



**SEVERN SOUND ENVIRONMENTAL ASSOCIATION
JOINT MUNICIPAL SERVICE BOARD (JMSB)
2021 Fourth Quarter (Q4) Meeting**

**January 27, 2022
9:30am – 12:00pm
Via video & telephone conference**

1. WELCOME AND CALL TO ORDER

2. ADOPT AGENDA

3. DECLARATION OF PECUNIARY INTEREST

4. APPROVAL OF PAST MINUTES

4.1 Minutes of 2021 Third Quarter (Q3) meeting of the SSEA Joint Municipal Service Board held October 25, 2021

4.2 Minutes of the SSEA 2021 Special Meeting of the Board held December 10, 2021

4.3 Business arising from the minutes

5. ELECTION OF SSEA CHAIR AND VICE CHAIR

*SEVERN SOUND SOURCE PROTECTION AUTHORITY MEETING
No SSSPA Mtg.*

6. SSEA FOURTH QUARTER 2021 REPORT

7. PRESENTATIONS

7.1 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 –Tamara Brincat (SSEA Invasive Species Program Coordinator)

7.2 SSEA 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 Report

8. SSEA FINANCIAL REPORTS

8.1 Staff Report 55-21-SSEA - 2021 4th Quarter Draft Financials

8.2 Staff Report 56-21-SSEA – 2022 Staff COLA Salary Increase

8.3 Staff Report 57-21-SSEA - SSEA Reserve Schedule - At December 31, 2021 and Projected Reserve Schedule at December 31, 2022

8.4 Staff Report 58-21-SSEA- Township of Tay Request use of SSEA Reserve for 2022

8.5 Staff Report 59-21-SSEA - Appointment of Auditors for 2021

8.6 Staff Report 60-21-SSEA - Risk Management Services Budget Update

9. SSEA CORPORATE ADMINISTRATION UPDATES

- 9.1 Staff Report 61-21-SSEA – SSEA COVID-19 Vaccination Policy
- 9.2 Staff Report 62-21-SSEA – Severn Sound Source Protection Authority (SS SPA) Drinking Water Source Protection Update and SSEA Risk Management Services 2021 Q4 Update
- 9.3 Staff Report 63-21- SSEA – SSEA Q4 Grant Application Update
- 9.4 Staff Report 64-21-SSEA – SSEA Invasive Species Program Q4 Update
- 9.5 Staff Report 65-21-SSEA - Sustainable Severn Sound (SSS) Special Project Q4 Update
- 9.6 Staff Report 66-21-SSEA - SSEA Depave Paradise Program Q4 Update
- 9.7 Staff Report 67-21-SSEA - SSEA Healthy Soils=Healthy Watersheds Q4 Program Update
- 9.8 Staff Report 68-21-SSEA – SSEA Past and Upcoming Events Q4
- 9.9 Staff Report 69-21-SSEA – New SSEA Partner Weather Station
- 9.10 Staff Report 70-21-SSEA – SSEA Office re-opening update

10. EXECUTIVE DIRECTOR UPDATE

- 10.1 Staff Report 71-21-SSEA – Executive Director Q4 Report (On Table)

11. ANNOUNCEMENTS

12. CORRESPONDENCE

13. CLOSED SESSION

There are no closed session items for this agenda.

14. OTHER BUSINESS

- 14.1 Staff Report 72-21-SSEA – SSEA 2022 Board Meeting Schedule

15. ADJOURN



**SEVERN SOUND ENVIRONMENTAL ASSOCIATION
JOINT MUNICIPAL SERVICE BOARD (JMSB)
2021 Third Quarter (3) Meeting**

**October 25, 2021
9:30 am – 11:11 am
Via video & telephone conference
Draft Minutes**

Present via zoom video:

SSEA Chair, Deputy Mayor Steffen Walma
SSEA Vice Chair, Councillor Paul Wiancko
SSEA Past Chair, Councillor Ron Stevens
Councillor Ian Veitch
Councillor Perry Ritchie
Deputy Mayor Anita Dubeau
Councillor Paul Raymond

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

Staff present via zoom video:

Julie Cayley
Lex McPhail
Judy Limoges
Melissa Carruthers
Michelle Hudolin
Tamara Brincat
Aisha Chiandet
Tracy Roxborough
Morgan Gillies

Executive Director
IT Manager/GIS Applications Specialist
Treasurer
Risk Mgmt. Official/Risk Mgmt. Inspector
Wetlands & Habitat Biologist
Invasive Species Program Coordinator
Water Scientist
Sustainability & Climate Action Coordinator
Healthy Soils = Healthy Watersheds Program
Coordinator
Environmental Intern
Invasive Species Management Technician
Watershed Resilience Coordinator

Ben Lehan
Nicole Stott
Shannon Mawhinney

Not present via zoom video:

Councillor Carole McGinn

Town of Midland

1. WELCOME AND CALL TO ORDER

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

2. ADOPT AGENDA

MOTION: 2021-079

Moved by: R. Stevens

Seconded by: I. Veitch

RESOLVED THAT: the SSEA Joint Municipal Service Board approve the Meeting Agenda as amended dated October 25, 2021

Carried;

Items added under new business:

1. *2020 Strategic Plan Update report*
2. *Deputy Mayor Dubeau - collaborative webinar Georgian Bay Water Levels*

3. DECLARATION OF PECUNIARY INTEREST

None declared.

4. APPROVAL OF PAST MINUTES

4.1 Minutes of 2021 Second Quarter (Q2) meeting of the SSEA Joint Municipal Service Board held July 26, 2021

MOTION: 2021-080

Moved by: P. Raymond

Seconded by: P. Wiancko

RESOLVED THAT: the SSEA Joint Municipal Service Board approve the minutes of the Second Quarter (Q2) meeting of the SSEA Joint Municipal Service Board held July 26, 2021

Carried;

4.2 Minutes of 2021 Second Quarter (Q2) meeting of the SSEA Source Protection Authority meeting held July 26, 2021

MOTION: 2021-081

Moved by: A. Dubeau

Seconded by: P. Ritchie

RESOLVED THAT: the SSEA Joint Municipal Service Board approve the minutes of the Second Quarter (Q2) meeting of the SSEA Source Protection Authority meeting held July 26, 2021

Carried;

4.3 Minutes of the SSEA 2021 Special Meeting of the Board held September 21, 2021

MOTION: 2021-082

Moved by: R. Stevens

Seconded by: P. Wiancko

RESOLVED THAT: the SSEA Joint Municipal Service Board approve the minutes of the SSEA Special Meeting of the Board held September 21, 2021

Carried;

4.4 Business arising from the minutes

Ms. Cayley reminded group that the meeting was being recorded. Also advised that the following action items from the meeting dated July 26, 2021 had been completed.

- *Written response regarding the ecological benefits of willow trees near water in Oro-Medonte*
- *Office re-opening plan*

5. SEVERN SOUND SOURCE PROTECTION AUTHORITY MEETING

No SS SPA Meeting.

6. SSEA THIRD QUARTER 2021 REPORT

MOTION: 2021-083

Moved by: I. Veitch

Seconded by: P. Raymond

RESOLVED THAT: The Third Quarter 2021 report presented by Julie Cayley, Executive Director be received for information

Carried;

ACTION ITEM: Ms. Cayley is asking for feedback on the new quarterly report layout from the SSEA Board of Directors.

7. PRESENTATIONS

7.1 Invasive Species and Species At Risk Partnership Projects – Michelle Hudolin (SSEA Wetlands & Habitat Biologist) and Tamara Brincat (SSEA Invasive Species Program Coordinator)

MOTION: 2021-084

Moved by: A. Dubeau

Seconded by: P. Ritchie

RESOLVED THAT: the Invasive Species and Species At Risk Partnership Projects update presentation be received for information

Carried;

8. SSEA FINANCIAL REPORTS

8.1 Staff Report 38-21-SSEA - 2021 3rd Quarter Draft Financials

MOTION: 2021-085

Moved by: I. Veitch

Seconded by: A. Dubeau

RESOLVED THAT: Staff Report No. 38-21-SSEA regarding the 2021 third quarter draft financials be received as information.

Carried;

8.2 Staff Report 39-21-SSEA - SSEA 2020 Unrestricted Surplus

MOTION: 2021-086

Moved by: R. Stevens

Seconded by: P. Wiancko

RESOLVED THAT: Staff Report No. 39-21-SSEA regarding SSEA 2020 unrestricted surplus be received as amended as information; and

FURTHER THAT: The Board of Directors approve the transfer of the 2020 unrestricted surplus in the amount of \$168,350 to the contingency reserve for future needs.

Carried;

Ms. Limoges noted that Staff Report 39-21-SSEA has been updated to remove the word “contingency” from the line that reads “With the approval of this transfer, the ~~contingency~~ reserve balance would be \$311,826 (audited total as shown \$143,476 + \$168, 350).

Decision regarding if there was an opportunity to use some of the surplus funds to reduce the current budget ask took place. The majority of the SSEA board of directors, stood behind the current budget asks and did not think the use of the surplus funds would be appropriate at this time.

9. SSEA CORPORATE ADMINISTRATION UPDATES

9.1 Staff Report 40-21-SSEA – SSEA Employee Group Benefit Plan Renewal November 1, 2021

MOTION: 2021-087

Moved by: P. Raymond

Seconded by: P. Ritchie

RESOLVED THAT: Staff Report No. 40-21-SSEA regarding the annual renewal report for the SSEA employee group benefit plan from Mosey & Mosey be received as information.

Carried;

9.2 Staff Report 41-21-SSEA – SSEA Bank Signing Authority

MOTION: 2021-088

Moved by: I. Veitch

Seconded by: R. Stevens

RESOLVED THAT: Staff Report No. 41-21-SSEA regarding SSEA bank signing authority be approved by the Board of Directors to have the signing authority information refer to the titles and not include names:

Two signatures required; one signature from the Executive Director or Treasurer from the Treasurer Municipality and one from the SSEA Chair or SSEA Board Member representing the Treasurer Municipality.

Carried;

9.3 Staff Report 42-21- SSEA – SSEA Diversity and Inclusion Policy

MOTION: 2021-089

Moved by: I. Veitch

Seconded by: A. Dubeau

RESOLVED THAT: Staff Report No. 42-21-SSEA regarding the SSEA Diversity and Inclusion Policy be received for information and;

FURTHER THAT: the SSEA Diversity and Inclusion Policy be approved by the Board of Directors

Carried;

9.4 Staff Report 43-21-SSEA – Severn Sound Source Protection Authority (SS SPA) Drinking Water Source Protection Update and SSEA Risk Management Services 2021 Q3 Update

MOTION: 2021-090

Moved by: P. Raymond

Seconded by: P. Wiancko

RESOLVED THAT: Staff Report No. 43-21-SSEA regarding an update on the activities undertaken by SS SPA and SSEA Risk Management staff during Q3 of 2021 be received for information.

Carried;

9.5 Staff Report 44-21-SSEA - SSEA Q3 Grant Application Update

MOTION: 2021-091

Moved by: P. Richie

Seconded by: A. Dubeau

RESOLVED THAT: Staff Report No. 44-21-SSEA regarding SSEA grant application update, be received for information.

Carried;

9.6 Staff Report 45-21-SSEA - SSEA Invasive Species Program Q3 Update

MOTION: 2021-092

Moved by: R. Stevens

Seconded by: P. Wiancko

RESOLVED THAT: Staff Report No. 45-21-SSEA regarding SSEA Invasive Species Program Update, be received for information.

Carried;

9.7 Staff Report 46-21-SSEA - SSEA Inland Lake Monitoring Q3 Updates

MOTION: 2021-093

Moved by: P. Raymond

Seconded by: P. Ritchie

RESOLVED THAT: Staff Report No. 46-21-SSEA regarding Inland Lake Monitoring Updates, be received for information.

Carried;

9.8 Staff Report 47-21-SSEA – Sustainable Severn Sound (SSS) Special Project Q3 Update

MOTION: 2021-094

Moved by: R. Stevens

Seconded by: A. Dubeau

RESOLVED THAT: Staff Report No. 47-21-SSEA, regarding the SSEAs SSS special project Q3 update for the 3rd quarter of 2021 be received for information.

Carried;

ACTION ITEM: Ms. Cayley to distribute supporting materials that were submitted to the County of Simcoe regarding the Municipal Comprehensive Review, to the Board of Directors.

9.9 Staff Report 48-21-SSEA – SSEA Depave Paradise Program Update

MOTION: 2021-095

Moved by: P. Wiancko

Seconded by: R. Stevens

RESOLVED THAT: Staff Report No. 48-21-SSEA regarding SSEA Depave Paradise Program Update be received for information.

Carried;

9.10 Staff Report 49-21-SSEA – SSEA Healthy Soils=Healthy Watersheds Q3 Program Update

MOTION: 2021-096

Moved by: I. Veitch

Seconded by: P. Ritchie

RESOLVED THAT: Staff Report No. 49-21-SSEA regarding SSEA Healthy Soils = Healthy Watersheds Q3 Program Update be received for information

Carried;

The SSEA Board of Directors, meeting of October 25, 2021, went into recess at 10:30 a.m.

Moved by: P. Wiancko

Seconded by: P. Raymond

The SSEA Board of Directors, meeting of October 25, 2021, came out of recess at 10:40 a.m.

Moved by: I. Veitch

Seconded by: R. Stevens

Ms. Roxborough left the meeting during the recess

9.11 Staff Report 50-21-SSEA – SSEA Update on Georgian College Applied Research Projects

MOTION: 2021-097

Moved by: R. Stevens

Seconded by: P. Ritchie

RESOLVED THAT: Staff Report No. 50-21-SSEA regarding an Update on Georgian College Applied Research Projects, be received for information.

Carried;

9.12 Staff Report 51-21-SSEA – SSEA Past and Upcoming Events

MOTION: 2021-098

Moved by: P. Raymond

Seconded by: A. Dubeau

RESOLVED THAT: Staff Report No. 51-21-SSEA regarding SSEA Past and Upcoming Events, be received for information.

Carried;

9.13 Staff Report 52-21-SSEA – SSEA Office re-opening update

MOTION: 2021-099

Moved by: P. Wiancko

Seconded by: I. Veitch

RESOLVED THAT: Staff Report No. 52-21-SSEA regarding the SSEA Office re-opening update be received for information.

Carried;

ACTION ITEM: Agenda item to be added to the next Executive Committee meeting to discuss the feasibility of the SSEA Board of Director meetings to go back to in person.

ACTION ITEM: SSEA staff to create a SSEA vaccination policy.

10. EXECUTIVE DIRECTOR UPDATE

10.1 Staff Report 53-21-SSEA – Executive Director Q3 Report (On Table)

MOTION: 2021-100

Moved by: P. Raymond

Seconded by: R. Stevens

RESOLVED THAT: the SSEA Board of Directors receives the Executive Director’s report for information

Carried;

11. ANNOUNCEMENTS

12. CORRESPONDENCE

12.1 Correspondence from Huronia Community Foundation (August 30, 2021)

13. CLOSED SESSION

There are no closed session items for this agenda.

14. OTHER BUSINESS

14.1 2020 Strategic Plan Update report

MOTION: 2021-101

Moved by: A. Dubeau

Seconded by: I. Veitch

RESOLVED THAT: the SSEA Board of Directors receives the 2020 Strategic Plan Update report received for information

Carried;

Council Raymond suggested looking into the feasibility of the SSEA starting to use Facebook, based on the demographic this platform serves. He further, encouraged SSEA staff to reach out to Township of Tay communications staff for tips if needed.

14.2 Deputy Mayor Dubeau commented on “collaborative webinar Georgian Bay Water Levels”. *Deputy Mayor Dubeau was pleased to see SSEA participate in the “Extreme Water Levels: Impacts and Strategies” webinar held on October 23, 2021; praised Ms. Chiandet for her amazing work, hoped SSEA staff can share presentation with the Board, and encouraged all board members to participate in any upcoming sessions.*

ACTION ITEM: Ms. Cayley to distribute Ms. Chiandet’s presentation and the meeting invite for the upcoming sessions to the SSEA Board of Directors.

ACTION ITEM: Ms. Chiandet to present the presentation at the next SSEA Board of Directors meeting.

15. ADJOURN

MOTION: 2021-102

Moved by: R. Stevens

Seconded by: I. Veitch

RESOLVED THAT: this meeting of the SSEA Board of Directors held on October 25, 2021 adjourn at 11:11 a.m. to meet again in January, 2022 or at the call of the chair.

Carried;

ACTION ITEM: Doodle Poll to be created by SSEA staff to pick January meeting date and time

Chair Steffen Walma

Executive Director, Julie Cayley

Approved this _____ day of _____, 2021

DRAFT



Severn Sound Environmental Association 2021 4th Quarter (Oct. 1 - Dec. 31) Report/Update

Staffing/HR

Administration, Staffing, Training and Volunteers

Administration

Two SSEA Board meetings were held (3rd Quarter & special call of the Chair meeting).

The SSEA office remains closed to the public and staff continue to work remotely accessing the office as needed adhering to strict COVID 19 health & safety protocols. The office status will follow Provincial and Health Unit recommendations.

Staffing

Remote work and successful grant applications enabled SSEA to provide several (5) seasonal staff opportunities. THANK YOU to *Canada Summer Jobs*, BioTalent Canada, and ECO Canada for supporting seasonal staff members Zack Fryer (Communications Assistant), Nikolas Kuchmij (Climate Action Program Coordinator), Nicole Stott (Biodiversity Conservation Intern), Emily Edgley (Environmental Monitoring & Citizen Science Program Assistant), and Shannon Mawhinney (Watershed Resilience Coordinator). Recruitment for the Office Manager, with a talented pool of candidates, concluded with an announcement expected in the new year.

THANK YOU to Tracy Roxborough, outgoing Sustainability & Climate Action Coordinator.

Training/Professional Development

SSEA staff attended 22 no-cost webinars on a range of SSEA program related topics. SSEA Water Scientist also took a training course on algae identification to increase SSEA's capacity in providing that service.

Volunteers - THANK YOU

THANK YOU to all 32 citizen science volunteers who provided data through our Invasive Species Spotters, Shore Watch, Stream Watch, and Water Level programs.

THANK YOU to the volunteers that assisted with Invasive Species Ldd surveys and to the Honourable Jill Dunlop, MPP for Simcoe North who joined staff for tributary sampling.



SSEA field staff demonstrate equipment and field sampling techniques to Honourable, Jill Dunlop, MPP (Simcoe North)

Education, Engagement, Outreach

Presentations, Articles, Social Media, Events, Inquiries

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

Virtual Presentations

SSEA staff presented to the SSEA Board on various program updates.

Articles/Publications/News

Staff contributed information and pictures about habitat rehabilitation work for an [article about Champlain Wendat Rotary Park](#) and was interviewed by Radio Canada CFRH Penetanguishene about the [Tree Seedling Distribution Program](#).

