



... FOR THE SAKE OF WATER QUALITY AND THE
FISHERIES RESOURCES ON MANITOULIN ISLAND AND THE
GREAT LAKES THAT SURROUND IT

The Manitoulin Streams Improvement Association is a community based, non-profit organization. We recognize that 70% of the island's streams and rivers have been negatively affected by historical poor land-use practices and the local fisheries have diminished as a result. Our goal is to create, through the rehabilitation and enhancement of important cold water streams, healthy and self-sustaining river ecosystems that contribute to the ecological, economic and social health of Manitoulin Island. Through education, partnership and participation, our hope is to create a legacy of community ownership for these streams that will be passed from one generation to the next.

*Check out our glossary at the back of the newsletter! Terms which appear in **bold** throughout the text will have an available explanation.

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What's New & Exciting?

Board Members Switch Positions!

As Chairman of Manitoulin Streams for the past five years Paul Moffat has decided to step down and take up the Vice Chairman position. Ted Williamson, previously Vice Chairman, has been nominated into the Chairman position. Both long time members of Manitoulin Streams are excited about their new positions.

Changes to the Manitoulin Streams Team!

Beginning in December we hired two new employees. Susanne Meert is our new Tourism and Statistics Coordinator, who we hired through funding from the Ministry of Training, Colleges and Universities. She will be developing an experiential tourism program for tourists and school groups. The school program, for any grade, can include an in-class and/or a streamside session. The tourist sessions will focus more on streamside tours and rehabilitation talks. Sue will also be gathering and analyzing statistics on the impact that the streams on Manitoulin Island have on the socio-economic situation of Manitoulin. She will be extrapolating data from existing surveys (e.g. 2010 and 2005 Survey of Recreational Fishing in Ontario, MNR) and refining the statistics for our area in eastern Georgian Bay and areas surrounding Manitoulin Island. We are happy to welcome Sue to Manitoulin Streams and look forward to her work!

We also hired Maria Diebolt as assistant project coordinator. She will be assisting Marcus in his preparation for the summer season and applying for funds for projects. Maria has an Honours Bachelor of Environmental Studies and Forest Conservation from Lakehead University in Thunder Bay, Ontario. She has been working in northern Alberta for the past 2 years with a forestry consulting company and is excited to be back home and joining Manitoulin Streams. Welcome to the team!

Working with Post-Secondary Students

This past September Manitoulin Streams hired Laurentian University to perform a **Benthic-Macroinvertebrate (BMI)** study on 20 sites on Manitoulin Island. They did surveys on both post and pre-rehabilitated sites. Furthermore, the University produced a paper from previous Manitoulin Streams studies that concluded *"past rehabilitations have improved the BMI community but further improvement of the **riparian zone** would improve water quality and provide food and refuge resources for BMIs."* One suggestion that Laurentian has made, that we have begun to implement, is to plant faster growing tree and shrub species so that the riparian zone will develop quicker. Manitoulin Streams has planted 10's of thousands of trees over the years and the ongoing growth of those shrubs and trees continue to greatly improve the **BMI** communities on Manitoulin Island. **BMI's**



Laurentian's BMI study

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are at the bottom of the food chain and are a source of food for fish that live in, migrate up or use the island's streams as a nursery. Aquatic insects are used by Manitoulin Streams to determine the health of the water and surrounding ecosystem. Healthy **BMI** communities also contribute to the terrestrial ecosystem by providing a food source for birds and other animals and some invertebrates assist in plant pollination when they develop into flying insects. This Laurentian Study illustrates that the type of work Manitoulin Streams conducts not only benefits aquatic ecosystems but also contributes to biodiversity in the ecosystem as a whole.

College Boreal was once again on the island performing **electrofishing** surveys. They surveyed 13 sites in 4 days in October looking at post and pre-rehabilitated sites. The results from these surveys are still being analyzed and we look forward to seeing their results.



College Boreal Students Electrofishing

Exhibits and Media - We have had many great opportunities to show off our projects this year!

