

Contents

3 Words from the Chair & Executive Director

6 SSEA Service Area Map

Strategic PlanProgress - 2022

Sound Science

10 Supportive Partnerships

Engaged & Informed Community

13 Exceptional Organization





Executive Director

In 2022, we began the process of re-opening the office, piloting a hybrid approach to having staff return to the office combined with working remotely and made significant strategic operational progress working with staff and the Board to implement a pay equity review and SSEA's first pay grid. This progress supports business excellence, being committed to a culture of continuous improvement and to being an employer of choice as well as reducing our carbon footprint.

Recognized for the strength of the science and work SSEA does in Severn Sound, we were welcomed into the Lake Huron Bi-National Partnership to share expertise in helping sustain the environmental integrity of Lake Huron, the second largest of the Great Lakes. In June, the SSEA co-hosted with the Ausable Bayfield Conservation Authority the 2022 Lake Huron Georgian Bay Community Watershed Actions' Summit in Port McNicoll. This event attracted visitors and partners from across southwestern and central Ontario and highlighted Severn Sound and the critical importance of partnerships in protecting our watersheds.

In October of 2022 the municipal election resulted in many new council members in the 8 SSEA member municipalities. I want to personally thank the outgoing SSEA Board for their hard work and dedication to the health of the Severn Sound watershed. I sign off looking forward to 2023 and to celebrating 20 years since the Severn Sound was de-listed as a Great Lakes Area of Concern!

Board Chair

2022 marked the changing of the guard as the Severn Sound Environmental Association (SSEA) said farewell to 7 of its 8 Board Members. Anita Dubeau (Penetanguishene), Carole McGinn (Midland), Paul Raymond (Tay), Perry Ritchie (Springwater), Ron Stevens (Severn), Ian Veitch (Oro-Medonte) and Paul Wiancko (Georgian Bay) leave behind a legacy of environmental and municipal leadership that has placed SSEA on sound footing for years to come.

The return to normal operations in 2022 saw an increase in the presence of SSEA both physically in the community supporting invasive species removal, planting trees, re-naturalizing green spaces, as well as, on-line with more social media posts, educational videos and the dissemination of information to help local stakeholders improve the surrounding environment. The result – more partnerships! We all appreciate that working together we can accomplish a lot more and save money at the same time. My hats off to SSEA staff for their continued passion to make Severn Sound the great place it is – and our many partners who share that success.

Steffen Walma

Styl Value

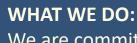
"We're all connected, either up stream or down stream of somebody and we really need to think about that in the actions we take and work that we do." J. Cayley 2022

It I is Car la

Julie Cayley







We are committed to ensuring exceptional environmental quality and exemplary stewardship of the Severn Sound area through sound science, collaboration and partnerships.





2022 Board

Steffen Walma (Chair)
Deputy Mayor, Township of Tiny

Paul Wiancko (Vice-chair) Councillor, Township of Georgian Bay

Carole McGinn Councillor, Town of Midland

Ian Veitch
Councillor, Township of Oro-Medonte

Anita Dubeau Deputy Mayor, Town of Penetanguishene

Watershed Resilience

Coordinator

Ron Stevens Councillor, Township of Severn

Perry Ritchie Councillor, Township of Springwater

Paul Raymond
Councillor, Township of Tay



Left to right: Anita, Paul W., Ian, Carole, Steffen, Ron & Paul R. - Perry Ritchie not available for photo

2022 Staff Julie Cayley **Judy Limoges** Cliff Evanitski **Executive Director** Office Manager Treasurer Melissa Carruthers Michelle Hudolin Lex McPhail Tamara Brincat Risk Management Wetlands & **Invasive Species** IT Manager & GIS Official/Inspector **Habitat Biologist** Specialist Program Coordinator Aisha Chiandet Paula Madill Nikki Priestman Morgan Gillies Healthy Soils = Healthy Water Scientist Watershed Health Ecosystem **Technologist** Coordinator Watersheds Program Travis van Engelen **Emily Edgely** Walker Hunter Cameron Epp Citizen Sci. & Water Tree Plant Program **Invasive Species Invasive Species** Specialist **Quality Coordinator Technician** Technician **Shannon Mawhinney** Nicole Stott Manjot Takhar Jonathon Stones

Pollinator Program

Assistant

Drinking Water Source

Protection Assistant &



Environmental Field

Tech. & Program



Address Priority & Legacy Issues

- Completed 12 conditions updates of Farlain and Little lakes for public.
- Updated public event posters showing results for Provincial Water Quality Monitoring Network (PWQMN), Provincial Groundwater Monitoring Network (PGMN), Climate Monitoring, Stream Temperature Monitoring, Open Water and Inland Lake Monitoring.
- Produced 9 info videos for SSEA YouTube Channel.



