PRINCE EDWARD ISLAND
WILDLIFE
CONSERVATION FUND

Spring 2024
Summary Report

(For Public Distribution)

Report Prepared By:

COMMUNITY FOUNDATION OF PRINCE EDWARD ISLAND
LA FONDATION COMMUNAUTAIRE DE L'ÎLE-DU-PRINCE-ÉDOUARD

Community Foundation of PEI
53 Water Street
Charlottetown, PE C1A 1A3
Phone 902-892-3440 | info@cfpei.ca

Introduction

The Wildlife Conservation Fund was established in 1998 to provide funding for not for profit groups participating in Wildlife Enhancement projects in PEI.

Revenue for the Fund is collected by the province through two established sources, the Conservation Fee associated with the sale of Angling, Hunting, and Trapping licences. The second revenue source is through the revenue collected with the purchase and annual renewal of motor vehicle licence plate registrations.

The Wildlife Conservation Fund operates under the direction of an Executive Committee made up of volunteers from across PEI and an Application Evaluation Committee that reviews, scores, and recommends funding levels based on applications in one of the five categories:

- Habitat Restoration and Enhancement
- Natural Areas
- Education
- Research and Monitoring
- Other

The following Summary Report lists the funded organizations and their project outcomes for the Spring/Summer/Fall of 2024

Organization Name	Souris and Area Branch of the PEI Wildlife Federation
Project Title	Atlantic Salmon Barrier Removal (Mill Creek)
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	Souris Wildlife has been working on a large connectivity project to assess and proritise barriers to fish movement across nine watersheds within north eastern PEI in partnership with the Canadian Wildlife Federation, Atlantic Salmon Federatipn and other partners. An old concrete culvert in Mill Creek was identified as a high priority barrier restriciting movement of Atlantic salmon, Brook trout and other fish species from accessing high quality habitat upsteam. The culvert was unused and collapsing into the stream, causing it to catch woody debris and creating an almost complete blockage. Souris Wildlife worked with partners to completely remove the culvert creating an open system and replanted the riparian zone with native trees and shrubs.
Brief Summary	An dilapidated culvert was catching debris and creating a blockage in Mill Creek, preventing fish from accessing high quality habitat upstream. The old culvert was completely removed and the riparian zone was replanted with native trees and shrubs.
Project Results	On July 29 our team used an electrofisher to safely relocate fish from the area, including young-of-the-year and juvenile Atlantic salmon and Brook trout, and installed netting to prevent their re-entry. Silt fences were installed, and an excavator was brought in to remove the old structure. The banks were restored to a more natural slope, stabilized with rock, and reinforced with a brush mat. Additional fencing and hay bales were used to control runoff. In August 2024, representatives from the Department of Fisheries and Oceans visited the site, providing insights for future restoration efforts and commending SAB for their work. The project was hailed as a significant environmental success regarding barrier mitigation for restoring fish connectivity. By October 1st, 2024, over 60 trees and shrubs had been planted to restore the riparian zone along the banks of Mill Creek. Native trees and shrubs have since been planted at the restoration site with the help of local Girl Guides. We've done many site visits to this site post bridge removal and have seen many fish and bugs using this beautiful newly restored habitat access site. on 11th December, 3 Atlantic salmon redds were found upstream despite high water levels making visibilty very difficult for identifying redds. This project has opened more than two kilometers of high value Atlantic salmon spawning grounds and maintained connectivity for other aquatic species, including Brook trout, American eel, Gaspereaux, Smelts, and more.

Organization Name	Belfast Area Watershed Group
Project Title	Wildlife Wonders
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	1. Increased awareness about the importance of wildlife conservation by creating and distributing a PEI wildlife coloring book, hosting a critter dipping event, and organizing a seashore adventure for children ages 6 to 14. In addition, we hosted a Nature Kaleodoscipe event featuring bats, and invasive species 2. Encouraged families to participate in outdoor recreational activities, like fishing, and taught them about proper catch-and-release techniques to minimize harm to wildlife. 3. Fostered a sense of appreciation and respect for local wildlife, fish species, and their habitats. 1. 4. Created social media infographics to support conservation efforts for local wildlife populations, focusing on improving habitat conditions and protecting vulnerable species.
Brief Summary	Wildlife Wonders hosted outdoor activities through a wildlife-themed coloring book and engaging events. Hosting activities like a fishing day, critter dipping, and socials - fostering an appreciation for local wildlife with hands-on experiences.
Project Results	Summary of Results for Project Activities Host Roseberry Pond Family Fishing DayAnticipated Result: 30 people attend the family fishing dayAchieved Result: The event successfully attracted 45 participants, exceeding the target by 2 attendees.Host a Newcomer 'Learn to Fish' Day. This event was changed to “Nature Kaleidoscope”. It included a scavenger hunt, and nature-based arts and crafts. Partners with the PEI Watershed Alliance showing bats, the PEI Invasive Species Council joined with an exhibit of various species (plant and animal) to be aware of PEI. The event was held at the Cape Bear Lighthouse.Anticipated Result: 20 people to attend Achieved Result: The event engaged 25 participants, surpassing the goal by 5 participants. Hold a Critter Dipping Event for the CommunityAnticipated Result: 12 children & community members attend the eventAchieved Result: 11 children and community members participatedHold a Seashore Adventure Day. Anticipated Result: 12 children & community members attend the event. Achieved Result: The event attracted 10 participantsCreate & Design a Wildlife Coloring Book. Anticipated Result: 250 coloring books are printed and distributed to local childrenAchieved Result: 245 coloring books were printed and distributed. All students at the Belfast Consolidated School received the coloring book; it was also distributed at Belfast Days and other events throughout the summer - highly popular with children and parents! Create 6 Infographics about Local Wildlife & Share Them on Social Media. Anticipated Result: People engage with the social media posts – at least 5 likes per post. Achieved Result: The infographics received a minimum of 8 likes per post, with some posts exceeding 10 likes, successfully engaging the community. The posts included the: River Otter, Mermaid’s Purse, Great Blue Heron, Bumblebee, Beaver/muskrat, Green crab Conclusion: The successful engagement of local families, tourists, and children, along with the positive response to social media content, highlights the effectiveness of the initiatives. The increased participation and engagement demonstrate community interest in conservation and environmental education efforts.

Organization Name	Kensington North Watersheds Association
Project Title	Watercress and Wild Cucumber Management in Kensington North
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	Wild Cucumber is a climbing plant that tends to outcompete native plants for light, space, and nutrients. Managing this species will allow native flora and fauna to thrive, promoting a more diverse and balanced ecosystem. During this project, KNWSA removed wild cucumber from 37 locations across Kensington North by implementing management strategies recommended by the Invasive Species Council. Vines were pulled from trees and shrubs to encourage the growth of native species and, if seed pods were present, they were bagged and disposed of to eliminate the possibility of seed dispersal. Watercress grows in dense mats directly in the stream, trapping sediment and disrupting spawning areas for brook trout. Watercress can impact local biodiversity and alter water quality; making it important to remove this species from the watershed. KNWSA Staff removed approximately 100 meters of invasive watercress from the Barbara Weit River which had an immediate affect on stream flow. The primary benefit of this project activity however, was the development of a working technical manual for watercress management and the lessons learned which will help inform future restoration work. In addition to invasive species removal, KNWSA staff planted 750 native trees and shrubs in impacted areas to improve biodiversity, support native wildlife and improve overall ecosystem health.
Brief Summary	KNWSA monitored and removed invasive watercress and wild cucumber to determine Best Management Practices, support native wildlife and improve overall ecosystem health in Kensington North.
Project Results	KNWSA staff identified wild cucumber hotspots and added them to a working map which will help us prioritize and document invasive species management in Kensington North. Wild cucumber was removed from 37 locations and management strategies were determined based on the Invasive Species Council's guidelines. The majority of wild cucumber was removed before the formation of seed pods, making removal quick and easy, however, a small amount was removed in late summer/fall and bagged for disposal at Island Waste Disposal Facility. All sites have been documented and stream-side locations will be revisited annually for additional management until the species is eradicated at the site- this will help us determine and share Best Management Practices. By eradicating wild cucumber hot spots, we will remove the pressure from native plants giving them the opportunity to thrive which, in turn, will result in a more diverse and balanced ecosystem. Staff performed watercress assessments along the Barbara Weit River to identify hotspots and any impacts to stream health. The goal of this project was to determine Best Practices for managing invasive watercress by demonstrating 2 techniques (hand-removal and benthic barrier installation). Approximately 100 meters of watercress was hand-pulled over three patches along the river, however, roots were left in-stream. We have learned that this plant is rhizomatic so, In order for this practice to be effective, the entire plant (including roots) would need to be removed and bagged for disposal. This would be destructive, leaving the stream bed vulnerable and could potentially cause more harm than good. The benthic barrier was ordered, however, by the time it was received and a permit was submitted, we were into the fall when in-stream work is prohibited

	and the application was denied. Our permit application remains in the database for reconsideration in the spring. Our plan is to install the benthic barrier next spring at the hotspot closest to the headwater where it will remain for 1 month. During this time, we will monitor water quality closely to ensure temperature and DO do not change as a result of the material. If there are no issues, we will then move the benthic barrier to the next closest watercress patch and so-on. Our results will be shared with the Invasive Species Council and PEI watershed groups and our Technical manual will be updated to reflect our newest findings. Invasive watercress hotspots impede fish passage in the Barbara Weit River, cause stream over-widening, erosion, flooding, and excess sediment deposition, all of which would be improved or eliminated by properly managing the species. Technical Guides were developed for management of each of Watercress and Wild Cucumber and have been shared with interested parties. These are working documents that will be updated as new research and technology arises. In addition to invasive species removal, KNWSA staff planted 750 native trees and shrubs in impacted areas to improve biodiversity, support native wildlife and improve overall ecosystem health. These tree planting sites will be revisited annually for 3 years to determine first, second and third year survival rates and to perform any required maintenance.

Organization Name	Island Nature Trust
Project Title	Surveying PEI's Coast for Bank Swallow
Project Type	Research based: potential to advance knowledge
Potential to Advance Knowledge	This project has contributed greatly to our regional knowledge of a threatened species at risk, the Bank Swallow (BANS). As BANS conservation efforts are escalating throughout the province, understanding the areas they are nesting in is a crucial first step in ensuring the success of these efforts. Data collected through this project and a similar project funded by WCF in 2023, has provided a robust data set depicting BANS breeding habitat across the Island. In 2023, we set out to map BANS breeding habitat around PEI's coastline and surveyed over 500km of PEI's coast. We continued this effort in 2024, yet again surveying over 500km of coast, focusing on areas not surveyed in 2023. This comprehensive overview of BANS habitat across the province is proving to be valuable in several ways: * Data gathered through this project contributes to a larger dataset initiated by the Atlantic Canada Bank Swallow Working Group. Ultimately, the data being culminated by the Working Group will contribute to our understanding of BANS population trends within the Atlantic Region. * We have also had discussions with the Department of Forests Fish and Wildlife, who regularly use this data to help guide policy and permitting decisions. The island-wide census of BANS breeding habitat gained through this project is of great value to them while making these decisions. * During surveys, staff and volunteers noted areas of potentially suitable BANS nesting habitat, regardless of whether nests were present. This information will be used to help guide surveying in the future to increase efficiency. In addition to extensive coastal surveying, we continued weekly monitoring of a subset of colonies to augment similar data collected in 2023. Regular monitoring of colonies contributes to a more regionally-specific record of BANS breeding behaviour, burrow occupancy rates, arrival and departure dates, and breeding phenology. Gaining a better understanding of how this SAR behaves in PEI and the larger Atlantic Region is important to understanding the threats and conservation needs of the species, allowing conservation efforts to be tailored more effectively. One of the biggest challenges when monitoring BANS is estimating the population size at a given colony. Bird counts can vary drastically between visits since adult swallows may travel far from the colony to forage and roost. The next best option to calculate population size is counting the number of burrows in a colony. The number of burrows can be misleading, however, because we know that not all burrows are used by BANS in a given year. There is also evidence that burrows may coalesce inside a colony, meaning that one burrow may not equate to one breeding pair. Video surveys collected during this portion of the project will contribute to a dataset that will demonstrate trends in burrow occupancy rates throughout the province and identify unknowns surrounding the incidence of burrow coalescence. Both of these factors will contribute to more accurate population estimates.
Brief Summary	A comprehensive survey of Bank Swallow nesting habitat along PEI's coastline is complete after a two-year effort undertaken by Island Nature Trust staff, partner groups, and volunteers.
Project Results	Goal 1: Increase knowledge of Bank Swallow distribution across PEI.

	The surveying of PEI's coastline was done in collaboration with the Atlantic Canada Bank Swallow Working Group, using the same methodology adopted in 2023. The coastline was divided into distinct routes of varying length, allowing volunteers and INT staff members to systematically survey and collect data on potential Bank Swallow activity and habitat. INT staff, partners, and volunteers surveyed a total of 507 kilometers of PEI coastline during the 2024 breeding season. This included 252 kilometers not previously monitored in 2023. Additionally, 31 kilometers were surveyed by boat or kayak to assess regions inaccessible by foot. Data was collected on 107 different Bank Swallow colonies along the coastline. Surveyors gathered valuable information such as colony size and productivity and identified routes with suitable or unsuitable habitat for Bank Swallow, which will be used to guide survey efforts for efficiency. The data collected as a result of this project will contribute to our knowledge of Bank Swallow habitat and breeding activity on PEI. The culmination of data from 2023 and 2024 will allow for a better understanding of colony locations and suitable habitat across the province. This data is regularly used by the Department of Forest Fish and Wildlife to assist in development permitting decision-making. Data collected from this project is also shared with the Atlantic Canada Bank Swallow Working Group, contributing to a larger dataset on Bank Swallow habitat and breeding activity. The addition of data from PEI's coastline will allow the working group to better understand Bank Swallow population trends in Atlantic Canada. Goal 2: Retain and recruit volunteers to survey the coast for Bank Swallow colonies and be ambassadors for their conservation. This project and its methodology rely significantly on the support and efforts of volunteers. INT invested 30 hours in volunteer training in 2024. Volunteer training includes an overview of coastal ecology, biology, species threats, monitoring protocol, and data submission protocol. Bank Swallow volunteers were also provided with outreach material for their own reference and to distribute to the public and landowners opportunistically. In 2024, 28 volunteer surveyors collected data along PEI's coastline. Of the 28 volunteers, 21 were new volunteer recruits and 7 were pre-existing volunteers from 2023. INT recruited new volunteers for this project through social media posts, public outreach events, media releases, and word of mouth. In 2024, INT had 45 active members of our Coastal Guardian volunteer program. As Coastal Guardians, volunteers are trained to survey for Piping Plover and Bank Swallow, understand general coastal ecology, and share their knowledge of coastal conservation with the public. Of these 45 Coastal Guardians, 28 were actively involved with Bank Swallow surveys related to this project. INT recognizes the value that a strong volunteer force brings to our organization. Volunteer efforts are utilized throughout the year across many different programs allowing INT to accomplish our conservation goals, regardless of time and staffing constraints. In 2024 INT hosted a volunteer appreciation event for our dedicated volunteers to express our gratitude and celebrate their efforts. Volunteers were gifted custom INT merchandise including hats, Nalgene water bottles, and field supplies like first aid kits and field guides. Recognizing the work of our volunteers and ensuring they feel valued and connected to the organization has contributed strongly to volunteer retention and recruitment. Goal 3: Increase knowledge of Bank Swallow breeding timelines in PEI. Five colonies were monitored weekly from May to mid-August. Colonies were located in Rock Barra, Wood Islands, Launching, and two colonies in Darnley. These colonies were monitored regularly to contribute to the dataset started in 2023, with the intent of establishing a regionally accurate breeding timeline for PEI. Bank Swallow were first observed in the province on May 15th, but were

