

Environment and Sustainability Standing Committee
October 3, 2011

TO: Environment and Sustainability Standing Committee

SUBMITTED BY: 
Phillip Townsend, Director, Infrastructure and Asset Management

DATE: September 2, 2011

SUBJECT: Summary: 2011 Nova Scotia Youth Conservation Corps Project

INFORMATION REPORT

ORIGIN

July 7, 2011, Environment and Sustainability Standing Committee (ESSC): Nova Scotia Youth Conservation Corps Project.

BACKGROUND

On June 2, 2011, the Sustainable Environment Management Office (SEMO) learned that the Halifax Regional Municipality (HRM) was successful in a submission for a Nova Scotia Youth Conservation Corps (NSYCC) Partner Project titled: Lake Banook/MicMac Water Quality Stewardship Project.

The Youth Conservation Corps provides young Nova Scotians with opportunities for hands-on experience in environmental projects like watershed management and climate change.

The Nova Scotia Youth Conservation Corps has three components:

1. Youth: Nova Scotia students, equity groups, and the unemployed, ages 17 – 30;
2. Community: Communities throughout Nova Scotia who are interested in putting together a summer environmental project proposal for submission to the NSYCC. These projects provide work opportunities for local youth; and
3. Environment: Work relates to the conservation and enhancement of Nova Scotia's environment, community environmental education and awareness, and public participation.

DISCUSSION

The attachment is the project report to the Minister of Environment (a requirement of the program).

The project was highly successful and provided exceptional value to HRM's efforts related to community engagement around lake water quality issues.

Engagement of community through youth on environmental issues continues to demonstrate excellent value.

BUDGET IMPLICATIONS

There are no further budget implications to this project. The HRM portion of the project, in the amount of \$1,598, was paid from D935 (Sustainable Environment Management Office) in the spring and is captured within this years operating budget.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

This is a community engagement project.

ATTACHMENTS

Attachment: Report to Minister of Environment

A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/cc.html> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Richard MacLellan, Manager, Sustainable Environment Management Office, 490-6056

COMMUNITY PARTNER NAME:

**HALIFAX REGIONAL MUNICIPALITY SUSTAINABLE ENVIRONMENT
MANAGEMENT OFFICE (SEMO)**

DARTMOUTH AREA WATERSHEDS NETWORK (DAWN)

NUMBER OF YEARS PARTNER HAS WORKED WITH NSYCC CREWS:

1ST YEAR FOR SEMO

1ST YEAR FOR DAWN

PROJECT NAME:

LAKE BANOOK AND LAKE MICMAC WATER QUALITY STEWARDSHIP PROJECT

CREW MEMBER NAMES: SHAWNA MACDONALD AND CHARLOTTE RAMEY



Left to right: Charlotte Ramey, Bernie Hart and Shawna MacDonald after the trail walk event at the Fairbanks Centre.

HIGHLIGHTS OF LAKE BANOOK AND LAKE MICMAC WATER QUALITY STEWARDSHIP PROJECT ACTIVITIES:

Urban lakes face a variety of anthropogenic stressors. As some of these stressors are unavoidable, such as road salt run-off, it is crucial to control the avoidable stressors. The Lake Banook and Lake Micmac Water Quality Stewardship project focused on reducing unnecessary non-point source pollution. Working with the Halifax Regional Municipality's Sustainable Environment Management Office and the Dartmouth Area Watersheds Network, the project used a multifaceted approach to public education. This included: a) the development and distribution of an educational brochure to area residents, b) a presentation for youth, c) public outreach display at lake-focused events, and d) an interpretative trail walk, with media in attendance.

The brochures were distributed to 1000 residents living in the watershed area as well as a brief discussion of watershed issues during door-to-door distribution, if the resident was at home and interested. The presentation was given to youth at canoe clubs, church camps, and day camps. It included a "watershed jeopardy game" to test their understanding, and add some fun into the topic. The trail walk featured Bernard Hart of the Shubenacadie Canal Commission to speak of the history, and Dr. Bill Freedman, professor of biology at Dalhousie University, discussed the ecology of these two urban lakes. The aim was to enlighten residents on the many reasons to protect the lakes – economics, ecosystem health, recreation and historical significance. For all four parts of the program, residents seemed engaged and concerned, and often said how glad they were that this project was being done.

