



LAKE HURON
COASTAL CENTRE

COASTAL CONSERVATION YOUTH CORPS

Youth Education Program | 2022



ACKNOWLEDGEMENTS

This program would not be possible without the generous funding from our sponsors and program partners.

We are grateful to Kerry Kennedy, our Coastal Education Technician, whose incredible enthusiasm, and dedication to educating youth in our coastal communities continues to inspire us.

The 2022 Coastal Conservation Youth Corps was made possible with support from:

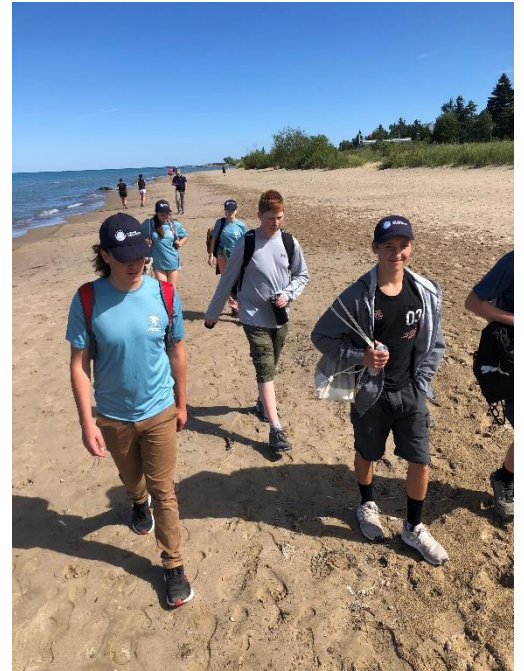


An agency of the Government of Ontario
Un organisme du gouvernement de l'Ontario



EXECUTIVE SUMMARY

The Coastal Conservation Youth Corps program (CCYC) provides youth with opportunities to volunteer and create community solutions for environmental challenges that impact Lake Huron. Launched in 2020, this new initiative of the Lake Huron Coastal Centre is wrapping up its pilot phase after three resoundingly successful seasons. Designed as an experiential learning and skill building volunteer opportunity, high school aged youth participated in weeklong summer sessions or weekend fall sessions. Earning a total of 1220 volunteer hours in 2022, 48 youth took coastal stewardship action while developing their leadership and interpersonal skills. The breadth of topics and activities included shoreline and water quality monitoring, installation of sand fencing to reduce undesirable sand migration and restore shoreline resilience, habitat enhancement through removal of invasive species and planting of native plants, litter collection and microplastic sampling.



In response to enthusiastic support from participants (100% said they would recommend the program to others) and a positive independent evaluation of the CCYC program, ongoing funding is being sought through grants, individual donations and support from community organizations to continue and further enhance this program. Inspiring, engaging and informing youth who will be making decisions that impact Lake Huron for years to come is well worth the investment.

INTRODUCTION

Designed to educate, inspire, and engage youth about the threats, stressors and opportunities for resilient communities around the shoreline of Lake Huron, the Coastal Conservation Youth Corps (CCYC) program has wrapped up its third season with highly successful outcomes.

Launched in 2020 with the support of base funding from the Ontario Trillium Foundation (OTF), the program was modeled after the Conservation Youth Corps at Credit Valley Conservation Authority. The program design and subsequent delivery were influenced by COVID-19 considerations and have evolved over the span of the 33 month contract with OTF. Cohorts of high school aged teens have participated in 5-day summer programs, or 4-day long fall weekend programs, in either Goderich or Saugeen Shores. Each program day focuses on a different coastal topic, incorporating a learning component, hands on stewardship activities, technical skill building and interpersonal growth opportunities.



Aligning with the core mandate of the Lake Huron Coastal Centre, the CCYC projects involve dune restoration, shoreline litter and microplastics studies, shoreline monitoring, species inventory, invasive species management and low-impact community design. They help to protect water quality, provide habitat to support biodiversity and reinforce coastal resilience. Each participant has the opportunity to learn valuable hands-on skills and gain experiences to further their career aspirations. The education component provides knowledge that complements school curriculum, while students also receive recognition of their volunteer hours which can be credited towards the completion of their high school diploma.

2022 PROGRAM EXPANSION

Entering the final funding year from the Ontario Trillium Foundation grant, program continuity from the preceding two seasons was facilitated with the return of Coastal Education Technician, Kerry Kennedy. Hiring an Education Assistant for the 2022 season allowed the cohort size to expand to 12, while increasing efficiency, safety oversight and further continuity. Cameron Hogg, a CCYC participant in the summer of 2021, brought an awareness of the program and a foundation of coastal knowledge to draw on. He was able to relate to the current registrants and was exceptionally personable and diligent. The 2022 team approach to leading the Coastal Conservation Youth Corps contributed to CCYC's great success this year.