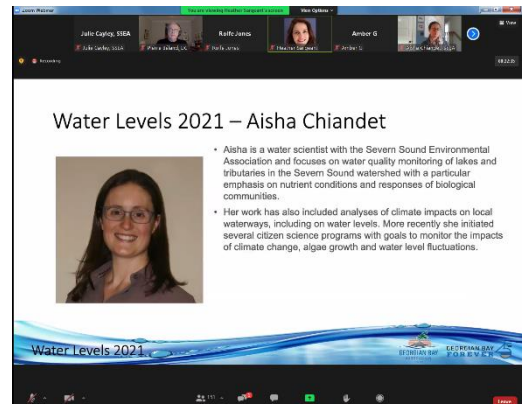
Social Media

A total of 148 posts were made on SSEA Instagram and Twitter accounts on a variety of conservation topics and SSEA programs this quarter to audiences of 444 and 393 followers respectively. A total of three new videos related to SSEA programs, results, or recording of webinars and meetings were posted on the SSEA YouTube channel with a total of 79 views and 36 subscribers.

Team members made two Facebook posts regarding SSEA programs to external group pages including the Orr Lake Ratepayers Association and Bass Lake Ratepayers Association pages with approximately 403 and 195 members, respectively.

Events/Meetings/Conferences

Staff attended the Honey Bee Festival in Township of Georgian Bay, the Township of Tiny Farm Crawl, and two virtual conferences/workshop events, including a three-part webinar series hosted by GBA and GBF on Extreme Water Levels, in which SSEA presented on observed climate impacts (video recordings at <https://georgianbay.ca/h20-2021/>). Staff provided an update at the North Simcoe Soil and Crop Improvement Association AGM. SSEA's field staff worked with the Honourable Jill Dunlop, MPP (Simcoe North) to demonstrate equipment and field sampling techniques used to assess water quality. The SSEA team attended 11 municipal and external partner meetings throughout the quarter.



Inquiry Responses (excluding SSS, invasive species, and source water)

SSEA responded to 36 inquiries from municipal partners, members of the public, and contractors.

Tree Planting

Planting and Distribution

Planning has begun for the Spring 2022 tree planting season, including accepting orders for the Tree Seedling Distribution Program and considering opportunities to implement selected community tree planting as the pandemic continues.

Fish and Wildlife Habitat/Natural Heritage

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

Invasive Species

IS staff completed Ldd egg mass surveys at select locations across the watershed to forecast defoliation for 2022. The results were distributed to working group municipal representatives and the SSEA Board.

Removal of artificial substrates from Little Lake, Midland as part of the invasive mussel surveillance project was completed in this quarter. IS staff also assisted Town of Midland with invasive buckthorn removal at Gawley Park.

SSEA's IS coordinator hosted the SSEA IS working group meeting in November with a total of 15 attendees from partner municipalities and organizations. An abstract was accepted by the Ontario Invasive Plant Council to speak at their January 2022 conference.

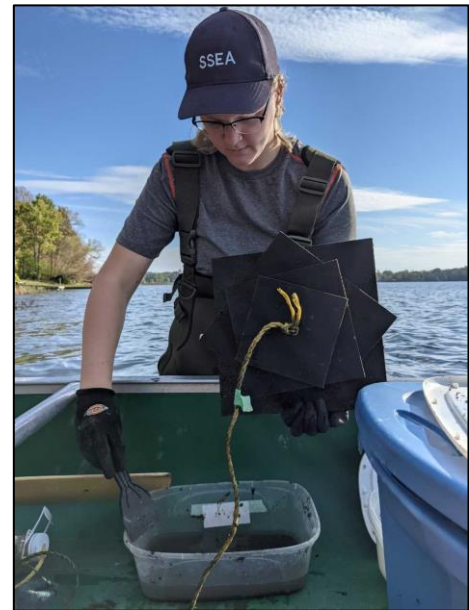
Staff continues to deliver action on the Wye Marsh Invasive Species Management and Farlain Lake Eurasian Water-milfoil Management (EWM) projects.

Species At Risk

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

Natural Heritage

Staff facilitated a webinar for SSEA municipal staff on *Natural Asset Inventory and Valuation*. Presentations from staff at the *Municipal Natural Assets Initiative (MNAI)* provided information on concepts of valuing nature, as well as, the MNAI approach to inventories, valuation and management of natural assets. SSEA staff are exploring funding opportunities to implement this work with interested Severn Sound municipalities.



Little Lake Zebra Mussel substrate removal

Land Use Planning

Input and Review

Plan and Policy Input

SSEA contributed comments to 30 applications, reports, and Environmental Impact Studies, an increase of 114% compared to the number of projects reviewed in Q4 of 2020. Staff also commented on and provided data for the County's Municipal Comprehensive Review, and provided comments on the Focused Study Area for Orillia's Settlement Area Boundary Expansion.

Drinking Water Source Protection

Drinking Water Source Protection, Risk Management Services

Drinking Water Source Protection and Risk Management

Staff attended nine regional and provincial meetings on various topics such as communications, assessment report update requirements, Source Protection Committee meetings and risk management topics specific to the Drinking Water Source Protection Program.

A "Drinking Water Source Protection 101" workshop was held for the planning department of Midland. Source Protection Plan and Assessment Report updates for three Oro-Medonte systems (Braestone, Maplewood, and Robincrest) were moved into the public consultation stage. Staff continues to support municipalities in meeting their requirements with potential changes to various municipal water systems in Springwater, Severn, Oro-Medonte, and Midland.

Negotiating with the Province for funding continuation is ongoing. A two-year (2022-2024) work plan was submitted (via LSRCA) to the Province for Source Protection Authority activity funding. The SSEA welcomes this opportunity to apply for multi instead of single-year funding.

Risk Management Services

This quarter, staff commented on 19 development applications (increase of 111% compared to Q4 of 2020), answered 14 inquiries (increase of 75% compared to Q4 of 2020), signed one Risk Management Plan, attended one pre-consultation meeting, and conducted one site visit.

Monitoring Programs

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

Lake Sampling (Open Water, Inland Lakes, Intakes)

A total of seven sampling events were completed across Little Lake, Orr Lake, Tay intakes, and Severn Sound open water. Sampling included collecting water chemistry, algae, and zooplankton samples. Water quality results are used to assess conditions and guide management decisions. Nearshore sediment sampling was also done on Orr Lake to support the nearshore intensive study. The water level gauge on Farlain Lake was surveyed and removed for the season.

Tributaries (Provincial Water Quality Monitoring Network (PWQMN), Stream Invertebrates, Temperature)

The monitoring team completed two PWQMN sampling runs at 14 sites throughout the watershed, collecting chemistry and metal samples. Stream invertebrates were collected using the OBBN sampling protocol at one stream (Wye River) and three lake locations, part of the Orr Lake monitoring program. Completed long-term tributary biennial invertebrate sampling at ten locations (Wye River, Hogg Creek, Copeland Creek, Lafontaine Creek, Baxter Dam) to assess tributary health. 40 stream temperature loggers were removed and the data was downloaded across the watershed to further assess conditions.

Groundwater (Provincial Ground Monitoring Network)

Six wells were sampled for chemistry and metals. Level loggers continue to collect hourly water level and temperature data at nine well locations. The data is used to monitor long-term trends and assess climate change impacts on groundwater.

Climate

The data for two air temperature loggers and five rain gauges have now been downloaded. Staff is working to correct and compile the data. Data is used as part of SSEA's Climate Monitoring Program to analyze and understand long-term water quality and climate trends.

A **new** weather station installed in Lafontaine is up and running. This station expands the SSEA weather network into the Tiny coastal watershed area.



Both the new weather station and the Midland weather station continue to record near-real time data which can be viewed on the [SSEA website](#).

[Severn Sound Environmental Association](#) > [Programs & Projects](#) > [Monitoring](#) > Weather Stations

Current Weather Conditions

Midland SSEA
As of: 2:30 PM Wed, Jan 19th, 2022

Cloudy

-1 °C

High: 4 °C at 11:15 AM
Low: -6 °C at 12:15 AM

Wind	17.9 km/h WSW
Today Rain	9.0 mm
Seasonal (Apr 1)	N/A mm
Pressure	98.6 kPa
CHU/GDD ₁₀ (May - Nov)	/

Powered by Weather Innovations Consulting LP

Lafontaine SSEA
As of: 2:30 PM Wed, Jan 19th, 2022

Few Snow Showers/Wind

-2 °C

High: 3 °C at 11:00 AM
Low: -6 °C at 12:00 AM

Wind	11.4 km/h W
Today Rain	0.0 mm
Seasonal (Apr 1)	N/A mm
Pressure	97.9 kPa
CHU/GDD ₁₀ (May - Nov)	/

Powered by Weather Innovations Consulting LP

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

The Stream Watch, Shore Watch and Invasive Species Spotter programs have finished for another season. Citizen Science kits have been returned and data is being processed for the 2021 report.

Observations are being collected for the Ice Spotters Program, which has our volunteers recording the amount of ice coverage on inland lakes and on Severn Sound until ice is fully on. These volunteers will observe ice conditions again in the spring until ice-off.



Ice Spotter volunteer photo, Little Lake, Dec. 23/21

Sustainable Severn Sound Special Project

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

SSEA's Watershed Resilience Coordinator is currently handling all SSS project inquiries and responsibilities. SSEA continues to support our municipal members of the PCP program and are happy to **welcome our newest member the Township of Springwater.**

SSS was successful in engaging a municipal partner in the new Depave Paradise project. The Depave event will be conducted at Honey Harbour Park in Georgian Bay in the spring of 2022.



Town of Midland staff, hydro seeding with native wildflowers at a No-Mow Zone restoration site.

Staff finalized the Bee City restoration report for the Town of Midland and one site was chosen and restored this fall. Staff from SSS and IS assisted Midland staff in removing woody invasive plants before the site was tilled and seeded with a native wildflower mix.

In Q4, SSS attended numerous planning meetings with municipal and external stakeholders:

- Climate Change Exchange Q4 meetings
- Bee City meetings with the Town of Midland
- Regional Climate Change Exchange meeting
- Regional Depave Coordinator meetings (3)

SSS provided feedback/support to multiple municipal partners in the form of strategic plans, GHG data summarization and PCP participation, and grant proposals including:

- Penetanguishene PCP 2019 update
- Bee City Team admin services to the Town of Midland and one Bee City Team meeting
- Attended the Invasive Species Working group to bring awareness to the new Depave Paradise program that is available to all municipal members.

Healthy Soils = Healthy Watersheds Special Project

Soil and Watershed health BMPs, agriculture nutrient management

The local farm community has been engaged in the pilot project area of the Township of Tiny to complete Farm Surveys about their agricultural practices and apply for HS=HW grants to assist with cost sharing for cover crop seed, enhanced soil sampling, and consultation with a Certified Crop Advisor or Professional Agrologist. Over 20 site visits were conducted across the Township to share and collect data about the project, and seven participants have successfully signed up for the program. SSEA assisted with collecting 30 composite soil samples for nutrient analysis.

HS=HW Program Coordinator attended the *Introduction to Soil Health in the Field* training session, hosted by the University of Guelph, to learn about soil diagnostics in the field. SSEA had a booth at the Tiny Farm Crawl event to showcase the HS=HW Program, and held a live-from-the-field presentation for the Georgian Bay District High School Grade 9 science class to demonstrate the importance of soil health. The HS=HW Program sponsored Peter Johnson from *Real Agriculture* to present *How's Your Soil Health?* for the North Simcoe Soil and Crop Improvement Association's AGM.

Data Analysis and Reporting

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

Statistics/Data Management & Analysis

Routine, year-round data management consisting of PWQMN, Georgian Bay water levels and regional climate data, and open water/inland lake field measurement processing continues as normal. Additional analysis was completed for air and water temperature, ice coverage, water levels and rainfall for inclusion in a webinar on climate change. Farlain Lake water level data was summarized and provided to Township of Tiny staff. An inventory of available monitoring data and station locations was also provided to consultants to support the County of Simcoe MCR.

Reporting

SSEA completed [Water Quality Updates](#) for both Orr Lake and Little Lake. A report on 2021 soil sampling conducted at the Town of Penetanguishene's snow disposal site was submitted to Town staff. A data report was produced summarizing water quality conditions for the Sturgeon River headwaters and provided to MECP and Springwater. The report updating rainfall and Crop Heat Unit information, completed annually and shared with local agriculture associations, was completed for 2021 using data from the Midland (STP) and Lafontaine (Mon Piero Farms) weather stations.

Partnerships

New/Updated NGO partners and MOU's, Academia

SSEA is continuously working with municipal and NGO/external partners including:

- The ED is an Active member on the Huronia Community Foundation Board, as well as, the Healthy Great Lakes Advisory Committee (CELA)

- Active membership with GBB's ICECAP and the SMDHU's Climate Change Exchange Committee and Climate Change Charter Working Group
- Participating in updates to the agreement between the Township of Springwater, SSEA, and Nottawasaga Valley Conservation Authority
- New Lafontaine weather station purchase; made possible through the partnership between SSEA's Healthy Soils = Healthy Watershed Program, Township of Tiny and Ontario's Great Lake Action Fund
- Meet and greet with SSEA and Richard Simpson, new Central Ontario-West Program Director with Nature Conservancy of Canada

Academia

SSEA continues to sit on the Program Advisory Committee for Georgian College, providing industry perspective on the Environmental Technology Program. SSEA entered into a data sharing agreement with Ontario Tech University for research on algae in Severn Sound, which will involve sharing Severn Sound chemistry and algae data.

Financial

Grants, Budget, Invoicing

Grants

Multiple grants have been secured or applied to by SSEA this quarter to maintain and expand services including:

- ECO Canada Science Horizons Youth Internship Program: Secured \$23,866 towards a Citizen Science & Water Quality Coordinator internship
- County of Simcoe Forestry Grant/MOU: Secured \$750 - \$1,500 (estimated) for Community Tree Planting
- Forests Ontario Over-the-Counter Tree Program Subsidy: \$2,100 pending approval for Tree Distribution Program
- Many other potential grant opportunities are being pursued by staff

Budget

SSEA completed budget deputations to the Township of Springwater and Tiny, and prepared for Town of Midland.

Invoicing

In Q4, SSEA issued 17 invoices: six cost recovery, two inland lakes, Victoria Harbour intakes, Honey Harbour water quality, two Farlain Lake EWM project (interim), two to GBF re Matchedash Bay Turtle study, a quarterly Drinking Water Source Protection (DWSP) invoice, and two environmental property requests.

Thank you from Team SSEA

- Julie Cayley - Executive Director
- Lex McPhail - IT Manager/GIS Applications Specialist
- Paula Madill - Ecosystem Technologist
- Michelle Hudolin - Wetlands & Habitat Biologist
- Aisha Chiandet - Water Scientist
- Melissa Carruthers - Risk Mgmt. Official./Risk Mgmt. Inspector
- Judy Limoges -Treasurer (p/t)
- Nikki Priestman - Watershed Health Coordinator
- Tracy Roxborough - Sustainability & Climate Action Coordinator
- Tamara Brincat - Invasive Species Program Coordinator
- Morgan Gillies - Healthy Soils = Healthy Watersheds Program Coordinator
- Ben Lehan - Environmental Intern
- Emily Edgely - Environmental Field Tech & Citizen Science Program Assistant
- Shannon Mawhinney – Watershed Resilience Coordinator
- Nicole Stott - Biodiversity Conservation Intern
- Zack Fryer - Communications Assistant/Environmental Education Consultant
- Nikolas Kuchmij - Climate Action Program Coordinator
- Peter Tiller – Environmental Program Coordinator
- Bob Bowles - Species at Risk Biologist





Ldd Egg Mass Survey Results and Defoliation Forecast for 2022

Tamara Brincat, Invasive Species Program Coordinator
SSEA Board Meeting – January 27, 2022

