



Severn Sound Environmental Association 2022 4th Quarter (Oct. 1 - Dec. 31) Report/Update

Staffing/HR

Administration, Staffing, Training and Volunteers

Administration

One SSEA Board meeting (2022 3rd Quarter). The new pay grid and organizational chart was implemented and SSEA began the transition with the Township of Tay to a paperless online payroll system.

Staffing

Welcomed Travis van Engelen as Tree Plant Program Specialist.

THANK YOU to outgoing staff: Tamara Brincat (IS Coordinator) and Emily Edgley (Citizen Science and Water Quality Coordinator)



Thank you to the 2022 SSEA Board of Directors!

Training/Professional Development

SSEA staff attended 4 no-cost webinars and 2 paid professional development courses.

Volunteers - THANK YOU

THANK YOU to all 35 Citizen Science volunteers who participated in our Shore Watch, Stream Watch, Water Level Watch, Ice Spotters, and Invasive Species Spotters programs this year! THANK YOU to all volunteers and municipal staff that assisted with invasive species removals.

Watch for the SSEA Environmental Champion awards re-launch in 2023.

Education, Engagement, Outreach

Presentations, Articles, Social Media, Events, Inquiries

Presentations

Presentations to the SSEA Board on various program updates. Delivered presentations at 5 additional events and 4 council meetings during Q4. Many of our presentations, meetings, videos etc. have been recorded and posted to the [SSEA YouTube channel](#).

Articles/Publications/News

SSEA issued 3 press released, provided an article for Tay's e-newsletter on open water monitoring, algae, and citizen science. Media coverage of [2 Billion Trees Program funding](#) and [Great Lakes Local Action Fund grant](#).

Social Media (Instagram, Facebook and Twitter accounts)

A total of 96 posts made on a variety of topics and SSEA programs with over 1,200 followers. One new video related to the SSEA Drinking Water Source Protection Program was posted on the SSEA YouTube channel (34 views and 45 subscribers). SSEA participated in Drinking Water Source Protection educational campaigns by posting across all social media.

Events/Meetings/Conferences

SSEA staff hosted MPP Dunlop on a water sampling trip on Hogg Bay to demonstrate sampling equipment and discuss the importance of water quality monitoring. THANK YOU to Queens Cove Marina for providing a water taxi. Staff joined the Minister of Agriculture Food and Rural Affairs and MPP Downey at an event recognizing local farmers.

Hosted information webinars on Bill 23 for Municipal partner staff (1 with CELA and 1 with MNRF). Team SSEA participated in 17 additional municipal and external partner meetings and events including the Township of Springwater strategic plan and North Simcoe Soil and Crop Improvement Association.

Inquiry Responses (excluding Source Water)

SSEA responded to 17 inquiries from municipal partners, members of the public, and contractors.



Tree Planting

Planting and Distribution

In planning stages for spring 2023 Community Tree Planting & Tree Seedling Distribution programs.

Fish and Wildlife Habitat/Natural Heritage

Invasive Species, Species at Risk, Wetlands, Wildlife and Habitat Stewardship

Invasive Species (IS)

Completed Spongy/Ldd Moth monitoring at select forested locations across the watershed to forecast potential defoliation for spring/summer 2023. Completed invasive mussel surveillance on Orr Lake and connected with municipal staff on results and next steps. Facilitated 2 volunteer IS management events. Hosted IS Working Group meeting. Continue to deliver technical and field monitoring support on the Wye Marsh Invasive Species Management and technical support on the Farlain Lake Eurasian Watermilfoil Management projects.

Species At Risk

Continued monitoring for turtles in Matchedash Bay area, with field investigations wrapping up for the season in October.



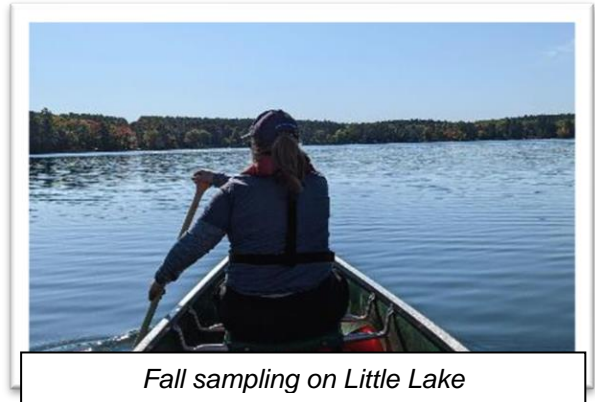
Land Use Planning

Input and Review

Plan and Policy Input

Submitted comments on 23 applications, reports, and Environmental Impact Studies, a decrease of 23% compared to the number of projects reviewed in Q4 of 2021. Participating in Official Plan review for Severn Twp.

Comments submitted on 3 Environmental Registry of Ontario postings regarding elements of Bill 23: More Homes Built Faster.