As in 2021, two sessions were held in Goderich and three sessions were based in Saugeen Shores. With the easing of COVID-19 constraints, the 2022 program was able to incorporate added mobility, using school buses as a means of transport to various sites for monitoring, dune grass harvesting or restoration work. New locations visited in 2022 included Baie du Dore, Saugeen Beach Road, Gobles Grove, Camp Klahanie and Black's Point. The many new locations and projects necessitated a greater flexibility with scheduling.

New relationships and partnerships were forged with landowners and community organizations including Green Goderich, the Historic Saugeen Metis, and Invasive Phragmites Control Centre. Lindsay Fisher, the Waterfront Stewardship Specialist for the Town of Saugeen Shores was a great asset and joined the program on multiple days.

A newly introduced monitoring element of the program is the Water Rangers test kit and protocols as a tool that participants used to monitor water quality parameters and subsequently the data has been entered online to be shared with the Gordon Foundation's national data stream. The EnviroScape learning kit was also introduced in the final session of the program to support learning about the threats of point and non-point water pollution.

2022 PROGRAM ENROLLMENT AND PARTICIPATION



The program times and length of day were kept consistent with the 2021 format, running from 9:00 – 3:00 daily. Participants in the week-long sessions had the potential to earn 30 volunteer hours, while participants in the weekend sessions could earn up to 24 volunteer hours, plus an additional 3 hours for pre-program preparation work.

A total of 48 youth participated in the Coast Conservation Youth Corps program in 2022, with a total count of 1220 program hours (see Table 1). Six participants were returning youth from 2021; two completed the full week-long program, while four others joined the program on selected days. In addition to youth participants, a high school geography teacher participated during the August week in Goderich, which proved to be a wonderful opportunity to share the content and potentially extend the program impact to students she will work with in the future. Her participation is not included in the Table 1 summary.

Table 1. 2022 Coastal Conservation Youth Corps Participation Summary

Group	2022 Dates	Location	Registrants	Participants	Hours
1	July 11-15	Saugeen Shores	12	12	360
2	July 18-22	Saugeen Shores	12	12	318
3	July 25-29	Saugeen Shores	7	6	126
4	August 8-12	Goderich	14	11	258
5	Sep 17-18, Oct 1-2	Goderich	11	7	158
Total			56	48	1220

Registration for the Coastal Conservation Youth Corps was made available in early spring via an online registration form on the Lake Huron Coastal Centre website. Soon afterwards, the registrant is sent a confirmation email and closer to the session date waiver forms are emailed along with a schedule and drop off locations. This year 14% of registrants cancelled or did not show on the first day due to new employment opportunities or family circumstances. Maintaining a wait list assisted in trying to fill abandoned registration spots, however the cancellations often occurred in close proximity to the session date, making it challenging to fill these last minute spaces. A suggestion for 2023 is to clearly request on the website or in the confirmation message that the participant needs to notify the LHCC immediately if they must cancel or change their registration.

If a participant is unable to complete a day, or a portion of the program, they are invited to ‘make it up’ in a subsequent week, provided space is available.

PROGRAM FORMAT AND TOPICS

Over the course of three delivery years the educational materials, options for field work, skill development, and leadership activities have expanded greatly and now contribute to the capacity to vary the program plan for each session and respond flexibly as needed. The format of each day generally commences with an educational component and transitions to field work activities reinforcing the concepts learned. The schedule for each week was variable, depending on the municipality where the session was held in, the meeting location, access to field work opportunities, transportation, and weather conditions. A sample program format is outlined in Table 2.



