

President's Report *continued from front cover*

The proposed MMER amendment is still working its way through the federal government bureaucracy, and it is still unknown if the mine will go ahead. The NWA will continue to be vigilant and to insist on the highest possible standards of environmental protection for any resource extraction projects along our beautiful river.

Despite these areas of concern, we also have much to celebrate. Under the guidance of our nursery technician, Diane Fraser, and with the support of past-president Paul McLaughlin, our native tree nursery in Durham Bridge has been a great success. We have expanded from two large garden beds to four and have completed work on a functioning irrigation system, resulting in 1000 silver maple seedlings being planted this year, and 1050 three-year-old trees out-planted during the summer and fall. We also have about 1000 two-year old trees still at the nursery. Some of these trees were planted on private properties on the Nashwaak where landowners

expressed concerns about riverbank erosion; hundreds more have been planted along the Marysville Flats as we continue to develop the Nashwaak Greenway. We have completed educational materials for the Grade Three and Grade Four science curricula and have delivered educational programs to many school classes and summer camps. And we completed the installation of a fish ladder at Manzer Brook to allow fish passage through a large culvert. Never a dull moment!

Of course, we always welcome involvement from our members, and there are many different ways to get involved. It is a genuine pleasure to work with volunteers in our community to advance our many projects, so if you have a particular interest or passion, please reach out and we will find a way to get you connected.

Looking forward to continued success in 2019!

- Peter Toner

MEMBERSHIP

The Nashwaak Watershed Association is committed to the management of the Nashwaak River watershed as a healthy ecosystem that balances a variety of economic, recreational, social, and landowner interests.

If you share this objective, we would appreciate your membership. There is a \$10 fee.

Membership is available through our website or by sending us your name, address, phone number and e-mail address to:
info@nashwaakwatershed.ca or to:

Nashwaak Watershed Association Inc.
P.O. Box 314, Station "A"
Fredericton, NB, E3B 4Y2

Let us know if you're interested in volunteering on committees, at the tree nursery, or in other outdoor activities.

Staff



Marieka Chaplin
Executive Director



Jillian Hudgins
Project Coordinator



Claire Ferguson
Project Assistant

2017-18 Board of Directors

Peter Toner, President
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William Miller
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With thanks for continued support



CANADA SUMMER JOBS 2018



Your Environmental Trust Fund at Work



The Public is Invited to attend the NWA ANNUAL GENERAL MEETING

**Tuesday, November
13th, 2018**

7:00 - 9:00pm

**The Ville Cooperative
241 Canada Street,
Fredericton, N.B**

In addition to short presentations on the work of the Association, we will have a guest speaker, Dr. Michelle Gray of UNB and the Canadian Rivers Institute to discuss The Influence of Forestry Harvest on Watersheds.

ALL ARE WELCOME

Connect with us



info@nashwaakwatershed.ca
www.nashwaakwatershed.ca

WaterWays



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WaterWays

NEWSLETTER OF THE NASHWAAK WATERSHED ASSOCIATION, INC.



**Fall
2018**

President's Report

2018 has been a year of continuity for the NWA, as we continue to build on established strengths. With funding from sixteen different sources totaling over \$240,000, we have been able to advance a variety of projects pertaining to the health of the Nashwaak River, to develop our expertise in a number of key areas, and to engage decision-makers and the general public alike on issues of concern to us all.

Water quality was much in the news over the summer, with blue-green algae outbreaks in various locations and continued public scrutiny of the waters at Parlee Beach. There is no doubt that New Brunswickers are vigilant about water quality, and are rightly concerned about threats to clean water. While some of these threats are environmental, like high summer temperatures and another year of relatively low water levels, others are matters of public policy. The provincial government's new Water Strategy may certainly be a step in the right direction; but the proof of the pudding, as they say, is in the eating. We will be watching carefully and advocating passionately to ensure that a good set of principles gets translated into solid, workable policies. For our part, the NWA has completed a second season of water quality monitoring and temperature logging to establish a scientifically-valid baseline of water quality along the Nashwaak.