Manitoulin Streams Hosted OFAH Zone D Meeting

On May 14th, 2011 Manitoulin Streams hosted the Ontario Federation of Anglers and Hunters Zone D meeting in Mindemoya. There were approximately 40 people in attendance. Afterwards, Manitoulin Streams had a full page information sheet attached to the meeting packages that were sent out to approximately 7800 OFAH members.



Manitoulin Trade Fair and Interactive Stream Table

On June 4, 2011 we set-up a shared booth with the Little Current Fish & Game Club and the Manitoulin Area Stewardship Council at the Manitoulin Trade Fair in Little Current. Our shared booth won 'the best overall booth' from the three day event. This was a fantastic public event, attracting approximately 10,000 people from the greater Manitoulin area. We also unveiled our Interactive Streams Table at this event. The table was created jointly by LAMBAC,

Ham's Marine/Henley Boats, Municipality of Central Manitoulin and Manitoulin Streams. The table now resides in the Providence Bay Interpretive Centre where it was seen and used by approximately 6500 people this summer.

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Third Annual Eyed Egg Release in Norton's Creek

On December 21, 2011 Manitoulin Streams spearheaded its third brook trout stocking program at Norton's Creek with help from the MNR and Manitoulin Area Stewardship Council. Approximately 70 volunteers from Manitoulin Secondary School, Assiginack Public School, Lake Manitou Area Association, Little Current Fish and Game Club, other



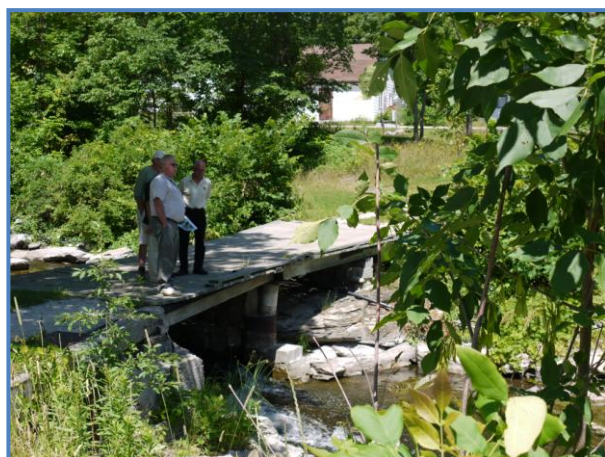
Island Fish & Game Clubs as well as locals interested in



Assiginack Public School Grade 1 and 2 students ready to place eyed eggs in the creek

helping the cause placed 10,000 eyed eggs in incubator boxes. We then placed the boxes in the creek, where they will stay

for two months until the eggs hatch and the fry can swim into the stream. The past two years we put 5000 eggs in the creek each year, so this year we doubled our effort! This is a huge success for the third year running! Thanks to everyone who helped out.



Bass Lake Creek Tour with Mr. DeLauney and Mr. Riche

Tours

On July 14th MNR Assistant Deputy Minister David DeLauney and MNR Area Supervisor Brian Riche toured the Bass Lake Creek site and received background information on Manitoulin Streams Association. Later in the summer we performed a public relations tour with a first nations representative and a local wildlife biologist on multiple stream sites.

Working with Local Schools

On May 13th we teamed up with 20 students from Central Manitoulin Public School and 10 students

from Manitoulin Secondary School to plant trees in the riparian zone of Site MIN 310 on the Mindemoya River and the 2011 Grimesthorpe Creek site. We gave educational instructions on how to properly plant trees and how the stream was recently rehabilitated. On June 24th we gave a stream rehabilitation presentation to 24 students from Lakeview Public School.

Presentations and Booth Talks

At the end of March we were present at the Lake Huron Biodiversity Workshop in Barrie, Ontario where we explained the role of Manitoulin Streams in the Great Lakes Ecosystem Restoration Initiative. Then

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on August 6th we had a booth at the International Joint Commission for the Upper Great Lakes Water Levels in Kagawong, Ontario. Finally, on September 19th we presented a slide show at the Annual General Meeting to approximately 20 people. We also placed eight educational posters at the Providence Bay Marina.