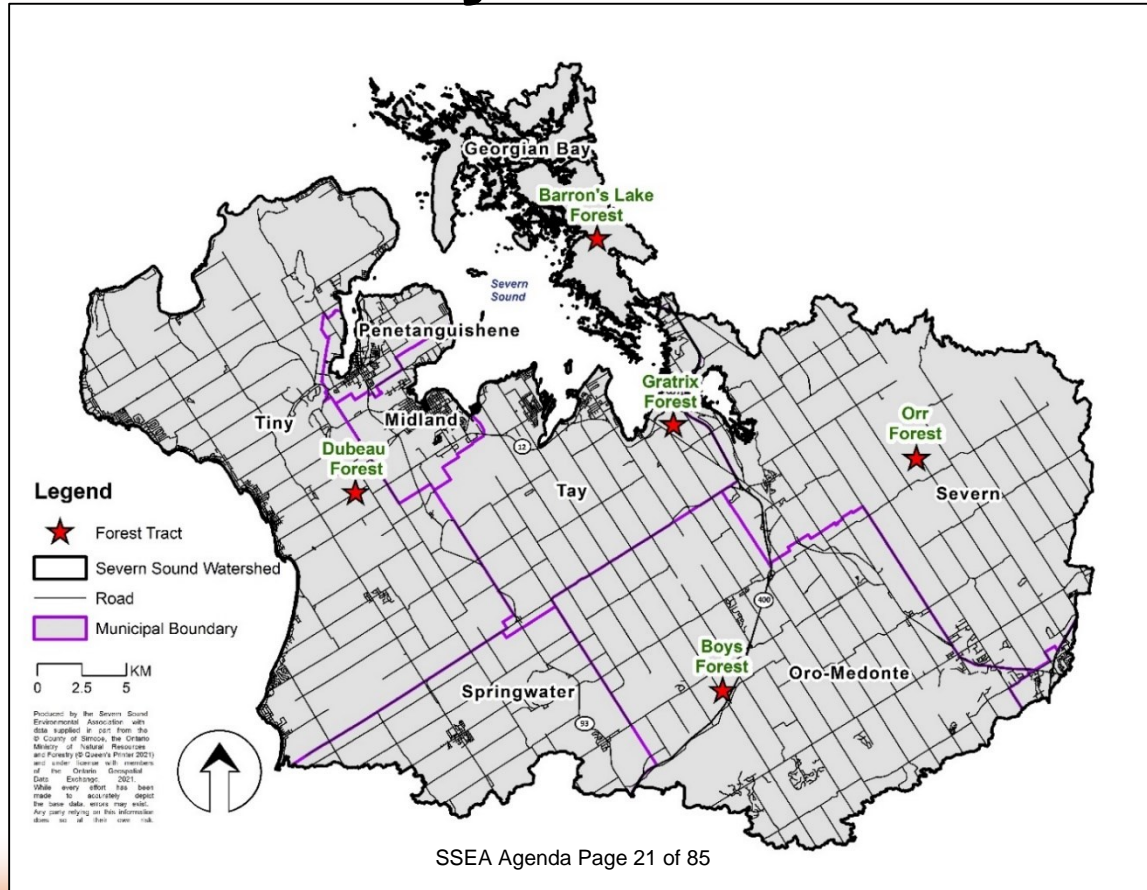


Survey Locations

MK Plots

5 forested locations
across the watershed

Complements County
of Simcoe 2021
surveys

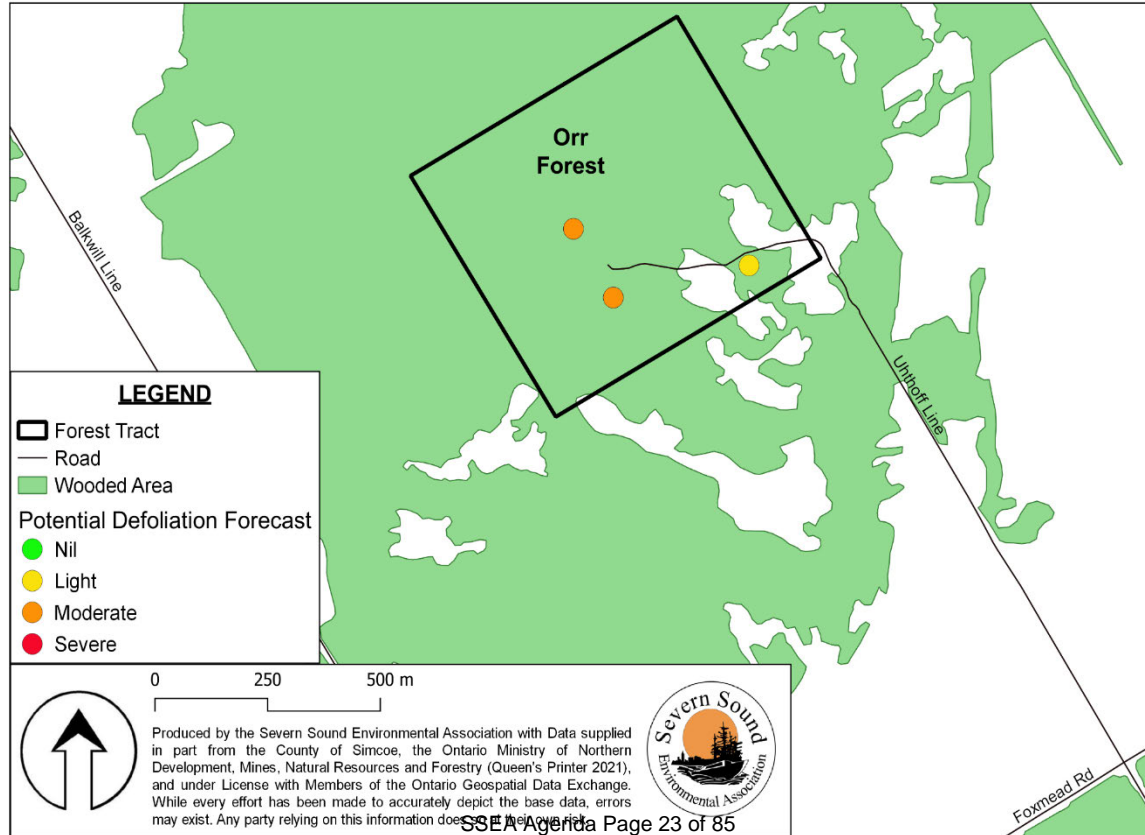


Survey Results Summary

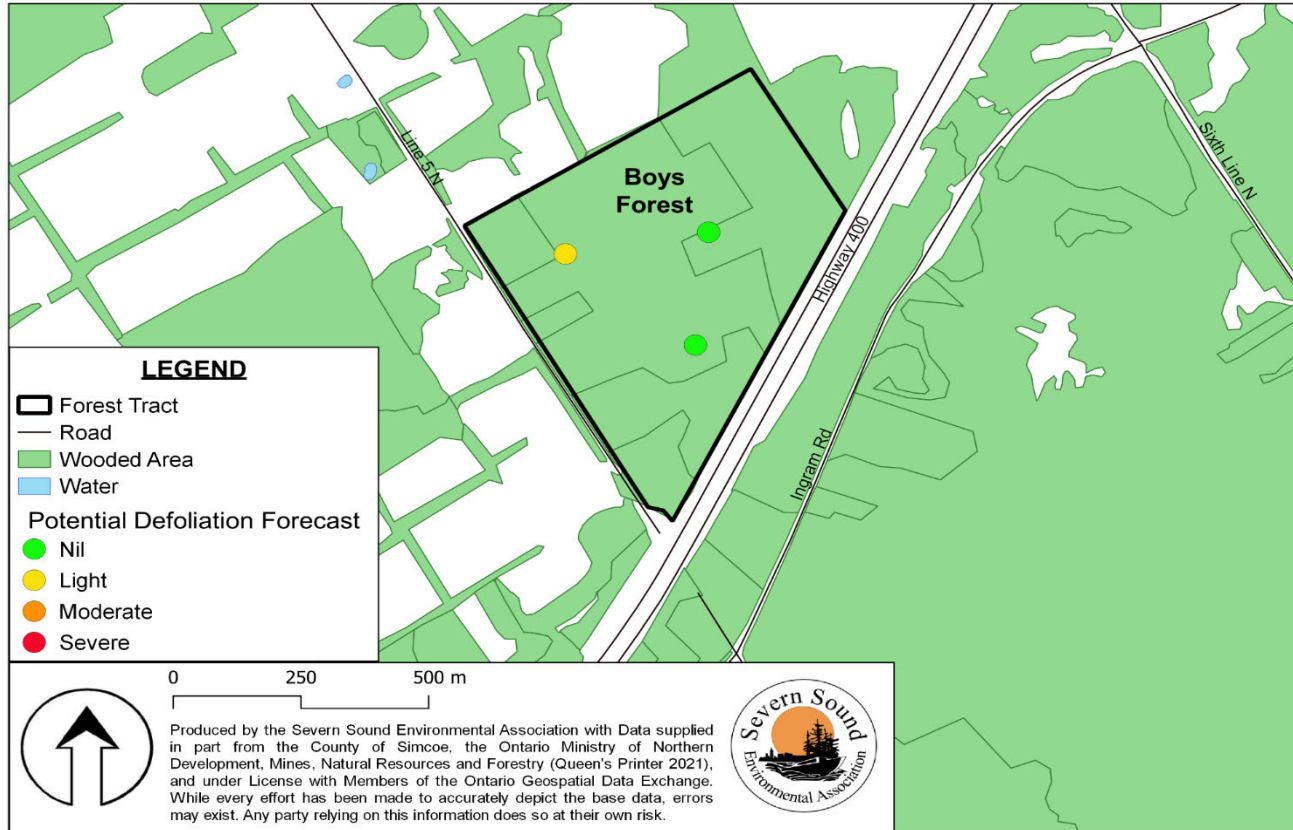
- Evidence of natural controls for Ldd was observed at 4 out of 5 sites
- Forecast for potential defoliation in 2022 ranged from nil/light to moderate within the surveyed plots
- Defoliation can vary within forests and across municipalities as a result of variety of factors
 - E.g., tree species, competition between caterpillars, pathogens and other natural controls



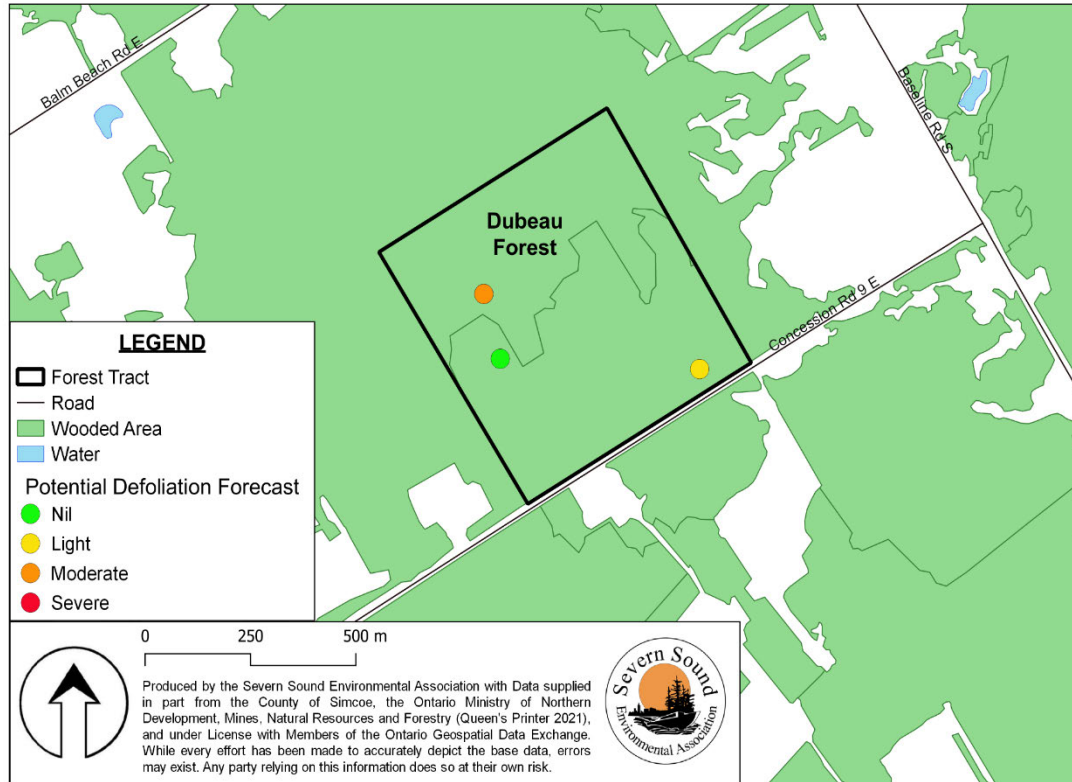
Survey Results - Severn



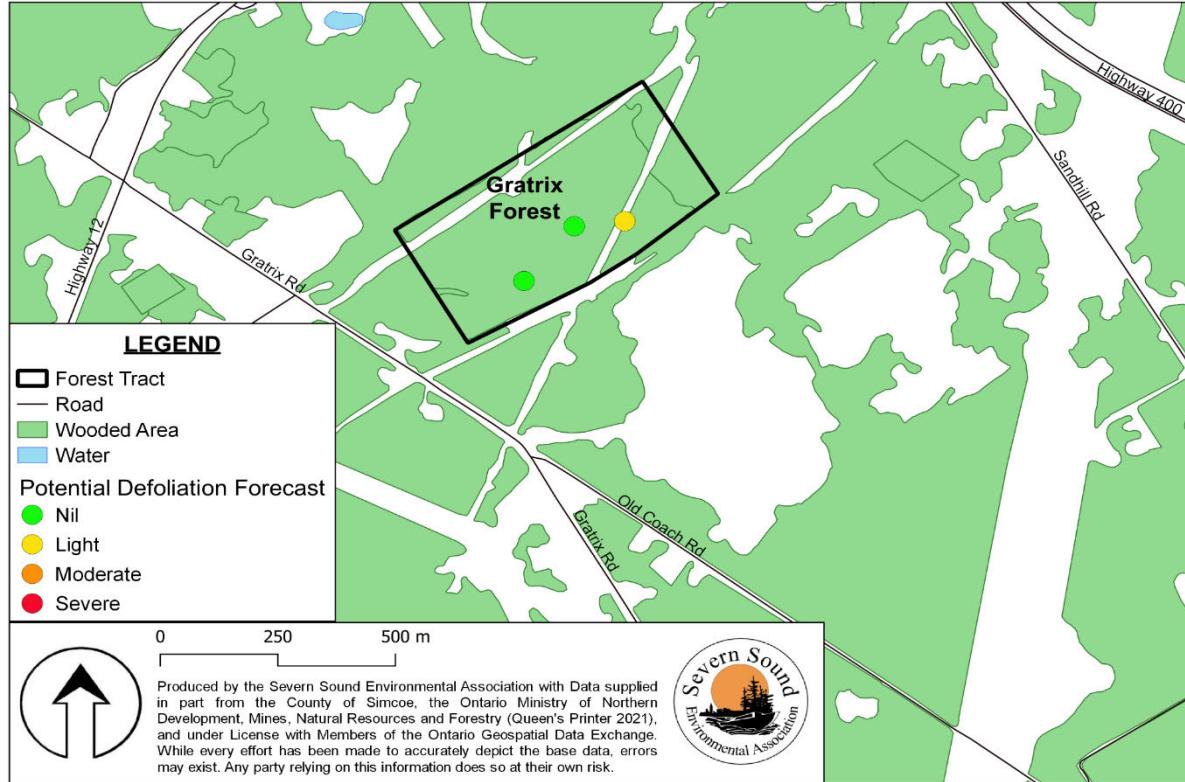
Survey Results – Oro-Medonte



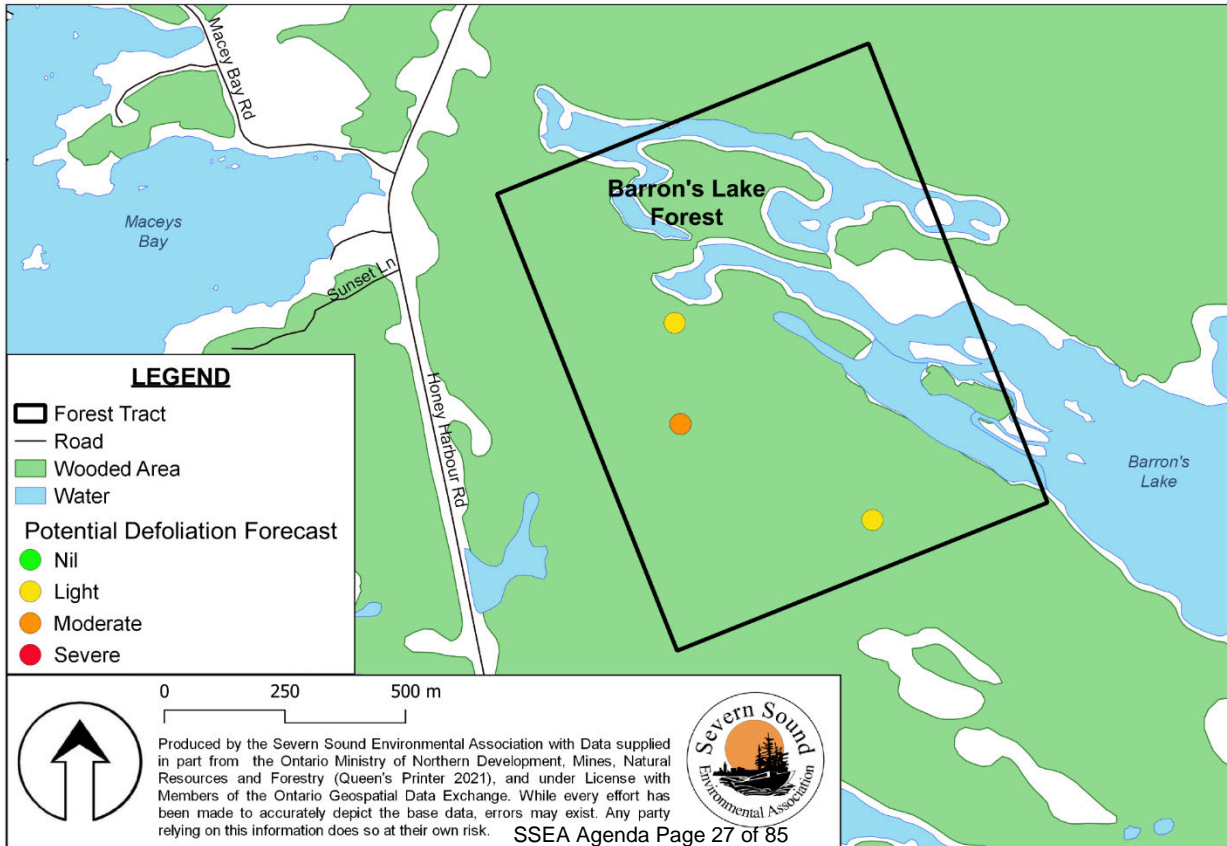
Survey Results - Tiny



Survey Results - Tay

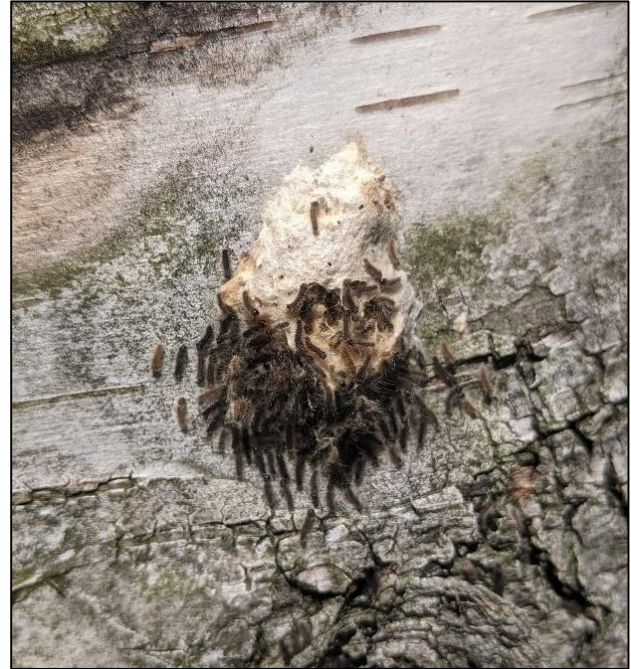


Survey Results – Georgian Bay



Conclusions

- Report is intended to forecast potential Ldd defoliation for 2022 to provide municipalities with data to help inform decision-making around Ldd management
- SSEA Staff will continue to work with forestry experts from the Province, the County of Simcoe and partner organizations to stay up to date on the current Ldd outbreak and to provide science-based information to our municipal partners



A scenic view of a forest pond. The water is calm, reflecting the surrounding trees and sky. There are several dead trees and branches in the water. The forest is dense with various types of trees, including pines and deciduous trees. A white rectangular box is overlaid on the image, containing the text "Thank YOU!".

Thank YOU!



Severn Sound Environmental Association

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

Phone (705) 534-7283

Website: www.severnsound.ca

2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022

*Tamara Brincat, Invasive Species
Program Coordinator*

*Michelle Hudolin, Wetlands and Habitat
Biologist*

Severn Sound Environmental
Association, 2021



2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022

Executive Summary

The Severn Sound area is experiencing an outbreak of the invasive Ldd (*Lymantria dispar dispar*), which is causing varying levels of defoliation (leaf loss) across the watershed. Historically, the cyclic nature of this invasive forest defoliator in Ontario has resulted in several years of peak infestation followed by a population crash caused by natural controls.

In late summer and fall of 2021, Severn Sound Environmental Association (SSEA) staff conducted egg mass surveys for Ldd in selected publicly accessible forests within the Severn Sound watershed to complement the work of the County of Simcoe Forestry department and the Provincial Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR). The results of the SSEA surveys have been summarized in this report, which provide a snapshot of the outbreak within selected areas of the watershed. The intent of this report is to forecast potential Ldd defoliation for 2022, in order to provide SSEA member municipalities with data to help inform decision-making around Ldd management.

Generally, defoliation due to Ldd can vary within forests and across municipalities as a result of a variety of factors, including tree species composition, competition between caterpillars for resources, pathogens and other natural controls on the species (e.g., a fungus and host-specific virus).

2021 SSEA survey findings:

- Evidence of natural controls for Ldd was observed in four out of five sites surveyed by SSEA;
- Overall, the forecast for potential defoliation in 2022 ranged from nil/light to moderate within the surveyed plots.

Introduction

The SSEA area is experiencing an outbreak of the non-native, invasive Ldd (formerly referred to as European Gypsy Moth; *Lymantria dispar dispar*), with varying levels of tree and forest defoliation (leaf loss) caused by the caterpillar stage. Ldd was brought to North America in the 1860s from Europe. It was first established in Massachusetts and spread to Ontario by 1969. It is now a well-established forest pest throughout much of the province.