Another issue pertaining to water quality and public policy is the Sisson Brook Mine, and our organization was very active in public consultations relating to proposed amendments to the Metal Mining Effluent Regulation (MMER). Because the proposed mine would destroy fish-bearing habitat in its construction and discharge treated mine waste into tributaries of the Nashwaak, the mining company was required by Environment and Climate

Change Canada and the Department of Fisheries and Oceans to seek an MMER amendment in order for the project to proceed. The NWA expressed grave concerns on several fronts:

- the proponent did not give adequate consideration to alternative methods of tailings disposal, opting for a conventional Tailings Storage Facility (TSF) the size of downtown Fredericton;
- the lack of modelling by the proponent of a failure of the TSF;
- although the projected life of the mine would be 27 years, the proponent admits that treatment of mine waste may need to be done "in perpetuity", handing the problem of water treatment on to the New Brunswick taxpayer and the residents of the Nashwaak for generations to come;
- the proponent's financial securities plan has not been made available to the public, so it is impossible to assess whether the proposed bonding is adequate to the likely costs associated with decommissioning the mine;
- the instability of commodity prices, combined with the relatively low quality of the Sisson ore deposit, suggests that the mine may not be financially viable in the long-term, which may lead to environmental problems if monitoring and waste treatment are not done to a high standard;
- the lack of demonstrated "social licence to operate" evidenced in low levels of meaningful consultation with the people who call the Nashwaak home.

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CALL FOR PUBLIC INPUT

We are working on our five-year plan and we could use your help!

Head to our website at nashwaakwatershed.ca or mention us on social media and tell us about your love for and concerns about the Nashwaak River.

Participate in our short survey and enter to win some NWA swag.

nashwaakwatershed.ca

Monitoring -Dr. Jillian Hudgins

The NWA I tested water quality at twelve sites monthly between May and October. Overall, water quality has been excellent with occasional exceedances in metal or nutrient levels. E. Coli readings have been over the limit (400 MPN in a single sample) on two occasions: throughout the watershed after a heavy rainfall in June and on September 4th in Penniac Stream. The NWA I recommends not swimming for 48 hours after a heavy rainfall. We do not test for blue-green algae.

Thirty-four temperature loggers were installed throughout the watershed in May and collected in October. They measure the water temperature at six-hour intervals and will continue to help us identify important cold-water tributaries to protect and restore. Cold-water streams are important refuges for salmonids in mid-summer. Water temperatures soared because of extended periods of warm weather this summer, with some sections of the river measuring over 27.0°C.

Stay tuned for our monitoring report to be released at the end of 2018.



Aquatic Connectivity Survey and Fish Ladder Installation -Dr. Jillian Hudgins

Sixty-five culverts were surveyed for fish passage in 2018 bringing our total number surveyed to 142. Approximately 65% are partial or full barriers to fish passage. We removed garbage from all stream crossings, cleared several large debris jams, and reported on collapsing infrastructure. In August 2018, we installed a fish ladder on Manzer Brook at Rte. 628. This culvert was blocking fish passage due to a drop at the outlet – an electrofishing survey found a salmon parr and American eel downstream but not above. The 3-m long ladder allows fish to swim into the culvert and it backwaters the culvert, making the water deeper. We would like to thank Tek Steel for fabricating

the ladder, HILCON Ltd., UNB student Calvin O'Neill and Atlantic Salmon Federation for their help with the design, Canadian Rivers Institute for helping with electrofishing, and New Brunswick Department of Transportation and Infrastructure for their cooperation on this project.

Our long-term goals are to increase fish populations and biodiversity by managing human actions that impede access to high-quality aquatic habitat and foster a more engaged watershed community. We have started the design process for two more barrier culverts.

Dunbar Falls Field Trip

To build onto our “Upstream/Downstream” outdoor education programming, we have developed the “Introduction to Hiking and Habitats at Dunbar Falls” field trip for Grade four classes. This field trip takes place on the trail that leads to the beautiful Dunbar Falls, which is located near Durham Bridge. During the outing, participants learn about habitats and

food webs, act as land-use managers for the watershed, and have the opportunity to do an Atlantic salmon habitat assessment at the base of waterfall. We launched this program on September 18th to Grade three to five students from the Fredericton Christian Academy, and overall it was a success! Our goal for this program is to teach students about various habitats in the Nashwaak watershed while they learn how to responsibly recreate outdoors.

