AUSABLE BAYFIELD CONSERVATION
CREATING AWARENESS | TAKING ACTION

BOARD OF DIRECTORS
Thursday, October 20, 2022

Ausable Bayfield Conservation Authority Administration Centre
Morrison Dam Conservation Area
HYBRID IN-PERSON/VIDEO CONFERENCE

10:00 a.m. **HEARING**

Pursuant to Ontario Regulation 147/06

(Development, Interference with Wetlands & Alteration to Shoreline and Watercourses)

Regarding Permit Application #2022-44

BOARD OF DIRECTORS MEETING

AGENDA

1. Chair's Welcome
2. Land Acknowledgement
3. Adoption of Agenda
4. Disclosure of Pecuniary Interest
5. Disclosure of intention to record this meeting by video and/or audio device
6. Adoption of Minutes from September 15, 2022 and October 13, 2022
7. **Business Out of the Minutes**
   - Proposed 2023 Budget – Brian Horner
8. **Program Reports**
   - Report 1: (a) Development Review (O Reg147/06) – Daniel King
     (b) Violations/Appeals Update – Geoff Cade/Daniel King
   - Report 2: CA Act Update – Brian Horner/Kate Monk
   - Report 3: Biomonitoring Update – Cristen Watt/Mari Veliz
   - Report 4: 3rd Quarter Profit and Loss Statement – Brian Horner
9. **Committee Reports**
   - Arkona Lions Museum Committee – Doug Cook
10. Correspondence
11. New Business
12. **Committee of the Whole** – *personnel and property matters*
13. Adjournment

Upcoming Meetings

November 17	Board of Directors Meeting at 10:00 a.m.
December 15	Board of Directors Meeting at 2:30 p.m.

MINUTES

BOARD OF DIRECTORS MEETING

Thursday, September 15, 2022
Ausable Bayfield Conservation Authority Boardroom
Morrison Dam Conservation Area

IN PERSON/VIDEO CONFERENCE

DIRECTORS PRESENT
Ray Chartrand, Doug Cook, Adrian Cornelissen, Bob Harvey, Dave Jewitt, Mike Tam, Marissa Vaughan, Alex Westman

DIRECTORS ABSENT
George Irvin

STAFF PRESENT
Geoff Cade, Tina Crown, Abbie Gutteridge, Brian Horner, Denise Iszczuk, Daniel King, Mary Lynn MacDonald, Tracey McPherson, Kate Monk, Nathan Schoelier, Angela Van Niekerk, Mari Veliz

CALL TO ORDER
Chair Dave Jewitt called the meeting to order at 10:00 a.m., and welcomed everyone in attendance, both in person and virtually.

LAND ACKNOWLEDGEMENT STATEMENT
Chair Jewitt read the Land Acknowledgement Statement, acknowledging the original stewards of this land, the Haudenosaunee and Anishinaabe.

ADOPTION OF AGENDA

MOTION #BD 77/22 **Moved Ray Chartrand**
Seconded by Marissa Vaughan

"RESOLVED, THAT the agenda for the September 15, 2022 Board of Directors Meeting be approved,"

Carried.

DISCLOSURE OF PECUNIARY INTEREST

There were no disclosures of pecuniary interest at this meeting or from the previous meeting.

DISCLOSURE OF INTENTION TO RECORD

Chair Jewitt noted that this meeting was being recorded on Zoom for temporary posting online, and is not an official record. The official record of this meeting will be the approved minutes.

ADOPTION OF MINUTES

MOTION #BD 78/22 **Moved by Adrian Cornelissen**
Seconded by Alex Westman

"RESOLVED, THAT the minutes of the Board of Directors meeting held on July 14, 2022 and the motions therein be approved as circulated."

Carried.

BUSINESS OUT OF THE MINUTES

None.

PROGRAM REPORTS

1. (a) Development Review

Daniel King, Regulations Coordinator, presented the Development Review report pursuant to Ontario Regulation 147/06 *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.* Through the application process, proposed developments within regulated areas are protected from flooding and erosion hazards. Staff granted permission for 17 *Applications for Permission* and 19 *Minor Works Applications.*

(b) Violations/Appeals Update

Geoff Cade, Water and Planning Manager, noted that there were no updates to provide on the ongoing violations.

MOTION #BD 79/22 **Moved by Doug Cook**
Seconded by Ray Chartrand

"RESOLVED, THAT the Board of Directors affirm the approval of applications as presented in Program Report # 1 – a) Development Review, and receive b) Violations and Appeals update as presented."

Carried.

2. *Conservation Authorities Act* Update

Kate Monk, Projects Coordinator, provided an update on the ongoing implementation of the *Conservation Authorities Act* Update. She noted that staff have been meeting with municipal staff with regard to the draft agreement for planning services. In addition, the following topics are being discussed with municipal staff: transition plan progress, the current inventory and future programs and services, programs and services that ABCA can provide on a contract or fee-for-service basis, and financial implications for budgets beyond 2023. Municipal staff are also reviewing a draft of the Cost Apportioning Agreement for the Category 3 programs that require levy funding. A draft of the Cost Apportioning Agreement was provided to Directors.

Conservation Authorities were also informed that through new Orders-In-Council made pursuant to the *Executive Council Act*, the Ministry of Natural Resources and Forestry (MNRF) has been designated as the Ministry responsible for administering the *Conservation Authorities Act*; however, the administration of the source protection programs under the *Clean Water Act, 2006* remains with the Ministry of Environment, Conservation and Parks.

MOTION #BD 80/22 **Moved by Doug Cook**
Seconded by Mike Tam

"RESOLVED, THAT the Board of Directors receive the update on the *Conservation Authorities Act* as presented."

Carried.

3. Conservation Lands Strategy

Kate Monk, Projects Coordinator, reported that there are new requirements for conservation authority properties under the *Conservation Authorities Act.* This includes a conservation lands strategy and inventory of properties, which are to be completed by December 31, 2024. ABCA has decided to work on this strategy in 2023, which includes all parcels of conservation authority owned land. The document will be overarching all properties with sections for our various properties. While there are some regulations for the document, there is flexibility in how the requirements are achieved.

As such, staff have developed a framework and a draft table of contents. This document will aim to fulfill the requirements of the Conservation Authorities Act, integrate existing studies, establish clear corporate priorities regarding the future management of ABCA lands,

recommend changes to programs and services in response to research and input received, and develop an implementation plan to balance the needs of the community with protecting the environment. Public input is also required by the legislation, and the ABCA plans to use social media and the website as the principle platform for communication.

MOTION #BD 81/22 **Moved by Marissa Vaughan**
Seconded by Bob Harvey

"RESOLVED, THAT the Board of Directors receive the report as presented and approve recommendation that the Conservation Lands Strategy be developed using the framework as presented."

Carried.

4. Stewardship Project Review

Angela Van Niekerk, Wetland Specialist, provided an update of stewardship projects through various funding sources. Through the Canada Nature Fund two wetlands, one erosion control project, eight fragile land retirement projects, and nine cover crop projects were funded in both the Ausable and Bayfield watersheds. Two wetlands were funded through Environment and Climate Change Canada, three wetlands were funded through Eco Action, and eight wetlands and one fragile land retirement project were funded through the Habitat Stewardship Project.

MOTION #BD 82/22 **Moved by Ray Chartrand**
Seconded by Adrian Cornelissen

"RESOLVED, THAT the ABCA Board of Directors receive stewardship project update as presented."

Carried.

5. Enforcement Services Contract

Nathan Schoelier, Stewardship and Conservation Lands Manager, presented a contract for enforcement services on ABCA properties. ABCA relies on contracted enforcement companies to complete pro-active patrol, as well as respond to complaints received regarding unauthorized use on ABCA owned or managed properties. For several years, ABCA has contracted Municipal Enforcement Unit (MEU) for these services, but was informed that they will be ceasing operations due to unforeseen circumstances.

