



2018-19 | ANNUAL
REPORT





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MESSAGE FROM THE DIRECTOR

Another successful year has come and gone! Towards the end of this year, the organization worked with SkySail Brand on a design refresh for a number of our communications tools, including our Annual Report. As a result, this year's report, as you can see, has been pared down considerably in length and content. We wanted to showcase the highlights without readers having to flip through 60+ pages, hope you enjoy it! That being said, for those of you who want to read all the details, please visit our website, subscribe to our quarterly newsletter, and follow us on social media. Looking forward to celebrating our 25th year in 2019-20!

Brooke Nodding
Director, Coastal Action

BOARD OF DIRECTORS

Rick Welsford, **Chair**
Granville Veinotte, **Vice Chair**
Kelly Wilson, **Treasurer / Past Chair**
Kirk Symonds
Jeremy Hopkins
Mike Allen

Michael Graves
John McGee
Karl Nauss
Sharon Church
Errol Knickle
Andre Veinotte

STAFF




Brooke Nodding
EXECUTIVE DIRECTOR



Shanna Fredericks
ASSISTANT DIRECTOR



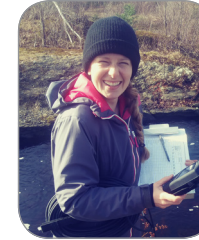
Danielle Pernette
SPECIES AT RISK &
BIODIVERSITY TEAM
LEAD



Clare Kellock
CLIMATE CHANGE &
EDUCATION TEAM
LEAD



Ariel Smith
COASTAL & MARINE
TEAM LEAD



Sarah MacLeod
WATERSHEDS & WATER
QUALITY TEAM LEAD



Jennifer McKinnon
GRAPHIC DESIGNER &
FIELD TECHNICIAN



Andrew Breen
ATLANTIC WHITEFISH
PROJECT COORDINATOR



Emma Kinley
WETLANDS PROJECT
COORDINATOR



Sam Reeves
WATERSHEDS PROJECT
COORDINATOR



Samantha Battaglia
STORMWATER MANAGEMENT
PROJECT COORDINATOR



Philip Longue
FISHERIES TECHNICIAN



Blaire Slaunwhite
AMERICAN EEL
FISHERIES TECHNICIAN



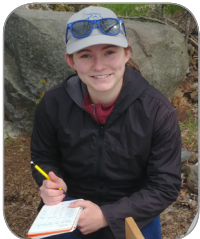
Shawn Feener
INVASIVE SPECIES PROJECT
COORDINATOR



Melissa Risto
ATLANTIC WHITEFISH
FISHERIES TECHNICIAN



Bailey Silver
AMERICAN EEL JUNIOR
FISHERIES TECHNICIAN



Kaylee MacLeod
INVASIVE SPECIES
FISHERIES TECHNICIAN



Leah Rudderham
WATERSHEDS PROJECT
FIELD COORDINATOR



Julia LeBlanc
ENVIRONMENTAL
EDUCATION SUMMER
COORDINATOR



Alicia Christie
ENVIRONMENTAL
EDUCATION SUMMER
COORDINATOR



Keiran Brackenbury
WATERSHEDS PROJECT
FIELD TECHNICIAN



Lily Webber
ENVIRONMENTAL
EDUCATION AUTUMN
COORDINATOR

COASTAL AND MARINE

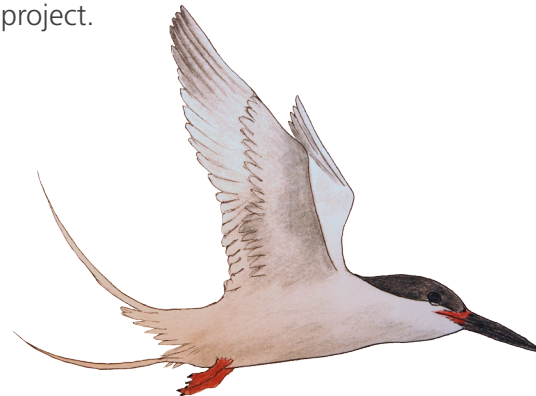
Coastal Action works to protect marine and coastal habitats along the south shore of Nova Scotia and beyond through research, community engagement, and shoreline cleanups.