Drinking Water Source Protection

Source Protection Authority and Risk Management Services

Source Protection Authority Services

Continue to work with provincial, regional, and local representatives and attend meetings to fulfill the requirements of 2022-2024 funding agreement work plan. Includes policy work, municipal drinking water system changes, and general education and outreach initiatives.

MECP approved 3 changes to municipal water systems within the Township of Oro-Medonte.

Risk Management Services

Sent out 9 Draft Risk Management Plans, commented on 8 development applications, answered 7 inquiries, attended 2 pre-consultation meetings, held 1 Risk Management Plan negotiation meeting, and conducted 1 site visit.

Monitoring Programs

Field/data collection: Open Water, Inland Lakes, Intakes, PWQMN/Tributaries, Stream Invertebrates, Stream Temperature, PGMN, Climate, and Citizen Science

Lake Sampling (Open Water, Inland Lakes, Intakes)

Completed 3 Tay intakes sampling events, 1 inland lake sampling event for each of Farlain and Little Lake, 1 full open water sampling run and 1 late season sampling event in the Honey Harbour area. Sampling included collecting water chemistry and field data such as pH, turbidity, conductivity, and temperature. Water quality results are used to assess lake conditions, guide management decisions and protect drinking water quality.



Staff detected blue algae late in the season in the Severn Sound open waters, particularly in Midland Bay and Penetang Harbour, and worked with MECP and the Simcoe Muskoka District Health Unit to collect samples for identification and toxin

testing where necessary. The Water Quality Advisory due to an algae bloom detected on Penetang Harbour was [lifted](#) in mid-December.

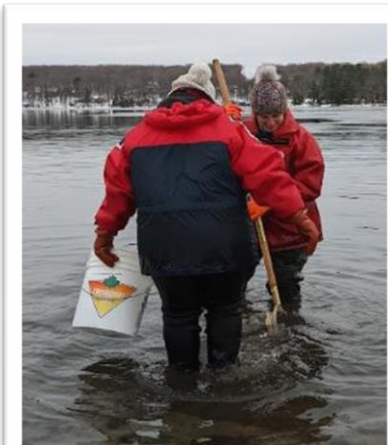
Watershed Monitoring (PWQMN, PGMN, Stream Invertebrates, Fish Community Survey, Stream Temperature)

PWQMN (Provincial Water Quality Monitoring Network - streams)
Conducted 3 sampling runs at 14 sites throughout the watershed, collecting chemistry samples and field data such as temperature, dissolved oxygen, conductivity, and turbidity.

Through PWQMN, a conductivity sensor was installed at a downstream site on the Coldwater River. Data will be used to establish a baseline range which can help detect external impacts on water quality, like storm events and de-icing salts.



Collecting PWQMN sample, North River



Invertebrate sampling, Farlain Lake

Groundwater (Provincial Groundwater Monitoring Network)

Conducted 1 winter sampling run at 6 PGMN well sites. Conducted a third data download for level and barometric pressure loggers and collected manual water levels at all 8 well locations. Data is used to monitor long-term trends and assess impacts of climate change on groundwater.

Lake and Stream Invertebrates

Sampled 3 stations on Farlain Lake (public boat launch, end of 17th Conc. East side of lake and North end, off Farlain Lake Road) using the Ontario Benthic Biomonitoring Network (OBBN) protocol.

Identified 7,354 stream invertebrates in samples from Hogg Creek, Copeland Creek and Baxter Dam to assess ecological health.

Stream Temperature

Removed and downloaded 40 temperature loggers from stream sites throughout the watershed, which logged in-stream temperature during the summer.

Stream temperature data and other information was collected from portions of the Coldwater River for the Intensive Stream Temperature Study. This Study helps to update drainage mapping, provides background data, determines thermal habitat classification through modeling of all stream reaches, and helps to better understand where to focus future monitoring efforts.

Climate Monitoring

Rain and Air Gauges

Data compilation completed for 4 rain gauges and 1 air temperature logger which provided additional background information for monitoring projects in the Severn Sound and Tiny Coastal Area, putting monitoring results into context (e.g., water quality and quantity, inland lake levels, trends in algae growth, thermal stability classification for streams).



Temperature loggers ready for

Weather Stations

Midland and Lafontaine weather stations checked regularly using the online portal to ensure uninterrupted data collection. Annual data compilation and analysis completed and included in year-end report summarizing rainfall and crop heat units from 2022.

Learn more about our weather stations and view near real-time data on the [SSEA website](#).



Citizen Science (Shore Watch, Stream Watch, Invasive Species Spotters, Water Level Watch)

Data collected through the Stream Watch, Shore Watch and Invasive Species Spotters programs until the end of October. Observations for the Water Level Watch Program on Farlain Lake compiled and the gauge removed for the season. Monitoring for Ice Spotters began in early November and will continue until freeze-up. In 2022, we had 35 volunteers across all programs monitoring at 35 sites and have received 811 observations.

