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## Severn Sound Environmental Association 2019 3<sup>rd</sup> Quarter (July 1-September 30) Report/Update

### Staffing/HR

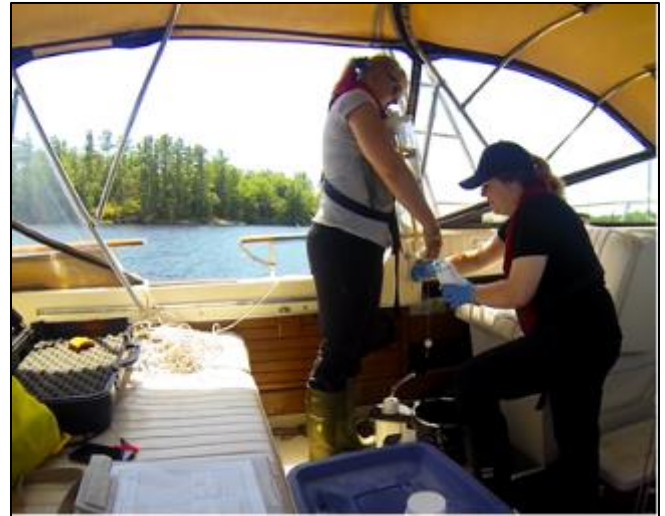
Administration, Staffing, Training and Volunteers

#### Staffing

- Thank you to our Watershed Health Field Technician Kelcey Mclean for all your hard work over the summer!
- Welcomed Cody Avery, Drinking Water Source Protection Assistant
- Congratulations to ED Julie Cayley appointed by Minister Yurek to the Muskoka Watershed Advisory Group

#### Volunteers

- Thank you to all of the volunteer citizen scientists on Farlain Lake who have submitted water level observations!
- Thank you to all volunteers from the municipalities of Tay, Tiny, Severn and Penetanguishene for assistance with invasive species removals



SSEA students sampling bottom water chemistry in North Bay, Honey Harbour

#### Training

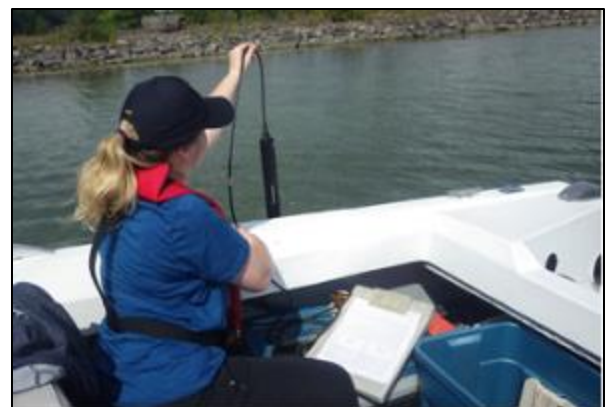
- WHMIS training (provided free from County of Simcoe)
- Statistics webinar (free)
- WISKI Web Pro groundwater database training (provided free from Ministry of Environment, Conservation and Parks)

### Education, Engagement, Outreach

Presentations, Articles, Media, School Involvement and Events

#### Presentations

- Farlain Lake Town Hall meeting on high water level issue
- Farlain Lake Community Association (FLCA) AGM
- Honey Harbour Association Annual General Meeting
- Georgian Bay Hunters and Anglers Dinner "Invasive Species Impacts on Natural Resources"



Temperature and oxygen sampling on Lake Couchiching

- ED Julie Cayley one of 8 thought leaders presenting at “Climate Change: Are you Ready” at the Near North Environmental Education Centre on the SSEA joint municipal services board structure and role in municipal climate change mitigation and adaptation
- Presented to Doug McNeil, provincial flooding advisor as part of Action Plan 2030 to Protect the Great Lakes, represented Severn Sound communities re: flood resilience/shoreline protection in the face of changing climate



*SSEA display at the Honey Harbour Association AGM*

#### Articles/Publications/News

- Interviews with: Midland Mirror on [Severn Sound water quality](#); Kevin Callan (aka The Happy Camper) on [Lake Couchiching monitoring](#) (SSEA staff on a 6:26 min)
- Southern Georgian Bay Chamber of Commerce videos on [SSEA background and monitoring programs](#), [invasive species](#) and [Drinking Water Source Protection](#) posted to YouTube and Facebook
- SSEA [press release](#) addressing the recent increase of gypsy moth populations within the Severn Sound area
- Sampling and identification of *Ophrydium* (aka jelly blobs) in Little Lake, communicated via [press release](#)
- Severn Sound partners Township of Tiny and Town of Penetanguishene included as pilot communities in “Action Plan 2030 to Protect the Great Lakes” re: flood resilience/shoreline protection in the face of changing climate