ABCA staff investigated two enforcement companies to replace MEU services. One of the companies was not interested in pursuing a contract, so staff met with Tenet Security Group

to discuss enforcement needs. This company is based in Lucan, Ontario and is used by several municipalities in Perth County. ABCA and Tenet Security Group were able to agree on services provided and compensation. A copy of the draft contract was provided to Directors.

MOTION #BD 83/22 **Moved by Alex Westman**
Seconded by Ray Chartrand

"RESOLVED, THAT the Ausable Bayfield Conservation Authority enter into an agreement with Tenet Security Group until December 31, 2023, and

"FURTHER, THAT the Board of Directors designate Tenet Security Group as responsible for regular enforcement duties associated with the *Conservation Authorities Act* and *Trespass to Property Act*, with respect to Ausable Bayfield Conservation Authority properties and Huron Tract Land Trust Conservancy properties."

Carried.

6. Parkhill Scenic Lookout Agreement

Nathan Schoelier, Stewardship and Conservation Lands Manager, noted that the Parkhill Area Horticultural Society (PAHS) is interested in working with the Ausable Bayfield Conservation Authority to renovate and maintain two of the raised garden beds at the Parkhill Scenic Lookout. The Parkhill Lions' Club continues to maintain the garden bed below the Lions arch. As part of the contract the PAHS would be responsible for providing ABCA staff with a plan for approval, as well as be responsible for the costs associated with the renovation and maintenance of the beds. The Parkhill Lions' Club was consulted during the preparation of the agreement and are in support of the PAHS assuming responsibility for the raised garden beds. The agreement would be in place for five years.

Adrian Cornelissen, Director representing North Middlesex, informed staff that the PAHS is funded by the Municipality of North Middlesex, and as such believes that the municipality should be made aware of the potential agreement, as it may have budgeting implications.

MOTION #BD 84/22 **Moved by Adrian Cornelissen**
Seconded by Doug Cook

"RESOLVED, THAT further discussion on the agreement with the Parkhill Area Horticultural Society be deferred until March 2023, pending municipal budget discussions."

Carried.

7. Vehicle Tender Results

Nathan Schoelier presented results from a vehicle tender. At the Board of Directors meeting on February 17, 2022 the purchase of a 2022 Chevrolet Silverado 2500 from Huron Motor Products in Exeter was approved. However, ABCA staff were informed that General Motors Canada ended production of this truck prior to building the truck that had been ordered. On August 18, staff sent requests for quotations to watershed vehicle dealers with a closing date of September 6. The low tender was again from Huron Motor Products with a price of $55,135.00, plus taxes and fees, for a 2023 Silverado 2500. The 2022 ABCA budget included $44,000.00 for the capital purchase of a four-wheel-drive pick-up truck to replace the 2010 Ford F-150. The budget also included an anticipated $3000 under Product Sales for the sale of the 2010 Ford F-150; however, given the current market a greater return may be realized, reducing the budget implications of the Vehicle & Motor pool. The five year forecast does not anticipate further vehicle replacement until 2025, allowing opportunity for cost-recovery to the motor pool budget.

MOTION #BD 85/22 **Moved by Ray Chartrand**
Seconded by Alex Westman

"RESOLVED, THAT the Ausable Bayfield Conservation Authority accept the low tender of $55,135.00 plus taxes for the purchase of a 2023 Chevrolet Silverado 2500 from Huron Motor Products, Exeter."

Carried.

8. Flood Hazard Identification & Mapping Program

Geoff Cade made the Board of Directors aware of a federal cost sharing program called the Flood Hazard Identification & Mapping Program (FHIMP). This is a Canada wide program, for which both municipalities and conservation authorities are eligible to apply. The deadline for applications is September 16, 2022, and the grant is intended for projects including data acquisition, flood plain mapping, flood hazard assessment and research and data dissemination. Some of ABCA's mapping is more than thirty years old, and this could be an opportunity to seek updates. ABCA received some inquiries from local municipalities about the program, and so reached out to initiate further discussions; however, these discussions have not taken place, so no application will be submitted at this time.

MOTION #BD 86/22 **Moved by Doug Cook**
Seconded by Ray Chartrand

"RESOLVED, THAT the Board of Directors receive the report on the Flood Hazard Identification & Mapping Program as presented."

Carried.

9. Education Update

Denise Iszczuk, Conservation Educator, presented a summary of education programming throughout the summer months of 2022. In total, ABCA education staff saw almost four hundred your over twenty-seven days of programming, including ABCA Nature Day Camps and in-person programs to community groups. Day Camps required the hiring of one contract staff for four weeks to ensure camper to leader ratios met programming standards. Staff were also able to try day camps at Clinton Conservation Area and Rock Glen Conservation Area.

Education programming for Fall 2022 includes delivering more programs at conservation areas and at schools as requested, developing and delivering four virtual programs, delivering ten sponsored wetland programs and ten sponsored species-at-risk programs, offering Oaks and Acorns programming for ages 18 months to 6 years of age, and several in-person events, including Owl Prowl.

MOTION #BD 87/22 **Moved by Bob Harvey**
Seconded by Alex Westman

"RESOLVED, THAT the update on education programing be received as presented."

Carried.

COMMITTEE REPORTS

MOTION #BD 88/22 **Moved by Doug Cook**
Seconded by Marissa Vaughan

"RESOLVED, THAT the minutes of the Source Protection Committee held on July 27, 2022 and the motions therein be approved as circulated."

Carried.

CORRESPONDANCE

a) Reference: Notice from Ontario Ministry of Natural Resources

File: A.5.3
Brief: An email from Jennifer Keyes, Director, Resources Planning and Development Policy Branch notifying Conservation Authorities that through new Orders-In-Council made pursuant to the *Executive Council Act* that were approved by the Lieutenant Governor in Council, the Ministry of Natural Resources and Forestry has been designated as the Ministry responsible for administering the *Conservation Authorities Act*.

b) Reference: Thank you to ABCA Board and Staff
File: A.5.1
Brief: A note of thanks from Alex Westman to those who donated to plant a tree in Donna Westman's memory.

NEW BUSINESS

1. Doug Cook thanked staff who were involved in the phragmites information night in Port Franks, and noted that it was a good success.

COMMITTEE OF THE WHOLE
None

ADJOURNMENT
The meeting was adjourned at 10:52 a.m.

_____	_____
Dave Jewitt	Abigail Gutteridge
Chair	Corporate Services Coordinator

Copies of program reports are available upon request.
Contact Abigail Gutteridge, Corporate Services Coordinator

MINUTES

BUDGET COMMITTEE

Thursday, October 13, 2022

Ausable Bayfield Conservation Authority Boardroom
Morrison Dam Conservation Area

HYBRID IN-PERSON/VIDEO CONFERENCE

DIRECTORS PRESENT
Ray Chartrand, Doug Cook, Adrian Cornelissen, Bob Harvey, George Irvin, Dave Jewitt, Marissa Vaughan

DIRECTORS ABSENT
Mike Tam, Alex Westman

STAFF PRESENT
Geoff Cade, Donna Clarkson, Tina Crown, Abbie Gutteridge, Brian Horner, Denise Iszczuk, Tracey McPherson, Kate Monk, Nathan Schoelier, Mari Veliz

CALL TO ORDER
Chair Dave Jewitt called the meeting to order at 9:33 a.m., welcomed everyone in attendance and read out the Land Acknowledgement Statement.

ADOPTION OF AGENDA

MOTION #BD 89/21 **Moved by Doug Cook**
Seconded by Ray Chartrand

"RESOLVED, THAT the agenda for the October 13, 2022 Board of Directors Budget Committee meeting be approved,"

Carried.

DISCLOSURE OF PECUNIARY INTEREST
There were no disclosures of pecuniary interest at this meeting or from the previous meeting.

DISCLOSURE OF INTENTION TO RECORD PROCEEDINGS
None.

