



# NURSERY Notes

Josh Noseworthy

This has been a big year at the Nashwaak Watershed Association Inc., and particularly so at our Durham Bridge tree nursery.

We have seen a lot of investment and growth in the nursery program, and thanks to the New Brunswick Environmental Trust Fund, we are very excited to be implementing a brand new Nursery Management Plan! The plan is designed to provide a consistent amount of trees each year for our floodplain forest restoration work along the Nashwaak Greenway (between the mouth of the river and Marysville), and to provide our members with a variety of native tree species for planting in your own yards and woodlots (with a friendly donation, of course!).

A large part of the plan focuses on providing NWAIA with trees and shrubs to continue restoring abandoned farmland along the Nashwaak River. Using information gathered about the Silver Maple floodplain forest that occurs along the banks of the lower Nashwaak, we were able to tailor our nursery work so we can now plant over 1,000 native trees each year to restore this unique forest community. We also now have

a designated Willow nursery to supply us with cuttings, which are used to help stabilize the riverbanks where the forest was historically cleared. All this work involved expanding the nursery from three planting beds to six planting beds, setting up an irrigation system to keep our precious trees hydrated in the summer, and hiring a contract operator to set up and maintain the nursery according to the new plan. So far it has been a resounding success, and we're very excited to begin seeing the fruits of our labour in the coming years.

One of the biggest benefits of having a Nursery Management Plan is the ability to precisely plan where and when restoration work should happen along the Greenway. Knowing exactly how many trees, of what age and species, helps us prioritize where the most important restoration work should occur first, and how many volunteers it will take to get the job done. Having this information not only makes us more efficient at ecological restoration, it also helps us leverage funding by proving we have a dedicated plan in place and can project our success into the future. The NWAIA Nursery Management Plan is in the final stages of editing, so stay tuned to our website and check out all the great work being done to grow trees for our community!

## Membership

The Nashwaak River 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 no fee, although donations are welcome and help to cover the cost of the Association's work.

You can become a member by sending us your name, address, phone number and e-mail address to [nashwaakwatershed@hotmail.com](mailto:nashwaakwatershed@hotmail.com) 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 other outdoor activities.

[www.nashwaakwatershed.ca](http://www.nashwaakwatershed.ca)

All are invited to attend the NWAIA ANNUAL GENERAL MEETING

Wednesday,  
November 18th  
7:00 PM - 9:00 PM

The Ville Cooperative  
(former Alexander Gibson  
Memorial School)

241 Canada Street  
Fredericton, N.B.  
[www.facebook.com/  
thevillecooperative](http://www.facebook.com/thevillecooperative)

In addition to short presentations on the work of the Association, a film will be shown:



<http://www.ariverbetweenus.com>

OPEN TO THE PUBLIC  
ALL ARE WELCOME

Connect with us



[info@nashwaakwatershed.ca](mailto:info@nashwaakwatershed.ca)  
[www.nashwaakwatershed.ca](http://www.nashwaakwatershed.ca)



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With thanks for continued support