Results and Funding

Charitable Status Finally Granted!

Manitoulin Streams Improvement Association has newly acquired its 501(c)(3) Charity Status with Revenue Canada. The benefit to gaining this status will be the ability to write tax receipts to you, our donors, who will be eligible for deductions on your taxes. So what are you waiting for - donate today!

Our Gracious Funders

Last year Manitoulin Transport donated \$5000 to put towards our 2011 rehabilitation projects. Their donations over the last 5 years have been greatly appreciated and helped provide stability in our ongoing work.

Northern Ontario Heritage Fund Corporation continues to fund us through a reimbursement of 41.63% on all rehabilitation construction costs and materials. The Municipality of Central Manitoulin has graciously funded Manitoulin Streams with \$5000 per year for the next 5 years for work to be completed in the Municipality. Environment Canada EcoAction funded us \$98,000 over 2 years for project coordination, strategic planning and site designs. Canada Ontario Agreement Funded us \$125,000 this year for stream rehabilitation and project coordination. Billings township donated \$1000 towards the project. The township of NEMI also donated \$1000. Carriere Industrial Supply Ltd has donated \$1000 each year for the next 3 years to Manitoulin Streams. Environment Canada and Ministry of Environment funded \$ 15,000 for coordination, site designs and strategic planning. Manitoulin Streams would also like to thank Assiginack Township for their ongoing support of \$5000 a year as well as their administrative support. The Little Current Fish and Games Club has donated \$500 for 2011 and has always supported Manitoulin Streams projects over the years.

Manitoulin Streams is currently in the process of applying for funds from the Community Fisheries and Wildlife Involvement Program (CFWIP). Last year they generously donated \$19,700 and we are hoping that these Ontario Ministry of Natural Resources funds will continue this year.

We are also seeking out funds from other organizations including the LaCloche and Manitoulin Business Assistance Corporation (LAMBAC), FedNor and the Ministry of Natural Resources-Canada Ontario Agreement (COA).

Our work at Manitoulin Streams would not be possible without the above mentioned funding. We are extremely grateful.

Manitoulin Streams/OFAH Memberships



Manitoulin Streams is asking people to renew their memberships or to subscribe to one for the first time. Memberships are due a year after you signed up or you can look on your card for the expiration



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date. Memberships can be purchased through Manitoulin Streams for \$35 and the funds are used to restore streams and the fisheries in your community. Since Manitoulin Streams is an OFAH club member when you purchase a Manitoulin Streams membership, you automatically receive an OFAH membership (valued at \$49.90) for FREE. You could save \$14.10 when you sign up through Manitoulin Streams! This membership includes: a subscription to Ontario Out of Doors Magazine; \$3,000,000 member's public liability insurance for outdoor activities; personalized OFAH membership card and an OFAH decal; discounts on hotels, clothing, insurance and much more. Sign up today!



Online Donations

There is still a fast and safe way to donate to Manitoulin Streams and contribute to your local community! On the front page of our website (www.manitoulinstreams.com), you will find a "Donate" button on the left panel. We are using the trusted security and fraud prevention system "PayPal" to protect your financial information. Your donations will be used to buy the materials required for stream restoration and improving local fisheries. Don't hesitate to invest in your community!

Our 2011 Completed Summer Projects

We had a very busy season this year and managed to rehabilitate 5 sites, with all the sites being on streams on our top 10 priority list. In total we protected, stabilized or retired from agriculture use approximately 1.4 square hectares of shoreline! We planted 3700 trees/shrubs, installed 286 metres of fence, applied 732 square metres of native grass seed and placed 340 cubic metres of protective stones. Amongst all this work we had a whopping total of 135 volunteers who donated 1019 hours of work. Wow! Thanks to everyone who donated either their time or their equipment.