Ldd populations are cyclical in nature, surging approximately every 7-10 years, historically followed by a population crash due to natural factors such as competition for resources, predators, pathogens and weather conditions. In Ontario, the invasive Ldd is beyond the stage where it can be eradicated, and as a result is expected to continue to have periodic population increases, with varying levels of defoliation. In Ontario, major outbreaks have peaked in 1985, 1991, 2002, and 2008, and there was an upsurge in the Severn Sound area starting in 2019. The Ldd outbreak is not uniform throughout the

Severn Sound watershed, one municipality, or even throughout a forest in a given year. The population level in specific areas depends on a number of factors including forest composition (e.g., tree species), weather conditions, and topography/landscape features (e.g., hill top).

Ldd has four stages to its life cycle: egg, larva (caterpillar), pupa and adult moth. Ldd caterpillars feed on the foliage of over 300 host plant species, mainly hardwood trees. Some of their preferred hosts are oak, maple, birch, aspen, alder and pine, depending on the region. The caterpillars chew holes in or consume entire leaves, referred to as defoliation. The caterpillar portion of the Ldd's life cycle is the only stage that feeds on leaves or needles.

The Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRNF) monitors forest health annually, including mapping defoliation due to Ldd. During summer 2021, MNDMNRNF mapped [areas of light to severe defoliation in the province](#); this map shows that portions of the Severn Sound watershed experienced moderate to severe levels of defoliation due to Ldd. Results of MNDMNRNF Ldd surveys, including fall surveys and the associated 2022 defoliation forecast map, are published on the [Ontario Ldd page](#) when available.

Historically, natural factors such as host tree defense mechanisms (e.g., production of chemicals to deter defoliators), prolonged cold winter temperatures, competition for resources among caterpillars, and predators, parasites and pathogens, have been a significant factor in collapsing outbreaks of Ldd. Particularly, the caterpillars are affected by two pathogens that help to drive the population collapse: Nucleopolyhedrosis virus (NPV) and *Entomophaga maimaiga* fungus. NPV is density-dependent, meaning that as the population of Ldd increases, so does the virus and as the population decreases so does the virus. *E. maimaiga* is weather/climate dependent, meaning it thrives in moist cool conditions.

The SSEA has produced educational materials on Ldd including a factsheet, videos, webinar and several reports which should be referenced in addition to this document; reports from the County of Simcoe are also very valuable sources of information and data (see the Resources section below).

2021 Egg Mass Survey Methodology

The MNDMNRNF has established a protocol using Modified Kaladar (MK) Plots to estimate Ldd egg mass density and predict defoliation for the upcoming season (Appendix A). The SSEA participated in several Ldd MK Plot surveys with the County of Simcoe in 2020, and 2021 was the first year for SSEA-led MK Plot surveys. The SSEA used this protocol for Ldd surveys to help forecast potential defoliation for 2022. As per the protocol requirements, Ldd egg masses were counted on trees and shrubs as well as on the ground and in leaf litter within 0.1-hectare plots; SSEA completed 2021 surveys after leaf-off and before snowfall. As per the protocol, egg masses were differentiated as 'new' (i.e., laid in summer 2021) versus 'old' egg masses from previous

years, based on colour, appearance and condition. In addition, signs of natural controls such as NPV, the fungus *E. maimaga*, and parasites were noted in SSEA surveys. For each plot, the MK Plot protocol was used to calculate a total number of new egg masses per hectare; provincial MNDMNR defoliation criteria are provided in Table 1.

Table 1: Provincial defoliation categories

Expected defoliation	Egg masses/ ha
Nil (0%)	0
Light (1-40%)	1-1235
Moderate (40-75%)	1236-6175
Severe (>75%)	>6175

The County of Simcoe Forestry Department completed Ldd surveys in select County Forests in August 2021, and provided a [defoliation forecast for 2022](#) for those sites. In addition, the County also provided an [LDD Infestation Update and Options for Consideration for 2022](#) information report to the County Council in September. SSEA staff are in regular communication with County Forestry staff, and in order to avoid duplication of the County of Simcoe's work, the SSEA chose County Forest sites in the Severn Sound area that had not already been surveyed by the County. Five sites were surveyed, four of which were in Simcoe County Forest tracts, and one was on Crown land within the portion of the Severn Sound watershed that is in the District of Muskoka.

Survey Site Information

There was a narrow window between leaf-off and snowfall in 2021, and MK Plot surveys can take considerable time to complete. With available resources, the SSEA completed Ldd egg mass surveys at five sites with three plots per site (i.e., data collected at a total of 15 plots). Refer to Figure 1 for an overview map showing the SSEA's Ldd survey site locations.

Orr Forest (Severn)

Simcoe County forest, located at the north end of the Uthoff line, near Foxmead Rd in the Township of Severn. This property is predominantly surrounded by woodland. The plots surveyed in this forest had a large variety of tree species, including pine, ironwood, basswood, ash, maple and oak.

Boys Forest (Oro-Medonte)

Simcoe County forest in the Township of Oro-Medonte, east of Line 5 N, north of Copeland Forest. Forest and agricultural lands surround the site, and Highway 400

bisects this forest tract. The plots surveyed within the forest were predominantly maple, beech and elm.

Dubeau Forest (Tiny)

Simcoe County forest, located on Concession 9 East in the Township of Tiny, near the intersection with Baseline Rd S. The County Forest is contiguous with other forested lands, and to the east is an aggregate pit. The plots surveyed within this forest were predominantly composed of pines, oaks, and beech trees.

Gratrix Forest (Tay)

Simcoe County forest, located towards the northern end of Gratrix Rd in the Township of Tay. The southwestern portion of the property is a red pine plantation. The surrounding lands are largely forested, and there is a sand and gravel pit to the southeast of the forest tract. The plots surveyed in this forest had little to no understory and were mostly composed of medium to large sized deciduous and coniferous trees. The primary tree species observed were pines, maples, poplars and beech. It was also observed that many trees in the plantation portion of the property had recently been harvested.

Barron's Lake Forest (Georgian Bay)

Crown land within the Township of Georgian Bay, located west of Barron's Lake, off of Honey Harbour Rd. The plots surveyed within this forest were dominated by maples, oaks and pines. Several wetlands are located within this forest.

2021 Egg Mass Survey Results

The SSEA's results are a snapshot of conditions and a forecast of potential defoliation in 2022 for the selected sites. The proportion of new versus old egg masses is factored into the calculations of potential defoliation; generally, a small proportion (approximately 10%) of the egg masses observed in the survey plots were new (i.e., laid in summer 2021) rather than old egg masses. Overall, the potential defoliation forecast for 2022 ranges from nil/light to moderate within the surveyed plots. It is important to note that there may be considerable local variation in the defoliation level caused by Ldd, and that the survey results from one forest cannot necessarily be extrapolated as a defoliation forecast for a broader area or the entire watershed. The forecast for potential defoliation due to Ldd may differ from the actual defoliation that occurs and does not account for Ldd mortality that is a result of natural controls through the winter (i.e. that takes place after the surveys were completed) or spring weather conditions that can affect caterpillar survival. There could be areas in the Severn Sound watershed that will experience severe defoliation from Ldd in 2022, due to local factors such as topography, tree species composition or limited natural controls.

Results of the egg mass surveys and forecasted potential defoliation levels for sites surveyed by SSEA are provided in Table 2. Refer to Figures 2 through 6 for potential defoliation forecast maps by site. Evidence of natural controls was present at the

surveyed sites, with the exception of the Gratrix site (Tay), however it should be noted that this site had very little evidence of Ldd during the SSEA egg mass surveys.

- Orr Forest (Severn): there was evidence of fungus, virus and egg parasitism observed within the tract; potential defoliation forecast for 2022 is light to moderate. Detailed information by plot within the Orr Forest tract is provided in Table 2.
- Boys Forest (Oro-Medonte): there was evidence of the fungus, virus and egg parasitism observed within the tract; potential defoliation forecast for 2022 is nil to light. Detailed information by plot within the Boys Forest tract is provided in Table 2.
- Dubeau Forest (Tiny): there was evidence of fungus, virus and egg parasitism observed within the tract; potential defoliation forecast for 2022 is nil to moderate. Detailed information by plot within the Dubeau Forest tract is provided in Table 2.
- Gratrix Forest (Tay): signs of Ldd (e.g., caterpillars, pupa casings and egg masses) were not prevalent, no evidence of fungus, virus and egg parasitism was observed within plots in the tract; potential defoliation forecast for 2022 is nil to light. Detailed information by plot within the Gratrix Forest tract is provided in Table 2.
- Barron's Lake Forest (Georgian Bay): there was evidence of fungus and egg parasitism observed within the tract, no evidence of the virus was observed in the survey plots; potential defoliation forecast for 2022 is light to moderate. Detailed information by plot within the Barron's Lake Forest tract is provided in Table 2.

Table 2: Results of 2021 egg mass surveys by SSEA

Municipality	Forest Tract & Plot	New Egg Mass per ha	Defoliation Forecast	Virus (NPV)	Fungus (<i>E. maimaiga</i>)	Egg parasitism	Tree Species Composition
Severn	Orr A	700	Light	N	N	Y	Silver poplar, white elm, sugar maple, silver maple, bur oak, basswood
Severn	Orr B	4,000	Moderate	Y	Y	Y	White elm, sugar maple, basswood
Severn	Orr C	3,700	Moderate	N	N	Y	White elm, ash species, ironwood, bur oak, basswood, sugar maple
Oro-Medonte	Boys A	0	Nil	N	Y	Y	Sugar maple, red maple, American beech, ash species, white elm
Oro-Medonte	Boys B	0	Nil	N	N	Y	White pine, basswood, American beech, sugar maple, ironwood
Oro-Medonte	Boys C	600	Light	Y	Y	Y	American beech, sugar maple, red pine, ash species

Municipality	Forest Tract & Plot	New Egg Mass per ha	Defoliation Forecast	Virus (NPV)	Fungus (<i>E. maimaiga</i>)	Egg parasitism	Tree Species Composition
Tiny	Dubeau A	200	Light	Y	Y	N	Red pine, American beech, red oak, white pine, white birch
Tiny	Dubeau B	0	Nil	N	Y	N	Buckthorn species, red oak, red pine, American beech
Tiny	Dubeau C	2,700	Moderate	Y	Y	Y	American beech, buckthorn species, maple species, white birch, eastern hemlock, ash species, trembling aspen, cedar species
Tay	Gratrix A	200	Light	N	N	N	Red pine, red oak, glossy buckthorn, ash species
Tay	Gratrix B	0	Nil	N	N	N	Red pine, white pine, mountain ash, American beech, ash species, red oak, glossy buckthorn
Tay	Gratrix C	0	Nil	N	N	N	Red pine, red oak, buckthorn, black cherry

Municipality	Forest Tract & Plot	New Egg Mass per ha	Defoliation Forecast	Virus (NPV)	Fungus (<i>E. maimaiga</i>)	Egg parasitism	Tree Species Composition
Georgian Bay	Barron's Lake A	1,100	Light	N	N	Y	White pine, red oak, red maple
Georgian Bay	Barron's Lake B	1,400	Moderate	N	N	Y	White pine, balsam fir, sugar maple, bigtooth aspen
Georgian Bay	Barron's Lake C	900	Light	N	Y	Y	Balsam fir, white oak, red maple, white pine, red oak

In the surveyed plots, the potential defoliation forecasts ranged from nil/light to moderate; all plots were below the provincial threshold for severe (>75%) defoliation. The County of Simcoe [LDD Infestation Update and Options for Consideration for 2022](#) report provides additional insight into defoliation levels throughout forested areas in the County of Simcoe, and the MNDMNR defoliation forecast should be available on the [provincial Ldd website](#) by early 2022.

Management Considerations and Options

The decision to participate in any Ldd management is ultimately up to property owners, including municipalities. There are several management practices that can be undertaken to reduce defoliation of trees, corresponding with various stages of Ldd's life cycle:

- **From May to August** hand-picking is an effective way to remove caterpillars, moths and pupae from smaller trees and shrubs. Place Ldd in a bucket of soapy water for 48+ hours.
- From **May to early June**, applying the biological insecticide *Bacillus thuringiensis* 'kurstaki' (Btk) through ground-based application (spraying) of individual trees; ground application can be done by a licensed pesticide applicator or by homeowners by following label instructions carefully. Aerial application of Btk from aircraft must be conducted by a licenced pesticide applicator under appropriate permits. Btk targets the caterpillars of butterflies and moths but is not specific to Ldd alone, and must be applied during the early Ldd caterpillar stage; more information on Btk is available in [SSEA Report: Survey of Municipal Aerial Btk Spray Programs for Ldd Moth](#). The insecticide TreeAzin, which is used for Ldd and Emerald Ash Borer, may also be injected into trees by a licensed pesticide applicator. Applying approved insecticides can help manage defoliation from Ldd but will not eradicate the species.
- **From late June to August**, large caterpillars may move down tree trunks during hot days. To target these, a 'skirt trap' can be created by wrapping a large piece of burlap around the trunk fastened by twine or rope around the middle, and folding the top half of the burlap over the twine so there is overhang that the caterpillars can crawl under. [City of Toronto's instructional video](#). The trap should be checked every afternoon and caterpillars and pupae should be placed in a bucket of soapy water for 48+ hours.
 - This method may also trap females in their moth stage (**from July to August**). The same steps can be applied.
- During their egg stage, from **September to April**, egg masses can be scraped off surfaces (e.g. tree bark, sheds, lawn furniture, vehicles) into a container with soapy water for 48+ hours. [SSEA's instructional video on removing egg masses](#). Egg masses that are on the ground are likely to survive through winter and hatch as caterpillars in spring, so egg masses should be carefully collected in a container of soapy water.
- Leave dead caterpillars, which can be infected with the virus/fungus that are natural controls for the population; dead caterpillars can infect live ones and help spread these natural controls.
- **Please note:** when handling or managing Ldd caterpillars, pupae, or eggs, use gloves. Long hairs can cause skin irritation or allergic reactions in some people.

The SSEA has more detailed information available on management techniques, including Fact Sheets and videos (see Resources section below). In addition, the County of Simcoe has provided information on municipal management options and considerations in the [LDD Infestation Update and Options for Consideration for 2022](#) report.

Summary of Results

During 2021 egg mass surveys, SSEA staff observed evidence of natural controls at four out of five sites, with the fifth site having limited signs of Ldd. Natural controls (virus, fungus, parasitism) have historically caused Ldd populations to collapse.

The egg mass surveys conducted by SSEA in 2021 provide data and a forecast of potential defoliation for next year for selected forested sites in the Severn Sound watershed. Overall, the forecast for potential defoliation in 2022 ranges from nil/light to moderate within the surveyed plots; all plots surveyed were below the provincial threshold for severe (>75%) defoliation. The results of the SSEA surveys provide a snapshot of the outbreak within surveyed areas, and the results from one forest cannot necessarily be extrapolated as a potential defoliation forecast for other areas within the watershed.

SSEA Staff will continue to work with forestry experts from the Province, the County of Simcoe and partner organizations to stay up to date on the current Ldd outbreak and to provide science-based information to our municipal partners.

Resources

- [SSEA's Ldd Factsheet](#)
- [SSEA's YouTube Video on Ldd Life Cycle and Management Options.](#)
- [SSEA's instructional video on removing egg masses.](#)
- [SSEA and Township of Tiny Ldd webinar](#)
- [SSEA Report: Survey of Municipal Aerial Btk Spray Programs for Ldd Moth](#)
- [County of Simcoe's Ldd page](#)
- [Invasive Species Center – Ldd page](#)
- [Invasive Species Centre Webinar: Forests under attack: The history, dispersal, and management of Ldd](#)
- [Aerial Spraying for Forest Management \(MNRF, 1991\)](#)

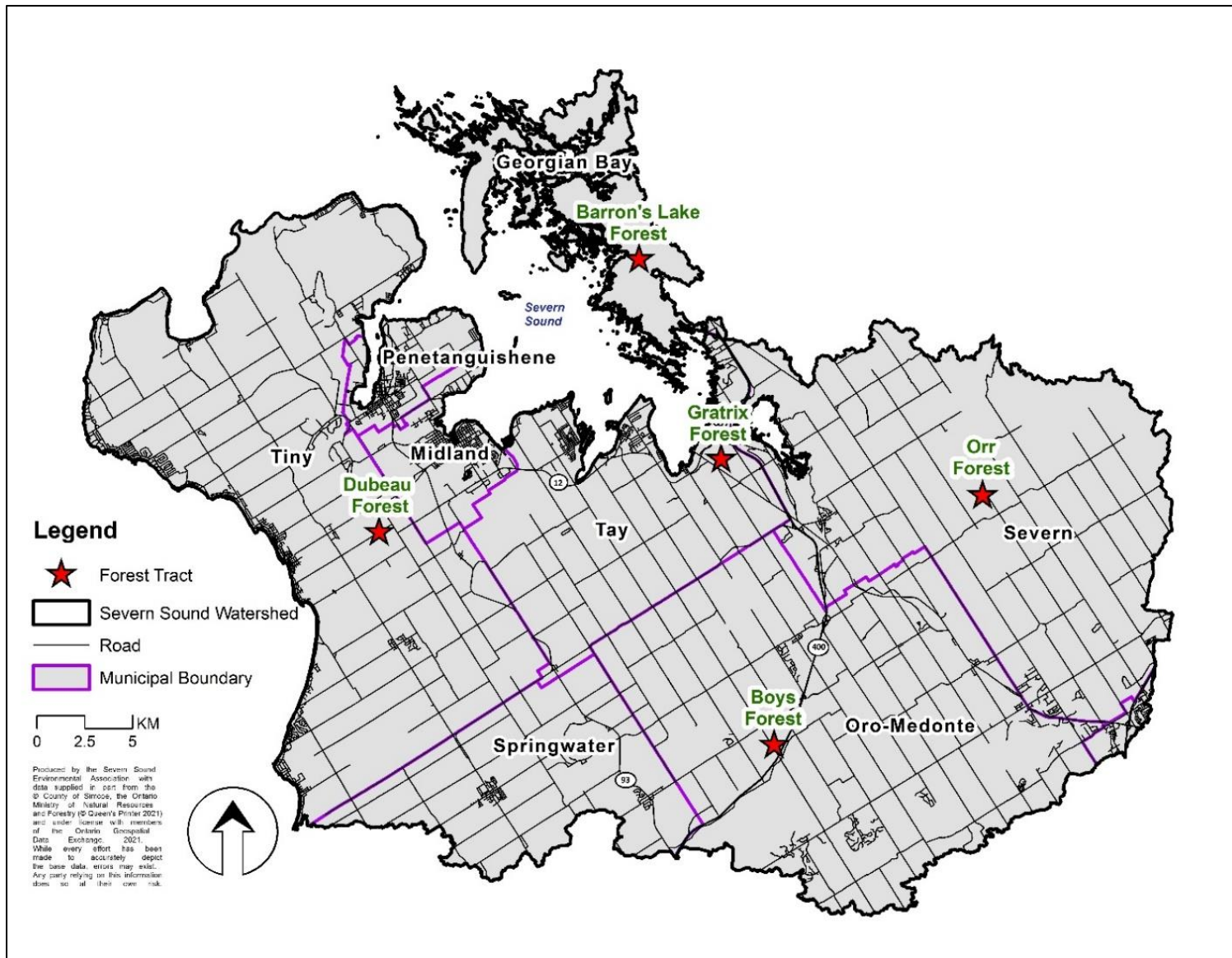


Figure 1. Overview map of the SSEA's Ldd egg mass survey site locations.