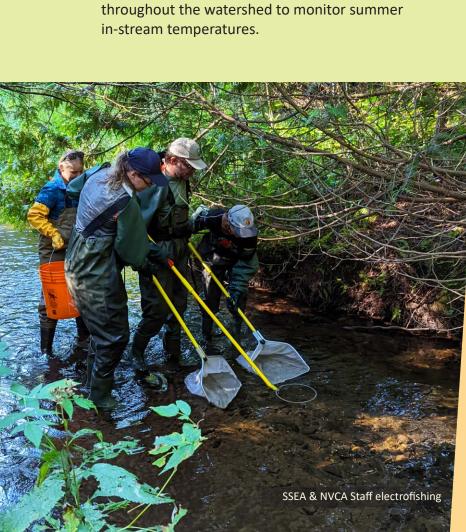


Build Scientific Knowledge & Understanding

- Hosted Drinking Water Source Protection 101 workshop for Georgian Bay Township's planning department.
- Presented to Great Lakes researchers data analysis on Severn Sound open waters showing how water level fluctuation impacts water temperature and algae growth.
- Monitored Spongy/Ldd Moth at select forests across watershed to forecast potential 2023 defoliation.
- Completed invasive mussel surveillance on Orr Lake, presented results and next steps to municipal staff.
- Provided technical support on Wye Marsh Invasive Species and Farlain Lake Eurasian Watermilfoil management projects.

Build Resilience across Severn Sound

- Issued media releases on the Tree Seedling Distribution Program, Matchedash Bay Turtle Study, Citizen Science programs, blue green algae bloom on Farlain Lake, invasive species, protecting pollinators in Tiny Township, open water monitoring, Great Lakes Local Action Fund and 2 Billion Trees Program.
- Installed 40 temperature loggers at stream sites throughout the watershed to monitor summer in-stream temperatures.





Commit to Filling Knowledge Gaps

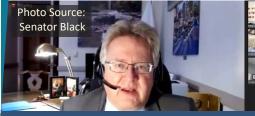
- Hosted webinar on the commercial fertilizer prohibition within the Lafontaine Wellhead Protection Area, with speakers from the Simcoe Muskoka District Health Unit (health risks of nitrate), Township of Tiny (testing and results of system), Turf Grass Institute (alternatives), and SSEA (Source Protection Plan policies).
- Partnered with Nottawasaga Valley Conservation Authority (NVCA) to do fish surveys at 3 sites in the headwaters of the Coldwater River. Results will enhance knowledge of stream health, available habitat for various fish species, and help identify changes over time.
- Completed 12 publicly-available conditions updates for both Farlain and Little lakes, including social media posts to educate residents on how to respond to a suspected blue green algae bloom.

Strengthen Existing Partnerships

- Assisted production of video for Port of Honey Harbour's Interactive Signage Project in Township of Georgian Bay that promoted agencies helping the local environment.
- Agricultural Committee supported SSEA during 2023 Budget presentations.
- Participated in numerous municipal and partner events including Dufferin Simcoe Land Stewardship Annual General Meeting, Tay Kids' Fishing Derby, County of Simcoe Forestry Event, All Things Canadian Festival, Bressette House Market and Georgian Bay Geopark Meeting.
- Co-hosted webinar with the North Simcoe Soil and Crop Improvement Association; "Soil Health - What Does It Mean to Me and Why Should I Care?" with greetings from Senator Rob Black.







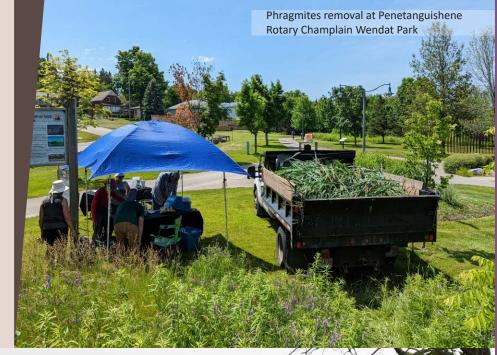


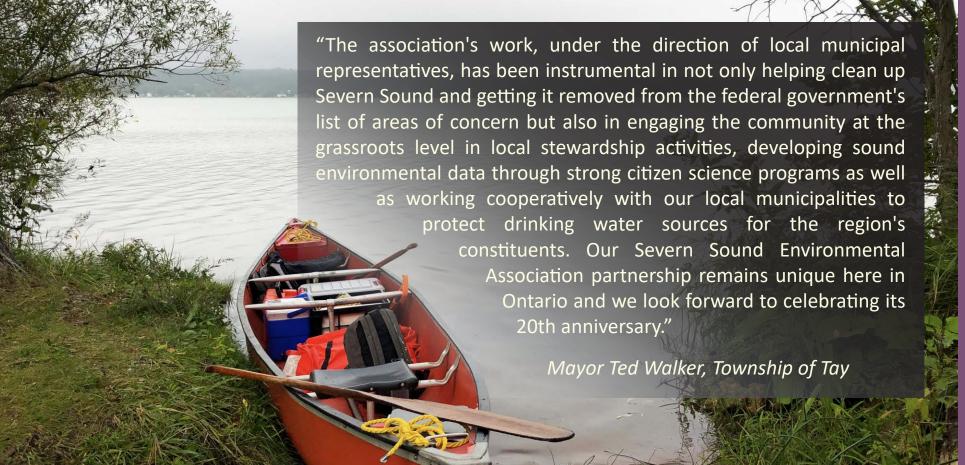
Build New Alliances

- Hosted Meet and Greet between Simcoe North MP Adam Chambers and federally-funded SSEA staffers who shared with MP Chambers the value of the funding and experience relative to their careers.
- Conducted turtle surveys in the Matchedash Bay area, as part of a multi-year partnership with Georgian Bay Forever.
- Included Simcoe North MPP Jill Dunlop on a water sampling trip on Hogg Bay to demonstrate equipment and the importance of water quality monitoring.