	not observed at one of the focal colonies until 30 swallows were observed in Launching on May 24th. Burrow excavation was first observed in Rock Barra on May 29th, at which point 60 BANS were present at the colony. The colonies in Darnley showed the first signs of hatching (fecal sacs and food carrying) on June 18th. Fledglings were observed for the first time on July 16th in Rock Barra. BANS were last observed at one of the five BANS colonies on August 12th in Darnley. As was the case in 2023, dates varied between colonies. This variation highlights the need for repeat monitoring over several years. It is expected that breeding phenology will vary from year to year and location to location, and that is why current data is insufficient to make broad generalizations. That said, the collection of this information over the last two years is a substantial step towards identifying trends in BANS breeding timelines in PEI. Goal 4: Increase public knowledge of Bank Swallow and their conservation needs. Public outreach and education are essential components of species-at-risk conservation. Since many threats to species-at-risk are anthropogenic in nature, promoting behaviour change that will reduce threats to the species is vital to conservation efforts. Volunteers can significantly aid INT staff members in sharing knowledge with the public and engaging with more individuals. In addition to surveying protocols and species biology, volunteers are trained to engage with and educate members of the public. In 2024, INT hosted 6 “Outreach on the Beach” days and 3 additional outreach events with partner organizations. INT staff were able to have face-to-face engagement with 283 members of the public during these events as well as distribute 313 pieces of outreach materials. Bank Swallow outreach material includes information pamphlets, door hangers, stickers, colouring sheets, species at risk brochures, Flitt's Call, and Flitt's Call activity booklets. INT hosted a colony visit and Flitt’s Call reading with author Kara Griffin as a part of our Passport to Nature event series. Flitt's Call is a children's book about a Bank Swallow nesting in PEI and explores themes of climate action and species at risk. This event successfully hosted 11 people and allowed the attendees to observe an active Bank Swallow colony and ask staff members questions about the species. INT also engaged with the public through social media platforms to extend our reach beyond in-person engagement. In 2024 INT made two Instagram and two Facebook posts highlighting Bank Swallow as a species at risk and discussing work completed through this project. In addition, the INT quarterly magazine included a summary of the preliminary results from the surveying project for 2024. Goal 5: Add to regional, national, and continental data for this species. Data collected through this project has been shared with the Provincial Forest Fish and Wildlife and the Atlantic Canada Conservation Data Centre. Data will also be uploaded to NatureCounts, the Atlantic Canada Bank Swallow Working Group’s open data platform, and shared with the Canadian Wildlife Service.

Organization Name	Winter River - Tracadie Bay Watershed Association
Project Title	**Establishing and Enhancing Wildlife Habitat along the Winter River**
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	This project has benefited wildlife and their habitats in various ways. * Fish passage was restored by clearing blockages of fallen trees. * By planting native trees and shrubs, we are increasing the amount of beneficial species for pollinators. * Through the creation of wildlife structures such as isect hotels, amphibian cover boards and brush piles, we gave smaller wildlife places for rest and protection against predators. * Water quality in streams has been improved through brush mat construction and garbage pick ups. * Aquatic ecosystems face less of a threat from fishing gear since we set up fishing line garbage disposals. * With waste removed from shorelines, wildlife within this ecosystem face a reduction to the threat of ingestion or entanglement. * Forest diversity and thus quality has increased through native tree and shrub planting. * Wildlife habitat quality also increased within forest ecosystems by creating and monitoring brush piles, amphibian coverboards, bird boxes, bat boxes, and insect hotels. * Through removing invasive plants (glossy buckthorn, Japanese knotweed) we were able to give room for native plant species to thrive, thus allowing for species biodiversity for a healthy ecosystem. * By engaging with the public about our project, and the wildlife we meet along the way, people are more likely to have positive behaviour towards wildlife conservation.
Brief Summary	Our project benefits native wildlife in the Winter River-Tracadie Bay area by removing threats (garbage, invasive species), creating habitat (bird boxes, insect hotels) and adding beneficial features (fishing line garbage disposals, tree planting).
Project Results	Activity 1: Invasive plant species removal Goal: 150 kg of invasive plant species removed Outcome: 236 kg of invasive plant species were removed Activity 2: Removal of stream blockages that threaten fish and sediment passage. Goal: 8 km of stream cleared of blockages. Outcome: 5.66 km of stream was cleared of blockages Activity 3: Installation of Fishing Line Only Garbage Disposals Goal: Installation of 5 fishing line-only garbage disposals. Outcome: 5 fishing line-only garbage disposals were installed

	Activity 4: Planting native trees and shrubs Goal: 3,000 native trees and shrubs planted Outcome: 3,684 native trees and shrubs were planted Activity 5: Wildlife structures Goal: 20 wildlife structures.This includes wildlife brush piles, insect hotels, pollinator gardens, bee hotels, and amphibian cover boards. Outcome: 25 wildlife structures were created Activity 6: Instalment and/or enhancement of brushmats to mitigate bank erosion Goal: 6 brushmats enhanced/installed Outcome: 7 brush mats were installed Activity 7: Shoreline clean-ups and road-side clean-ups Goal: 500 kg of garbage from shorelines, road sides, and streams sides retrieved and properly disposed of Outcome: 635 kg of garbage was retrieved and properly disposed of Activity 8: Education and Outreach Goal: 100 volunteers/participants (including youth), 5000 people reached through social media, email, and other methods. Outcome: 106 volunteers helped with project implementation and 5,024 people were reached through social media, email and our newsletter.

Organization Name	Richmond Bay Watershed Association Inc.
Project Title	Little Trout River Conservation Project
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	The project improved habitats for various species by controlling invasive plants, planting native trees and shrubs, and enhancing aquatic ecosystems and fish passage. These efforts ultimately supported biodiversity, ecosystem health, and the long-term sustainability of wildlife populations within the Little Trout River Watershed project area.
Brief Summary	The project included a wide range of activities aimed at understanding, maintaining, and enhancing environmental conditions for fish, wildlife, plants, and ecosystems on the Little Trout River, Richmond PE.
Project Results	The project successfully achieved its purpose of understanding, maintaining, and enhancing environmental conditions for fish, wildlife, plants, and ecosystems on the Little Trout River. Important progress was made in maintaining previous restoration efforts and diversifying habitats for fish and wildlife. This included enhancing 1.5 km of habitat through invasive buckthorn control and replanting with red-berried alder clippings. In addition, 150 red oak acorns and 20 butternut seeds were collected and planted across 3 km of riparian zone, while previously planted trees were maintained through cage removal and pruning. To manage invasive species and vegetative growth, Japanese knotweed was contained to an area of 2,000 m^2 and cut female buckthorn stumps were covered to prevent seed dispersal. Aquatic habitat improvements included the installation of 16 boulder/rock clusters, the removal of an eroded forestry bridge structure, reopening fish access to four spring inlets, and re-excavating a sediment bypass pond. To increase knowledge of climate impacts on aquatic species, 10 Hobo temperature loggers were installed to monitor temperature changes, and 23 cold-water springs were evaluated and documented for their seasonal flow patterns. A 15 km stream reconnaissance was conducted to identify new migration barriers, bank erosion, substrate loss, and key breeding habitats for Brook Trout and Atlantic Salmon. Beaver population management carried out preserved 15 km of unrestricted fish passage along the river. Supporting these efforts, 8 kms of access trails were maintained to facilitate monitoring and conservation activities. Together, these results demonstrate a comprehensive approach to achieving the project's goals of habitat diversification, invasive species management, climate adaptation, and connectivity improvements within the Little Trout River Watershed.

Organization Name	South Shore Watershed Association
Project Title	Address and enhance natural functionally and resilience of Westmoreland river
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	The South Shore Watershed Association prides itself in providing work that benefits wildlife and enhances wildlife habitat. We believe that it is important to address these issues in lasting and resilient ways that take into account climate change and the dynamic ecosystems that surround our waterways. This project improved biodiversity of native trees and shrubs in riparian zones, which are particularly vulnerable and also particularly important to maintain water quality and biodiversity. With the help of the PEI Wildlife Conservation Fund we were able to plant 203 trees in the riparian zone of the Westmoreland River. The species planted included Black and White Spruce, Balsam Fir, Red Maple, Red Osier Dogwood, Cedar, and Yellow Birch which were located according to the conditions that suit each species. This project was also focused on the restoration of aquatic stream habitats. We were able to complete stream restoration on 4.7 km of stream habitat on both the east and west branches of the Westmoreland River. This includes clearing fish passage, maintaining and creating fish cover, and stabilizing banks through the implementation of brush mats. We do this in order to ensure that brook trout have access to as much of their habitat as possible throughout the whole watershed, so we focus on connectivity of restored sections and quality of stream habitat within the restored area. The third part of this project was centered on wildlife monitoring. We completed this in a few different ways to ensure that we got a full understanding of the wildlife present in the watershed. We conducted amphibian surveys by listening to frog calls in the spring and identifying species present and abundance. We also have boards located at a few different points in the watershed in wet areas which provide cover for amphibians and are monitored every three weeks to see what is sheltering under the boards. We also use trail cameras to track mammals and birds present at several locations in the watershed. In the streams, we sampled fish and macroinvertebrate species and abundance to understand the aquatic biodiversity. The PEI Wildlife Conservation Fund has helped SSWA to restore and conserve wildlife habitat in both the streams and the riparian zones. These healthy and conserved ecosystems provide services to wildlife as well as humans by improving water quality, soil quality, biodiversity, and reducing greenhouse gas emissions to mitigate climate change.
Brief Summary	This project focused on improving the functionality and resilience of wildlife habitat in and around the Westmoreland River. This goal was accomplished by increasing the diversity of native plants and implementing stream restoration techniques.
Project Results	Maintain, improve and rehabilitate uninterrupted fish passage in Westmoreland's (WML) main river channels and spawning tributariesTo achieve this goal, stream restoration was completed on 5 km on the east and west branches of the WML River. The east and west branches are the two major channels of this river and restoration was focused on the main branches before working on the tributaries. A course from the Vermont Department of Environmental Conservation was given in June of this year, which taught new best management practices for stream restoration and was focused around woody material in the streams. This altered the ways SSWA was completing restoration and the goals of our work, and this change in plans meant that we

	were unable to complete as much restoration as we had planned. However, the new management strategies are designed to work with the natural progression of the streams and account for different riparian habitats and stream conditions as well as the transitional state of the stream. These techniques are meant to work with the long-term health of the stream in mind, so the work we were able to complete this summer will support the work we will do in coming seasons. We were able to provide a foundation for lasting and sustainable stream restoration work that aims to change with these ecosystems and bolster their adaptive capacity. Most of the main channels were restored and a few tributaries lower on the system were restored as well. Spawning locations have been observed on both branches, although the numbers have not yet been finalized as these surveys are ongoing. Maintain and monitor optimum physiological, chemical, and biological conditions in the WML river systemThe maintenance of the WML river system is accomplished by the other goals outlined in this section. Healthy riparian zones improve biological conditions such as moisture availability, soil nutrient levels, and biodiversity. Stream restoration improves water quality and aquatic biodiversity and enhances the physiological conditions of the stream. Habitat improvement and connectivity is integral to maintaining biodiversity and the conditions that support that. In order to understand how to best maintain these conditions they must be monitored. SSWA does this in several different ways. Some of our monitoring goes on all season whereas other surveys are only conducted once. Water quality is monitored in two ways. Monthly readings are taken at representative locations along the stream system accounting for low, middle, and high areas of each branch as well as monitoring areas of concern. While we were unable to purchase more HOBO Onset monitoring devices, we still had four which we used to take half hour temperature readings throughout the summer at low and middle locations on each branch. Anuran, or frog, surveys are conducted biweekly throughout the spring to understand what species and abundance are present in the ponds and wetlands in a watershed. Amphibian surveys are conducted every three weeks to have another measure of amphibian species and abundance. Stream sedimentation surveys are conducted each time there is a significant amount of rain to understand erosional patterns in the watershed and help plan riparian enhancement efforts. SSWA also carries out several surveys annually to gain an understanding of the conditions within the entire watershed. Stream assessments, invasive species surveys, headwater assessments, riparian assessments, redd surveys for spawning sites and cross section surveys to understand sedimentation changes all are conducted on the physiological characteristics of the watershed. We assess the entire watershed to understand where we need to focus restoration and conservation efforts and where our priorities lie. SSWA conducts two different aquatic biodiversity surveys as well. We use the protocols informed by CABIN to collect and study macroinvertebrates in order to understand the basis of the aquatic food chain, gain a nuanced understanding of water quality, and map biodiversity. SSWA also studies fish species and abundance through electrofishing surveys. Through these monitoring techniques SSWA is able to understand the physiological, biological, and chemical conditions in the WML watershed and make informed decisions on restoration and conservation efforts. Support and improve healthy diverse vegetated riparian zones through at least 15m wide along WML main river channels SSWA enhances riparian zones in two major ways. The first is through increasing the native vegetation and

	biodiversity of riparian zones through planting native trees and shrubs. We were able to plant 203 trees and shrubs in three different riparian locations which needed support following PTS Fiona. This increases the stability of these riparian ecosystems and the available resources for wildlife species in the area. The second avenue SSWA uses to improve riparian zones is through education and cooperation with landowners. We have found that this is the best way to ensure that the riparian zone is healthy and conserved for as much of the watershed as possible. Most landowners with riparian issues are happy to work with us. Sometimes this looks like pulling a fence back to 15 m from the stream. Other times SSWA donates plants to mitigate riparian erosion and increase biodiversity. Education on the importance of riparian health and the ecosystem services that healthy riparian zones provide to landowners is paramount. Healthy and diverse riparian zones are integral to the condition of the watershed. Increase the availability of natural and artificial wildlife habitats to support wildlife populations SSWA increased habitat availability in a few different ways this field season. We installed 10 new bird boxes in the WML watershed to increase nesting locations for birds such as tree swallows. We also installed a few duck tubes based on a design created by Delta Waterfowl. They are put on 4x4 posts in the middle of a wetland and are made of wire mesh rolled into a cylinder and straw to provide bedding and shelter for the ducks. In aquatic environments we increased fish habitat by increasing fish cover and potential spawning sites. Instead of installing artificial fish cover as we have done in the past, we have changed our best management practices to prioritize natural fish cover structures. We arranged logs and root balls to create better cover for fish in the streams and enhance the dynamicity of the ecosystem. We also raked cobbles in a few locations to disturb the substrate and improve the habitat for spawning. Loose cobbles make it easier for the fish to create redds, or nests, and increase spawning in the WML River system. SSWA was able to increase aquatic and terrestrial habitat through the aid of the PEI Wildlife Conservation Fund. Enhance river functionality, connectivity, and surrounding land-useThis last goal was largely accomplished through enacting the goals above. Functionality of the river is increased through improving the riparian zone, increasing the extent of fish passage, and improving habitat availability. The condition of the river was continuously monitored in order to ensure the functionality and stability of the watershed. Connectivity was improved through riparian zone restoration and work with landowners to prioritize riparian health. Riparian work also helped to address some of the surrounding land-use issues and we hope to continue to broaden these relationships with landowners to improve land-use practices in the watershed. Monitoring, habitat enhancement, stream restoration, and riparian work all help to improve the functionality and connectivity of the WML River.

