Annual Report 2018

Severn Sound Environmental Association

Keeping Severn Sound healthy... for the next generation and beyond

Contents:

Severn Sound Environmental Association

Message from the Chair and Executive Director

The dust continues to settle on a whirlwind year, 2018.

We wished two of our valued team farewell as Keith Sherman and Gail Marchildon both retired. In October of 2018 our municipal partners went to the polls and we welcomed new SSEA Board members: Town of Penetanguishene Deputy Mayor Anita Dubeau, Township of Tay Councillor Jeff Bumstead, Township of Oro Medonte Councillor Ian Veitch and Town of Midland Councillor Carol McGinn. Thank you to our outgoing board members from Tay, Dave Ritchie (Board Vice Chair), Penetanguishene, Mike Lauder, Oro Medonte, Barb Coutanche and Midland, Pat File, for their dedication and guidance over the last term.

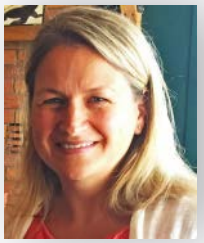
We moved to our new space in Port McNicoll and to the Township of Tay as our host treasurer municipality. A big thank you to our new landlord, Newmarket Tay Hydro and to Tripp's paint for their generous donations!

We released "Building an Environmental Legacy" our SSEA Strategic Plan 2018-2023. Our vision is big, "… to be the most resilient and thriving Great Lakes Watershed" and you, our partners and our community, are critical to making that a reality! Diving into the strategic plan the Board directed staff to work on a budget that aligned with the strategic direction, in particular the Goal of being an Exceptional Organization. Under this direction we worked to develop a 5-year budget proposal, established a merger committee with SSEA and Sustainable Severn Sound, re-established an Agriculture Advisory Committee and began to explore opportunities and needs identified by our municipal partners including managing stormwater and low impact development in a changing climate.

As stated in the 1991 Severn Sound Socio-Economic Profile Report (Keir) "An attractive, safe, usable water body is one of the main assets that communities surrounding Severn Sound will require in order to continue to attract recreational growth and a strengthened economic base." This still holds true today and we believe that, working together, we will continue to restore and protect Severn Sound for this generation and those to come.

Thank YOU for your interest and support in making Severn Sound the " most resilient and thriving Great Lakes Watershed"!

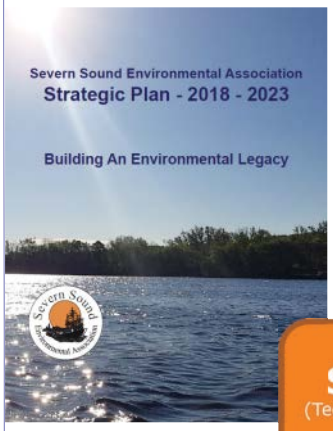
Steffen Walma
Chair



Julie Cayley
Executive Director

Building An Environmental Legacy

Strategic Plan - Every year, we will prepare and present an Annual Report on Strategic Plan implementation to our Board of Directors. We will share the Annual Reporting with our community members and our partners so that you can follow along on our journey or, better yet, walk our strategic path with us.



The Strategic Plan is our collective plan for action. It is based on a set of goals and corresponding actions that will help us carry out our mission for the next five year period and beyond.

Visit *severnsound.ca* to download a copy of our Strategic Plan.

Goals & Actions

Plan of Action

Goal 1: Sound Science

- Address Priority & Legacy Issues
- Build Scientific Knowledge & Understanding
- Build Resilience Across Severn Sound
- Commit to Filling Knowledge Gaps

Goal 2: Supportive Partnerships

- Strengthen Existing Partnerships
- Build New Alliances
- Empower Others to Take Action

Goal 3: An Engaged and Informed Community

- Increase Watershed Awareness & Understanding
- Enhance SSEA Profile & Visibility
- Learn from Others

Goal 4: An Exceptional Organization

- Consistently deliver exceptional, exemplary service – for all, by all
- Commit to a Culture of Continuous Improvement
- Be an Employer of Choice

SSEA Executive Director, Julie Cayley, holding Strategic Plan session.

Soft Launch

Highlights

- On November 30, we held a session to present our Strategic Plan, renewed Mission and Vision to our municipal partners.
- 12 municipal staff members attended.
- Among those who attended were CAOs, Planners and Engineers.
- A formal, public launch of our Strategic Plan is expected during summer 2019.

Our Mission:

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

Environmental Monitoring/Analysis

Our monitoring programs help to build on the environmental legacy of the SSEA and Severn Sound Remedial Action Plan (SSRAP). Our expansive datasets are improved by the continuation of watershed monitoring, ensuring more knowledge is obtained about Severn Sound and the watersheds contributing to it. This establishes a basis for a healthier Severn Sound through more informed municipal decision making and through encouraging stewardship actions by local landowners. Our climate is changing, and so are we! We are looking at new opportunities and programs to fill information gaps, and innovative ways to continue to inform residents of the Severn Sound watershed. More information on our monitoring programs can be found at www.severnsound.ca and for updates follow SSEA_SSRAP on twitter.

Temp., Oxygen, Conductivity & Turbidity Profile Equipment

Lake Results

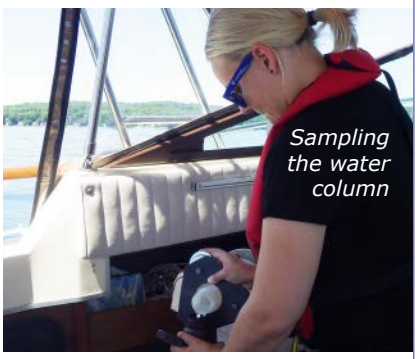
Long term monitoring of the open waters of Severn Sound continued in 2018, including at the Tay Area water intake, along with monitoring on Little Lake (Midland), and Bass Lake (Oro-Medonte).

Results/Highlights

- As a whole, water quality targets from the Remedial Action Plan are being met for Severn Sound and Penetang Harbour
- Localized issues of excess algae growth have been identified in South Bay and Honey Harbour
- Addition of sites in Oak Bay and Macey's Bay to compare with conditions in other embayments – water quality was considered good and similar to existing sampling locations in Port Severn and Midland Bay

Open Water
sites sampled: **17**
algae samples: **193**
zooplankton samples: **24**

Severn Sound Open Water - Sites were sampled biweekly over the ice-free season for basic water chemistry, metals and chlorophyll a. In some locations, nutrients, algae and zooplankton samples were taken.



