Kensington North Watersheds Association

NEWSLETTER

www.knwsa.ca Kensington North Watersheds Association kensington_north_watersheds

2020 IN REVIEW

Although 2020 had its fair share of challenges, from new social distancing guidelines to extremely hot, dry weather, Kensington North Watersheds still had a successful and fun year! We continued on with many multi-year projects we have been working on in the past several seasons, and we also started a few projects new to 2020!

This past field season staff covered a total of 24.5 kilometers completing stream assessments, over 14 km of stream maintenance and restoration activities, planted nearly 500 native trees, shrubs, and wildflowers, harvested hundreds of potato rows, and completed many other exciting activities that will be highlighted throughout this newsletter!

In this newsletter:

If you're viewing this newsletter electronically, you can click icons and links to open up our webpages!

Above: Carley holds a young brook trout caught while electrofishing in Indian River
Left: Heather, Kyle, Emma, and Carley pose while electrofishing in Indian River

Left: Zachary and Emma pose while tree planting in Barbara Weit River

YEAR-2 OF HABITAT RESTORATION IN BARBARA WEIT RIVER

2020 was year-2 of a 3 year project focused on restoring water quality and wildlife habitat in the Barbara Weit River watershed. This project is funded by Environment and Climate Change Canada as part of the EcoAction Community Funding program.

In the spring, staff began assessing our tree planting sites from the previous year. We performed any required tree maintenance, such as pruning branches, adding additional cardboard to suppress vegetation growing around the tree, and added or removed tree guards as needed.

Staff planted over 200 native trees and shrubs during the spring and fall of 2020.

Areas we planted in this year include in an open, grassed buffer zone, in patch cuts from 2019, and in forests that required additional plant bio-diversity. Due to the hot, dry conditions, we did not plant as many trees as we initially planned. Instead, we returned to tree planting sites during the drought to water newly planted trees to increase their survival!

Staff covered approximately 6 km of stream completing maintenance and restoration work such as removing blockages and trimming nuisance branches with handsaws and chainsaws, removing water cress to allow sediment to flush, and constructing brush mats to catch excess sediment during high flow events.

In the fall of 2020, staff returned to the large garbage patch alongside Barbara Weit River to continue remediation efforts. In 2019, staff removed approximately a dozen fish tubs full of garbage. This year staff removed another appoximately 15 fish tubs full. Garbage was taken to New London for proper disposal.

After several years of removing garbage from this area, much of the large debris has been removed and mostly smaller garbage remains. We will assess the site in 2021 to determine what the next steps should be to return this area to a healthier riparian zone.

COASTAL RESTORATION IN HUNTERS CREEK AND BALTIC RIVER

2020 was year 4 of our Coastal Restoration Project funded by Fisheries and Oceans Canada. We are part of a PEI-wide project involving multiple watershed groups to improve fish passage for anadromous fish species, such as brook trout.

Kensington North's portion of the project involves regular stream restoration and maintenance activities in both the Baltic River and Hunter's Creek branches of Darnley Basin watershed. For example, clearing fallen tree branches and blockages, and removing garbage and debris from the stream. In addition to our regular stream activities, staff created a rock deflector in Hunter's Creek to protect a vulnerable, eroding stream bank.

This project also involves the creation of a deeper channel in the estuary for improved fish migration and the creation of new salt marsh habitat. We use a mini-dredger in the estuary to suction excess sediment from the channel, then deposit this sediment into enclosures we've built. Once the sediment has settled in these enclosures, we plant with salt marsh grass to establish new marsh.

This year, we worked in the Hunter's Creek estuary and created three new salt marsh enclosures. We also created a channel approximately 150 meters in length to improve fish migration in and out of Hunter's Creek.

Above: Progress photos throughout the process of dredging sediment into new salt marsh enclosure
Left: New rock deflector built in Hunter's Creek to protect eroding bank.

IMPROVING WATER QUALITY IN TUPLIN CREEK

Another project that Kensington North worked on in 2020 was improving water quality in Tuplin Creek as part of the Atlantic Ecosystems Initiatives program, funded by Environment and Climate Change Canada. Similarly to our Coastal Restoration Project, AEI is also a multi-watershed group project managed by the PEI Watershed Alliance.

Our portion of this project involves performing regular stream restoration activities and also monitoring water quality. We measured water quality mainly for nutrients such as nitrates, and we used a variety of methods to measure water quality, including a handheld YSI loaned from the Watershed Alliance, our own YSI photometer, and grab samples analyzed at the PEI analytical lab. We also measured the turbidity of the water following heavy rain events with the use of a turbidity tube. All of our water quality results from this project, and other projects, are available to view on Atlantic DataStream- Click the logo in the corner to check them out!

In the fall, staff walked and droned much of Tuplin Creek to identify any problem areas and map the surrounding land use in this watershed. The results of both water quality monitoring and mapping will help us determine any problem areas to focus our remediation efforts!
In 2021 we will also be working with a graduate student studying sediment flux in the stream!

Above: brush mat constructed in Tuplin Creek to catch excess sediment

Atlantic DataStream

WILDLIFE CONSERVATION FUND

We also received funding through the Wildlife Conservation Fund for a project focused on improving wildlife habitat in Branders Pond, Cousins Pond, and Paynters Creek watersheds.

