



Quote for the Day:

Economic advance is not the same thing as human progress. ~John Clapham, *A Concise Economic History of Britain*, 1957

Welcome to our spring newsletter! Like you, we can't wait for spring to *really* arrive, as we have lots of work lined up for the coming season. We have lots of volunteer opportunities, so please get in touch if any of our projects captures your interest:

- ✦ Restoration forestry – we'll be planting at the Devil's Punchbowl, and at various sites throughout the watershed
- ✦ Riparian enhancement – we'll be working on diversifying and thickening buffer zones in key areas around our watercourses
- ✦ Trail construction and repair – the new trail at the devil's punchbowl will be finished this spring!
- ✦ Educational walks – check out our schedule of events in this newsletter, and on our website
- ✦ Stream enhancement – as usual, the crew will be hard at work improving fish habitat in our streams

We will also continue to work with landowners to find ways to reduce the amount of sediment entering our stream and harming fish habitat, we will be working to make progress on the reduction of nitrate loading in our estuaries (please see this issue article for an update on water quality), monitoring water quality and working on clay road issues throughout the watershed.

If you enjoy reading about our work, perhaps you'd like to support us by coming out to volunteer or by purchasing a membership – you'll be helping us help your environment! We look forward to working with you all in the coming year!

Rob Sharkie, Executive Director



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Marginal Land Reclamation Project

This year, as part of our ongoing commitment to good environmental stewardship and as an expansion of our regular watershed activities, with the help of Environment Canada's EcoAction funding program, the PEI Greening Spaces Program from the Dept of Forestry, the PEI Watershed Management Fund and Wildlife Conservation Fund and support from our members and corporate sponsors, TREC will complete a **two-year marginal land reclamation project** within our target watersheds that we began last year. It is anticipated that at least **4000** native trees and shrubs of various sizes will be used to enhance **30 acres** of marginal land through the completion of this project! Marginal lands are classified as those sites in high slope areas, areas adjacent to watercourses or wetlands not appropriate for agricultural or development usage, non-forested areas adjacent to forest fragments that, once planted will increase the forest fragment size and improve wildlife habitat. Also included will be areas that, once reforested, will serve as wildlife corridors and/or windbreaks. In a nutshell, the goals of this project are:

- ✿ To increase forest cover in the watersheds
- ✿ To increase the amount of greenhouse gases sequestered
- ✿ To improve Acadian forest species diversity and wildlife habitat
- ✿ To provide an example of good environmental practices, and educate landowners about the value of forested areas
- ✿ To reduce land-use impacts on the environment
- ✿ To provide opportunities for volunteerism in the community
- ✿ To draw on our experience from previous projects (such as Devil's Punchbowl Forest Restoration project) to improve and expand ecological forestry practices

As a direct result of our work at the Devil's Punchbowl and in establishing riparian demonstration sites within our watersheds, local landowners have expressed a willingness to participate in this marginal land reclamation project. Last fall, with help from our funders, community volunteers and landowners we were able to plant approximately 10 acres towards our goal. Many thanks to the Greening Spaces Program and to the Macphail Woods Nursery for all the excellent trees and shrubs that now have a home in our watershed! In this coming year, we hope to restore and diversify approximately 20 acres using native trees and shrubs – a big job, so if you you'd like to come out and plant some trees we'd love to see you!

Currently, approximately seven landowners in our watershed have agreed to allow TREC to plant sections of their properties, and we are very thankful for their support! If you have a property that contains some marginal land, or require some forest restoration, please get in touch with us – we are always keen to partner with local landowners to help improve our forests.

Why all the tree planting? Forest restoration is becoming a very important part of watershed management. Increasingly, we are more and more aware of the effect a healthy forest can have on our streams and rivers. Healthy forests and riparian zones help shade the water, keeping the temperature down and providing cover for fish, as well as providing food in the form of insect life that drops from the branches of surrounding plants. Forests also act like big sponges, holding water in the soil and releasing it slowly into surface water in times of drought. Healthy hedgerows help to cut down on wind erosion, protecting our soil and providing habitat and "wildlife corridors" for animals – for example, some species of birds use hedgerows as cover to get from the forest to your birdfeeder!



