



**SEVERN SOUND ENVIRONMENTAL ASSOCIATION
JOINT MUNICIPAL SERVICE BOARD (JMSB)
2023 Third Quarter (Q3) Meeting
October 26th, 2023
9:30am – 12:00pm
In-person and Zoom**

Harbour Shore Community Room (Victoria Harbour Branch Library – 145 Albert Street)

- 1. WELCOME AND CALL TO ORDER**
- 2. ADOPT AGENDA**
- 3. DECLARATION OF PECUNIARY INTEREST**
- 4. APPROVAL OF PAST MINUTES**
 - 4.1 Minutes of 2023 Second Quarter (Q2) meeting of the SSEA Joint Municipal Service Board held July 20th, 2023
 - 4.2 Business arising from the minutes – none
- 5. SEVERN SOUND SOURCE PROTECTION AUTHORITY MEETING**

None this quarter.
- 6. PRESENTATIONS**
 - 6.1 Update on State of Severn Sound Report COA Project - Nolan Pearce, Trent University, Project Lead
 - 6.2 2022 SSEA Audited Financial Statements - Judy Limoges, SSEA Treasurer (verbal)
- 7. SSEA BUSINESS**
 - a. SSEA 3rd Quarter 2023 Report**
 - b. Financial Reports**
 - 7.1 Staff Report 31-23-SSEA - 2023 3rd Quarter Draft Financials
 - 7.2 Staff Report 32-23-SSEA - 2024 SSEA Budget Update
 - 7.3 Staff Report 33-23-SSEA - Honey Harbour Project Update
- 8. SSEA CORPORATE ADMINISTRATION UPDATES**
 - 8.1 Staff Report 34-23-SSEA - Employee Group Benefit Plan Renewal
 - 8.2 Staff Report 35-23-SSEA - COA: Stormwater & State of Severn Sound Report Project updates

- 8.3 Staff Report 36-23-SSEA - Algae Blooms Summary
- 8.4 Staff Report 37-23-SSEA - Improving Habitat in the Severn Sound Watershed Project (GLLAF) Update
- 8.5 Staff Report 38-23-SSEA - SSEA Grant Application Update
- 8.6 Staff Report 39-23-SSEA - SSEA Invasive Species Program Update
- 8.7 Staff Report 40-23-SSEA - SSEA Building Tree Capacity in the Severn Sound Watershed Project
- 8.8 Staff Report 41-23-SSEA - SSEA Monitoring Program Update
- 8.9 Staff Report 42-23-SSEA - SSEA Past and Upcoming Events Update
- 8.10 Staff Report 43-23-SSEA - Severn Sound Source Protection Authority Drinking Water Source Protection Update and SSEA Risk Management Services 2023 Q2 Update
- 8.11 Staff Report 44-23-SSEA - Sustainable Severn Sound Update
- 8.12 Staff Report 45-23-SSEA - Ministry Information Sessions Update
- 8.13 Staff Report 46-23-SSEA - 2022 Annual Report
- 8.14 Staff Report 47-23-SSEA - 2024-2029 Strategic Plan Update

9. EXECUTIVE DIRECTOR UPDATE

- 9.1 Staff Report 48-23-SSEA - Executive Director Q3 Report (On Table)

10. ANNOUNCEMENTS

11. CORRESPONDENCE

- 11.1 Email from Environment and Climate Change Canada dated September 8th, 2023 re: Maintenance and expansion of HYDAT Network in Severn Sound Watershed

12. CLOSED SESSION

No items.

13. OTHER BUSINESS

14. ADJOURN



**SEVERN SOUND ENVIRONMENTAL ASSOCIATION
JOINT MUNICIPAL SERVICE BOARD (JMSB)
2023 Second Quarter (Q2) Meeting**

July 20th, 2023

9:30am – noon

Harbour Shore Community Room, Victoria Harbour

Present:

Chair, Councillor Steffen Walma

Vice-chair, Councillor Danielle Alexander (via Zoom)

Councillor Suzanne Marchand

Councillor Roberta Bald (via Zoom)

Councillor Lori Hutcheson (via Zoom)

Deputy Mayor Barry Norris

Councillor Mark Taylor

Township of Tiny

Township of Springwater

Town of Penetanguishene

Town of Midland

Township of Oro-Medonte

Township of Tay

Township of Severn

Staff present:

Julie Cayley

Melissa Carruthers

Aisha Chiandet

Cliff Evanitski

Michelle Hudolin

Judy Limoges

Jon Main

Emma Maurice

Lex McPhail

Nikki Priestman

Nicole Stott

Travis van Engelen (via Zoom)

Brian Chantler

Drew Garrett

Sarah Hutchison

Grace McLachlin

Sarah Song

Sam van Heerwaarden

Executive Director

Manager Source Water Protection,
RMO/RMI

Water Scientist/Limnologist

Office Manager

Manager Watershed Resilience,
Wetlands & Habitat Biologist

Financial Services Coordinator/Treasurer

Sustainability & Climate Action

Coordinator

Climate Resilience-Habitat Intern

IT Manager/GIS Applications Specialist

Watershed Health Specialist

Source Water Protection Intern

Tree Plant Program Specialist

Field Technician (seasonal)

Field Technician (seasonal)

Citizen Science Assistant (seasonal)

Library Technician Assistant (seasonal)

Algae Causation Study Assistant

Field Technician (seasonal)

Regrets:

Councillor Brian Bocek

Township of Georgian Bay

Guests:

None

1. WELCOME AND CALL TO ORDER

Chair Walma called the meeting to order at 9:30 am.

2. ADOPT AGENDA

MOTION: 2023-026

Moved by: B. Norris

Seconded by: S. Marchand

RESOLVED THAT: the SSEA Joint Municipal Service Board approves the Meeting Agenda dated July 20th, 2023, as amended; and

FURTHER THAT correspondence to the City of Orillia dated July 17, 2023 re: Boundary Expansion be added under Other Business as item 13.1.

Carried;

3. DECLARATION OF PECUNIARY INTEREST

None declared.

4. APPROVAL OF PAST MINUTES

4.1 Minutes of 2023 First Quarter (Q1) meeting of the SSEA Joint Municipal Service Board held April 27th, 2023

MOTION: 2023-027

Moved by: M. Taylor

Seconded by: R. Bald

RESOLVED THAT: the SSEA Joint Municipal Service Board approves the minutes of the First Quarter (Q1) meeting of the SSEA Joint Municipal Service Board held April 27th, 2023.

Carried;

4.2 Minutes of the Severn Sound Source Protection Authority held April 27th, 2023.

MOTION: 2023-028

Moved by: B. Norris

Seconded by: L. Hutcheson

RESOLVED THAT: the SSEA Joint Municipal Service Board approves the minutes of the Severn Sound Source Protection Authority meeting held April 27th, 2023.

Carried;

4.3 Minutes of the SSEA Executive Committee meeting held June 29th, 2023.

MOTION: 2023-029

Moved by: D. Alexander

Seconded by: S. Marchand

RESOLVED THAT: the SSEA Joint Municipal Service Board approves the minutes of the SSEA Executive Meeting held June 29th, 2023.

Carried;

5. SEVERN SOUND SOURCE PROTECTION AUTHORITY MEETING

None this Quarter.

6. PRESENTATIONS

6.1 Presentation Re: COA Project updates

MOTION: 2023-030

Moved by: D. Alexander

Seconded by: L. Hutcheson

RESOLVED THAT: the presentation and Staff Report No. 20-23-SSEA regarding COA Project updates (Stormwater Monitoring and State of Severn Sound Reporting), be received for information.

Carried;

6.2 Presentation Re: Investigation of Impacts of Blue Green Algae on Fairlain Lake Update

MOTION: 2023-031

Moved by: R. Bald

Seconded by: D. Alexander

RESOLVED THAT: the presentation and Staff Report No. 21-23-SSEA regarding Investigation of Impacts of Blue Green Algae on Fairlain Lake Update, be received for information.

Carried;

6.3 Presentation Re: Improving Habitat in the Severn Sound Watershed Project (GLLAF) Update

MOTION: 2023-032

Moved by: R. Bald

Seconded by: L. Hutcheson

RESOLVED THAT: the presentation and Staff Report No. 22-23-SSEA regarding Improving Habitat in the Severn Sound Watershed Project (GLLAF) Update, be received for information.

Carried;

7. SSEA BUSINESS

a. SSEA 2nd Quarter 2023 Report

MOTION: 2023-033

Moved by: B. Norris

Seconded by: S. Marchand

RESOLVED THAT: the SSEA Joint Municipal Service Board receives the 2nd Quarter 2023 Report for information.

Carried;

b. SSEA Financial Reports

7.1 Staff Report 18-23-SSEA – 2023 2nd Quarter Draft Financials

MOTION: 2023-034

Moved by: M. Taylor

Seconded by: R. Bald

RESOLVED THAT: Staff Report No. 18-23-SSEA regarding the 2023 2nd Quarter Draft Financials be received as information.

Carried;

7.2 Staff Report 19-23-SSEA – Draft 2024 SSEA Budget Update

MOTION: 2023-035

Moved by: S. Marchand Seconded by: B. Norris

RESOLVED THAT: Staff Report No. 19-23-SSEA regarding the 2024 Draft Budget be received; and

FURTHER THAT: The Board approves the Executive Committee recommendation to approve an overall 2024 budget which includes an increase of \$114,478 over the 2023 final budget for the municipal contributions portion of the Core 2024 budget.

Carried;

8. SSEA CORPORATE ADMINISTRATION UPDATES

8.1 Staff Report 23-23-SSEA – SSEA 2023 Grant Application Update

MOTION: 2023-036

Moved by: M. Taylor Seconded by: S. Marchand

RESOLVED THAT: Staff Report No. 23-23-SSEA regarding SSEA Grant Application Update, be received for information.

Carried;

8.2 Staff Report 24-23-SSEA – SSEA Invasive Species Program Update

MOTION: 2023-037

Moved by: L. Hutcheson Seconded by: R. Bald

RESOLVED THAT: Staff Report No. 24-23-SSEA, regarding SSEA Invasive Species Program Update, be received for information.

Carried;

8.3 Staff Report 25-23-SSEA – SSEA Building Tree Capacity in the Severn Sound Watershed Project

MOTION: 2023-038

Moved by: M. Taylor Seconded by: D. Alexander

RESOLVED THAT: Staff Report No. 25-23-SSEA regarding Building Tree Planting Capacity in the Severn Sound Watershed Project, be received for information.

Carried;

8.4 Staff Report 26-23-SSEA – SSEA Monitoring Program Update

MOTION: 2023-039

Moved by: M. Taylor Seconded by: D. Alexander

RESOLVED THAT: Staff Report No. 26-23-SSEA regarding SSEA Monitoring Program Update, be received for information.

Carried;

8.5 Staff Report 27-23-SSEA – SSEA Past and Upcoming Events Update

MOTION: 2023-040

Moved by: B. Norris Seconded by: L. Hutcheson

RESOLVED THAT: Staff Report No. 27-23-SSEA regarding SSEA Past and Upcoming Events Update, be received for information.

Carried;

8.6 Staff Report 28-23-SSEA – SSSPA Drinking Water Source Protection and SSEA Risk Management Services 2023 Q2 updates

MOTION: 2023-041

Moved by: R. Bald

Seconded by: D. Alexander

RESOLVED THAT: Staff Report No. 28-23-SSEA regarding an update on the activities undertaken by SS SPA and SSEA Risk Management staff during Q2 of 2023, be received for information.

Carried;

8.7 Staff Report 29-23-SSEA – SSEA Policies Update

MOTION: 2023-042

Moved by: D. Alexander

Seconded by: S. Marchand

RESOLVED THAT: Staff Report No. 29-23-SSEA regarding the SSEA Policies Update be received as information; and

FURTHER THAT: The SSEA Board approves amending section 2.12 of the Letter of Agreement between SSEA and member municipalities to reflect the change in the Treasurer functions to the Township of Tay from the Town of Midland; and

FURTHER THAT: The Board approves the following updated policies as presented on July 20th, 2023:

SSEA Credit Card Policy;

SSEA Diversity and Inclusion Policy; and

SSEA Reserve Policy.

Carried;

9. EXECUTIVE DIRECTOR UPDATE

Verbal on table

MOTION: 2023-043

Moved by: R. Bald

Seconded by: L. Hutcheson

RESOLVED THAT: The Executive Director Q2 Staff Report No. 30-23-SSEA be received for information.

Carried;

10. ANNOUNCEMENTS

Councillor Taylor invited SSEA Board members to attend Provincial Approval Training sessions to be hosted by Severn Township in late September/early October.

Chair Walma brought forward Tiny Island Review initiative.

11. CORRESPONDENCE

None.

12. CLOSED SESSION

None.

13. OTHER BUSINESS

13.1 Correspondence to the City of Orillia dated July 17th, 2023 re: Boundary Expansion

MOTION: 2023-044

Moved by: M. Taylor

Seconded by: R. Bald

RESOLVED THAT: Correspondence from SSEA to the City of Orillia dated July 17th, 2023 re: Boundary Expansion, be received for information.

Carried;

14. ADJOURN

MOTION: 2023-045

Moved by: B. Norris

Seconded by: D. Alexander

RESOLVED THAT: this meeting of the SSEA Board of Directors held July 20th, 2023 adjourn at 11:20am to meet again October 26th, 2023 or at the call of the Chair.

Carried.

Chair, Steffen Walma

Executive Director, Julie Cayley



Severn Sound Environmental Association 2023 3rd Quarter (July 1 - September 30) Report/Update

Staffing/HR

Administration, Staffing, Training and Volunteers

Administration

One SSEA Board meeting.

Staffing

Team SSEA welcomed Sarah Song, Inland Lakes Water Quality Stewardship Intern. Thank you to Canada Summer Jobs (CSJ) for supporting contract staff members Drew Garrett, Sam van Heerwaarden, and Sarah Hutchison. CSJ staff met with MP Adam Chambers to express thanks and provide feedback on the Program.

THANK YOU to outgoing staff: Matteus Schwirtz-Zinser and Charlotte Anderson (Invasive Species Summer technicians), Grace McLachlin (Library Technician), Drew Garrett (Field Technician), Sam van Heerwaarden (Field Technician) and Sarah Hutchison (Citizen Science Assistant & Field Technician).

Training/Professional Development

SSEA staff attended 7 no-cost webinars or training sessions and 6 paid professional development courses on a range of SSEA program related topics and health and safety matters. SSEA staff and board members were given a tour of the Philip H. Jones Pollution Control Plant by Town of Penetanguishene staff learning about sewage treatment and discharge requirements.