Organization Name	Hunter-Clyde Watershed Group
Project Title	Restoring and Enhancing Fish and Wildlife Habitat in the Hunter River Watershed
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	This project was a benefit to wildlife by: 1. Action to benefit wildlife: Improving overall stream quality, and increasing total area of the Wabanaki - Acadian Forest Habitat through headwater, riparian, upland, and shoreline planting. Results: We planted over 1,400 native trees and shrubs in headwater, riparian, upland, understory and shoreline habitats. Our main priority areas were properties that lacked vegetation, specifically in riparian zones. Planting native plant species within the Wabanaki - Acadian forest creates enhanced habitat for woodlands species on Prince Edward Island and it creates resiliency, ensuring that habitats will be protected for years to come. In turn, this will help increase wildlife habitat acreage and quality as the planted trees and shrubs grow. 2. Action to benefit wildlife: Improving aquatic habitat through collecting excess silt with brush mats and removing blockages that impede fish passage and water flow. Results: 10 brush mats were installed along multiple branches within our watershed groups boundaries. The brush mats are made out of stakes, brush from fallen trees and biodegradable twine. They help to capture access silt and overtime creates a new bank of it's own with all of the sediment that has built up. In addition to brush mats, stream assessments were done along all branches of the the watershed. During stream assessments we put a GPS point at each blockage that impeded fish passage and water flow. Throughout the summer we went back to those blockages and removed them, while still ensuring that we leave enough woody material and fish cover within the streams. Over the summer field season we enhanced and removed blockages from a total of 7km of stream. This led to increased fish passage within all branches of our watershed, allowing brook trout to reach preferred spawning habitat. Building brushmats and removing blockages increase stream habitat quality. Brushmats remove excess silt that can degrade brook trout spawning habitat, as well as decrease water quality during high flow events. 3. Action to benefit wildlife: Decreasing the amount of refuse and other hazards to wildlife through garbage cleanups. Results: The Hunter - Clyde Watershed Group completed garbage cleanups on beaches, in riparian zones and along the roadside. A total of 20 kg of garbage was removed from beaches in North Rustico, Anglo Rustico and Rustico. A beach clean up event was also held for all members of the public who wanted to join. 4.59 km of ride side was cleaned and 1 km of riparian zones was cleaned of refuse. When garbage is left in nature, it can break down leaving harmful chemicals and microplastics behind, leading to decreased health of species within these habitats. Removing this garbage enhances species habitats and improves overall health of the ecosystem. 4. Action to benefit wildlife: Restoring and protecting native biodiversity by removing invasive species and planting native species in replacement. Results: Over the course of the summer 36 bags of invasive species was removed from Campbells Pond and upstream of the pond. In addition to that, 255 meters of stream was cleared of invasive species on Line Road, as well as

	removal of Japanese Knotweed at a third site. Removing invasive species ensures the native species have areas to thrive, without worrying about competition from invasive species which leads to more diverse habitats for all species. 5. Action to benefit wildlife: Fostering a respect and interest for the environment within our community and show why protecting nature is important. Results: We held a beach clean up and a volunteer tree planting day where members of the community got hands on experience helping wildlife.We also attended many events with a booth set up through out the summer. These event included North Rustico Canada Day Festival, Cavendish Beach Hut with Parks Canada, the River Clyde Pageant, North Rustico Fun days in the Park, Riverbank Heritage Day, Sharing the Feld, Kensington North Environmental Fun Day and Sea-foam Fandango. We discussed the importance of nature and wildlife conservation during these events.
Brief Summary	In the Hunter River Watershed, fish and wildlife habitat was enhanced by planting native trees and shrubs, completing stream enhancement, and attending public events to encourage conversations on environmental protection.
Project Results	Check for survival of trees and shrubs that have previously been planted. Our anticipated results was to check 500 + trees planted in 2023 for survival rates. We successfully checked 1500 trees that were planted throughout the summer of 2022 and 2023. Plant native trees and shrubs in riparian, shoreline, and upland areas for wildlife habitat. Our anticipated results was to plant 1000 trees between riparian, shoreline, and upland habitats in the Hunter River watershed and guard 200 + vulnerable trees against grazing. We achieved this goal by planting 1400 native trees, and guarding 200 trees. We planted in riparian, shoreline and upland habitats at multiple different sites within the Hunter-River Watershed. Host Environmental Fun Day for local schools and home-schooled youth. We anticipated that we would host 100 youth and 20 adults to inform them on the importance of conservation and hand out 100 seedlings from the tree nursery. Environmental Fund Day had 110 children and 20 youth, and we handed out 100 seedlings from the tree nursery. Re-establish stream meander and collect excess silt in streams by installing 10 brush mats in appropriate areas. We created 10 brush mats in multiple different streams within our watershed boundaries. Remove invasive species from Line/Mill Creek, Campbell's Pond, and New Glasgow. Our anticipated results were to remove invasive species from ~50m of Line/Mill Creek and 15 + bags of invasive species from Campbell's Pond and replant with native species, cut down a patch of Japanese Knotweed in New Glasgow, cover with a tarp, soil and seed with grass. We removed invasive species along ~255 metres of Line/Mill Creek and we removed 36 bags of invasive species from Campbells Pond, which was well above our anticipated results. We also cut down a patch of Japanese Knotweed in New Glasgow and we were able to tarp it. As this is an ongoing mediation process, grass has not yet been planted. Host a community tree planting event with Glasgow Hills Trails. Anticipated results were to plant 100 trees with at least 10 participants. We hosted a

	community tree planting event with Glasgow Hills and planted 30 trees with 6 participants. Plant and guard trees with Central Queens Elementary School. Anticipated results were to plant and guard 20 trees with Central Queens Elementary students. We were able to plant and guard 6 trees with the Central Queens Students. Host an information booth at multiple summer events . We anticipated that we would set up booths at North Rustico Canada Day Festival, Cavendish Beach Hut with Parks Canada, and the River Clyde Pageant. Talk to 300 + people about sustainability and conservation and the importance of preserving and restoring habitat for wildlife. We were able to attend all of the events listed above, as well as North Rustico Fun Days in the Park, Riverbank Heritage Day, Sharing the Field, Kensington North Environmental Fun Day and Sea-Foam Fandango. We were able to talk to over 300 people at these events. Remove refuse from streams, shorelines, and roadsides. Our anticipated results were to host 2 community garbage clean-ups, maintain 2 garbage cans at Campbell's Pond, remove refuse from ~1km of stream, ~2km of shoreline, and ~1km of roadside. We were able to host 1 community garbage clean-up, we maintained 2 garbage cans at Campbell's Pond, removed refuse from ~1 km of stream, ~3.56 km of shoreline and ~4.59km of roadside. Improve fish passage by removing natural blockages. Anticipated results were to remove blockages impeding fish passage from 5km of freshwater stream habitat. We were able to complete 7km.

Organization Name	Morell River Management Cooperative
Project Title	Improving Water Quality in the St. Peter's Bay Drainage Basin
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	This project improved water quality within the watersheds of the St. Peter's Bay area drainage basin, providing multiple benefits to wildlife. Over 1,000 lbs of garbage were removed from the shorelines of St. Peter's Bay and the banks of the Morell River by completing shoreline cleanup and river cleanups. The addition of new garbage bins for anglers to dispose of garbage and fishing line at popular angling locations helped reduce litter along the Morell River. This objective reduced the potential for wildlife to become entangled in fishing line or ingest garbage by mistaking it for food. It also reduced the amount of pollutants entering the water table by preventing contaminants like motor oil from leaching into the ground. By removing in-stream blockages on the main branches of the Morell River and cold-water tributaries, flow conditions were improved increasing dissolved oxygen levels to benefit native fish and macroinvertebrates. This objective proved to be extremely important as multiple heatwaves in the summer of 2024 caused water temperatures to reach near-lethal conditions for native coldwater fish species. By removing barriers restricting fish passage, native fish including brook trout and Atlantic salmon were able to migrate into cooler areas of the river to find refuge from high water temperatures. This objective also provided benefits to other migratory fish species including rainbow smelt, alewife, and American eel by restoring habitat connectivity.
Brief Summary	The restoration of headwaters and cold-water tributaries and litter clean-ups within freshwater and coastal ecosystems improved water quality in the St. Peter's Bay area, providing better habitat conditions for Island wildlife.
Project Results	Goal 1. Reduce harm to wildlife by reducing litter in the St. Peter's Bay Area Morell River Management Cooperative completed a clean-up along 13km of the St. Peter's Bay shoreline. With some of the most picturesque views on the Island, MRMC takes pride in keeping the shoreline free of garbage to not only maintain the Bay's natural beauty but also to protect the home of PEI's native wildlife and species at risk, including piping plovers, bank swallows, willet, and other migratory shorebirds. The MRMC crew collected 600 lbs of garbage and marine debris, including Styrofoam buoys, rope, and fishing gear. PEI Mussel King assisted in the clean-up effort by picking up the piles of garbage from the shoreline by boat. Using a boat to collect the garbage is ideal as it prevents driving vehicles on the sensitive shorelines. MRMC is proud of removing so much debris from the shore, keeping the coastal environment clean and safe for people and wildlife. During the 2024 fishing season, MRMC installed six new garbage bins at popular fishing locations along the Morell River. The goal of installing these bins was to reduce litter within the riparian area. The bins were emptied bi-weekly by the MRMC crew, removing 220 lbs of garbage. In October 2024 MRMC partnered with the Department of Fisheries and Oceans (Fisheries Officers) and the PEI Department of Justice and Public Safety (Conservation Officers) to complete a river cleanup on the Morell River from the Highway bridge up to McKay's. An estimated 2,500 lbs of garbage was removed from riparian areas within the Morell River Conservation Zone. This significantly improved riparian habitat for wildlife by removing old tarps that could entangle birds and oil jugs that could leak into the ground. Goal 2. Increase water flow of the rivers draining into St. Peter's Bay Morell River Management Cooperative manages barriers within our management area on an annual basis to increase water flow and improve fish migration. The MRMC crew selectively cuts windfalls to create good flow and fish passage

	while leaving plenty of woody material in-stream for fish cover and habitat. In 2024, the MRMC crew successfully restored access to just over 50km of freshwater habitat on the Morell River, Bristol Creek, and St. Peter's Rivers during the 2024 field season. In addition to restoring access to the main branches of the Morell River, the MRMC crew also cleared 3.6km of cold-water tributaries to provide refuge during the warm water temperatures caused by low water and consistent heat waves in the early summer. Goal 3. Prevent stagnant water resulting in poor water quality MRMC's Beaver Management Plan guides the field crew's trapping and dam removal efforts on the Morell River. Following the recommendations in the plan ensures that diadromous fish can migrate successfully between fresh and saltwater as well as spawning sites, feeding areas, and cold-water refugia. Following the plan also prevents dams in low-gradient sections of streams that can create stagnant water with low dissolved oxygen. The MRMC crew assessed salmon migration routes in the spring and fall of 2024 to ensure that beaver dams did not impede migration and monitored active sites during the summer when there was the greatest potential for detrimental impacts of stagnant water. MRMC works with local trappers to manage beaver activity. In 2024, MRMC trapped 20 beavers and removed 20 beaver dams. Goals 4 and 5. Monitor dissolved oxygen (DO) levels on the Morell River and water temperature within the rivers of the St. Peters Bay area drainage basin. The Morell River is a warm water system where summer water temperatures often exceed 20ºC. As warm water holds less dissolved oxygen (DO), this can create poor water quality conditions for native fish, especially cold-water species. To monitor temperature and DO, MRMC installed Hobo™ loggers on every branch of the Morell River and installed a remote satellite temperature station to get real-time data. The remote temperature station is located near 'the forks,' where the east and west branches merge into the main branch. When temperatures exceed 20ºC, brook trout and Atlantic salmon become stressed and seek cold water refugia. Angling during these temperatures causes additional stress to the fish. Temperature information from the remote station was posted on the MRMC Facebook page every week during the summer months so that anglers could make informed angling decisions based on water temperature. MRMC placed Hobo™ data loggers in fifteen locations throughout the Morell River, Bristol Creek, and St. Peter's River. By partnering with Forest, Fish and Wildlife, an additional four dissolved oxygen loggers were placed throughout the east branch of the Morell River. A thermal flight of the Morell was also completed in August 2024 in partnership with the PEI Watershed Alliance. A map provided by this flight will help to identify cold water inputs and help guide future restoration projects.