PROPOSED 2022 BUDGET
General Manager Brian Horner provided an overview of the 2023 budget preparation by staff, as well as the format for the information session. Each department will present the budget for their program and a summary of the individual projects that are proposed for 2023. He noted the proposed 2023 budget is less than what was originally presented in the five-year forecast. Staff prepared the budget with a 2% wage increase on the pay grid.

Vehicles and Equipment
Nathan Schoelier presented the vehicle and equipment motor pool budget. There is no project or general levy required for the vehicle and equipment budget as the revenue received when charging mileage and equipment rates to the users' programs offsets expenses. In 2023, the 2011 John Deere utility vehicle at Rock Glen Conservation Area, which staff use for conservation area operations and maintenance, is scheduled to be replaced.

Private Land Stewardship
Nathan Schoelier reviewed the private land stewardship budget wherein staff provide one-on-one technical advice, site visits, and assistance with paperwork in connecting landowners with cost-share funding to maximize grants for their stewardship projects. ABCA staff aim to help complete at least 100 projects each year. Expenses in the stewardship program are offset with tree sales, providing tree planting plans, phragmites management spraying and forest management plans for clients. Only 10 percent of the department budget is from the municipal levy. The County of Huron continues to provide grants to landowners for stewardship projects through the very successful Huron Clean Water Project. This project, along with the Middlesex County Clean Water Project, will continue until 2023. There are no municipally funded grants available in Lambton or Perth Counties for landowners to access a similar cost-share program to improve rural water quality. Other projects that will take place in 2023, pending funding, include Canada Nature Fund, Ontario Community Environment Fund, Forests Ontario Foundation and Environment and Climate Change Canada.

Recreation Services
Nathan Schoelier explained that the ABCA provides essential recreation areas for municipal residents and tourists. Interest continues to remain high, although has returned to pre-pandemic levels. The routine maintenance of facilities at conservation areas is carried out by ABCA employees. Revenue is generated by gate fees at Rock Glen Conservation Area, hunting passes and community donations. Proposed new projects for 2023 include the replacement of the Bannockburn Conservation Area wooden bridge, as recommended in the bridge inspection report, as well as general parking lot maintenance at several conservation areas, which will include the purchase and installation of new granular material.

Property Management

Nathan Schoelier, Stewardship and Conservation Lands Manager, summarized the goals of managing the ABCA properties and water bodies, which includes conservation areas, wildlife areas, management areas, conservation forests and agricultural land. Property management revenue is generated from timber harvests, farm land rental and the Parkhill CA campground lease and offsets the cost of property taxes, insurance, risk management inspections and property maintenance. Most ABCA land is taxed at a 25% tax rate under the Managed Forest Tax Incentive Program, and a small portion of land is qualifies for the Conservation Land Tax incentive Program (CLTIP), meaning there are no taxes paid. Property assessments for applications for the CLTIP have increased significantly, but staff will continue to look for opportunities to reduce the property taxes on individual properties. The ongoing invasive species management project will continue in 2023, with the continued control of phragmites and developing strategies for other species control such as Giant Hogweed and Japanese Knotweed.

Drinking Water Source Protection

Donna Clarkson, DWSP Co-Program Supervisor presented the Drinking Water Source Protection budget. There are no levy dollars allocated to the Drinking Water Source Protection budget. The Province funds ongoing mandatory implementation responsibilities for Source Protection Authorities. The implementation body for each source protection policy coordinates implementation costs. In fall 2021, the province allowed submission of a 2-year workplan, and the current approved budget, until March 2024, maintains the same levels of staffing. Also, in the December 2021 the province release the Phase II Directors Technical Rules, which required updating a number of policies in the Source Protection Plans. Pre-consultation on the Draft Amendment to the plans began on August 12, 2022 and public consultation is anticipated in early 2023.

By agreement, ABCA delivers Risk Management Services for eight municipalities. These agreements are in place until December 2023. Staff have been happy to be able to resume in-person visits with property owners and lease holders, after two years of phone and zoom meetings.

Environmental Monitoring

Mari Veliz, Healthy Watersheds Manager and Tracey McPherson, GIS/IT Coordinator assisted Geoff Cade in presenting the Planning and Regulations program and Environmental Monitoring project factsheets and budgets. In some cases, funds are deferred to meet the funder's year end. Mari Veliz explained that some projects are fully funded through other partners, but that the project levy contribution often leverages other sources of funding, some substantial, to undertake environmental and monitoring projects, one example of which is the Ausable River Recovery project. There are no new projects proposed for 2023; however, there are a number of phased or ongoing projects. The Natural Heritage Systems Plan will build on the outcomes of the analysis of the Nairn Creek subwatershed to better integrate permitting site visits with awareness about the importance of small, natural features on the landscape. Tracey McPherson noted that in 2023 updates will be made to the core datasets, which will assist in the migration of the internal internet mapping site (GeoPortal) to ArcGIS Enterprise. In addition, staff will be exploring platforms to make more data open and available to our partners and the public.

Floodplain Management

Geoff Cade, Water & Planning Manager presented the four main components of the floodplain management program. They include the maintenance of 16 erosion control projects, 7 flood control projects, the flood forecasting and warning system and the Port Franks ice management project. Since 1996 the Ministry of Natural Resources and Forestry (MNRF) has provided a 50% grant toward three of the projects; however, for 2023 only an 18.3% funding grant is expected. In 2023, ongoing projects include the annual monitoring of channel configuration in the Ausable River Cut, as well as the Armstrong West Erosion Control project.

Education

Denise Iszczuk, Conservation Educator, presented the Conservation Education budget. Revenue for providing effective and meaningful outdoor education experiences comes from the municipal levy, program fees, donations, foundations, and fundraising. Staff promote environmental awareness through classroom programs, field trips, day camps, the water safety awareness program, community presentations and special events. In 2022, user fees and formal programs increased overall from 2021, and nature summer day camps proved to be popular with a total of 21 days of programming. This fall, two owl prowl events will provide a fundraising opportunity. The 2023 education program and budget is based on the premise that school programs can be delivered in schoolyards or in classrooms, as well as field trips to conservation areas. In 2023, some highlighted events will include field trips, programs in classrooms and schoolyards, two week-long summer day camp programs at Morrison Dam Conservation Area, and delivering the river safety program, which will be available throughout the year and can be delivered in the classroom or virtually.

Corporate Services

Brian Horner presented the consolidated Corporate Services budget, and provided an overview of the services provided by this department. In 2023, it is proposed that a wage market check study be done, as the last time this was completed was in 2014 (and 2007 prior to that). This would help to ensure past and current wage increases are consistent with entities similar to the Ausable Bayfield Conservation Authority. In addition, the Conservation Authorities Act update includes a watershed-based resource management strategy as a Category 1 program. This strategy can be completed by ABCA staff. The Conservation Authorities Act update implementation over the next year will also require staff time. Phase two is expected to be complete by January 31, 2024.

Project Levy

Brian Horner presented the proposed project levy summary for 2023 at $266,590 as compared to $249,594 in 2022. This includes ongoing, phased and new projects proposed for 2023. The project levy dollars will be leveraged with other sources of funding to undertake projects totaling $1,115,031.

General Levy

The general levy proposed for 2023 total $1,153,832 in comparison to $1,119,184 in 2022.

Proposed 2023 Budget

The proposed fee schedule and pay grid were presented for review as these figures were used in preparing the consolidated budget. The combined project and general levies total $1,420,422 (3.77 per cent increase) as compared to $1,368,778 in 2022. Brian Horner reminded the directors that not every program area is sustained by levy dollars, and that levy dollars leverage further funding from other sources.

The Board indicated that they would like to see a further breakdown of the reserve funds to gain further understanding of what is available for future project support. This could come as a report at an upcoming Board of Directors meetings. The Board also provided some direction that the Fee Schedule should note the difference between the 2022 and 2023 fees as a comparison point.