SSEA Staff at tour of Philip H. Jones Pollution Control Plant

Volunteers - THANK YOU

Thank you to the 14 citizen science volunteers who have participated in Shore and/or Stream Watch this monitoring season. Thank you to 54 community volunteers who helped the *Improving Habitat in the Severn Sound Watershed Project* this quarter by planting trees, shrubs, wildflowers, and removing invasive species at several locations in Midland and Penetanguishene.

sseainfo@severnsound.ca - www.severnsound.ca

Education, Engagement, Outreach

Presentations, Articles, Social Media, Events, Inquiries

Where appropriate, presentations, meetings, videos etc. have been recorded and posted to the [SSEA YouTube channel](#).

The Strategic Plan refresh was launched with the public and SSEA partners invited to fill out surveys to provide input. Surveys are open until October 30th 2023 at www.severnsound.ca

Presentations

Presented to the SSEA Board on various program updates including habitat enhancement, stormwater monitoring and State of Severn Sound projects. Presentations delivered at events included a demonstration of the new Wastewater/Stormwater Receiving Waters Monitoring Project in Elmvale, a display at the Honey Harbour Association AGM, and presentation at the Farlain Lake Community Association AGM. Delivered in person training for Tay Township Staff on noxious plant identification & management. Presented preliminary Severn Sound 20 years after de-listing report to international Lake Huron Working Group meeting in Michigan.



SSEA Board member Springwater Twp Councillor Alexander using a flow meter at the Stormwater Monitoring demonstration.

Articles/Publications/News

Coverage of [SSEA's Great Lakes Local Action Fund Habitat Improvement Project in Midland Today](#) and [French Radio Station CFRH](#). Contributed to Midland Today article on [Georgian Bay Cruise Ships](#).

Social Media

A total of 146 posts were made across the SSEA [Instagram](#), [Facebook](#) and [Twitter](#) accounts on a variety of topics and SSEA programs this quarter, to audiences of 683, 356, and 438 followers respectively. 5 new videos ([Farlain Lake Shoreline Stewardship - Community Workshop](#), [SSEA Board Quarter 2 Meeting](#), [Provincial Environmental Permissions - Volume 1](#), [SSEA Tree Planting Programs & Aggregate Approvals 101 - Volume 2 - Ministry information Sessions](#)) with 290 views total, were posted on the [SSEA YouTube channel](#) with 51 subscribers. SSEA participated in National Forest Week, Summer/Fall Drinking Water Source Protection campaign, and Meet the Team Monday campaign that has been highlighting the exceptional staff and services SSEA has. In partnership with the Health Unit, social media has been used to inform residents about confirmed algae blooms.

Events/Meetings/Conferences

Team SSEA participated in 16 municipal and external partner events throughout the quarter, including attending and presenting at NABEC (Northeast Agricultural/Biological Engineering Conference), the Lake Huron Technical Committee and the Lake Huron Partnership meetings (international). SSEA hosted 6 additional events involving the Severn Sound community. SSEA staff conducted a public nature walk in Penetanguishene that included information on native plants, rehabilitation projects, and the benefits of naturalization.

In collaboration with the Township of Severn, SSEA hosted two webinars regarding ministry approvals. The first was led by MECP speaking about provincial permissions and the second by MNR speaking about aggregate approvals.



Executive Director, Julie Cayley presenting 'Lessons Learned: Protecting Drinking Water in the Rural Township of Tiny, Severn Sound' at the Northeast Agricultural/ Biological Engineering Conference in Guelph

Inquiry Responses (excluding Source Water)

SSEA responded to approximately 21 inquiries from municipal partners, members of the public, and contractors.

Tree Planting

Planting and Distribution

The SSEA is in the planning stages for our spring 2024 tree planting programs. Staff will continue to conduct site visits to prospective Community Tree Planting properties in fall and winter and will develop and disseminate promotional material. Staff is investigating the cost and availability of native tree and shrub seedlings for both the Community Tree Planting Program and the Tree Seedling Distribution Program. Staff is developing the pricing of seedlings for the 2024 Tree Seedling Distribution Program, and seedlings for both programs will be ordered in Q4. The 2BT Capacity Building Project is on target and SSEA expects to meet performance measures and deliverables by the end of the Project, March 2024.

Fish and Wildlife Habitat/Natural Heritage

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

Invasive Species (IS)

Continued to provide technical support on IS to municipalities, residents, and external agencies. IS staff surveyed 86 municipal properties across the watershed, participating in 6 removal events which followed. Outreach & Education were important components of the IS Program this quarter across the watershed with IS staff attending many community events, responding to 31 new invasive/non-native species inquiries, and leading educational opportunities through presentations and guided walks. OFAH Invasive Species Summer Technicians, Matteus Schwirtz-Zinser & Charlotte Anderson, completed their contracts. Thanks to both for their hard work this quarter! Continued to collaborate with partner agencies and

deliver technical support on the Wye Marsh Invasive Species Management Project. As part of the Wye Marsh Project, SSEA staff mapped nearly 30 invasive phragmites sites on the property and further managed 8 locations. Site visit conducted on Sparrow Lake focusing on aquatic IS.



Phragmites surveying and management, Wye Marsh



Shoreline invasive species survey

Habitat Restoration/Enhancement

Continued implementing the *Improving Habitat in the Severn Sound Watershed Project* (MECP Great Lakes Local Action Fund), supporting Penetanguishene and Midland in habitat naturalization/restoration projects on municipally-owned land. Habitat improvement activities included planting of native shrubs and wildflowers at Therrien Park and JT Payette Park in Penetanguishene, and Ernest T. Bates Park, Edgehill Park, and Little Lake Park in Midland.

Species At Risk

Field team conducted summer and early fall visual encounter surveys for turtles in the Matchedash Bay area, as part of a multi-year partnership with Georgian Bay Forever.



Turtle monitoring, Matchedash Bay area

Natural Heritage

Staff participated in a tour of Bluewater Beach Park in Tiny, to learn more about the specialized dune ecosystem and the restoration and habitat preservation work undertaken at the site.



SSEA Staff Touring Bluewater Dunes in Tiny

sseainfo@severnsound.ca - www.severnsound.ca

Land Use Planning

Input and Review

Plan and Policy Input

SSEA participated in pre-consultation meetings and/or commented on applications, reports, and Environmental Impact Studies for 22 sites. Staff also provided comments on the Town of Penetanguishene's draft Site Plan Design Guidelines, and City of Orillia Settlement Area Boundary Expansion (proposed expansion includes SSEA watershed).

Drinking Water Source Protection

Source Protection Authority and Risk Management Services

Source Protection Authority Services

Staff continues to work with provincial, regional, and local representatives, and attend meetings, to fulfill the requirements of the 2022-2024 funding agreement work plan, some of which includes policy work, municipal drinking water system changes, and general education and outreach initiatives. Submitted an early engagement package regarding Cassell Drive (Springwater) to MECP for their review. Presented Cassell Drive (Springwater) and Fourth/Vindin St. (Midland) to the local Source Protection Committee.

Risk Management Services

This quarter, staff answered 23 inquiries, commented on 12 development applications, sent out 3 draft risk management plans, signed 2 risk management plans, conducted 2 site visits, attended 2 pre-consultation meetings, and one risk management plan negotiation meeting.



Third quarter events - Town of Midland Canada Day (top left), Invasive Species removal at Wye Marsh (top middle), Discover Coldwater with Member Mark Taylor (top right), wildflower planting and invasive species removal with Member Roberta Bald (bottom left and right), Township of Tiny Community BBQ (bottom middle)

Monitoring Programs

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

Lake Sampling (Open Water, Inland Lakes, Intakes)

Completed sampling events for Tay intakes (6 runs at 2 sites), Severn Sound open water (6 runs at 11 sites), Little Lake (7 runs at 1 site) and MacLean Lake (7 runs at 5 sites). THANK YOU to Severn Twp Councillor and SSEA Board Member Mark Taylor for joining the crew on MacLean Lake. Sampling included collecting water chemistry and field data such as water clarity, dissolved oxygen, turbidity, conductivity, and temperature, along with algae and zooplankton samples for lake sites. Water quality results are used to assess lake conditions including algae blooms, guide management decisions, and protect drinking water quality. Additional samples were collected for algae identification and toxin testing for suspected blooms in Midland Bay, Penetang Harbour, Hogg Bay, Bass Lake, MacLean Lake, and Farlain Lake. Algae pigment fluorometers were used to test inland lake and open water samples, supporting MECP's project to create thresholds for harmful algae, based on field fluorometer data.

NEW in 2023: Piloting the Inclusion of Wastewater and Stormwater Effluents into Existing Long-Term Watershed Monitoring Program (COA Project)

During the summer season and part of the fall, staff completed 2 wet weather and 2 dry weather events which were targeted for sampling at 6 sites on the Wye River within the Elmvale settlement area as part of the Stormwater/Wastewater Receiving Water Monitoring Pilot Project. Water samples were analyzed for nutrients, suspended sediments, chloride, and field measurements of flow, dissolved oxygen, conductivity, turbidity, and temperature were taken.

PWQMN (Provincial Water Quality Monitoring Network)

Conducted 3 sampling runs at 14 sites during this quarter throughout the watershed, collecting chemistry samples and corresponding field data such as temperature, dissolved oxygen, conductivity, and turbidity. Staff performed maintenance and downloaded data from the PWQMN Program conductivity sensor. The sensor was installed at a downstream site on the Coldwater River over the summer. Sensor cleaning and downloading was performed. Data will be used to establish a baseline range which can help detect external impacts on water quality, like storm events and de-icing salts. This is the second season the sensor has been in place.



Collecting manual groundwater level readings

PGMN (Provincial Groundwater Monitoring Network) Wells

Hourly water level and temperature data continue to be collected hourly. Loggers downloaded and manual water level readings recorded, at nine wells. The data is used to collect baseline conditions and assess how groundwater is being affected by land use, climate change, and track trends and emerging issues within the watershed.

SSEA Monitoring Well

Loggers downloaded and manual water levels collected at 6 well locations in the Township of Tiny and the Township of Springwater.

sseainfo@severnsound.ca - www.severnsound.ca

Stream Temperature

Staff has completed one download on the installed temperature loggers around the watershed. Stream temperature will be recorded at these locations every 30 minutes throughout the summer months and added to SSEA's long-term temperature monitoring dataset. Changes in water temperature can be an important indicator of natural or anthropogenic (human) impacts within an ecosystem - which can have negative or positive effects.

SSEA staff has continued updating site information for the intensive thermal stability study in portions of the Coldwater River subwatershed. This involves visiting all drainage areas and receiving waters to update drainage mapping. This multi-year project will provide background data and determine temperature classifications through modeling of all stream reaches, and helps to better understand where to focus future monitoring and stewardship efforts.

Stream Invertebrates

Completed biennial monitoring of 11 historic benthic invertebrate stations in the Hogg Creek (4), Wye River (3), Lafontaine Creek (1), Copeland Creek (1), Maclean Lake (1) and Baxter Dam (1) watersheds. Two sampling protocols were conducted at each station (sieve, t-sampling) to have a better understanding of the families present and the density. Data collected from this Program is used to determine the benthic community structure, changes over time and provide valuable information about overall stream health in our tributaries.



Picking benthos from t-samples at Lafontaine Creek

Climate Monitoring - Rain and Air Gauges

Staff has completed two downloads on all four rain gauges and one air temperature logger which had been installed in the spring. This data provides additional background information for monitoring projects in the Severn Sound and Tiny Coastal Area, putting monitoring results into context (e.g., water quality and quantity, inland lake levels, trends in algae growth and thermal stability classification for streams).

Three "Tidbit" temperature loggers were installed on rooftops to demonstrate the difference in temperature between conventional roof (black/grey) and white and green rooftops.

Weather Stations

The Midland and Lafontaine weather stations have been checked regularly using the online portal to ensure data continues to be recorded. Monthly rainfall graphs with updated average precipitation for May are now available on the SSEA website. To learn more about our weather stations and to view the available near real-time data go to the [SSEA website](#).

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

Monitoring will be ongoing until late October. End of season reminders were sent to participants regarding data submission and equipment return. Data has been received from 9 Shore and Stream Watch participants to date, and 7 water level readings have been submitted for the Water Level Watch (Farlain Lake) Program. Data from 2022 season has been compiled and the summary report is underway.

Special Projects

Soil sampling completed at Penetanguishene snow disposal site as a cost recovery project.

Farlain Lake Algae Causation Study and Algae Monitoring Program

The Farlain Lake Algae Monitoring Program volunteers finished collecting samples for the monitoring season. A total of 133 samples were received from 7 dedicated volunteers, which have been analyzed for algal pigments using handheld fluorimeters. The data collected through this citizen science program will be used in the Farlain Lake Algae Causation Study report to determine contributing factors that led to last year's blue-green algae bloom. The report will highlight the results of the study, causation factors, and recommendations for Farlain Lake and beyond. Dissolved oxygen and sediment surveys were also conducted by SSEA to shed light on additional nutrient sources.

Sustainable Severn Sound Special Project

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

Partners for Climate Protection

The Municipal Climate Leadership Committee met on September 14th. SSEA is working with the Township of Springwater to create their greenhouse gas inventory and baseline. The first sets of energy data have been received from Enbridge; HydroOne data was received in early October. All the member municipalities were very helpful in providing authorization to receive energy data from HydroOne, Alectra, and NT Power. The \$10k Municipal Climate Action offer from Enbridge has been circulated to staff for signing and submission. The work on the implementation report is underway. There will be deputations made to local councils this fall/winter to update project progress. Support the Township of Georgian Bay in a \$3.5 million proposal with Moose Deer Point First Nation to the Federal Government's Disaster Mitigation and Adaptation Fund for road improvements and animal crossing for Twelve Mile Bay Road.



J. Main with Jim Hawke and rooftop temp logger

Bee City Initiative & Projects for Pollinators

There is considerable interest in SSEA's Projects for Pollinators initiative. The community has given us positive feedback on the resource materials; there is broad community support for Bee City Municipal designations, and we continue to have more people buying into environmental stewardship and naturalization. SSEA finished distributing material funded by the TD Friends of the Environment Foundation - wildflower seed packets were a hit at special events, as are the [Native Pollinator Plants](#) guide and newly published [Gardening for Pollinators Guide](#). SSEA received multiple donations for the purchase of materials to create more pollinator seed packets - which were given away promptly at several events throughout the summer.



Team SSEA Q3 2023 - Bluewater Dunes, Tiny

Data Analysis and Reporting

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

Statistics/Data Management & Analysis

Ongoing data management consisting of PWQMN, Georgian Bay water levels and regional climate data, open water/inland lake water chemistry, zooplankton, and algae data processing continues as additional data becomes available, along with updating of long-term trends.

Reporting and Educational Content

Completed 7 conditions updates for both MacLean and Little lakes, which can be viewed [online](#) and on SSEA social media feeds. Drafted educational brochures created to educate residents on algae blooms and shoreline stewardship. New [All About Algae](#) webpage created. [State of the Bay](#) report created by Georgian Bay Biosphere released, includes content from SSEA.