Site MIN 310 - Mindemoya River



Before 2010



After 2011

This summer we rehabilitated site MIN310 on Mindemoya River. Site MIN310 was highly eroded, had a steep bank, very little vegetation and livestock had access to the river, which was increasing the rate of erosion. This project included installing 65 metres of split cedar rail fence that controlled livestock's

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access to the river. We also graded the eroding bank to a 2:1 slope (65 metres long by 3 metres tall) and put in stone protection/stabilizer at the bottom. We used approximately 500 sq. metres of **coir matting** along with 2055 trees and shrubs and 500 square metres of native grass seed mix.

Site MIN 614 - Mindemoya River



Before 2010



After 2011

Site MIN 614 had a steep bank with very little established vegetation in the **riparian zone**, which was causing the sand to erode into the river at an accelerated rate. Manitoulin Streams had a site design made that focused on erosion and sediment control. We graded and reinforced the eroding 30mx60m sand bank using heavy machinery, implemented stone protection, applied an erosion control blanket (**coir matting**), planted 144 shrubs and 195 square metres of native grass seed.

Grimesthorpe Creek

Manitoulin Streams teamed up with local landowners and volunteers to install electric fencing and plant trees and shrubs in the **riparian zone** on a site on upper Grimesthorpe Creek. Previously cattle had full access to a section of Grimesthorpe Creek and a spring fed tributary that flows into the creek. The 221 metres of electric fencing that was installed prevents cattle from accessing Grimesthorpe Creek and a large section of the tributary. Volunteers assisted with planting 500 trees and shrubs. In total 1.2 square hectares of shoreline/wetland was protected,



stabilized, improved or retired from agriculture use.



Site M 38 - Manitou River

Manitoulin Streams teamed up with a local landowner for Site M 38 on the Manitou River. This site is used as a **ford** crossing for livestock and therefore was vulnerable to reoccurring erosion. Manitoulin Streams and the landowner protected 42 square metres of the shoreline by stabilizing it with 1000 tree plugs, 42

sq metres of native grass seed and extra topsoil.

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Lower Norton's Creek

The lower area of Norton's creek had an excess amount of channels that were diverting the water and affecting the velocity of the creek. These channels had made the creek flow slower and the level of the water had dropped. Manitoulin Streams teamed up with the Killarney Rangers and 9 other local volunteers to block off 6 beaver channels and 1 man made channel. We created 5 artificial **fascine** type banks, applied 300 square metres of native grass seed and protected 300 square metres of

shoreline. This completed project increased the velocity of Norton's Creeks and helped to recreate it's natural meander.