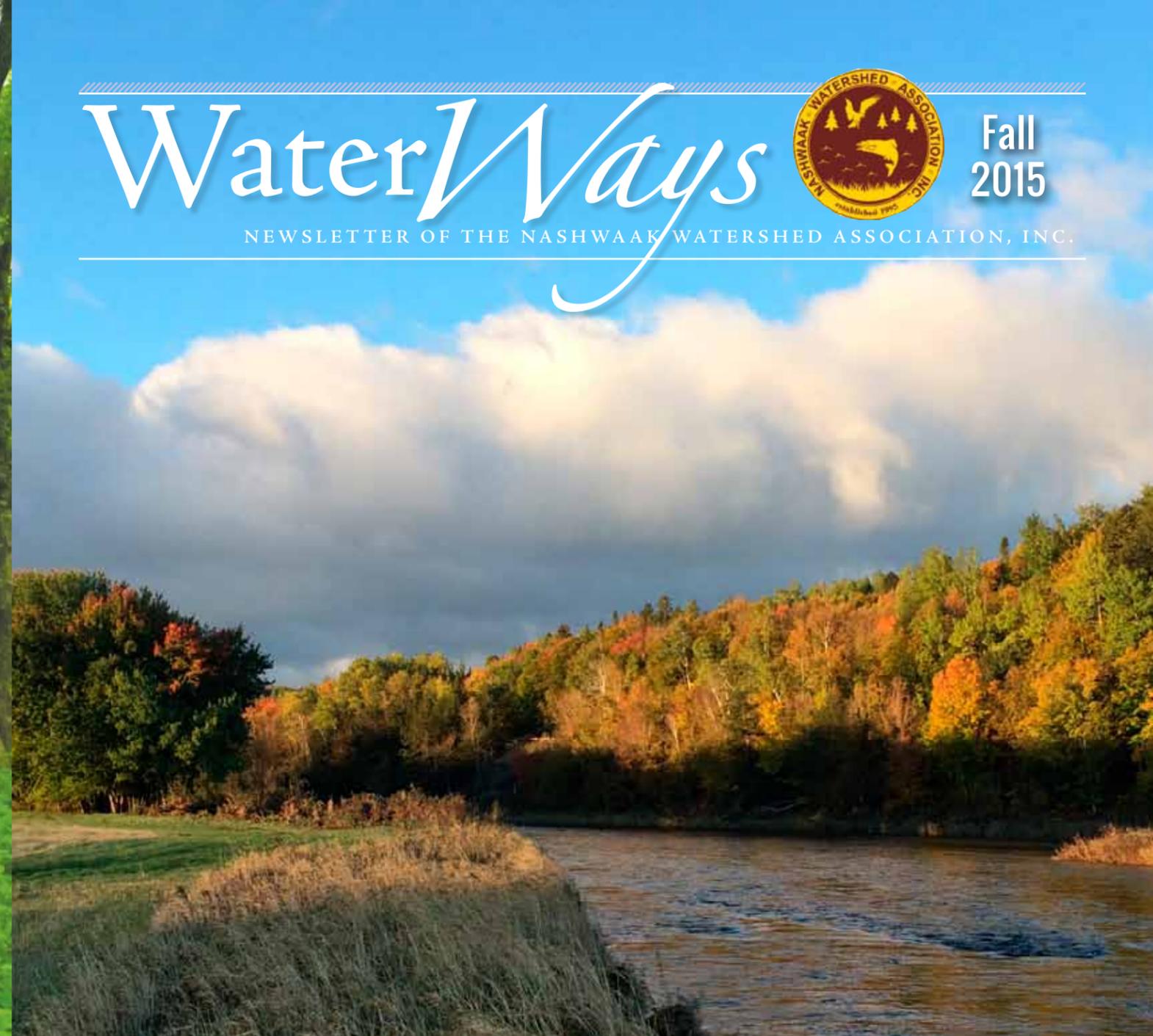
Your Environmental Trust Fund at Work

# WaterWays

NEWSLETTER OF THE NASHWAAK WATERSHED ASSOCIATION, INC.



Fall  
2015



## President's Report

Every year we produce this newsletter. I feel very strongly that in it, every year, we have been able to present new ideas and initiatives, and to welcome new people who in turn, bring their own ideas to the organizations, and so we grow. Growth has to be one of our key objectives, not simply to get bigger, but to be able to facilitate change...to be heard. The NWAIA already punches well above our weight, and we will continue to do so.

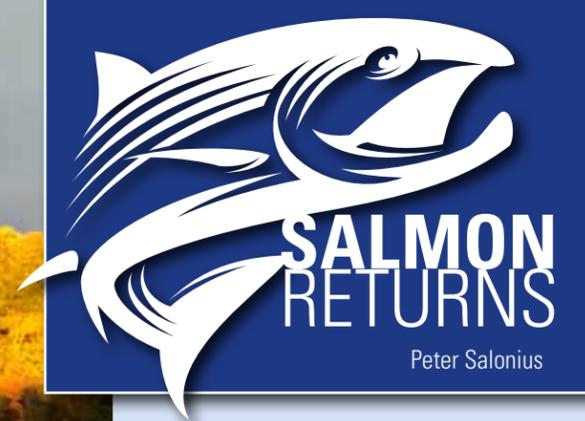
In 2013, the board completed a three-year strategic plan to detail objectives so that as we did grow, we would have a plan to guide us. In that plan, 2015 was to be the year we began to hire staff, and to begin to approach funding sources that could support multi-year plans with a heavier scientific component in addition to continuing the development work already underway.

This we have done, with the addition of Heather Loomer (PhD), a young woman with a strong research background in water quality and aquatic habitat, who will act as

our coordinator, charged, in part, with the task of helping develop the rationales and funding proposals those longer projects require.