The first positive outcome was the youth that were presented to. They were very keen on the subject, and had lots of questions and comments. During the game they were very good at answering the questions and had fun being competitive. Several participants said they had learned about this in school which was encouraging to hear! If the project is done in a future year it may be worthwhile to get a few environmental companies or HRM to sponsor the project with some bookmarks or pencils to give away to the participants after the presentation.

For brochure distribution, the approximate area of the Lake Banook and Lake Micmac watershed was determined using sewer shed maps from Halifax Regional Municipality and topographic information from the Department of Natural Resources. The watershed was then divided into more manageable areas of several streets each. The NSYCC crew then went on foot door to door, and covered a total of 74 streets. Residents that were home and interested were spoken to. If there was no answer, information was left in the mailbox. It was very surprising to find that most residents did not realize what a watershed was, or that the storm drain water goes into the lake without being treated. Most residents were under the impression that wastewater and storm water were together. During the door-door talk a quick survey

would be conducted, questions such as if they had a pet, and if so did they pick up after it, and if they washed the car in the driveway. Many people indicated they were aware of some issues, but often not all such as phosphates in soaps, and some indicated they would change their behavior (such as using phosphate free soaps or using commercial car washes) based on the new information they were given in the brochure. Feedback from the vast majority of the residents was positive. Some areas had more prior knowledge of lake health issues than others; unsurprisingly, the residents who lived nearest a lake, such as those with property directly facing Lakes Banook and Micmac were more likely to say they were already aware of these issues and the solutions to them. Also, the residents of the Oathill Lake area were very enthusiastic and concerned about the watershed.

The people at community locations and events also were keen on the subject and had some knowledge of watershed health, as they were often those with a direct interest in the lake such as paddlers.

The trail walk was the highlight of the campaign. About 15 area residents attended to listen to Mr Hart and Dr Freedman speak, and all had positive feedback of the experience. The participants were engaged, often asking questions of the experts. However, the most beneficial part of the walk was the media coverage; the Chronicle-Herald attended to talk to the NSYCC crew and the experts, and the CTV News attended and included interviews with the crew and the experts in a larger piece on lake issues in Halifax Regional Municipality. This coverage meant that the Lake Banook and Lake Micmac Water Quality Stewardship project was able to reach a far larger audience; CTV News reaches 295,000 viewers nightly, and the Chronicle-Herald weekly has a circulation of 80,000 readers.

This project has educated over 1000 people and their families, around 200 children, nearly innumerable residents via news media, and the NSYCC crew on the problems faced by Lakes Banook and Micmac (and by other urban lakes as well). There are always going to be larger issues that the residential community has little to no control over but when even a small number of people change small habits, a significant difference can be made in the health of the lake. People are willing to listen and happy to make a difference, they just need the information. The feedback and cooperation that has been received throughout the summer is why it is felt this project has been such a great success.

Hello future students doing watershed stewardship!

First off, this is a great project filled with many experiences. The things you will learn and the things you will teach to others will stay with you and you will be able to apply them to many other aspects of your life – everything from dealing with less than cooperative residents to writing public service announcements. Below, we will tell you the requirements of our summer project for 2011 and give you some suggestions that we found worked well for us.

The goal of our project was to educate the public on watershed basics and how they can help protect Dartmouth lakes. The people living in the Lake Banook and Lake Micmac watershed were our target for Summer 2011. The first event we attended was the Dragon Boat Festival. The festival is a great way to get to many people who are utilizing/appreciating the lake so it's the perfect place to do some outreach. But bring a tent for either rain or sun! Contact HRM Rec, they may have something you can borrow. Call the festival at least a week before and tell them you are a non-profit organization that is doing public outreach for the lake, and that in previous years has been allowed to attend then festival with no table fee. Look into booking a Watershed model from Clean Nova Scotia. It is an interactive model of how the water shed works, it is great to have on display and very portable.

