

Central Queens Branch of the PEI Wildlife Federation

WATERSHED NEWS



Winter 2023

What a year! To wrap up our 2022 season we wanted to share and highlight our accomplishments. This year we've decided to distribute our newsletter electronically to help reduce waste and reach a wider audience.

West River Restoration Update

With the help of our ambitious field crew of experts we accomplished a remarkable amount of work in a relatively short period of time. During 2022, our crew traveled the majority of the main branch of the West River and major tributaries to ensure fish passage was possible and habitat enhancement were conducted along the way. In total our crew covered 39.6 km of stream habitat! During their travels the crew turned problematic woody debris (fallen trees blocking the stream) into productive cover structures for local salmonids. In total our crew installed 93 cover structures. They also installed 79 brush mats to help capture mobile sediment and narrow the stream channel to the desired width. CQWF has proven to be very effective in restoring degraded reaches of stream back into productive habitat for brook trout and Atlantic salmon by implementing the correct sequence of restoration tactics.

Not all the work to improve our local streams occurs directly in the water. You need to think "outside the stream" as well! We spent a considerable amount of time planting native trees and shrubs in areas that lack biodiversity and long-lived species such as red oak and yellow birch. Our crew planted over 1,200 trees and shrubs in



2022 with some assistance from local community volunteers and UPEI summer students. Planting trees/shrubs is a great way to increase biodiversity, improve our forests resilience, introduce longer-lived species, and create desirable habitat for terrestrial species. This aspect of our work wouldn't be possible without the help from the Provincial Frank Gaudet Tree Nursery who grows and nurtures the trees we used to plant.

CQWF uses information gathered during environmental monitoring activities to help decide which restoration tactics are used while addressing certain limiting factors. CQWF conducts redd surveys which involves walking over 25 km of river during November and counting/marking Atlantic salmon and brook trout redds. A redd is a nest that salmonids create to bury their eggs in the stream bottom substrate in which they'll leave unattended until the eggs finish incubating. During 2022, CQWF counted an impressive number of 141 Atlantic salmon redds, which is an increase from recent years surveys! Other surveys CQWF conducts include water quality monitoring (19 sites), juvenile density surveys (14 index sites), and early morning bird surveys at two locations. If you are interested in the results from these surveys the reports are posted on our web page.



The damage that occurred from Hurricane Fiona left Islanders in shock. The West River took significant damage that will have consequences for many years to come. CQWF immediately began cleaning up the aftermath in October to ensure important spawning grounds remained accessible to Atlantic salmon and brook trout during the 2022 fall spawning season. CQWF removed +70 blockages along the main West River and lower Howell's Brook. CQWF intends on working with local landowners to manage the fallen trees and turn this woody debris into productive habitat for salmonids. This will take some time and serious effort over the upcoming years. The long term consequences of this storm are yet to be determined and will take years to understand the full effects.



Funded Projects

CQWF was funded by the Wildlife Conservation Fund for restoration work on the Clyde River. CQWF spent a considerable amount of time restoring aspects of the Clyde River which involved maintaining sections of stream restored in 2021 and an additional 3.95km of the west branch free of blockages. Along these enhanced sections, 21 cover logs and 15 brush mats were installed. Existing plantation sites were evaluated for survival and replanted with 150 trees/shrubs. To cap off the season on the Clyde River a sediment trap was re-excavated on the west branch permanently removing 300 m³ of sediment.



CQWF is considered a leader in Atlantic salmon conservation efforts on PEI. Our group uses a holistic approach when rehabilitating salmon habitat. This summer we used 16 tonnes of Nova Scotia river rock at 17 spawning areas (13 on Howell's Brook and 4 on the main West River) to improve spawning habitat. The goal was to provide high-quality spawning substrate in combination with soft engineered structures to encourage female salmon to utilize high-quality habitat to create redds

in an attempt to increase embryo survival. At 19 locations another 16 tonnes of R5 rock was placed in riffle areas along the lower reaches of Howell's Brook to help improve juvenile rearing habitat nearby the improved spawning areas. The goal of this was to increase the stream bottom coarseness in order to provide abundant juvenile rearing habitat to reduce competitiveness and increase survival. This project was funded by the Atlantic Salmon Conservation Foundation and Habitat Stewardship Fund project in collaboration with the PEI Watershed Alliance.

CQWF partnered with the Dept. of Environment and Dept. of Transportation Infrastructure and Energy to remove and dispose of contaminated soils in Bonshaw. There was an accident in the 1970s involving a tractor trailer carrying a load of bunker fuel which left the highway in Bonshaw and crashed nearby the river. Most of the accident was cleaned up but there was a portion of the load buried on site. Moving forward to recent years, remnants of the bunker fuel were being picked up by CQWF as it surfaced along the streamside. In the fall of 2022, CQWF had Island Coastal Services excavated the accident site and had the contaminated spoils disposed of at the East Prince Waste Management Facility in Wellington.



We had another successful year stocking juvenile salmon in the West River with one of our largest releases yet with an estimated 40,000 fry released! This venture would not be possible without the continuous support from the Dept of Forest Fish and Wildlife and the Abegweit Biodiversity Enhancement Hatchery. We hope to see these fish thrive in the high quality habitat provided by CQWF and we're looking forward to seeing them return in a few years as adults!

Get Involved!

A major component in succeeding in our restoration ventures is having volunteer support. If you would like to become more involved send us an email at cqwef.pei@gmail.com to subscribe to our email list. We will send out notifications for upcoming events and frequent updates on what our crew has been up to during the field season!

CQWF hosted two volunteer events on Saturday mornings during the summer. The two events involved planting trees and improving salmon habitat along Howell's Brook. These events are a great chance to have a first hand experience with what's involved in watershed activities! Stay tuned to our Facebook page or join our email list to stay up to date on upcoming events for 2023.



Our Funding Partners

We would like to acknowledge and thank all of our volunteers and funding partners, without whose support we would be unable to continue our restoration efforts:

- The Atlantic Salmon Conservation Foundation
- PEI Wildlife Conservation Fund
- PEI Dept. of Transportation and Infrastructure
- PEI Dept. of Communities, Land and Environment
- PEI Dept. of Tourism
- Government of Canada
- Abegweit Biodiversity Enhancement Hatchery

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Plans for 2023

Looking forward to 2023 we have a long list of tasks we wish to accomplish. A large portion of the instream work will be addressing the damage from Hurricane Fiona. There are restoration activities planned for improving a new section of river for salmon spawning habitat and we wish to continue our Atlantic salmon spawning habitat characterization report we started in 2022. CQWF will continue monitoring environmental indicators and incorporating that information into our restoration plans. Finally, we hope to see some new faces at our Saturday morning volunteer days so stay tuned for those dates once we arrive closer to the summer season. Typically we have a volunteer day event on the last Saturday morning (9 am) of each month beginning in June. From the Central Queens Wildlife staff and volunteers we hope you have a happy and healthy winter!