Empower Others to Take Action

- 5 Citizen Science programs engaged 35 new volunteers.
- Developed an iNaturalist project for Invasive Species Spotters to expand the range and increase the number of observations reported by volunteers.
- Provided technical support to Farlain Lake
 Community Association (FLCA) for their survey of native and non-native aquatic plants.

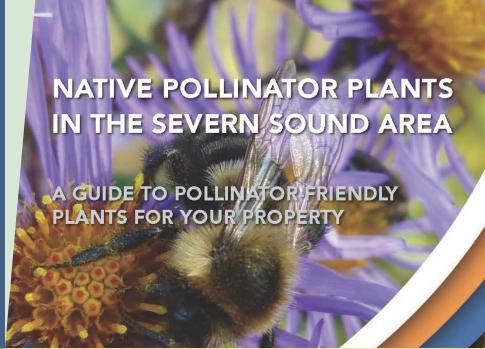




Increase Watershed Awareness & Understanding

- Distributed 2021 Municipal Invasive Species Reports to each member municipality.
- Hosted information webinars for municipalities on Bill 23; More Homes Built Faster Act 2022.
- Created Native Pollinator Plants in the Severn Sound Area guidebook.
- Delivered a webinar to municipal staff on the issue of salt in both surface and groundwater in Severn Sound.





Enhance SSEA Profile & Visibility

- Continued to expand social media presence for public.
- Participated in National Invasive Species Awareness
 Week and National Pollinator Week campaigns.
- Conducted social media drive about Winter Salt Best Management Practices, with 16 posts and 1 video that reached over 5,000 users.

Learn from others

- Collaborated with environmental groups to address information gaps.
- Attended 42 webinars, 9 professional development courses, 2 conferences, and other learning opportunities to improve skillsets and knowledge in order to better serve local stakeholders.

Consistently Deliver Exceptional, Exemplary Service

- Secured \$188,050 to assist municipal partners with tree planting, supporting pollinators, invasive species monitoring and management, shoreline naturalization, as well as, water quality sampling and reporting.
- Expanded on-line video content including SSEA Board Meetings and educational videos.





Commit to a Culture of Continuous Improvement

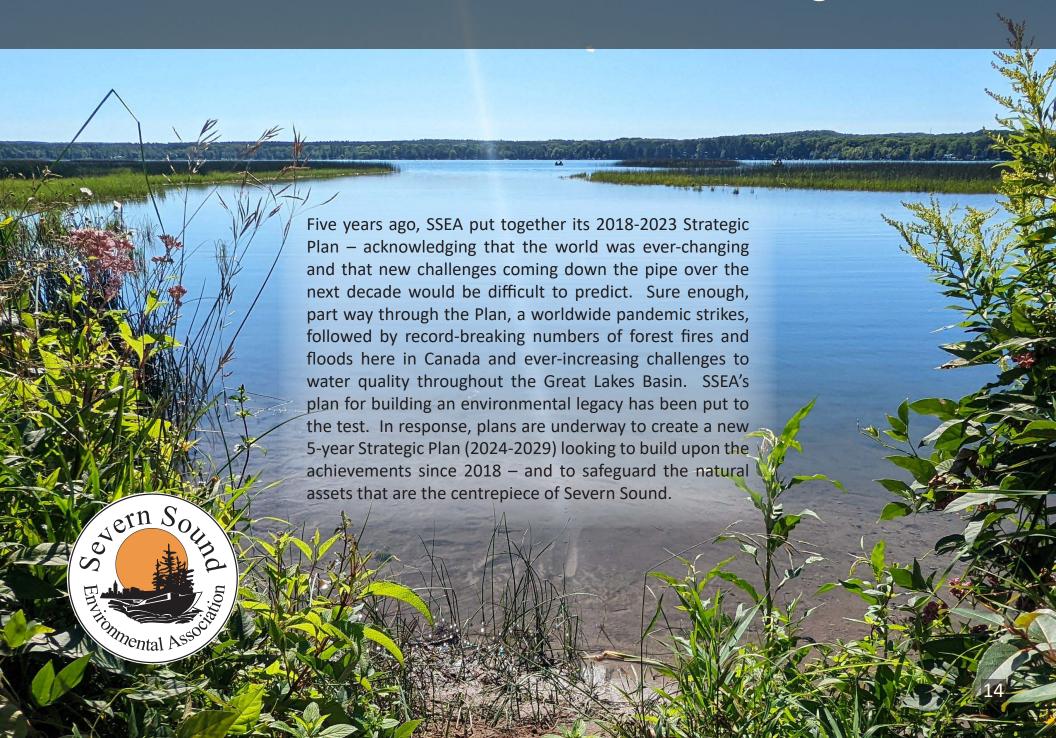
• Commenced transition with the Township of Tay to a paperless online payroll system.