Sampling the water column

Measuring water clarity with a Secchi disk

Remedial Action Plan Targets

	Total Phosphorus (µg/L)	Chlorophyll a (µg/L)	Water Clarity (Secchi Depth, m)	Bottom Dissolved Oxygen (mg/L)
RAP Delisting Objectives				
Severn Sound	15	5	3	5*
Penetang Harbour	20	7	2	5
2018 Annual Average				
Severn Sound	11	2	3	8
Penetang Harbour	12	n.a.	3	9

*Unless the shape of the lake bed results in a natural localized oxygen depletion (eg. North Bay).

Index Trap Netting - As an opportunity to enhance expertise, SSEA staff assisted Ontario Ministry of Natural Resources and Forestry (MNRF) with their spring trap net survey, focusing on walleye near Port Severn. The historic annual survey has been an integral part of our understanding of Severn Sound fish populations. *Photo Souce: MNRF*

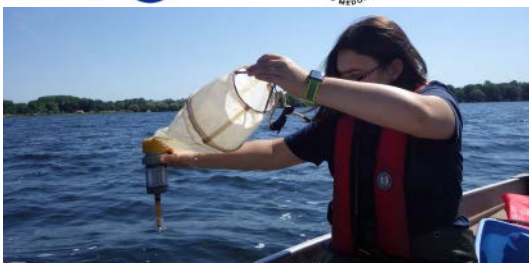
Staff getting up close and personal with a Bowfin during trapnet sampling with MNRF.

Inland Lakes - Both Little and Bass Lakes are sampled biweekly over the ice-free season for basic water chemistry, nutrients, algae and zooplankton; lake and stream invertebrate communities are also sampled in and around Bass Lake.

SSEA Water Scientist, Aisha Chiandet collecting a sample on Bass Lake.

Recording Little Lake water levels.

Sampling for zooplankton communities on Little Lake.



Results/Highlights

- Nutrient enrichment indicators for *Little Lake* show water quality has improved compared to previous years
- Little Lake is poorly to moderately enriched and has high chloride levels
- Little lake also has dense native and non-native aquatic plant coverage
- Nutrient enrichment indicators for *Bass Lake* show water quality has improved compared to previous years
- Bass Lake is moderately enriched with bottom waters that go anoxic every summer

Lakes

Orr Lake - A New Approach to Reporting for SSEA

Reporting on the condition of inland lakes and their surrounding subwatersheds helps SSEA inform the public and decision makers on the health of local waterways based on sound science. The Orr Lake Subwatershed 2017 Conditions report was a new approach to this type of reporting by SSEA. It identifies the status, trends, and baseline conditions of Orr Lake and its subwatershed using the most recent data sets available. The main focus was to communicate to the people who live on the lake or in the surrounding area, the general health of Orr Lake and the contributing watershed based on a set of indicators. The goal is to improve these indicators of watershed health with best management practices and stewardship actions. The report can be found in the Resources section of severnsound.ca.

Orr Lake and its subwatershed are in fair condition, and opportunities exist for stewardship actions such as reduction in road salt application, streamside restoration and tree planting. This project was made possible by the support of the Township of Springwater. Special thanks to NVCA for contributing historical data.

Results/Highlights

- Lake and stream water quality based on composite water quality indices were good, and the lake is considered moderately enriched with moderate phosphorus levels
- Nuisance algae species such as the blue-green algae Microcystis have been kept in check by the widespread coverage of aquatic plants
- Under ice dissolved oxygen depletions occur regularly, and sodium and chloride concentrations are increasing in the lake and tributaries
- Lake invertebrate community was sampled for the first time by the SSEA, and showed stress likely due to habitat limitations
- Stream riparian cover was considered poor within the Orr lake subwatershed with only 26% of total stream length having the recommended 30m vegetation buffer
- Increasing development pressures continue to have an impact on the amount of interior forest habitat cover

Orr Lake

Rivers

Results/Highlights

- Within the Wye River Headwaters, sodium, chloride, and conductivity are increasing significantly
- Total phosphorus is decreasing significantly at the Hogg Creek and Sturgeon River stations
- Copeland Creek, Wye and Severn River have shown fluctuations but no significant trends in total phosphorus since 2002

Insects

Results/Highlights

- Total Taxa (# of different families) from 1998 to present has increased slightly at all stations throughout the watershed
- Headwaters of Hogg Creek, Coldwater River, and Wye River showing significant Total Taxa increases
- Using the Hilsenoff Biotic Index (HBI) water quality ranking, Coldwater River headwaters, followed by the downstream ends of Silver and Hogg Creeks, ranked the highest of all Severn Sound streams as very good with slight organic pollution.
- The HBI central portion of Coldwater River was ranked the lowest and the only station classed as poor water quality
- Over the last 20 years, the HBI shows that two headwater stations on the Wye River have significantly improved

Dragonfly Nymph Collected in Sturgeon River

Wells

Results/Highlights

- In partnership with Ontario Geological Survey (OGS), seven long-term SSEA wells and seven new (2017) wells were sampled through the PGMN. Chemistry and metals data collected will support the 3D model delineation of aquifers, aquitards and recharge areas by OGS.
- Future SSEA monitoring well drilled in the Township of Tay by Ontario Geological Survey (OGS)
- New tipping bucket rain gauge, thanks to MECP, will be installed alongside an existing SSEA well in the Township of Oro-Medonte, in the spring of 2019.

Tributary Monitoring

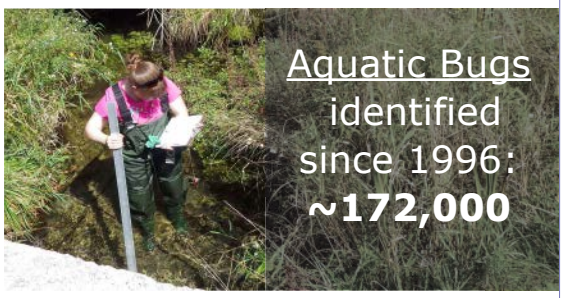
Provincial Water Quality Monitoring Network (PWQMN)

- Through a partnership with Ontario Ministry of Environment, Conservation and Parks (MECP), SSEA monitors tributary water chemistry by sampling 8 times per year on the Wye, Sturgeon, Coldwater and North Rivers, and Hogg and Copeland Creek. In addition to the Provincial Water Quality Monitoring Network (PWQMN), SSEA samples for water chemistry on Lafontaine Creek and Wye River (Wyebridge). This ensures the current status and trends of the major rivers are understood.

Collecting a water sample from Copeland Creek at 1 of 14 stations monitored for water chemistry.

Ontario

Tributary Benthic Macroinvertebrate Monitoring - Benthic macroinvertebrates are small aquatic organisms living on the bottom sediments of streams and lakes. Studying macroinvertebrates helps SSEA staff build scientific knowledge and understanding of specific habitat conditions for other species including fish. Macroinvertebrates are excellent indicators of water quality conditions because of their limited habitat, pollution tolerances, and lack of mobility which reflects localized conditions. SSEA monitors 23 long-term stations within the watershed biennially (Copeland Creek, Lafontaine Creek, Hogg Creek, Coldwater River, North River, Wye River, and Sturgeon River) using a variety of protocols including the Ontario Benthic Biomonitoring Network (OBBN) protocol.