In general, the Board would like staff to come back to the Board meeting with some reductions and are aiming for a 2.5 per cent increase instead of the proposed 3.77 per cent. Further direction and discussion will be held at the next Board meeting on October 20, 2022.

NEW BUSINESS

None

ADJOURNMENT

The meeting was adjourned at 12:27 p.m.

_____ _____

Dave Jewitt
Chair

Abigail Gutteridge
Corporate Services Coordinator

ABCA Program Report

To: **Board of Directors**
Date: **October 20, 2022**
From: **Daniel King, Regulations Coordinator**
Subject: **Applications for Permission - Ontario Regulation 147/06 - *Development, Interference with Wetlands and Alteration to Shorelines and Watercourses***

The following *Applications for Permission* have been issued by staff since the last Board of Directors Meeting.
* A Coastal Assessment and coastal engineering design was submitted as part of the application

MAJOR PERMIT

(1) PERMIT #: 2022-79
NAME: Justin Cowley
MUNICIPALITY: Central Huron
PERMISSION TO: allowing installation of drainage infrastructure
COMPLETED APPLICATION RECEIVED ON DATE: June 29, 2022
PERMISSION GRANTED BY STAFF DATE: September 2, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 20
STAFF NAME: Andrew Bicknell

(2) PERMIT #: 2022-67A
NAME: David & Maryann Atkinson
MUNICIPALITY: Lambton Shores
PERMISSION TO: construct an attached garage was amended by ABCA staff
PERMISSION FOR AMENDEMENT GRANTED BY STAFF DATE: September 7, 2022
STAFF NAME: Daniel King

(3) PERMIT #: 2022-91
NAME: Nada Beaulac c/o Overholt Excavating
MUNICIPALITY: Bluewater
PERMISSION TO: allow maintenance and extension of existing shore protection
COMPLETED APPLICATION RECEIVED ON DATE: August 2, 2022
PERMISSION GRANTED BY STAFF DATE: September 8, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 26
STAFF NAME: Andrew Bicknell

(4) PERMIT #: 2022-89
NAME: Ian and Janet Smith
MUNICIPALITY: Lambton Shores
PERMISSION TO: construct a building addition

COMPLETED APPLICATION RECEIVED ON DATE:	August 1, 2022
PERMISSION GRANTED BY STAFF DATE:	September 8, 2022
NUMBER OF BUSINESS DAYS TO REVIEW:	27
STAFF NAME:	Andrew Bicknell

(5) PERMIT #: 2022-95A
NAME: Jennifer Zammit c/o KB Shoring Inc.
MUNICIPALITY: Bluewater
PERMISSION TO: repair existing shore protection

COMPLETED APPLICATION RECEIVED ON DATE:	September 12, 2022
PERMISSION GRANTED BY STAFF DATE:	September 20, 2022
NUMBER OF BUSINESS DAYS TO REVIEW:	6
STAFF NAME:	Daniel King

(6) PERMIT #: 2022-90
NAME: Mike Sloan c/o L360 Architecture
MUNICIPALITY: Lambton Shores
PERMISSION TO: structurally alter and renovate an existing building

COMPLETED APPLICATION RECEIVED ON DATE:	August 22, 2022
PERMISSION GRANTED BY STAFF DATE:	September 22, 2022
NUMBER OF BUSINESS DAYS TO REVIEW:	23
STAFF NAME:	Andrew Bicknell

(7) PERMIT #: 2022-97
NAME: Jeff and Susan Manning
MUNICIPALITY: Bluewater
PERMISSION TO: develop a new residence and detached garage

COMPLETED APPLICATION RECEIVED ON DATE:	September 7, 2022
PERMISSION GRANTED BY STAFF DATE:	September 28, 2022
NUMBER OF BUSINESS DAYS TO REVIEW:	17
STAFF NAME:	Andrew Bicknell

(8) PERMIT #: 2022-92

NAME: Stephen VanHevel

MUNICIPALITY: Lambton Shores

PERMISSION TO: construct a new residence

COMPLETED APPLICATION RECEIVED ON DATE:	September 12, 2022
PERMISSION GRANTED BY STAFF DATE:	October 6, 2022
NUMBER OF BUSINESS DAYS TO REVIEW:	18
STAFF NAME:	Andrew Bicknell

MINOR WORKS PERMIT

1. PERMIT: MW#2022-95
   NAME: Lake Huron and Elgin Area Primary Water Supply Systems
   MUNICIPALITY: North Middlesex
   PERMISSION TO: undertake maintenance of infrastructure
   COMPLETED APPLICATION RECEIVED ON DATE: August 18, 2022
   PERMISSION GRANTED BY STAFF DATE: August 31, 2022
   NUMBER OF BUSINESS DAYS TO REVIEW: 9
   STAFF NAME: Andrew Bicknell

2. PERMIT: MW#2022-88
   NAME: Peter and Mary Downs c/o Overholt Excavating
   MUNICIPALITY: Bluewater
   PERMISSION TO: Place stone to augment existing shore protection
   COMPLETED APPLICATION RECEIVED ON DATE: August 15, 2022
   PERMISSION GRANTED BY STAFF DATE: August 31, 2022
   NUMBER OF BUSINESS DAYS TO REVIEW: 12
   STAFF NAME: Andrew Bicknell

3. PERMIT: MW#2022-87
   NAME: Janet McAuliffe c/o Overholt Excavating
   MUNICIPALITY: Bluewater
   PERMISSION TO: Place stone to augment existing shore protection
   COMPLETED APPLICATION RECEIVED ON DATE: August 24, 2022
   PERMISSION GRANTED BY STAFF DATE: August 31, 2022
   NUMBER OF BUSINESS DAYS TO REVIEW: 5
   STAFF NAME: Andrew Bicknell

4. PERMIT: MW#2022-89
   NAME: Michael Payne
   MUNICIPALITY: Bluewater
   PERMISSION TO: Place stone to augment existing shore protection
   COMPLETED APPLICATION RECEIVED ON DATE: August 16, 2022
   PERMISSION GRANTED BY STAFF DATE: August 31, 2022
   NUMBER OF BUSINESS DAYS TO REVIEW: 11
   STAFF NAME: Andrew Bicknell

5. PERMIT: MW#2022-90
NAME: Daniel Wloch c/o Overholt Excavating
MUNICIPALITY: Bluewater
PERMISSION TO: Place stone to augment existing shore protection
COMPLETED APPLICATION RECEIVED ON DATE: August 30, 2022
PERMISSION GRANTED BY STAFF DATE: August 31, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 1
STAFF NAME: Andrew Bicknell

6. PERMIT: MW#2022-91
NAME: Nancy Vink c/o Overholt Excavating
MUNICIPALITY: Bluewater
PERMISSION TO: Place stone to augment existing shore protection
COMPLETED APPLICATION RECEIVED ON DATE: August 23, 2022
PERMISSION GRANTED BY STAFF DATE: August 31, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 6
STAFF NAME: Andrew Bicknell

7. PERMIT: MW#2022-82
NAME: Frank Dariano
MUNICIPALITY: Lambton Shores
PERMISSION TO: construct a covered porch
COMPLETED APPLICATION RECEIVED ON DATE: August 9, 2022
PERMISSION GRANTED BY STAFF DATE: September 2, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 18
STAFF NAME: Andrew Bicknell

8. PERMIT: MW#2022-99
NAME: Kelly Van Engelen
MUNICIPALITY: Lucan Biddulph
PERMISSION TO: Install and in-ground swimming pool
COMPLETED APPLICATION RECEIVED ON DATE: August 30, 2022
PERMISSION GRANTED BY STAFF DATE: September 8, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 6
STAFF NAME: Daniel King

9. PERMIT: MW#2022-96
NAME: Quadro Communications

MUNICIPALITY: Lucan Biddulph
PERMISSION TO: Directionally drill under a watercourse
COMPLETED APPLICATION RECEIVED ON DATE: September 2, 2022
PERMISSION GRANTED BY STAFF DATE: September 8, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 4
STAFF NAME: Meghan Tydd-Hrynyk