Be an Employer of Choice

- Worked with post-secondary institutions to provide summer jobs designed to enhance the skillsets of young environmental professionals in the region.
- Implemented a new pay grid and organizational chart in order to attract and maintain current talent.



Our Path Forward 2024 - 2029 Strategic Plan





Severn Sound Open Water

- Worked with Province to maintain lab resources for SSEA's lake and tributary sampling so that the frequency and list of water quality variables are consistent, allowing SSEA to effectively monitor changes impacting local water quality.
- Monitored 14 locations throughout Severn Sound; total of 175 samples collected.
- Sampled 2 Tay municipal drinking water intakes for nutrients, general water chemistry, temperature and algae. Water quality results were used to assess conditions and guide municipal decisions.
- Observed blue algae late in the season in Severn Sound's open waters, particularly Midland Bay and Penetang Harbour, and worked with the Ministry of Environment, Conservation and Parks (MECP) and the Simcoe Muskoka District Health Unit to collect samples for identification and toxin testing. The Water Quality Advisory for Penetang Harbour was lifted in mid-December.

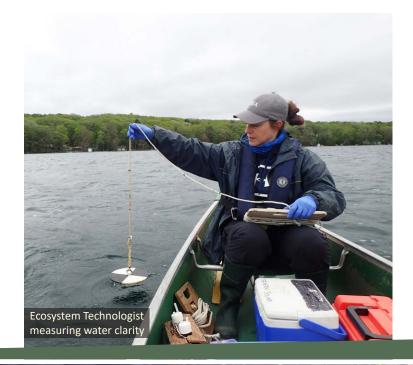


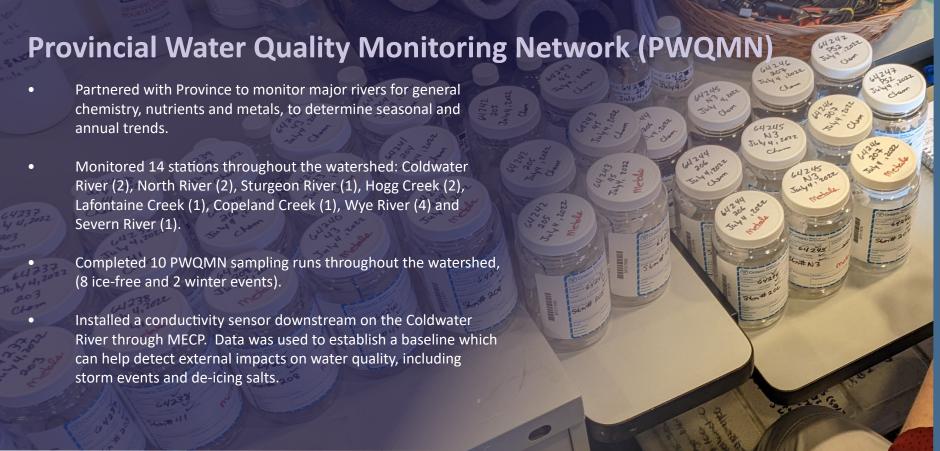


Much like the postal service, the 25-foot long Thunder Spirit and its Captain, Don Limoges, have been a reliable and integral part of SSEA's Open Water Sampling Program. For over 20 years, neither snow, nor rain, nor heat, nor foul weather, nor continuous maintenance and upgrades — have stopped the Thunder Spirit from transporting SSEA staff on their sampling runs from Penetanguishene to Port Severn To Honey Harbour — 14 stations each being sampled 14 times a year. Considered late 70s vintage, the Thunder Spirit is a Georgian Bay classic with over 4,100 stops on a route covering nearly 30,000 kilometres for SSEA since 2003 — all to help safeguard local water quality.

Inland Lakes

- Sampled Orr Lake in winter to track under-ice dissolved oxygen and phosphorus, to determine impact on water quality and fish.
- Conducted 12 inland lake samplings on both Farlain and Little lakes.
- Detected blue algae blooms in Farlain Lake and Midland Bay; conducted initial algae identification, and provided support to the Ministry of Environment, Conservation and Parks (MECP) and the Simcoe Muskoka District Health Unit to collect samples for verification and toxin testing. Additional sampling was done on Kettle's Lake in Awenda Provincial Park to compare conditions to Farlain Lake.





PROGRAMS & PROJE

MONITORING. **OGRAMS & PROJECTS**

Provincial Groundwater Monitoring Network (PGMN)

- Maintained loggers and conducted 3 data downloads to collect hourly water level and temperature information at 9 well locations. This data is used to monitor long-term trends and assess if climate change is impacting groundwater.
- Conducted winter sampling run at 6 PGMN well sites, to test water for chemistry, nutrients and metals, to gain insight on groundwater quality and trends.