Table 2. 2022 Coastal Conservation Youth Corps Sample Program

Day	Topic	Key Concepts Covered, Potential Project Work
Day 1	Orientation	Welcome, health and safety training, teamwork, leadership skills, Lake Huron 101, communicating science, citizen science, introduction to woodland assessment.
Day 2	Coastal Wetlands	Function and importance of coastal wetlands. Restoration and monitoring of a coastal wetland. Wetland species identification (reptiles, amphibians, birds, plants). Species at risk and invasive species. Potential work includes invasive species removal (eg. Phragmites), planting native wetland plants, monitoring.
Day 3	Water quality & Plastic pollution	Managing pollution in the Great Lakes. Potential work includes a community beach cleanup, microplastic analysis of water samples, Coast Watchers monitoring protocol, Water Rangers test kit protocol.
Day 4	Habitat Restoration	Types of coastal ecosystems, essentials of restoration planning, sand beach and dune ecology, plant identification. Beach grass harvesting and transplanting, pacing to estimate distance, sand fence installation, photo monitoring, planting of native species, removing invasives, supplemental pollinator garden planting.
Day 5	Community Planning & Wrap -up	History of coastal economies and community development. Visit to Saugeen Metis centre or museum. Watershed dynamics, environmental stressors and opportunities for building community resilience. Community evaluation of Low Impact Development and youth presentations of LID recommendations. Final surveys, farewell lunch, guest speaker and discussion of next steps for community action.

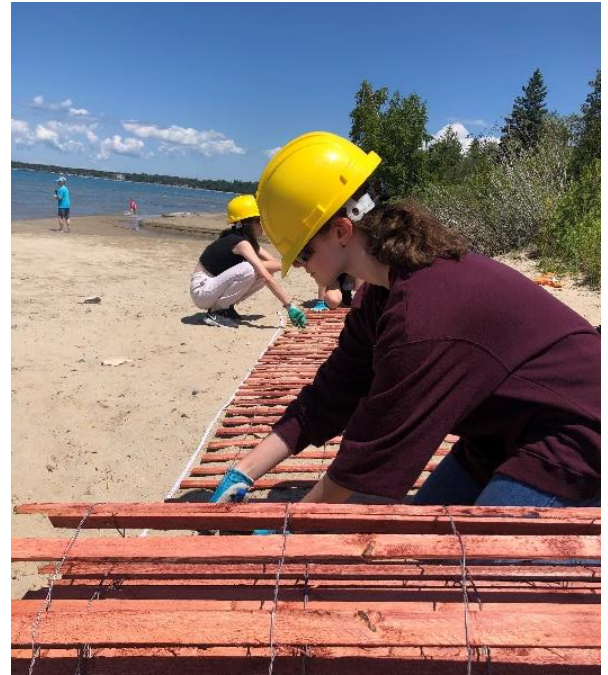
In an effort to continually improve the quality of program delivery and participant experience, feedback provided from participants has been incorporated where possible. Presentations have been shortened, and efforts were made to make them more interactive. Engaging team building, or active skill building components were also interspersed into the learning portion of each day.

Community organizations including the Historic Saugeen Metis and Green Goderich supported the education components of the program.

FIELD WORK

A variety of field work opportunities allow participants to apply new skills and to reinforce health and safety considerations. Thanks to support and collaboration with multiple partners, authentic and meaningful monitoring and restoration work was conducted across a broad range of ecosystems from Black's Point to the Saugeen River.

Local municipal partners were critical in identifying restoration projects on public beaches, while providing staff support and disposal of invasive species. Green Ribbon Champion (GRC) property owners enabled restoration work on private property to occur thanks to the assessments and recommendations made by GRC Coordinator, Holly Westbrook. The Invasive Phragmites Control Centre also supported the CCYC by welcoming participants to assist in a *Phragmites australis* removal project at Baie du Dore.



The following maps indicate the locations of field work activities undertaken over the course of 5 Coastal Conservation Youth Corps sessions in 2022.

Legend

- Invasive species removal
- Water monitoring
- Shoreline cleanup
- Plant native species
- Phragmites monitoring