SSEA Ecosystem Health Technologist, Paula Madill, Records depth and pebble size at an OBBN station. 7 of the 21 stations sampled in 2018 followed the OBBN protocol.

Provincial Groundwater Monitoring Network (PGMN)

- SSEA signed a new PGMN partnership agreement with MECP, to continue with monitoring groundwater within the Severn Sound watershed until 2026. The objective of the PGMN is to collect and manage baseline hourly ambient water levels and quality from key aquifers across Ontario. Data generated from the program helps our team build scientific understanding in the region by tracking trends, emerging issues, and providing a base for making informed resource management decisions.

SSEA Staff working with a Trent U. Student to monitor water level at a PGMN Well.

Ontario

Climate Monitoring Results

Weather Stations - SSEA continues to monitor localized conditions with our network of rain gauges at the Midland Water and Wastewater Operations (WWO) facility, Huronia Airport, Balm Beach and Pinegrove (Penetanguishene). Two additional weather stations at Midland WWO and Mon Piero Farms in Lafontaine contribute to open data networks. These self-contained units track wind, rain, barometric pressure, temperature, humidity, UV and solar radiation. By collecting weather conditions, the state of the local environment is better understood. Precipitation data provides valuable information used in interpreting the results of our water chemistry and tributary temperature.

Fleming College Coop Student installing a rain gauge at Huronia Airport

Air and Stream Temperature Monitoring - Air temperature was monitored at long-term locations at the Midland WWO and Huronia Airport as well as at our weather station locations. Air temperature data helps support other SSEA monitoring programs by providing additional information when analysing the fluctuations of our tributary temperature. One method that we use to analyze air temperature is the Crop Heat Unit (CHU) system which helps farmers make decisions about their crops. CHUs can also be used to illustrate climate trends.

Photographing each temperature logger site and identifying a reference location helps Technicians with retrieval months later

Thermal Stability - The ability of streams to buffer changes in water temperature as air temperature increases. The intensive thermal stability monitoring program focuses on one major subwatershed per year. Water temperature, pH, conductivity, sediment type, and flow conditions are measured at selected stream and road intersections. In 2018, the Sturgeon River was surveyed within the Townships of Tay, Springwater, and Oro-Medonte. The data collected provides SSEA with the ability to monitor climate change, protect fish habitat, and provides municipal planning authorities with the ability to make informed planning decisions. This data can be found in the Tributary Temperature Monitoring Program section of our website.

Rain Gauges

Results/Highlights

- The average rainfall for all SSEA rain gauges was 328.9 mm (May to October)
- August had the largest amount of rainfall recorded by the gauges at an average of 98 mm

A Roof Top Rain Gauge

Sturgeon River — Air & Streams

Results/Highlights

- Yearly CHU values have increased by approximately 5% since 2007, from 3264 to 3433
- Monitored 40 stream temperature sites across SSEA watershed area
- 11 cold water, 23 cool water, and 6 warm water streams monitored by temperature loggers

Results/Highlights

- 41 cold, 21 cool, 15 warm water stream sections using spot temperatures
- 18 sites were dry throughout summer heat waves
- 53 stream sections were intermittent on initial visit
- 203 field measurements collected for temperature, conductivity, and pH

St. Theresa's Coop Student Madison learns how to deploy temperature loggers for installation at sites throughout the watershed

Land and Water Stewardship

SSEA works with municipalities, partners and landowners to provide education, develop and implement stewardship and regulatory actions to protect and restore water quality and habitat. These efforts result in land stewardship and water protection initiatives that improve environmental quality, build resilience in the SSEA area, and encourage partners to be more engaged, informed and empowered to take action.

Reducing Impacts

Results/Highlights

- Completed 10 management projects to manage phragmites, garlic mustard, spotted knapweed, Japanese knotweed and Himalayan balsam
- Restored over 3 hectares of native habitat by reducing invasive species competition through removal
- Engaged 170 volunteers in IS management related activities

Taking Aim at Invasive Species

Invasive species are non-native organisms that have established outside of their historical habitat range and negatively impact native ecosystems in Ontario. Once introduced into a new location, invasive species are capable of causing significant negative impacts including displacing local plants and wildlife, reducing native biological diversity, inhibiting human recreational activities, lowering property values, impacting infrastructure and causing public health risks.

Since the launch of the Invasive Species Program in 2017, the SSEA has been dedicated to reducing the impacts of invasive species in the Severn Sound watershed through on the ground action and collaboration with government agencies, community groups and local residents. Throughout 2018, the Invasive Species Program has worked to increase the number of training opportunities available for municipal staff and concerned citizens regarding the identification, treatment and disposal of invasive species. In addition, the SSEA has implemented a robust invasive species monitoring program, which has helped to increase our ability to detect and respond to incoming invaders.

Additional funding awarded in 2018 through BioTalent Canada, MNRF, the Wege Foundation, Huronia Community Foundation and the TD Friends of the Environment Foundation provided the support to facilitate invasive species removal projects, resulting in the restoration of local ecosystems and strengthening of community relationships. As a cornerstone of the program, the SSEA continues to “spread the word, not the species”, by connecting with residents at local events and utilizing news articles, presentations and social media to highlight actions that can be taken for preventing, mapping and removing invasive species populations.

Ontario

BioTalent Canada
Building skills for Canada's bio-economy
Un monde de ressources pour la bioéconomie canadienne

Huronia Community Foundation / La Fondation communautaire de la Huronie

TD Friends of the Environment Foundation

Monitoring Invasives

Results/Highlights

- High-priority invasive species detected included: dog-strangling vine, Japanese knotweed and phragmites
- 44 invasive species detected at over 50 monitoring locations
- Monitoring Occurred in the Townships of Georgian Bay, Severn, Tay and Tiny, and the Towns of Midland and Penetanguishene

Over **1,100** patches observed

Invasive Species Monitoring

The first step in successfully managing an invasive species is to map and monitor the locations where that species has established. By tracking the introduction and movements of invasive species within the Severn Sound watershed, the SSEA helps to inform the overall invasive species management planning for this region.

Drinking Water Source Protection / Risk Management Services

Source Protection Authority - In 2018, SSEA continued to offer exceptional service as the Source Protection Authority for the Severn Sound watershed, building knowledge and understanding from our partners. Work raising awareness and helping to reduce nitrates in groundwater in issue contributing areas continued, through signing risk management plans with the agricultural community and participating in a tour hosted by the Ontario Institute of Agrologists which highlighted the nitrate issue in the Lafontaine drinking water system.