Climate Monitoring Rain Gauges & Weather Stations

- Installed five rain gauges and one air temperature logger in Penetanguishene, Oro-Medonte, Tay and Tiny. Data used for 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, as well as, thermal stability classification for streams).
- Compiled data from all 5 gauges to compare rainfall across the watershed. Data was also used as part of SSEA's Climate Monitoring Program to analyze trends.
- Downloaded monthly data from the Midland and Lafontaine weather stations for use in climate-trend analysis. Current data, updated hourly, can be viewed on SSEA's website.
- Analyzed weather station data for crop heat units and rainfall. Results were reported to the local agricultural community and are available on the SSEA website.



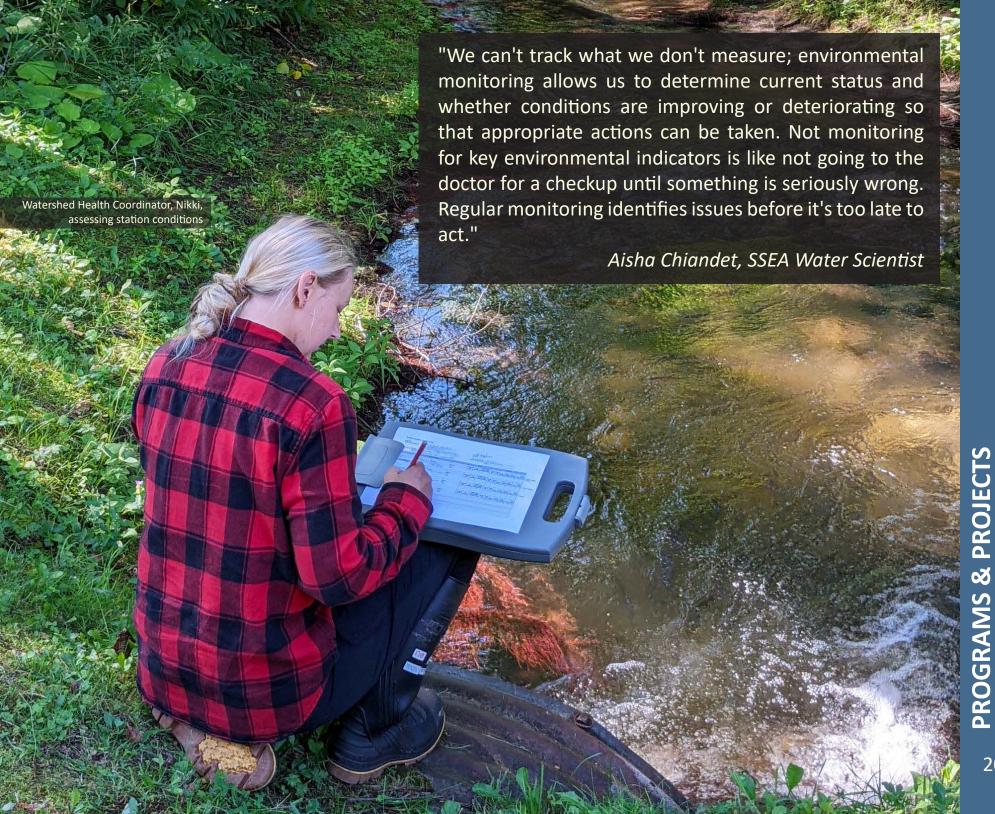
Stream Temperature

- Long-term & Intensive Monitoring

- Gathered in-stream temperature data from 78 loggers throughout the watershed during the summer.
- Collected temperature and other data from the Coldwater River for the Intensive Stream Temperature Study. This Study helped update drainage mapping, provided background data and determined thermal classification through modeling of all stream reaches - with the goal to focus future monitoring, restoration and protection efforts.









- Attended 37 regional and provincial meetings dealing with communications, assessment report update requirements, Source Protection Committee and risk management.
- Submitted Source Protection Plan and Assessment Report updates for three Oro-Medonte water treatment systems (Braestone, Maplewood, and Robincrest) to the Province for approval.
- Supported municipalities in meeting their requirements with potential changes to various drinking water systems in Springwater, Severn, Oro-Medonte, Tiny, Midland, and Orillia.
- Started update to impervious surface mapping around municipal drinking water systems to support potential policy changes around salt and snow storage.
- Assisted municipalities in meeting their February 1st Drinking Water Source Protection annual reporting requirements.



Risk Management Official Services

- 289 letters regarding commercial fertilizer ban were submitted to impacted Lafontaine residents.
- Answered 40 inquiries from municipal staff and public.
- Conducted 4 site visits.

- Commented on 33 development applications.
 - Performed 24 windshield survey inspections.
- Actively worked on 9 draft risk management plans.