Microplastics Research

Our 3-year microplastics research project aims to improve the understanding of microplastic pollution in Atlantic Canadian waters and inform the development of mitigation strategies to protect ocean ecosystems. Funded by Environment and Climate Change Canada, we have partnered with ACAP Humber Arm, Clean Annapolis River Project, and Memorial University's Civic Laboratory for Environmental Action Research (CLEAR) to investigate the abundance and types of microplastics found in the coastal waters and beach sediments in the Bay of Islands, NL; Bay of Fundy, NS; and the LaHave and Mahone Bay Islands region, NS.



In 2018, a total of 114 surface water samples and 228 beach sediment samples were collected throughout these three regions. Analysis of these samples will reveal the types of microplastics found in our waters and their relative abundance, as well as the locations of 'hot spots' suffering from high concentrations of microplastics. Source identification and 'hot spot' locations will guide the mitigation and education initiatives implemented during the final year of this project.



OCEAN FRIENDLY NOVA SCOTIA

BUSINESS



Ocean Friendly Nova Scotia

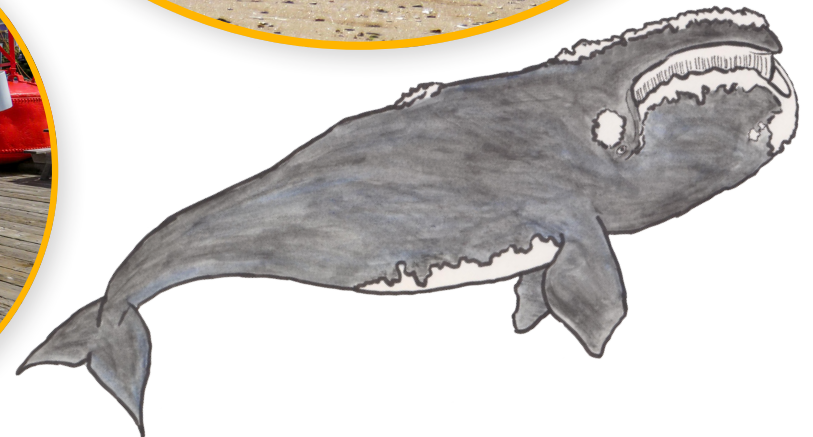
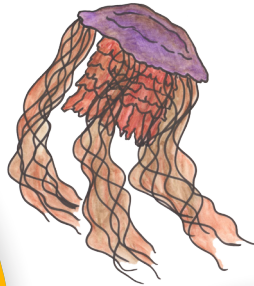
In 2018, with the help of Dalhousie University's College of Sustainability Capstone Program, we designed an environmental recognition program aimed at reducing single-use plastics for businesses, retailers, and restaurants. We will work with local businesses to help them achieve their 'Ocean Friendly' status by providing an audit of current practices, researching feasible plastic alternatives, and assisting them as they eliminate various categories of single-use plastic. With funding provided by NS Environment, this program will be launched in the Town of Lunenburg in 2019.



COASTAL AND MARINE

World Oceans Day

Each year, Coastal Action hosts a garbage cleanup and a variety of education and outreach booths on the Lunenburg waterfront in celebration of World Oceans Day. This year's World Oceans Day theme focused on preventing plastic pollution. Our shoreline cleanup was held on June 8, 2018 in the Town of Mahone Bay and was featured on CBC's Land and Sea 'Ocean Devotion' episode. On June 9, 2018, we took over the Lunenburg waterfront with our fellow ocean-loving surfers, sailors, artists, and environmentalists to celebrate our oceans and bring awareness to the threat of plastic pollution. Activities included informational displays, marine debris art and sculptures, boat tours, and even knot tying, all made possible through our partnerships with the Fisheries Museum of the Atlantic, NS Sea School, Zero Waste NS, Surf Association of NS, Cape LaHave Adventures, and more.



SPECIES AT RISK AND BIODIVERSITY

Our species at risk and biodiversity work assists in the recovery of threatened species including the Atlantic whitefish, American eel, and Southern Upland Atlantic salmon. This work also includes the assessment and restoration of wetland habitats and our involvement in an initiative focused on biodiversity conservation in southwest Nova Scotia called the Kespukwtk Conservation Collaborative.