Mon Piero Farms completes their Risk Management Plan. [Left - K. Sherman (SSEA) & Right - P. Maurice (Farmer)]

Municipal Source Protection training. Presentation by M. Carruthers (SSEA)

The SSEA has built and strengthened relationships for the implementation of Part IV of the Clean Water Act, 2006 by providing ongoing Risk Management Official (RMO) and Risk Management Inspector (RMI) services to eight municipalities (Townships of Georgian Bay, Oro-Medonte, Severn, Tay, Tiny; the Towns of Midland and Penetanguishene; District Municipality of Muskoka).

DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER
Lake Simcoe Region conservation authority
South Georgian Bay Lake Simcoe Source Protection Region

Results/Highlights

- Assisted 10 municipalities in fulfilling annual reporting requirements
- Hosted Drinking Water Source Protection 101 training for all member municipalities; approximately 50 people attended
- As a region, submitted a Clean Water Act s.36 workplan which laid out proposed changes to the Source Protection Plan and associated Assessment Reports
- Renewed Part IV delegation agreements with the District Municipality of Muskoka and seven member municipalities

Results/Highlights

- Signed 5 risk management plans for properties within the Severn Sound area
- Commented on 48 development proposals to ensure compliance with the Clean Water Act and to confirm that policies in the Source Protection Plan are being followed
- Answered 28 inquiries from member municipalities or the public to determine if the Drinking Water Source Protection Program would apply to situations such as property purchases or renovations
- Attended 7 pre-consultation meetings to determine if development proposals would be impacted by the Source Protection Plan

Drinking Water Source Protection Risk Mgmt. Services

Tree Programs

The SSEA helps facilitate large and small tree planting projects on private and public lands.

Tree Seedling Distribution Program - SSEA provides reasonably-priced native tree and shrub seedlings to residents for planting in the Severn Sound area.

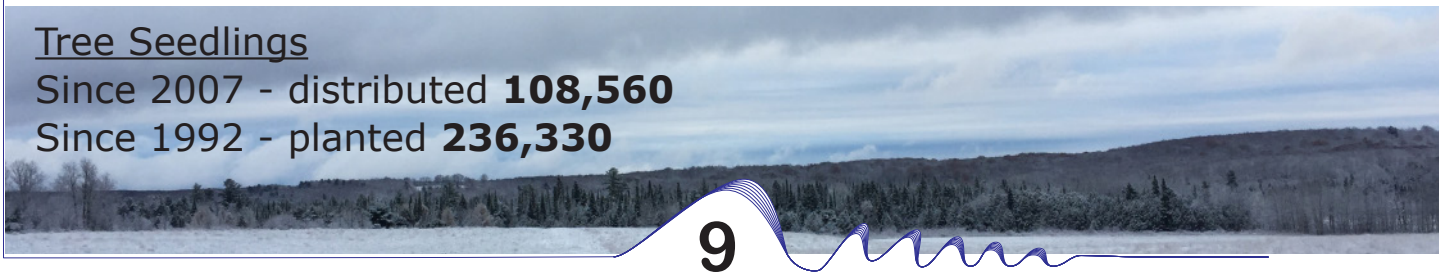
COUNTY OF SIMCOE

Community Tree Planting Program - SSEA engages volunteers in native tree planting projects that enhance woodland cover, biological diversity, wildlife habitat or stream water quality. Seedling costs are covered by a County of Simcoe Forestry department grant.

Results/Highlights

- 162 people purchased 7,930 native trees and shrubs
- 6 community planting events organized by SSEA
- 3,150 native tree and shrub seedlings were planted by volunteers
- 310 volunteers provided 699 hours of service

Trees



Planning, Evaluating and Mapping

SSEA continually explores opportunities to enhance expertise and provide support and policy input to decision makers. Land use plan reviews, wetland evaluations and mapping fish habitats have furthered our commitments to filling knowledge gaps and building resilience throughout the Severn Sound area.

Planning & Policies

Land Use Planning and Review

- Participation in Official Plan updates for Midland, Penetanguishene, Tiny and Oro-Medonte
- Reviewed and commented on 35 proposals, applications, reports or Environmental Impact Studies for SSEA municipalities

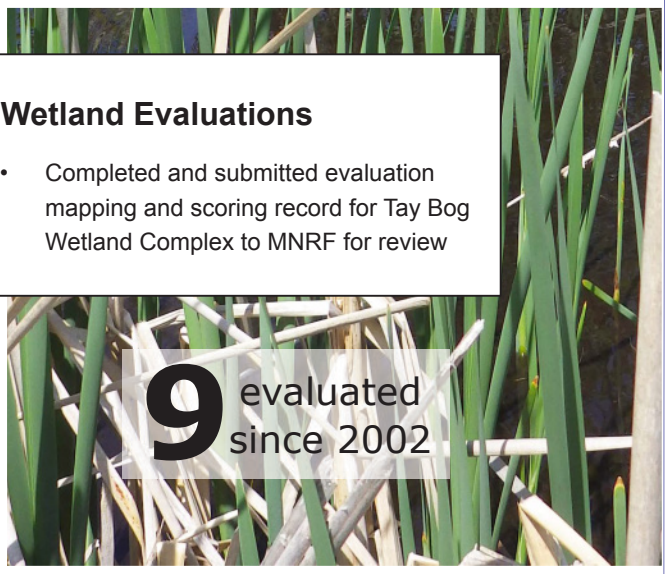
Policy Review and Comment

- Provided input into provincial policy/guidance and Environmental Registry postings, including draft Provincial Watershed Planning Guidance and proposed Greenbelt Expansion

Wetlands

Wetland Evaluations

- Completed and submitted evaluation mapping and scoring record for Tay Bog Wetland Complex to MNRF for review



Site plan review and field visit by SSEA staff accompanied by Township of Tay staff

Coastal Margin and Spawning Shoal Habitat Mapping

Two multi-year Fish Habitat mapping projects, which enhanced our expertise and capabilities, were concluded this year. Studying the quality of fish habitat and the ability of Severn Sound to sustain fish populations helps to address the RAP legacy issue of restoring and maintaining the walleye fishery.