Heather has already made her presence felt with blogs on our website, building connections within the community, and helping coordinate and complete work in the programs already in progress. She has been instrumental, as has been our former coordinator, Peter Ashfield, in negotiations with The Ville Cooperative, an interesting

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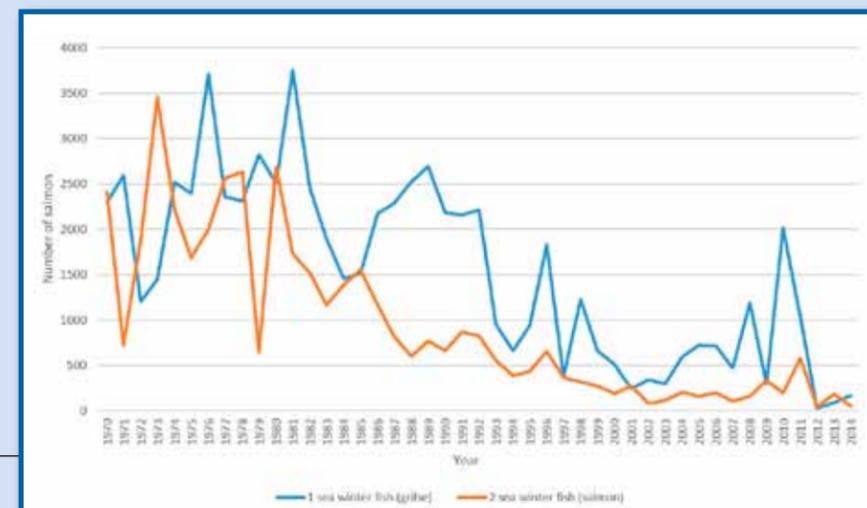
A timeline linking salmon returns with sea lice management in farmed salmon: Salmon aquaculture began in the Bay of Fundy in the 1980s / farmed fish rose quickly to exceed wild salmon numbers. Excellent numbers of salmon and grilse returned from the ocean until the early 1990s when decreasing salmon returns forced the closure of salmon fishing by the mid-1990s.

- It is known that:
- Salmon (and sea-run Brown Trout) suffer declines in all countries after the advent of open cage salt water salmon farming and returning adult salmon decreases are coincident with an increasing number of sea lice on farmed salmon in the Bay of Fundy
  - Sea lice are always found on adult salmon in salt water but small migratory smolt die when infested with sea lice in salt water
  - In the early 2000s, salmon farms began employing SLICE (a parasiticide) to control of sea lice with a coinciding slow improvement in salmon returns
  - In 2009, sea lice became increasingly tolerant to SLICE and salmon returns again decreased, coinciding with increased numbers of sea lice in Bay of Fundy salmon farms

There is a very real possibility that during the summer, sub-lethally infested salmon smolts (with less than ~ 10 lice/fish) from the southern Maritimes and Maine are spreading aquaculture origin sea lice to smolts from rivers with no salmon farms nearby, as these migrants school together, such that these fish also become infected (and weakened) long before they would normally do so, when they finally associate with sea lice infested maturing salmon on the Labrador Sea feeding grounds in late summer and fall.

The numbers of salmon returning from the ocean to the Nashwaak in 2014 show 163 grilse (salmon that overwinter the ocean for only one year) and 48 salmon (defined as having overwintered in the ocean for multiple years). These numbers aren't much better than the previous year's (2013) which saw continued historically low returns. Those of us who live along and play in the Nashwaak River know this trend all too well. The Nashwaak was once known for its abundance of salmon but over the years there has been a drastic population decrease in the river. In 1970, when the federal Department of Fisheries and Oceans began tracking salmon returns, the adult salmon returning to the Nashwaak River were around 2000 and after a steady decline since the mid 1980s, the number of adult salmon bottomed out at 44 in 2012.

I am increasingly convinced that aquaculture origin sea lice from Bay of Fundy salmon farms have been negatively influencing Atlantic salmon returns in rivers far distant from open net sea cages ever since numbers of farmed salmon soared in the 1990s. There is some evidence to support this contention in the fact that smolt/adult ratios have been inexplicably disappointing in much of the Maritimes and Quebec for the last several decades, while good smolt/adult ratios have been observed in Newfoundland rivers (excluding rivers not impacted by south coast salmon farms) and in Labrador rivers.



social enterprise project in the former Alexander Gibson Memorial School. We hope to establish a permanent office there, in what looks to be a key location for socially active NGOs, small businesses, and community groups such as the Falls Brook Centre and Red Rock Adventures. Our interest in opening and maintaining an office is in large part due to the number and types of community activities and organizations who are also working out of the same building. This offers potentially, the critical mass of key players for social and environmental influence in the Nashwaak River drainage and those relationships will be key in advancing our projects in the broader community.