#### Media

- @SSEA\_SSRAP Twitter activity for 3<sup>rd</sup> quarter: 53 tweets, 1,312 page visits, and 272 Followers
- Tweets on topics including algae, invasive species, SSEA sampling activities, Drinking Water Source Protection, observations from the field, National Forest Week and links to resources
- Web Site Activity: 1,271 users visited [www.severnsound.ca](http://www.severnsound.ca)
- [Youtube Channel](#): New video content on gypsy moths and Fish Communities in Georgian Bay presentation by Arunas Liskauskas at SSEA Open House



*SSEA interview with Midland Mirror reporter Andrew Mendler*

### Events/Meetings/Conferences

- Displays at: Midland Canada Day, All Things Canadian Festival, Coldwater Heritage Day, Tiny Community BBQ, Georgian Bay Hunters and Anglers Dinner
- Woodland Beach Property Owners Association AGM- SSEA provided input on Georgian Bay water levels, beach quality and natural shorelines
- Staff attended: 2 Sustainable Severn Sound meetings, *We Are All Treaty People* workshop, Wye Marsh Stewardship Committee meeting, Georgian Bay Forever's Underwater



*Guest speaker Arunas Liskauskas (MNRF) at the 2019 SSEA Open House*

- Autonomous Vehicle launch, 5 [webinars](#) by the Lake Huron Centre for Coastal Conservation (Coastal Processes, Species at Risk, Invasive Species, Microplastics, Climate), OFA Farm Tour, Agricultural Trends meeting, *Low Carbon resilience & Green Infrastructure Asset Management* webinar
- Provided aquatic plant training to staff from Georgian Bay Islands National Park
- Provided input to the Township of Georgian Bay's Strategic Plan One-Year Perspective
- Provided feedback at the Township of Tay Strategic Plan Open House
- Supported the Township of Tiny at two AMO delegations (Ontario Ministry of Agriculture, Food and Rural Affairs and Ministry of Environment, Conservation and Parks)
- Attended Red Pine House County of Simcoe Forestry Interpretive Centre Opening
- SSEA Open House - Baxter Ward Community Centre, with [guest speaker Arunas Liskauskas](#)
- Attended and provided input to the International Joint Commission (IJC) consultation "Step In and Speak Out for the Great Lakes: Lake Huron" Collingwood
- Attended Simcoe County Federation of Agriculture summer BBQ and meeting

### School Involvement

- Mentored 2 Georgian College students for 3rd year Student Applied Research Projects on "Microplastics Entering Severn Sound by Wastewater Effluent" and "Water Quality Analysis of the Wye River"

## **Tree Planting**

### *Planting and Distribution*

### Community Tree Planting & Tree Seedling Distribution

- In planning stages and seeking sites for spring 2020



## Fish and Wildlife Habitat / Natural Heritage

*Natural Heritage Assessments, Invasive Species, Wetlands, Habitat and Stewardship*

### Invasive Species

- Conducted second post-treatment assessment of giant hogweed biomass following herbicide trial along Uthoff Trail (Severn)
- Supported FLCA (Farlain Lake) efforts to control Eurasian watermilfoil growth through diver-harvesting and benthic mat installation
- Manually removed phragmites at two locations within Champlain Rotary Wendat Park in Penetanguishene with community volunteers and Central North Corrections Centre staff and inmates
- Removed phragmites, coltsfoot, dog strangling vine and white sweet clover with volunteers from the Woodland Beach and Bluewater Dunes Property Associations (Tiny)
- Completed initial property visit and preparations for upcoming invasive species workshop and field tour with Simcoe and Muskoka District Maple Syrup Producers
- Assessed gypsy moth, emerald ash borer, Himalayan balsam and periwinkle populations on private land to provide identification and management guidance
- Received Ontario Invasive Species Act Authorization that permits SSEA Invasive Species Program staff to collect and transport prohibited invasive aquatic plants
- Completed baseline invasive species monitoring in all six participating partners in the SSEA Invasive Species Program
- THANK YOU to the Town of Midland for providing vehicle loans to the Invasive Species Program