Fish Habitat

Projects Concluded

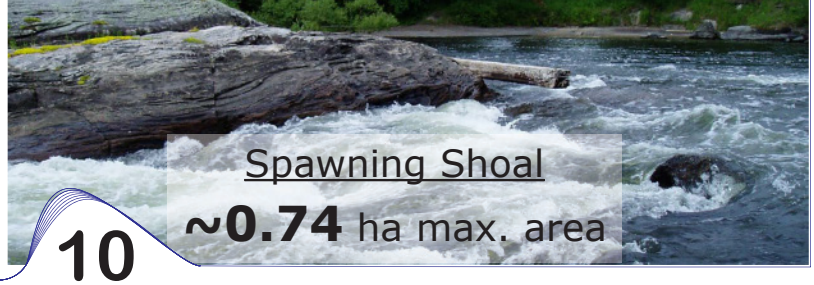
- Habitat condition mapping for selected portions of Sturgeon and Hogg Bays (Tay Twp.), Treasure Bay, Beausoleil Bay, Oak Bay/Green Island (Georgian Bay Twp.) and Penetang Harbour (Penetanguishene) for the Severn Sound Nearshore Fish Communities Project (MNRF – Great Lakes Protection Fund)
- Port Severn Walleye Spawning Shoal Habitat Survey data compilation for Trent-Severn Waterway/Parks Canada

Coastal Margins Shoreline Surveyed

>150 km of the Severn Sound Total

~250 km of shoreline

~127 km² surface area



Parks Canada / Parcs Canada
University of Windsor
Ontario
Fisheries and Oceans Canada / Pêches et Océans Canada
Environment and Climate Change Canada / Environnement et Changement climatique Canada

Sharing Knowledge

A more informed community leads to one that is more engaged and interested in taking actions that result in a healthier Severn Sound. SSEA shares information through displays, presentations, articles and reports, which are showcased at events, workshops, conferences, youth programs and through local news outlets and social media. This sharing of knowledge leads to the public having a better understanding of the issues facing Severn Sound, and enabling them to make positive change.

Presentation at IAGLR 2018


Students learn how to do a stream assessment at the Wildfire Outdoor Education Centre


CTV reporter Roger Klein capturing field staff in action

Citizen Science in Severn Sound - The best way for people to feel connected to the Severn Sound watershed is for them to take an active role in protecting it. This can be done through one of three SSEA citizen science programs: Ice Spotters, Shorewatch, and Community Environmental Monitoring. We're always looking for volunteers; get in touch for more information!

Aisha Chiandet and Carl Lesperance with poster on Citizen Science in Severn Sound to be presented at the International Association for Great Lakes Research (IAGLR)

Results/Highlights

- SSEA produced Orr Lake Subwatershed 2017 Conditions Report Summary, Deanlea Beach Report, and a report on the Port Severn Walleye Spawning Shoal Habitat Survey; staff contributed to articles on Total Phosphorus and Lower Food Web for Georgian Bay Biosphere Reserve's State of the Bay report
- Staff presented at the Latornell Conservation Symposium and the International Assoc. for Great Lakes Research Conference, speaking on SSEA's Invasive Species and Citizen Science Programs, and trends in Severn Sound open water quality
- Youth programs were delivered at Georgian Bay District Secondary School and the Wildfire Outdoor Education Centre
- Staff presented at the Weeds and Algae Seminar hosted by the Gloucester Pool Cottage Association
- SSEA joined Simcoe Muskoka District Health Unit's Climate Change Exchange
- Field staff hosted CTV reporter Roger Klein during open water sampling to discuss issues in Severn Sound

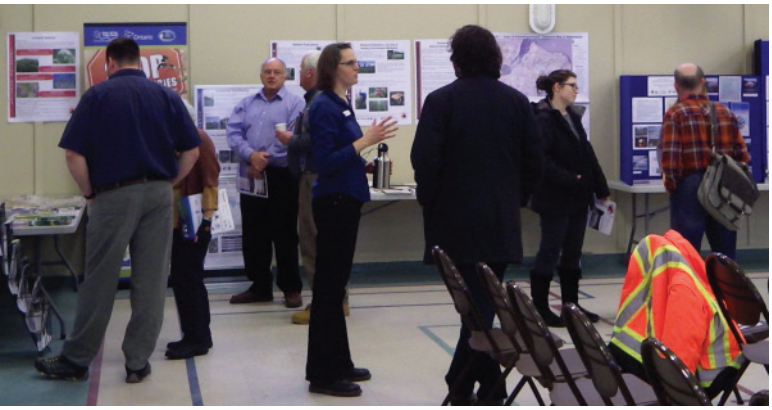
Informing Community

Program Descriptions

- Ice Spotters – residents on local inland lakes or Severn Sound shoreline report on when ice comes on and goes out
- Shorewatch – citizens submit observations on unusual lake phenomena such as algae blooms, fish kills, etc.
- Community Environmental Monitoring – citizens borrow testing equipment from SSEA to monitor a local waterbody

Engaging Community

SSEA Staff were on hand to answer questions.



Robert Canning, SSEA Invasive Species Program Coordinator

SSEA Annual Open House

Each year, SSEA holds an annual Open House, as part of our effort to enhance public awareness of issues facing Severn Sound. On November 30, 2018, the event was well attended by local Mayors, Councillors, municipal staff, partners, landowners and community members, at the Wyebridge Community Centre. The event showcased our work, trends and findings that are compiled from our research. This year, Robert Canning, SSEA Invasive Species Program Coordinator, spoke about the numerous challenges associated with trying to control and reduce invasive species in our watershed. Special thanks to Grounded Coffee Co., Ontario Waterpower Association and Township of Tiny for sponsoring the event.

Alien Invaders in the Severn Sound

Invasive Species Program Coordinator, Robert Canning, spoke at the 2018 SSEA Open House.

“Invasive species threaten the safety and security of our local ecosystems and communities, but we still have trouble agreeing upon exactly what that term actually means”

Mr. Canning detailed the uncertainty that surrounds invasive species in the Severn Sound watershed. “Between climate change and hybridization, we can no longer consider the classification of invasive species a black and white issue. Global weather patterns, among other factors, have started to play havoc with which types of species can inhabit a particular area.”

Invasive species are most easily transported between ecosystems via human-related pathways such as contaminated construction equipment, infected wood products and recreational activities, reinforcing the importance of public awareness and prevention programs. The popularity of gardening and landscaping activities in the Severn Sound watershed has seen the rise of ornamental plants as a primary source for the spread of invasive species in recent years.

“The same showy flowers and incredible growth that make many ornamental plants appealing to consumers, are the same features that also make those varieties invasive,” stated Mr. Canning. English ivy, goutweed and periwinkle were all introduced through the horticultural trade and are now some of the most common invasive species found in the area. Ornamental grasses such as miscanthus, ribbon grass and feather grass often spread outside of the garden, infesting ditches, wetlands and roadsides throughout the watershed.

Mr. Canning also provided an overview of the varieties of invasive species within the Severn Sound watershed, including high-risk invaders to watch out for in the future and answered questions from the audience.