Agricultural Stewardship Programs



- Completed delivery of COA funded Healthy Soils = Healthy Watersheds Program (worked with 11 farmers, over 160 soil samples, 990 acres of cover crop planted and 2 new weather stations installed).
 - Promoted agricultural stewardship activities with local stakeholders through social media and on Tiny Farm Crawl.
- Held 3 SSEA Agriculture Advisory Committee meetings.
- Provided annual analysis of Crop Heat Units to local farm organizations.

Invasive Species (IS) Program

- Delivered IS Best Management Practices, training, and species identification services to municipalities and landowners.
- Presented SSEA Spongy/Ldd egg mass survey results to Township of Tiny Council.
- Partnered with the Invasive Species Centre to mitigate aquatic invasive species at public boat launches.
- Inputted to the provincial Best Management Practice document for goutweed.
- Installed artificial substrates in Orr Lake to identify any invasive mussels.
- Finished Sturgeon Bay aquatic plant surveys with help of Georgian Bay Forever.

- Completed Giant Hogweed identification and inventory on Uhthoff Trail with Township of Severn.
- Installed Phragmites awareness signage and planted native shrubs at Champlain Wendat Rotary Park in Penetanguishene.
- Completed annual monitoring of Phragmites at Wahnekewaning Beach in Tiny.
- Monitored and inventoried 14 sites for Invasive Species.
- Facilitated 9 volunteer IS management events.
- Provided training to Penetanguishene roads staff on invasive Phragmites.

 Conducted invasive species removal at several no-mow sites in Midland's Little Lake Park, followed by native wildflower planting.



STEWARDSHII

Tree Planting Programs

- Celebrated the County of Simcoe's 100th Anniversary of County Forests by participating in community festivities.
- Planted 1,455 seedlings of nine species in Oro-Medonte and Tiny with several Scouts Canada groups, SSEA staff and Board members, volunteers and landowners.
- Engaged another 228 participants who planted 8,740 seedlings across all eight SSEA member municipalities via Tree Seedling Distribution Program.



Citizen Science Programs

- Completed 2021 Citizen Science Data Report and posted online.
- Launched updated Citizen Science Program webpage to both increase public involvement and report on results.
- Collected data through the Stream Watch, Shore Watch and Invasive Species Spotters programs with volunteers also submitting observations on blue green algae that were used to identify and track blooms.
- Acquired more aquatic plant rakes thanks to support of Huronia Community Foundation.
- Received 43 observations from Ice Spotters, 572 from Shore Watch, 149 from Stream Watch, 31 from Water Level Watch and 628 from Invasive Species Spotters.