Activities performed for this project included: stream clearing activities, assessment of tree plantings from previous years, excavating of in-stream sediment trap in Cousins Pond, water quality monitoring, and removal and management of invasive species such as glossy buckthorn.

The funding from WCF is available for groups across PEI to apply for, and WCF funds projects that benefit wildlife and their conservation. 100% of the sales of conservation license plates and hunting, trapping, and angling licenses go towards the Wildlife Conservation Fund. If you would like to help wildlife across PEI and support projects like this, please consider purchasing a conservation license plate for an annual fee of $10!

Left: Before & after removing branches & debris in Branders Pond

Left: Heather and Emma harvest strip of potatoes as part of Living Labs project (photo by CBC PEI)

Below: Chris, Emma and Zachary collect hand-dug potatoes (photo by EPAA)

LIVING LABORATORIES INITIATIVE

For the second year, Kensington North is partnering with East Prince Agri-Environment Association on the Living Laboratories Initiative, funded by Agriculture and Agri-Food Canada. This project is designed to benefit farmers and Islanders by improving the health of soil, water quality, and crop productivity. This project involves developing and testing multiple beneficial management practices (BMPs) on agriculture fields such as cover cropping, irrigation, fertilizer efficiency, and the addition of wetlands in an agricultural landscape. The Living Labs project is especially exciting as it has a collaborative approach to research, involving farmers and producers, scientists from Agriculture and Agri-food Canada, Environment and Climate Change Canada, Fisheries and Oceans Canada, scientists from the Provincial Department of Agriculture and Fisheries, and environmental groups all working together.

In 2020 Kensington North helped multiple partners with soil sampling, harvesting potato strips, grading potatoes for yield, installation of signs, and the construction of wetlands to remediate agricultural runoff!

FINAL YEAR OF WILLOW PROJECT

2020 was the final year of a 5-year project Kensington North has partnered on with East Prince Agri-Environment Association. This project involved planting willow cuttings just outside the buffer zone at the end of agriculture fields. The goal is for these willows to store carbon and excess nutrients and mitigate green house gases. Over the last 5 years, Kensington North has assisted in planting these willows, performed soil samples, and helped harvest the willows for analysis.

Left: Staff in 2018 planting willow cuttings in Spring Valley

OTHER EXCITING PROJECTS!

In addition to the multiple, larger projects Kensington North worked on in 2020, we also had some smaller scale projects.

In 2020 Kensington North trialed the use of floating wetlands in Paynter's Pond in Long River. This pond has had numerous issues over the years with excessive growth of algae and anoxic events. We constructed floating wetlands as a trial to remove excess nutrients from this system. These wetlands were built out of a hollow tube filled with water bottles, then covered with jute material and planted with aquatic vegetation. The goal is for the plants' roots to grow down into the water column, taking up excess nutrients in the system.

Top Right: Kyle passing Carley and Emma grass to plant in floating wetland

Bottom Right: Emma and Zachary pose after planting swamp milkweed at Pollination Station

Kensington North was also a partner on the Community Nominated Priority Places project for species at risk that Island Nature Trust managed. This project focused on PEI's coastal habitat and working to conserve the species at risk who live in these areas. In the summer, staff assisted in performing a bank swallow survey along our North Shore. Staff covered approximately 23 km of shoreline and would note the presence of bank swallow cavities, whether there were birds present and how many, and note the location. We also assisted in repairing a damaged sand dune at Cousins Shore beach with the use of cut spruce trees.

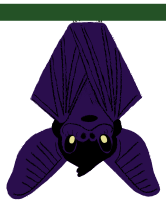
In 2020, we also planted and maintained our pollination station at Ross's Place Community Gardens in Kensington. This was the second year we have had a plot at the gardens and in 2020 we were excited to have two boxes! We planted a mix of plant species that benefit pollinators, including native species and other nectar-producing flowers from local nurseries. Some of the flowers planted included swamp milkweed - the only food larval monarch caterpillars eat, yellow coneflower, and joe pye weed!

Unfortunately we did not find any monarch caterpillars using our milkweed in 2020, but monarch population numbers were lower in this area compared to previous years. Luckily, swamp milkweed is a perennial plant, so it will regrow next season, and we hope to have monarchs use it in the future!

MORE EXCITING PROJECTS!

In 2020 we also tackled a new project of performing stream and riparian health assessments. Staff covered approximately 24.5 km during the summer, walking streams and noting various habitat features. Some of the features staff looked for and recorded included buffer zone width, sediment depth, the composition of the surrounding vegetation and forest, and state of stream crossings and culverts. The next step will be using these assessments to make individual watershed plans to better guide our remediation work in the future.