Community - SSEA Partners Reception

Empowering others to take action to help protect and restore the Severn Sound Area is a goal of the SSEA. For over 20 years, SSEA has acknowledged the many contributions made by landowners, partners and volunteers to various SSEA programs and projects at our annual partner's reception.

Several awards recognizing environmental champions were presented at the 2018 event on November 30th at the Wyebridge Community Centre.

2018 Severn Sound Bob Whittam Environmental Award

Two very worthy recipients received the Bob Whittam Environmental Award this year. The award recognizes individuals or groups who are dedicated and truly interested in improving the Severn Sound ecosystem.

The 2018 recipients of the Bob Whittam Environmental Award are **Ron Reid** and **Scott Warnock**.

Award presentation to Ron Reid - *Left to right: Mike Burkett (Mayor, Township of Severn), Bruce Stanton (MP, Simcoe North), Jane Dunlop (Deputy Mayor, Township of Severn and representative of MPP Jill Dunlop), Steffen Walma (Deputy Mayor, Township of Tiny and SSEA Board Chair), Ron Reid (award winner), Judith Cox (Councillor, Township of Severn), Ron Stevens (Councillor, Township of Severn), Julie Cayley (SSEA Executive Director).*

Community Partner Acknowledgments

Several individuals, groups and partners were acknowledged by SSEA Staff for their contributions and participation to the Tree Planting programs, the Invasive Species program and the Bass Lake Water Quality Survey.

Thank-you to our event sponsors.

Tiny · Ontario Waterpower Association · Grounded Coffee Co.

Award Recipients

Bob Whittam Environmental Award

Ron Reid
for his legacy of environmental leadership protecting our natural heritage through his work with Couchiching Conservancy

Scott Warnock
for his leadership and advocacy for Severn Sound and the Great Lakes through his role on the Board of the Great Lakes and St. Lawrence Cities Initiative

Environmental Stewardship Award

Donna Deneault
for her dedication to combatting invasive species in the Severn Sound ecosystem through her volunteer work controlling invasive Phragmites

Student Environmental Award

Nari Hwang
for her dedication to the natural environment in the Great Lakes through her artwork and by teaching others how to prevent plastics from entering our clean water systems

Reid Veldboom
for his commitment to the natural environment in the Severn Sound area by teaching other students about responsible gardening

Kelsey Scott
for her dedication to the natural environment in the Severn Sound by leadership in numerous environmental initiatives

Community - Donations

Thank You for Your Support in 2018

Huronia Community Foundation / La Fondation communautaire de la Huronie

The Huronia Community Foundation (HCF) generously supported the SSEA in 2018, through a Smart and Caring Grant and the CP Stow Endowment Fund. These HCF funds allowed the SSEA to purchase a new laptop computer for the Invasive Species Program. This portable equipment and advanced Geographic Information Systems mapping software is invaluable to SSEA for efficiently collecting ecological monitoring information and mapping occurrences of invasive species, storing data, and presenting results and sharing knowledge internally as well as with individuals and organizations. This equipment improves the effectiveness of the SSEA Invasive Species Program, including detecting invasive species to assess local threats, monitoring and management of priority populations, providing education on invasive species identification, removal and disposal techniques, and promoting partnerships and a collaborative approach to tackling invasive species in the Severn Sound area.

Mentoring Students

Student Employment

Environmental Monitoring Assistants - Nikole Priestman and Madison Marion

- The positions provided positive learning experiences and valuable environmental field sampling skills to assist in their future career path.
- Funding support from Canada Summer Jobs — Government of Canada

Community Invasive Species Outreach Liaison - Amanda Henderson

- Student position created in partnership with the Ontario Federation of Anglers and Hunters to support the SSEA's Invasive Species Program
- Main responsibilities included field monitoring and manual removal of invasive species
- Attended events and addressed public inquiries regarding invasive species concerns

Student Coop / Placement

- **Evan Britton** - Fleming College, Ecosystem Management Technology two week placement
- **Steven Holden and Marcus Remonde** - Georgian College, Environmental Tech. Program - Gloucester Pool/Baxter Lake water quality coop project

Internship

- **Carl Lesperance** - Eco Canada for young professionals Internship program supporting staff development

Students and Internships - SSEA is proud to be able to hire and mentor several students and interns each year, giving them valuable experience in various aspects of the environmental sector, including field work, data management/analysis and public education.

Testimonial *"This project was a valuable learning experience and could not have been completed without the help of the SSEA. They were very accommodating, providing us with scientific expertise, sampling equipment, and arranging sample analysis." ~Steven Holden*

SSEA Governance Structure

	SSEA Board to Oct. 22, 2018	Oct. 23 to Dec. 31, 2018
	Deputy Mayor (Chair) * *Steffen Walma* Twp. of Tiny	Deputy Mayor (Chair) *Steffen Walma* Twp. of Tiny
	Deputy Mayor (Vice Chair) * *Dave Ritchie* Twp. of Tay	Councillor *Jeff Bumstead* Twp. of Tay
	Councillor * *Paul Wiancko* Twp. of Georgian Bay	Councillor (Vice Chair) *Paul Wiancko* Twp. of Georgian Bay
	Councillor *Pat File* Town of Midland	Councillor *Carole McGinn* Town of Midland
	Councillor *Barb Coutanche* Twp. of Oro-Medonte	Councillor *Ian Veitch* Twp. of Oro-Medonte
	Councillor *Mike Lauder* Town of Penetanguishene	Deputy Mayor *Anita Dubeau* Town of Penetanguishene
	Councillor * *Ron Stevens* Twp. of Severn	Councillor *Ron Stevens* Twp. of Severn
	Councillor *Perry Ritchie* Twp. of Springwater	Councillor *Perry Ritchie* Twp. of Springwater

SSEA Board Role: Members 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 Business Plan and as represented by an Executive Director.
- Ensuring that their respective Municipalities are properly informed of SSEA activities.

Executive Committee Role: The Chair, Vice Chair, Past Chair and one other Board Member elected by the SSEA Board, sit on the **Executive Committee**. The committee provides oversight and advice on matters that require additional consideration from the Board but do not coincide with the regular meeting schedule.

Executive Director Role: The **Executive Director** reports to and represents the SSEA Board to staff and stakeholders. The ED makes routine decisions on how to implement Board decisions. This includes:

- Overseeing the daily operations of the SSEA Office including the management of staff.
- Making decisions on budget, funding and reporting matters to bring forward to the Board.
- Ensuring that the Board is provided with information that promotes informed decision-making.