Organization Name	Trout River Environmental Committee
Project Title	Riparian Zone Enhancement Project
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	This project benefits wildlife through the restoration and enhancement of important habitat within the riparian zone. This was accomplished through the planting of native trees and shrubs, and the maintenance and future planning of past planting sites. This was also achieved by enhancing in stream habitat through the removal of major blockages caused by Post-tropical Storm Fiona through targeted removal based on blockages assessments completed in the winter of 2023/24. By planting native trees and shrubs within the riparian zone and maintaining 34 past planting sites, we work to restore native Acadian forests which provide much needed habitat for wildlife. By removing major in stream blockages, fish passage has been restored in important sections of to Trout River and Hope River. This provide increased and improved spawning habitat for brook trout allowing them to move further upstream. Special consideration was given when removing major in stream blockages considering the many benefits woody material provides to aquatic habitat and only removing blockages which impede fish passage, dam streams or cause other habitat related issues.
Brief Summary	TREC enhanced wildlife habitats by planting over 1,300 native species in riparian zones, maintaining and surveying 34 planting sites, and improving fish passage along 5.5 km of Trout and Hope River.
Project Results	Goals: 1. Complete site visits for 2024 tree planting sites to assess what species and locations are best to plant (April and May). 2. Build and install tree cages on deciduous trees vulnerable to predation and add cages to previously planted trees where required, at least 300 trees and shrubs caged. 3. Maintain roughly 40 established planting sites throughout the field season via patch cuts, maintenance of past patch cuts, pruning, removing and adding cages where required, re-using materials when possible. 4. Plant 1000 native trees and shrubs within riparian zones starting June 1st when Watershed Blanket Permit begins. 5. Host a tree drive giving away roughly 300 native trees and shrubs (Partner Support), in July6. Remove severe in stream blockages based on ACOA project identified sites within Trout River, Granville Creek, Hope River and other streams within the TREC watershed if time allows. ACOA Project end date March 31st. Results: TREC completed site visits, consulted with landowners and created plans for 9 planting locations in riparian areas in the 2024 field season. The field crew planted 1029 native trees, shrubs and herbaceous plants with 156 caged to prevent browsing. There were an additional 323 trees donated by Arbor Nursery, Kool Breeze and community members to support of Annual TREC Tree

	Drive. Information was shared at the event on proper planting methods and suitable sites for each species available. Roughly 75 people were in attendance. During the field season we collected data on and maintained 34 past tree planting sites working to maintain the health of the plantings and plan for the future. Site maintenance included pruning, patch cutting, invasive species removal, and installing or removing browsing cages. Notes were taken on survival rates, species success, maintenance performed, if the site could be planted more and general conditions of the site.This project helped us to create protocols for successful planting in the future, such as GPSing plants so tree survival rates and success per species can be better tracked. The crew removed major in stream blockages from 5.5508 Km of stream on Trout River and Hope River based surveyed completed in winter of 2023-24. Recommendations from the PEI Watershed Alliance and PEI Government were given to watershed groups at the beginning of the field season on leaving woody material in stream. This information provided us with better guidelines on the severity of blockages that should be removed, where only severe blockages which posed issues to fish passage were removed from the 5.5kms.

Organization Name	Nature PEI -- The Natural History Society of Prince Edward Island
Project Title	Explore Dune Fungi and SAR Plant Relationships using eDNA
Project Type	Research based: potential to advance knowledge
Potential to Advance Knowledge	As the data has not yet been fully processed or analyzed, it is too early to determine the complete scope of knowledge gained from this project. However, a significant amount of data has been gathered, including 47 root samples of Hudsonia tomentosa from 8 different dune systems and 37 root samples of Lechea maritima from 5 different dune systems. Additional collections were made for Arctostaphylos uva-ursi, Hudsonia ericoides, Corema conradii, Vaccinium macrocarpon, and Empetrum. Both Hudsonia tomentosa and Hudsonia ericoides were sampled near Inocybe "sp-PEI01". This fungal species, currently being described by Dr. Brandon Matheny at the University of Tennessee, is believed to form a mycorrhizal relationship with plants in the Rock-rose family (Cistaceae), such as Hudsonia. While our specimens are already contributing to this research, these new samples could potentially confirm definitively whether this Inocybe species establishes a mycorrhizal relationship with one or both of these plants. Preliminary observations of the relationship between Lechea maritima and Hudsonia tomentosa based on this year's fieldwork include the following: * Lechea maritima has a small and delicate root system, which alone may not be sufficient to stabilize dune systems. * Hudsonia tomentosa, with its more robust root system, may create a "nursery" of mycorrhizal fungi that Lechea maritima can interact with. This interaction could compensate for Lechea's limited capacity to maintain extensive fungal relationships independently. * Hurricane Fiona significantly impacted Lechea maritima habitats in Cabot Provincial Park, Darnley, and Conway Sandhills, leading to notable habitat loss. * Lechea maritima appears to have higher salt tolerance and potentially a faster recovery response to extreme events, such as Hurricane Fiona. In areas where Hudsonia tomentosa was still recovering from storm surge damage, Lechea maritima exhibited robust growth.
Brief Summary	This project is exploring the mycorrhizal relationships between Lechea maritima (Beach Pinweed), Hudsonia tomentosa (Wooly Beach heather) and their fungal partners using eDNA on the coastal sand dunes of Prince Edward Island. We await results.
Project Results	At this time the goals to develop an eDNA sampling plan and executing that plan to collect 95 root samples has been completed. Samples are currently at the Canadian Centre for DNA Barcoding to be processed in early January. Full results will be available in April of 2025.

Organization Name	Tignish and Area Watershed Management Group INC
Project Title	Kildare Watershed Restoration Project
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	The project has been successfully completed, incorporating key elements such as enhanced fish passage connectivity, native tree planting for improved shade and habitat diversity, and brush mat installation to mitigate erosion and facilitate floodplain inundation. These improvements directly benefit wildlife by:Enhanced fish passage connectivity: Allows fish to access important spawning and rearing habitats, promoting healthier and more diverse fish populations.Native tree planting: Provides shade, which helps regulate water temperature and creates a more suitable habitat for aquatic organisms. Additionally, native trees provide food and shelter for a variety of wildlife, including birds, insects, and small mammals.Brush mat installation: Reduces erosion, which can degrade water quality and harm aquatic life. By stabilizing the streambank and facilitating floodplain inundation, brush mats create valuable habitat for fish and other wildlife.These combined efforts contribute to a healthier and more resilient ecosystem, benefiting a wide range of wildlife species.
Brief Summary	The project has been successfully completed, incorporating key elements such as enhanced fish passage connectivity, native tree planting for habitat diversity, and brush mat installation to mitigate erosion and facilitate floodplain inundation.
Project Results	The project yielded significant ecological benefits, resulting in a more diverse riparian zone, improved fish passage, effective erosion control, and enhanced fish habitat. Extensive assessments will help in coming years as a starting point and a gage how successful the project is. Blockages have been removed and 3 brush mats have been constructed along the watershed. 4km of the Kildare watershed has been enhanced. Nesting boxes were built with a mini camera inside and attached to rebar in the ground to capture the life of tree swallows. Benthic macroinvertebrate sampling has been done and will continue to be taken each year forward to document the changes in macro invertebrate. Riparian Health assessments is complete along 4 km of the watershed and fully documented with photos and stream crossing assessments. An aerial assessment has been completed. Water quality testing has been done using lab samples, as well as YSI testing.

Organization Name	Ducks Unlimited Canada
Project Title	Supporting Wildlife Through Wetland Conservation- An Education Program
Project Type	Education based: pedagogy & impact
Pedagogy Impact	Our pedagogy and impact remained consistent with our original PEI WCF application, helping us surpass project goals, including reaching more classes, integrating Traditional Ecological Knowledge (TEK), and supporting the Charlottetown Rural High School (CRHS) Wetland Centre of Excellence (WCE). The project's success was driven by our fundraising efforts, including a grant from NSERC-PromoScience, which funded parts of the project not covered by the PEI WCF. Strong partnerships and staff support also played a significant role in the project's success. Since 2002, DUC, with community partners, has delivered Wetland Field Trips across the province. This year, we reached 472 students: 17 Grade 4 classes (316 students), John J Sark Memorial School (4 classes, 36 students) and 4 high school classes (120 students), bringing our total to over 10,000 youth (469 classes) on PEI. Classes for the wetland field trip were registered, including both rural and urban schools, with many schools returning or joining after hearing about the program through word of mouth (see Appendix for list of classes). Registration involved collecting details (e.g., number of students, location, sponsor info) to prepare for the field trips, which took place from May 27th to May 31st, 2024, to minimize travel costs. On the first day, DUC staff trained CRHS WCE students, many of whom assisted with Grade 4 field trips during the week. Each day, four to five classes visited Tremploy Pond for a two-hour session, engaging in three main activities: critter dipping, a nature walk and bird watching, and a wildlife identification game. Students learned about biodiversity, local species, and TEK. This year, we expanded to a second location to reach students from Lennox Island First Nation. A field guide developed by DUC's Outreach Coordinator of Indigenous Engagement highlighted culturally significant species and incorporated language and land-based teachings. Students also received a wetland exploration kit with identification sheets, field notebooks, a dip net, magnifying tab, and a wetland brochure, while teachers received USBs with lesson plans and resources for continued learning. This was delivered on May 29th, and the program was so successful DUC staff visited the whole school, returning for a modified program the following fall (November 2024). In 2019, DUC established PEI's first Wetland Centre of Excellence (WCE) at Charlottetown Rural High School in recognition of their dedication to local wildlife and the Tremploy Pond wetland site, becoming part of a national network of schools. The PEI WCF grant enabled us to continue supporting action projects at Tremploy Pond and facilitated the sharing of knowledge through mentorship during the Grade 4 wetland field trips. Throughout the year, WCE students participated in six action projects, totaling over 1,520 hours of work. A key project was the installation of an osprey pole at Tremploy Pond, both as habitat support and an educational tool for students. Under the guidance of WCE teachers Rob Redmond, Carolyn Huggan, and carpentry instructors, students built and installed the osprey platform. They also maintained a tree nursery with several native species, including Red Oak, and gave each Grade 4 student a tree to take back to their schools. Students learned about making acorn flour from Elder Cecelia Brooks and conducted a

	bioblitz survey, documenting hundreds of species in their local wetland. Carolyn, Rob and a few WCE students were able to take part in a Wetland Education training session with professionals from all over the Maritimes who came together on April 30, 2024 prior to "field season". Over 115 WCE students participated in training on May 27th, and 48 high school students mentored the Grade 4 classes throughout the week, sharing their knowledge, experiences, and enthusiasm. Visiting teachers appreciated the mentorship, and many elementary students were excited about the opportunities they would have when they reach high school.
Brief Summary	Over 350 elementary and 120 high school students joined DUC's immersive wetland education program, which expanded to a second location. Charlottetown High students mentored elementary classes and completed action projects to support wildlife habitat.
Project Results	In our initial application, we outlined the project goals and objectives based on two educational programs: the Wetland Field Trip (WFT) for elementary students and the Wetland Centre of Excellence (WCE) for high school students. We successfully met or exceeded all our goals for the WFT program. In total, 21 classes (352 students) participated in DUC's wetland education program during the spring and fall of 2024. Seventeen Grade 4 classes (316 students) took part in the WFT program in the spring, surpassing our target of 15 classes. Additionally, we delivered 4 extra classes in the fall as part of a modified program with Lennox Island First Nation school. These classes experienced a high-quality wetland field trip program that was safe, accessible, and engaging, along with supplemental wetland education materials. Feedback received from participants confirmed the program's excellence, emphasizing its curriculum alignment, relevance, and overall quality. Our partnership with Charlottetown Rural High School also contributed to the success of these field trips, as high school students shared their stewardship expertise and provided training to the younger students. Several students expressed, or already had experience in working or studying in environmental science or a related field. Elementary teachers were asked to complete an online feedback form following their field trips, and we achieved an impressive 94% response rate, with 16 out of 17 teachers participating, exceeding our goal of 80%. The feedback was overwhelmingly positive, with 15 out of 16 teachers (94%) rating the educational value of the trip as 5/5 (the remaining teacher gave a rating of 4/5), surpassing our target of 90% satisfaction. Full teacher feedback and comments are included in the attached file. A key goal of this program was to integrate Traditional Ecological Knowledge and Mi'kmaw language into the field trip delivery and printed materials. Led by the Outreach Specialist for Indigenous Engagement, we developed a flora and fauna guide used during the nature walk component. This guide highlighted culturally significant species such as wisqoq, wild rice, eel, bear, and eagle, and included translations and pronunciations. The guide was created in consultation with an elder and the community. While this goal was met, we recognize the need for further efforts to ensure that traditional ecological knowledge and Indigenous perspectives are woven into all environmental education programs, and we will continue to prioritize this. This year, we also expanded the WFT program to a second location near Lennox Island First Nation, where students from John J. Sark Memorial School participated in the field trip. The program was modified slightly by Mi'kmaw staff to incorporate more cultural and land-based teachings. Delivered on May 29, 2024, the program was very well received. DUC staff were invited back to

	the school in the fall (November 2024) to continue the learning. During this visit, staff presented to four additional classes on wetlands and wildlife, fostering valuable exchanges of knowledge. We are eager for future opportunities to collaborate. This project was featured on DUC-Atlantic's social media platforms (Facebook, Instagram, and X), which collectively have over 12,000 followers. The PEI WCF program was recognized in social media posts, DUC's annual report, media releases, and other communications (see communications strategy). For the Wetland Centre of Excellence (WCE) portion of the project, all goals were met or exceeded. Please refer to the attached report from WCE lead teachers, which outlines the projects completed this year. Regarding virtual networking, WCE students participated in three webinars (Fall 2023 and Spring 2024), and WCE teachers took part in a virtual session with peers from across Canada to collaborate on action projects and best practices. WCE students conducted five action projects to support wetland and wildlife conservation, exceeding our target of two. These projects included building and installing an Osprey pole, participating in an international bioblitz competition, removing invasive species (Bittersweet nightshade and Glossy Buckthorn), planting native species, and supporting a tree nursery. These efforts were supplemented by participation in both virtual and in-person presentations from DUC, local Elders, and other organizations to support the development and implementation of these projects. The mentorship component of the WCE project was vital to its success. We trained 100 high school students in mentorship activities and best practices, far surpassing our goal of 50 students. While we initially aimed to offer this to two classes, interest from four classes allowed us to more than double our original target.

Organization Name	Central Queens Branch of the PEI Wildlife Federation
Project Title	Wing Deflector Re-construction and Hurricane Fiona Cleanup Con't
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	When reconstructing/redesigning 2 flow deflectors on the main west river the main goal we had was to improve Atlantic Salmon populations. These structures will establish holding pools for migrating Atlantic Salmon, which will help our salmon population by providing a place for holding during the winter months. These holding pools will decrease the likelihood of predation of Salmon which in turn will lower the stress levels of the target species. They are also an important component in successful spawning of Atlantic Salmon Addressing damages from Hurricane Fiona is and has been an important step in assuring salmonid species on the west river continue to strive. Blockages brought by Fiona impede on the ability for fish species to move freely throughout our rivers. Regaining connectivity allows our salmonid populations to access the majority of waters within our watershed. Gaining connectivity is important as it positively affects fish migration, especially our Atlantic Salmon populations. While clearing blockages we also retained as much woody material in the river environment as possible to ensure productive habitat features are present for native salmonids (cover structures, macroinvertebrate habitat, etc). For example, larger-sized woody materials (full-length logs) will be retained or repositioned in pool areas for salmonid cover, and the readily available brush from conifers will assist in the construction of brush mats.
Brief Summary	Reconstruct/Redesign two flow deflectors on the lower West River by Black Brook to encourage migrating salmon to use them as holding pools. Assure connectivity throughout the West and Clyde rivers to allow for better fish passage.
Project Results	First Component: Wing Deflector Re-construction The two degrading wing defectors were both completed on time, and steps were followed to make sure they were designed and installed properly by calculating the structure placement. Both structures were observed showing an optimal increase in flow which will dig a deeper holding pool in time. Rock clusters were also placed around the holding site to encourage fish-holding Second Component: Hurricane Fiona Cleanup Con't A total amount of ~30 km was maintained and made free of obstructions on both the West River and Clyde River. A total of 83 cover structures and 56 brush mats were installed within our watershed using materials from blockages cleared. Large wood flow deflectors were built utilizing large wood found within blockages with a total amount of 31,637m or 189,822 m2.