THANK YOU to Huronia Community Foundation for the project grant and the following businesses who donated prizes: Glen Oro Farms, Hardwood Hills, Wye Marsh and TruEarth.

Sustainable Severn Sound Special Project

Climate Change Action Plans, Partners for Climate Change Protection (PCP) Program

Partners for Climate Protection

SSEA continues to support our municipal members of the PCP program as an Associate Member, facilitating actions under municipal climate action plans where possible.

Bee City Initiative & Projects for Pollinators

Supporting current Bee City members by providing information to the public, answering questions, and engaging the community to participate in stewardship work at Bee City sites. 184 native plants were planted in Severn and Midland to support the creation of pollinator habitat. THANK YOU to Georgian Bay District Secondary School students for participating in the Midland event, and to Ardrea Nature for assisting at the Severn site.

Working towards the completion of deliverables in SSEA's *Projects for Pollinators* initiative, funded by TD Friends of the Environment Foundation. The *Native Pollinator Plants in the Severn Sound Area* booklet was developed and 150 printed copies will be shared with



Native Pollinator Plants in the Severn Sound Area

municipal members, and digital copies are available on the [pollinator website](#). 125 native seed packets were handed out at 4 community and habitat stewardship events.

Data Analysis and Reporting

Statistics, Data Management & Analysis, Reporting, and GIS/Mapping

Statistics/Data Management & Analysis

Routine, year-round data management consisting of PWQMN, Georgian Bay water levels and regional climate data, and open water/inland lake water chemistry, zooplankton and algae data processing continues as normal. Additional analyses were completed to forecast open water temperatures over the next 50 years.

Reporting and Educational Content

Completed 1 conditions update for both Farlain and Little Lakes, which can be viewed [online](#) and on SSEA social media feeds.

Partnerships

New/Updated NGO partners and MOU's, Academia

SSEA is always working with municipal and NGO/external partners to deliver effective environmental stewardship, including membership with GBB's ICECAP and the SMDHU's Climate Change Exchange Committee and Climate Change Charter Working Group. SSEA is also a member of the Lake Huron Working Group, Great Lakes Ecoregion Network, and Georgian College Program Advisory Committee.

The team supported the Huronia Community Foundation (HCF) taking the lead on the Environmental section of the HCF Vital Signs report. The ED remains a member of the the Healthy Great Lakes Advisory Committee & Water Team (CELA lead) and the Lake Huron Management Group.

Academia

Working with PhD student from UOIT on a nearshore algae project. Collaborating on undergraduate data analysis projects focused on tributary flow and water quality with University of Waterloo researcher.



SSEA ED meeting the Honourable Elizabeth Dowdeswell, Lieutenant Governor of Ontario (Midland)

Financial

Grants, Budget, Invoicing

Grants

Multiple grants have been secured or applied for by SSEA to enhance services, including:

- MECP Great Lakes Local Action Fund: \$50,000, Improving Habitat in the Severn Sound Watershed - approved
- NRCan 2 Billion Trees: \$276,507, Building Tree Planting Capacity in the Severn Sound Watershed - approved
- COA: \$75,000, The State of Severn Sound 20 Years Post-Delisting as an Area of Concern (pending approval)

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- COA: \$70,000, Piloting the Inclusion of Wastewater and Stormwater Effluents into Existing Long Term Watershed Monitoring program (pending approval)
- Lake Huron Forever: \$10,000, Severn Sound Citizen Science: Expanding Community Engagement (pending approval)
- TD Friends of Environment Foundation: \$9,300, Severn Sound Citizen Science: Expanding Community Engagement (pending submission in 2023 Q1)
- Canada Summer Jobs: \$10,850, summer staff wage subsidies, multiple programs (pending submission in 2023 Q1)

Budget

Completed budget deputations to the Township of Tiny and the Town of Penetanguishene, and submitted budget letters and service accomplishment summaries to all SSEA partner municipalities. Completed council orientations for Township of Tay and Town of Midland. Issued 22 invoices for work completed.



Team SSEA 2022 Seasons Greetings

Thank you from Team SSEA

- Julie Cayley - Executive Director
- Lex McPhail - IT Manager/GIS Applications Specialist
- Paula Madill - Ecosystem Technologist
- Michelle Hudolin - Wetlands & Habitat Biologist
- Aisha Chiandet - Water Scientist
- Melissa Carruthers - Risk Mgmt. Official/Risk Mgmt. Inspector
- Judy Limoges - Treasurer (p/t)
- Nikki Priestman - Watershed Health Specialist
- Tamara Brincat - Invasive Species Program Coordinator
- Cliff Evanitski – Office Manager
- Cameron Epp - Watershed Resilience Coordinator
- Emily Edgely - Citizen Science & Water Quality Coordinator
- Nicole Stott - Drinking Water Source Protection Assistant
- Bob Bowles - Turtle Monitoring Project Assistant (p/t)