***Executive Committee**

Executive Director
Julie Cayley
B.Sc.; Trent U., P. Ag.
Ag Leadership

SSEA Staff

IT/GIS Manager - *Lex McPhail*
Terrain/Water Res. Tech.,
GIS App. Specialist; Fleming College

Wetlands & Habitat Bio. - *Michelle Hudolin*
B.Env.Sc.; U. of Guelph
Certified Water Guide, Wetland Evaluator

Watershed Mon. Lead - *Carl Lesperance*
Env. Tech.; Georgian College
B.Sc. (Env.); Royal Roads U.

Inv. Sp. Prog. Coord. - *Robert Canning*
B.Sc.; Trent U.
M.Sc. (Watershed Ecosystems); Trent U

Treasurer - *Judy Hancock*
CPA, CMA, Business Administration;
Ryerson Polytechical Institute

Water Scientist - *Aisha Chiandet*
B.Env.Sc.; U. of Guelph
M.Sc. (Watershed Ecosystems); Trent U

Ecosystem Health Tech. - *Paula Madill*
Environmental Bio. Tech.
Canador College

RMO/Special Projects
Keith Sherman, H.B.Sc.; Queen's U.
M.Sc. (Watershed Ecosystems); Trent U

RMI/RMO
Melissa Carruthers
Environmental Tech.; Niagara College

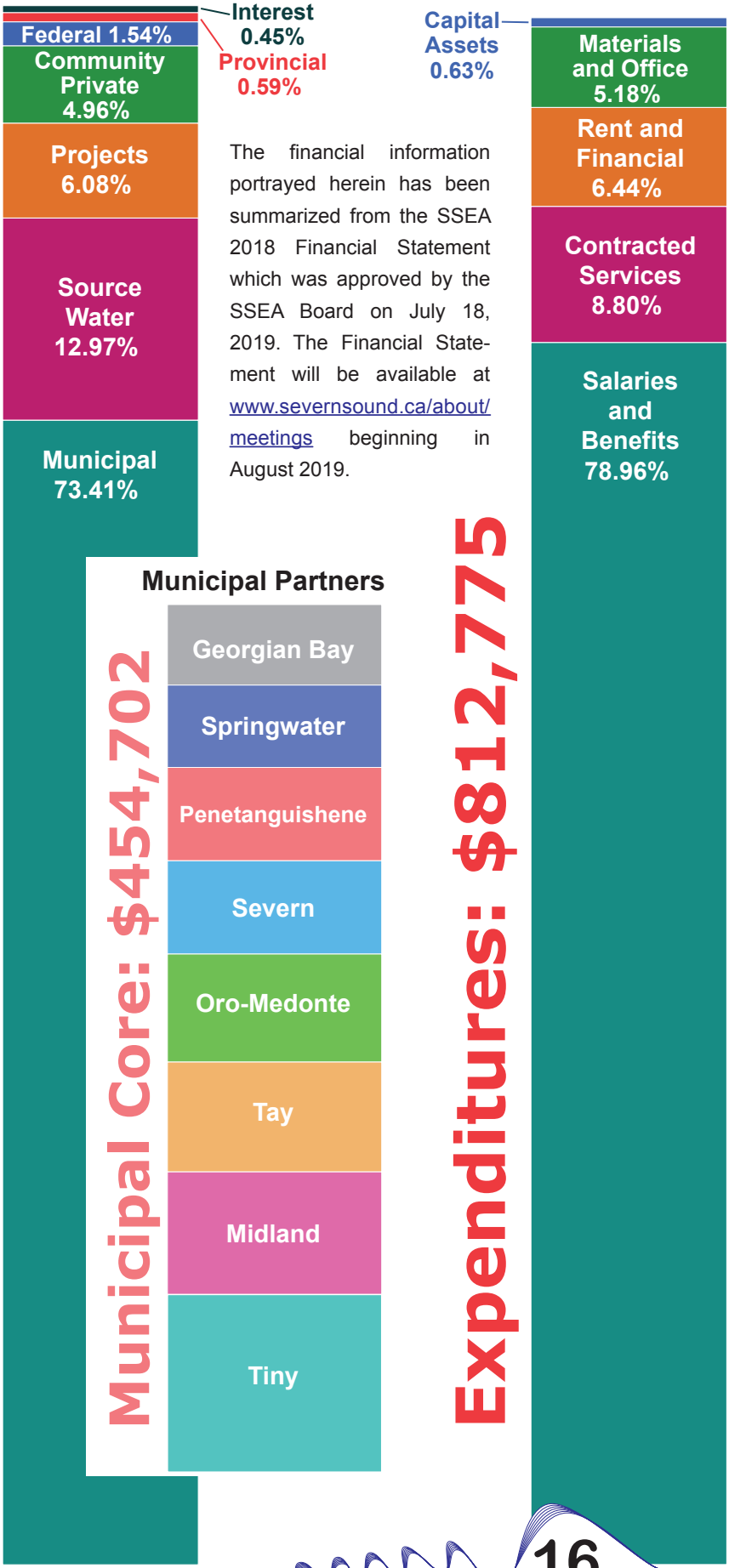
Madison Nikki Amanda Steven Marcus Graham Laurie

Seasonal Staff | Special Contracts | COOP Students
Internships | Employee Sharing

Joint Municipal Service Board

Financial Summary

SSEA Operations



The financial information portrayed herein has been summarized from the SSEA 2018 Financial Statement which was approved by the SSEA Board on July 18, 2019. The Financial Statement will be available at www.severnsound.ca/about/meetings beginning in August 2019.

Revenues: $815,238

Expenditures: $812,775

Municipal Partners

Municipal Core: $454,702

- Georgian Bay
- Springwater
- Penetanguishene
- Severn
- Oro-Medonte
- Tay
- Midland
- Tiny

Project Value Total: $847,148

Activity	Total Value
Open Water Monitoring	$73,164
Honey Harbour Monitoring	$72,632
Drinking Water Intake Monitoring	$32,184
Inland Lake Monitoring	$83,605
Tributary Monitoring	$38,332
Tributary Benthos	$72,363
Climate Monitoring	$36,782
Provincial Groundwater Monitoring Network	$43,736
Citizen Science Project	$7,238
Tree Planting	$21,743
Tree Distribution	$14,922
Source Water Protection (Technical Support)	$127,754
Risk Managment Services	$89,000
Invasive Species Project	$116,324
Habitat Mapping and Management	$17,370

With every **Municipal Core** Funding dollar, the **Project Value** SSEA has leveraged is almost double.

Municipal Core $ 455 K

Project Value $ 847 K

Critical Partners

SSEA is a service-driven, results-focused organization offering leading-edge scientific expertise. Each year, our core funders provide a stable base of support enabling the SSEA to leverage increased program capabilities. SSEA also relies on grants and in-kind support that is above and beyond our core revenues. No matter how small, we appreciate these contributions and would like to thank the agencies, groups and individuals that have helped us protect and restore the Severn Sound area.