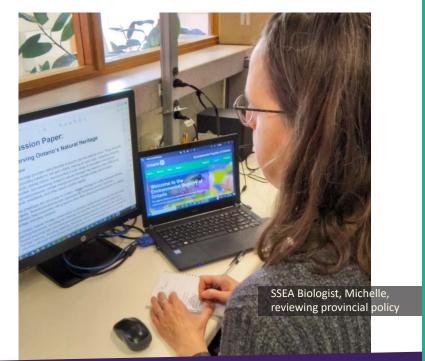


PROGRAMS &

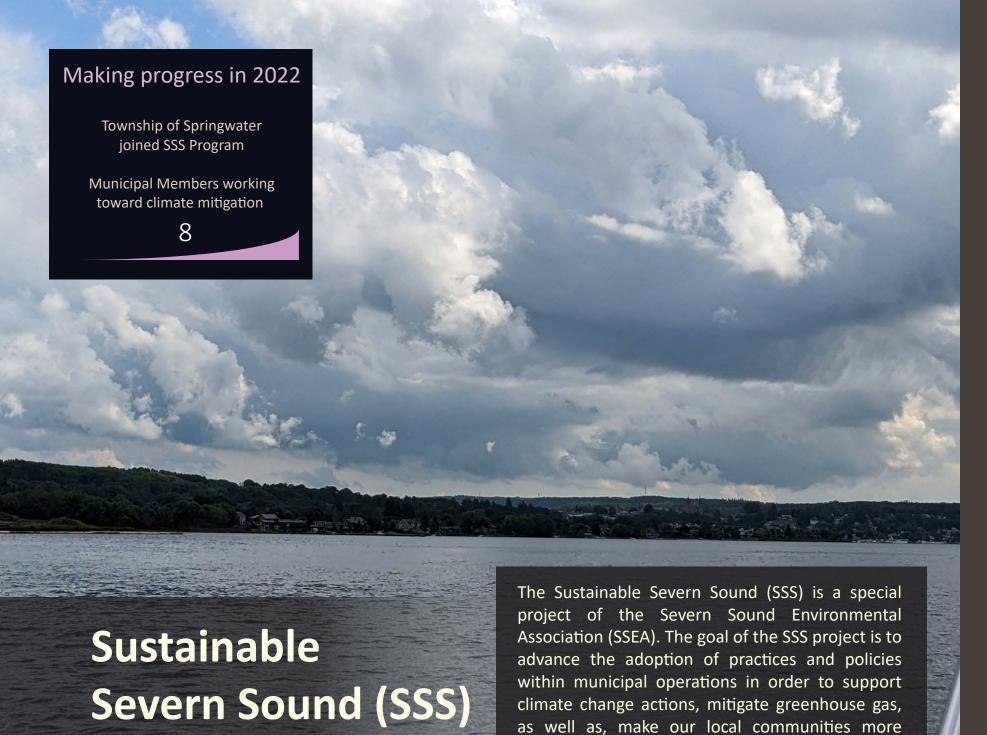


Policy Review & Comment

- Participated in working groups aimed at helping municipalities and landowners manage the potential impacts of climate change.
- Submitted comments to 5 provincial Environmental Registry postings: Subwatershed Planning Guide, Expanding Administrative Penalties for Environmental Contraventions, Proposed Changes for the Next Edition of Ontario's Building Code, Low Impact Development Stormwater Management Guidance Manual, as well as, Municipal Wastewater and Stormwater Management in Ontario Discussion Paper.
- Commented on 3 Environmental Registry of Ontario postings regarding elements of Bill 23: More Homes Built Faster.



Land Use Planning and Review Provided comments on the Township of Tiny's policy to protect and enhance tree canopy and natural vegetation, the Town of Penetanguishene's Draft Tree By-law and Management Guidelines, the Township of Tiny Transportation Master Plan, the City of Orillia's settlement area boundary expansion, Stormwater Management Guidance for the Township of Severn, and the Official Plan Review for the Township of Oro-Medonte. Implemented electronic notification system with eight member municipalities to speed up review process so that SSEA comments would reach local planning departments in a more timely and effective manner. Land use planning site visit by SSEA Staff, Municipal Staff and proponent's team



resilient and sustainable.

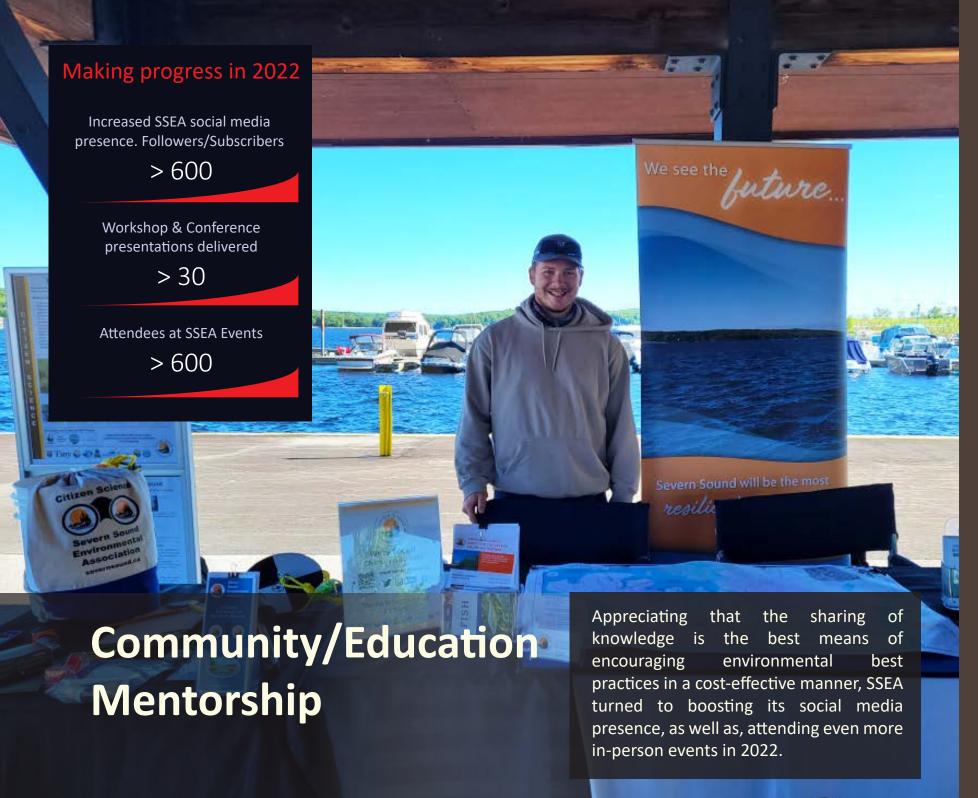


- Welcomed newest municipal member, the Township of Springwater, to the SSS Program. Springwater is working with SSEA to begin data collection to establish a Greenhouse Gas (GHG) baseline in order to establish their reduction targets and Climate Action Plans.
- Provided advice as Penetanguishene declared a climate emergency as a re-commitment to their Local Climate Action Plan.
- Collected GHG emission data for 2021/2022 and researched potential modifications and updates for all its municipal members' Climate Action plans.
- Collaborated with a local producer to create a video on Climate Change in our Backyards.
- Supported Tiny Township in its recent Bee City
 Designation including co-hosting two Earth Week
 webinars to help promote the importance of native
 pollinators.