10. PERMIT: MW#2022-99
NAME: 63 River Road Inc.
MUNICIPALITY: Lambton Shores
PERMISSION TO: install seasonally removable docks
COMPLETED APPLICATION RECEIVED ON DATE: August 18, 2022
PERMISSION GRANTED BY STAFF DATE: September 8, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 22
STAFF NAME: Meghan Tydd-Hrynyk

11. PERMIT: MW#2022-103 -01 through -16 (16 locations)
NAME: Hay Communications
MUNICIPALITY: North Middlesex
PERMISSION TO: undertake directional drill for utility watercourse crossings at 16 locations
COMPLETED APPLICATION RECEIVED ON DATE: August 25, 2022
PERMISSION GRANTED BY STAFF DATE: September 19, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 16
STAFF NAME: Andrew Bicknell

12. PERMIT: MW#2022-100
NAME: Kevin Baltessen
MUNICIPALITY: Bluewater
PERMISSION TO: replace a sewage disposal system
COMPLETED APPLICATION RECEIVED ON DATE: August 29, 2022
PERMISSION GRANTED BY STAFF DATE: September 19, 2022
NUMBER OF BUSINESS DAYS TO REVIEW: 15
STAFF NAME: Andrew Bicknell

13. PERMIT: MW#2022-102
NAME: Tim & Sherri Staffen
MUNICIPALITY: Bluewater
PERMISSION TO: replace the roof of a dwelling

COMPLETED APPLICATION RECEIVED ON DATE:	September 9, 2022
PERMISSION GRANTED BY STAFF DATE:	September 19, 2022
NUMBER OF BUSINESS DAYS TO REVIEW:	6
STAFF NAME:	Daniel King

ABCA Program Report

To: **Board of Directors**
Date: **October 20, 2022**
From: **Brian Horner, General Manager/Secretary Treasurer**
Kate Monk, Projects Coordinator
Subject: **Conservation Authorities Act Update - Progress Report**

This report provides an update on the implementation of the Conservation Authorities Act and associated regulations. Additional information may be available at the board meeting.

1. Brian and Kate met with municipal staff from August through to October to discuss the following topics:
    - Transition Plan progress;
    - Programs and services in the three categories identified in the Act;
    - Programs and services ABCA can provide on a contract or fee-for-service basis outside of the municipal levy such as tree planting, invasive species control, water sampling, green infrastructure, trail construction, etc.;
    - Draft Cost Apportioning Agreements and timeframe for entering into agreements;
    - Budget forecasts in the three categories of programs identified in the Act.

Attendees included Chief Administration Officers (CAOs), clerks, treasurers and planners. The following is a summary of the general discussion:

- No concerns were expressed with the current operation, procedures, and programs of the authority.
- Pleased that they can contact ABCA staff as necessary.
- See value in the Category 3 programs that will require levy (subwatershed plans, stewardship, monitoring, research, education).
- Will review the draft Cost Apportioning Agreement (CAA). Some municipalities will send to their lawyers for review. Kate provided a feedback form, requesting it be returned by October 31.
- Interested in the services the ABCA can provide on a contract or fee-for-service basis (ex. tree planting, nature trails).
- Agree with the approach of having the new councils enter into the CAA. ABCA staff to attend council meetings early in 2023 to provide information on the CA Act, categories of programs and to present the draft CAA.
- Agree that budgets are approved by the ABCA board of directors on an annual basis.

- Would prefer all CAAs are the same but understand that Conservation Authorities and municipalities have local issues and considerations.
- Would also like ABCA staff to attend council orientation sessions.

2. The Transition Plan approved in 2021 identified the February 2023 ABCA board meeting as the time for the BOD to approve the draft Cost Apportioning Agreement to be sent to councils. However, staff propose that if municipal staff can provide their feedback in October or November that staff present the documents to the Board in December 2022. This will allow staff to attend council meetings as the municipalities have time on their agendas, rather than waiting until after the February board meeting.

ABCA Program Report

To: **Board of Directors**
Date: **October 6, 2022**
From: **Cristen Watt and Mari Veliz**
Subject: **Biomonitoring Update**

2022 marks a Watershed Report Card year for Ausable Bayfield Conservation. In keeping with this evaluation mode, Healthy Watersheds staff want to ensure that monitoring programs are effective at tracking ecosystem change.

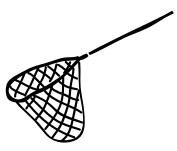
There are a multitude of different indicators that we could focus on as there are at least 180 water quality indicators. Healthy Watersheds staff made deliberate decisions in 2000 to focus on phosphorus, nitrate, suspended solids, the benthos (*i.e.,* organisms living on the bottom of creeks and rivers) and fish, particularly species at risk. In 2022, we have had the opportunity to complete a more thorough analysis of the biotic community at a few sites, where one might anticipate more degraded conditions. Water Quality Technician, Cristen Watt, has found that with more detailed analyses (attached infographic and report) the biotic community is indeed reflecting conditions that could be improved. These results provide confidence in our existing monitoring programs.

BENTHIC BIO-MONITORING

Benthic invertebrates are bottom-dwelling aquatic animals in stream sediments

Species differ in their sensitivity to pollution & act as environmental indicators

METHODS



- 3 minute kick
- Capture in nets
- Preserved until identification

Ephemeroptera (E)
(Mayfly larva)

Trichoptera (T)
(Caddisfly larva)

Plecoptera (P)
(Stonefly larva)

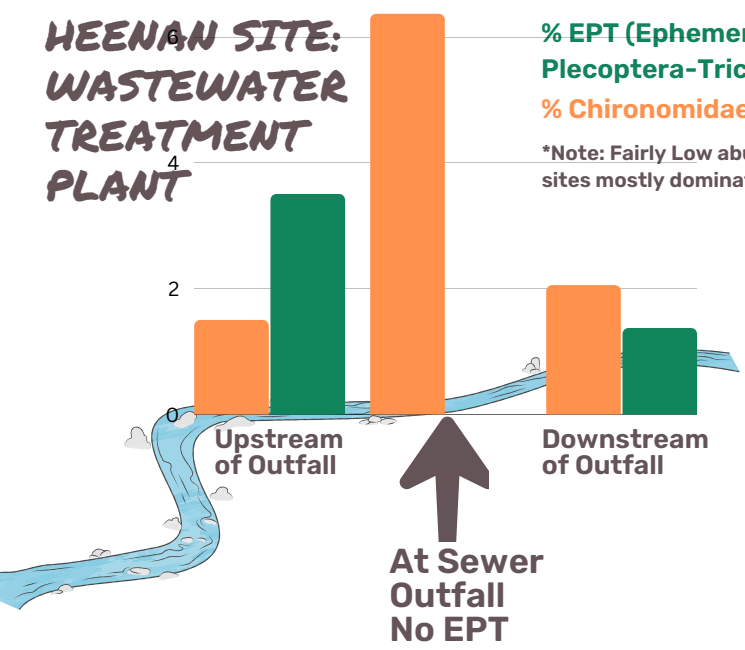
EPT SPECIES

WHERE

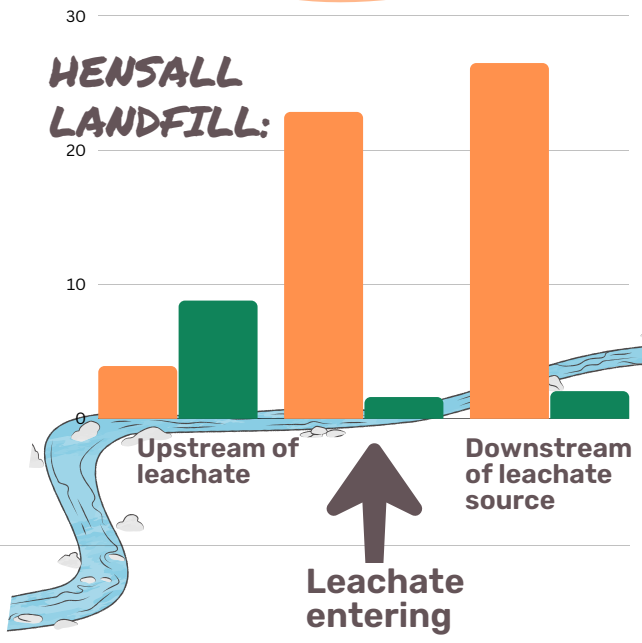
Chironomidae
(Non-biting midges)
Associated with degraded ecosystems