We also attended several regattas at Lake Banook. These are big events with lots of spectators that are held throughout the summer. To attend regattas, contact the Atlantic Division Canoe Kayak Canada and they will give you all the information you need and supply you with a table.

Doing presentation to kids was a good and fun way to get the message across. To get kids interested in these issues at a young age means they will more likely keep them in mind as they grow older. The DAWN group will have the presentation that we have made (for reference or for use) and also a watershed "Jeopardy" type game that we play with the children after our presentation to them. Hopefully you can contact a company (preferably an environmental company) to donate something like pencils or Frisbees with their logo on it to give away as prizes to the kids that participate. If that is not possible, don't worry – the kids just like knowing which team won. Our groups were around 30-50 kids and breaking them up into three groups works fairly well. Make sure to stress the rule "let the reader finish the question before raising your hand", this makes it easier for you to judge who shot their hand up first.

We made a brochure and it took longer than expected to go through the process of being approved and printed, but since that's done for you now, DAWN will have the file and copies of the brochure available to you. Give yourself 2 weeks for orders to come in.

When going door-to-door, make sure you introduce yourself first! Something like "Hello, I'm a summer student with (whoever is supporting the project), and I'm going around to all the residents to talk about the watershed. Do you have a minute?" This lets them know you're not there to sell them anything; otherwise, people go on the defensive and mentally shut you out. If they have questions, then talk as long as they want; if they don't, just hand them a pamphlet and tell them to have a good day.

Something you may want to look into is having a visual representation to give a resident who is supporting the cause.

Example have the resident sign a pledge and give them a window sticker, this may make it so more people in a certain area will make a conscious effort if they can see that it is important to their community.

The last part of the project was to do a public presentation (or media event). Our idea was to do a guided trail walk. We had a historian, and a biology professor from Dalhousie that specialized in the ecology of urban lakes to come and host the tour. We had an excellent turnout thanks to public service announcements and press releases that the HRM sent out after we sent to get it approved. Don't be afraid to go after the larger media outlets – it was the big outlets that paid attention to our event, not the smaller ones, surprisingly. During the walk the history, biology and current issues were covered and it was a great success earning a spot on the CTV evening news, which gave us a huge publicity boost and let us reach a much wider audience.

A good idea is to possibly look into permanent information stands (such as a plaque) to be at the beaches (Birch Cove) and areas that the lake are used (off-leash dog park) with the information that is in the brochure, or that is relevant to lake users.

Finally, use your resources to the best of your ability. You are surrounded by a lot of talented people in DAWN that have a lot to offer you so don't be afraid to ask.

The project is excellent; you have a lot of freedom to be creative with your ways of outreach. We had a great time doing this job this summer, and we hope you can learn from our experiences and use them to make your summer just as awesome as our summer was!

Sincerely,

Shawna MacDonald and Charlotte Ramey

NSYCC Lake Banook and Micmac Water Quality Stewardship Crew, Summer 2011

Most lakeside residents keen to help environment

Education project focusing on Banook, Micmac part of city plan to reduce lake pollution

By IAN FAIRCLOUGH Staff Reporter

Too much fertilizer, too much garbage and alien plant species are just some of the dangers to the health of Dartmouth lakes, residents are being told.

The Nova Scotia Youth Conservation Corps has been running a two-month education program for the municipality and the Dartmouth Area Watersheds Network around Lake Micmac and Lake Banook, telling residents about the types of activities and habits that can pollute lakes and damage the local ecology.

Charlotte Ramey and Shawna MacDonald of the Youth Conservation Corps have been going door to door and finding people who are surprised by some of the information being supplied.

Ramey said Halifax Regional Municipality was looking to reduce pollution running to its lakes, which is why they focused on the residential areas.

"Talking to residents has really given us a sense of some of the issues (outside of the expected ones)," Ramey said.

"Issues we hadn't considered that were brought to our attention were illegal dumping and erosion from people not sticking to marked paths and walking down over banks to go fishing."

She said reaction has been generally positive.