LaHave River Invasive Species Project

Our multi-year LaHave River Invasive Species Project is evaluating the predation pressure that smallmouth bass and chain pickerel have on Atlantic salmon smolt during their seaward migration in the LaHave River watershed. In 2017, we confirmed, through stomach content analysis, that these invasive fish species are preying on Atlantic salmon smolt. In 2018, we tagged 178 smallmouth bass and 313 chain pickerel as part of a mark/recapture study to determine population estimates. This mark/recapture data will be used in conjunction with diet analysis work planned for 2019 to improve our understanding of predation on Atlantic salmon by invasive fish species in the LaHave River watershed.

American Eel

Since 2008, Coastal Action has been part of a Joint Venture Project with Fisheries and Oceans Canada and the Canadian Committee for a Sustainable Eel Fishery Inc. to monitor the abundance and harvesting of American eel in Scotia-Fundy waters. This work involves monitoring traps, collecting biological data, conducting mark/recapture tagging, electrofishing, and more. This data is provided to Fisheries and Oceans Canada in order to maintain indices of eel and elver (baby eel) status; understand the impacts of the eel fishery; study the biological characteristics and age class structure of elver and silver eel; and investigate the prevalence of an invasive swim bladder parasite, *Anguillicoloides crassus*.

Our research takes place in the East River, Chester watershed and Oakland Stream in Mahone Bay. In 2018, 849 silver eel were tagged as part of a mark/recapture study; a total of 3,479,777 elver and 1,118 juvenile eel were captured and analyzed; and the swim bladder parasite, *Anguillicoloides crassus*, was found in 22 of 26 sacrificed eel.



SPECIES AT RISK AND BIODIVERSITY

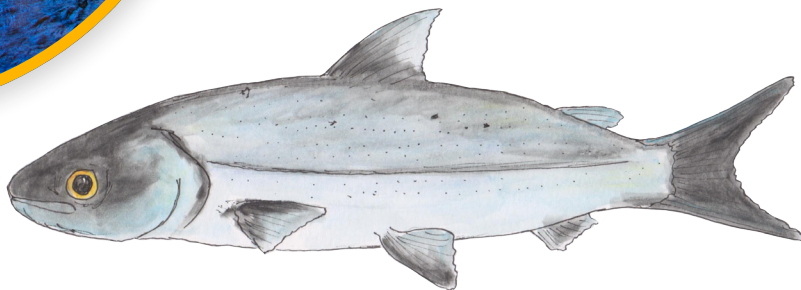
Atlantic Whitefish

It was an exciting year for our Atlantic Whitefish Recovery Project! Coastal Action has been working to protect and restore Canada's rarest fish species since 2004 in partnership with the Atlantic Whitefish Conservation and Recovery Team and Fisheries and Oceans Canada. In 2018, we began capturing juvenile whitefish and transporting them first to the Coldbrook Biodiversity Facility, then to Dalhousie University's Aquatron facility following

a decision by Fisheries and Oceans Canada to return the larval fish to the Petite Rivière watershed.

It is hoped that these fish will become part of a captive breeding program for future translocation into a watershed free of invasive chain pickerel and smallmouth bass.

In December 2018, we were thrilled to find an adult whitefish in our rotary screw trap, the first adult seen since 2014. We continue to address knowledge gaps in their life history, control invasive species within their habitat, and promote education and awareness around the plight of this endangered species, with the goal of re-establishing the anadromous nature of the species and expanding their current range.



Kespukwitk Conservation Collaborative

Southwest Nova Scotia was recently identified as a 'Priority Place' by the Federal government's 'Pan-Canadian approach to transforming Species at Risk conservation in Canada'. This area, which represents the Mi'kmaq region of Kespukwitk, is home to a number of species at risk and is considered a biodiversity hotspot. In 2018, the conservation community in southwest NS, led by Environment and Climate Change Canada, joined forces to form the Kespukwitk Conservation Collaborative. We are excited to be part of this unprecedented alliance as we work together under an adaptive management framework to address Species at Risk conservation in our region.