Left: Ginny measures a perched culvert in Tuplin Creek



2020 was the third summer we monitored bats in our region in collaboration with Canadian Wildlife Health Cooperative. Each summer we install four stationary acoustic monitors for one week in July. These monitors turn on at the same time every night and can record the number of bat passes. We also perform a mobile survey which involves driving along the same route each year with a microphone attached outside the vehicle. We drive at approximately 32 km/hr along this route and measure bat passes. Since this route is designed to never cross over the same location twice and due to the speed we are travelling, we estimate that each individual bat pass equals one bat; therefore, we can estimate how many bats we encountered that evening! Each year we post the results of our bat monitoring on our social media (**2018 bat results** and **2019 bat results**), so stay tuned for our 2020 results!

Above: Carley, Hannah, and Heather pose after installing stationary monitor

MORE EXCITING PROJECTS!

In the winter of 2020, staff assisted biologists from Forest, Fish, and Wildlife with waterfowl monitoring. Every second Wednesday throughout the winter, staff would visit various waterbodies in our area and count the number and species of waterfowl we saw. In the summer, staff began to assist Forest, Fish, and Wildlife with wildlife monitoring through the use of trail cameras. These trail cameras are motion activated, so they will take pictures only when something, like an animal, triggers them. Every two weeks, staff visit the various trail cameras and swap out memory cards. Then we go through the photos, saving any photos that contain wildlife. We also purchased a couple of our own trail cameras to catch other interesting pictures of wildlife in other locations within our watershed boundaries! Click HERE to see all the wildlife we saw using the stream and animal crossing in Indian River!

In May, staff helped out the Women's Institute by participating in their annual roadside cleanup. Staff focused on side, dirt roads in our area. These roads can often be forgotten about, but can also unfortunately be a popular area to dump garbage. Some of the roads our staff cleaned included Route 104 between Spring Valley and Indian River, Hanna road in Indian River, and Hall road in Spring Valley.

In 2020 we continued to monitor water quality across many of our watersheds. We monitor for water quality using various methods, including a handheld YSI which can quickly measure numerous parameters including nitrates, temperature, dissolved oxygen, and pH. We also will regularly use a bottle to grab water samples, which we can either monitor ourselves with our YSI photometer, or we can send to the PEI analytical lab for analysis. Having these data will help us determine baseline levels now to compare against in the future and potentially identify any problem areas within our watersheds! All our water quality data from 2012-2020 has been uploaded onto **Atlantic DataStream** for public access and visualization!

In 2020 we also measured fish populations through the use of electrofishing surveys and redd surveys. Four of our staff had their backpack electrofishing certification, which allowed us to borrow the backpack electrofisher from the PEI Watershed Alliance to use in Indian River. Electrofishing works by sending a current at a set voltage through the water. The backpack operator holds on to a long pole with a ring at the end - which is the anode. The current then travels through the water to the cathode, which is a long metal "tail" that hangs into the water. If fish are close enough, they are temporarily stunned, allowing the staff to grab them with their large nets. As staff are wearing rubber waders without holes and long rubber gloves, we are safe from any electrical shock! We make sure not to set the voltage too high, and we keep an eye on the fish to ensure they safely recover after they are shocked. Once fish are caught, we counted and measured the fish which allows us to determine the density of fish in a given section of stream!
In the fall we performed redd surveys to identify popular spawning areas. Redd surveys involve walking along a section of stream and looking for redds in the stream substrate. Redds are disturbed, depressions in the stream cobble where female brook trout lay their eggs. They create this depression by rapidly flapping their tail as they deposit eggs, which are then fertilized by nearby males. Once we identified a redd, we recorded its location using a GPS. Knowing these locations can help us to better plan our restoration activities in the future!



MEMBERSHIP

Check out our **NEW** website!
www.knwsa.ca

By becoming a member or renewing your membership, you will be joining and supporting Kensington North in addressing issues within our watersheds. Members' participation in meetings, forums, and special events helps create the direction for our association.

Regular members are entitled to vote at our annual or special meetings, are eligible to stand for election for our Board of Directors, and receive newsletters

1 year: $10
3 years: $25
5 years: $40

Corporate members are not eligible to vote at meetings, but receive special recognition for their support and are listed on the Corporate Members page of our website, and they receive newsletters

1 year: $100
3 years: $250
5 years: $400

Youth memberships are available for those less than 18 who want to be involved with the watershed group. They are not eligible to vote, but are still encouraged to become involved in watershed issues and activities

1 year: $2

Want to become a member or renew your membership? Click the button to the right to be redirected to our online membership form **OR** cut out and complete the form at the bottom of this page!

Become a member!

We would like to thank our many volunteers, supporters, and our funders:
PEI Wildlife Conservation Fund, Town of Kensington, PEI Watershed Management Fund, Province of PEI, Fisheries and Oceans Canada, Environment and Climate Change Canada, Employment and Social Development Canada, Agriculture and Agri-Foods Canada, American Friends of Canadian Conservation, and Clean Foundation.

Membership Form

Name:_____
Address:_____
City/Town:_____
Province_____ Postal Code:_____
Telephone:_____
Email:_____
Membership Type: Regular: 1 yr [ ] 3 yr [ ] 5 yr [ ] Youth: [ ]
Corporate: 1 yr [ ] 3 yr [ ] 5 yr [ ]

Make cheque payable to: Kensington North Watersheds Assoc.
And mail to: PO Box 187 Kensington, PE C0B 1M0