Special Project

Mouth of the Mindemoya River - Providence Bay

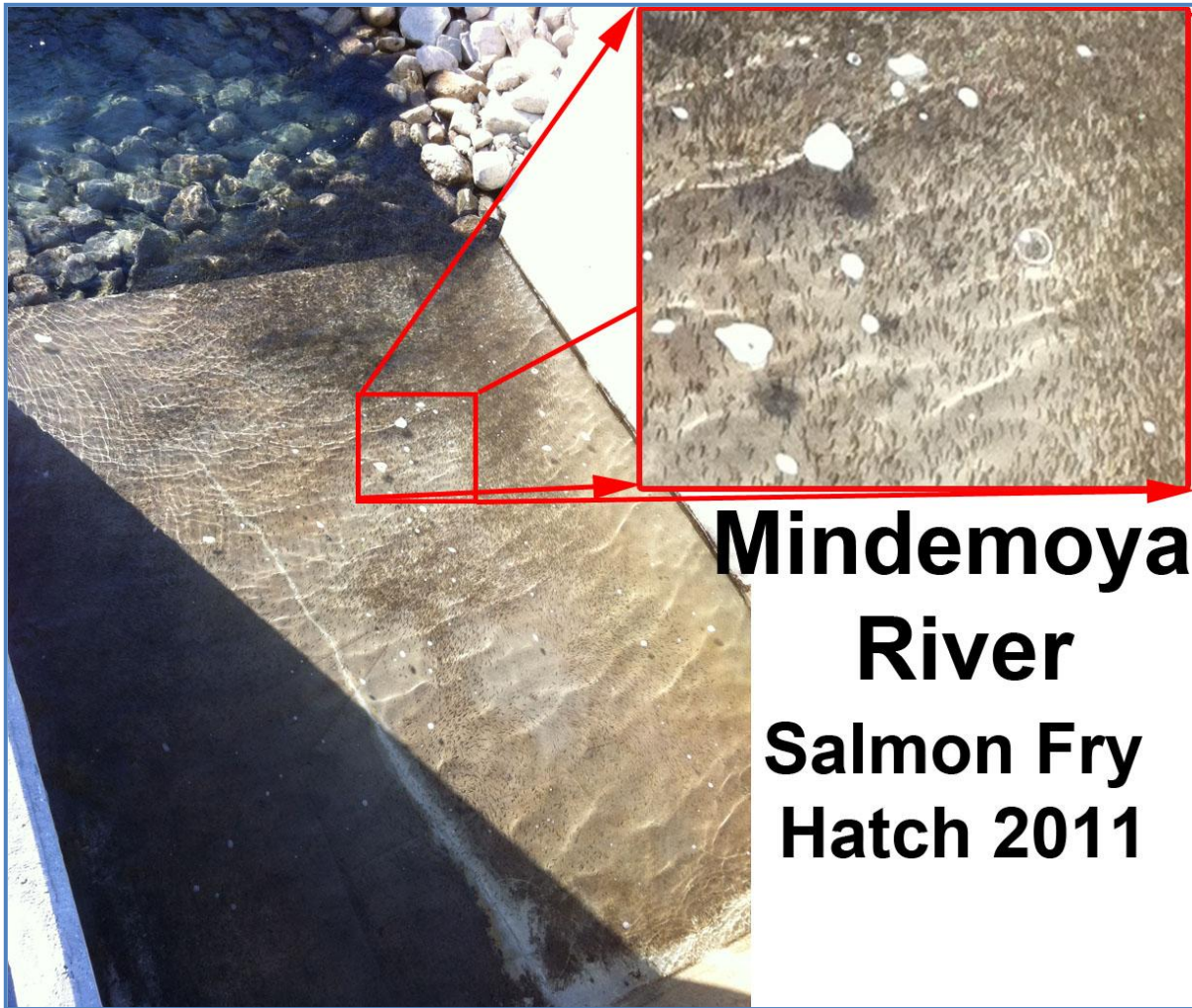


The mouth of the Mindemoya River has often been an obstacle for spawning fish. The coastal wave action of Lake Huron compounds on the mouth of the river and creates a sand bar large enough that the flow of the river cannot open it up again.

The river then gets diverted into different directions. These diversions are often

not large enough to support the incoming fish. This fall Manitoulin Streams teamed up with MNR, DFO and Central Manitoulin Municipality in the creation of a temporary fish passageway. The Central Manitoulin Municipality used their small, rubber-tired backhoe to open up the mouth of the channel. This is a short term solution for this problem and Manitoulin Streams, along with its partners, are looking to implement a more permanent solution in the near future.

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On November 15 and 24th MNR employees observed clouds of salmon fry at the dam on Mindemoya River. There have also been reports from people fishing near the mouth of the river seeing large clouds of fry. These huge hatches may be a direct result of the work that Manitoulin Streams and its partners performed on the mouth. Manitoulin Streams and its partners plan to continue opening the mouth of the river during peak spawning times until a more permanent solution can be applied.