WATER QUALITY AND WATERSHEDS

Coastal Action protects watershed health through monitoring and restoration efforts.

Water Quality

Our water quality work continues to grow throughout southwestern Nova Scotia as we carry on with our watershed-scale monitoring programs and deliver various monitoring contracts for our municipal partners. Now in its 9th year, our monitoring of the Petite Rivière watershed provides us with important information on the health of the waters that support Canada's rarest fish species, the Atlantic whitefish. Our LaHave River watershed monitoring program, now in its 13th year, has become one of the strongest, longest-running water quality datasets in Atlantic Canada.



We work closely with municipal partners, volunteers, and others to deliver a number of water quality monitoring contracts in order to protect our waterways from the impacts of development and ensure public health and safety in recreational waters. In Sherbrooke Lake, we work closely with volunteers to monitor the health of the lake and its many tributaries to track impacts related to the development of a public access site and the increased recreational usage that will follow. In Fox Point Lake, we work with another group of dedicated volunteers to monitor lake health in response to a large-scale, ongoing development project within the lake's drainage basin. We continue to monitor fecal bacteria levels throughout the LaHave Estuary as straight pipes are replaced by compliant systems through the Municipality of the District of Lunenburg's Straight Pipe Replacement Program. Finally, we monitored fecal bacteria concentrations in Lunenburg Harbour in 2018, on behalf of the Town of Lunenburg, in response to growing concerns regarding the health of the harbour.



WATER QUALITY AND WATERSHEDS

Watersheds: Fish Habitat Restoration

Our fish habitat and watershed work focuses on assessing and restoring aquatic connectivity (fish passage), improving in-stream fish habitats, and developing fish habitat restoration plans. In 2018, we installed a Denil fish ladder at the historic Crousetown Dam on the Petite Rivière to improve fish passage over the dam and reduce debris blockages. In the LaHave River watershed, we assessed fish passage through culverts and developed a fish habitat restoration plan for the Main Branch Sub-watershed. In the Main River Sub-watershed of the LaHave, we restored 500 m of step-pool habitat along Silver Mill Brook, a beautiful stream which has been improved over the years through multiple in-stream and riparian projects. This stream flows through agricultural land owned by Kevin Veinotte, an environmental steward and farmer who has worked closely with Coastal Action, Ducks Unlimited Canada, and the Nova Scotia Salmon Association's NSLC Adopt-A-Stream Program to conserve biodiversity on his land.



In 2018, we began the development of a fish habitat restoration geodatabase for the LaHave River watershed using ArcGIS. This geodatabase will facilitate the spatial analysis of various environmental datasets collected from the watershed since 2007, including water quality data, aquatic connectivity barriers, and the distribution of invasive chain pickerel and smallmouth bass. This decision-making support tool will help us identify and prioritize restoration activities, inform the ongoing assessment of threats to watershed health, and share information with our partners and stakeholders.



CLIMATE CHANGE AND EDUCATION

Coastal Action strives to empower our local communities in the face of our changing climate through green infrastructure, low impact development, and carbon sequestration initiatives.

Climate Change & Stormwater Projects

The site of the former Gold River - Western Shore Elementary School is now a little greener and well on its way to becoming a beautiful greenspace after we successfully removed 200 m² of unused pavement on a cool October day in 2018. We were excited to work with the Together We Can Community Society as they lead a multi-phase, multi-year development project to create a community greenspace at the former school site in Western Shore.

The depave event was a great success, with over 90 community members contributing 858 volunteer hours. We replaced the pavement with compost and mulch generously donated by Oceanview Nursery and then planted over 100 native plants, creating an area which will soon become a natural playground. This new greenspace will divert 307.2 m³ of runoff and remove 78.67 kg of contaminants annually.

We hosted a community planting day at Shoreham Village, a long-term care home in Chester, NS, where we built four rain gardens. With the help of Shoreham residents and volunteers, we planted a variety of over 200 herbaceous perennials and ferns, creating a beautiful greenspace for the residents and native forage for pollinator species.



Altogether, these four rain gardens will capture 700 m³ of runoff and filter 179 kg of contaminants annually.

