic environments, which simply means *no oxygen, or depleted oxygen*. The water turns a pale shade of green, white or grey where fish, shellfish and other aquatic life simply cannot survive. PEI has several rivers that go anoxic each year. All rivers in the SEA Management Region have experienced anoxic events at some point and rivers that go anoxic on a regular basis include Boughton, Montague and Sturgeon.

The Report of the Commission on Nitrates in Groundwater (2008) highlights the environmental, social, economic and health based impacts of excessive levels of nitrates. It documents the ongoing deterioration of aquatic ecosystems, the very real risk to human health and it is a problem that we must all work to solve.

If you want to help the environment, SEA is looking for 'Estuary Monitors' to volunteer a few hours over the summer months - please contact us if you would like to participate. It's time we all took steps to make sure nitrates stay where they're needed, and go no further.