



iNaturalist Wildlife Tracker

— Victoria Ruigrok

Created using *iNaturalist*, a simple app for plant and animal identification, the NWA Wildlife Tracker allows individuals to record their observations of the wildlife species that are present within our watershed. Encompassing all wildlife observations within the Fredericton region, this project currently has over 4000 observations, including anything from large mammals and birds to the smallest insects. Currently, the most observed species within our watershed is the monarch butterfly, but other prominent species include the Eastern grey squirrel, mallard, and black-capped chickadee. The Wildlife Tracker was created for individuals who are interested in learning about our local species, so be sure to check out this project on our website if you're interested in finding out more about the species that are present within our beautiful watershed.

MEMBERSHIP

The Nashwaak Watershed Association aims to promote, conserve, and restore the Nashwaak ecosystem by using science-based methods, community collaboration, and advocacy for the watershed and its inhabitants.

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

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

Let us know if you're interested in volunteering!

2020-2021 Board of Directors

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Ian Smith
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Restoration & Outreach Technician

You are invited to attend our virtual NWAI ANNUAL GENERAL MEETING

We have a special evening planned and we hope that you can participate.

**Wednesday,
November 10, 2021
7-9pm**

In addition to short presentations on the work of the Association, we will have a guest speaker, Cecelia Brooks who is the Water Grandmother at Canadian Rivers Institute at UNB. Cecelia is a grandmother of Wolastoqey, Mi'kmaq, Mohawk and Korean ancestry who is a member of Saint Mary's community in Fredericton and lives in Nashwaak Bridge. She specializes in traditional plant knowledge and will be speaking about the Indigenous perspective towards on-the-ground habitat restoration.



Please register for the event in advance at:
<https://nben.ca/en/nwai-aga>

Connect with us



info@nashwaakwatershed.ca
www.nashwaakwatershed.ca

WaterWays

NEWSLETTER OF THE NASHWAAK WATERSHED ASSOCIATION, INC.



Fall
2021

President's Report

2021 was a year of important milestones for the NWA as we continue to grow and professionalize the organization. In May we marked the launch of our 2021-2030 Strategic Plan, which was developed as a long-term project involving NWA staff and board members, and led by our friend and former board member, Josh Noseworthy. Using the Conservation Standards adaptive management framework, we met regularly for more than a year to identify and discuss our biodiversity targets and direct ecological threats, to conduct situation analyses, and to develop an ambitious set of goals and strategies to achieve them, as well as a monitoring plan to track our progress. This document charts the course for the next decade of the NWA's work, and truly marks our growth as an organization dedicated to the preservation and protection of the Nashwaak.

The NWA also completed work on two major and long-standing projects: the removal of the Campbell Creek dam (described by Natalie Deseta in this newsletter), and the completion of our riparian restoration activities on the Marysville Flats. The Marysville Flats restoration site is one that is dear to my heart, as I have worked on it for the seven years that I have been an NWA board member. The site has been transformed from a mostly-cleared former agricultural property into a rapidly-rehabilitating silver maple floodplain forest. Seedlings that I helped to plant in 2015 are now more than twenty feet tall, and it is easy to imagine that in another five or six years the whole site will be transformed back to its natural state. All NWA members can be justifiably proud of this achievement, which is now being replicated downstream at our Neill's Flats restoration site.

Finally, the NWA has surpassed \$400,000 in annual project funding from a wide variety of sources to continue our projects on restoration, aquatic connectivity, water quality monitoring, education, and many other important areas of work. This amount of secured funding speaks to the professionalism and dedication of our staff, under the leadership of Executive Director Marieka Chaplin, to find new and creative ways to implement our vision and achieve tangible results. The NWA has developed into an important player among New Brunswick's watershed organizations, and we can certainly look forward to more important milestones in the year ahead.

— Peter Toner

nashwaakwatershed.ca

With thanks for continued support



WaterWays



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Cyanobacteria

— Victoria Ruigrok

We are pleased to partner with ACAP Saint John for a second year of cyanobacteria monitoring. Cyanobacteria is present in many rivers, lakes and ponds in New Brunswick, so this project is very important for monitoring the occurrence of cyanotoxins. Commonly called “blue-green algae,” cyanobacteria isn’t a type of algae but rather a species of bacteria. While most species of cyanobacteria are not dangerous, certain types can produce cyanotoxins that are harmful to humans, pets and wildlife. There are two forms of cyanobacteria in New Brunswick: surface blooms and benthic mats. Surface blooms generally look like scum on the surface of the water and are blue-green in colour, while benthic mats will grow on the bottom as darkly coloured clumps. As water conditions change, blooms and mats can dissipate quickly, so it is important to observe the water and learn how to recognize both forms of cyanobacteria. Cyanotoxins can have varying effects on pets, humans and wildlife, so if you observe any

blooms or mats, avoid the water and report your findings to your regional department of environment and local government office. Unfortunately due to COVID-19 restrictions and delays at the research lab we are still awaiting our toxin results from the two sites in the Nashwaak. Through other research at UNB Fredericton we know that toxin producing species of cyanobacteria can be found throughout the river system so please always check for visual signs of cyanobacteria before letting your pets off leash or getting in the water.