"The big thing that people are surprised at is that storm drains and sewer lines are separate. Some people think that they're together and they both get treated so reminding people of that has been very important."

Ramey said educating people about phosphorous runoff from lawns through storm drains to the lake has also been a priority.

"We've been letting people know that you can stick to nitrogen-only fertilizer or low-phosphorous," she said.

"We've had a couple of people say they're going to make that change and we've had a couple say they're going to switch to phosphate-free detergents for washing their vehicles."

Phosphates running into lakes from lawns or cleaning products cause unwanted plant growth, which in turn can choke off fish habitat.

MacDonald said some people have told them that they're going to keep doing what they're doing regardless of the information being provided, but it is a small percentage.

"Most people are very keen on it and willing to learn, and we've had people thank us for what we were doing and say they were going to go look into it or immediately change how they are doing things."

The Youth Conservation Corps hosted a walk around the lakes Aug. 18 to give residents a first-hand look at why protecting the watershed is so important, with Dalhousie University biology professor Bill Freedman along for the walk to talk about the ecological stresses faced by urban lakes.

"They're a real ecological and recreation resource, but it's easy to degrade them," he said.

"It happens through pollution, which is mostly associated with the dumping of nutrients these days."

He said people using invasive plant species in landscaping and water features on their properties can also cause problems.

If the plants spread to a lake or excess plants are dumped along the edge of a property, "they can cause a lot of damage."

The phosphates can increase the damage, causing rampant plant growth.

"A bit more isn't a problem.

"But if it becomes excessive, the habitat is degraded for fish and for people."

(ifairclough@herald.ca)

CLOSE WINDOW

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Guided Trail Walk

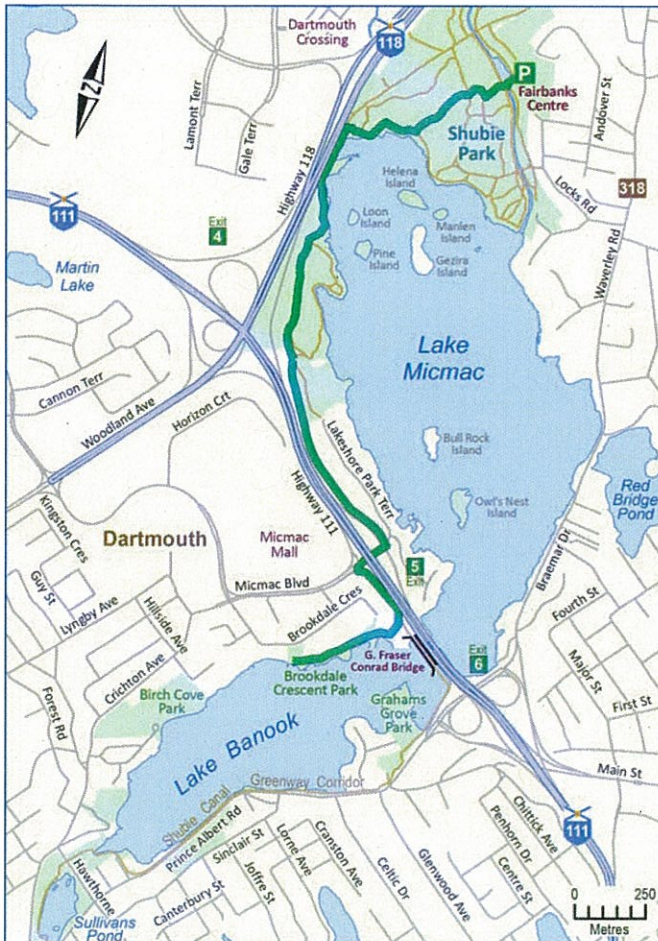
Along Lake Micmac & Lake Banook
Featuring Bernie Hart & Dr. Bill Freedman

Date: Thursday, August 18th, 2011

Rain Date: Friday, August 19th, 2011

Time: 10 am—1 pm

Where: Meet at the Fairbanks Centre—
54 Locks Road, Dartmouth NS



Call 490-4000 or visit www.halifax.ca
for more information.