The State of Severn Sound 20 Years Post-Delisting as an Area of Concern (COA Project)

This Project focuses on analyzing data and communicating findings from the last 20 years of environmental monitoring of Severn Sound and its watershed after being delisted in 2003 as an Area of Concern. Data and knowledge gaps will be identified to facilitate reporting on conditions in the Severn Sound watershed, specifically related to fish communities and river habitat feeding into Severn Sound. An expert Science Advisory Committee was established to advise the project and one meeting was held. Progress on data analysis was presented at 2 additional meetings with agencies across Lake Huron represented. Updates were made to wastewater treatment plant, fish contaminant, and tributary water quality data sets to support the Project. Drafts for 5 report sections completed. Knowledge gathering survey created to guide conversations with Indigenous Knowledge Holders.

Partnerships

New/Updated NGO partners and MOU's, Academia

SSEA continues to work with municipal and NGO/external partners to deliver effective environmental stewardship, including membership with GBB's ICECAP and the SMDHU's Climate Change Exchange Committee (CCEC) and Climate Change Charter Working Group. SSEA is also a member of the Lake Huron Partnership, and Great Lakes Ecoregion Network.

Academia

Continue to work with a PhD student from the [University of Ontario Institute of Technology](#) on a nearshore and long-term algae and water quality study in Severn Sound. Collected open water samples for quality control analysis for the project. Working with Post-Doc from [Trent University](#) on 20th Anniversary of de-listing state of Severn Sound reporting.

Patrick Jackson was a guest speaker at Orillia's [Lakehead University](#) campus with Dr. Pendea, who extended an open offer to partner with local municipalities on climate change projects specifically on his research focus area of reconstructed wetlands.

Institutions

SSEA staff connected with the Georgian Bay General Hospital CAO and forwarded energy information from Enbridge to the hospital.

sseainfo@severnsound.ca - www.severnsound.ca

Financial

Grants, Budget, Invoicing

Grants

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

- Community Donations: \$2,740
- Invasive Species Centre: \$2,000, Severn Sound Community Invasive Shrub & Tree Management (approved)
- ECO Canada Internship: \$24,963 (80% wage funding) Inland Lakes Water Quality Stewardship Intern (approved)
- Memorandum of Understanding (MOU) signed with Georgian Bay Forever to support the Save Matchedash Bay Turtle Monitoring/Habitat Improvement Project during 2023
- Invasive Species Control Fund: \$9,000, Sound Watershed Roadside Invasive Phragmites Mapping Initiative (pending approval)
- TD Friends of Environment Foundation: \$10,000, Severn Sound Citizen Science: Expanding Community Engagement (unsuccessful)
- Great Lakes Integrated Sciences and Assessments: \$30,000 USD, Project CHILL (Critical Heat Island & Local Leadership) (unsuccessful)

Budget

The 2024 draft budget was approved at the SSEA Board of Directors meeting held on July 20th with a core municipal share increase of 12.33% over 2023. Budget letters were sent to municipal partners on September 15th.

Invoicing

In Q3, SSEA issued 26 invoices: 25 cost recovery invoices to Severn, Midland, Tiny and Tay, 1 to Wye Marsh for the Invasive Species project.

Thank you from Team SSEA

- Julie Cayley - Executive Director
- Lex McPhail - IT Manager/GIS Applications Specialist
- Paula Madill - Ecosystem Technologist
- Michelle Hudolin - Manager Watershed Resilience, Wetlands & Habitat Biologist
- Aisha Chiandet - Water Scientist/ Limnologist
- Melissa Carruthers - Manager Source Water Protection, RMO/RMI
- Judy Limoges - Treasurer
- Nikki Priestman - Watershed Health Specialist
- Patrick Jackson - Invasive Species Program Coordinator
- Cliff Evanitski – Office Manager
- Nicole Stott - Source Water Protection Intern
- Travis van Engelen - Tree Plant Program Specialist
- Emma Maurice - Watershed Resilience Intern
- Jon Main - Sustainability & Climate Action Coordinator
- Brian Chantler - Environmental Field Technician
- Grace McLachlin - Library Technician
- Sarah Song - Algae Causation Study Assistant
- Matteus Schwirtz-Zinser - OFAH Invasive Species Summer Technician
- Charlotte Anderson - OFAH Invasive Species Summer Technician
- Drew Garrett - Field Technician
- Sam van Heerwaarden - Field Technician
- Sarah Hutchison - Citizen Science Assistant & Field Technician

sseainfo@severnsound.ca - www.severnsound.ca



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 31-23-SSEA
Date: October 12th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Financial Services Coordinator (Treasurer)
SUBJECT: 2023 3rd Quarter Draft Financials

APPLICABLE STRATEGIC PLAN GOALS:

Strategic Plan Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 31-23-SSEA regarding the 2023 3rd Quarter Draft Financials be received as information.

Purpose of Staff Report

To provide the Board with up-to-date 2023 financials.

Background and Analysis

Please be advised that the 2023 financial report reflects that finances are trending favourably year to date September 30th, 2023. SSEA is in a net revenue position as expected. This is due to issuing the majority of its invoices in the first half of the year.

Core cost recovery revenues are underbudget and will be offset by external funding including Canada Summer Jobs and ABCA funding. Core revenues are expected to be on budget at year end once all funding has been received. With September representing 75% of the year completed, core expenses are tracking at 75% - on target.

Projects are tracking favourably and reflect that some have been invoiced and others are invoiced later in the year (for e.g. after the field season) and/or funded following grant claims submissions. Note, that as previously indicated, the funding for the Honey Harbour Water Quality Monitoring Survey Project is included in the 2023 budget but was not been approved by the Township of Georgian Bay (invoice issued to cover 2023 sample analysis costs of 2022 samples). The budget also includes funding for the Citizen Science Project which has not been secured. However, measures have been taken to keep expenses to a minimum. SSEA continues to monitor these expected shortfalls. Additional funding has been secured for projects

not included in the budget: provincial funding of \$145,000 for the Stormwater and Delisting projects (2023/2024), \$50,000 provincial funding from the Great Lakes Local Action Fund for habitat restoration, \$23,000 from the Township of Tiny for the Farlain Lake Algae Causation Study and \$15,000 GBF funding for the Matchedash Turtle Study.

Items not included in the attached are planned transfers to reserve, the balance of external project funding, Canada Summer Jobs funding, interest income, various utilities, and audit fees paid/accrued later in the year.

The SSEA team continues to monitor revenues and expenses in line with the 2023 budget.

Submitted by:

Original signed by
Judy Limoges, Treasurer SSEA

Approved for submission by:

Original signed by
Julie Cayley, Executive Director

Attachment: SSEA Financial Report ending September 30th, 2023

DRAFT

| | 2023 | | 2022 | | Actual |
|---|------------------|---------------|----------------|-----------------|------------------|
| | YTD Actual | Annual Budget | Variance \$ | Actual/Budget % | |
| SSEA CORE OPERATIONS | | | | | |
| GENERAL REVENUE | (995,363) | (1,015,984) | (20,621) | 98.8% | (1,080,339) |
| UNDISTRIBUTED PAYROLL EXPENSE | 292,850 | 415,775 | 122,925 | 70.0% | 338,472 |
| ADMINISTRATION/OVERHEAD | 112,784 | 196,102 | 83,318 | 58.8% | 266,430 |
| GIS/IT | 77,270 | 106,806 | 29,536 | 72.4% | 92,478 |
| REQUESTS & REVIEWS | 11,345 | 21,000 | 9,655 | 54.5% | 16,616 |
| MONITORING & SURVEILLANCE | 72,512 | 106,614 | 34,102 | 68.0% | 115,360 |
| MONITORING SUPPORT | 38,609 | 32,025 | (6,584) | 121.1% | 24,603 |
| WATER SCIENCE | 58,332 | 65,049 | 6,717 | 90.0% | 67,964 |
| INVASIVE SPECIES | 47,111 | 72,613 | 25,502 | 65.0% | 73,064 |
| SOURCE WATER IMPLEMENTATION | 224 | 0 | (224) | 0.0% | 1,025 |
| TOTAL SSEA CORE OPERATIONS | (284,325) | 0 | 284,325 | 0.0% | (84,327) |
| SSEA IMPLEMENTATION PROJECTS | | | | | |
| GROUND WATER PROJECT | | | | | |
| Revenues | 0 | | 0 | 0.0% | (699) |
| Expenses | 0 | | 0 | 0.0% | 700 |
| FARLAIN LAKE PROJECT | | | | | |
| Revenues | 0 | | 0 | 0.0% | (4,756) |
| Expenses | 640 | | (640) | 0.0% | 3,681 |
| HONEY HARBOUR SURVEY | | | | | |
| Revenues | (11,269) | (17,768) | (6,499) | 63.0% | (12,924) |
| Expenses | 3,191 | 17,768 | 14,577 | 18.0% | 10,156 |
| WYE MARSH PROJECT | | | | | |
| Revenues | (21,884) | (18,817) | 3,067 | 116.0% | (21,152) |
| Expenses | 3,447 | 18,817 | 15,370 | 18.0% | 7,407 |
| INLAND LAKES | | | | | |
| Revenues | (17,795) | (22,043) | (4,248) | 81.0% | (18,331) |
| Expenses | 14,359 | 22,043 | 7,684 | 65.0% | 16,413 |
| TREE DISTRIBUTION PROJECT | | | | | |
| Revenues | (157,230) | (27,000) | 130,230 | 582.0% | (43,439) |
| Expenses | 144,439 | 27,000 | (117,439) | 535.0% | 43,439 |
| RMO PROJECT | | | | | |
| Revenues | (59,059) | (48,284) | 10,775 | 122.0% | (47,237) |
| Expenses | 22,564 | 48,284 | 25,720 | 47.0% | 47,237 |
| VICTORIA HARBOUR WTP SURVEY | | | | | |
| Revenues | 0 | (10,563) | (10,563) | 0.0% | (8,304) |
| Expenses | 8,229 | 10,563 | 2,334 | 78.0% | 7,128 |
| CITIZEN SCIENTIST | | | | | |
| Revenues | 0 | (13,507) | (13,507) | 0.0% | (24,318) |
| Expenses | 4,979 | 13,507 | 8,528 | 37.0% | 36,640 |
| HABITAT RESTORATION PROJECT | | | | | |
| Revenues | (45,000) | | 45,000 | 0.0% | 0 |
| Expenses | 43,693 | | (43,693) | 0.0% | 0 |
| SUSTAINABLE SEVERN SOUND | | | | | |
| Revenues | (108,935) | (72,320) | 36,615 | 151.0% | (57,020) |
| Expenses | 32,037 | 72,320 | 40,283 | 44.0% | 57,020 |
| POLLINATOR PROJECT | | | | | |
| Revenues | (250) | | 250 | 0.0% | (8,405) |
| Expenses | 1,030 | | (1,030) | 0.0% | 7,244 |
| DELISTING PROJECT | | | | | |
| Revenues | (21,000) | (100,000) | 21,000 | 0.0% | 0 |
| Expenses | 7,779 | 100,000 | (7,779) | 0.0% | 0 |
| HEALTHY SOILS = HEALTHY WATERSHED PROJECT | | | | | |
| Revenues | 0 | | 0 | 0.0% | (13,200) |
| Expenses | 0 | | 0 | 0.0% | 22,445 |
| SPECIES AT RISK | | | | | |
| Revenues | 0 | | (100,000) | 0.0% | (18,406) |
| Expenses | 2,004 | | 97,996 | 2.0% | 7,556 |
| DEPAVE PARADISE | | | | | |
| Revenues | 0 | | 0 | 0.0% | (13,415) |
| Expenses | 0 | | 0 | 0.0% | 4,521 |
| STORMWATER MONITORING | | | | | |
| Revenues | (20,000) | | 20,000 | 0.0% | 0 |
| Expenses | 31,200 | | (31,200) | 0.0% | 0 |
| FARLAIN LAKE CAUSATION STUDY | | | | | |
| Revenues | | | | | |
| Expenses | 23,022 | | (23,022) | 0.0% | 0 |
| TOTAL SSEA IMPLEMENTATION PROJECTS | (119,807) | 0 | 119,807 | 0.0% | (20,021) |
| TOTAL SSEA OPERATING (SURPLUS)/DEFICIT | (404,133) | 0 | 404,133 | 0.0% | (104,348) |

NOTE: The financial report received from the Township of Tay has been adjusted to reflect a more accurate DRAFT, unaudited report. Judy Limoges, SSEA Financial Services Coordinator (Treasurer).



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 32-23-SSEA
Date: October 13th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Financial Services Coordinator (Treasurer)
SUBJECT: 2024 Budget Update

APPLICABLE STRATEGIC PLAN GOALS:

**Strategic Plan Goal 2: Supportive Partnerships
Strategic Plan Goal 4: An Exceptional Organization**

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 32-23-SSEA regarding the 2024 Budget Update be received as information.

Purpose of Staff Report

To provide the Board with up-to-date information on the 2024 SSEA budget.

Background and Analysis

At the SSEA Board of Directors meeting held on July 20th, 2023, the 2024 budget was passed with an increase of \$114,478 (12.33%) in the core Municipal Share over the 2023 budget - based on the SSEA's Executive Committee budget reduction recommendation.

This increase is mainly due to incorporating pay equity and the new pay grid as well as increased IT and insurance costs. Budget notices were sent out to the municipal partners on September 15th, 2023. Accordingly, the following formal presentations to municipal partners have been scheduled to date, all deputations will be made in person if possible:

- Georgian Bay October 17, 2023, 9:00am
- Springwater November 13, 2023, 7:00pm
- Tiny November 14, 2023, 5pm
- Penetanguishene November 15, 2023, 7:00pm
- Midland Week of January 30, 2024

A reminder, the reduction of the 2024 budget by \$109,822 included:

- Remove full-time staff position, Watershed Monitoring Coordinator, for the year by converting a current contract position to full-time permanent status with employee benefits;

- Include 50% Provincial funding for DWSP beyond the current MOU end date of March 31, 2024. Should the MOU with the Province not be renewed, each municipal partner has enough funds in SSEA reserves to cover this potential shortfall in 2024;
- Use Capital Asset Reserve funds to fund IT asset purchases in 2024.

Conclusion/Recommendations

Staff is working on the deputation presentations and will update the Board next quarter.

Submitted by:

Approved for submission by:

Original signed by
Judy Limoges, Treasurer SSEA

Original signed by
Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 33-23-SSEA
Date: October 12th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Financial Services Coordinator (Treasurer)
SUBJECT: Honey Harbour Project Update

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 33-23-SSEA regarding the Honey Harbour project update be received as information.

Purpose of Staff Report

To provide the Board with up-to-date information on the Honey Harbour Water Quality Survey Project.