Example of high slope land

Agrologist Update – Ecological Goods and Services By Ramona Doyle

Spring is quickly approaching and the fields of the watershed will soon be ready for plowing and planting. My winter was filled with lots of workshops and conferences designed to inspire innovative planning for the upcoming planting season.

The uptake for the first year of the EG&S pilot project has proved promising and I look forward to completing new projects with producers for 2008. Farmers received their first compensation checks in the Founds Mill watershed this past month. The following are some specifics on the type and quantity of activities completed in the first year of the project:

- ✦ 12 acres terraces
- ✦ 8 acres grassed waterways
- ✦ 7 acres headland
- ✦ 31 acres hedgerows
- ✦ 159 acres land covered with mulch over the winter
- ✦ 69 acres spring plowed
- ✦ 163 acres spring plowed and mulched over the winter
- ✦ 8 acres spring plowed and a cover crop over the winter

TREC hosted two Watershed Farmers meetings with speakers Wade Caseley and Guenna McCarthy. Wade is a farmer from Margate who has worked extensively with Nutrient Management Plans. Guenna is a student working with Dept. of Agriculture who is doing research on Furrow Dammaras – a hilling device that has proven very successful in reducing agricultural run-off in row crops. Raymond Loo also led a talk on the future of farming on PEI. Thank you to all the presenters and attendees.

I am happy to say that I will be able to remain in the Agrologist position for TREC until the end of 2008 so I'll be out and about in the watershed this summer monitoring split field trials and meeting with farmers. To any producer that wants to complete and Environmental Farm Plan or for other inquiries you can contact me at 394-5647.

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Last Year's Membership Term: April 1/07-March 31/08

New Year Membership Term: April 1, 2008 – March 31, 2009

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Trout River Environmental Committee
PO Box 34 Hunter River**

What's in *Your* Water?

Condensed from a recent article by Irene Novaczek, BSc (chemistry & biology), PhD (marine ecology), Breadalbane PEI

Many Islanders had the opportunity recently to take their water into a free clinic to have it tested for nitrates. In my village of Breadalbane nitrate levels varied widely, from less than 1 ppm up to a high of just over 8 ppm. All samples (from this clinic location, not so with others) were declared to be below water quality guidelines for drinking water and therefore “safe”. But what does the wide variation mean?

Scientists generally agree that once you approach a level of 3, your water is being contaminated by some unnatural source of nitrogen. The sources relevant on PEI are 1) human sewage – generally leakage from septic fields or poorly maintained septic tanks; 2) animal manure – either from intensive manure spreading on fields, or concentrated patches of manure in piles or in feedlots, or a leaking manure storage tank; or 3) chemical fertilizers spread on cropland. Rotting leaves or bugs, where your well is poorly designed or not well maintained, may also cause a slightly elevated nitrate level.

Everyone whose nitrate level is above 3 needs to recognize that they are drinking water that is contaminated by something - fertilizers, manure or sewage - and should take the time to consider which of these three is most likely. If you think sewage or concentrated manure is a possible influence you should definitely get your water tested for E. coli bacteria, because this can make you either acutely or chronically ill. Sewage contamination can also involve viruses, pharmaceutical drugs and various toxins that people throw down their toilets and drains. Use a clean source of drinking water until you get the underlying problem solved.

If you are within a few hundred meters of a chemically fertilized potato field or blueberry crop, that may be the source of your contamination. The PEI government's 1999 Water Quality report showed that between 10% and 30% of samples taken from wells close to potato and blueberry fields had traces of two or more pesticides as well as elevated nitrates. Unfortunately, getting water tested for pesticides is very expensive and you have to know what chemicals you are looking for. Even if you do find out actual numbers there may be no sure way of removing trace contaminants using any commercially available filter system.