In the fall of 2018, we hosted a Rainscaping Workshop to help residents learn techniques for managing stormwater on their property. The workshop focused on DIY stormwater solutions, best practices, as well as how to make use of stormwater as a resource. Participants learned to map their own properties and design personalized stormwater management plans.



CLIMATE CHANGE AND EDUCATION

Coastal Action delivers a wide variety of education initiatives in hopes of fostering environmental stewardship values and inspiring action in our local communities.

Morton Centre Environmental Education Camps

Education plays an important role in all of Coastal Action's work. Our environmental education programs build connections with the natural world, foster a sense of stewardship in our youth and local communities, and address the lack of environmental programming in the public-school system.



Our environmentally themed summer camps are held at the Morton Centre, a beautiful 99-acre property located on Heckman's Island, just outside of Lunenburg. In 2018, Coastal Action delivered a wide range of environmental education programs, including a new grade 2 program called Shapeshifter Search; a summer Environmental Leadership Training for youth ages 12+; three day camps for children ages 6-12; three family nature events; a grade 4 program called Cycle Savers with a leadership component for youth ages 15-18; as well as a few one-off events for local groups like Girl Guides of Canada and Duke of Edinburgh.

Trailblazers

In the spring and fall of 2018, we delivered Trailblazers, our outdoor after-school program, to 27 kids in grades 6-8 from Bluenose Academy. This 7-week program provides youth with team building and leadership opportunities while, at the same time, creating space for unstructured free play in the woods, physical activity, hands-on science experimentation, and wilderness skill-building such as knot tying, outdoor cooking, and fire building.

Fish Friends

Coastal Action has delivered the Fish Friends program to schools throughout the south shore region since 2003. This hands-on environmental education program provides classrooms



with hatchery-raised brook trout eggs and everything they need to raise their eggs to the fry stage over a 5-month period. A curriculum guide and presentation provide teachers with a variety of topics to incorporate into the program such as freshwater ecology, life cycles, and habitats. Students release their young fish into a stream near their school, fostering a sense of pride in their small fish population and stewardship over their stream. In 2018, we delivered Fish Friends to seven south shore schools, where students raised and released over 2,000 brook trout fry into our local streams.



HIGHLIGHTS



2,500 m²
Area of fish habitat restored.



1,385
Number of individual plants planted.



370
Children who participated in camps and environmental programs.



56
Outreach events in which we took part.



300
Volunteers who donated their time.



3,795
Invasive fishes removed from critically endangered Atlantic whitefish habitat (2,405 smallmouth bass and 1,390 chain pickerel).

1,000 m³
Amount of stormwater runoff diverted.



258 kg
Toxins removed from stormwater runoff.

25

Years that Coastal Action has been operating.



1,313
Number of water samples collected in 2018.



Bursary
Award Winner
Claudia Cook



Volunteer
Award Winners
Martha & Peter Kinley



FINANCIAL REPORT

BREAKDOWN of FUNDING (year ends March 31)	2019	2018
REVENUE		
Project funding	\$778,085.00	\$780,331.00
Donations and fundraising	\$160,800.00	\$89,369.00
	\$938,885.00	\$869,700.00
EXPENSES - Projects		
Salaries and benefits	\$593,233.00	\$501,075.00
Project materials and supplies	\$157,010.00	\$181,953.00
Travel and conferences	\$56,798.00	\$64,408.00
Bad Debt *	\$43,476.00	---
Equipment purchases	\$26,068.00	\$26,115.00
Training	\$14,182.00	\$22,430.00
Insurance	\$11,178.00	\$7,765.00
Advertising and promotion	\$3,175.00	\$17,891.00
	\$905,120.00	\$821,637.00
EXPENSES - General Operations		
Audit and accounting fees	\$7,775.00	\$11,589.00
Rent and building expenses	\$6,649.00	\$6,453.00
Telephone and utilities	\$6,602.00	\$7,806.00
Office and administration	\$6,368.00	\$6,279.00
Bank charges	\$2,185.00	\$1,238.00
Board expenses	\$1,561.00	\$1,278.00
Director liability insurance	\$1,166.00	\$1,082.00
	\$32,306.00	\$35,725.00
TOTAL EXPENSES	\$937,426.00	\$857,362.00
NET SURPLUS - for year	\$1,459.00	\$12,338.00
NET ASSETS - beginning of year	\$173,539.00	\$161,201.00
NET ASSETS - end of year	\$174,998.00	\$173,539.00