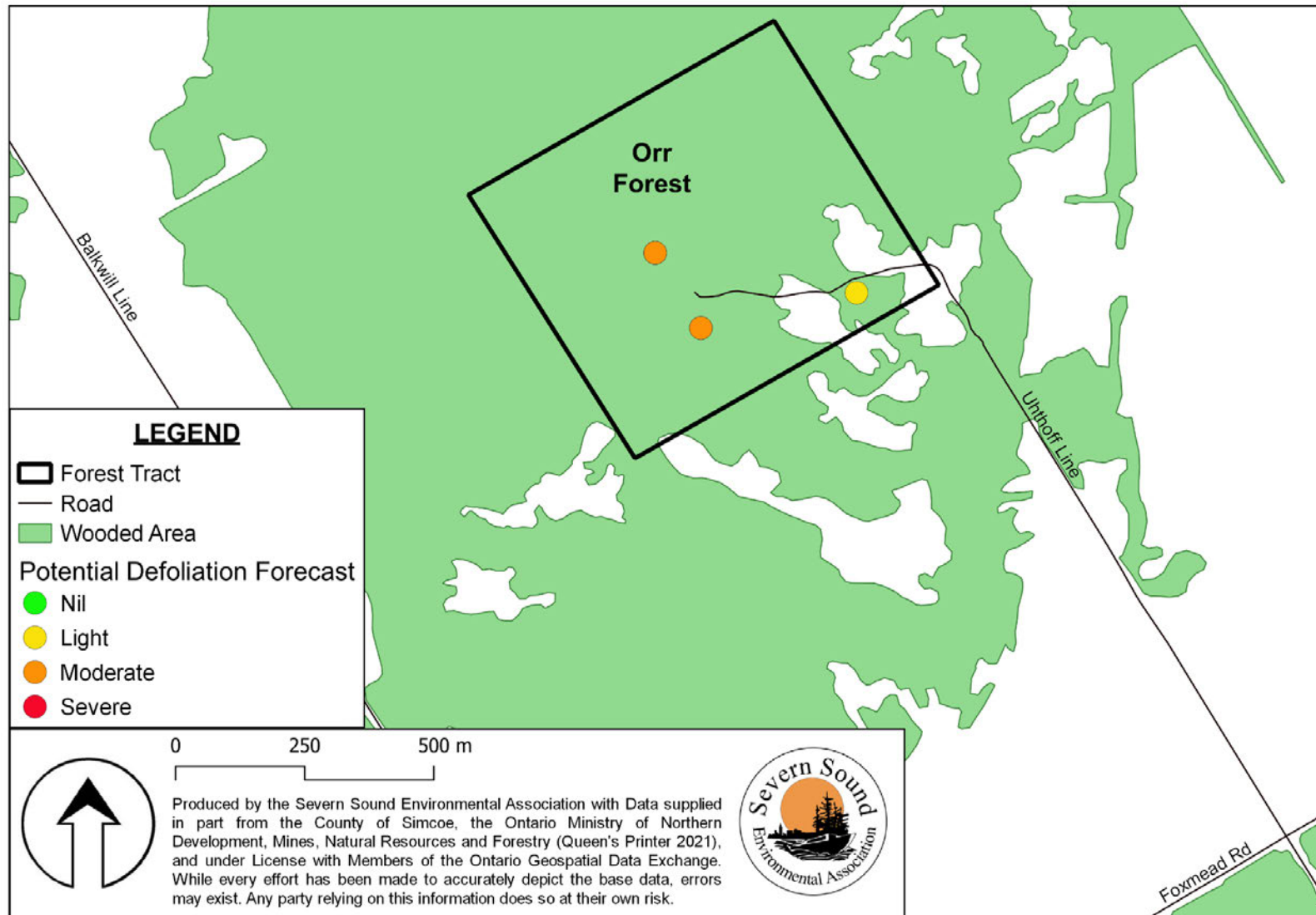


Figure 2. Potential Ldd defoliation forecast for Orr Forest tract (Severn)

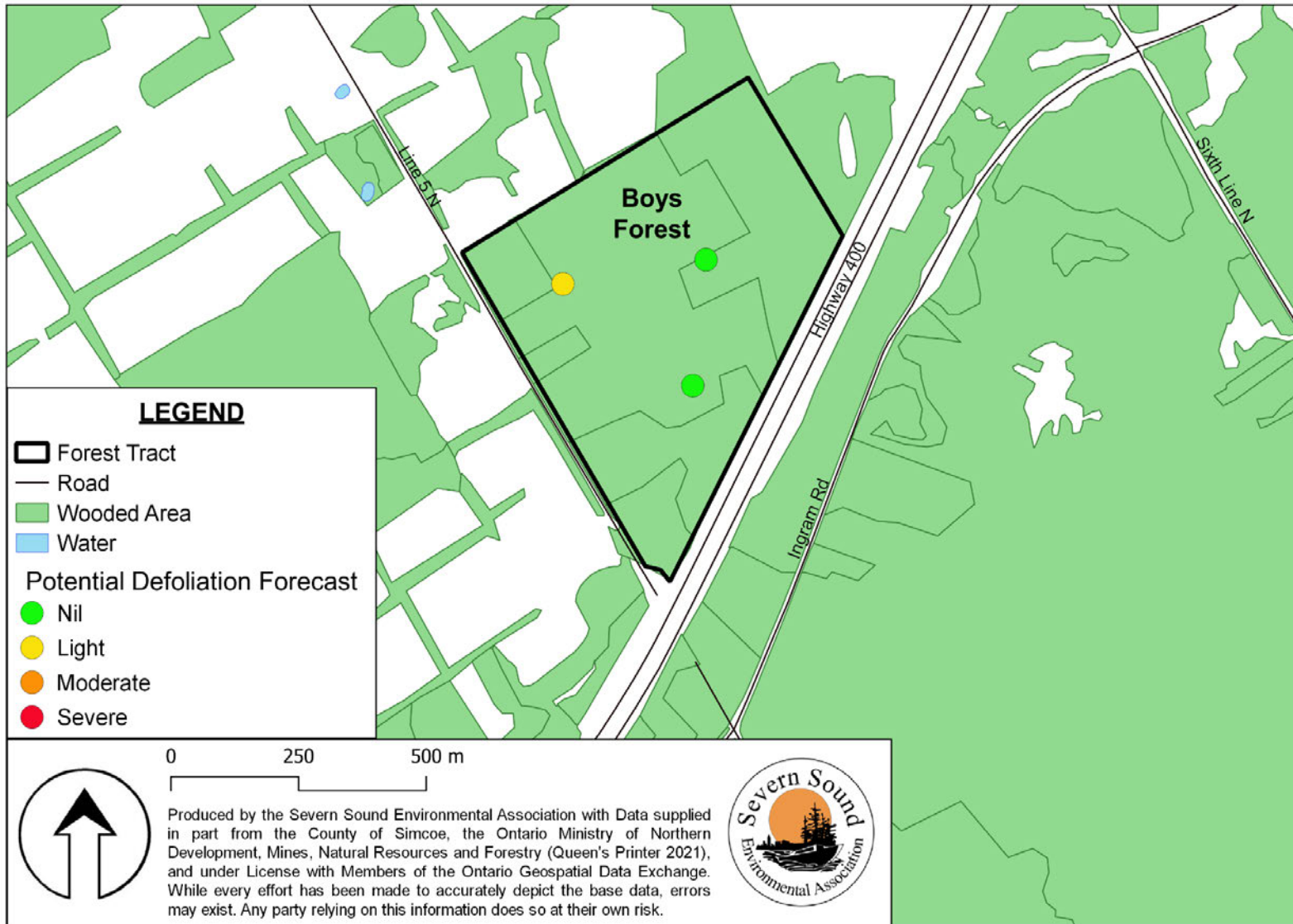


Figure 3. Potential Ldd defoliation forecast for Boys Forest tract (Oro-Medonte)

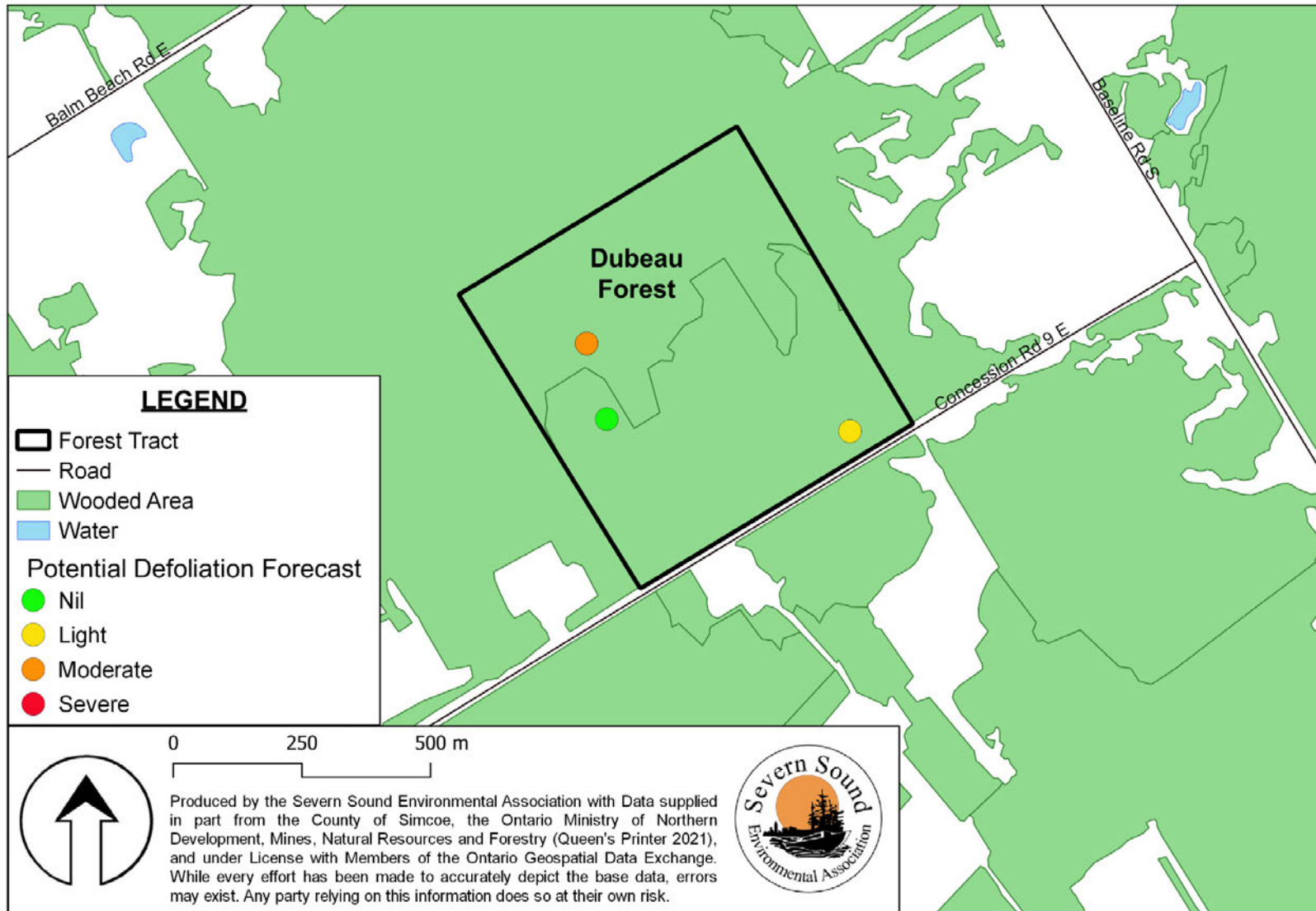


Figure 4. Potential Ldd defoliation forecast for Dubeau Forest tract (Tiny)

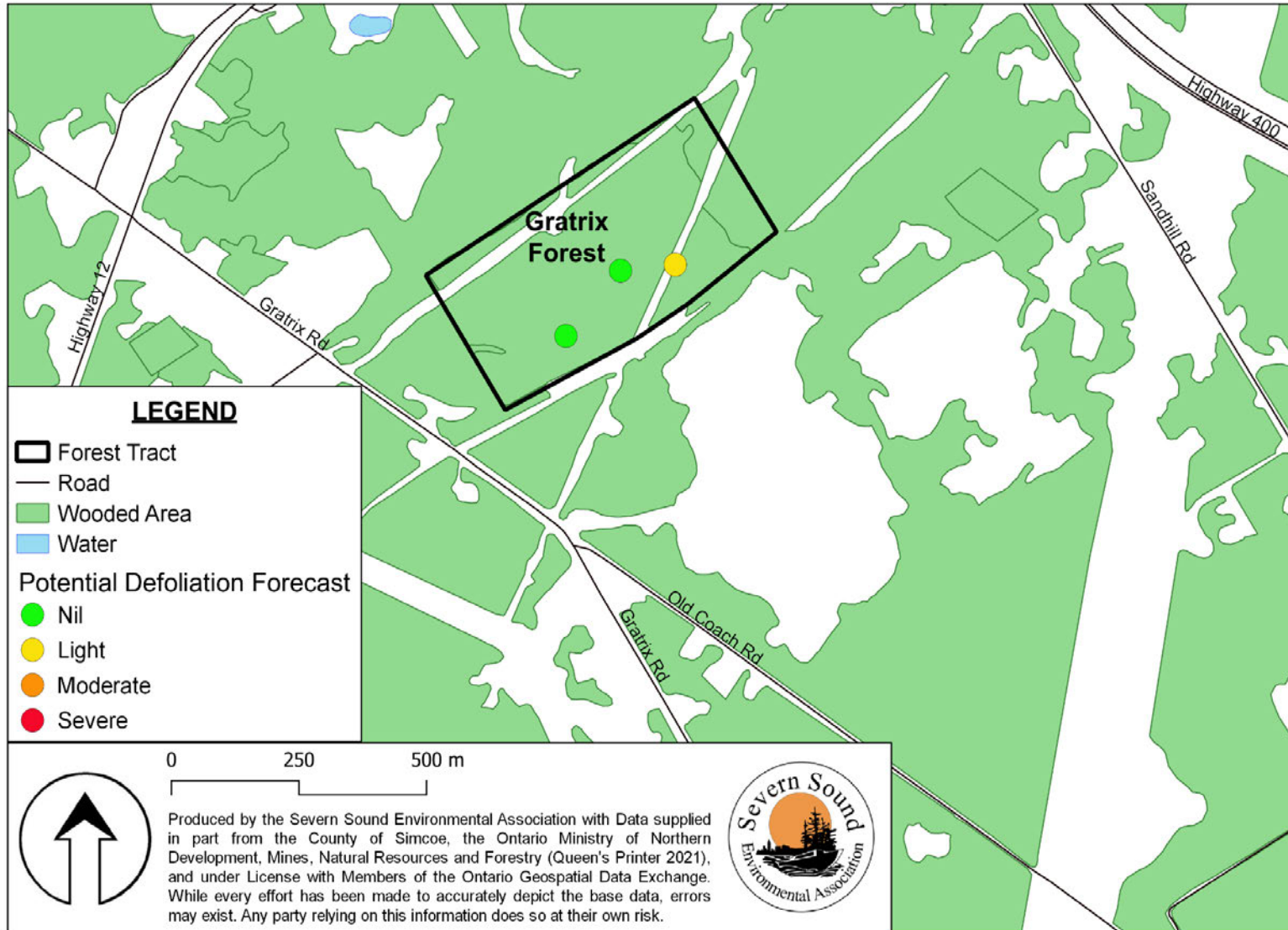


Figure 5. Potential Ldd defoliation forecast for Gratrix Forest tract (Tay)

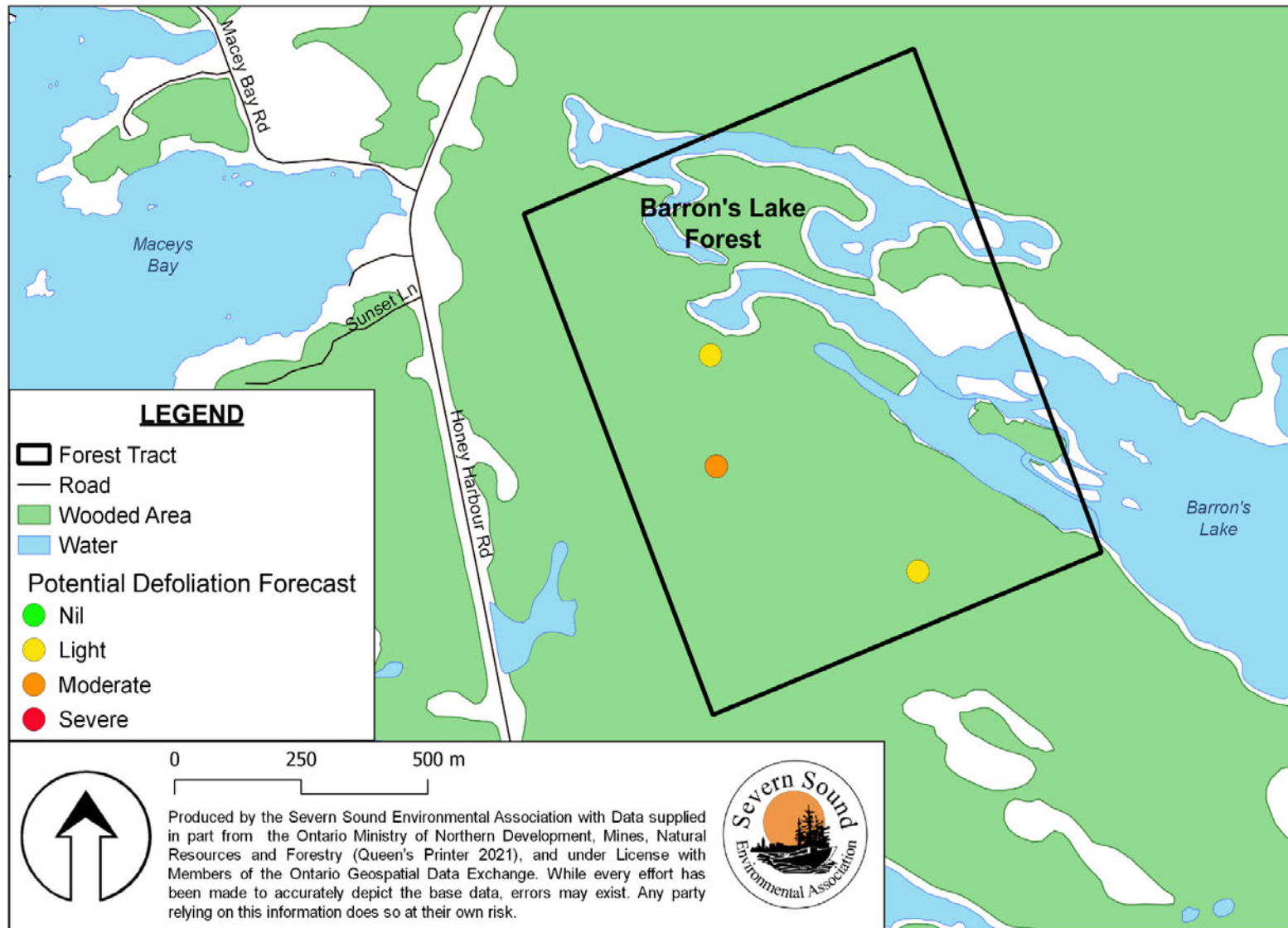


Figure 6. Potential Ldd defoliation forecast for Barron's Lake Forest tract (Georgian Bay)

Appendix A - MNDMNRF Ldd Survey Protocol

Gypsy Moth: Modified Kaladar Plot - Egg mass Density Estimation and Defoliation Forecast

- Plot Objective:** Estimate the number of new egg masses per hectare to forecast subsequent defoliation
- Plot Location:** Inside susceptible stands (e.g. oak, aspen, birch) away from the forest edge.
- Plot Size:** 10 m x 10 m (0.01 ha) (mark corners and centre with pins, stakes or rocks)
- Number of Plots:** Minimum of 3 per stand – more is better
- Plot Spacing:** Separate plots within a stand by 30 m – 50 m.