Everyone is welcome to enjoy a guided trail walk along the lakes. Come on out and discuss some issues that these lakes and their watershed area face. Combine exercise, history and biology to develop a new appreciation of our urban lakes. Refreshments will be provided.



PEOPLE AND NATURE.
WORKING.

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Lake Users

Minimize your impact "take only pictures and leave only footprints" ... damage to shorelines can speed up erosion and destroy habitat for both plants and animals. Litter is both dangerous to the ecosystem and unsightly.

You can:

- Stick to marked beaches and trails
- Dispose of your waste properly

One of our goals: to turn Birch Cove, a beach on Lake Banook, into a Blue Flag beach. Blue Flag is a prestigious international recognition for a location that meets high standards in water quality, environmental education and safety. At a Blue Flag site users can rest assured the beach is one of the very best in the world.



Lake Banook and Lake Micmac Watershed Area

For more information on how to keep the watershed and lakes clean visit:

www.clean.ns.ca

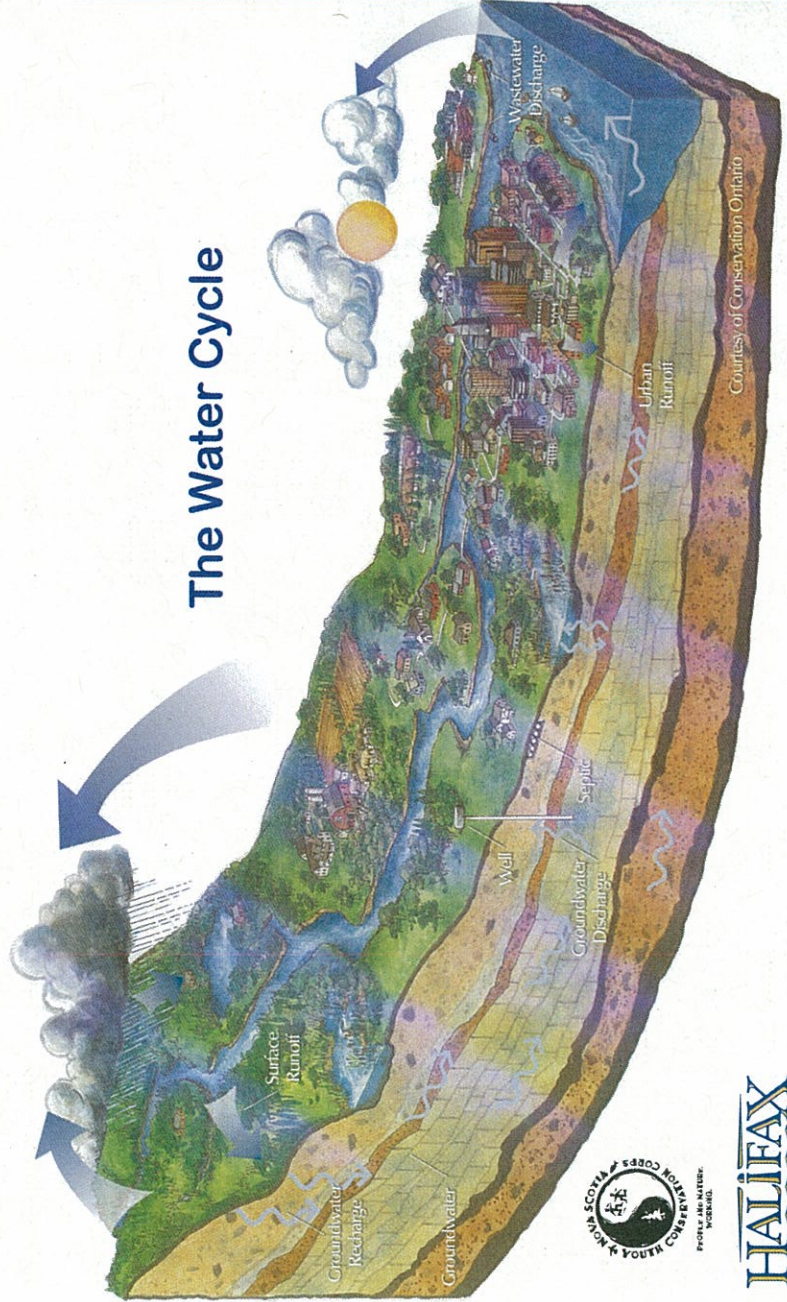
www.gov.ns.ca/nse/

www.dawnetwork.ca

www.oathilllake.ca

or call 490-4000

The Water Cycle



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It All Drains into the Lake



Welcome to the Watershed

What is a watershed?