Background and Analysis

As in previous years, the SSEA 2023 and 2024 budgets include the Honey Harbour Project. A council resolution from the Township of Georgian Bay, received by SSEA on January 26th, 2023 stated that the special Georgian Bay project of three long-term monitoring sites in Honey Harbour is not included as part of the their (Georgian Bay Township) 2023 budget. The Board has previously been advised of this change. An invoice has been issued to the Township to cover the 2023 cost of the professional taxonomic services to analyze the 2022 algae and zooplankton samples collected. The cost of the Honey Harbour monitoring project was included in the 2023 SSEA approved Budget as part of the Severn Sound Open Water Monitoring Program. This will result in an underfunding of the SS OWMP in 2023.

The SSEA 2024 budget was approved by the Board of Directors on July 20th, 2023 and budget notices were sent out to municipal partners on September 15th, 2023. The Honey Harbour monitoring Project budget for 2024 is \$18,673 and is included in the 2024 SSEA approved budget. Upon receipt of the budget notice, the Township advised that the Honey Harbour monitoring project should be removed from the budget notice. The Township has been advised that giving up the SSEA provincial lab sample analysis allocation for the Honey Harbour portion of our monitoring program may make it harder to secure the required allocation in the future,

should the Township wish to include monitoring in Honey Harbour again. The future cost would increase to include this in our lab load. A letter has been sent to the Township requesting confirmation as to the timelines of this discontinuation in services.

Financial Implications

The SSEA 2023 financials will reflect the Honey Harbour project as breakeven if the 2023 invoice is paid by the Township; a shortfall if it is not, and that the SSEA 2024 budget will be short by \$18,673 funding from the Township of Georgian Bay.

Conclusion/Recommendations

Staff will monitor this project and keep the Board informed throughout 2024.

Submitted by:

Approved for submission by:

Original signed by _____
Judy Limoges, Treasurer SSEA

Original signed by _____
Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 34-23-SSEA
Date: October 11th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Treasurer

SUBJECT: SSEA EMPLOYEE GROUP BENEFIT PLAN RENEWAL NOVEMBER 1, 2023

APPLICABLE STRATEGIC PLAN GOALS:

Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 34-23-SSEA regarding the Annual Renewal Report for the SSEA Employee Group Benefit Plan from Mosey & Mosey be received as information.

Purpose of Staff Report

To inform the Board of Directors of the SSEA Employee Group Benefit Plan Renewal for the year commencing November 1st, 2023.

Background

SSEA continues to be part of a multi-employer consortium plan consisting of municipalities and their organizations developed by Mosey & Mosey and LAS. The benefits are provided through Sun Life. The Plan provides SSEA with reduced costs through volume discounts and reduced administrative costs. Other factors contributing to the annual cost of employee group benefits are the number of employees covered and their salary rates (pooled benefits: Life, AD&D, LTD). The Treasurer and Executive Director met with Mosey & Mosey representatives to discuss renewal costs.

The current annual cost is \$35,748. The renewal annual cost is \$33,576 representing a decrease of \$2,172 or 6.1%.

SSEA will continue working with Mosey & Mosey to achieve cost savings and reduce risk while continuing to maintain its ability to be an employer of choice.

Prepared and submitted by:

Approved for submission by:

Original signed by
Judy Limoges, Treasurer

Original signed by
Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Second Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 35-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Nikki Priestman, Watershed Health Specialist and Aisha Chiandet, Water Scientist/Limnologist

SUBJECT: COA: Stormwater & State of Severn Sound Report Project updates

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships
Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 35-23-SSEA regarding COA Project updates (Stormwater Monitoring and State of Severn Sound Reporting), be received for information.

Purpose of Staff Report

To update progress on the two COA-funded projects and outline upcoming activities.

Background

SSEA received Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health (COA) funds through the Ministry of Environment, Conservation and Parks (MECP) to carry out the two projects detailed below:

1) Stormwater Monitoring - Piloting the Inclusion of Wastewater and Stormwater Effluents into Existing Long-Term Watershed Monitoring Program

The goal is to characterize potential impacts and risks from both wastewater and stormwater effluent to a selected portion of the Severn Sound watershed (Wye River through Elmvale) and to demonstrate to municipalities the value of using a shared service delivery approach for monitoring of the waters receiving the effluent. The Pilot is in support of proposed MECP Consolidated Linear Infrastructure Environmental Compliance Approval certification procedures and incoming requirements, and will be used to develop and test protocols to observe the long-term trends of a municipality's stormwater management (SWM) system on receiving waters. In the future, this type of monitoring can also be used to measure the effectiveness of proactive SWM Operations and Maintenance (O&M) initiatives (e.g. clean outs, unclogging outlets, vacuum catch basins, etc.).

2) *State of Severn Sound Reporting - The State of Severn Sound 20 Years Post-Delisting as an Area of Concern (AOC)*

This Project aims to communicate findings from the last 20 years of environmental monitoring of Severn Sound and its watershed following the delisting of Severn Sound as an AOC, including gaps in information and knowledge related to the state of fish communities and fish habitat in Severn Sound and its major tributaries. A Science Advisory Committee (SAC) will help guide the selection of indicators and provide data and/or guidance on the report and its findings.

Relationships will be created with Indigenous communities to facilitate gathering knowledge on environmental change from a Traditional Oral Knowledge perspective.

Analysis/Discussion

1) *Stormwater Monitoring*

Sampling at 6 sites is timed to capture 2 wet, 1 snowmelt (spring only), and 1 dry event in each of the spring, summer and fall as applicable (up to 10 sampling events total). Water samples are analyzed for nutrients, suspended sediments and chloride. Staff uses a handheld sonde to measure temperature, pH, dissolved oxygen, turbidity, and conductivity in the field and a new flowmeter, which was purchased for the project, is used to record flow during sampling events, except during very high flows where safety is a concern. Flow must be measured in order to calculate the **load** of parameters such as phosphorus. For dates where flow monitoring is not possible, data from the gauges operated by Water Survey of Canada and Nottawasaga Valley Conservation Authority will be used to estimate flow data. To date, staff has completed 3 spring sampling events, 3 summer sampling events and 2 fall sampling events with a total of 48 sets of samples submitted for analysis. Results to date have been compiled and graphed. Early analysis shows clear impacts of wet weather events for variables like total phosphorus and suspended solids, while seasonal dynamics of chloride are less closely related to recent storm events.

Staff organized a field site visit for the SSEA Board and Springwater Township staff and Council, which was attended by 6 participants. This was a valuable opportunity to discuss the project goals and results so far, and to answer questions from staff and council members.

2) *State of Severn Sound Reporting*

A Science Advisory Committee (SAC) was created including representatives from provincial and federal agencies, academia, members at large, and those who had past involvement with the Remedial Action Plan. A Terms of Reference was drawn up, and 2 meetings have been held (1 in Q3, 1 in Q4). An overview of results from data analyses was presented at 2 additional meetings (Lake Huron Technical Committee of the Great Lakes Fisheries Commission and Lake Huron Partnership) with agencies across Lake Huron represented. Updates were made to the following datasets: wastewater treatment plant, fish contaminant, and tributary water quality, and taste and odour compounds from drinking water intake. Drafts for reports sections for 5 different indicator categories were completed and will be sent to SAC committee members for review. Reporting on results to date will occur at 3 upcoming symposia/webinars: Latornell Symposium, Lake Huron and Georgian Bay Communities Connecting Land to Lake Webinar, and Georgian Bay Biosphere Lands and Waters Gathering. A Knowledge Gathering survey was created to guide conversations with Indigenous Knowledge Holders. Meetings were held with Indigenous liaisons from Parks Canada and Georgian Bay Biosphere, as well as, the President of the Georgian Bay Métis Council. An opportunity to attend the GBMC AGM for the purpose of Knowledge gathering was extended to SSEA. Partnership building is ongoing with First Nation communities (Chimnissing, Wahta First Nations, Chippewa Tri-Council).

Conclusion/Recommendations

1) Stormwater sampling will continue into the fall/early winter and data will be analyzed and interpreted in a report after monitoring is complete. A summary of the findings and lessons learned will be shared with the Board and used to provide recommendations on developing a long-term plan to monitor ambient water quality from tributary systems that receive effluent from stormwater and wastewater facilities with all SSEA municipal partners.

2) Analysis to support State of Severn Sound reporting will continue, along with updates to datasets as required. An additional 2 meetings are planned for the SAC. Fisheries, and fish and wildlife habitat data will be gathered from partner agencies as available, along with Indigenous Knowledge, and communications celebrating the 20th anniversary of delisting will continue at events and through social media. The Project will bring awareness to the history of the Severn Sound area and the hard work that was undertaken to have it delisted as an Area of Concern, and the need for environmental stewardship so that conditions do not deteriorate.

Prepared by:

Approved for submission by:

Original signed by

Nikki Priestman, Watershed Health Specialist
Aisha Chiandet, Water Scientist/Limnologist

Original signed by

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 36-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Aisha Chiandet, Water Scientist
SUBJECT: SSEA Update on Algae Blooms in 2023

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 36-23-SSEA regarding Update on Algae Blooms in 2023, be received for information.

Purpose of Staff Report

To update the Board on blue green algae bloom occurrences during the 2023 season and planned actions to address the issue.

Background

While a natural part of lake ecosystems, excessive amounts of cyanobacteria, or blue green algae (BGA), in the form of blooms can cause human and animal health concerns for recreation and drinking water, and can indicate an ecosystem that is out of balance. High levels of nutrients, often washed off the landscape after large storm events, along with warm temperatures and sunny, calm conditions - typically contribute to BGA blooms, however exact causes are complex.

Analysis/Discussion

The 2023 season was unprecedented in terms of the number of confirmed blue green algae blooms that occurred, and the extensive spatial coverage on most of the affected waterbodies. Water quality advisories due to blooms were posted by the Simcoe Muskoka District Health Unit (SMDHU) for the following lakes in the Severn Sound watershed:

| Waterbody | Observation Submitted By | Area Affected | Duration of Advisory |
|------------------|--------------------------|------------------------|----------------------|
| Little Lake | SMDHU | Little Lake Park Beach | July 4 - Aug 11 |
| Orr Lake | resident | Entire lake | July 25 - Oct 11 |
| Penetang Harbour | SSEA staff | East shoreline | Sept 1 - present |
| Midland Bay | SSEA staff | Gawley Park Beach | Aug 25 - Sept 1 |
| Hogg Bay | SSEA staff | Northeast shoreline | Aug 25 - present |
| MacLean Lake | Resident/SSEA staff | Southwest shoreline | Aug 14 - present |
| Bass Lake | SSEA staff | Northeast shoreline | Oct 5 - present |

SSEA staff also observed high densities of algae in the open waters of Severn Sound coinciding with blooms in late August, which were confirmed to include several BGA species capable of producing toxins. A water quality advisory was not issued for the whole of Severn Sound mainly due to how quickly accumulations can move with wind and water currents, and the need to focus testing efforts on areas where people interact with the water (i.e. beaches, water intakes). A bloom also occurred on Farlain Lake. However, it was short-lived, affected only a small area and did not result in elevated toxin levels, so an advisory was not issued. A total of 7 water quality advisories were issued this year compared to 3 in the Severn Sound area in 2022. In the Muskoka District portion of the SMDHU, 6 advisories were issued in 2023, indicating that this problem is not unique to the Severn Sound area.

Agency Support

SSEA staff worked closely with the Ministry of Environment Conservation and Parks (MECP) on collecting and submitting samples for identification analysis of algal toxins. The SMDHU was a key partner in assessing the risk to public health and determining whether a bloom warranted a water quality advisory. They were also responsible for communicating results and updates to the municipalities affected. A current listing of active and recent water quality advisories due to blooms, along with advisories from 2022, can be found on their [website](#).

SSEA Actions

To communicate advisories issued by the Health Unit, SSEA shared social media posts and created additional social media content on algae blooms (below). Additionally, an [All About Algae](#) webpage was created and brochures on algae and stewardship actions were drafted.

A Closer Look: Blue-Green Algal Blooms

What is algae (phytoplankton)?

- Very diverse group of eukaryotic, photosynthetic organisms
- Vital components of lake food webs
- Can exist as single cells, or as groups of cells in colonies

What is blue-green algae?

- Cyanobacteria, or blue-green algae, are naturally occurring microscopic organisms (actually bacteria) that can photosynthesize.
- There are some species that are harmful and can produce toxins
- Under certain conditions, can multiply quickly and create harmful algal blooms

Take these steps to help reduce growth of blue-green algae:

- Limiting nutrient inputs will help to control blooms
- Use phosphate-free products
- Avoid using fertilizers on lawns
- Maintain a natural shoreline
- Reduce runoff by planting or maintaining native vegetation
- Minimize the amount of hard surfaces

MacLean Lake (2019)

Farlain Lake (2022)

Causes and Effects of Blue-Green Algae Blooms

Causes

- Combination of suitable environmental conditions:
 - Abundant light
 - Warm temperature
 - Calm wind conditions
 - Increased nutrients (esp. phosphorus)

Sources of excess nutrients:

- Fertilizers and stormwater runoff
- Soil erosion
- Residential sewer/septic leakage

Effects

- Can produce toxins that are harmful to both human and animals
- Health effects include: nausea and vomiting, skin, eye or throat irritation, breathing difficulties, and in extreme cases, nerve and liver poisoning
- Pet and livestock illness and death can occur if animals consume large amounts of water containing toxins

If you suspect a blue-green algae bloom, be cautious and assume that toxins are present to avoid exposure. Contact the Ministry of Environment Conservation and Parks (MECP) Spills Action Centre. Incidents can be reported online or by phone 1-866-MOETIPS (6638477).

Quick ID Tips: Algae in the Severn Sound Area

Blue-green algae

- Can produce toxins!
- Bright bluish-green colour
- Paint slick or floating specks
- Fingernail clippings
- Peas
- Frog skin
- Can have strong odour

Green algae

- Non-toxic!
- Dark to yellowish green colour depending on type and age
- Stringy or woolly, mat-like
- Cloudy-like, often around aquatic plants
- Bubbles embedded in thick mats
- Stringy ring around rocks

To support MECP's work creating BGA bloom thresholds using algae pigment data measured with a handheld fluorometer, SSEA collected more open water and inland lake samples and analyzed them using fluorometers. This info along with lab-derived chlorophyll *a* data will help calibrate the meters and set thresholds to prioritize suspected bloom events for toxin testing.

The Farlain Lake Algae Causation Study, funded by the Township of Tiny, serves as a model for citizen science-led algae bloom monitoring and for investigating causes of algae blooms on other lakes. It is important to note causes of BGA blooms are complex and can vary annually. Regardless, it is imperative that shoreline property owners and lake managers take all possible steps to reduce the severity of blooms. In response to this need and using the learnings from the Township of Tiny project, SSEA created an internship position (Inland Lakes Water Quality Stewardship Intern) funded in part (80%) by Eco Canada to focus on reporting on inland lake water quality and communicating stewardship actions to shoreline property owners. The intern role will also include planning/hosting public education sessions on lake stewardship and recommendations for shoreline habitat improvements as well as seeking grants and funding opportunities to support shoreline stewardship programs.