EDUCATION & Community



65 culverts assessed for fish passage

Over 1,000 trees planted at our native tree nursery

Over 2,800 live willow stakes planted, predominantly in the Nashwaak Greenway

12 sites in the watershed monitored for water quality from May to October

City of Fredericton and the NWA I are working on a conservation easement for the 28-acre Marysville Flats

34 temperature loggers deployed around the watershed

Highlights 2017-2018

A generous donation from Oboz Footwear and from the estate of Gordon Dunphy

A 3-m long fish ladder was installed in Manzer Brook allowing fish to swim into the culvert

Water temperatures soared because of extended periods of warm weather this summer, with some sections of the river measuring over 27.0°C.

Funding for projects from five NEW funders: Lush, Patagonia, WWF-Loblaw Water Fund, SEED and Canada Summer Jobs

A successful fundraising partnership for the Larry's Gulch raffle with Radical Edge

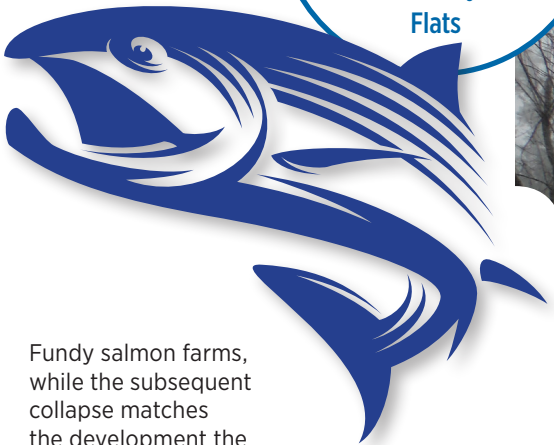
Continued partnership with St. Mary's First Nation (over 200 volunteer hours contributed to NWA I projects)

Field trips provided to over 500 students attending schools within the watershed

SALMON Situation 2018

-Peter Saloni

Salmon angling on the Nashwaak river, continues to be closed as it has been for the last two decades due to poor marine survival even though juvenile production in fresh water has remained respectable. We were on the verge of requesting hook and release angling on the strength of a remarkable upswing in adult salmon returns at the end of the 2000's when juvenile seaward migrating smolt to adult returns from the ocean sometimes exceeded ten percent. Unfortunately, adult returns crashed again and have remained low. The upswing in returns from the ocean seems to match the control of sea lice on Bay of



Fundy salmon farms, while the subsequent collapse matches the development the parasite's resistance to control chemicals. Aquaculture origin sea lice have been implicated in salmon and sea trout population collapses in rivers on both sides of the north Atlantic Ocean when smolt entering salt water are exposed to heavy infestations of this parasite. Under natural conditions adult salmon, returning to spawn, all of which carry sea lice – have minimal interaction with seaward migrating juvenile smolt due to different run timing. However open net pen salmon farms provide a constant source of sea lice borne on ocean currents.

Landowner Outreach Program

-Marieka Chaplin



Shorelines are one of the richest environments on earth, but they are also among the most vulnerable. Planting native vegetation such as trees and shrubs is both beautiful and useful. In 2018, eleven landowners participated in our landowner conservation program which promotes shoreline and wetland naturalization. Participants began the process with a free site visit provided by NWA I staff. During these visits, staff provided advice and recommendations for the property then created and implemented a planting plan.

A total of 152 silver maple and bur oak trees, 468 willow shrubs and 1,500 willow stakes were planted on private properties this year.

Please contact us to book a FREE site visit if you live adjacent to a river or wetland in the watershed. The NWA I will coordinate the ordering, delivery, and planting of all the plants on your property.

NB Water Strategy Commits to New Water Protection Laws

-Stephanie Merrill

Last December the Province released the long-awaited Water Strategy that includes 29 short-term and long-term actions to protect New Brunswick's waters – including your Nashwaak River. After making the recommendation through the Minister's Working Group on watershed management, NWA I is particularly pleased to see the government's commitment to introducing a new water protection act within two years. This modernized legislation will both make watershed protection action plans mandatory and legally enforceable and set science-based water quality standards. This is a big step toward keeping our rivers, lakes and streams healthy.

NWA I commits to ensuring government stays on course to meeting its commitments and to reinforcing our recommendations to maintain and even enhance the original intentions of our Water Classification program. We will advocate to play a central role in the development and implementation of a watershed management plan for the Nashwaak River to ensure we can all continue to enjoy the fish, wildlife and recreational opportunities our waters provide.

The Water Strategy is publicly available at Department of Environment and Local Government <https://www2.gnb.ca/content/gnb/biling/elg.html> or on our website under Projects – Water Classification (link at bottom of section).