Egg mass counting procedure:

1. Above ground egg-mass count:

Use binoculars to count all egg-masses above 30cm on all trees/objects that are within the plot. If a tree falls on the plot boundary, but more than half its diameter is inside the plot, it should be included. Exclude the tree if more than half the diameter is outside the boundary.

2. Ground egg-mass count:

Within each of the 10 mini-plots (1 m x 1 m) (figure 1) examine the ground carefully and record the number of new egg-masses that are detected below 30cm. Carefully sort through fallen debris, leaves and other objects as new egg-masses are often detected. Multiply the total number of new egg-masses counted by 10 to determine the number of new egg-masses per 0.01 ha.

3. New vs. Old egg-masses:

To determine the portion of new egg masses (P) in the stand, carefully examine 50-100 egg masses within and around the survey plots. Use the following criteria to identify each egg mass as new or old:



New egg-mass detected on underside of debris New Parasitized egg-mass

New egg masses: always firm to touch, darker beige, eggs pop when squeezed, parasitoid holes may be present



Old egg-mass with exit holes

Old un-hatched egg-mass

Old egg masses: usually soft to touch (may be firm if killed during previous winter), dull or bleached, ragged appearance, exit holes present

Divide the number of new egg masses by the total number of egg masses examined to determine (P), the proportion of new egg masses in the stand.

4. New egg masses above ground:

Multiply the total number of egg masses counted above ground by (P) the proportion of new egg masses.

5. Total new egg masses per hectare:

To determine the total number of new egg masses per 0.01 ha add the total ground egg masses/0.01ha to the total new egg masses above ground. Multiply this total by 100 to determine the total number of new egg masses per hectare (egg masses/ha)

Determine defoliation forecast: Defoliation forecast parameters are located at the bottom of the MKP form and on page 3 (Figure 2). They are to be used when forecasting defoliation for the subsequent year.

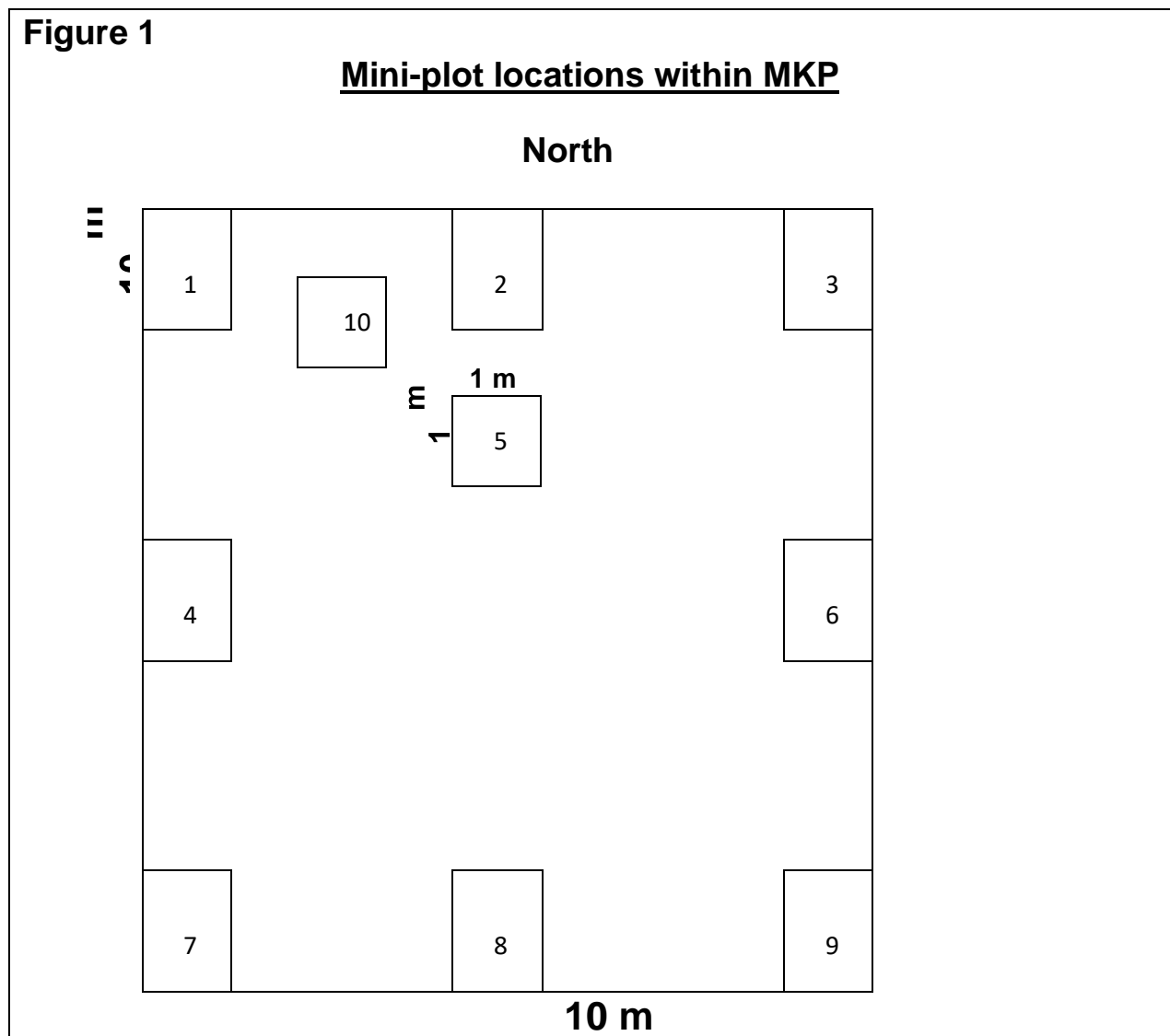


Figure 2

Defoliation Forecast Parameters

Expected Defoliation	(egg masses/ha)
Nil (0%)	0
Light (1-40%)	1-1235
Moderate (40-75%)	1236-6175
Severe (>75%)	>6175



**Severn Sound Environmental Association
Joint Municipal Service Board Meeting
2021 Fourth Quarterly Meeting (Q4) - January 27, 2022**

STAFF REPORT

No: 55-21-SSEA
Date: January 19, 2022
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Treasurer
SUBJECT: 2021 4th Quarter Draft Financials

APPLICABLE STRATEGIC PLAN GOALS:

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

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 55-21-SSEA regarding the 2021 Fourth Quarter Draft Financials be received as information.

Purpose of Staff Report

The purpose of this report is to provide the Board with up-to-date 2021 draft financials.

Background

The 2021 draft financial report reflects that finances are trending favourably. SSEA is in a net revenue position as expected.

This is mainly due to a reduced amount of core spending; core expenses are tracking at 75%. Payroll expenses are under budget due to unfilled staff vacancies. SSEA also has savings in travel, legal, supplies/materials and training.

Core project and cost recovery revenues are underbudget and are mostly offset by external funding for staff that was not included in the 2021 budget: Canada Summer Jobs, Biotalent Canada, ECO Canada and Community Development Corp. (CDC).

Projects are tracking favourably. Note that as previously indicated, the funding for the SSS project in 2021 is expected to be short by \$11,155 due to only six confirmed municipal partners, whereas the budget included seven. Measures have been taken to keep expenses to a minimum and external funding sources were explored to minimize this project shortfall.

In addition, DWSP program currently reflects zero as was the case throughout 2021. This is due to the provincial funding agreement being signed after the 2021 budget was set. The municipal

DWSP funding for 2021 will be dealt with at a future board meeting once finances are accessible and further information is available regarding future provincial funding.

In addition to the provincial funding for DWSP, and core external funding for staff indicated above, SSEA also received additional funding in 2021 that was not included in the 2021 budget: Farlain Lake and Wye Marsh projects, Great Lakes Local Action provincial funding (Healthy Soils=Healthy Watershed project), Citizen Science project, Matchedash Bay Turtle project (Species at Risk) and Depave Paradise project.

Analysis

Various items have not been included in the attached financial report as we proceed to complete our year end and work towards the annual audit: expenses in the payment process, cost recovery invoices issued by SSEA in process, payroll accruals (one pay period), capitalization of assets, amortization, deferred revenue, prepaid expenses, various utilities paid at year end, audit fee accrual, employee future benefits adjustment, audit adjustments, etc.

Conclusion

The SSEA team has been extremely diligent, spending frugally and securing revenue sources. It is expected that we will finalize 2021 in a surplus position.

Submitted by:
Original signed by

Approved for Submission by:
Original signed by

Judy Limoges, Treasurer SSEA

Julie Cayley, Executive Director

Attachment: SSEA Financial Report ending December 31, 2021 DRAFT

	2021		2021		2020
	YTD Actual	Annual Budget	Variance \$	Actual/Budget %	Actual
SSEA CORE OPERATIONS					
GENERAL REVENUE	(953,952)	(958,557)	(4,605)	100.0%	(713,660)
UNDISTRIBUTED PAYROLL EXPENSE	203,437	370,832	167,395	55.0%	198,903
ADMINISTRATION/OVERHEAD	124,691	163,080	38,389	76.0%	198,337
GIS BASE COVERAGES	93,106	90,412	(2,694)	103.0%	80,835
REQUESTS & REVIEWS	12,190	34,454	22,264	35.0%	8,258
MONITORING & SURVEILLANCE	105,914	111,355	5,441	95.0%	93,784
MONITORING SUPPORT	18,704	22,440	3,736	83.0%	8,955
WATER SCIENTIST	57,688	62,523	4,835	92.0%	59,326
INVASIVE SPECIES	66,914	56,181	(10,733)	119.0%	45,417
SOURCE WATER IMPLEMENTATION	(0)	47,280	47,280	(0.0%)	(1,000)
PSAB ADJUSTMENTS	0	0	0	0.0%	28,393
TOTAL SSEA CORE OPERATIONS	(271,308)	0	271,308	0.0%	7,548
SSEA IMPLEMENTATION PROJECTS					
GROUND WATER PROJECT					
Revenues	0	(2,550)	(2,550)	0.0%	0
Expenses	0	2,550	2,550	0.0%	0
FARLAIN LAKE PROJECT					
Revenues	(4,400)	0	4,400	0.0%	(8,472)
Expenses	3,450	0	(3,450)	0.0%	5,008
HONEY HARBOUR SURVEY					
Revenues	(15,309)	(15,240)	69	100.0%	(9,507)
Expenses	7,251	15,240	7,989	48.0%	9,507
WYE MARSH PROJECT					
Revenues	(13,964)	0	13,964	0.0%	(6,254)
Expenses	5,784	0	(5,784)	0.0%	2,062
INLAND LAKES					
Revenues	(12,533)	(16,328)	(3,795)	77.0%	(12,679)
Expenses	15,902	16,328	426	97.0%	12,679
TREE DISTRIBUTION PROJECT					
Revenues	(29,958)	(20,154)	9,804	149.0%	65
Expenses	25,158	20,154	(5,004)	125.0%	7,512
RMO PROJECT					
Revenues	(69,114)	(68,708)	406	101.0%	(74,587)
Expenses	57,886	68,708	10,822	84.0%	60,964
VICTORIA HARBOUR WTP SURVEY					
Revenues	(6,242)	(8,323)	(2,081)	75.0%	(4,274)
Expenses	2,891	8,323	5,432	35.0%	4,274
CITIZEN SCIENTIST					
Revenues	(19,119)	0	19,119	0.0%	(15,669)
Expenses	25,399	0	(25,399)	0.0%	19,461
SUSTAINABLE SEVERN SOUND					
Revenues	(76,178)	(78,085)	(1,907)	98.0%	(27,648)
Expenses	85,897	78,085	(7,812)	110.0%	33,865
HEALTHY SOILS = HEALTHY WATERSHED PROJECT					
Revenues	(48,803)	0	48,803	0.0%	0
Expenses	38,896	0	(38,896)	0.0%	0
SPECIES AT RISK					
Revenues	(13,680)	0	13,680	0.0%	0
Expenses	9,104	0	(9,104)	0.0%	0
DEPAVE PARADISE					
Revenues	(2,000)	0	2,000	0.0%	0
Expenses	1,621	0	(1,621)	0.0%	0
TOTAL SSEA IMPLEMENTATION PROJECTS	(32,061)	0	32,061	0.0%	(3,693)
TOTAL SSEA OPERATING (SURPLUS)/DEFICIT	(303,369)	0	303,369	0.0%	3,855

NOTE: The financial report received from the Township of Tay has been adjusted for several items to reflect a more accurate DRAFT report. Judy Limoges, SSEA Treasurer.



**Severn Sound Environmental Association
 Joint Municipal Service Board
 2021 Fourth Quarterly Meeting (Q4) - January 27, 2022**

STAFF REPORT

No: 56-21-SSEA
Date: January 17, 2022
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Treasurer, Julie Cayley, Executive Director
SUBJECT: SSEA 2022 Staff COLA Salary Increase

APPLICABLE STRATEGIC PLAN GOALS:

Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 56-21-SSEA regarding a 2022 annual COLA salary increase of 2.0%, based on the 2022 budget be approved by the Board; and

FURTHER THAT: The Executive Director be authorized to implement this cost of living increase for SSEA FTE staff effective January 1, 2022.

Purpose of Staff Report

The purpose of this report is to provide further information to the board regarding the general annual salary increase for SSEA FTE.

Background

The chart below provides a history of SSEA approved annual cost of living adjustment (COLA) salary increase for SSEA FTE along with municipal and conservation authority comparators (where available) from 2017-2022:

Municipality:	2022	2021	2020	2019	2018	2017
Georgian Bay	1.60%	1.60%	1.50%	1.50%	1.50%	0.02%
Midland	1.75%	not approved	1.25%			
Oro-Medonte	2.00%	n/a	1.60%	1.50%		
Penetanguishene	1.80%	1.85%	not approved	1.65%	1.60%	1.75%
Severn	2.00%	1.50%	1.75%	1.75%		
Springwater	n/a	1.48%	2.21%	1.77%	1.84%	1.46%
Tay	comp review market incr and 2%	0.00%	2.00%	2.50%	1.50%	
Tiny	1.50%	1.00%	2.00%	1.50%	1.60%	1.50%

SSEA		1.50%	2.00%	2.00%	1.60%	1.49%
Conservation Authorities:						
NVCA	1.3% cola+1.7% steps=3%	1.5%	2.20%	2.50%	1.90%	1.72%
LSRCA	2%	PROPOSED=1%	1.75%	1.50%	1.85%	

The average increase from the 7 municipal responses received is approximately 1.81%. The 2022 SSEA approved budget includes a 2% COLA increase for SSEA FTE.

The SSEA FTE positions do not have a salary grid and have always been paid at a set job rate. A staff pay equity and compensation review and updates to our employee manual to further reduce corporate financial risk has been included in the 2022 SSEA budget.

With the updated information herein, we trust this provides the Board with the information required to approve a 2% 2022 salary increase for SSEA staff and authorize the ED to effect the change January 1, 2022.

Submitted by:

Original signed by
 Julie Cayley, Executive Director

Original signed by
 Judy Limoges, Treasurer



**Severn Sound Environmental Association
Joint Municipal Service Board Meeting
2021 Fourth Quarterly Meeting (Q4) - January 27, 2022**

STAFF REPORT

No: 57-21-SSEA
Date: January 17, 2022
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Treasurer

SUBJECT: SSEA RESERVE SCHEDULE - AT DECEMBER 31, 2021 AND PROJECTED RESERVE SCHEDULE AT DECEMBER 31, 2022

Strategic Plan Goal 4: An Exceptional Organization

RECOMMENDATION:

**RESOLVED THAT: Staff Report No. 57-21-SSEA regarding the 2021 SSEA Reserve Schedule, AND;
FURTHER THAT: the 2022 projected reserve schedule be approved by the Board.**

Purpose of Staff Report

The purpose of this report is to provide the Board with a reserve schedule reflecting the balance of reserves at December 31, 2021 and the projected balance at December 31, 2022, in accordance with the SSEA Reserve Policy.

Background

The SSEA Board of Directors approved the SSEA Reserve Policy on October 2, 2020. The policy indicates that a summary will be provided to the Board each year setting out a statement of continuity showing the beginning balance, transfers to/from each reserve and the projected year-end balance. The attached reserve schedule provides this information to the Board.

Analysis/Discussion

During the 2020 budget process, it was determined that \$16,800 would be contributed to reserves annually as follows: \$5,000 to the Contingency Reserve for strategic plan renewal, \$5,000 to the Capital Asset Reserve for replacements, \$5,000 to the Employee Benefits Reserve for staff payouts upon termination (eg sick banks), and \$1,800 to the Well Decommissioning Reserve.

In addition, the Board of Directors passed a motion on October 25, 2021 to transfer the SSEA 2020 unrestricted surplus of \$168,350 to the Contingency Reserve in accordance with the SSEA Reserve Policy.

During the 2022 budget process the Board of Directors approved an increase to the annual contribution to the Capital Asset Reserve for replacements to \$12,000 to reflect the annual asset amortization cost, bringing the total annual budgeted contribution to reserves up to \$23,800. The Board also approved the use of \$78,000 from the Contingency Reserve and the Employee Benefits Reserve to complete the staff pay equity and compensation review, and finalize updates to our employee manual to further reduce corporate financial risk in 2022.

The allocation of these contributions to and transfers from reserves are reflected on the attached reserve schedules.

Prepared by:
Original signed by

Approved for Submission by:
Original signed by

Judy Limoges, Treasurer

Julie Cayley, Executive Director

Attachment: SSEA Reserve Schedule at December 30, 2021
SSEA Projected Reserve Schedule at December 31, 2022



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) - January 27, 2022**

STAFF REPORT

No: 58-21-SSEA
Date: January 17, 2022
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Treasurer

SUBJECT: TOWNSHIP OF TAY REQUEST USE OF SSEA RESERVE FOR 2022

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

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 58-21-SSEA regarding Tay Township's request to utilize their portion of the 2020 DWSP funding of \$9,254 currently in the SSEA Contingency Reserve to offset their share of SSEA costs in 2022, be approved by the SSEA Board.