Figure 1 2022 CCYC Goderich and Central Huron field work locations

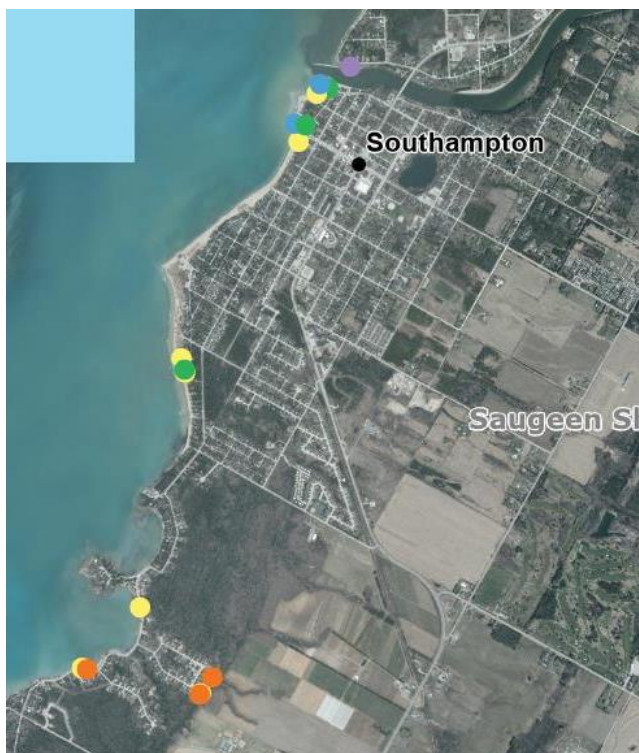


Figure 2 2022 CCYC Southampton field work locations



Figure 1 2022 CCYC Port Elgin field work locations

RESTORATION IMPACT

Coastal Conservation Youth Corps members looked for opportunities to improve biodiversity and shoreline resilience wherever they travelled. By conducting formal shoreline cleanups, they removed harmful litter from the environment, recorded results and submitted their data to the Ocean Wise Shoreline Cleanup portal, contributing to an international citizen science effort. Not only did the crew collect large easy to see items, but they also worked carefully to remove tiny pieces of debris and pre-production nurdles from the sand.



Date	Location	Activity	linear m
11-Jul	Biener Woods	Litter cleanup	250
12-Jul	Northshore park	Shoreline cleanup	200
13-Jul	Conc 4 to 163 Saugeen Beach Rd	Shoreline cleanup & invasive monitoring	2000
18-Jul	Biener Woods	Litter cleanup	250
22-Jul	Northshore park	Shoreline cleanup	500
25-Jul	Beiner Woods	Litter cleanup	250
9-Aug	Black's Point	Shoreline cleanup	175
10-Aug	Black's Point	Shoreline cleanup	125
18-Sep	St. Christopher's Beach	Shoreline cleanup	200
	TOTAL		3950

Table 1 2022 CCYC Shoreline Cleanup summary



Habitat restoration activities focused on reducing the spread of invasive plant species and enhancing biodiversity through planting locally sourced native herbaceous plants and shrubs. Work was conducted in coastal woodlands, wetlands and sand beach ecosystems. Certain shoreline situations were suitable for restoring a dune profile through the installation of sand fencing and transplanting of American beach grass culms to aid in the controlled deposition of sand. These measures are expected to minimize the loss of sand blown away from beaches and to retain it in the sand cycle of nearshore waters, while simultaneously

creating habitat for the ordinary and rare species that make their home in dune environments. The restoration activities of the Saugeen Shores program are summarized in Table 2. Not included in the chart is a *Phragmites australis* monitoring session conducted on July 27 through the Biener Woods complex from Carter Drive to Trillium Drive. Measured as a linear 2km route, the survey was conducted in conjunction with Lindsay Fisher, Waterfront Stewardship Specialist Student with the Town of Saugeen Shores.

Date	Location	Activity	Area (ha)
13-Jul	Concession 4	Removing seed heads from Phragmites	0.1
13-Jul	Eidt's Grove	Invasive species removal	0.01
13-Jul	163 Saugeen Beach Rd	Invasive species removal	0.01
13-Jul	Northshore park	Bank stabilization, ninebark shrubs planted	0.01
14-Jul	Gobles Grove Parkette	Invasive removal, beach grass & native planting, 25ft sand fencing installed	0.04
15-Jul	Pioneer Park	Invasive species removal, pollinator planting	0.01
15-Jul	Flagpole	Invasive species removal	0.01
19-Jul	Gobles Grove Parkette	Invasive removal, beach grass & native planting, 25ft sand fencing installed	0.04
20-Jul	Baie du Dore	Phragmites australis removal	0.04
21-Jul	Pioneer Park	Invasive species removal, pollinator planting	0.01
25-Jul	Port Elgin Main Beach	Dune weeding	0.01
26-Jul	365 Huron St. S.	Invasive removal, beach grass planting, 50 ft sand fence installation	0.03
26-Jul	355 Huron St. S.	Scots pine removal	0.02
27-Jul	end of Acton Drive	Phragmites removal	0.01
27-Jul	Mirimichi Bay	Invasive removal, planting native species	0.01
28-Jul	Pioneer Park	Invasive species removal, pollinator planting	0.01
	Saugeen Shores Total		0.37

Table 2 2022 CCYC Saugeen Shores Restoration Projects summary

Two locations in the Goderich area included the removal of invasive buckthorn. In the Maitland Woods small seedlings were removed and red oak seedlings were planted afterwards. In the woodland at Camp Klahanie CCYC experimented with a new technique using Buckthorn Baggies on some larger cut stems.