If there is a future for New Brunswick it will rest in the hands of these people, and their peers. It will require that the rest of us acknowledge their contributions, and support them.

If we have a renewable resource, it is our young, well-educated and committed people.

We have added two new board members since the last writing, Joanna Nickerson, who, having just completed her MBA at UNB, has begun a new job as a Social Innovation Coordinator at the Pond Deshpande Centre at UNB, and Peter Toner, a father of three, and an Associate Professor in Anthropology at St Thomas University.

Joanna has agreed to act as our new treasurer. We are delighted to have someone with her skill set in this very key position, and her contributions to the board effectiveness have been substantial and continually positive.

Peter's background as an educator helps us further advance our education program for elementary schools and outdoor programs. Peter is an enthusiastic participant heading up a sub-committee that is looking at expanding those ideas.

The board we now have is composed largely of young, well-educated, committed people who have shored up the longer-term members. Some, like Stephanie Merrill and Josh Noseworthy, have a poise and depth of experience well beyond their years, and have already made commitments to careers in environmental stewardship. Others, like Kent Fackenthall, Alex LeBlanc, Joanna, and Peter are professionals with a deep social conscience and a willingness to contribute. Interestingly, for the most part, they are people who grew up here...they are the sons and daughters of our neighbors and friends, and that is significant. If there is a future for New Brunswick it will rest in the hands of these people, and their peers. It will require that the rest of us acknowledge their contributions, and support them. If we have a renewable resource, it is our young, well-educated and committed people.

We will be holding our AGM Wednesday, November 18th at The Ville Cooperative (old Alexander Gibson Memorial School) and I urge everyone to come join us, sign a membership form, and become a part of this growing organization. There is a great deal to do. There is a chance to do something great.

– Paul McLaughlin

## Upstream | Downstream



## Taking it to the KIDS



In 2015, the NWAJ continued to develop its educational outreach program in elementary schools. Under the lead of Peter Toner and Paul McLaughlin, we have begun to develop an outdoor learning program.

The new initiative, called "Upstream/Downstream", will coordinate activities and learning across several elementary schools in the Nashwaak watershed. The New Brunswick school system already has in place units in the science curricula that can be effectively adapted to experiential learning in a watershed environment:

- Life Science: Plant Growth and Changes (Grade Three)
- Earth and Space Science: Exploring Soils (Grade Three)
- Life Science: Habitats (Grade Four)

The stated outcomes for teachers in these science units can easily be matched with the NWAJ's own objectives concerning water quality, riparian zone management, river bank restoration, and tree planting. A unique opportunity exists for NWAJ members and volunteers to work closely with students and teachers to satisfy the objectives of both groups. More importantly, though, is the opportunity to help students to appreciate that, from Stanley to Barkers Point, they are linked through the beautiful and unique Nashwaak River watershed. In emphasizing this environmental connectedness, we can also encourage these students to rethink their sense of community, from their individual towns and neighbourhoods to the river that runs through them.

While the planning for this educational outreach program is in its early stages, in

the last year we have piloted two successful field trips with Gibson-Neil School and, to the delight of teachers and students, we have more planned.

We began last March with a field trip for 4th grade students, who were taken first into Odell Park on snowshoes to experience an old growth forest, and on a subsequent trip, to a managed forest at the UNB woodlot. They were given small cameras to share, and asked to take as many pictures as they wished. They then documented their impressions in writing. We selected some of the most interesting written pieces to accompany some of their best photos and produced a full colour coffee table books. Joanna Nickerson and Kent Fackenthall did a fabulous job on these books and copies were left in each classroom to loan to students who could share them with their families.

This past September, a new class of 4th grade four students each transplanted three seedlings to care for and observe over the year, and the also planted some six to eight foot whips on the school grounds. Come spring, they will be taking one of their three seedlings home to plant while the other two will remain in pots at the school for continued observation by students in the following year. The students and teachers also shared a planting day with staff members from the McInnes Cooper Law Offices at a site along the Nashwaak River south of the Heritage Centre. They combined the walk there with a short lesson on river dynamics and erosion causes and effects.

Stay tuned for more exciting developments as we hope to have the "Upstream/Downstream" program ready to launch, for the 2016-17 academic year.