Organization Name	Sierra Club - Wild Child PEI
Project Title	Wild Child Forest School 2024
Project Type	Education based: pedagogy & impact
Pedagogy Impact	Wild Child PEI's Forest School program follows the Forest School pedagogy and best practices laid out by the Child and Nature Alliance of Canada. This pedagogy centers on the land as the core of learning, with the land acting as a teacher and the educators serving as co-facilitators and co-learners. This pedagogy is child-led, emergent, inquiry-driven, and play-based, viewing children as competent and capable learners. Our program takes place outdoors (rain or shine or snow), runs year-round, and involves a process of regular and repeated sessions in the same outdoor space, supporting children in developing a reciprocal relationship with the land and an understanding of themselves as part of the natural world. This pedagogy also recognizes that the land is Indigenous and seeks to build reciprocal relationships with local Indigenous communities that have been learning from it since time immemorial. The impact of our program, and Forest School programs in general, is significant for children and families. Free play in the natural world helps children build core life skills (gross motor skills, learning to use tools, and self-regulation around managing risk), develop socio-emotional skills (imaginative play, conflict resolution, etc.), learn about their place in the natural world, and promote resiliency (trying new things, being outside in all weather, etc.). Additionally, spending time outside and moving their bodies promotes physical health for kids and helps them sleep better, too. Some research has found that when children are connected to the natural world as kids, they are more likely to grow up to become stewards and champions of the natural world and wildlife (in both attitudes and actions).
Brief Summary	Wild Child Forest School brought 602 children and youth to PEI's woods, beaches, and green spaces to learn about & play in the great outdoors. Participants connected with nature, themselves, & their peers while exploring the outdoors in every season.
Project Results	Our goals * Run 30-40 WIld Child Forest School programs from May- Dec * We successfully ran 35 programs from May-Dec of this year * 350-450 Children will attend our program during this time * 602 Children attended our program May-Dec * Evaluate the program with input from parents, participants, staff and landowners feedback, this learning will be incorporated into the programming on an ongoing basis * We received feedback from parents, participants, staff and landowners on a seasonal basis and responded as a staff with making changes to our planning, activity and level of communication with families as needed. We were able to quickly respond to replicate positive patterns and address as a team the few issues that have come up. * Collect, compile, share stories and insights from children and youth as they share their thoughts, feelings and learnings about nature during the program * We have been able to not only collect and compile more of this than before but we have also been able to share more than before on our social media and with our annual report * Continue to develop partnerships and fundraise to support our program * We have been able to deepen our relationship with Mi'kmaq Family Resource Center by continuing to run programs on our site with them, we have collected with and worked with MacPhail Woods on workshops and site

	management at Robert Cotton park and we have maintained positive relationships the United Way, Rotary Clubs and Alliance for Mental Wellbeing. We were able to meet all of our Goals and had a very successful 2024 programming year. The Activities we proposed were as follows: * Acquire permission for Forest School sites * Completed, we received permission from landowners to host our programs for 2024 * Train Staff and Volunteers * We trained 7 seasonal staff and volunteers over the course of 2024 * Run 8-12 Spring Forest School programs serving 130-170 children/youth * We ran 13 programs and served 155 children/youth * Run 10-14 Summer Forest School programs serving 130-170 children/youth * We ran 15 programs and served 261 children/youth * Run 12-20 Hall Forest School Programs serving 130-225 children/youth * We ran 15 Programs and served 186 children/youth * Evaluate Forest School Programs * We received 40 feedback forms from families for spring and summer and we are still receiving fall feedback s our fall season just wrapped, and we received a lot of feedback from staff members and members of our community as well as feedback from participants. We used this feedback to make changes to our program as needed and to build on our skills and relationships with our community. * For media outreach, we planned on 1-2 media hits in print, radio or television including acknowledgment of PEI WCF's support. * Wild Child PEI was featured in the media a few times this year and at each interview we thanked PEI WCF for the financial support but unfortunately, this was not included in the small blurbs from our interviews. * 5 posts on PEI Wild Child Blog and social media sites acknowledging PEI WCF Financial Support * We posted 4 times on our social media, at the bottom of every page of our website, at 2 tabling events where we reached more than 350 people and on the Sierra Club website

Organization Name	Island Nature Trust
Project Title	**Ecological Silviculture, Wildlife Monitoring, and Invasive Species Management on Protected Natural Areas**
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	This project was of benefit to wildlife by 1) enhancing and restoring natural habitats, 2) increasing knowledge of wildlife populations and ecological silviculture, and 3) managing invasive species across the Island. The implementation of one existing and one new forest management plans (FMPs) as well as, the creation of four new FMPs will restore plantations and old field white spruce stands to a more diverse natural state which will support more biodiversity. These new comprehensive FMPs focused on ecology and restoration allow Island Nature Trust to continue the ecological silviculture work beyond the scope of this project leveraging funds through the Forest Enhancement Program. Through the deployment of trail cameras, INT now has a solid baseline of wildlife habitat use in select areas which are candidates for silvicultural implementation. This information helps INT design unique site-specific prescriptions for habitat enhancement and monitor wildlife post-implementation. This project provided opportunities for education of volunteer Conservation Guardians which allows INT to collect more informative and better-quality information about each property as the Guardians conduct site visits. The information collected from trained Conservation Guardians will be used to inform future management of the Natural Area. Finally, the invasive species survey and subsequent management, on a property with a popular trail, will reduce the likelihood of the invasive species spreading to other habitats. Invasive species reduce local biodiversity, therefore, removing the invasive species provides more habitat for native species to utilize.
Brief Summary	This project helped fund the restoration of ecosystems impacted by plantations and past agricultural use across PEI and contributed to increased awareness of ecological silviculture and invasive species.
Project Results	Our first goal was to enhance wildlife habitat at two Natural Areas that were impacted by historical agriculture use. At Hennessey Farm Woodland Natural Area, a total of 37 rare and important species were planted including ironwood, white baneberry, and yellow birch. An additional 8015 tree species through the Forest Enhancement Program including red spruce, yellow birch, and eastern white cedar were planted in the Fiona impacted areas and the adjacent abandoned farmland. As mentioned above, work conducted on Gordon's Island was limited to an assessment of the property. We determined that it was significantly affected by Fiona and would benefit from a biomass retention strategy where deadwood was brought to the ground to decompose, and the areas would be enriched with new tree and shrub species. To compensate for the lack of work conducted on this property we had a forest management plan created for another coastal property, Penny's Point, and a total of 8120 trees were planted through the Forest Enhancement Program including 540 yellow birch. Our second goal was to conduct forest assessments to write four forest management plans (FMPs) for four INT natural areas with plantations and/or old field white spruce. Our consultant worked with Macphail Woods to develop an assessment protocol to comprehensively assess our properties. Four properties were assessed (Stewart Memorial Woodland Natural Area, Murray River Headwaters Natural Area, Dunk River Hardwoods Natural Area, and Farmington Woodlands Natural Area) and four FMPs were written and submitted to the Forest Enhancement Program for approval (all were approved). Due to the timing of the NAPA Technical Advisory Committee

	meetings only two FMPs were submitted prior to the end of this grant period. The other two will be submitted for consideration at the next meeting. Our third goal was to conduct a formal invasive species survey at the Barbara Green Natural Area and engage volunteers in the management of the site. Three volunteers participated in the survey and management and cleared a very large established area of Virginia creeper from the property. Our fourth goal was to better understand the wildlife on our properties. We set up one trail camera in Stewart Memorial Woodland Natural Area, Murray River Headwaters Natural Area, Dunk River Hardwoods Natural Area, and Farmington Woodlands Natural Area in forest stands we expect to conduct work in. This will allow us to compare the species using the area before and after silviculture treatment. Species spotted include northern flicker, coyote, snowshoe hare, and red squirrels. Our fifth goal was to increase forest ecology knowledge among volunteer Conservation Guardians. We hosted two interpretive walks where we showed Guardians examples of past silviculture work and pointed out features of forest ecosystems. Approximately 21 total Guardians were present on those walks. We also presented (and recorded) a webinar for 12 Guardians which focused on past ecological silviculture work, our current forest management plan work, and how Guardians can help INT identify areas that could use intervention. A quick two-sided reference sheet was also created for volunteers.

Organization Name	West Point and Area Watersheds Inc.
Project Title	West Point & Area Watershed activities
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	Our project was beneficial to wildlife because it helped to improve fish passageways, stabilize banks, and provide shade and cover for wildlife while creating a more diverse forest.
Brief Summary	We resolved legacy sediment issue from a known angling site in West Point Area. The goal for this project was to restore brook trout habitat and promote angling opportunities in the local community.
Project Results	enhance fish habitat and improve bank stabilization uninterrupted fish passage field day for elementary class, social media outreach, promote stewardship plant 200 trees weed eating and cutting grass Maintain Silt trap for the ultimate goal of habitat conservation and to promote recreational angling in the local community We did not accomplish installing brush mats or invasive species management due to time constraints

Organization Name	Hillsborough River Association Inc.
Project Title	Hillsborough River Biodiversity Enhancement & Fish Passage Improvement & Continued Amelioration of Critical Areas of Post-Tropical Storm Fiona Damage
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	The HRA's Spring 2024 WCF project benefitted wildlife as follows. Beaver activity and in-stream blowdowns were surveyed and finfish obstructions were removed (e.g., 335 blowdowns, 11 beaver dams), improving access - primarily in the Clark's Creek and Head of Hillsborough systems. Fifteen brush mats covering 134.5 metres were also installed therein. 35+ bird nest boxes were inspected and cleaned (e.g., Tree Swallow, Wood Duck, American Kestrel). 577 native trees and shrubs were planted by staff and volunteers to enhance plant biodiversity and eventually create structural biodiversity for wildlife food, cover, and nesting habitat in various Hillsborough River tributaries, primarily on the Head of Hillsborough system. The installation of 255 habitat brush piles, three floating cover structures, and three bank-parallel flow deflector logs* created additional wildlife cover, holding, and nesting opportunities. The educational field trips HRA, the Pisquid River Enhancement Project (PREP), and the Forests, Fish, & Wildlife Division (FF&W) hosted for Mount Stewart Consolidated School, Donagh Regional School, and École François-Buote reinforced the value of various wildlife attributes and the role of finfish migration and rearing and spawning habitat in wildlife ecology, nutrient transfer, and food enrichment. Erosion surveys as well as electrofishing and redd surveys helped measure the effectiveness of our actions, and outreach via media releases and social media posts further reinforced wildlife conservation. Also, fish population and spawning surveys informed the above efforts (e.g., Rainbow Smelt, Atlantic Salmon). The above activities were undertaken in the following watersheds: Clark's Creek (including Callaghan's Brook), the Head of Hillsborough (including Fanning Brook), Tannery Creek, the Black Brook, and the Glenfinnan and Johnston's rivers. * Bank-Parallel Flow Deflector Log: A large blowdown installed parallel to an eroding bank and secured using fishing twine, rebar, or by hammering remaining branches into the sediment / streambed (or a combination thereof). Implemented to slow and/or revert bank erosion and provide cover and habitat for aquatic life.
Brief Summary	Assessed/addressed in-stream storm damage to improve fish passage, improved fish habitat, conducted electrofishing & redd surveys, improved biodiversity via tree planting, repaired/disinfected 35+ bird boxes, addressed beaver dam blockages, & more.
Project Results	- Continue assessing and ameliorating critical areas of post-tropical storm Fiona damage and winter storm events (i.e. access trails to watershed improvement areas, electro seining sites, and salmon spawning areas in at least two major tributaries of the Hillsborough River: Staff walked Clark's Creek, Callaghan's Brook, the Head of Hillsborough Main Branch, the Fanning Brook Run, and Tannery Creek to assess blowdown removal needs. Where necessary, blockages caused by fallen trees and assorted woody debris were removed to improve or restore finfish access. A total of 335 in-stream blowdowns were partially removed and 255 habitat brush piles were created throughout the above systems - a total of 8,515 m (i.e., 8.52 km) of stream having been cleared. - Assess and address beaver activity which blocks finfish access on at least two major tributaries of the Hillsborough River: Staff walked Clark's Creek, Callaghan's Brook, the Head of Hillsborough Main Branch, the Fanning Brook

	Run, and Tannery Creek to assess dam removal and trapping needs. Where necessary, beavers were trapped and dams were breached to improve finfish access. One beaver dam was fully removed from the Head of Hillsborough Main Branch, and two were fully removed from a Johnston's River tributary. Additionally, one dam was breached in Callaghan's Brook, five were breached in the Fanning Brook Run, and two were breached in the Head of Hillsborough Main Branch. As for beavers, during the funding period, one was removed from the Head of Hillsborough Main Branch at the Barr Road and another from Clark's Creek at the Cape Breton Road (beaver trapping is still underway). - Repair, replace, or disinfect 30 Tree Swallow nest boxes and 2 American Kestrel nest boxes: Tree Swallow nest boxes were inspected, cleaned, and disinfected at Pigot's Trail [26], Orwell Cove (Captain's Meadow Wetland) [10], Jay's Pond [1], Fort Augustus (Avery's) [1], Wally Redmond's (48 Road - Monaghan Road), PREP's Avondale Boar Barn, and Marshfield. Also inspected and cleaned two American Kestrel nest boxes in Marshfield and Wood Duck nest boxes at Seal River, Avondale, Whalen's, Wally Redmond's, Irving Road, and East Uigg Road. One successful Barred Owl nest box was noted at East Uigg Road, and seven eggs were discovered in a Wood Duck nest box at Avondale. No new nest box installations were required. - Enhance native plant biodiversity and riparian zone structure along two major Hillsborough River tributaries: HRA acquired a total of 577 native trees and shrubs from the J. Frank Gaudet Tree Nursery in 2024. Some were planted within HRA's stated jurisdictions - primarily in the Head of Hillsborough system - others were provided to private landowners for planting, and a few others still were provided to PREP for planting in their stated jurisdictions (e.g., the Seal River). - Improve finfish spawning and rearing habitat in Hillsborough River tributaries: Fifteen brush mats covering 134.5 metres were installed throughout the Head of Hillsborough Main Branch, the Fanning Brook Run, and Clark's Creek. Three floating log cover structures and three bank-parallel flow deflector logs were also installed in these systems. Additionally, we repositioned a pre-existing flow deflector log in the Head of Hillsborough Main Branch. Lastly, collapsed alders were trimmed back where necessary on primary Hillsborough River tributaries. - Host two educational community events focused on wildlife habitat stewardship and identification: In 2024, HRA, PREP, and the Forests, Fish, & Wildlife Division collaboratively hosted three educational field trips for Mount Stewart Consolidated School, Donagh Regional School, and École François-Buote. These trips featured smelt dip netting, electrofishing, and riparian zone tours, covering fish habitat, fish identification and ecology, enhancement techniques, riparian zone enhancement techniques, and forest ecology. As well, photo essays were presented for several groups on HRA's and PREP's stream enhancement and watershed management work (e.g., HRA and PREP's respective AGMs). - Conduct fish and point source erosion surveys: Both electrofishing and redd surveys were conducted in Clark's Creek (Main / Callaghan's Branch), the Head of Hillsborough (Main Branch & Fanning Brook Branch), and the Glenfinnan River (electrofishing only). Point source erosion surveys were also conducted. For results and details, see the supplemental Dropbox link provided below.