Naididae
(Worm Family)

HEENAN SITE: WASTEWATER TREATMENT PLANT

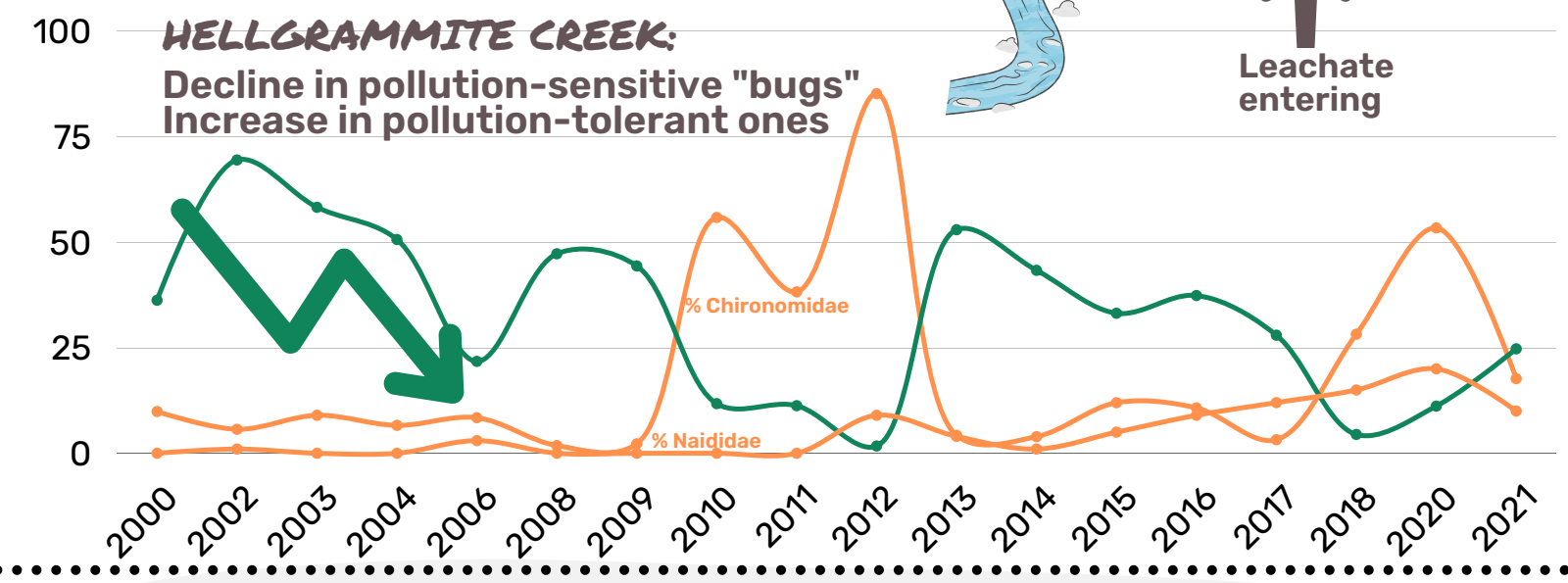


HENSALL LANDFILL:



HELLGRAMMITE CREEK:

Decline in pollution-sensitive "bugs"
Increase in pollution-tolerant ones



CONCLUSIONS

- Percent EPT and Percent Chironomidae are useful indicators of stream health
- Hellgrammite Creek has deteriorated over 20 years
- Hensall and Heenan have poor water quality overall, but %EPT is worst at sites near the sewer outfall and leachate zone

Benthic Biomonitoring summary of aquatic ecosystems:

Hensall Landfill, Heenan Drain, and Hellgrammite Creek

Ausable Bayfield Conservation Authority

Prepared by: Cristen Watt

October 2022

AUSABLE BAYFIELD CONSERVATION

CREATING AWARENESS | TAKING ACTION

Main Introduction

Benthic, or “bottom-dwelling” macroinvertebrates are small aquatic animals and the aquatic larval stages of insects that live in stream sediments. Benthic species differ in their sensitivity to organic pollution and environmental conditions, so the variety and numbers of these animals in a sediment sample can indicate stream health. Ausable Bayfield Conservation Authority has been conducting biomonitoring surveys for benthic invertebrates at various sites for over twenty years. This report summarizes the results of benthic macroinvertebrate surveys in the Heenan Drain near the Lucan Wastewater Treatment Plant, in Hellgrammite Creek, and near the decommissioned Hensall Landfill. These sites were of interest due to nearby industrial or land-use activities that pose potential threats to local and downstream water quality. Stream health at these sites is of additional concern as these watercourses provide habitat for species rarely found elsewhere in the Ausable Bayfield Watershed.

Main Objective

This report summarizes benthic biomonitoring data at the three main sites of interest to evaluate aquatic health near a landfill site (Hensall), Wastewater treatment plant (Heenan), and downstream of land conversion from pasture to conventional cropping (Hellgrammite). Analyses presented here track changes to the benthic communities over time to evaluate impacts of nearby land use and potential for ecosystem health deterioration. Benthic communities were summarized by relative abundance of organisms differing in sensitivity to organic pollution. A main objective was to determine if indices based on relative abundance (Chironomidae and Ephemeroptera-Plecoptera-Trichoptera species) were good indicators of water quality at these sites.

Main Methods

Site Selection

This report summarizes the benthic macroinvertebrate community at three main sites in the Ausable Bayfield watershed (Figure 1).

Figure 1. Benthic macroinvertebrate sampling sites at the Heenan Drain, Hensall landfill, and Hellgrammite Creek.

Field Methods

Benthic samples were collected using a D-Net (mesh size 250 µm) and a three-minute kick method in which substrate on the stream bed is disturbed and kicked into the net. Areas were chosen within each of the sites to include riffle, run and pool habitats so that the samples would incorporate species that live in each of these environments. Benthic invertebrate samples were preserved on-site in a 10% formaldehyde solution (formalin) and within one week were transferred to a 70% alcohol solution (ethanol). The benthic community samples were sent to a taxonomic expert for identification and sorting. The benthic samples were sub-sampled. This procedure is repeated until a desired number of organisms are sampled. At least 100 animals were identified to the lowest taxonomic level possible (*i.e.,* Family, Genus, or species). Benthic communities were analyzed with a several metrics to evaluate the aquatic habitat quality.

Data Analysis

Benthic communities were summarized using several metrics at each of the three sites: Percent Chironomidae, Percent EPT (Ephemeroptera-Plectoptera-Trichoptera), and Percent Naididae (formerly Tubificidae) (Table 1). Chironomidae species are considered indicators of poor water quality because they are often highly abundant in degraded freshwater sites. Alternatively, EPT species (organisms belonging to the taxa Ephemeroptera [Mayfly larva], Plecoptera [Stonefly larva], and Trichoptera [Caddisfly larva]) are considered highly sensitive to pollution, and their presence therefore indicates 'good' environmental conditions. Any significant declines to EPT species in a stream may indicate a pollutant has entered the ecosystem (Parks Canada).

Table 1. Metrics used to summarize benthic macroinvertebrate community composition.