Purpose of Staff Report

The purpose of this report is to obtain the SSEA Board of Directors' approval to apply the 2020 DWSP reserve attributed to the Township of Tay and totaling \$9,254, to the 2022 SSEA Township of Tay budget request.

Background

In 2020, SSEA requested \$73,649 from our municipal partners to cover the cost of the Drinking Water Source Protection (DWSP) activity as per the 2020 SSEA budget in anticipation of a reduction in funding from the Provincial Government for this program. In May 2020 an MOU was signed with the LSRCA as the lead SPA for the 2020-2021 Provincial funding for the DWSP program. As a result, on October 15, 2020 the SSEA Board passed a resolution to move the 2020 municipal source water funding received from our municipal partners to the SSEA DWSP reserve for funding this program in the event that provincial funding is discontinued in future.

Accordingly, all municipal partners' 2020 DWSP portion of their SSEA funding, with the exception of Oro-Medonte's, is currently included in the SSEA Contingency Reserve in the amount of \$64,554 (see attached).

On January 11, 2022, an email was received from Brent Andreychuk, Manager of Financial Services/Treasurer, Tay Township requesting Tay's 2020 Source Water Reserve funding in the amount of \$9,254 for their use toward the SSEA 2022 budget ask, thereby reducing their 2022 contribution by that amount.

Conclusion/Recommendation:

With the approval of this request, the SSEA Contingency Reserve balance would be \$223,650 and the total projected SSEA reserves balance would be \$265,172 at December 31, 2022 as per attached.

Prepared by:
Original signed by

Approved for Submission by:
Original signed by

Judy Limoges, Treasurer

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) - January 27, 2022**

STAFF REPORT

No: 59-21-SSEA
Date: January 17, 2022
To: Chair and Members of the SSEA Board of Directors
From: Judy Limoges, Treasurer

SUBJECT: APPOINTMENT OF AUDITORS FOR 2021

Strategic Plan Goal 4: An Exceptional Organization

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 59-21-SSEA regarding appointing the audit firm for the SSEA Treasurer municipality, Township of Tay, currently Pahapill and Associates Professional Corporation, to perform the 2021 annual financial audit of the SSEA, be approved by the SSEA Board.

Purpose of Staff Report

The purpose of this report is to obtain the SSEA board of directors' approval to appoint the auditor firm Pahapill and Associates Professional Corporation, to perform the 2021 annual financial audit of the SSEA.

Background

The Municipal Act section 296(1) requires a municipality to appoint an Auditor. Our Treasurer municipality, Township of Tay, has appointed Pahapill and Associates Professional Corporation through resolution and they have an agreement authorized by by-law. The agreement covered the 2019 audit. The Township extended the audit firm's appointment to include the 2020 and 2021 audit. Accordingly, SSEA requires a motion from the board of directors to appoint Pahapill and Associates Professional Corporation, to perform the 2021 annual financial audit of the SSEA.

Prepared by:
Original signed by

Approved for Submission by:
Original signed by

Judy Limoges, Treasurer

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 60-21-SSEA
Date: January 27, 2022
To: Chair and Members of the SSEA Board of Directors
From: Melissa Carruthers, Risk Management Official / Risk Management Inspector
SUBJECT: Risk Management Services Budget Update

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science

- Continue to provide planning and policy advice to municipal decision makers

Goal 2: Supportive Partnerships

- Strengthen & build relationships for the implementation of Part IV of the Clean Water Act

Goal 4: An Exceptional Organization

- Identify and implement opportunities to ensure funding for SSEA is secure and sustainable over the long-term

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 60-21-SSEA regarding an update on the Risk Management Services budget be received for information.

Purpose of Staff Report

The purpose of this report is to provide an update on changes to the Risk Management Services budget calculation.

Background

A Risk Management (RM) Services Agreement was signed with all of the SSEA member municipalities (excluding Springwater) and the SSEA in 2015, delegating responsibility for Part IV implementation under the Ontario Clean Water Act to the SSEA. This service is provided through special project funding, paid by the applicable municipalities, and is not part of the core SSEA budget.

As part of SSEA's commitment to fiscal responsibility, we are working to ensure the Municipal Drinking Water Source Protection Risk Management Services budget reflects actual workload around protecting municipal drinking water sources and the work that is required in your specific municipality. This budget item goes towards a dedicated, trained and experienced Risk Management Official/Inspector and the work they carry out on your behalf. The Risk

Management funding model has been further developed in 2021 to include relevant costs incurred by SSEA for funding this position in this activity for our municipal partners.

Analysis/Discussion

The Risk Management Official / Risk Management Inspector position works with partner municipalities (through the Risk Management Services Agreement) ensuring municipal drinking water sources are protected both now and in the future from overuse and contamination. Budgeting for these Risk Management services was previously (2015) based on predictions of workload and risk which have changed now that we have 5 years of service delivery and actual numbers. The actual cost of these services is no longer being covered, including the change in workload by municipality as well as the cost recovery rate being charged. The rate was increased by \$17/hr to cover SSEA cost and ensure partner municipalities were still being charged an internal rate as a municipal partner. A base portion of the Risk Management Official/Inspector salary of \$6,055 (to each municipality) is now included to ensure on demand continued access to this full time, long term, provincially trained and certified, professional expert with local experience and expertise who ensures partner municipalities have access to the most up to date services and information relative to the Source Protection regulations.

Expected Impact on SSEA Budget/Workload

In the 2022 budget, overall cost of Risk Management services in Severn Sound decreased (\$86,392 in 2021 and \$58,043 in 2022), however the cost per municipality may have increased or decreased as noted in your budget request letters. As the funding model now uses actuals, both the SSEA budget and applicable municipal partners funding ask, will fluctuate yearly. This will be based on need and will not be tied to a specific percent increase or decrease.

Prepared by:
Original signed by

Approved for Submission by:
Original Signed by

Melissa Carruthers, Risk Management
Official / Risk Management Inspector

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 62-21-SSEA
Date: January 27, 2022
To: Chair and Members of the SSEA Board of Directors
From: Melissa Carruthers, Risk Management Official / Risk Management Inspector
SUBJECT: **Severn Sound Source Protection Authority (SS SPA) Drinking Water Source Protection Update and SSEA Risk Management Services 2021 Q4 Update**

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science

- Continue to offer exceptional services as the Source Protection Authority for Severn Sound

Goal 2: Supportive Partnerships

- Strengthen & build relationships for the implementation of Part IV of the Clean Water Act
-

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 62-21-SSEA regarding an update on the activities undertaken by SSSPA and SSEA Risk Management staff during Q4 of 2021 be received for information.

Purpose of Staff Report

The purpose of this report is to provide an update on the activities that Severn Sound Source Protection Authority and SSEA Risk Management staff have undertaken during the fourth quarter of 2021.

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 work 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 are underway. Answering inquiries from the general public or municipal staff and commenting on development proposals is also a large part of what the risk management staff does.

Analysis/Discussion

Source Protection Authority services – During the fourth quarter of 2021 Source Protection Authority staff completed the following tasks:

- Attended nine regional or provincial meetings on various topics such as communications, assessment report update requirements, and risk management topics specific to the drinking water source protection program
- Held a Drinking Water Source Protection 101 workshop for members of the planning department staff in the Town of Midland
- Source Protection Plan and Assessment Report updates for 3 Oro-Medonte systems (Braestone, Maplewood, and Robincrest) officially moved into public-consultation stage
- Continue to support municipalities in meeting their requires with potential changes to water systems in the Townships of Springwater, Severn, Oro-Medonte, and Midland.
- Submitted a two year (2022-2024) work plan (via LSRCA) to the Province for Source Protection Authority activity funding. It is noted this is the first time a two year work plan has been submitted. Typically it is only for one year.

Risk Management Official services - During the fourth quarter of 2021 risk management staff has completed the following tasks:

- Commented on 19 development applications (increase of 111% compared to Q4 of 2020, bulk of increase coming from Township of Tay), answered 14 inquiries (increase of 75% compared to Q4 of 2020, increases from all across watershed), signed one Risk Management Plan (Oro-Medonte), attended one pre-consultation meeting, and conducted one site visit.

Prepared by:
Original signed by

Approved for Submission by:
Original Signed by

Melissa Carruthers, Risk Management
Official / Risk Management Inspector

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 63-21-SSEA
Date: January 27, 2022
To: Chair and Members of the SSEA Board of Directors
From: Aisha Chiandet, Water Scientist; Michelle Hudolin, Wetlands & Habitat Biologist;
Tamara Brincat, Invasive Species Coordinator

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. 63-21-SSEA regarding SSEA Grant Application Update, be received for information.

Purpose of Staff Report

To update the Board on funding applications that have been submitted or approved during the fourth quarter of 2021, or are in current preparation and will impact budget and workload in 2022.

Background

The following lists funding applications submitted in Q4 of 2021 and also applications that are currently in preparation and pending submission.

Approved Funding:

- 1) Science Horizons Youth Internship Program (ECO Canada) (2021-2022)**
Project Title: *Citizen Science & Water Quality Coordinator*
Programs Supported: Citizen Science, Environmental Monitoring programs
Approved For: \$23,866 towards wages
SSEA In-kind: \$5,049 in 2022
Description: Funding to offset wages to hire junior professionals (under 30) full-time permanent positions in citizen science and environmental monitoring
Impact: Increase staff resources for SSEA's Citizen Science Programs, environmental monitoring, reporting and communications.

2) County of Simcoe Forestry Grant/MOU:

Project Title: *SSEA Community Tree Planting*

Program Supported: volunteer-supported tree planting projects

Approved For: \$750-\$1,500 (estimate)

SSEA In-kind: \$2,500-\$5,000 (estimate)

Description: 100% of seedling costs eligible for reimbursement, pending ability to conduct community tree planting

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

Funding Pending Approval:

3) Forests Ontario Over-the-Counter Tree Program Subsidy

Programs Supported: Tree Seedling Distribution Program

Total Applied For: \$2,100

Description: Subsidy of \$0.25 per tree seedling for 2022 Tree Seedling Distribution over-the-counter program

Impact: The SSEA sets seedling prices so that the Tree Seedling Distribution Program is self-funded; the Forests Ontario subsidy allows seedling prices to be set lower for participants.

Pending Submission in January 2022:

4) EcoAction Fund (Environment Canada)

Project Title: *Healthy Soils = Healthy Watersheds (HS=HW)*

Programs Supported: Agriculture stewardship

Total Applied For: \$100,000 over 3 years

SSEA In-kind: approximately \$25,000

Description: Expand pilot phase of the HS=HW project to improve water quality and sequester greenhouse gases by working with farmers in North Simcoe to explore and encourage adoption and promote action of soil health best management practices.

Impact: Increase SSEA resources to work with the agricultural community support soil health.

5) TD Friends of Environment Foundation Grant (TD Bank)

Project Title: *Projects for Pollinators (P4P)*

Programs Supported: Bee City initiative, Depave Paradise, Sustainable Severn Sound

Total Applied For: \$8,000 over 1 year

SSEA In-kind: \$6,182

Description: Increase pollinator habitat and biodiversity in the watershed by promoting No Mow zones, invasive species removals, distributing pollinator kits, and public education.

Impact: Increase staff resources and project materials to engage the public on increasing pollinator habitat.

6) Nature and Climate Grant Program (World Wildlife Fund Canada)

Project Title: Replanting for a Resilient Severn Sound

Programs Supported: Invasive Species, Natural Heritage

Total Applied For: \$112,000 over 2 years

SSEA In-kind: \$307,800 over 2 years

Description: Habitat restoration project involves removal and replacement of invasive species at 8 demonstration sites, 1 in each of SSEA's partner municipalities.

Impact: Increase staff resources and provide project materials to manage and remove invasive species, engage the community through education and volunteer opportunities, and improve and enhance habitat and biodiversity.

7) Grassland Stewardship Initiative (Forests Ontario)

Project Title: TBD

Programs Supported: Natural Heritage/Species At Risk

Total Applied For: TBD

SSEA In-kind: TBD

Description: Habitat restoration to support the conservation and recovery of Bobolink and Eastern Meadowlark populations.

Impact: Increase staff resources, expertise and capacity to implement grassland enhancement.

8) Federal Canada Summer Jobs (CSJ) (Service Canada)

Programs Supported: TBD

Total Applied For: TBD

SSEA In-kind: TBD

Description: Wage subsidy to hire youth (aged 15 to 30 years) for seasonal positions; if approved, SSEA would be eligible for up to 50% of the provincial minimum hourly wage for a minimum of six weeks. SSEA also anticipates partnering with Ontario Federation of Anglers and Hunters on a CSJ application for their *Invasive Species Hit Squad* program; if approved, an additional staff person would be available to SSEA at minimal or no cost.

Impacts: Increase staff resources for various programs, and provides youth with the opportunity to gain and develop valuable skills and experience.

9) Municipal Climate Resilience Fund (Intact Centre)

Project Title: TBD

Programs Supported: Natural Heritage, Sustainable Severn Sound

Total Applied For: TBD, up to \$100,000 over 1 year

SSEA In-kind: TBD

Description (anticipated): Provide support for Natural Asset inventory in one SSEA municipality

Impact (anticipated): Increase expertise related to natural asset inventory and valuation.

10) Education and Community Action Microgrant (Invasive Species Centre)

Project Title: TBD

Programs Supported: Invasive Species

Total Applied For: TBD, up to \$5,000 for 1 year

SSEA In-kind: TBD

Description: Provide financial support for smaller scale community invasive species management

Impact: Increase staff resources, reduce cost of invasive species removal and disposal, as well as, enhance volunteer recruitment.

Support Letters Provided – not applicable for this quarter

Partnership Agreements, Approved in Principal or Signed – not applicable for this quarter

Partnerships Agreement Pending

Ongoing discussion with Ontario Invasive Species Centre for funding to support implementation of a boat wash station demonstration project.

Analysis/Discussion

SSEA works to secure external funding both independently and in partnership with numerous organizations, in order 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 funding amounts (excluding pending submissions) for the next three years (projected for all four quarters) are as follows:

2022 – approximately* \$116,963

2023 – approximately* \$27,675

2024 – approximately* \$15,000

*Note: amounts for some projects for 2022 onward may change, and have to be confirmed each year.

Conclusion/Recommendations

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

Aisha Chiandet, Water Scientist
Michelle Hudolin, Wetlands & Habitat Biologist
Tamara Brincat, Invasive Species Coordinator

Julie Cayley, Executive Director



**Severn Sound Environmental Association
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 64-21-SSEA
Date: January 25, 2022
To: Chair and Members of the SSEA Board of Directors
From: Tamara Brincat, Invasive Species Program Coordinator
Michelle Hudolin, Wetlands & Habitat Biologist

SUBJECT: SSEA Invasive Species Program Update

APPLICABLE STRATEGIC PLAN GOALS:

Goal 1: Sound Science

Goal 2: Supportive Partnerships

Goal 3: An Engaged & Informed Community

RESOLVED THAT: Staff Report No. 64-21-SSEA, regarding SSEA Invasive Species Program Update, be received for information.

Purpose of Staff Report

The purpose of this report is to provide an update on the key activities and accomplishments of the SSEA Invasive Species Program during Q4 of 2021.

Background

The Invasive Species Program is a core program of the SSEA. 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 SSEA was fortunate to receive continued support through BioTalent Canada's *Science and Technology Internship Program – Green Jobs*; one youth was hired in Q3, this contract continued through Q4 where they continued to support the SSEA Invasive Species Program, increasing capacity for monitoring and communications.

Monitoring, Management & Technical Support

- Aided the Town of Midland staff in removing the invasive species buckthorn at Gawley Park in Midland to support their Bee City/No-Mow project.
- Completed Ldd egg mass surveys at 15 plots across 5 forested areas in the watershed. These surveys assist with forecasting 2022 tree defoliation caused by Ldd (in SS)
- Produced and distributed the 2021 Ldd Egg Mass Survey Results and Potential Defoliation Forecast for 2022 report to support municipal decision making.
- Completed surveillance for invasive mussels in Little Lake, Midland. Removed artificial substrates from Little Lake SSEA installed in Q2 to detect invasive mussels. The substrate samples have been processed and no adult invasive mussels were detected.

- During the artificial substrate removal, visual surveys and rake tosses were completed to detect the possible presence of other invasive species in Little Lake. During this monitoring 2 new invasive species were found: the Chinese mystery snail and the macroalgae starry stonewort. Further work will be done in 2022 to investigate population size and possible management options.

Education & Outreach

- Responded to a total of 9 new invasive species inquiries, across all eight partner municipalities, providing technical support to municipal staff and the public. Inquiries were related to identification, reporting and management recommendations of invasive/non-native species.
- Attended the Honey Bee Festival Township of Georgian Bay to promote SSEA programs, including the Invasive Species Program, and provide education and outreach.
- Facilitated and hosted the fall Invasive Species Working Group Meeting. In attendance were 4 partner organizations and 7 of 8 partner municipalities. Attendees participated in valuable discussion re: invasive species inquiries, management, reporting and education.
- Abstract accepted to present to the Ontario Invasive Plant Council January 2022 conf.

Funding & Donations

- One Biodiversity Conservation Intern (contract staff) started in July and continued through Q4 to support the delivery of the Invasive Species Program supported by a wage subsidy from *BioTalent Canada's Science and Technology Internship Program – Green Jobs*.

Special Projects

- Continued to deliver work on the 2021-2022 Farlain Lake Eurasian Water-milfoil (EWM) Management project, including providing technical expertise.
 - Participated in EWM Committee meeting;
 - Contributed to Farlain Lake Community Association EWM Management year-end report.
- Continued to deliver work on the 2020-2024 Wye Marsh Invasive Species Management Project, including report writing and technical support.
 - Submitted an updated Wye Marsh Phragmites Management Plan;
 - Submitted Wye Marsh 2021 Summary Report.

Conclusion

The SSEA Invasive Species Program has successfully fostered relationships with municipalities, partner organizations and associations. Significant activities and tasks, including public and municipal outreach and education, were accomplished in the Q4 of 2021 benefitting the SSEA partner municipalities and residents.

Prepared by:
Original signed by

Approved for Submission by:
Original signed by

Tamara Brincat, Invasive Species Program Coordinator
Michelle Hudolin, Wetlands & Habitat Biologist

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 65-21-SSEA
Date: January 14, 2022
To: Chair and Members of the SSEA Board of Directors
From: Shannon Mawhinney, Watershed Resilience Coordinator
SUBJECT: Sustainable Severn Sound (SSS) Special Project Q4 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. 65-21-SSEA, regarding the SSEA's SSS special project Q4 update for the 4th quarter of 2021 be received for information.

Purpose of Staff Report

The purpose of this report is to provide a summary of the Q4 2021 SSS project work plan progress and achievements to the SSEA Board of Directors.