Should you be worried about trace pesticide contamination? Perhaps not in isolation, but some interesting reports on the health effects of a combination of nitrates and traces of pesticides have been published, starting in the 1990s. In one study in Idaho, for example - performed by university based scientists and published in a reputable, peer-reviewed journal - scientists had women drink their own, slightly contaminated tap water and then did various tests on their physiological response. They concluded that the Idaho water – which resembled ours in having elevated nitrates with mixtures of pesticides at ppb concentrations – had various negative effects on hormone levels and the immune system. The researchers concluded that problems such as attention deficit disorder, thyroid dysfunction, chronic fatigue and weakened resistance to disease might result in some people who drank this water over the long term. I found this interesting because I have noted what seem to be very high rates of ADD in children as well as very common thyroid problems on PEI. Also, the particular pesticides that were tested in the Idaho study are ones commonly used on PEI, and these have been found in our rivers as well as in well water

In general, you can find studies that support either side of any issue, simply because people ask different questions, use different equipment and methods, and are working on water with different characteristics. I have noted that studies on the health effects of pesticides in water that are funded by pesticide manufacturers are unanimous in saying that there is no problem. Government studies often focus on just one pesticide at a time. Very low concentrations (ppb) of any single pesticide, administered over the short term, can generally be shown to have no negative impact. Studies that throw nitrates into the mix are rare, but depending on the combination of other chemicals present, it seems that trouble may ensue.

In conclusion I would encourage people to get their water tested for nitrates. If your results are above 3 ppm, consider where it may be coming from. If manure or septic contamination is a possibility, get your bacterial counts looked at, especially the E coli. If you think it could be chemical fertilizers, check whether the farm near you also uses pesticides. If so, and if your well is within 100 m of the field, you may also have very small concentrations of one or more pesticides in your water. This may not be causing you any problems at all, but if you have small children or an elder in your home, or if a family member has an immune system, thyroid or behavioural problem, it would make sense to find an alternate source of drinking water.

TREC Calendar of Events

All our events are free of charge. For more information, directions or if you have a suggestion please contact the TREC office 886-3390 or email troutriverec@gmail.com All events take place rain or shine, so please dress for the weather, and be sure to bring your questions!

May 13: TREC Annual General Meeting – Please join us for TREC's Annual General Meeting. In addition to a review of the past year's projects, we have invited Dr. Irene Novaczek, biologist and researcher with the Institute of Island Studies to speak on the issue of water quality and its relation to human health. The meeting is located at the **Sterling Women's Institute Hall** (across from the Shell Station) in Stanley Bridge and will begin at **7:00pm**. All are welcome to attend!

June 15: Bird Identification – Beginning at the Devil's Punchbowl tree nursery at **8:00am**, local birding expert Dwaine Oakley of the Natural History Society will lead a walk along the trails at the Punchbowl. Bring binoculars if you have them, and dress appropriately for weather.

June 28: Plant Identification – Island botanist Kate MacQuarrie will lead this walk as we take a look at many plants and wildflowers you will find in Island fields and forests. Walk will begin at the Devil's Punchbowl tree nursery at **10:00am**.

July 5: Tree and Shrub Identification – Join us for a walk along the trails at the Devil's Punchbowl as we identify some of the common trees and shrubs you find in Island woods. Workshop begins at the tree nursery at **10:00am**.

July 19 – Pruning Trees and Shrubs – Gary Schneider of the Macphail Woods Ecological Forestry Project will lead a workshop on proper tree and shrub care. Issues such as pruning for structure, form and health will be discussed – a great workshop after the ice this winter! Begins at **10:00am** at the Devil's Punchbowl Nursery.

August 10: Ecological Forest Restoration – With all the concern lately about over-harvesting in our forests, this is a timely workshop. Join Gary and Rob as we discuss the restoration work at the Punchbowl property, describe how to manage woodlots in a more environmentally sustainable manner, and answer your questions about forest restoration. Begins at **2:00pm** at the tree nursery at the Devil's Punchbowl.

August 30: Landscaping with Native Plants – A very popular workshop that we're bringing back! Join Gary Schneider as he discusses how to beautify your yard with some of our spectacular native trees and shrubs, while providing food and shelter for wildlife. If you enjoy gardening, watching birds, or learning about plants this is the workshop for you. The workshop will start with a slideshow at the **North Granville Community Centre** at **10:00am**, and then we'll head outside to discuss some hands-on techniques.

October 11: Fall Forest Walk – Join us to enjoy a fall walk in the woods as we talk about ongoing restoration forestry efforts, common plants, trees and shrubs. Bring your questions, and dress appropriately! Begins at the Devil's Punchbowl tree nursery at **10:00am**.

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