Indicator	Calculation	Description
Chironomidae (%)	$\frac{\text{Abundance of individuals in Chironomidae}}{\text{Total abundance of individuals in sample}} \times 100$	Family of non-biting midges. High abundance generally indicates poor stream conditions.
EPT (%)	$\frac{\text{Abundance of individuals in Orders E. P, T}}{\text{Total abundance of individuals in sample}} \times 100$	Insects belonging to the Orders 'Ephemeroptera (E)', 'Plecoptera (P)' or 'Trichoptera (T)'. High relative abundance generally indicates healthy stream conditions.
Naididae (%)	$\frac{\text{Abundance of individuals in Naididae}}{\text{Total abundance of individuals in sample}} \times 100$	Family of worms. High abundance generally indicates poor stream conditions.
Chironomidae / EPT Ratio	$\frac{\text{Relative abundance of Chironomidae in sample}}{\text{Relative abundance of EPT Individuals in sample}} \times 100$	Ratio of the abundance of benthic invertebrates belonging the Family Chironomidae to abundance belonging to EPT Orders. High ratio indicates more pollution-tolerant species compared to pollution sensitive (i.e., poor aquatic conditions)

Benthic Biomonitoring at the Hensall Landfill site

Hensall Introduction

Hensall Landfill is located within the drainage area of the Black Creek headwater tributaries, which flow downstream to join the Ausable River west of the town of Exeter. Dunn Drain and Geiger Drain are two headwater tributaries located near the now decommissioned Hensall Landfill. Both Dunn and Geiger Drains are cold-water streams that supply cold water to the Black Creek, which is one of only two aquatic systems in the Ausable Bayfield watershed known to support cold-water fish species such as Brook Trout. Within Dunn Drain, cold groundwater upwellings have been noted particularly in the vicinity of a sharp bend in the watercourse (B.M. Ross and Associates Limited). Groundwater upwellings are required for Brook Trout as they survive and breed only in cold-water aquatic systems, and specifically require groundwater discharge for spawning purposes. Of note, this groundwater upwelling area is also impacted by elevated concentrations of un-ionized ammonia and iron, likely sourced from leachate from a waste disposal area near Dunn Drain (B.M. Ross and Associates).

Benthic biomonitoring has been conducted by the Ausable Bayfield Conservation Authority at this site since 2006 to determine the impacts of landfill leachate on the aquatic community (Jean *et al*. 2020). Based on water quality and bio monitoring of fish and benthic macroinvertebrates, remediation actions to improve conditions in Dunn Drain were determined necessary by the Ministry of the Environment, Conservation, and Parks (MECP). In October 2015, remedial works were installed in the form of a groundwater well and infiltration trench. Clean water is pumped from a bedrock well “up gradient” of any groundwater impacted by leachate. The groundwater is distributed back into the ground via a perforated tile pipe adjacent to the Dunn Drain at the location the leachate is believed to be entering Dunn Drain. The remediation goal for introduced groundwater to dilute groundwater contaminated with leachate (pers comm. Andrew Garland, B.M. Ross). Since remediation efforts have come into effect, the ABCA has conducted benthic biomonitoring in 2017, 2019, and 2021.

Objective

This chapter summarizes aquatic conditions upstream, within, and downstream of a landfill leachate zone. Aquatic conditions in a neighbouring watercourse with no known leachate and a long-term monitoring site are also provided for comparison with the impacted site. This summary evaluates local and downstream impacts of the landfill before and during site remediation.

Hensall Methods

Site Selection

Benthic biomonitoring at the Hensall site began in 2006 and continues to the present, spanning 15 years of data collection every other year 2006–2014, and every other year 2017–2021 (Figure 2Table 2). In total, there were five sampling locations in the Dunn Drain (N = 3), Geiger Drain (N = 1), and Black Creek (N = 1) (Table 2. Sampling site locations on the Dunn and Geiger Drains and Black Creek near the Hensall Landfill site.). Site 1 was located upstream of the groundwater upwelling area to assess the area not influenced by the leachate. Site 2 was located within the groundwater upwelling area (i.e., zone impacted by leachate). Site 3 was located downstream of the groundwater upwelling area to determine downstream effects of leachate. Site 4 was located on Geiger Drain as it is cold water and has a similar fish

community to Dunn Drain but is not directly affected by leachate. Site 5 was located downstream of Sites 1–4 in the Black Creek. This site provides historic background on the benthic community at this site as it has been monitored every other year by the ABCA (Neary 2005; Neary 2009).

Table 2. Sampling site locations on the Dunn and Geiger Drains and Black Creek near the Hensall Landfill site.

Watercourse	Site Name	Years Surveyed	Location Details
Dunn Drain	Site 1 DD01	2006, 2008, 2010, 2014, 2017, 2019	Near property boundary: upstream of ground water upwelling
Dunn Drain	Site2 DD02	2006, 2008, 2010, 2012, 2014, 2017, 2019	Near culvert crossing at sharp bend in the drain: within area of ground water upwelling
Dunn Drain	Site 3 DD03	2006, 2008, 2010, 2012, 2014, 2017, 2019	Upstream of fork where Geiger and Dunn Drain meet; downstream of ground water upwelling
Geiger Drain	Site 4 DD04	2006, 2008, 2010, 2014, 2017, 2019	Upstream of fork where Geiger and Dunn Drain meet; on Geiger Drain
Black Creek	Site 5 HABLA1	Alternate years 2000-2016; 2017, 2019, 2021	Downstream of Morrison Line culvert and confluence of Dunn and Geiger Drains. Provides benthic community data prior to 2006 (i.e., historic).

Field Methods

Field methods and data analysis followed the protocols described on Pages 2-3.

Figure 2. Benthic biomonitoring site locations at the Hensall Landfill site.

Hensall Site Results and Discussion

Benthic invertebrate communities differed amongst sampling sites in the vicinity of the Hensall Landfill (Table 3). Relative percentage of Chironomidae, EPT, and Naididae species at each site can be found in Appendix 1 for each year that surveys have been conducted. Benthic invertebrate sampling indicated that water quality at the Hensall Landfill is poor overall but does differ across sites. This result is consistent with previous reporting that concluded that water quality at these sites ranged from 'fairly significant organic pollution' at Site 1 to 'very significant to severe organic pollution' at Sites 2 and 3 (Veliz 2014).

Of the three sites in Dunn Drain, Site 1– upstream of the leachate area–had species compositions consistent with higher water quality, compared to further downstream in the same drain. Compared to sites 2 and 3, Site 1 had the lowest relative abundance of pollution-tolerant Chironomidae species and highest relative abundance of pollution-sensitive EPT species. Percent EPT ranged from 1.39% to 29.67% at this site, but most sampling years, EPT was still low at less than 5% of the recorded benthic invertebrates in each sample, indicating poor water quality.

Based on Percent EPT, the poorest conditions appeared to be at Site 2, closest to the leachate zone. Sites 2 and 3–within and downstream of the leachate area–had the highest percentage of pollution-tolerant Chironomidae species and lowest percentage of pollution-sensitive species. Site 2 had the lowest relative abundance of EPT species, which ranged from 0 to a high of 7.24%. Pollution-tolerant Naididae species were the dominant taxon in most years, reaching a maximum relative abundance of 88%. This result is consistent with previous benthic invertebrate analyses that indicated sites within and downstream of the leachate upwelling zone consistently ranked as 'Poor' to 'Very Poor' environmental quality and had the lowest species diversity of all sampling sites (Jean *et al.*, 2020). Site 3 had slightly higher relative abundance of EPT species than Site 2, suggesting slightly better aquatic conditions downstream of the area immediately impacted by leachate. Although slightly improved compared to Site 2, aquatic conditions at Site 3 were still lower in EPT, higher in Chironomidae, and dominated by Naididae, when compared with sites upstream of the leachate area or in the Geiger Drain.