Expected Impact on SSEA budget/workload

The 10-month internship position (September to June 2024) will use \$9,002 dollars from the approved core payroll budget for interns (2023-2024) to supplement the 80% wage funding from ECO Canada. Part of the position's duties involve seeking additional funding opportunities to implement stewardship actions. Additional in-kind support from SSEA may be required depending on future grants.

Conclusion/Recommendations

After an unprecedented 2023 algae bloom season in the Severn Sound area with a total of 7 confirmed blooms requiring Water Quality Advisories, and rising concern from municipalities and the community, the SSEA created an internship position (with 80% external funding) to focus on this issue.

Prepared by:

Approved for submission by:

Original signed by
Aisha Chiandret, Water Scientist

Original signed by
Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 37-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Emma Maurice, Climate Resilience-Habitat Intern
SUBJECT: **Improving Habitat in the Severn Sound Watershed Project (GLLAF) Update**

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 37-23-SSEA regarding Improving Habitat in the Severn Sound Watershed Project (GLLAF) Update, be received for information.

Purpose of Staff Report

To provide an update on the Improving Habitat in the Severn Sound Watershed Project.

Background

In Q4 of 2022, the SSEA successfully negotiated a one-year \$50,000 Transfer Payment Agreement for the *Improving Habitat in the Severn Sound Watershed* Project with the Ontario Ministry of Environment, Conservation and Parks, through the Great Lakes Local Action Fund (GLLAF).

The objective of the Project is to support a pilot initiative implementing 20,000 m² of habitat naturalization/restoration work on municipally-owned land. The Project includes volunteer engagement and broad communications, education and outreach to raise awareness, as well as, empowering the community and transferable methods to other partner municipalities. The towns of Penetanguishene and Midland are hosting the 2 pilot projects.

Analysis/Discussion

During Q3 of 2023, SSEA staff completed the following tasks:

- Visited and contacted local nurseries and suppliers to source native plants and seeds;
- Purchased supplies to facilitate habitat improvement activities such as shovels, rakes, gardening gloves, weed wrenches and mulch;
- Continued habitat improvement activities at designated sites, including coordinating volunteers to remove invasive plants, plant native shrubs and wildflowers, and spread native seed mix;

-
- Removed approximately 180 kg of invasive species
 - Planted 168 potted shrubs
 - Purchased 800+ potted wildflowers and native plants
 - 145 wildflowers were planted at Therrien Park by SSEA and Penetanguishene staff
 - 92 wildflowers were planted at JT Payette Park by 25 campers and councillors from the BGC Penetanguishene summer camp
 - 83 wildflowers were planted at Edgehill Park by SSEA staff and one volunteer
 - 147 wildflowers were planted at Ernest T. Bates Park by SSEA staff, 2 volunteers and the grade 5/6 class of Sacred Heart School
 - 92 wildflowers were planted at Little Lake Park
 - Organized and scheduled additional volunteer groups to help plant the remaining wildflowers early in Q4 (October)
 - Purchased 46.5 kg of native wildflower and grass seed;
 - Seeded 3.5 kg at Therrien Park
 - Seeded 5 kg at Ernest T. Bates
 - Remaining seed mix will be spread at the other 3 habitat enhancement sites in Q4
 - Hosted a public nature walk to communicate about the Project and the importance of naturalization and habitat creation; and
 - Interviewed by Midland Today and CFRH French radio station to promote the Project, raise awareness of the importance of naturalization and habitat creation, and invite volunteers.

External funding for the Project Coordinator ends October 31, 2023.

Conclusion/Recommendations

The GLLAF project is on target and SSEA expects to meet performance measures and deliverables by the end of the Project in December 2023.

Prepared by:

Approved for submission by:

Original signed by

Original signed by

Emma Maurice, Climate Resilience-Habitat Intern

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 38-23-SSEA
Date: October 26th, 2023
To: Chair and Members, SSEA Board of Directors
From: Michelle Hudolin, Manager Watershed Resilience, Wetlands & Habitat Biologist
SUBJECT: SSEA Grant Application Update

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community
Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 38-23-SSEA regarding SSEA Grant Application Update, be received for information.

Purpose of Staff Report

To update the Board on funding applications that are currently pending approval, have not been approved during the third quarter of 2023, or are pending submission and will impact budget and workload in 2023 and beyond.

Background

The following lists approved funding applications, those submitted in Q3 of 2023 and are pending approval, or applications pending submission, if applicable. Support letters provided for external partners are also included, if applicable.

Approved Funding:

1) County of Simcoe Forestry Grant/MOU

Project Title: SSEA Community Tree Planting

Program Supported: volunteer-supported tree planting projects

Approved For: \$174 over 1 year

Description: 100% of seedling costs eligible for reimbursement, when seedlings are planted by a community group

Impact: Funding covers seedling costs; SSEA core funding and federal 2 Billion Trees funding covers staff costs associated with organizing and implementing 2023 tree planting projects.

2) ECO Canada: Science Horizons Youth Internship Program

Project Title: Inland Lakes Water Quality Stewardship Intern

Programs Supported: Inland Lakes

Total Applied For: \$24,963 for ten months (80% wage subsidy)

SSEA Cash: \$9,002

Description: Wage subsidy to hire youth in the environmental sector.

Impact: Increase staff resources to assist with reporting on inland lakes water quality and developing shoreline stewardship initiatives and outreach material.

3) Invasive Species Action Fund (Invasive Species Centre)

Project Title: Severn Sound Community Invasive Shrub & Tree Management

Programs Supported: Invasive Species

Approved For: \$2,000 for 1 year

SSEA In-kind: \$2,151 in 2023 (staff time, vehicle/transportation)

Description: This Project will help SSEA build capacity and increase access to specialized invasive species management equipment, and to enhance engagement opportunities with the community and partners.

Impact: Build organizational capacity through purchase of equipment, and support volunteers and partners with IS management.

Funding Pending Approval:

4) Invasive Phragmites Control Fund (Invasive Species Centre/Green Shovels Collaborative)

Project Title: Sound Watershed Roadside Invasive Phragmites Mapping Initiative

Programs Supported: Invasive Species

Total Applied For: \$10,000 for 1 year

SSEA In-kind: \$5,500 in 2023 (staff time, vehicle/transportation)

Description: Survey and map invasive phragmites along roadsides in selected portions of the SSEA area. Mapping information will be shared with member municipalities to facilitate management of roadside phragmites patches.

Impact: Increase SSEA resources (staff time and equipment purchase), and support partners with planning for invasive phragmites management.

Partnership Agreements, Approved in Principal: not applicable for this quarter

Partnership Agreements, Signed:

5) Georgian Bay Forever (GBF)

Project Title: Save Matchedash Bay

Programs Supported: Natural Heritage-Species At Risk

Approved for: \$15,000 for 2023

Description: Collaborative project, including turtle monitoring and developing a turtle habitat enhancement plan (SSEA responsibility) and invasive phragmites removal (GBF responsibility) for the Matchedash Bay area.

Impacts: Increase staff resources, contribute to Severn Sound species at risk conservation and improve management of invasive species.

SSEA commitment: Turtle monitoring and development of a turtle habitat enhancement plan; in-kind support for phragmites management.

Support Letters Provided:

- 6) **Fund name:** Aquatic Invasive Species Prevention Fund
Project Title: Clean, Drain, Dry/ Aquatic Invasive Species Prevention & Education
Project Lead: Ontario Federation of Anglers and Hunters (OFAH)
Description: OFAH proposal focuses on education and outreach about aquatic invasive species, to increase prevention and awareness for key aquatic invasive species.
Impact: Increase staff expertise/resources for improving invasive species awareness and prevention.
SSEA commitment: Collaboration with OFAH and in-kind support

Community Donations: \$2,740

Analysis/Discussion

SSEA works to secure external funding both independently and in partnership with numerous organizations to support special projects and core operations that support the Strategic Plan. Note that some of the grants and partnerships pending submission are for more than one year. The current total approved funding amounts (excluding pending submissions) for the next two years (projected for all four quarters) are as follows:

- 2023 – approximately* \$438,866
- 2024 – approximately* \$77,477

*Note: project amounts for 2023 onward may change and need to be confirmed annually. 2023 amounts are unaudited values. Provincial/Federal government funded projects have a different fiscal year, and funding amounts used in each SSEA fiscal year are subject to change.

Expected Impact on SSEA budget/workload

SSEA grant applications include budgeted amounts for staff resources, which may include funds to support existing positions and/or new hires depending on the project, and other costs such as equipment, mileage/vehicle expenses, materials and supplies, and goods and services that would support the projects, if approved. Where permitted by the fund, project budgets also include an amount to support SSEA overhead expenses. The expectation is that approved grant applications would offset existing staff and equipment resources, and expand deliverables.

Prepared by:
Original signed by

Approved for submission by:
Original signed by

Michelle Hudolin, Manager Watershed Resilience, Wetlands & Habitat Biologist

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 39-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Patrick Jackson, Invasive Species Program Coordinator
SUBJECT: SSEA Invasive Species Program Update

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community
Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 39-23-SSEA, regarding SSEA Invasive Species Program Update, be received for information.

Purpose of Staff Report

To provide an update on the key activities and accomplishments of the IS Program during Q3.

Background

The Invasive Species Program is a core program of the SSEA with a goal of having a coordinated approach to IS management as well as being a central contact for local IS information. The SSEA is working to address public and municipal concerns regarding non-native invasive species establishment within the Severn Sound watershed, and to reduce the ecological, economic and social impacts of invasive species, while fostering regional partnerships and community relations.

Updates

The following is a summary of the Invasive Species Program activities in Q3 of 2023.

Monitoring, Management & Technical Support

- 2022 Municipal Invasive Species Reports were sent to municipal staff for review, and the final consolidated report is posted on the SSEA website. Final reports have been shared with municipal staff, councils and the SSEA Board.
- Created a detailed IS management plan for Therrien Park as part of the GLLAF Project.
- Monitored/surveyed for IS at inland lake and stream sites within the SSEA watershed, including Little Lake, Orr Lake, MacLean Lake, Farlain Lake, Bass Lake, Hogg Creek, Sturgeon River, Coldwater River and North River.

- Surveyed for IS at **86** municipal sites across the watershed. Surveying will continue through Q4 with results being published in the 2023 annual reports.
- Provided technical support on Japanese Knotweed management projects in several municipalities.
- SSEA participated in, supported and/or facilitated **6** IS management events:
 - Little Lake Park, Midland – Phragmites, Buckthorn (2)
 - Waubaushene Beach, Tay - Phragmites
 - Quarry Island, Georgian Bay – Phragmites
 - Ernest T Bates Park, Midland – Field Bindweed (2)

Education & Outreach

- Responded to 31 new invasive/non-native species inquiries across partner municipalities, providing technical support to municipal staff and the public. Inquiries were related to identification and requests for community science-related information; the primary species of interest were Japanese Knotweed, Invasive Phragmites, Oak Wilt, Giant Hogweed, and Eurasian Watermilfoil.
- Facilitated Noxious Plant Training with Tay Township Staff, reviewing topics such as identification, control methods, Personal Protective Equipment, etc.
- Attended many local events including Midland Canada Day, Georgian Bay Festival, Georgian Bay Hunters & Anglers 100th Anniversary, Discover Coldwater, and Tiny Township Volunteer & Sponsor Appreciation Beach Bash. Invasive Species Staff helped to expand SSEA program awareness engaging with hundreds of community members.
- Assisted with Bluewater Dunes education seminar. SSEA staff learned about the site's remediation, unique ecosystems, and IS impacts and transmission into these areas.
- Led a guided walk through Rotary Champlain Wendat Park in Penetanguishene to educate participants about IS, habitat restoration, pollinators and sustainable shorelines.

Funding

- Secured Invasive Species Action Plan Fund (Invasive Species Centre) grant for \$2,000 grant to help SSEA build capacity and increase access to specialized IS management equipment for trees and shrubs, and to enhance engagement opportunities with the community and partners. Three weed wrenches have been purchased, with more equipment pending.
- Applied to Green Shovels Collaborative – Invasive Phragmites Control Fund for \$10,000.00 to help map roadside phragmites within the SSEA watershed; Simcoe County portion will be the primary focus so that NCC's efforts in Township of Georgian Bay are not duplicated.
- Two IS Summer Technicians (12-week and 9-week contracts, respectively) started in Q2 and spanned until the end of August of Q3 to support the delivery of the SSEA IS Program. These positions were provided by Ontario Federation of Anglers and Hunters (OFAH) through *Canada Summer Jobs* and *Green Shovels Collaborative* funding.
- Provided Letter of Support to OFAH for their application to the Aquatic Invasive Species Prevention Fund for education, outreach, and signage.

Partnerships

- Collaborated with Georgian Bay Forever (GBF) on several phragmites management events in the Townships of Tay and Georgian Bay.

- Attended Phrag Free Tiny Marsh project update at Tiny Marsh led by David Hawke from MTM Conservation. This collaborative event included phragmites management organizations from across the SSEA watershed (GBF, Parks Canada, Wye Marsh).

Special Projects

- Continued to deliver work on the 2020-2024 Wye Marsh Invasive Species Management Project, including technical support.
 - Conducted pre-treatment assessments, and mapping/ground truthing of all current invasive phragmites sites in Wye Marsh.
 - Managed 8 invasive phragmites sites over approximately 120 person-hrs.

Conclusion

The SSEA Invasive Species Program has successfully fostered relationships with municipalities, partner organizations and associations. Staff continues to research and identify external funding opportunities and support municipal and community-led invasive species projects.

Accomplishments are shared through presentations, social media and other communications. Significant activities and tasks, including planning, monitoring and public/municipal outreach and education, were accomplished in Q3 of 2023, benefitting the SSEA partner municipalities and community.

Prepared by:

Approved for submission by:

Original signed by

Original signed by

Patrick Jackson, Invasive Species Program Coordinator

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 40-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Travis van Engelen, Tree Plant Program Specialist
SUBJECT: **Building Tree Planting Capacity in the Severn Sound Watershed Project**

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community
Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 40-23-SSEA regarding Building Tree Planting Capacity in the Severn Sound Watershed Project, be received for information.

Purpose of Staff Report

To provide an update on the Building Tree Planting Capacity in the Severn Sound Watershed Project, funded through the federal 2 Billion Trees (2BT) Program.