*Giant hogweed treated with herbicide in Severn*



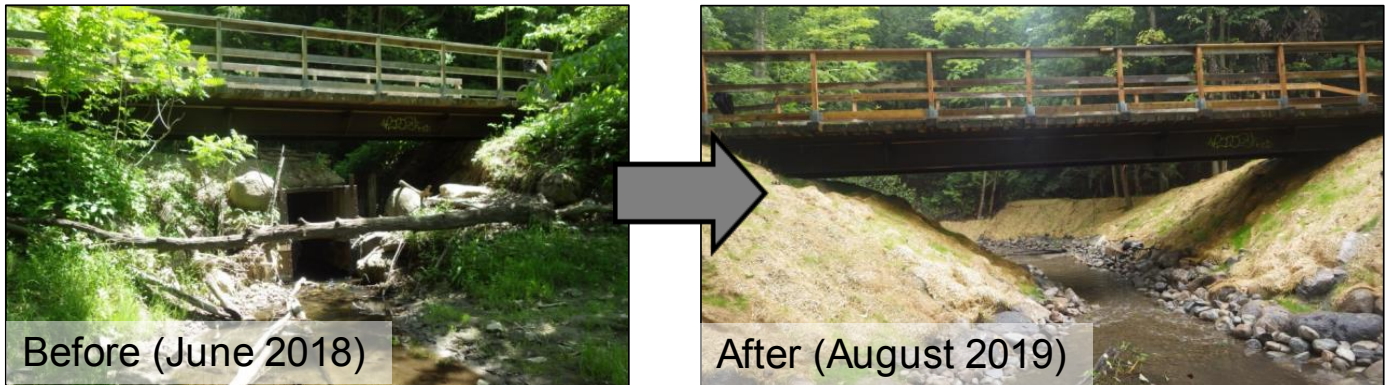
*SSEA staff spreading the word about invasive species to the next generation!*

### Habitat and Stewardship

- Implementation of a multi-year, multi-partner stream restoration project on Copeland Creek (grant from The W. Garfield Weston Foundation through Swim Drink Fish), including removal of box culvert and stabilization of banks. This project restored free-flowing conditions in Copeland Creek, improving cold water stream habitat and fish passage.

[sseainfo@severnsound.ca](mailto:sseainfo@severnsound.ca) - [www.severnsound.ca](http://www.severnsound.ca)

Total project cost is approximately \$175,500 with \$150,500 of that covered through Swim Drink Fish, Dufferin Simcoe Land Stewardship Network and Georgian Bay Métis Council



*Copeland Creek Free Flow Project before and after restoration*

## Land Use Planning

*Input and Review*

### Plan Input

- Commented on 10 proposals, applications, reports or Environmental Impact Studies
- Participated in a Penetanguishene Zoning By-law Stakeholder Meeting

## Drinking Water Source Protection

*Drinking Water Source Protection, Risk Management Services*

### Drinking Water Source Protection

- Attended 5 meetings/teleconferences
- Sent update letter regarding status of Risk Management Plans to member municipalities including a copy of what was submitted to the Minister (MECP) as part of the legally required annual reporting process
- Held a meeting with Oro-Medonte staff to discuss next steps with changes to municipal water systems
- Received and signed 2019/20 SWP MOU t with LSRCA

### Risk Management

- Commented on 11 development applications, answered 12 inquiries, conducted 5 site visits, actively negotiating an additional



*SSEA Nitrate Open House held in Lafontaine*



- 2 Risk Management Plans and issued 270 prohibition letters.
- Hosted an open house for the 270 residents affected by the prohibition of commercial fertilizer
- There are 66 Risk Management Plans to be negotiated in the South Georgian Bay Lake Simcoe Source Protection Region as of September 15<sup>th</sup>, 2019, however this number may increase as threat verification is updated

## Monitoring Programs

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

### Open Water

- Ongoing biweekly water quality sampling (water temperature, dissolved oxygen, conductivity, nutrients, general water chemistry and metals) at 14 sites in Severn Sound (11 runs completed)
- Ongoing biweekly water quality sampling at the raw water intake at the Tay Area water intake, including algae compounds (microcystin, taste and odour); reporting to Tay as data is received
- Inland Lakes Ongoing biweekly water quality sampling on Little Lake in Midland(11 runs completed), along with water level monitoring
- Ongoing biweekly water quality sampling Lake Couchiching (9 runs completed)
- Water quality sampling parameters include: temperature, dissolved oxygen, conductivity, nutrients, general water chemistry, algae and zooplankton

### Provincial Water Quality Monitoring Network (PWQMN)

- 2 runs were completed at 14 sampling locations across 8 streams (Lafontaine and Copeland creek, Wye, Sturgeon, Coldwater, North (Silver Creek) and Severn River (Port Severn)- measured water temperature, dissolved oxygen, pH, turbidity, conductivity, water chemistry and metals



*Sampling for nuisance algae compounds at raw water intake for Tay drinking water plant*



*Temperature logger housing unit retrieval for data download*

### Stream Temperature

- 45 temperature loggers maintained
- 20 temperature loggers have been retrieved and downloaded data will be interpreted over the winter.