- Completed Township of Georgian Bay's Depave Project with 40 volunteers removing 100m2 of asphalt and planting 100m2 of pollinator gardens with the goal of improving local water quality and enhancing wildlife habitat. Educational signage was installed and a project video posted online.
- Supported Bee City members by engaging community to participate in stewardship work at Bee City sites. 184 native species were planted in Severn and Midland to create pollinator habitat.
- Completed 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 were shared with municipal members, with digital copies available on the pollinator website. 125 native seed packets were handed out at 4 community events.

Scan the QR code to view the Native Pollinator Plants in the Severn Sound Area booklet







EDUCATION & MENTORSHIP

 Secured funding for 4 Canada Summer Jobs (CSJ) Positions and 2 internships







SSEA Governance

Severn Sound Environmental Association (SSEA) Board Role:

Board Members, appointed by council resolution, act on behalf of the SSEA, to make strategic decisions that guide the organization toward advancement of its mission. This includes:

- Making regulations and rules governing the procedures of the SSEA;
- Making decisions on the hiring of employees to meet its duties; and responsibilities as projected by the Strategic Plan and as represented by an Executive Director; and
- Ensuring that their respective Municipalities are properly informed of SSEA activities; and
- Acting as the Severn Sound Source Protection Authority Board.

Executive Committee Role:

The Chair, Vice Chair, Past Chair and up to one other Board (minimum 3 members) are elected by the SSEA Board to sit as the Executive Committee. The Committee meets at the call of the Chair, reviews items referred to them by the full Board, and makes recommendations on said items back to the Board.

Executive Director Role:

The Executive Director (ED) reports to and represents the SSEA Board to staff and stakeholders. The ED makes routine decisions on how to implement Board direction and managing the organization. This includes overseeing:

- Daily operations of the SSEA Office including managing staff;
- Budget, funding and reporting matters to bring forward to the Board; and
- Ensuring that the Board is provided with information that promotes informed decision-making.

Financial Accountability

The Severn Sound Environmental Association (SSEA) prioritizes financial transparency and accountability in accordance with accepted municipal financial accounting practices, as administered by the Treasurer Municipality, Township of Tay. As such, Annual Audited Financial Statements are available on the SSEA website.

Audited Financial Statements are available after they have been reviewed and approved by the SSEA Board.

Scan the QR code or select the link below to view the 2022 SSEA Audited Financial Statement when it becomes available. https://www.severnsound.ca/about-us/meetings/

Key Partnerships

- Surveyed the Simcoe Loop Trail to identify educational signage sites in partnership with the County of Simcoe.
- Hosted a virtual Meet and Greet with both the staff in Barrie's Ministry of Environment, Conservation and Parks (MECP) office, as well as, the Ontario Clean Water Agency staff working in Tay.
- Honoured to be invited to join the Lake Huron Partnership Working Group, a bi-national collaborative of federal, provincial/state agencies, conservation authorities and First Nations working to advance the Lake Huron Lakewide Action and Management Plan that includes actions for Severn Sound, and the Great Lakes Ecoregion Network. Through the latter, general feedback on progress under the Great Lakes Water Quality Agreement was provided, along with specific feedback from the perspective of a delisted Area of Concern.

- Supported the Township of Tiny's deputation at AMO to leverage resources to address Great Lakes issues.
- Provided a letter of support for Beausoleil First Nation for their invasive species project funding proposal to the federal First Nations Guardians Initiative.
- Supported the Huronia Community Foundation's (HCF) work on the community Vital Signs Report including facilitating the environmental focus group and participating in the surveys.
- Continued to work as a member of Healthy Great Lakes Advisory Committee & Water Team.
- Provided input to Simcoe County Destination
 Development and Action Plan, and a case study to MECP for draft guidance on monitoring impacts from stormwater on receiving waters.
- Shared data under various agreements, including McMaster University receiving Georgian Bay water quality information from the Midland rain gauge.



2022 Partners

- Ardtrea Nature
- Beausoleil First Nation
- BioTalent Canada
- Brock University
- Canada Summer Jobs (grant)
- Canadian Environmental Law Association
- County of Simcoe
- ECO Canada
- Environment and Climate Change Canada
- Farlain Lake Community
 Association
- Friends of Wye Marsh
- Georgian Bay Biosphere
- Georgian Bay Forever
- Georgian Bay District Secondary School
- Georgian Bay Métis Council
- Georgian College
- Glen Oro Farms
- Guelph Turfgrass Institute
- Hardwood Hills
- Honey Harbour Public School
- Huronia Community Foundat
- Huronia Woodlot Owners
- Invasive Species Centre

- Lake Huron Partnership
 Working Group
- Lake Simcoe Region
 Conservation Authority
- McMaster University
- North Simcoe Soil and Crop
 Improvement Association
- Nottawasaga Valley Conservation Authority
- Ontario Federation of Anglers and Hunters
- Ontario Ministry of Environment,
 Conservation and Parks
- Ontario Tech University

- Phragmites Adaptive Management Framework
- Royal Bank of Canada
- Simcoe Muskoka District Health Unit
- TD Friends of Environment Foundation
- TruEarth
- University of Waterloo

Note: If we have missed you on our list our sincere apologies and please let us know.



