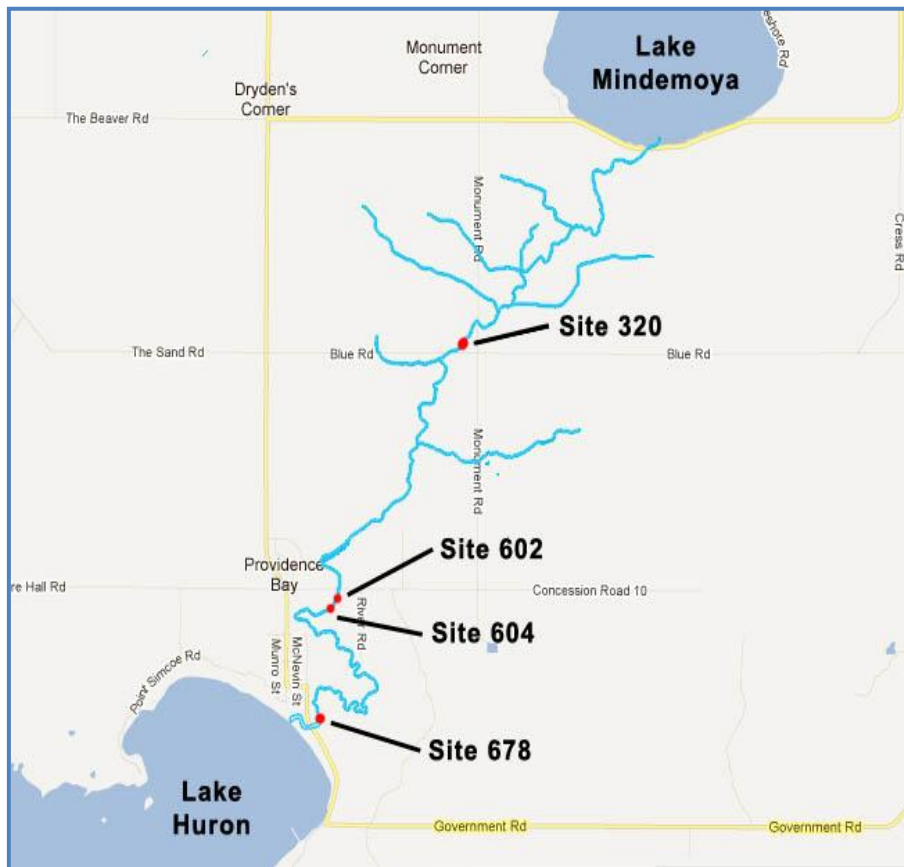
Projects for Summer 2012

the implementation of these projects is dependent on funding

Mindemoya River - Central Manitoulin

This summer we hope to begin work on four sites (MIN 320/602/604/678) on the Mindemoya River. These river stretches are located between the Hwy 551 bridge in Providence Bay and northwest of the Blue and Monument Road intersection. Mindemoya River is the 5th waterway on our 'Top 10 Priority List'.

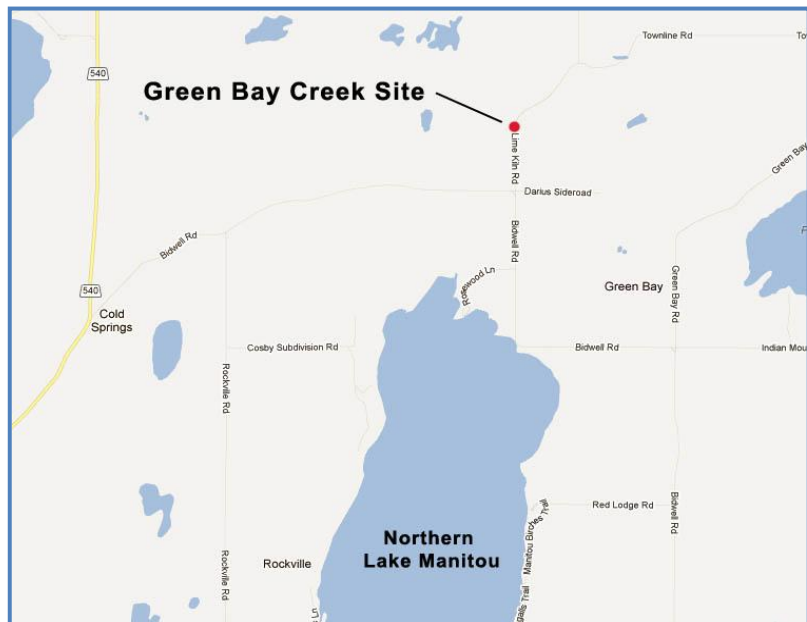
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The site rehabilitation plans have been engineered by the Great Lakes Environmental Services Inc. The work will include rebuilding the stream bank, installing cedar rail fences, replanting trees in the **riparian zone**, building rock weirs, pools and covering the bottom with spawning gravel. Special consideration will be given to site 602 and 604 due to a culvert at Cranston road that prevents fish from going further upstream to spawn. These projects are expected to be finished by summer's end.