Background

The Severn Sound Remedial Action Plan/SSEA has facilitated tree plants since the early 1990s, to increase forest cover and biological diversity, and improve wildlife habitat and water quality. The SSEA helps with project planning, obtaining native tree and shrub seedlings, and coordinating groups and volunteers, including local schools and community organizations. Over 246,000 seedlings have been planted through this Program. To supplement the Community Tree Planting Program, SSEA started the Tree Seedling Distribution Program in 2007 to provide property owners with reasonably-priced, native seedlings for spring planting. Over 150,000 seedlings have been purchased and planted to date by participants.

In addition to water quality and habitat benefits of planting trees, there is a value in carbon capture: the Tree Canada Foundation reports the average Canadian tree's annual carbon storage is 2.5 kg (urban environment), and 2.8 kg (rural environment), and the lifetime carbon sequestration per tree is 200 kg and 225 kg in urban and rural environments respectively¹. As part of its habitat rehabilitation and climate change objectives, and to support its municipal partners and landowners in their efforts to protect and enhance forests and tree canopy, SSEA sought external funding to build additional capacity in its tree planting programs.

Analysis/Discussion

The SSEA is working to expand its successful tree planting programs over the next several years, as part of its habitat rehabilitation and climate change objectives, and to support SSEA's municipal partners and landowners in their efforts to protect and enhance forests and tree canopy. SSEA is developing a Plan to increase tree planting capacity as an organization and with partners, to significantly increase the number of trees planted in rural, suburban, and urban areas. The Plan will include assessing current capacity, identifying organizational gaps, defining desired capacity, exploring opportunities and challenges, and developing strategic goals.

Planning for the spring 2024 Community Tree Planting and Tree Seedling Distribution programs is underway. Staff is actively seeking landowners who are looking to plant several hundred trees on their property. Social media posts and other outreach efforts are being undertaken to find sites for spring 2024. Priority will be given to tree planting projects that align with SSEA's objectives such as increasing forest cover, increasing biological diversity, planting trees in areas that will increase forest connectivity, and planting buffers to protect water quality of streams and wetlands. SSEA staff is also working on reporting for the 2 Billion Trees project and will be completing and submitting quarterly and annual reports to Natural Resources Canada in Q4.

Financial Implications

The SSEA will be submitting reporting to the Country of Simcoe in Q4 and expects to receive reimbursement for the cost of a portion of the seedlings planted by volunteers through the 4-year Memorandum of Understanding (MOU). Staff is investigating the cost and availability of native tree and shrub seedlings for both the Community Tree Planting Program and the Tree Seedling Distribution Program. Staff is developing the pricing of seedlings for the 2024 Tree Seedling Distribution Program, with seedlings for both programs being ordered in Q4.

Conclusion/Recommendations

The SSEA is in the planning stages for its spring 2024 tree planting programs. Staff will continue to conduct site visits to prospective Community Tree Planting properties in fall and winter, and will develop and disseminate promotional material and start accepting orders for the Tree Seedling Distribution Program in Q4. The 2BT Capacity Building Project is on target and SSEA expects to meet its targets and deliverables by the end of the Project in March 2024.

Prepared by:

Approved for submission by:

*Original signed by**Original signed by*

Travis van Engelen, Tree Plant Pgm Specialist

Julie Cayley, Executive Director

References

1. Tree Canada Foundation "What Trees Can Do to Reduce Atmospheric CO2" 1999.
https://treecanada.ca/wp-content/uploads/2017/07/What_trees_can_do_to_reduce_CO2_1999.pdf



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 41-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Aisha Chiandet, Water Scientist
SUBJECT: SSEA Monitoring Program Update

APPLICABLE STRATEGIC PLAN GOALS:

- Goal 1: Sound Science**
 - Goal 2: Supportive Partnerships**
 - Goal 3: An Engaged & Informed Community**
 - Goal 4: An Exceptional Organization**
-

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 41-23-SSEA regarding SSEA Monitoring Program Update, be received for information.

Purpose of Staff Report

To update the Board on SSEA's progress of monitoring activities for 2023, including completed and outstanding field activities.

Background

Each year, SSEA conducts environmental monitoring on Severn Sound open water, inland lakes, tributaries, groundwater monitoring wells and at climate monitoring sites. This monitoring provides critical information on status and trends in environmental quality and informs municipal decision making. Monitoring data is used for such things as assessing raw drinking water conditions, informing timing of public works projects, background information for land-use planning reviews, support for Official Plans, and making recommendations on stewardship actions by municipal decision makers and residents. Being out on Severn Sound and inland lakes also allows staff to monitor for blue green algae blooms and invasive species.

For some programs, the same sites are monitored each year, and for others, areas of focus rotate. Under the Inland Lakes Monitoring Program, Little Lake is sampled annually, and MacLean Lake is sampled on a 5-year rotation, with the last survey being done in 2016. For stream invertebrate monitoring, sites are sampled biennially, with this year's focus being on the western half of the watershed. Sites on MacLean Lake will also be sampled for invertebrates using the Ontario Benthic Biomonitoring Network protocol, which is used for lakes province wide. Intensive stream temperature classification will continue this year in areas of the Coldwater River.

Analysis/Discussion

The table below provides details on planned and completed 2023 monitoring activities:

| Program | Purpose | Focus | Timing (subject to change) | Activities (to date) |
|--|--|---|--|---|
| Severn Sound open water | Long-term water quality | Severn Sound | Full runs start May 2, bi-weekly to Oct 3 | 13 runs complete; collected additional samples for project with Ontario Tech University |
| Inland lakes | Long-term water quality & levels | Little Lake Maclean L + 3 trib + 3 lake invertebrate sites | Start May 8 & 9, bi-weekly to Oct 16 & 17, respectively Invertebrate OBBN October | 12 runs complete for each lake; OBBN sampling on hold due to Blue-Green Algae Bloom |
| Drinking water intakes | Long-term water quality & algae bloom monitoring | Tay Area & Rope intakes | Monthly Jan-Apr/Oct-Dec, bi-weekly from May-Sept | 17 runs complete |
| Nuisance/ Harmful algae complaints | Respond to inquiries, identify harmful algae | Dependent on observations from residents/municipal/SSEA staff | | In-house algae pigment analysis /identification provided for 13 occurrences; additional samples collected for 9 occurrences |
| PWQMN | Long-term tributary water quality | Watershed wide | Monthly - during first week of month | 7 runs complete |
| PGMN | Long-term groundwater quality & quantity | Watershed wide | Water level checks - Apr, June, Sept, Nov Sampling – Oct, Nov | 2 downloads and level checks completed |
| SSEA Groundwater | Long-term groundwater quantity | Tiny, Tay, Springwater, Oro-Medonte | Level checks - Apr, June, Sept, Nov | 2 downloads and level checks completed |
| Stream invertebrates (benthic macro-invertebrates) | Long-term stream health | Hogg Creek, Lafontaine Cr., Copeland Cr., Wye River | Aug, Sept. | Completed collection of samples for all sites; sample ID ongoing |
| Climate | Long-term rain & air temperature | Watershed wide | Spring gauge/logger installation, summer download, fall removal | 4 rain gauges, 1 air temperature logger deployed and summer download complete |

| Program | Purpose | Focus | Timing (subject to change) | Activities (to date) |
|---|---|--|---|---|
| Weather station | Long-term & real-time climate | Lafontaine, Midland | Check stations as necessary, spring/fall calibration | Routine maintenance & data downloads completed, monthly data updates complete |
| Long-term stream temperature | Long-term stream temperature & thermal classification | Watershed wide | Spring logger installation, summer download, fall removal | Summer downloads complete for all loggers, Phase 1 and 2 completed for portion of Coldwater subwatershed |
| Intensive stream temperature | Thermal classification & flow status of all reaches in one subwatershed | Coldwater River (2-3 sub-watersheds) | Phase 1 – logger installation & site recon, May to Sept. Phase 2 – evening field measurements on hot days - July/Aug/Sept | |
| Citizen science programs (Water Level Watch, Shore Watch, Stream Watch) | Supplemental environmental monitoring, water levels for Farlain Lake | Watershed wide; Farlain Lake | Removal of gauge on Farlain Lake - Nov Receive monitoring kit items for download/calibration - late Oct/Nov | Data received from 9 Shore/Stream Watch volunteers, 7 Farlain Lake water levels readings submitted |
| Stormwater/wastewater Monitoring Project | COA/MECP funded Pilot project for monitoring receiving waters for impacts of stormwater and wastewater effluent | Wye River (6 sites incl. upstream and downstream of Elmvale) | May 2023 to Dec 2023. Event based sampling – 1 Dry, 2 Wet per season and 1 Snowmelt (spring/winter only) | 1 snowmelt, 3 wet weather, 2 dry weather monitoring events |
| Farlain Lake Algae Causation Study | Township of Tiny funded - Investigate the causes of blue-green algae blooms, with the assistance of citizen science volunteers. | Farlain Lake (2 offshore and 3 nearshore sites) | May to October, weekly water sampling for pigment analysis; sediment sampling and dissolved oxygen survey in Aug/Sept | 4 sampling events conducted by 7 volunteers; 28 samples analyzed for algae pigments; oxygen and sediment sampling completed |

Results Reporting

Further information on monitoring programs and results reporting can be found online:

- [Monitoring Results](#) section on SSEA’s website houses Inland Lake updates for the current field year. Information and results from Severn Sound monitoring can be found [here](#) & in various [reports](#).
- Provincial websites provide results from [PWQMN monitoring](#) & [PGMN monitoring](#).
- SSEA [website](#) & [Weather Stations](#) page shows near real-time data from SSEA climate/weather stations along with monthly rainfall data updates.

- Citizen Science Program results for 2020 and 2021, along with the 2022 report when completed, can be accessed [here](#).

2024 Planning

Staff will be looking at known and possible changes to external support (Georgian Bay Township withdrawal from Honey Harbour sampling and Provincial support reductions) for the monitoring program as they develop the 2024 monitoring plan.

Expected Impact on SSEA budget/workload

To support the above monitoring activities, it has been and will continue to be necessary for field staff to work some overtime hours. This will be compensated as time-in-lieu. Summer monitoring was conducted by existing SSEA staff, with the addition of a fully funded 4-month environmental co-op student through Georgian College (started May 1st), 2 Field Technicians (started July 7th), a Citizen Science Assistant/Field Technician (started July 6th), and an Algae Causation Study Assistant (started May 1st). The Field Technicians and Citizen Science Assistant/Field Technician were partially funded through Canada Summer Jobs. Remaining field activities will be completed by existing SSEA staff, including the Algae Causation Study Assistant position which is a 10-month internship.

Monitoring equipment was purchased with support from special project funding from the Township of Tiny (Farlain Lake Algae Causation Study, field fluorometers) and from a COA grant (Stormwater/wastewater monitoring project, flow meter). A grant from HCF allowed for the purchase of chest waders, a new zooplankton net for inland lakes, and GPS unit.

There was a need for an additional vehicle to support both monitoring activities and other SSEA program needs during the 2023 season, and so a rental truck was procured from May-October. This reduced the need for personal vehicle use and mileage claims and was critical in the success of the monitoring season. Once the rental period ends, some personal vehicle mileage costs may be incurred to carry out field work or deliver water samples if the SSEA van is in use, though this is expected to be minimal.

Changes to external program support will be incorporated into 2024 planning as the information become available.

Conclusion/Recommendations

The 2023 field season was a success and included a variety of monitoring programs that continue to provide critical information across the Severn Sound watershed. Reporting on new and existing datasets will continue, using various formats to inform municipal partners and residents. It is recommended that a short-term vehicle rental be considered for the 2024 season given how important it was for the 2023 season. Staff also recommend that the SSEA Board write a letter to MECP thanking them for their ongoing lab load support and the SSEA continued commitment to the partnership in monitoring open water, groundwater (PGMN) and tributaries (PWQMN).

Prepared by:

Approved for submission by:

Original signed by
Aisha Chiandet, Water Scientist

Original signed by
Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 42-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: All Staff
SUBJECT: **SSEA Past and Upcoming Events Update**

APPLICABLE STRATEGIC PLAN GOALS

Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 42-23-SSEA regarding SSEA Past and Upcoming Events, be received for information.

Purpose of Staff Report

To outline key events hosted and attended by SSEA in Q3 2023, and upcoming events in Q4.

Background

Engaging with community and partner organizations is one of SSEA's core services. Facilitating and participating in community events or virtual webinars allows SSEA to:

- engage and educate community members, promote SSEA programs and services;
- encourage stakeholders and community to follow best management practices; and
- increase capacity through volunteers to deliver services and special project work.

Analysis/Discussion

SSEA has facilitated and/or participated in 27 events in Q3, detailed in **Table 1**. Approximately 13,246+ people attended, participated or volunteered in these events. To date, SSEA anticipates facilitating and/or participating in 5+ events in the Q4 of 2023, detailed in **Table 2**.