	Additionally, HRA facilitated the following roadway improvements in collaboration with PREP, TI, FF&W, and independent contractors: In September, HRA contracted Ernie Laverty Construction to install and grade shale at wet areas of Pigot's Trail (Hillsborough River). Also in September, to address a rutting issue on Allisary Creek Lane (Hillsborough River), TI installed a drainage culvert at the entrance and FFW paid for Laverty Construction to spread / grade shale atop it (both with clearing assistance from Erin Redmond). In October, TI redid the entrance to a Green Meadow Farms field off Route 323 in the Head of Hillsborough watershed, also having installed a new culvert and dug-out / graded the ditch below it, which was completely filled with silt from the field. They also added two rock catchments to the ditch to intercept future runoff. TI also upgraded the Barr Road at Head of Hillsborough to improve erosion control. - Conduct smelt surveys: Surveys were undertaken in the Hillsborough River and its tributaries to determine smelt numbers and the upper limits of smelt spawning locations. Specific locations include Johnston's River, Doyle's Creek, Tannery Creek, Clark's Creek, MacEwen's Creek, Black Brook, Cheese Factory Brook,, Mill Brook, and other unnamed Hillsborough River tributaries. A report is currently in the works. - Install temperature loggers and collect water samples for nitrate analysis on the Head of Hillsborough and Clark's Creek: Monitoring of stream temperature and nitrate levels was undertaken in Clark's Creek (and Callaghan's Brook), the Head of Hillsborough Main Branch (and the Fanning Brook Run), and the Glenfinnan River. Also, point source stream temperature recordings were noted during electrofishing surveys. For results and details, see the supplemental Dropbox link provided below. - Document our wildlife improvement actions via our website and social media platforms, in our Hillsborough Tidings newsletter, and at least one press release to various Island media outlets: Two press releases were published in The Buzz during the funding period, and interviews with CBC Mainstreet (1), Compass (1), and Island Morning (3) were also aired. Event posters were displayed at 10+ locations. Forty-three social media posts acknowledging watershed work and promoting watershed events were issued and/or shared via HRA's Facebook, Twitter/X, and Instagram accounts. (The WCF was acknowledged in relevant social media posts.) The WCF's contributions to our work were also highlighted at HRA's AGM. The WCF's contributions to the HRA were acknowledged in the March 2024 issue of the Hillsborough Tidings and will be included in the March 2025 issue - the Tidings being provided to the Confederation Library and UPEI's Robertson Library for posterity. The WCF was also acknowledged at relevant public meetings and events. Lastly, HRA also provided background material for the Foundation for Conservation of Atlantic Salmon's Annual Report. Also, we intend to publish several more year-end social media posts between the submission of this report and December 31st, 2024 and will add the links to the supplemental Dropbox link provided below. - Install 5 Wildlife Conservation Fund signs: One WCF sign was installed at MacEwen's Pond in Canavoy. Four more will be installed in the HRA's stated jurisdictions in the new year.

Organization Name	Canadian Council on Invasive Species - PEI Branch
Project Title	Management of Scotch Broom, (Cytisus scoparius), in the Georgetown area - PEI Invasive Species Council (PEIISC) and partners.
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	Scotch broom is known for its ability to destroy wildlife habitat, particularly the open forests and meadows favored by birds and butterflies. In the particular area where this project took place, the site had be invaded by the plants and transformed from an open grass area within a woodland, to a dense thicket of invasive woody shrubs. Through this project, we were able to restore the area by removing the swaths Scotch broom and replant with native tree species, setting the area up to become a healthy habitat that will support local wildlife. Scotch broom is not yet widely distributed on PEI, with only 4 known sites where it is present. If it were left to spread, much more wildlife habitat on PEI would be at risk. Located next to our site is a construction staging area where aggregate materials are frequently being moved in and out. This presented a significant risk of Scotch broom being unintentionally transported to new areas. So we were not only able to use this project to restore an area, but also to prevent other areas from being destroyed by Scotch broom.
Brief Summary	By removing a large swath of Scotch broom and replanting the area with native tree species, the PEI Invasive Species Council worked to restore wildlife habitat in Georgetown that had been transformed to a dense thicket of invasive woody plants.
Project Results	- Reduce knowledge gaps about Scotch broom populations and locations in the Georgetown area. Through this project, PEIISC staff were able to survey the area around the main population to get a better understanding of its distribution in the area. ArcGIS mapping tools were used to accurately measure population size and collect point data for outlier growth. All plants that were found were removed. This data will allow us to return to the site in following years to manage any new growth in these areas. It will also allow us to quantify the reduction in the size of the outbreak year over year. - Enhance public awareness of Scotch broom, its impacts, how to prevent its spread. The PEIISC spread awareness of scotch broom though social media posts which achieved 1,213 impressions. PEIISC staff were interviewed for a segment on CBC Island Morning where Scotch broom and this project was the focus. Scotch broom was also highlighted at all of this years public presentations by PEIISC staff and at our outreach booth at community events. We hope these efforts towards awareness of Scotch broom will result in the public reporting these plants if they are observed in the wild, and for precautions to be taken to prevent their further spread from existing sites. - Develop partnerships to advance invasive species work. This project allowed us an excellent opportunity to work closely with the PEI Department of Transportation. We were able to build a relationship towards the common goal of preventing the spread and establishment of invasive species. We expect that this partnership will serve as a basis for continued work together in the future. - Improve biodiversity in localized areas, protect ecologically sensitive areas, and reduce fire risks that threaten PEI wildlife and wildlife habitats by managing Scotch broom. Under this project over 4,500 m2 of scotch broom was removed

	from the site and surrounding area in Georgetown. Scotch broom quickly invades areas where it outcomes native plants, creates poor habitat for wildlife, and poses a fire hazard from the high amount of volatile oils in its tissue. It spreads through explosive dehiscence, launching its seeds several meters away from the mother plant. A main concern with this particular site was not only the poor habitat it had created in the woodland, but the high risk of spread to other areas due to the nature of the site being used as a construction aggregate staging area. Our work here restored habitat directly at the site, but also protected suitable habitat across the island where it might have been unintentionally spread. Scotch broom can resprout from its roots which are very difficult to remove when plants are large and mature. It also has a seed bank that can survive in the ground for over 30 years. Considering the continued management of the site with this in mind, we are much further ahead than we would have been otherwise thanks to the support of the Department of Transportation an Infrastructure. With their help, we used heavy machinery to "grub up" the top later of soil and roots after removing the above ground material and bury it all deep in a hole on site. This will hopefully have removed much of the seed bank and reproductive material from the soil, limiting the amount of regrowth possible in the following years. We also chose to re-plant the site, which was bare ground after management, with native trees provided by the J. Frank Gaudet Nursery to begin the establishment of some competitive growth to slow the possibility of a reestablishment of the Scotch broom.

Organization Name	Lot 11 and Area Watershed Management Group Inc.
Project Title	Foxley River East Enhancement Project
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	Our project was a direct benefit to wildlife in that clearing large loads of sediment from the preexisting sediment trap removes the sediment from the system completely while providing fish with a deep pond with undercut banks and installed cover logs where they can rest and be protected from larger fish or predators like cormorants. WCF has funded the excavation of this unique sediment trap in the past. Our group was able to remove an undersized culvert in 2023 upstream that was trapping large loads of sediment on either side and replaced it with a span bridge. The trapped sediment was then able to flow into the sediment trap and with your funding was able to be excavated in September of 2024 removing 4 tandem loads of sediment from the trap, The trap is now empty and ready to accept any residual sediment that may be upstream, we are confident that the replacement of the undersized culvert will lessen the impact of sediment building in the substrate directly upstream and reduce the amounts of excavations to the sediment trap. Banks at work site were stabilized with rock from culvert to sediment trap. Our riparian zones were cleared of dangerous fallen trees and prepared for planting in 2025. We opted not to plant in 2024 with the information sent out by our provincial nursery in regard to Japanese beetles being found on some nursery stock and they could not guarantee all beetles/eggs were removed despite best efforts by nursery staff. We spoke to our landowners, all agreed to wait till 2025 to plant minimize the risk this invasive beetle may have on our watershed potentially causing issue in later years. Our access trails were cleared and maintained, although these trails are an indirect benefit to wildlife, they allow minimal instream travel protecting our substrate from being disturbed with frequent travel. They allow the crew access to planting sites and safe travel passages when hauling equipment such as chainsaws and gas, reducing spills instream/land. They also minimize damage to riparian habitat where travel can damage plants and shrubs and seedlings. On a side note, our group was able to complete 2 more span bridges on this system in 2024 correcting hung, undersized culverts that were interfering with fish passage through this branch. The east branch of the Foxley River has been completely brought up to date/size for culvert requirements that should last for years to come, all connectivity issues have been addressed allowing fish clear passage from Milligan's Pond 2.7 km upstream. The reduction of sediment in this stream over the years with the excavation of the sediment trap and removal of blockages holding sediment has returned this section to cobble hard bottom suitable for trout to spawn.
Brief Summary	Our project set out to reduce sediment in the east branch Foxley River system and to stabilize banks. Wildlife benefits: uninterrupted fish passage along 2.7km of stream system. Reduction of sediment resulting in healthier habitat instream.
Project Results	The results of our projects were a complete success, we set out to remove the sediment from the sediment trap thus reducing sediment in the channel, with the funding of the excavation, we removed 4 tandem truckloads of sediment from the stream channel. We were able to complete the maintenance of our access trails to limit instream travel, we were able to remove fallen trees in our riparian zones and instream and prepare planting sites for planting in spring of 2025. We were able to stabilize banks along the stream system especially at

	culvert or bridge crossings. We were able to educate our community on the importance of the WCF fund and how these funds are used to enhance our community's environment.

Organization Name	Cornwall and Area Watershed Group Inc.
Project Title	Salmonid Habitat Restoration
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	Native tree planting in buffer zones created biodiverse wildlife habitat and shade for the stream as they mature. The management of woody material in streams ensures fish can migrate without barriers when removed, and provides habitat when strategically placed. Installation of brush mats captures excess sediment in the stream channel, exposing more suitable substrate for salmonid spawning and rearing. Raking previous redd locations loosens substrate for salmonid spawning that is often "sediment locked".
Brief Summary	Restoring salmonid spawning and rearing habitat in the North River and Hyde Creek watersheds through woody material management, installation of brush mats, raking riffles and tree planting.
Project Results	15 sites were raked on Watt's Creek and The North River main branch where redds were previously found. Redd surveys were completed weekly from November 13th - December 4th, 2024, where we found 5 Atlantic salmon redds, and many other potential redds with the help of Rosie MacFarlane. Redd surveys were challenging to complete given all of the rainfall we had that month, luckily, we got out once before the rain. 720 native trees and shrubs were planted in buffer zones to capture runoff, prevent erosion and enhance biodiversity. Over 8 Ha of planted trees were managed including pruning to promote survival of trees. 20 brush mats were installed on Milton Creek, 38 on the North River main branch, and 10 on Watt's Creek to capture sediment. Woody material management was completed to provide fish passage and enhance habitat on 1.5 km of Hyde Creek, 2.4 km on Milton Creek and 2.4 km on the North River main branch. Through these restoration activities we have achieved our goals for the project. We managed sedimentation levels and exposed more suitable substrate for salmonid spawning and rearing, enhanced salmonid habitat, improved connectivity, and enhanced riparian areas.

Organization Name	Ducks Unlimited Canada
Project Title	PEI Hunting Workshop
Project Type	Education based: pedagogy & impact
Pedagogy Impact	Participants in the workshop cycled through 6 stations where instructors taught subjects relevant to hunting on PEI and topics required through hunter safety programs across Canada. Most stations were interactive and students gained hands-on experience. Topics included, firearm safety, map & compass use, conservation enforcement, wilderness survival, calling, decoys & blind safety, and conservation & hunting ethics. 61 students participated in the workshop, passed the online course/exam, and will hopefully continue on to be future hunters and conservationists.
Brief Summary	The PEI Hunting Workshop and its dedicated volunteers helped teach sixty-one participants about safe and ethical hunting and how the hunting community can support wildlife conservation within the province.
Project Results	The organizing committee comprised of 3 representatives from FF&W, 1 from the Charlottetown Trap & Skeet Club, and 1 from Ducks Unlimited Canada, held 4 virtual meetings over the summer to plan the workshop. We have been following a similar format since 2020, and the same people have been involved so things came together fairly effortlessly. We had 120 people register for the event, but only accepted the first 90 due to limitations to group sizes. We put the remaining registrants on a waiting list to draw from in case of cancellations. Representatives from 2 government departments, 4 clubs or NGOs, as well as Holland College students, helped to educate novice hunters on the topics of firearm safety, map & compass use, conservation enforcement, wilderness survival, calling, decoys & blind safety, and conservation & hunting ethics. In the afternoon, students were able to participate in a safe clay target shoot. For many, this was their first time handling and shooting a firearm. Sixty-one participants successfully completed their online safety course and received their hunter education certification. This certification is recognized across North America and allows hunters to acquire their hunting licenses in other jurisdictions.