### Climate

- Monthly Georgian Bay water level and regional climate data compilation
- Maintained 4 rain gauges, recording precipitation at Huronia Airport, Midland Sewage Treatment Plant, Pine Grove (Penetanguishene) and Balm Beach
- Maintained 3 air temperature loggers at Huronia Airport and the Midland Sewage Treatment Plant



*Stream sampling of benthic invertebrates*

### Benthic Invertebrates (Stream health indicator)

- Monitored 9 from 4 different streams (Copeland, Hogg, and Lafontaine Creek as well as, Wye and Baxter River) through the collection of benthic invertebrates,.

### Citizen Science

- Water Level Watchers volunteers from Farlain Lake submitted water level observations from a static water gauge
- 8 Shorewatch observations were submitted to the SSEA for nuisance algae sightings (Shorewatch is a watershed-wide program where community members can submit observations on shoreline conditions such as algae growth and water levels)
- Partnering with Copeland Forest Friends Association on stream data collection
- Partnership with Water Rangers on trial of new water quality testing strips using bottom water samples from North and South Bays
- Received and responded to 8 Shorewatch observations (nuisance algae)
- Added 4 volunteers to SSEA citizen science programs (Water Level Watchers and Shorewatch)
- [Citizen Science section](#) created on SSEA website

## **Data Analysis and Reporting**

*Statistics, Data Management & Analysis, Stream Invertebrate ID, and GIS/Mapping*

### Reporting

- Fuller Pit Snow Disposal Site-Spring Soil Sampling data report (Penetanguishene)
- Draft Bass Lake Subwatershed Conditions Summary Report

- Updated summary displays for: Severn Sound Open Water, Severn River, Honey Harbour, Bass Lake and Little Lake water quality, climate indicators, citizen science monitoring results, Georgian Bay water levels

### Statistics/Data Management & Analysis

- Data compilation request in support of Robert St W EIS (Copeland Creek, lower Penetang Harbour)
- Compilation and initial analysis of 2018 Severn Sound, Bass Lake and Little Lake algae data
- Compilation of 2019 Severn Sound, Little Lake and Lake Couchiching field data
- Tay Intake microcystin and taste and odour data compilation and analysis provided to Township of Tay
- 2018/2019 ice cover and air/water temperature trend analysis
- Water level/climate data download and compilation

### Stream Invertebrate Identification

- 30 samples identified from 10 stations within the Bass Lake Watershed

### GIS/Mapping

- Land use/habitat mapping for Bass Lake watershed



*Water Rangers citizen science water test kit*

## **Partnerships**

*New/Updated NGO partners and MOU's*

### NGO Partners

- Water Rangers - partnering on citizen science water testing program

### Other Partners

- Beausoleil First Nation - tour of Christian Island focusing on invasive species, inland lakes, and climate monitoring
- SEGBAY Chamber of Commerce
- Central North Correctional Centre – staff and inmates for IS removal
- Georgian Bay Métis Council

### Networks

- Attended SMDHU Climate Change Exchange 3rd Quarter meeting

### MOUs

- Drinking Water Source Protection MOU signed 2019/20 with LSRCA



## Financial

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*Donations, Grants, Budget, Invoicing and Revenue (fee for service)*

### Grants

- Dufferin Simcoe Land Stewardship Network and Georgian Bay Métis Council for Copeland Creek Free Flow Project
- TD Friends of Environment Foundation - [Citizen Science Shorewatch program development](#) (\$4,625)
- Applied for COA funding for SSEA monitoring programs and Wye River Healthy Soils Healthy Water project - awaiting decision
- Applied for Great Lakes Commission Green Infrastructure grant - not funded

### Budget

- 2020 and 5 year SSEA budget forecast, including incorporating IS Program into Core and Sustainable Severn Sound (SSS) as special project, approved by SSEA Board July 18, 2019
- 2020 SSEA + SSS budget request letters sent to 6 of 8 municipal partners
- 2020 budget pre meetings and deputations made to: Townships of Georgian Bay, Severn and Tiny and Town of Penetanguishene

### Cost Recovery

- Penetanguishene Data Request - Robert St EIS

### Donations

Thank you to:

- Cabela's Canada for our new shirts!
- Joanne and Brian Smith, Tim Hortons Port Severn, for coffee and tea for SSEA Open House
- Township of Georgian Bay for providing the venue for SSEA Open House



*SSEA staff learning about forked three-awned grass from Beausoleil First Nation*

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### ***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)
- Robert Canning – Invasive Species Program Coordinator
- Nikole Priestman – Watershed Health Field Technician
- Laurie Barron – Corporate Services Coordinator (p/t)
- Kelcey Mclean – Watershed Health Field Technician
- Cody Avery- Drinking Water Source Protection Assistant

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*Team SSEA with our new shirts donated by Cabela's Canada!*