Table 1. List of events that SSEA facilitated and/or participated in during Q3 of 2023.

| Event Name | Event Coordinator | Relevant Program(s)/ Project(s) | Target Audience/ Region | Participants/ Volunteers |
|---|--|--|---|---------------------------------|
| Great Lakes Fishery Commission - Lake Huron Technical Committee | Great Lakes Fishery Commission | State of Severn Sound Project | Committee members, binational representation | 17 |
| Midland Canada Day | Town of Midland | All | Midland area residents, open to all | ~10,000 |
| Simcoe County Federation of Agriculture Annual Summer BBQ | Simcoe County Federation of Agriculture | All | Simcoe County agricultural community | 150 |
| Discover Coldwater | Township of Severn, Coldwater Business Improvement Area | All | Coldwater and area residents, open to all | 250 |
| Community BBQ - Township of Tiny | Township of Tiny | All | Township of Tiny residents | 1,600 |
| Northeast Agricultural / Biological Engineering Conference | Northeast Agricultural / Biological Engineering Conference | Drinking Water Source Protection | Agricultural and Biological Engineers in Northeast Canada & the United States | 250 |
| Georgian Bay Festival | Georgian Bay Festival | All | Residents of the Township of Tiny | 200 |
| Township of Tiny Farm Crawl | Township of Tiny | All | Residents/visitors of Tiny | 50 |
| Volunteer & Sponsor Appreciation | Township of Tiny | All | Volunteers, Sponsors, and Partners Twp.of Tiny | 50 |
| Huronian Museum - Heritage Boat Show and Water Ceremony | Huronian Museum, Canadian Water Museum, Georgian Bay Heritage League | All | Town of Midland and surrounding area | 80 |
| Georgian Bay Hunters & Anglers 100th Anniversary | Georgian Bay Hunters & Anglers Club | All | Public | 220 |

| | | | | |
|---|--------------------------------------|---|---|----|
| Guided Nature Walk | SSEA | Pollinators, naturalization, rehabilitation, invasive species | Public | 5 |
| Huronian Woodland Owners Association Fall Field Day | Huronian Woodland Owners Association | All | Huronian Woodland Owners | 20 |
| Lake Huron Partnership - Working Group mtg | ECCC, EPA | State of Severn Sound Project | Working group members, binational representation | 25 |
| Invasive Species Management - Little Lake Park | SSEA | Invasive species, GLLAF | Hosted in Town of Midland, open to the public | 2 |
| Wildflower Planting - JT Payette Park | Town of Penetanguishene | GLLAF, pollinators, naturalization, rehabilitation | BGC Penetanguishene Summer camp | 30 |
| Wildflower Planting - Ernest T Bates Park | SSEA | GLLAF, pollinators, naturalization, rehabilitation | Hosted in the Town of Midland, open to the public | 2 |
| Wildflower Planting - Ernest T Bates Park | Town of Midland | GLLAF, pollinators, naturalization, rehabilitation | Sacred Heart School, Town of Midland | 20 |
| Shrub and Wildflower Planting - Edgehill Park | SSEA | GLLAF pollinators, naturalization, rehabilitation | Town of Midland, open to the public | 1 |
| Wildflower planting and seeding - Edgehill Park | SSEA | GLLAF, pollinators, naturalization, rehabilitation | Organized volunteer group | 2 |
| Phragmites Free Tiny Marsh Walk with Dave Hawke | MTM Conservation | Invasive Species | Project Collaborators: GBF, Parks Canada, SSEA, MPFN, Wye Marsh, volunteers | 14 |
| Waubaushe Beach Phragmites Cut with | Georgian Bay Forever | Invasive Species | Tay Township | 9 |

| | | | | |
|--|------------------------------------|---|--|----------------|
| Quarry Island Phragmites Cut | Georgian Bay Forever | Invasive Species | Township of Georgian Bay | 13 |
| Tay Township Noxious Plant Presentation | SSEA | Invasive Species | Tay Township/ Municipal Staff | 25 |
| Stormwater/ Wastewater Monitoring Project Demo Day | SSEA | Stormwater/ Wastewater Monitoring Project | Township of Springwater council/ municipal staff, SSEA Board | 6 |
| Honey Harbour Association AGM | Honey Harbour Association | Honey Harbour monitoring, invasive species, pollinators | Honey Harbour Association members | 80 |
| Farlain Lake Community Association AGM | Farlain Lake Community Association | Farlain Algae Causation Study | Farlain Lake Community Association members | 49 |
| 3 Ministry Information Sessions | SSEA and the Township of Severn | All | Municipal Staff and Council | 76 |
| TOTAL VOLUNTEERS/PARTICIPANTS | | | | 13,246+ |

Table 2. List of upcoming events that SSEA will be facilitating and/or participating in during Q4 of 2023.

| Event Name | Date | Relevant Program(s)/Project(s) | Target Audience/ Region |
|---|-------------|---------------------------------------|---|
| Georgian Bay Honey Bee Festival | October 1 | All | Georgian Bay Township |
| Latornell Symposium | Oct 24 | State of Severn Sound Project | Agencies working on conservation, watershed science |
| Lake Huron and Georgian Bay Communities Connecting Land to Lake Webinar | Oct 26 | State of Severn Sound Project | Lake Huron wide |
| Simcoe County Fed. Of Ag. AGM | Oct 26 | All | Agriculture community |
| Georgian Bay Metis Council AGM | Nov 12 | State of Severn Sound Project | Georgian Bay Metis community |

| | | | |
|---|--------|-------------------------------|--|
| GLWQA Annex 2 Lake Huron Partnership Management Committee | Nov 15 | All | Lake Huron wide, action & funding priorities |
| Georgian Bay Biosphere Lands and Waters Gathering | Nov 29 | State of Severn Sound Project | Georgian Bay wide, partners on State of the Bay report |

Conclusion

SSEA staff has continued to foster relationships with municipalities, partner organizations and associations by facilitating and participating in community engagement events. **In the 3rd Quarter of 2023 staff attended 27 events with over 13,246 attendees/impressions.**

Prepared by:
Original signed by

Approved for submission by:
Original signed by

 Nicole Stott, Source Water Protection Intern

 Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 43-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Melissa Carruthers, Manager Source Water Protection, RMO/RMI
SUBJECT: **Severn Sound Source Protection Authority (SS SPA) Drinking Water Source Protection Update and SSEA Risk Management Services 2023 Q3 Update**

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 43-23-SSEA regarding an update on the activities undertaken by SS SPA and SSEA Risk Management staff during Q3 of 2023, be received for information.

Purpose of Staff Report

To provide an update on the activities that Severn Sound Source Protection Authority and SSEA Risk Management staff have undertaken during the third quarter of 2023.

Background

Under the *Clean Water Act, 2006* the SSEA is one of the Source Protection Authorities within the South Georgian Bay Lake Simcoe Source Protection Region (SGBLS SPR) and works with our member municipalities as well as the District Municipality of Muskoka to implement the Drinking Water Source Protection (DWSP) Program.

Historically staff of the SSEA has been delegated by 8 municipalities (District Municipality of Muskoka, townships of Georgian Bay, Severn, Oro-Medonte, Tay, Tiny, and towns of Midland and Penetanguishene) to preform risk management services on behalf of their municipality under Part IV of the *Clean Water Act*. To date that work has included verifying significant drinking water threats (SDWTs) via phone calls, surveys, and site visits and if a SDWT was found, the negotiation of risk management plans begins. Answering inquiries from the general public or municipal staff and commenting on development proposals are also a large part of the risk management staff workload.

Analysis/Discussion

Source Protection Authority Services - During the third quarter of 2023 Source Protection Authority staff completed the following tasks:

- Continued to work with provincial, regional, and local representatives, and attend meetings, to fulfill the requirements of the 2022-2024 funding agreement work plan, some of which includes policy work, municipal drinking water system changes, and general education and outreach initiatives.
- Submitted an early engagement package regarding Cassell Drive (Springwater) to MECP for their review. Presented Cassell Drive (Springwater) and Fourth/Vindin St (Midland) to the local Source Protection Committee.

Risk Management Services - During the third quarter of 2023 risk management staff has completed the following tasks:

- Answered 23 inquiries, commented on 12 development applications, sent out 3 draft risk management plans, signed 2 risk management plans, conducted 2 site visits, attended 2 pre-consultation meetings, and one risk management plan negotiation meeting.
- Current status of Risk Management Plans in the Severn Sound Area:

| | Estimated remaining Jan 1 2023 | Estimated to be removed w s.34 | 2023 Q1 Signed | 2023 Q2 Signed | 2023 Q2 Removed | 2023 Q2 Ordered | 2023 Q3 Signed | Remaining as of Sept 30, 2023 |
|-----------------|--------------------------------|--------------------------------|----------------|----------------|-----------------|-----------------|----------------|-------------------------------|
| Midland | 14 | 6 | | | 1 | | 1 | 6 |
| Penetanguishene | 1 | | | | | | 1 | 0 |
| Tiny | 12 | | 5 | | | | | 7 |
| Severn | 6 | | 1 | 1 | | 1 | | 3 |
| Oro-Medonte | 1 | | 1 | | | | | 0 |
| Tay | 1 | | | | | | | 1 |
| | 35 | 6 | 7 | 1 | 1 | 1 | 2 | 17 |

Conclusions

SSEA risk management staff is currently on track to achieve the South Georgian Bay Lake Simcoe Source Protection Plan policy TIME-1 deadline, that MECP has extended to July 1st, 2024, for risk management plan completion.

Prepared by:

Approved for submission by:

Original signed by

Original signed by

 Melissa Carruthers, Manager Source Water Protection, RMO/RMI

 Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 44-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Jon Main, Sustainability and Climate Action Coordinator
SUBJECT: **Local Climate Change Action Plan project update**

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science
Goal 2: Supportive Partnerships

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 44-23-SSEA regarding Sustainable Severn Sound Special Project – Local Climate Change Action Plan, be received for information.

Background

The Severn Sound municipalities worked together in 2009 to develop the region's first Sustainability Plan. That Plan led to successful environmental initiatives across the watershed. In 2018 Sustainable Severn Sound received funding to develop the region's first Climate Change Action Plan. There were 6 local action plans developed as part of this project, with the local municipalities signing onto the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP). Springwater joined the initiative in 2022. SSEA is working with Oro-Medonte staff on their potential to join the PCP Program. In 2023 a **Sustainability and Climate Action Coordinator** was hired to continue work on the Project; after a few months for staff onboarding, the Program is back on track.

Analysis/Discussion

Staff is working to achieve the next milestone for 6 of the partners. Milestone 4 entails the preparation of an implementation report. Staff is working towards meetings with town/township staff to review actions, current reviews of policy and plans, and discuss climate action tools and financing options. The Municipal Climate Leadership Committee met September 14th and is scheduled to meet again in December.

Energy Data

There has been success in obtaining updated community energy data. Town/township staffs have helped obtain the proper authorization from HydroOne and Enbridge. A fulsome community data update is being planned for the upcoming December Municipal Climate Leadership Committee. SSEA is working to receive community energy data for Midland and Tay from NT

Power, and Penetanguishene's data from Alectra. SSEA has received monthly facility data for Township of Georgian Bay, to be used in their energy audit of all their facilities.

External Funding

There has been significant work towards obtaining external grants and funds. Staff was successful in a letter-of-intent but was not successful in the full proposal to the NOAA – Great Lakes Integrated Sciences + Assessments out of Michigan State/U of M. That proposal would have looked at urban heat island effect in our region, a key topic in climate adaptation.

Work is underway for small and large funding applications. The largest funding proposal that is of significant interest to our region is the flood mapping funding that is available from the Federal Government/ECCC. Staff has been collaborating with town/township staff to gain interest in the initiative and to work towards developing the proposal due at the end of October.

Staff also connected with Enbridge and confirmed Enbridge's Municipal Climate Action Offer, which is a no-strings-attached fund of up to \$10k (50% grant for staff time and consultant fees) available in municipalities with Enbridge natural gas presence. Staff has passed along funding information to town/township staff for their review and submission to Enbridge. This Fund will likely run for three years, creating an opportunity for additional staff time and consultant fees towards climate action. SSEA staff is available to help member municipalities apply.

Financial Implications

The Municipal Climate Action Offer from Enbridge will help pay for climate initiatives. SSEA also met with FCM to discuss current opportunities with the Green Municipal Fund.

Conclusion/Recommendations

The work on Local Climate Change Action plans is continuing, with much more work to be done. Staff greatly appreciates the support of town/township staff to obtain authorization letters for energy utilities, collaborate on policy ideas, and work together on a low-carbon future. The hard work done to date needs to be celebrated, and staff look forward to presenting the community energy data to the climate committee in December. Staff is looking forward to presenting to councils to have them up to speed on climate initiatives and to work together to implement climate action in our communities.

Prepared by:

Approved for submission by:

Original signed by

Original signed by

Jon Main, Sustainability and Climate
Action Coordinator

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 45-23-SSEA
Date: October 26th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Nicole Stott, Source Water Protection Intern and Melissa Carruthers,
Manager Source Water Protection, RMO/RMI
SUBJECT: Ministry Information Sessions Update

APPLICABLE STRATEGIC PLAN GOALS:

Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community
Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 45-23-SSEA regarding Ministry Information Sessions Update be received for information; and

FURTHER THAT: The Board supports SSEA in continuing to work with Ontario Ministries and other governing agencies to provide information sessions to all 8 member municipalities.

Purpose of Staff Report

To outline the success of the 3-part webinar series in Q3, 2023 hosted by SSEA, bringing up to date information from Provincial Ministries to municipal partners.

Background

SSEA worked with the Township of Severn to host the following three 1-hour Ministry Information Sessions.

- September 14th - [Environmental Permissions](#) with the Ministry of Environment, Conservation, and Parks
- September 28th – [Aggregate Approvals](#) with the Ministry of Natural Resources and Forestry
- October 12th – Environmental Assessments with the Ministry of Environment Conservation and Parks

The goal of this series was to provide SSEA partner municipality staff and Councils with an

improved up to date understanding of rapidly changing provincial permissions and approvals which influence economic development, local planning and initiatives and the Severn Sound environment. A brief survey to provide feedback was included at the end of the sessions.

Analysis/Discussion

Sessions had 79 municipal staff and councillors registered, 43 attended, and 98 people viewed the first and second session on the [SSEA YouTube channel](#).

Feedback included 22 responses received from the survey provided to all webinar attendees after each session. All respondents found these information sessions valuable. Respondents voiced interest in further sessions regarding permits related to work on shorelines and in water, invasive species, species at risk, the Endangered Species Act, environmental issues, landfill/waste management, wastewater disposal on farmland, and source water protection.

Conclusion

This 3-part series was viewed 141 times, supporting the SSEA partner municipalities staff and Councils' knowledge on Environmental Permissions, Aggregate Approvals and Environmental Assessment. This series has helped to further foster SSEA's relationships with Provincial Ministries, facilitating an increase in opportunity to liaison between Ministries and Municipal Partners. Municipal staff and councils find these sessions valuable and have an interest in expanding the series to include additional topics.

Prepared by:

Approved for submission by:

Original signed by

Original signed by

Nicole Stott, Source Water Protection Intern
Melissa Carruthers, Manager Source Water
Protection – RMO/RMI

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 46-23-SSEA
Date: October 12th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Julie Cayley, Executive Director
SUBJECT: Draft 2022 SSEA Annual Report

APPLICABLE STRATEGIC PLAN GOALS:

Strategic Plan Goal 2: Supportive Partnerships
Strategic Plan Goal 3: An Engaged & Informed Community
Strategic Plan Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 46-23-SSEA regarding the Draft 2022 SSEA Annual Report be received for information; and

FURTHER THAT: The Board approves the Draft 2022 SSEA Annual Report as Final without the 2022 Audited Financials Statement, to be replaced with a link to the Audited Financial Statements section of the SSEA website (www.severnsound.ca) along with an explanation. Subsequent Annual Reports will include a link to the Audited Financial Statements section of the SSEA website along with an explanation.

Purpose of Staff Report

To present to the Board the preliminary draft of the 2022 SSEA Annual Report for approval.

Background and Analysis

The Letter of Agreement signed by SSEA's municipal partners in March 2009 requires an Annual Report outlining the progress made in implementing the organization's Strategic Plan by June 30th of each year. In previous years, SSEA's annual reporting process has included a financial summary based on the relevant year's Audited Financial Statement. However, delays in receiving the audit in 2022, as in several previous years, has led to a significant delay in releasing the Annual Report. As Annual Reports showcase progress for the previous years work, the information in them is time sensitive.

In order to expedite the release of SSEA annual reports so that the information contained is relevant and timely, staff is recommending removing the actual audited financials from the annual report. A link to them for when they are available would be included within the Report. This would allow for the release of the annual reports without waiting on the audited financials

but still provides transparency by linking the readers to the audited financials on the SSEA website.