Program Support

[$ = Grants | IK = In-Kind Support]

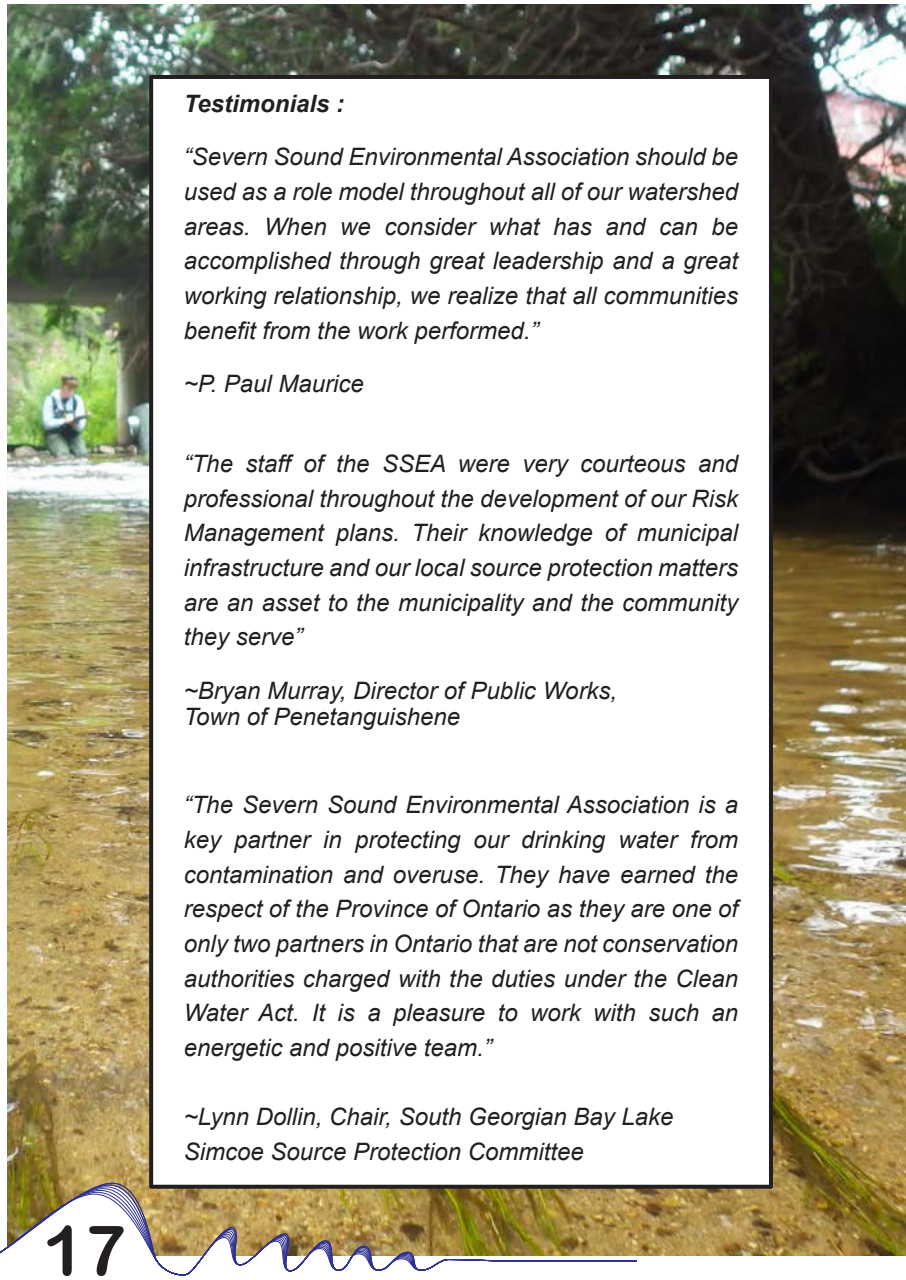
- BioTalent Canada [$ - Invasive Species (IS)]
- County of Simcoe [$ - Tree Planting Program, Board Development | IK - Web Site Hosting, GIS & IT]
- District Municipality of Muskoka [$ - Risk Management Official Services (RMO)]
- Fisheries and Oceans Canada [IK - Fish Habitat Program (FH)]
- Huronia Community Foundation [$ - IS]
- LSRCA [IK - DWSP]
- Newmarket/Tay Power Distribution Ltd. [$ - Donation | IK - IT]
- NVCA [IK - DWSP]
- Provincial Land Stewardship and Habitat Restoration Program [$ - IS]
- Ontario Geological Survey [IK - PWQMN]
- Ontario Ministry of Environment, Conservation and Parks [$ - Drinking Water Source Protection (DWSP) | IK - Open Water, Inland Lakes, PGMN & PWQMN]
- Ontario Ministry of Natural Resources [$ - FH | IK - GIS]
- TD Friends of the Environment Foundation [$ - IS]
- Town of Midland [$ - IS, RMO & Little Lake Monitoring | IK – Climate Monitoring]
- Town of Penetanguishene [$ - RMO]
- Township of Georgian Bay [$ - IS & Honey Harbour Monitoring]
- Township of Oro-Medonte [$ - RMO & Bass Lake Monitoring]
- Township of Tay [$ - IS, RMO & Water Intake Monitoring | IK - Monitoring Programs]
- Township of Tiny [$ - IS & RMO]
- Tripp's Paint [$ - Donation]
- Wege Foundation [$ - IS]

Grants and In-kind Support

Core Funders

- Township of Georgian Bay
- Town of Midland
- Township of Oro-Medonte
- Town of Penetanguishene
- Township of Severn
- Township of Springwater
- Township of Tay
- Township of Tiny

Core Funders



Testimonials :

"Severn Sound Environmental Association should be used as a role model throughout all of our watershed areas. When we consider what has and can be accomplished through great leadership and a great working relationship, we realize that all communities benefit from the work performed."

~P. Paul Maurice

"The staff of the SSEA were very courteous and professional throughout the development of our Risk Management plans. Their knowledge of municipal infrastructure and our local source protection matters are an asset to the municipality and the community they serve"

~Bryan Murray, Director of Public Works, Town of Penetanguishene

"The Severn Sound Environmental Association is a key partner in protecting our drinking water from contamination and overuse. They have earned the respect of the Province of Ontario as they are one of only two partners in Ontario that are not conservation authorities charged with the duties under the Clean Water Act. It is a pleasure to work with such an energetic and positive team."

~Lynn Dollin, Chair, South Georgian Bay Lake Simcoe Source Protection Committee

SEVERN SOUND WATERSHED AND JURISDICTIONAL AREA

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Our Vision:

Severn Sound will be the most resilient and thriving Great Lakes watershed.

Contact Information

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