Implemented Year 1 of our 2021-2030 Strategic Plan

Over 900 swamp milkweed plants were distributed to promote pollinator gardens and Monarch butterflies

Water temperatures and levels were high due to an anomalously hot, wet summer

Campbell Creek Dam removal completed restoring habitat for Atlantic Salmon and American Eel

Completion of tree planting at Marysville restoration site

Over 17,100 trees planted: 12,548 silver maple, 753 bur oak, 44 butternut and 1,165 red oak, 95 red maple, 500 white birch, 500 yellow birch, 500 white pine, 500 hemlock, 500 red spruce

Over 3,683 red-tipped willows planted, mostly planted by landowners

Workshops and hands-on events provided to >600 people with topics ranging from kayaking to wildlife-friendly gardening

13 sites in the watershed monitored for water quality monthly

15 landowners participated in the Natural Edge Program

37 temperature loggers deployed

Initiated our Acadian Forest Landowner Outreach Program

CAMPBELL CREEK

The Campbell Creek dam has been completely removed and the former headpond planted with native grasses and Acadian Forest tree species, including eastern white pine, eastern hemlock, red oak, red spruce, white & yellow birch. The riverbanks in the restored stream channel were staked with red tipped and pussy willow. For the first time in over a century the creek is freely flowing.

Numerous partners came together to bring this project to fruition, and we feel privileged to be part of this Wolastoquey-led initiative. The removal of the dam and restoration of the former headpond will provide habitat for aquatic species-at-risk: Atlantic salmon and American eel, as well as other coldwater fish (brook trout & sea lamprey), and terrestrial species. In addition, the restored creek will provide improved water quality, landscape connectivity and downstream regulation of water & sediment flow.

Project partners include: the Maliseet Nation Conservation Council, Saint Mary's First Nation, Wolastoquey Nation New Brunswick, the City of Fredericton, the Atlantic Salmon Federation, Community Forests Canada, Colbr Consulting and Hilcon Engineering. Funding for this work was provided by the Department of Fisheries and Oceans, the Atlantic Salmon Conservation Foundation and WWF-Canada.

— Natalie Deseta



Acadian Forest Project

— Kate Turner

Highlights 2020-2021



Although COVID-19 is still a present concern in 2021, modified protocols allowed us to safely conduct all of our annual field work to monitor Atlantic Salmon populations throughout the Nashwaak River.

Spring water temperatures rose early compared to previous years (6.8°C on April 22 2021; 5°C on April 30 2019) and smolt wheels were operated from April 22 to June 2. DFO and partnering Aboriginal Fisheries Strategy staff also installed a fence on the Tay River this year to aid in the assessment of out-migrating smolts, however <15 smolts were captured and a population estimate was not possible. Nashwaak populations are predominately 2 year old smolts; low smolt numbers this year may be in part a result of low 2018 adult returns, which resulted in low egg deposition (only 2% of Conservation requirement) and subsequently low

2019 fry densities. Low capture rates could also be attributed to inefficient gear resulting from low water flows and possibly an early migration triggered by early warm water temperatures, rather than a reflection of the current population status. Electrofishing surveys were conducted throughout the Nashwaak River this summer. Fry were detected at 10 of 14 sites, while 13 sites had salmon parr present.

The Nashwaak adult counting fence has been operational since June 10 and the counts to date are unfortunately lower than in recent years; as of September 23rd, 107 adults have been detected at the fence, 85 grilse and 22 multi-sea-winter (MSW) salmon, which is only 71% and 58% respectively compared to 2019 returns on that date. It is important to note that this is not an actual count as the fence has been lowered on multiple occasions due to high water and the removal of the dam on Campbell Creek has opened up new habitat for returning adults in the lower section of the Nashwaak. Annual seining of various holding pools in the system will be monitored in the coming weeks in order to determine a population estimate for the river above Durham Bridge.

— Sherisse McWilliams

Emerald Ash Borer Traps

From July to early September, the New Brunswick Invasive Species Council collaborated with various municipal and environmental partners- including landowners in the Nashwaak watershed- to install Emerald Ash Borer (EAB) traps in Ash trees across the province. These prism traps are installed high in the canopy of an Ash tree to capture a sample of flying bugs to detect the presence of this highly invasive forest pest. EAB kills 99% of ash trees in infested areas and was first detected in the province in 2018 in Edmunston, It has since reached Fredericton, Oromocto, and Moncton.

Monitoring efforts help to identify where this invasive species is spreading, and provides important information to watershed associations, Municipalities, and Government partners to plan appropriate management strategies. The main way Emerald Ash Borer is spread is through infested firewood and wood products, as the beetle larvae can survive in wood even after it's cut. So make sure that you don't move firewood: even just from the city to your camp or vice versa. Instead, help protect the ash trees in the Nashwaak watershed and BUY LOCAL, BURN LOCAL instead by purchasing certified “pest-free” firewood or sourcing your firewood where you will burn it.

— Shelby Heath

Seeds, and more seeds...

— Victoria Ruigrok

This year we collected tree seeds for future planting and restoration projects. As a part of our strategic plan, we aim to increase the floodplain forest area by over 70 hectares before 2030. Due to the large number of seedlings that will be needed in upcoming years, we decided to source our own seeds from local silver maples. In May of 2021, we collected over 220L of silver maple seeds which were then shipped to a tree nursery.

This exciting project is the first of its kind that we've completed. In July, we went to check on our seedlings and were surprised to see over 50,000 silver maple seedlings that were already larger than 30cm in length! The 50,000 seedlings will all eventually be planted at Neill's Flats, one of our main restoration sites within the watershed. Planting these trees will bring us one step closer to restoring this area to its previous habitat - a silver maple floodplain forest. Keep an eye out for our tree planting events next spring as we are going to need all the help that we can get! To achieve our ambitious goals, 10,000 of the seedlings were planted this fall at Neill's Flats and over 20,000 seedlings will be planted in 2022.



ACADIAN FOREST