Conclusion/ Recommendation

The 2022 SSEA Annual Report shows significant progress towards implementing the 2018-2023 Strategic Plan, as well as, highlighting services delivered in a number of programs. SSEA staff recommends excluding Audited Financial Statement information from the 2022 report and subsequent annual reports, providing a link to the Audited Financial Statement section on the SSEA website for when they become available.

Prepared by:

Approved for submission by:

Original signed by

Original signed by

Cliff Evanitski, Office Manager

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2023 Third Quarterly Meeting (Q3) – October 26th, 2023**

STAFF REPORT

No: 47-23-SSEA
Date: October 17th, 2023
To: Chair and Members of the SSEA Board of Directors
From: Cliff Evanitski, Office Manager; Julie Cayley, Executive Director
SUBJECT: 2023 SSEA Strategic Plan Refresh

APPLICABLE STRATEGIC PLAN GOALS:

Goal 2: Supportive Partnerships
Goal 3: An Engaged & Informed Community
Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 47-23-SSEA regarding the 2023 SSEA Strategic Plan Refresh be received as information.

Purpose of Staff Report

To inform the Board about the current status of the SSEA Strategic Plan Refresh.

Background

The existing SSEA strategic plan was developed in 2018 and is a five-year document that expires at the end of this year. The 2023 budget included \$15,000 for this initiative and was funded from the contingency reserve. SSEA contracted with PSI Planning Solutions to assist in the development of the Plan and refresh. The quote received from PSI for the renewal was \$10,000 plus mileage.

Analysis & Update

To save cost, the SSEA staff will be conducting the one-on-one Thought Leaders and municipal staff interviews; SSEA Board members will be completing one-on-one mayor interviews. Online surveys for Community and Partner stakeholders are being distributed to media outlets, an extensive list of partners including alumni, municipal staff and Federal and Provincial staff as well as being posted to the SSEA website in order to expand potential survey reach within the SSEA community and watershed. The deadline for input is October 30th 2023.

As of October 17, 2023, 20 thought leader one-on-one interviews have been completed. The online community and partner surveys went live October 2nd. As of October 17, 2023, 218 community surveys and 26 partner surveys have been completed. Board and staff in-person workshop sessions are booked for November 13, 2023 with a target to have the first draft of the refreshed strategic plan completed by November 24th and the final draft for Board review and

input December 4th. The Final SSEA refreshed strategic plan will be completed December 22, 2023 and presented to the Board at the January 25, 2024 Q4 meeting.

Conclusion/Recommendations

The SSEA strategic plan refresh is on target to be completed 2023 fiscal. This Plan will set the stage for SSEA’s workplans over the next 5 years.

Submitted by:

Original signed by _____
Cliff Evanitski, Office Manager

Approved for submission by:

Original signed by _____
Julie Cayley, Executive Director

From: Fooks, Jeanette (elle, la | she, her) (ECCC) <Jeanette.Fooks@ec.gc.ca>
Sent: Friday, September 8, 2023 9:12 AM
To: Aisha Chiandet <AChiandet@severnsound.ca>
Cc: Langmuir, Amber (MNRF) <Amber.Langmuir@ontario.ca>; Hayward, Jennifer (ECCC) <Jennifer.Hayward@ec.gc.ca>; Burritt, Dave (MNRF) (<Dave.Burritt@ontario.ca>
<Dave.Burritt@ontario.ca>
Subject: [EXTERNAL] FW: Letter regarding HYDAT network in Severn Sound watershed

Good Afternoon Aisha,

Thank you for your interest in the hydrometric network.

Your inquiry from 2022 requested that the Copeland Creek (gauge 02ED019) and the Sturgeon River (gauge 02ED018) be reactivated into the hydrometric network to support water quality monitoring in the Severn Sound area.

The hydrometric monitoring network in Ontario is part of the Canada-wide National Hydrometric Program (NHP) which provides accurate, timely and standardized data and information on current and historic surface water conditions. In Ontario, funding for the network is administered by the Ministry of Natural Resources and Forestry (MNRF) through its Surface Water Monitoring Centre (SWMC) in partnership with the Water Survey of Canada (ECCC-WSC). The MNRF and ECCC work together in a committee structure – Ontario Hydrometric Program Coordinating Committee (OHPCC) to make decisions related to the operation and funding of the network.

We have discussed your request, in depth, at several of the OHPCC meetings. In addition we have carefully considered the benefits of these stations with respect to current provincial and federal mandates and regret to inform you that at this point the reactivation of these stations does not align with our established criteria we use to assess increasing the network (and commensurate funding costs).

When assessing increasing the number of stations within the network, the province considers:

- The various uses that the station(s) will support. Higher priority is given to stations that support:
 - o informed decision making on water-related issues which affect the security of life and property,
 - o legislated responsibilities, such as Emergency Management and Civil Protection Act (floods and droughts) and the Ontario Water Resources Act (permit to take water)
 - o multiple ministries, programs and projects (ie early warning for flood *and* climate change)
- The financial responsibility related to managing a federal-provincial network, including:
 - o consideration to an increased network cost - a cost estimate of reinstating these stations would result in an initial cost of \$80k (\$40k per station), plus an annual cost \$28k (\$14k per station).

- striving for no net increase in the network operational costs (ie looking for under utilized stations to be removed)
- seeking secure, external, operational funding to support any additional costs.

While we cannot support adding these stations to the network at this time without additional funding provided, it is possible to offer sharing of knowledge on monitoring if you choose to establish some form of monitoring on your own. You had indicated that your agency is able to provide in-kind support. The stations in the network are operated to ISO standards by highly trained technicians, which prevent us from accepting external support, however we would be pleased to have staff discuss economical forms of monitoring equipment. There are many options, such as seasonal sensors or un-telemetered options may meet your needs at a much lower cost and effort.

Sincerely,

Jeanette Fooks, Federal Coordinator,
on behalf of the Ontario Hydrometric Program Coordinating Committee

Jeanette Fooks, P.Eng, Ing
District Manager, Hydrometric Operations Ontario and Quebec / Gestionnaire, Opérations hydrométriques Ontario et Québec
National Hydrological Services / Division des services hydrologiques nationaux
Environment and Climate Change Canada / Environnement et Changement climatique Canada
Cellular: 905-979-2136 Jeanette.fooks@ec.gc.ca
(she/elle)



From: Fooks,Jeanette (elle, la | she, her) (ECCC) <Jeanette.Fooks@ec.gc.ca>
Sent: February 16, 2023 11:07 AM
To: Aisha Chiandet <AChiandet@severnsound.ca>
Cc: DeVries,Tim (ECCC) <Tim.DeVries@ec.gc.ca>; Langmuir, Amber (MNRF) <Amber.Langmuir@ontario.ca>; Burritt, Dave (MNRF) <Dave.Burritt@ontario.ca>
Subject: Letter regarding HYDAT network in Severn Sound watershed

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello,
Regarding the letter directed dated October 28th, 2022.

Your letter raised questions about the operation of hydrometric gauges in the Severn Sound, with interest in re-establishing gauges on Copeland Creek and Sturgeon River.

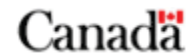
Since receiving your letter, the questions and interest have been discussed at two meetings of the Ontario Hydrometric Program Coordinating Committee (OHPCC, where the provincial and federal Coordinators discuss the operations of the network, including additions and so on).

This note is to let you know that we are looking into our history of gauging in those areas, as well as the current provincial and federal mandates currently in those areas.

Thank you for your patience,
Jeanette

Federal Coordinator, OHPCC

Jeanette Fooks, P.Eng, Ing
District Manager, Hydrometric Operations Ontario and Quebec / Gestionnaire, Opérations
hydrométriques Ontario et Québec
National Hydrological Services / Division des services hydrologiques nationaux
Environment and Climate Change Canada / Environnement et Changement climatique Canada
Cellular: 905-979-2136 Jeanette.fooks@ec.gc.ca
(she/elle)





Severn Sound Environmental Association

489 Finlayson Street, PO Box 460, Port McNicoll, ON L0K 1R0

Phone 705-534-7283 Website: www.severnsound.ca

Email: achiandet@severnsound.ca

October 28th, 2022

Ms. Jeanette Fooks, District Manager
Hydrometric Operations Ontario
Environment and Climate Change Canada
Via email: Jeanette.Fooks@ec.gc.ca

Dear Ms. Fooks,

RE: Maintenance and expansion of HYDAT network in Severn Sound watershed

On behalf of the Severn Sound Environmental Association, thank you to the Water Survey of Canada (WSC) for the important service you provide by maintaining a network of river discharge gauging stations across the country (HYDAT network). This data is essential and allows various agencies to track changes in river flow regimes, particularly as they relate to climate change, assign probabilities to extreme events (floods, low water levels) and raise awareness of risks associated with these events. The data also allows organizations like ours to more accurately interpret changes in water quality and riverine ecology, which are inherently influenced by river flow.

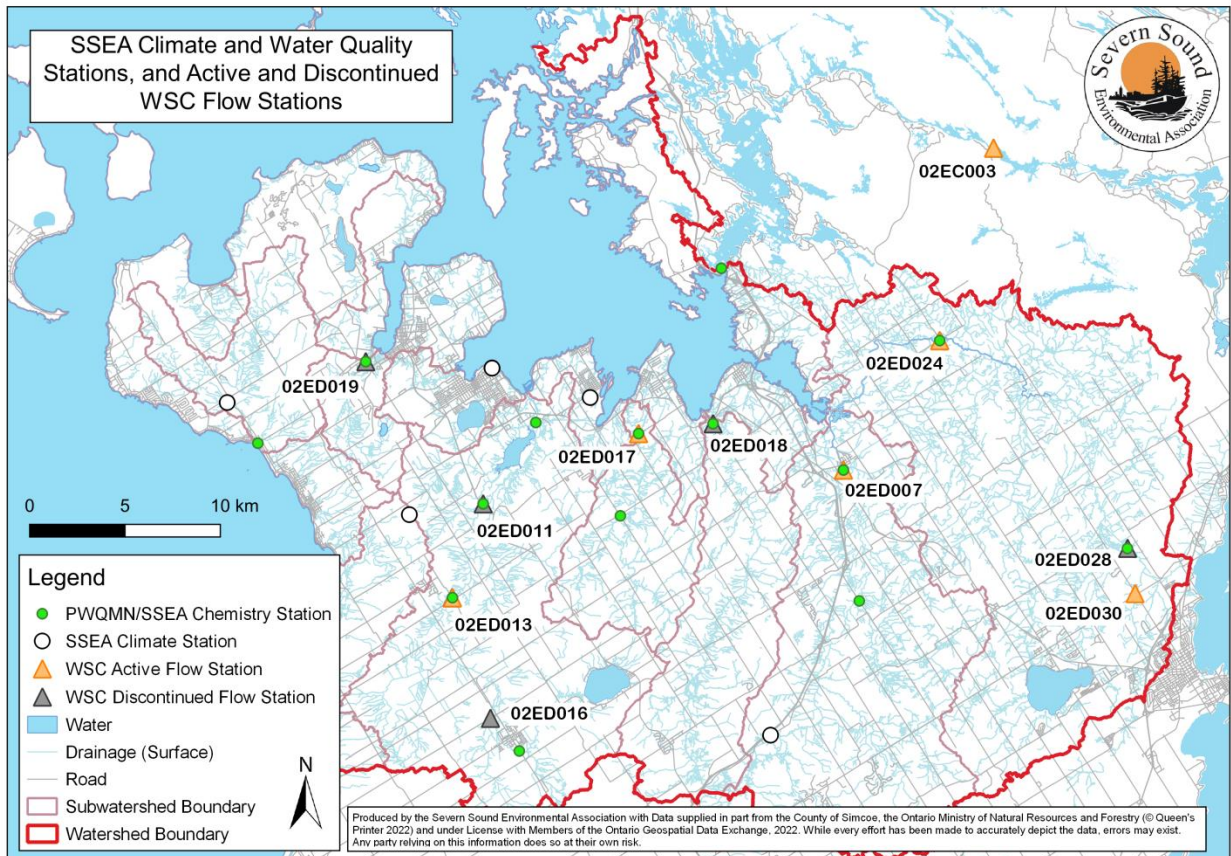
Severn Sound was one of the Great Lakes Areas of Concern successfully delisted in 2003. The Severn Sound Environmental Association (SSEA) is a Joint Service Board under the Municipal Act (Section 202), a unique partnership between 8 municipalities. There is not a Conservation Authority (CA) in our watershed. The SSEA provides support to the local municipalities as well as Federal and Provincial government partners, to sustain environmental quality and to ensure continued protection through wise stewardship of Severn Sound and its tributaries. The SSEA has over 30 years of experience in monitoring, research, partnership and successful environmental program delivery. Focused in South-eastern Georgian Bay, SSEA implements and is part of a variety of environmental monitoring programs, including the Provincial Water Quality Monitoring Network (PWQMN), many of which began while Severn Sound was listed as a Great Lakes Area of Concern (AOC).

As a relatively small organization with limited resources supporting small rural municipalities, SSEA and our partners rely on larger federal and provincial government monitoring programs to complement or otherwise support our monitoring programs. SSEA uses the discharge data provided through the HYDAT network along with data we collect such as rainfall, benthic invertebrate communities, and water chemistry to

assess the health of tributaries across the watershed. Assessing tributary health is particularly critical in light of current impacts such as land development and climate change.

When many of our monitoring programs began, there were up to 13 WSC gauges across the watershed. Many of these gauges have been discontinued, and in recent years, the infrastructure has been removed at inactive stations. Currently there are only 6 active stations. The removal of two of the gauges in particular means that there is no flow data whatsoever on two of the major tributary systems in the Severn Sound watershed, namely Copeland Creek (gauge 02ED019) and the Sturgeon River (gauge 02ED018). These gauges were discontinued in 1999 and 1998, respectively.

This gap in discharge data makes it difficult for agencies like the SSEA as well as municipalities and consultants working in the area to calculate contaminant loading, flood risk, and determine the impact of climate change on these river systems. As a delisted AOC, we are obligated to continue monitoring water quality conditions in Severn Sound and its watershed, which includes assessing watershed sources of nutrients and other contaminants. Ideally, each river system monitored for water quality should have a flow gauge associated with it. The map below shows the location of SSEA water quality monitoring stations, 12 of which are included in the PWQMN, our climate monitoring stations, and both active and inactive WSC gauges.



We urge the WSC to maintain the current network of gauges in the Severn Sound watershed, and to consider re-establishing gauges on Copeland Creek and the Sturgeon River. SSEA is open to finding creative ways to partner with federal and provincial government agencies to re-establish these gauging stations. We look forward to discussing further at your earliest convenience.

Best regards,



Steffen Walma, Board Chair
Severn Sound Environmental Association



Aisha Chiandet, Water Scientist
SSEA

CC: Julie Cayley, Executive Director, Severn Sound Environmental Association
Susan Humphrey, Regional Director General, Ontario Region, ECCC