Organization Name	Wheatley River Improvement Group Inc.
Project Title	Wheatley River fish passage restoration
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	Stream crossings are a major anthropogenic cause of disrupted connectivity in rivers and streams. Not only can crossing structures cause significant damage to the stability of the banks of a waterway, they also hinder fish passage making it impossible for migratory species to reach valuable habitat and spawning areas in the upstream reaches of the river. This project benefitted brook trout (and other fish by default) in the Wheatley River by restoring fish passage at a particular high-priority stream crossing that had been identified as problematic, and by improving overall connectivity and riparian habitat. Prior to the completion of this project, fish could not access the river upstream of the Millboro Road crossing along the Little Bungay Branch due to an approximate 14-inch drop from the culvert to the downstream pool. In this project, we worked to restore the fish passage at this crossing by realigning the downstream channel, building a series of rock pools to backfill the culvert, stabilizing the banks, and decommissioning the old stream bed. We also worked to improve overall connectivity along this branch by removing in-stream blockages. Finally, we focused on re-vegetating the riparian areas in this section of river which benefits fish and other wildlife by improving habitat. Planting a variety of appropriate native trees and shrubs will support Acadian Forest regeneration, increase biodiversity, provide protective cover, increase riparian buffering, stabilize stream banks, and reduce solar heating of the stream.
Brief Summary	Fish passage was restored on the Millboro road by realigning the downstream channel and building a series of rock pools. Now fish can move freely along this section and the riparian zone is vegetated, providing cover, shade and erosion prevention.
Project Results	GOAL 1. Re-open fish passage at the Millboro Road crossing: Fish passage was restored at the Millboro Road crossing by realigning the downstream channel and building a series of rock pools. The rock pools gradually raised the water level in the stream enough to backfill the culvert and remove any elevation distance at the crossing. The banks were stabilized with rock and the old stream bed was decommissioned. We seeded and mulched the disturbed area after construction and revegetated the riparian area with native trees and shrubs. Now fish can move freely along this section of the river and the riparian zone is vegetated, providing better cover, shade and erosion prevention. GOAL 2. Establish connectivity along the Little Bungay Branch and to the main branch of the Wheatley River: Stream connectivity was also improved along the Little Bungay branch by removing instream blockages along a 2.5 km section of the Wheatley River that we had not worked on since before Fiona. Our goal with this project was to cover at least from the main branch moving upstream to the Little Bungay Road – a total distance of about 3 km (covering the section where the construction project took place). Including the section that was worked on in 2023, we have now reached this goal and there is full connectivity from the main branch of the Wheatley River to the Little Bungay Road. GOAL 3. Improve habitat in the riparian areas along the Little Bungay Branch: Habitat was enhanced in riparian areas along the Little Bungay branch by planting ~700 native trees and shrubs. Our crew planted both in areas where there were disturbed soils (around the construction site) and in 2 areas where buffer zones were narrow and/or vegetation was sparse. We also planted

	additional dogwood cuttings (~200 individual stakes) in the exposed soils along the newly constructed banks of the rock pools. GOAL 4. Improve public awareness, community engagement and environmental education, particularly in relation to fish passage and river connectivity: A number of educational activities and communications were offered to community members of all ages in the Wheatley River watershed and surrounding areas. WRIG was active on social media, wrote local newspaper articles, collaborated with neighboring watershed groups, met with local property owners, and interacted with visitors to Rackham's Pond. WRIG also collaborated with neighboring watershed groups to conduct shoreline clean ups, to provide information to the public at Cavendish Beach, and to remove invasive species. In partnership with the Hunter-Clyde Watershed Group, WRIG also hosted Environmental Fun Day, an outdoor educational event for local grades five and six students that promotes environmental science and conservation. Over 100 students were in attendance.

Organization Name	Trout River Environmental Committee
Project Title	Partial Sediment Trap Decommissioning
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	This project has worked to improve aquatic habitat, particularly for brook trout spawning and determine success of a sediment trap and its partial decommissioning. This project has worked to improve water quality and connectivity which promotes biodiversity and increases the amount of healthy aquatic ecosystems available on PEI.
Brief Summary	This project has worked to to enhance aquatic habitats on Hope River, while assessing the success of an existing sediment trap and its partial decommissioning.
Project Results	Goals a and Activities: 1. Improve fish spawning habitat within Hope River 2. Improve water quality within Hope River Activity: Turbidity monitoring conducted between May and October 3. Special focus on sediment capture along Hope River Activity: Open original channel using mini excavator, build brush mats and clear alders to restore meander pattern, currently straight. Activity: Alders are cleared where necessary along 1.6km of stream downstream sediment trap as a step in floodplain connectivity and erosion prevention. 4. Use surveys to determine impacts of sediment trap prior to partial decommissioning, as well as impacts post-partial decommissioning 5. Use this project to determine whether a full decommissioning is necessary or continued use of sediment trap, i.e. is it necessary to continue to remove sediment via a sediment trap in Hope River, or is a multifaceted approach a better solution. As well as has enough legacy sediment been removed to this point, where the sediment trap is no longer needed and may be causing more damage than good. Activity: Use materials from original channel block, brush, rebar and other with assistance from Atlantic Salmon Federation to partially decommission sediment trap. Results: TREC worked to improved fish spawning habitat on Hope River, constructing 14 brush mats along 300m of Hope River upstream and downstream of the project site in order to trap legacy sediment in the area and sediments as result of project work, working to increase floodplain connectivity and improve spawning habitat for brook trout. We partially decommissioned the sediment trap using hand tools, opening up the natural channel for future restoration work, preventing streambed scour and increasing available brook trout spawning habitat. Materials were used from original block to block off flow to bypass channel, opening up the natural channel for future restoration activities. Atlantic Salmon Federation and PEI Government completed 2 site visits and provided expert advice. Turbidity Monitoring along with other regular water quality monitoring was conducted monthly during the project period at 4 sites upstream and downstream of the project site. These results water quality results were uploaded to Atlantic DataStream and are open to the public. Alders were manually cleared from the upstream and downstream areas of the sediment trap where necessary (see supplemental document for map). 1.5km of RHAs and .5km of RGAs were completed upstream and downstream of the project site. A monitoring plan was created (see Sediment Trap Partial

	Decommissioning Summary attached), short term monitoring was conducted directly after the project was completed. The Sediment Trap Partial Decommissioning Summary along with a monitoring plan was created to determine future success of the project and compare results with past and present RHAs and RGAs *See Sediment Trap Partial Decommissioning Summary attached for further details*

Organization Name	Nature Conservancy of Canada
Project Title	Establishing a Protocol for Monitoring Wetland Wildlife
Project Type	Research based: potential to advance knowledge
Potential to Advance Knowledge	The Nature Conservancy of Canada (NCC) 's "Establishing a Protocol for Monitoring Wetland Wildlife" project took place on NCC's Five Houses Woodland Nature Reserve. It involved using remote Autonomous Recording Units (ARUs) and on-the-ground surveys to identify 103 species, including six species at risk which rely on wetlands within this protected area. Bat presence on this nature reserve was confirmed for the first time, with four species identified. The data collection and semi-automated data processing used during this project will serve as the foundation for future remote monitoring of wildlife diversity in other protected areas across PEI. A report has been developed to outline results and to set guidelines for the efficient use of ARUs for long-term monitoring efforts across NCC's PEI nature reserves. Partners could also use NCC's new guidelines NCC's to build a more comprehensive province-wide species presence profile. This project's data suggests that one week of data collection in early June, with recordings occurring in 10-minute intervals every hour, is sufficient to capture the majority of species detections while minimizing the number of hours required to process data. Additionally, the data in this project was collected and processed using several different methods, and the time spent using each method was tracked. If aiming to capture the biodiversity of birds, amphibians, and bats, the method that provided the fullest picture of species presence was ARU data collection using auto-identification as an aid for confirming species presence. While this method took more time upfront, it became much more efficient than other methods (in-person surveys or manual processing of ARU data using subsamples), with each additional hour spent detecting uncommon or species at risk. This information will be used by NCC staff moving forward when completing long-term monitoring work that aims to confirm many species to measure wildlife biodiversity as an indicator of ecosystem health. This work has established the value of adding machine learning (BirdNET Analyzer) to human expertise to identify target species within a large volume of recordings, which NCC will implement at other sites. A custom classifier was trained using samples of research grade iNaturalist audio data of target species for wetland wildlife monitoring (at-risk birds, secretive marsh birds, and amphibians) and another classifier was built for Atlantic Canada's bat species. A classifier is an algorithm that can be used to sort data into classes or categories; BirdNET Analyzer uses classifiers to categorize audio data into species. Both models successfully detected these target species and can be re-used at other sites in the future. We will share the data with other nature conservation organizations, such as the PEI Watershed Alliance and the Forests, Fish and Wildlife Division, who provided guidance and additional support for this project. Bat data collected from this project will be submitted to the North American Bat Monitoring Program. We also have plans to begin installing ARUs on other nature reserves across the province.
Brief Summary	Discovering Species Through Sound. NCC used ARUs and on-the-ground surveys to identify 103 species, including 6 species-at-risk, which rely on wetlands within this protected area, up from 30 species observed at the Five Houses NR prior to this work.
Project Results	The main goals of this project were as follows:

	1. Deploy Autonomous Recording Units (ARUs) at two wetland sites on the Five Houses Woodland Nature Reserve to assess bat, bird, and amphibian diversity; 2. Complete on-the-ground survey work at these wetlands and vernal pools across the site to complement remote data collection; 3. Identify biodiversity hotspots across the Five Houses Woodland Nature Reserve for future conservation management actions and develop guidelines for efficient long-term monitoring of wetland wildlife biodiversity using remote data collection across other NCC nature reserves. NCC confirmed 103 species on the Five Houses Woodland Nature Reserve from the data collected by ARU and by on-the-ground surveys throughout this project (90 birds, four bats, and nine amphibians). The ARU data alone contained 100 of these species, 70% of which were new records for this nature reserve. A total of six species at risk were confirmed to be present: Canada Warbler and Olive-sided Flycatcher (previously observed), Eastern Wood-pewee, Barn Swallow, Little Brown Bat, and Northern Long-eared Bat. NCC staff completed egg mass surveys at eight vernal pools along a 1.5 km trail within the nature reserve in April and an additional survey of four vernal pools within the forest for adult amphibian species. Two passive sampling surveys were also completed using minnow traps and wooden boards. These on-the-ground surveys and ARU recordings of frog calls confirmed that this nature reserve is host to all but one of the amphibian species known to be present on PEI. Additionally, two point count surveys were completed using the Birds Canada Maritime Marsh Monitoring Program protocol, identifying 26 bird species. Both wetland sites contained similar biodiversity (approximately 70 species each), some of which were common to both sites and others which were unique to one site only. All three forest bird species at risk were found at the more remote wetland site on the nature reserve, highlighting the importance of protecting and maintaining low-disturbance habitat. Barn Swallow was only detected at the roadside wetland site, which is adjacent to neighbouring farmland, suggesting that targeted landowner outreach may be beneficial in this area to ensure that nesting areas in old barns or structures are not moved or disturbed. A report has been developed to outline results and to set guidelines for the efficient use of ARUs for long-term monitoring efforts across NCC's PEI nature reserves. This project's data suggests that one week of data collection in early June, with recordings occurring in 10-minute intervals every hour, is sufficient to capture the majority of species present while minimizing the number of hours required to process data. This work has established the value of using machine learning (BirdNET Analyzer) as a tool to identify target species within a large volume of recordings, which will be implemented at other sites. A volunteer property steward and the Province of PEI staff collected additional data for this project on other nature reserves. We will analyze this data by implementing the same processes used on the NCC data. A summary of the methods used will be shared with partners who are working on similar projects and with other NCC staff.

Organization Name	Bedeque Bay Environmental Management Association (BBEMA)
Project Title	Improving Critical Habitat for Atlantic Salmon in the Dunk River
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	The rivers of the Bedeque Bay Watershed flow through some one of the most agriculturally intensive areas of the Prince Edward Island. Stream corridor restoration will improve the connectivity of streams enhancing migratory access for fish throughout the watershed. Improving water quality and providing healthy habitats for both fish (all species) and aquatic insects. During Hurricane Fiona, the adjacent stream riparian areas along the Dunk River were devastated with extensive loss of trees, resulting in a decreased ability to buffer against nonpoint source pollutants and sediment impacts. Re-establishing this vegetated buffer through ongoing tree planting efforts will help to stabilize stream banks minimizing erosion and sedimentation. Additionally, stream temperature is affected by many factors including shading from vegetation, tree cover is particularly important for regulating water temperatures. Atlantic salmon are among the most vulnerable species partly because of their temperature sensitivity. Restoring important vegetative buffers along the stream reaches of the Dunk River can help sustain cold-water refugees and spawning habitats. Headwater stream systems are considered critically important for the health of rivers, despite their small size, these streams comprise most of the stream length in most watersheds. In the last three years water withdrawal for agricultural purposes has been steadily increasing on the Dunk River. Conducting headwater stream surveys will allow BBEMA to monitor potential impacts that ongoing water withdrawal (via irrigation ponds/multiple high-capacity wells) is having on surface water connectivity and water velocity, which directly impact fish habitat. Accessing and developing future restoration plans for of these areas will have a significant positive impact on overall stream health. Due to ever constant fluctuations in Bedeque Bay watershed characteristics such as changes in riparian and upland vegetation (due to weather/climate impacts) or human activities (regional groundwater pumping) monitoring terrestrial/aquatic environments with drones has become a viable cost-effective way to enhance BBEMA's wetland and riparian restoration projects. Providing an efficient tool/resource to evaluate past instream enhancement efforts as well as document on going changes in vegetation density in both the riparian corridor and in the surrounding uplands through real time GIS photo imagery surveys.
Brief Summary	Atlantic Salmon habitat enhancement (Dunk River) restoring natural flows and improving access to spawning habitats through blockage clearing, debris management, raking of spawning substrate, tree planting to stabilize banks and reduce sedimentation.
Project Results	* Riparian zone enhancement – Planted 3162 trees: Surpassing our goal of 2800! These trees in riparian buffers along the Dunk River will help filter pollutants, improve water quality, and provide shade to keep streams cool. * Stream restoration to rehabilitate Atlantic Salmon habitat - rehabilitated 11.5km of fish habitat: Physical improvements reopened spawning and rearing habitats for Atlantic Salmon and other species. This included the construction of 12 extensive brush mats and the installation of snow fencing on a historical Salmon spawning tributary (Southwest Brook) of the Dunk. This type of setup deters fish from spawning in specific areas since they prefer to spawn on gravel beds. The PE Department of Transportation recently deemed the Newton Road bridge road crossing unsafe for vehicle passage. Subsequently, construction to remove and replace the bridge is scheduled for Dec/Jan 2025. As the stream below the bridge is important historical spawning habitat for Atlantic Salmon

	BBEMA needed to ensure that fish do not spawn in the construction zone - the snow fencing will stay in place through the spawning season and winter till the construction of the new bridge is complete. Additionally, BBEMA removed 1 metric ton of bittersweet nightshade that was clogging up a significant percentage of a Dunk River tributary - installing bush mats along the cleared stream banks to reinforce the bank and prevent sediment from entering the water. * Improved available spawning habitat for Atlantic Salmon through in-stream enhancement activities: raked gravel at 15 sites to reduce embeddedness, flush sediment, expose buried gravel, and create crevices for fish. This included both historical spawning sites and new/enhanced sites along the Dunk River - main branch/Southwest tributaries/Breadalbane tributaries. * Conducted electrofishing surveys (presence/absence/density studies for Atlantic Salmon) in partnership with PE Dept of Forests, Fish, and Wildlife. * Tracked stream temperatures through the deployment of temperature loggers (HOBO) at 20 sites (Dunk River 15/Wilmot River 5) from May to Dec for continuous monitoring. This included the deployment of 6 dataloggers at Atlantic Salmon spawning site-specific tributaries. All loggers were calibrated to collect readings every 2 hrs. – data collected from loggers to be uploaded to BBEMA water quality data base. * Conducted bi-weekly aquatic habitat monitoring on 17 sites from May to Oct using YSI water quality testing equipment to track non-point source water quality analysis. Bi-weekly sampling included the following parameters - pH, DO, temp, conductivity, turbidity, nitrates, coliform, stream depth and stream flow (using a digital flow meter). All 2024 field season data uploaded to Atlantic DataStream online database to facilitate sharing with other watershed/environmental groups across Atlantic Canada. * Completed 21 UAV surveys (DJI Mavic 2 Enterprise Dual thermo Drone) to document stream connectivity, monitor and map the progress of historical riparian tree planting and/or restoration sites along the Dunk River targeting the following areas: estuary, main branch and upper tributaries (Southwest Branch). Completed 2 UAV surveys of the Wilmot River main branch above Marchbank's Pond. * Conducted Dunk River headwater stream assessments along Dunk River upper Southwest Brook tributaries.