Green Bay Creek- Lime Kiln Road, Green Bay

Manitoulin Streams has not worked on Green Bay Creek in the past and we are excited to start our first project on this unique creek. This creek is fed by a cold water spring in the Green Bay bluff and then meanders its way down into Lake Manitou. Manitoulin Streams will be working with a landowner on a remote watering project by installing two Frostfree Nosepumps as well as restricting livestock access to the creek. We will also be restoring the eroded bank and enhancing the **riparian zone**. The goal of this project is to increase the quality of the water that flows into Lake Manitou and rehabilitate the eroded creek banks. The landowner has taken the



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Environmental Farm Plan workshop and has applied for partial funding through that program to help complete this project. This project is expected to be finished by the summer's end.

Grimesthorpe Creek - Spring Bay

An enhancement strategy for Grimesthorpe creek is currently being worked on and we hope to start field work on sections of the creek this summer.

Kagawong River - Below Bridal Veil Falls, Kagawong

We are currently in the process of designing an enhancement strategy with Great Lakes Environmental Services to rehabilitate the Kagawong River below Bridal Veil Falls. We are hoping to make it a more sustainable area for fish to spawn as well as an educational tourism attraction.

Glossary

Benthic - Macroinvertebrates(BMI's): organisms that are large enough to be seen without the aid of magnification and they live in flowing and non-flowing bodies of water on the waterbed. Their mobility is limited enough (i.e., tens of meters), and their life spans are of sufficient length (a few months to more than a year) to make them ideal for evaluating ecological conditions and recovery from short or long-term changes. BMI's provide a sensitive measure of the effectiveness of remedial actions.

Electrofishing: uses electricity to stun fish before they are caught. This is a common scientific survey method used to sample fish populations to determine abundance, density, and species composition. When performed correctly, electrofishing results in no permanent harm to fish, which return to their natural state in as little as two minutes after being stunned.

Coir Matting: made from coconut fiber the mat is 100% natural and biodegradable. They assist in erosion control and support growth and development of vegetation. Mats are designed with different life spans for different projects (6 months-6yrs).

Ford: A shallow place in a body of water, such as a river, where vehicles or cattle can cross. While the stream bed is usually stable, the stream bank is typically eroded and in need of stabilization. To create a stabilized ford, the stream bank is graded and then reinforced with erosion-preventing material.

Fascine: rope-shaped bundle of live cuttings, lashed together with twine. They grow rapidly when made out of live materials and the root system works well to secure soil and hold the fascine in place.

Fry: Young fish. In this stage, the fish have already hatched from their eggs, but are still too young and small to reproduce. Because of their small size, fry are highly vulnerable to predation.

Riparian Zone: A sensitive zone which lies between land and a waterbody. This zone affects how the stream functions. The plants which grow in this area have root structures which hold onto soil and prevent erosion. They also slow down heavy rainwater travelling towards the stream, absorbing toxic chemicals and heavy fertilizers which can come from near-by industrial areas. This zone also serves as habitat to insects and the trees which grow here provide shade which keeps the stream cool.

Manitoulin Streams Coordinator Marcus Mohr

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