A watershed is an area of land that drains into a common point. In this case, the common point is Lake Banook and Lake MicMac. Your home falls within the watershed for these two lakes.

What is happening in this watershed area?

When it rains the rain water washes soil, pet waste, yard waste, pesticides, fertilizers, salt, oil/grease, litter and other pollutants into the storm drains. The storm drains in the watershed area empty into the lake. Ultimately, everything that goes into the storm drain and runs off the surface of the land ends up, untreated, in the lakes.

Why should we be concerned?

Without intervention these beautiful lakes we enjoy so much could become polluted and unusable. Dartmouth's lakes are home to beaches, water sports and trails used by residents and tourists alike. Did you know the 2009 World Canoe Championship generated over \$2.7 million in economic activity for HRM? Lakes also contribute to overall ecosystem health by providing a habitat for plants and animals which keeps our environment balanced.

What can you do to help?

Dog Owners:

Pick up after your dog... proper disposal of dog waste will ensure it does not end up in the storm drain and ultimately in the lake.

You can:

- bring plastic bags with you

on walks so you can pick up after your dog and place the waste in the garbage.

Car Owners:

Avoid washing your car in your driveway... if you wash your car in the driveway or don't frequently check for fluid leaks then soapy water and/or harmful fluids can be washed into the storm drain and out into the lakes.

You can:

- take you car to a carwash
- annual servicing should help reduce the potential for fluid leaks
- ensure motor oil is recycled properly and not poured directly into storm drains

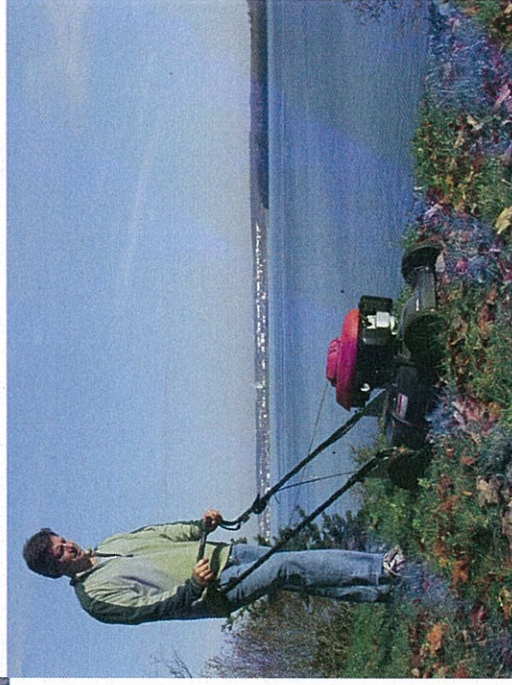


Landscaping:

Carefully choose lawn products... just as fertilizer helps your grass and gardens grow it helps unwanted and invasive plants grow in lakes too.

You can:

- buy fertilizer with low to no phosphorus or compost instead
- make a fertilizer free zone at least 20 feet from lakes, streams and rivers; also a 5 foot zone near the street edge to keep it way from storm drains
- plant a buffer zone of shrubs near waters edge



Yard waste and clippings:

Carefully dispose of yard waste...the process is natural, the placement is not. Grass leaves and brush pollute our lakes. Yes, these things are organic and bio-degradable, however, the break down process releases unwanted chemicals into the lakes.

- leave grass clippings on the lawn. (grass clippings will return needed moisture and nutrients back into the lawn)
- bundle up sticks/brush and bag leaves, put them out to be picked up on green bin day.
- keep grass off the road and away from storm drains