Organization Name	Cascumpec Bay Watershed Association Inc.
Project Title	Riparian zone enhancement Long Creek/Montrose
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	The project encompassed patch cutting alders and replanting native trees to enhance the riparian zone thus creating more shade for the stream a an enhanced corridor for wildlife. The alders that were cut were piled in order to provide habitat for snakes, frogs, salamanders, etc.
Brief Summary	CBWA planted over 1200 trees and shrubs on the Long Creek water shed in order to enhance the riparian zone and create better habitat for fish and wildlife. This project is part of a plan to improve wildlife corridors in the Long creek watershed.
Project Results	We patch cut over 1400 sq. meters as per guidelines Prepared 1400 sq. meter area for trees and shrub planting Trained Westisle students to plant trees and remove wild cucumber Planted over 1200 trees and shrubs. Removed wild cucumber on on a stretch of over 2 klms of stream in Montrose area.

Organization Name	Kensington North Watersheds Association
Project Title	Cross Watershed Tree Swallow Monitoring and Banding Initiative
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	The goal of this project was to develop and demonstrate a standardized practice for monitoring tree swallows through collaboration and partnership. Five watershed groups in central PEI installed a total of 40 nesting boxes using the blueprint developed by KNWSA in 2023. Between all partners, we monitored a total of 66 nesting boxes in 2024 using Birds Canada's Project NestWatch protocol. "Project NestWatch is a long-term monitoring program of breeding birds and nesting activity in Canada. Data gathered through this project provides valuable information on the health of bird populations and changes in the environment" (Birds Canada, n.d.). All partnering watershed groups will upload data to Project Nest Watch to be used for internal documentation or external research. Each group also had the opportunity to band birds in inhabited boxes to provide information on survivorship and site fidelity from year to year. This project provided groups with crucial information about tree swallow prevalence and habitat preferences within their watersheds and will use this data to inform future management planning for the protection of the declining species.
Brief Summary	Five watershed groups in Central PEI installed 40 swallow boxes and banded 199 tree swallows. The new standardized monitoring program will simplify data collection and help to inform future management planning.
Project Results	1. Implement a standardized monitoring program across 5 watershed groups Kensington North Watersheds Association, Trout River Environmental Committee, South Shore Watershed Association, Hunter Clyde Watershed Group, and Wheatley River Improvement Group all collaborated to develop and implement a standardized monitoring program for tree swallows within each of their watershed boundaries. Nesting boxes were designed in 2023 by KNWSA for easy cleaning and banding of birds and this blueprint was used to build over 40 new boxes in 2024. Birds Canada's Project NestWatch data sheets were used for standardized data collection and all groups will upload to the online database for internal documentation and external research. This database is accessible to Forests Fish and Wildlife and other researchers who may wish to utilize the data. Each watershed group monitored on their own schedule while we figured out a frequency that worked best. Surveying nesting boxes too frequently can deter birds from using the box or result in box abandonment. Surveying too infrequently may lead to a lack of necessary data for estimating hatch and fledge dates. We determined that surveying once per week during nest building phase is sufficient until the first egg is laid. After the first egg, we increased our surveys to twice per week until the clutch is complete to get an accurate count. Revisit the nest 11 days after the first egg was laid and every other day thereafter until the first egg has hatched (Incubation period is generally between 11-20 days). Identifying the hatch date will help to estimate the expected fledge date as well as the preferred banding date which is 10-11 days following hatching. Additional nest checks are not recommended between the hatch date and banding date as this is a vulnerable time for the birds. A rough draft of the Standard Operating Procedure was written to highlight our monitoring protocol and ensure future activities are consistent. This document will be shared with the PEI Watershed Alliance and all 25 community-Based groups.

	2. Monitor 60+ tree swallow boxes in the Queens County region of PEI Between all partners, we monitored a total of 66 nesting boxes in 2024 using Birds Canada's Project Nest Watch protocol. This includes 26 boxes built by KNWSA in 2023 and the 41 new boxes across the other 4 partnering watershed groups. Of the 66 boxes monitored, 42 were used, meaning nests were built by swallow pairs, and 36 of those were successful, meaning eggs were laid and young have fledged. A total of 238 eggs were counted and 83% of those fledged the nest. 3.Band young and adults in 50+ boxes with assistance from Fiep de Bie and Matt Ginn Thanks to Fiep and Matt we were able to band 199 birds across 5 watershed groups. 4 birds were recaptures from 2023 which provides information on nest fidelity and nesting preferences. 4. Increase knowledge of swallow populations -Share information with interested parties about nesting site selection, clutch size, and nest fate To ensure all interested parties including FFW and other researchers have access to our data, all groups will upload to Birds Canada's Project NestWatch database. SOP will be shared with the PEI Watershed Alliance and all PEI watershed groups. -Encourage landowners to build and implement their own swallow boxes Landowners who were interested in this project were provided with the swallow box blueprint and installation tips. KNWSA is hosting a swallow box building workshop at the Kensington Community Schools for 10-15 people in January to encourage Kensington residents to get involved. -Post project updates on social media and publish 1-2 article in the County Line Courier All watershed groups posted project updates on their own individual social media accounts. 2 articles acknowledging the funding and project were posted in the County Line Courier. TREC did a CBC interview, included the project and funder in 3 newsletters, and published an informational video on their social media pages and website. HCWG had a page dedicated to the project in each of their spring and winter newsletters. WRIG included the project in their autumn newsletter which is distributed to their members and printed for local pick-up. WRIG and KNWSA acknowledge WCF as a sponsor on their websites (wheatleyriver.ca, knwsa.ca).

Organization Name	Pisquid River Enhancement Project Inc
Project Title	Ongoing Fiona Recovery & In-Stream/Riparian Habitat/Biodiversity Enhancement w/ a Focus on Fish
Project Type	Project based: benefit to wildlife and habitat
Benefit to Wildlife	PREP's Spring 2024 WCF project benefitted wildlife as follows. Terrestrial and in-stream obstructions caused by beavers, Hurricane Fiona, and other storm events were assessed and addressed to improve finfish access/passage and worker access to enhancement and/or monitoring sites (e.g., 318 in-stream blowdowns were partially removed, primarily from the Pisquid and Vernon Rivers). Collapsed alders were trimmed to prevent woody debris congestion. 4062+ cubic metres of silt were excavated from MacLean's Pond to re-establish holding pools for salmonids. 678 native trees and shrubs were planted and/or provided to compensate for Hurricane Fiona losses and to enhance biodiversity for wildlife cover, food, and habitat - while simultaneously enhancing carbon capture and reinforcing buffer zones to mitigate the effects of agricultural runoff (i.e., siltation). Riparian plantings will also improve bank habitat. 17+ bird nest boxes were inspected and cleaned (e.g., Tree Swallow, Wood Duck) to improve nesting opportunities for these species. Multiple collaborative educational events and meetings - including three field trips with local elementary schools - were held to increase public awareness of wildlife habitat stewardship and encourage responsible/ethical conduct as per recreational codes of ethics (this was also achieved via social media). The creation of 169 habitat brush piles provided new opportunities for multi-species nesting and cover. Five bank-parallel flow deflector logs* and two floating cover logs installed in the Vernon River Main Branch and Glencoe Branch will help prevent bank erosion and create holding space for fish. Also, fish population and spawning surveys informed the above efforts (e.g., Atlantic Salmon, Rainbow Smelt), as did erosion surveys. The above activities were undertaken in the Pisquid, Vernon, Seal, Orwell, and Newtown River watersheds, with the Pisquid, Vernon, and Seal rivers having been prioritized (with extensive shoreline clean-ups having been undertaken in the Seal, Orwell, and Newtown Rivers as well). * Bank-Parallel Flow Deflector Log: A large blowdown installed parallel to an eroding bank and secured using fishing twine, rebar, or by hammering remaining branches into the sediment / streambed (or a combination thereof). Implemented to slow and/or revert bank erosion and provide cover and habitat for aquatic life.
Brief Summary	In 2024, PREP: improved fish passage & spawning/rearing habitat by assessing/addressing beaver activity & Fiona-related blockages; surveyed salmonid populations; planted and/or provided 678 native trees & shrubs; inspected/cleaned bird boxes, & more.
Project Results	**Where necessary, assess and address terrestrial and in-stream blowdown damage from storm events in the Pisquid, Vernon, Seal, Orwell, and Newtown Rivers as well as Ross Creek - with a continued focus on the impacts of Hurricane Fiona:** Crew primarily walked the East and West/Main branches of the Pisquid, the Main and Glencoe branches of the Vernon River, and the Seal River. Terrestrial and in-stream obstructions caused by beavers, Hurricane Fiona, and other storm events were assessed and addressed to improve finfish access/passage and worker access to enhancement and/or monitoring sites - mostly notably, 318 obstructive in-stream blowdowns were partially removed to assure fish and worker/surveyor passage, primarily from the Pisquid and Vernon Rivers. Alders were also trimmed to prevent woody debris congestion. **Where necessary, assess and address obstructive beaver activity the Pisquid,**

	Vernon, Seal, Orwell, and Newtown Rivers as well as Ross Creek: Three beavers preventing fish passage (e.g., Atlantic salmon) were removed from the Pisquid River at the High Bridge and Dunphy Roads. Additionally, four beaver dams were removed from the Pisquid at the High Bridge Road, two were removed at the Storey Road (Bradley's Creek) [Seal River], one was also breached here, and another was breached in the Pisquid at the Dromore Road. **Where necessary along the Pisquid, Vernon, Orwell, and Newtown Rivers, enhance native plant biodiversity and riparian zone structure - and compensate for Fiona losses - by planting 400 native trees and shrubs and caring for new and previously planted trees and shrubs:** PREP received 678 native trees and shrubs from the J. Frank Gaudet Tree Nursery this season. Most were planted within the Seal River watershed, with some having been provided to HRA and private landowners. 169 habitat brush piles were created while stream clearing in our stated jurisdictions. **Improve multi-species fish passage and finish spawning and rearing habitat where necessary in the Pisquid, Vernon, Seal, Orwell, and Newtown Rivers as well as Ross Creek (e.g., brush mat installation):** Five bank-parallel flow deflector logs and two floating cover logs were installed in the Vernon River Main Branch and Glencoe Branch. We also assisted HRA with the installation of 15 brush mats covering 134.5 metres in the Head of Hillsborough Main Branch and Clark's Creek. **Host educational events and meetings to inform the public about wildlife habitat stewardship and responsible/ethical conduct according to recreational codes of ethics:** In 2024, PREP, HRA, and the Forests, Fish, & Wildlife Division (FF&W) collaboratively hosted three educational field trips for Mount Stewart Consolidated School, Donagh Regional School, and Ecole François-Buote. These trips included smelt netting, electrofishing, and riparian zone tours covering fish habitat, fish identification and ecology, enhancement techniques, riparian zone enhancement techniques, and forest ecology. Also, photo essays on PREP's conservation efforts were presented to multiple groups (e.g., at PREP's AGM and Farmers' Meeting). **Install temperature loggers and collect water samples for nitrate analysis in the Pisquid, Vernon, and Seal Rivers:** Monitoring of stream temperature and nitrate levels was undertaken in the Pisquid, Vernon, and Seal rivers. Also, point source stream temperature recordings were noted during electrofishing surveys. For results and details, see the supplemental Dropbox link provided below. **Conduct fish and point source erosion surveys (i.e., runoff) where necessary throughout our jurisdictions:** Both electrofishing and redd surveys were conducted in the Pisquid, Vernon, and Seal Rivers. Point source erosion surveys were also conducted therein. Broken treetops impeded the redd surveyors' ability to see the stream bottom in pertinent spawning areas on ¼ of the upper Pisquid River Main Branch and the Head of Hillsborough Main Branch, which will be addressed next year. Also, 4062+ cubic metres of silt were excavated from MacLean's Pond to re-establish holding pools for salmonids. For results and details, see the supplemental Dropbox link provided below. **Document/disseminate our wildlife improvement actions via our Facebook page, in the Hillsborough River Association (HA)'s Hillsborough Tidings newsletter, and at least one press release to various Island media outlets. (HRA will also help communicate our collaborative work via their Facebook, Twitter, and Instagram accounts):** Fifteen (15) Facebook posts acknowledging

	watershed work and promoting watershed events were issued and /or shared via our Facebook page, with the WCF having been acknowledged in relevant posts. Some of our work was also highlighted via HRA's Facebook, Twitter, and Instagram accounts. The WCF's contributions to our work were also highlighted at PREP's AGM and in the March 2024 issue of the *Hillsborough Tidings*, and will be included in the March 2024 issue - the *Tidings* being provided to the UPEI Robertson Library and Confederation Library archives. We also acknowledged the WCF at relevant public meetings and events (e.g., our December Farmers' Meeting), and provided background material for the Foundation for Conservation of Atlantic Salmon's Annual Report. We'll be releasing a series of "year-in-review" Facebook posts throughout the remainder of December 2024 and January 2025, and the WCF's 2024 contributions will be further acknowledged therein. We also intend to release at least one press release in this style to the *Eastern Graphic* during this time, and will acknowledge the WCF's 2024 contributions therein as well. **Undertake smelt surveys:** Smelt population and habitat surveys surveys were undertaken at at key road crossing points in the Pisquid River, Vernon River, Seal River, Newtown River, and Ross' Creek watersheds. A report is currently in the works. **Install Tree Swallow, Wood Ducks, and Barred Owl nest boxes (12-15 total):** Due to time constraints related to the dredging of MacLean's Pond and the remaining Hurricane Fiona damage throughout our jurisdictions, no new nest boxes were installed. We intend to install them next year. In collaboration with HRA, Tree Swallow nest boxes were inspected, cleaned, and disinfected at Orwell Cove (Captain's MeadowWetland) [10], Wally Redmond's (48 Road - Monaghan Road), and PREP's Avondale Boar Barn. Also inspected and cleaned Wood Duck nest boxes at Seal River, Avondale, Wally Redmond's, Irving Road, and East Uigg Road. One successful Barred Owl nest box was noted at East Uigg Road, and seven eggs were discovered in a Wood Duck nest box at Avondale. **Undertake erosion control at Terry Polstra's Head of Hillsborough field (i.e., Green Meadow Farms):** In October, PREP Director Clarence Ryan enlisted the Department of Transportation & Infrastructure (TI) to redo the entrance to a Green Meadow Farms field off Route 323 in the Head of Hillsborough watershed. TI installed a new culvert and dug-out and graded the ditch below it, which was completely filled with silt from the field. They also added two rock catchments to the ditch to intercept future runoff.