Background

The objective of the SSS Special Project is to advance practices/policies within municipal operations to support implementation of their Municipal Climate Plans (see below for Supporting Documents and Links) to result in greenhouse gas (GHG) mitigation and sustainable communities. In 2018, six of SSEA's partner municipalities joined the Federation of Canadian Municipalities-ICLEI Local Governments for Sustainability [Partners for Climate Protection \(PCP\) Program](#)¹. Since 2018, SSS project staff has led each of our six PCP program member municipalities to Milestone 3 of the 5- Milestone PCP Program Framework: (1) Measure municipal and community GHG emissions, (2) Select GHG reduction targets, (3) Prepare a Climate Action Plan, (4) Implement the Climate Action Plan and GHG reduction actions, and (5) Report on climate action progress and GHG reductions.

¹Federation of Canadian Municipalities. 2021. Partners for Climate Protection program. Available from: <https://fcm.ca/en/programs/partners-climateprotection>

Analysis/Discussion

1. Sustainable Severn Sound Special Project Results, Q3 2021

Staffing Changes

Q4 saw some staffing changes in the SSS department. We said goodbye to Tracy Roxborough as she moved on to a new position with the Township of Severn. Our Watershed Resilience Coordinator will be handling most of the SSS responsibilities while we look for a replacement to fill the Sustainability and Climate Change Coordinator position.

Bee City Canada Program

SSEA's Watershed Resilience Coordinator continues to support the Town of Midland through administrative and communication services to help meet their Bee City Canada membership commitments.

- Bee City Team members meeting with the Town's Communication, Tourism and Operations staff in Q4 was rescheduled for Q1 to report on project progress.
- Per the request of the Bee City Team members, SSEA staff has prepared a Municipal Bylaw Scan to identify opportunities for initiatives and to provide options for updating the Town's current by-law (Clean Yards By-Law) which connects to the No Mow Pilot Project implemented by the Town in 2021. This is currently under review by the Bee City Team members.
- No Mow Pilot Project Summary Report was reviewed by Bee City Team. This report included site-specific management suggestion to support the establishment of high-quality pollinator habitat. The Town of Midland chose to restore one of the seven No-Mow Zones in the fall of 2021. SSEA staff assisted Town staff with invasive species removal at the Gawley Park site. Town Staff then tilled and hydro seeded the site with a native wildflower seed mix.
- The next meeting to be held in Q1 has a goal to identify the top three 2022 priorities for the Town in relationship to their Bee City Program membership.

Municipal Plan Review

Staff continues to participate in meetings and sessions to review municipal plans, and to provide a climate change lens to those updated plans. Currently, staff is supporting the County of Simcoe's Municipal Comprehensive Review. Comments were provided on the first draft of the County of Simcoe's Municipal Comprehensive Review Climate Change Plans.

Municipal Climate Leadership Committee

SSEA works with members of the MCLC to advance actions within their respective Municipal Climate Action Plans and the Local Climate Change Action Plan and to progress through the Federation of Canadian Municipalities-ICLEI Canada Partners for Climate Protection 5-Milestone Program.

Partners for Climate Change Protection Program

As the Associate Member to the Federation of Canadian Municipalities (FCM) – ICLEI Canada Partners for Climate Protection (PCP) Program, SSEA's staff is assisting our municipal PCP program members in meeting their membership requirements - including annual greenhouse gas (GHG) reporting representing both municipal operations (buildings, streetlighting, fleet, water/wastewater and solid waste) and community emissions (residential, commercial and industrial energy use, transportation and solid waste). Staff has received all outstanding data

and have entered that data into the online PCP Program Tool. Staff are preparing a 5-year GHG analysis and report for each of the six PCP program municipalities, which is to be presented to attendees at the Q1 Municipal Climate Leadership Committee (MCLC) meeting for final review.

We welcomed the newest SSEA member to the PCP program, the Township of Springwater. SSEA staff will work with Springwater in 2022 to work through Milestones program.

Financial Implications

A 7th (of 8) members to the SSEA SSS program increases the revenue to the project by \$11,479 (+HST), providing additional funds to enhance the program.

Conclusion/Recommendations

SSEA's Watershed Resilience Coordinator continues to implement the SSS special project work-plan to deliver on PCP Program commitments to our PCP Program member municipalities.

Prepared by:
Original signed by

Approved for Submission by:
Original Signed by

Shannon Mawhinney,
Watershed Resilience Coordinator

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 66-21-SSEA
Date: January 14, 2022
To: Chair and Members of the SSEA Board of Directors
From: Shannon Mawhinney, Watershed Resilience Coordinator
SUBJECT: SSEA Depave Paradise Program 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. 66-21-SSEA regarding SSEA Depave Paradise Program be received for information.

Purpose of Staff Report

The purpose of this report is to provide the SSEA Board with an update on the Depave Paradise Program.

Background

On July 26, 2021, the SSEA Board supported the staff recommendation for SSEA to participate as a delivery agent in the Depave Paradise Program (Depave Program), a project of Green Communities Canada. Hardened surfaces have negative impacts on local waterways due to the disruption of the natural water cycle and movement of contaminants through stormwater runoff. As summarized in SSEA's SSS Local Climate Change Action Plan, the projected rise in global temperatures is expected to result in intensification of the water cycle, causing more severe dry seasons and wetter rainy seasons, along with the possibility of more frequent extreme weather events.

Analysis/Discussion

Green infrastructure or Low Impact Development (LID) measures such as bioswales, permeable pavement, and rain gardens can help to minimize the impacts of hardened surfaces. By becoming a delivery agent in the Depave Paradise Program, SSEA can now offer an engaging way to involve the local community and educate residents on the benefits of green infrastructure while improving the hydrological and ecological functioning of a publicly accessible urban site. SSEA staff has successfully engaged a municipal partner, the Township of Georgian Bay, in the Depave Paradise Project. A site at Honey Harbour Park was chosen as the Township plans to remove an old outdoor skating rink and replace it with a smaller pavilion. Next steps

involve a site visit to the Park with SSEA, Township staff, as well as, members of the Georgian Bay Metis Council (GBMC). This site visit will help to establish a general planting plan for the Park. The GBMC are also partners on the Park revitalization, and are contributing traditional knowledge and incorporating native plantings that have traditional significance.

Additionally, there is the potential for a second Depave event in the 2021-2022 funding year. St. Theresa's Catholic High School has also expressed interest in the Depave Paradise Project. Should funding re-allocations allow SSEA to secure more funds from Green Communities Canada, conversations will move forward with the school.

Financial Implications

In becoming a delivery agent, SSEA was granted \$15,000 to support the implementation of one Depave Program project for 2022. A portion of these funds (\$7,000) was allocated towards the establishment of SSEA's new Watershed Resilience Coordinator position (52-week contract). Staff has been successful in securing a \$25,000 grant from the ECO Canada Science Horizons Internship Program which will offset the cost of this position. The funds received from Green Communities Canada will support other project costs, including plant and soil materials, tools, and communications and/or media requirements. The cost of removal of the asphalt material as part of the project implementation, is also eligible under the received program funding, however it would be ideal if this cost could be provided in-kind by the Township that partners with SSEA on the 2022 Depave project. Further details will be confirmed after final site approval. Cost of this project to SSEA is \$2,983 (already considered in the approved 2022 SSEA Budget), as well as, time from several SSEA Team staff positions to support the project and the coordinator position.

Conclusion/Recommendations

Members of the SSEA Board are encouraged to connect with their respective municipal staff members to discuss sites for the Depave Program for the 2022/2023 funding year. SSEA's Watershed Resilience Coordinator is available by phone and for virtual meetings to discuss this opportunity with you and/or your staff. The contribution by the municipality is anticipated to be mostly in-kind, and the ecological and environmental benefits in return will be significant. This work contributes directly to the strategic goals, priorities, and mission of the SSEA, specifically engaging and educating the public on the effects and issues of increasing impermeable surfaces.

Prepared by:
Original signed by

Approved for Submission by:
Original Signed by

Shannon Mawhinney, Watershed Resilience
Coordinator

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 67-21-SSEA
Date: January 27, 2022
To: Chair and Members of the SSEA Board of Directors
From: Morgan Gillies, Healthy Soils = Healthy Watersheds Program Coordinator
SUBJECT: SSEA Healthy Soils=Healthy Watersheds Q4 Program 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. 67-21-SSEA regarding SSEA Healthy Soils = Healthy Watersheds Q4 Program Update be received for information.

Purpose of Staff Report

The purpose of this report is to provide an update on the activities that the Severn Sound Environmental Association Healthy Soils = Healthy Watersheds (HS=HW) Program staff has undertaken during the fourth quarter of 2021.

Background

The objective of the Program is to promote and implement management actions that contribute to soil health in target areas of the Severn Sound Watershed which is critical to improving water quality over the long term. Priorities include identifying and implementing Best Management Practices (BMPs) that both increase the intensity of soil sampling and the use of cover crops to improve soil health and reduce nutrient loss.

The priority area is small at this point in the project due to limited funding and reduced time (less than 12 months) to implement BMPs and was chosen due to a demonstrated existing water quality impact. The priority area for this funded phase of the Program is the Nitrate Issue Contributing Area in the Township of Tiny.

Analysis/Discussion

- During the third quarter, the local farm community in the pilot area of the Township of Tiny was engaged to complete Farm Surveys about their agricultural practices and apply for HS=HW grants to assist with the implementation of the BMPs. Ten farmers were initially contacted, of which 7 participants have successfully signed up for the HS=HW Program in the fourth quarter.
- 20+ site visits were conducted across the Township of Tiny.
- SSEA assisted with collecting 30 composite soil samples for nutrient analysis.
- 300+ acres of cover crops and 140+ soil samples have been approved to receive grant cost sharing from the Program.
- A new weather station was installed in Lafontaine thanks to funding from the Great Lakes Local Action Fund and from the Township of Tiny.
- A virtual presentation was held on October 13th for the Georgian Bay District High School Grade 9 science class to show the students the importance of soil health.
- Set up a booth at the Tiny Farm Crawl event on October 16th at MonPiero Farms.
- Sponsored special guest speaker Peter Johnson from Real Agriculture presenting *How's Your Soil Health?* for the North Simcoe Soil and Crop Improvement Association's Annual General Meeting on December 3rd.
- Assisted Daniel Saurette from the Ministry of Agriculture and Rural Affairs in collecting 16 soil samples in the townships of Tay, Tiny and Oro-Medonte for the Ministry's topsoil sampling program.
- Interviewed 5 farmers from the Township of Tiny to collect footage for the production of educational videos on the importance of soil health and BMP implementation to be released on the SSEA YouTube channel in the upcoming quarter.
- Attended multiple meetings and webinars: Greenbelt webinar - Healthy Soil? What it is and Why it Matters; OMAFRA's Grazing Cover Crops Webinars; and Manitoba's Forage and Grasslands Regenerative Agriculture Conference - Water for Generations.

Conclusion/Recommendations

The HS=HW project funding ends March of 2022. Staff will focus in Q1 of 2022 on wrapping up deliverables, reporting to the funder (MECP) as well as continuing to pursue funding opportunities to extend and expand the project.

Prepared by:
Original signed by

Approved for Submission by:
Original Signed by

Morgan Gillies, HS=HW Program Coordinator

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 68-21-SSEA
Date: January 27, 2022
To: Chair and Members of the SSEA Board of Directors
From: Aisha Chiandet, Water Scientist; Tamara Brincat, Invasive Species Pgm Coordinator; Morgan Gillies, Healthy Soils=Healthy Watersheds Pgm Coordinator
SUBJECT: SSEA Past and Upcoming Events

APPLICABLE STRATEGIC PLAN GOALS:

Goal 2: Supportive Partnerships

Goal 3: An Engaged & Informed Community

RECOMMENDATION:

RESOLVED THAT: Staff Report No. 68-21-SSEA regarding SSEA Past and Upcoming Events, be received for information.

Purpose of Staff Report

To outline key events that SSEA hosted and attended during Q4 and upcoming events in Q1 of 2022.

Background

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

- Engage and educate community members, and 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 facilitated and/or participated in 8 events in Q4, detailed in **Table 1**. To date, SSEA anticipates participating in 3 events in Q1 of 2022, detailed in **Table 2**.

Table 1. List of events that SSEA facilitated and/or participated in during Q4 of 2022.

Event Name	Event Coordinator & Type	Relevant Program(s)/ Project(s)	Target Audience/ Region	Number of Participant/ Volunteer
Honeybee Festival	Twp of Georgian Bay	Bee City initiative	Twp of Georgian Bay Community	90
Township of Tiny Farm Crawl	Township of Tiny	Healthy Soils = Healthy Watersheds	Twp of Tiny Community	50
Healthy Soils Live Stream for Georgian Bay District Secondary School	SSEA - Virtual Webinar	Healthy Soils = Healthy Watersheds	Grade 9 science class students	20
Extreme Water Level Symposium	GBF/GBA/SSEA - Virtual Webinars	Open Water Monitoring, Climate Monitoring	Public, Georgian Bay-wide	570+ over 3 webinars
NSSCIA Annual General Meeting – How’s Your Soil Health?	NSSCIA – SSEA Sponsored Guest Speaker (Peter Johnson) for Virtual Webinar	Healthy Soils = Healthy Watersheds	North Simcoe farmers	30
Municipal Natural Assets webinar	SSEA/Municipal Natural Assets Initiative	Natural Heritage	Municipal staff, watershed wide	21
Drinking Water Source Protection 101	SSEA and Midland virtual webinar	Drinking Water Source Protection	Municipal staff, watershed wide	5
APPROX. TOTAL VOLUNTEERS/PARTICIPANTS				787

*NSSCIA = North Simcoe Soil and Crops Improvement Association

Table 2. List of upcoming events that SSEA will be facilitating and/or participating in during Q1 of 2022.

Event Name	Date	Relevant Program(s)/Project(s)	Target Audience/Region
Salt Impacts in Severn Sound Watershed - Webinar	January 13 th	Environmental Monitoring	Municipal operations staff
Ontario Invasive Plant Council Conference	January 13 th	Invasive Species	Land managers in Ontario
Ontario Invasive Species Forum	February 3 rd	Invasive Species	Land managers in Ontario

Conclusion/Recommendations

The SSEA staff has and will continue foster relationships with municipalities, partner organizations and associations by facilitating and participating in community engagement events.

Prepared by:
Original signed by

Approved for Submission by:
Original Signed by

Aisha Chiandet, Water Scientist
Tamara Brincat, Invasive Species Program Coordinator
Morgan Gillies, Healthy Soils=Healthy Watersheds Program Coordinator

Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) January 27, 2022**

STAFF REPORT

No: 69-21-SSEA
Date: January 27, 2022
To: Chair and Members of the SSEA Board of Directors
From: Nikki Priestman, Watershed Health Coordinator

SUBJECT: New SSEA Partner Weather Station

APPLICABLE STRATEGIC PLAN GOALS:

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

RESOLVED THAT: Staff Report No. 69-21-SSEA regarding the installation of a New SSEA Partner Weather Station, be received for information.

Purpose of Staff Report

The purpose of this report is to provide the Board with information regarding a new weather station installed in the Lafontaine area.

Background

As part of the SSEA Climate Monitoring Program, a new weather station was installed in the Lafontaine area of Tiny Township. Weather station purchase and installation was made possible through collaboration and funding provided in part by the Township of Tiny and the Healthy Soils = Healthy Watersheds Program (Ontario's Great Lake Local Action Fund) with maintenance support from SSEA. The weather station was installed with assistance from SSEA field staff on October 13, 2021 on a municipal property located near Lafontaine. The new equipment replaces and updates a nearby, eight-year-old, SSEA weather station that became inoperable. The cost of the weather station equipment was just over \$10,000 plus annual technical maintenance and communications costs of \$1,600. The new equipment complements the weather station that was installed in Midland in 2020.

Analysis/Discussion

The weather station, records near-real-time weather data through its multi-sensor system. Each sensor individually records rainfall, air temperature and humidity, wind speed and direction. Data collection is enhanced through the wireless, remote transmitter which communicates with a Weather INnovations Consulting LP (WIN)

server located in Chatham, Ontario. The station will be maintained by SSEA field staff and WIN Technicians.

Current weather conditions are made available to the public on the SSEA website at www.severnsound.ca. All contributing municipal partners can access logged data through the WIN server. A yearly dataset is also available to municipal partners upon request to SSEA.

Conclusion/Recommendations

Collecting local weather data contributes to the SSEA's Climate Monitoring Program. The weather stations (Lafontaine and Midland) along with other climate monitoring equipment located throughout the Severn Sound watershed, track weather patterns and long-term climate trends, used for climate adaptation planning and risk analysis, as well as, providing a scientific basis to support municipal decision making. The data is also used as additional background information for a number of other SSEA monitoring projects and programs.

The SSEA is seeking partners and opportunities to further expand the weather station network. Those interested should contact the SSEA.

Prepared by:

Approved for Submission by:

Original signed by
Nikki Priestman, Watershed Health Coord.

Original signed by
Julie Cayley, Executive Director



**Severn Sound Environmental Association
Joint Municipal Service Board
2021 Fourth Quarterly Meeting (Q4) – January 27, 2022**

STAFF REPORT

No: 72-21-SSEA
Date: January 19, 2022
To: Chair and Members of the SSEA Board of Directors
From: Julie Cayley, Executive Director
SUBJECT: 2022 SSEA Board Meeting Schedule

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. 72-21-SSEA regarding the 2022 SSEA Board Meeting Schedule, be received for information.

FURTHER THAT: the Board of Directors approves the following schedule of SSEA Board of Directors meetings for 2022. Meetings will be held from 9:00 a.m. to 12:00 noon at a location to be determined.

- Fourth Quarterly Meeting: January 27, 2022
- First Quarterly Meeting: April 28, 2022
- Second Quarterly Meeting: July 28, 2022
- Third Quarterly: October 27, 2020
- Fourth Quarterly: January 26, 2023

Purpose of Staff Report

The purpose of this report is to assist Board members, SSEA staff and other stakeholders to schedule SSEA board meetings into their respective schedules.

Background

The SSEA consists of eight member municipalities with representatives who have several meetings throughout the year including various board and committee commitments above and beyond their regular council duties. SSEA staff has reviewed the regular meeting schedules of its member municipalities and with the exception of the Township of Georgian Bay (which meets on the second Monday of the month), all other members hold their regular council meetings on Wednesdays.

Analysis/Discussion

SSEA has traditionally tried to meet quarterly (January, April, July and October) on the last Thursday of the month in order to reduce the potential for conflicting meeting dates with its municipal partners, as well as, to provide its treasurer municipality ample time to provide updated quarterly budget numbers to SSEA staff to forward to its Board. As well, recent turnover in municipal finance staff has made it even more challenging for SSEA to receive updated budget numbers in a timely fashion for the SSEA Board – thus the preference for meeting dates later in the month to assist our municipal partner during this time of adjustment. Additional Board meetings can be called by the Chair.

Expected Impact on SSEA budget/workload

The proposed timeline should help SSEA staff provide the Board with updated financial info during the year to better track the progress of various projects.

Conclusion/Recommendations

SSEA staff recommend accepting the proposed SSEA Board schedule for 2022.

Prepared by:
Original signed by

Approved for Submission by:
Original Signed by

Cliff Evanitski, Office Manager

Julie Cayley, Executive Director