Date	Location	Activity	Area (ha)
10-Aug	Camp Klahanie	Buckthorn removal	0.02
10-Aug	Black's Point Beach	Coltsfoot removed, red maple tree planted	0.01
11-Aug	Goderich Main Beach	Dune weeding, beach grass planting	0.01
17-Sep	Maitland Woods	Buckthorn removal, plant maple tree	0.01
1-Oct	Goderich Main Beach	Dune weeding, beach grass planting	0.01
2-Oct	Maitland Woods	Buckthorn removal, plant oak saplings	0.01
	Goderich Total		0.07

Table 3 2022 CCYC Goderich & Huron County Restoration Projects summary

EVALUATION

To assess the impact of the Coastal Conservation Youth Corps program after three years of programming, the Lake Huron Coastal Centre contracted an unbiased third-party consultant, Lisa Gallant, to analyze and theme collected data and assess overall impact and participant experience. Sources included key informant interviews conducted in January 2023, Ontario Trillium Foundation survey results, as well as internal pre and post participant surveys collected over the three seasons of CCYC. The report, completed in February 2023 is available by request (Gallant, L. (2023). *Coastal Conservation Youth Corps Program Evaluation Report. Lake Huron Coastal Centre.1-73*). Comments in the concluding statements of the report are highlighted below.

Overall, the CCYC program evaluation results demonstrated that students had a positive experience. All respondents (100%) from 2021-22 and 92% of respondents from 2020, said they would recommend CCYC to others.

The evaluation results overwhelmingly suggest that CCYC is an effective program that can help participants to increase coastal environmental knowledge and interest in environmental work.

CCYC can help participants to:

- *Gain transferrable interpersonal and technical skills that could assist with future education and employment.*
- *Improve skills to apply to environmental challenges such as identifying invasive species and testing lake water for microplastics while working as part of a team, following health and safety procedures and communicating respectfully.*
- *Feel more empowered or confident pursuing their career with the skills gained through the program and to more clearly define their career path and goals.*

Ultimately, CCYC projects can benefit and improve the environment in shoreline communities. This can occur through projects CCYC participants undertake such as removing invasive species, cleaning up the beach and repairing dunes along with increased interest of participants to take future action to protect the Great Lakes.

OTF reported the following key results from their evaluation of CCYC:

- *100% of respondents feel a strong sense of belonging to the Lake Huron community*
- *97% of respondents feel that programming is highly inclusive*
- *84% of respondents feel empowered to make decisions or actively contribute to decision making in the program*
- *62% of respondents feel inspired to take further action*

Source: OTF Grant Outcomes Report, "Promising Young People 4-2" survey 2022

Input from the evaluation findings can help Lake Huron Coastal Centre further enhance CCYC projects that can impact Lake Huron coastal communities and engage youth from rural settings and Indigenous youth. These suggestions could further improve the reach and impact of CCYC

The evaluation process found the following opportunities to further enhance CCYC.

Targeted outreach to rural and indigenous youth

- Seek funding to remove barriers to participation
- Seek partnership with Indigenous communities to embed Indigenous teachings in the curriculum
- Consider expanding programming through the year with weekend events
- Build relationships with organizations such as 4-H to promote the program
- Include demographics in future participant surveys

Curriculum documentation

- Create a program manual to document and transfer activities and lessons learned for future instructors to use

Changes to program design

- Look at further ways to reduce presentations while adding more hands-on activities
- Add more elements related to pursuing a career or education in the environmental field
- Add activities to further enhance capability or knowledge for transferrable skills such as teamwork and leadership

Add opportunities for action outside of CCYC

- Work with community partners to organize ongoing public activities that will increase awareness about actions residents can take to protect and restore coastal ecosystems, while also promoting the CCYC

Enhanced communication with municipal staff

- Use site visits and regular communication to select CCYC project locations that fit with municipal plans and plan for their maintenance





ON THE HORIZON

Primary to the ongoing delivery of the Coastal Conservation Youth Corps is funding support, which is being sought for the continuation of this charitable program. Support from our community partners to highlight the benefits of CCYC through broader community awareness and appreciation is highly valuable for both recruitment and fundraising.

With a resoundingly successful program, the Coastal Conservation Youth Corps is well worth the investment to extend and expand. As a critical resource, the Great Lakes provide great benefit to coastal communities including clean water, ecological health, social well-being and economic prosperity. The Lake Huron Coastal Centre recognizes these great assets, strives to protect them and is proud of the role a new generation of coastal residents will be able to play in guiding long-term human and environmental health.



**LAKE HURON
COASTAL CENTRE**