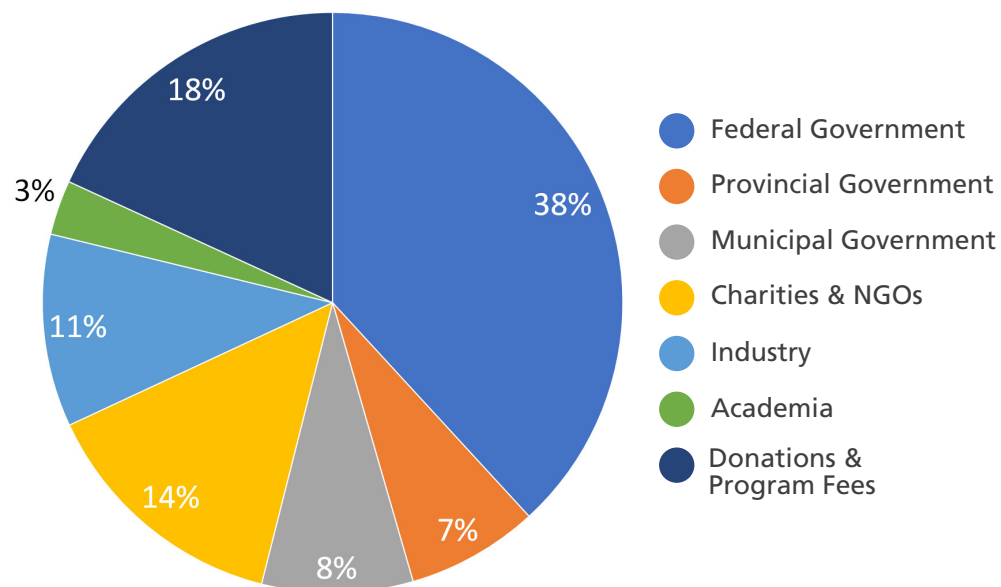


Figure 1: 2018-19 Coastal Action breakdown of revenue.

REVENUE OVER TIME

In our 3-year strategic plan (2018-2021), Coastal Action prioritized increasing and diversifying revenue with a goal of \$1M by the end of the 2020-2021 fiscal year.



* Coastal Action has a bill with a B.C. company for work they completed with ship Cormorant, which had been outstanding since 2015. The amount relates to an invoice for marine monitoring services that Coastal Action provided as a subcontractor to this company at that time. Due to a subsequent 3rd party lawsuit regarding ownership responsibility for the vessel, the amount has remained unpaid. Coastal Action has registered a lien against the ship in an effort to secure the debt; however, the outcome of the lawsuit is currently undeterminable and future collection is uncertain. As such the Board has deemed the balance to be uncollectible until such time as the lawsuit is resolved. Should any recovery arise from a final settlement of the lawsuit, the amount will be recognized as revenue when received.

DONATIONS

When you donate to Coastal Action, you're helping to conserve the species and ecosystems that make southwest Nova Scotia such a special place, as well as supporting our environmental education and outreach efforts. Over 95% of all donations go directly towards our environmental programming.

Tax receipts will be issued for donations exceeding \$10. Please include a return address on all correspondence in order for a receipt to be sent. For more information, contact the Coastal Action office at (902) 634-9977.

DONATIONS CAN BE MAILED TO:

Coastal Action
Cpt. Angus Walters House
37 Tannery Road
PO Box 730
Lunenburg, NS B0J 2C0



THANK YOU

Once again, Coastal Action would like to thank the many partners and volunteers who help make our work a success; all of our great environmental efforts and achievements would not be possible without you! We are extremely grateful for all the support received throughout the year and look forward to another tremendous year in 2019-20 as we celebrate our 25th Anniversary!

From the smallest contribution to the largest donation, every bit counts and is greatly appreciated. Thank you in particular to our board members and staff who worked tirelessly to make 2018-19 our most successful year to date, and to our partners and funders who made it all possible.

Looking forward to making our 25th year one to remember!





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