The site in the Geiger Drain (Site 4) had a lower Chironomidae / EPT ratio compared to sites the leachate area, indicating healthier aquatic conditions in the Geiger Drain than the Dunn Drain. Of all the sites, the ratio of Chironomidae to EPT species at the Geiger Drain was most comparable to Site 5, which is in the Black Creek and furthest downstream of the immediate leachate area. At the start of benthic studies, Site 4 was more abundant in EPT species than Chironomidae; however, over the past ten years this site has increased in relative proportion of Naididae and Chironomidae species, with no EPT species found in the most recent year of monitoring. Similarly, Site 5 appears to have declined in relative abundance of EPT species and increased in Naididae species over the twenty years of monitoring at this site. These metrics indicate that environmental conditions may be declining at both Sites 4 and 5, though both sites have maintained a lower Chironomidae / EPT ratio than those in the immediate vicinity of the leachate. Of the five sites at the Hensall Landfill, Site 5 had the highest diversity in benthic invertebrate species, ranging from 14% relative abundance of the dominant species in 2004 to 59% in 2008 (median of 24%).

Table 3. Benthic invertebrate sampling at five sites at the Hensall Landfill, including abundance of Chironomidae, EPT, and Naididae species.

Site Name	Number of Years	Mean Relative Abundance of Chironomidae (%)	Mean Relative Abundance of EPT (%)	Mean Chironomidae/ EPT Abundance Ratio	Mean Relative Abundance of Naididae (%)	Location Description
Site 1 DD01	6	3.92	8.78	0.79	20.98	Upstream of groundwater upwelling: Dunn Drain
Site 2 D02	7	22.83	1.62	25.94	69.12	Within area of groundwater upwelling: Dunn Drain
Site 3 DD03	7	26.47	2.06	41.91	55.50	Downstream of groundwater upwelling: Dunn Drain
Site 4 DD04	6	16.73	11.22	11.12	40.31	Upstream of Dunn Drain confluence: Geiger Drain
Site 5 HABLA1	17	30.15	19.21	10.36	17.91	Downstream of Dunn and Geiger confluence

Hensall Site Conclusions and Recommendations

Environmental conditions within the groundwater upwelling zone appeared to be poorest of the five sites, likely reflecting pollution from landfill leachate. Although this appears to be the poorest site based on benthic community composition, all sites in the Dunn and Geiger Drains had low Percent EPT compared with the long-term monitoring site (HABLA1).

The benthic community does not appear to have noticeably improved since landfill remediation and leachate dilution began, although EPT species were not observed in 2010 or 2012 and were once again observed in each monitoring year after 2014. Continued monitoring of the benthic community at this site, in addition to continuous monitoring of water chemistry and fish populations will be important for tracking the progression of remediation efforts.

Benthic Biomonitoring at the Heenan Drain near the Lucan Wastewater Treatment Plant

Heenan Site Introduction

The Heenan Drain flows toward the Little Ausable River northwest of the town of Lucan, passing by the Lucan Wastewater Treatment Plant (WWTP). Lucan has undergone a period of high growth over the past ten years, and WWTP is scheduled to undergo an expansion to meet the demands of this growing population. Without an expansion, it is expected that the plant would reach capacity as early as 2029, but possibly sooner if growth continues as it has in recent years.

The Lucan Sewage System is located at 6242 Fallon Drive, and consists of a pumping station, force mains to the treatment plant and lagoons, an aeration plant, lagoon system, generator, and an outfall sewer to Heenan Drain. The Heenan Drain eventually drains into the Little Ausable River, which intersects the Ausable River just outside of Biddulph Township. Based on a 2019 compliance report, a total of 389,932 m^3 of final effluent has been discharged from the Lucan Water Pollution Control Plant to the Heenan Drain (Ontario Clean Water Agency, 2019).

Considering this anticipated plant expansion, Ausable Bayfield Conservation Authority evaluated the ecological impacts of a potential plant expansion through a Before, After, Impact, Control (BACI) study of water quality and biological indicators in 2019 (Verhoog, 2020). Stream health surveys including benthic biomonitoring provide a baseline for the detection of impacts on water quality and aquatic life that could arise as a result of the expanded WWTP in Heenan Drain.

Objective

Benthic sampling was conducted at three sites in 2019 to assess aquatic conditions before Lucan's Wastewater Treatment Plant expansion. This report summarizes benthic invertebrate communities before the WWTP expansion (and upstream and downstream of the outfall of the WWTP) which will help evaluate impacts on the aquatic community as Lucan continues to expand.

Heenan Site Methods

Site Selection

Benthic biomonitoring at the Heenan site took place in September and October of 2019. In total, there were three sampling locations in the Heenan Drain (**Error! Reference source not found.**; Figure 3). Site 1 (HAHEEN1) was located upstream of the outfall sewer and was sampled on September 12, 2019. Site 2 (HAHEEN 2) was located near the outfall sewer and was sampled on October 1st, 2019. Site 3 (HAHEEN 3) was located downstream of the outfall sewer and was sampled on October 9th, 2019. Site 3 was the most downstream of the three sites. The locations of these sampling sites allowed for conditions upstream, near, and downstream of the sewer outfall to be evaluated.

Field Methods

Field methods and data analysis followed the protocols described on Page 2.

Figure 3. Benthic macroinvertebrate sampling locations in the Heenan Drain near the Lucan Wastewater Treatment Plant.

Heenan Site Results and Discussion

Of the three sampling sites in Heenan Drain, the site nearest the sewer outfall (Site 2, HAHEEN 2) appears to have the poorest water quality with the highest abundance of pollution-tolerant Chironomidae and lowest abundance of pollution-sensitive EPT species (no EPT species found) (Table 4). Community composition at Site 2 was different from upstream and downstream, with a very high abundance of flatworms compared with neighbouring sampling sites. Site 2 also had the lowest species diversity of the three sites, with 85% of the invertebrates in the sample belonging to just one Family.

Upstream of the sewer outfall at Site 1, species diversity was low with over 70% of species belonging to the Naididae family. However, pollution-sensitive species were detected at this site at a relative abundance that was highest of the three sampling sites. Site 3–furthest downstream of the outfall– pollution-sensitive EPT species were once again detected, and Chironomidae species had fallen in relative abundance compared with the site nearest to the outfall.

Table 4. Benthic invertebrate sampling at three sites at the Heenan Wastewater Treatment Plant including abundance (%) of Chironomidae, EPT, and Naididae species.

Site Name	Relative abundance of Chironomidae (%)	Relative abundance of EPT (%)	Relative abundance Chironomidae / EPT (Ratio)	Relative Abundance of Naididae (%)	Location Description
Site 1 HAHEEN1	1.50	3.50	0.43	70.00	Upstream of outfall sewer
Site 2 HAHEEN2	6.36	0.00	No EPT	0.85	Near outfall sewer
Site 3 HAHEEN3	2.05	1.37	1.49	8.22	Downstream of outfall sewer

Contrary to these results, previous analyses of these data had shown that Sites 2 and 3 (downstream of the outfall) had 'Fair' water quality and Site 1 (upstream of the outfall) had 'Fairly Poor' water quality (Verhoog 2019). Previous analyses (Verhoog, 2019) had generated biotic indices using tolerance values according to Mandaville (2002), which are values assigned to species based on their ability to survive environmental stressors. These tolerance values are summarized with abundance data produce a score that is compared to an index of water quality (Neary *et al*., 2009). The previous result that water quality downstream of the outfall was "Fair" is surprising given that many pollution-sensitive species were absent or in low abundance, and that overall diversity was low with 85% of the organisms belonging to a single genus (*Dugesia*). These analyses highlight the limitations of using a single metric when evaluating water quality using benthic data. These results show that while a single biotic index may indicate one result (e.g., "Fair" water quality), a closer look at the species present may be required to confirm other metrics support this result. Based on analyses presented here, water quality at Site 2 is poor, not 'fair',

based on the absence of EPT species, relatively high abundance of Chironomid species, and dominance by flatworms.

Heenan Site Conclusions and Recommendations

As expected, benthic monitoring results indicate that pollution-sensitive invertebrate abundance was lowest at the WWTP outfall. While pollution-sensitive species were lowest at the outfall, pollution-sensitive EPT species were present in low abundance at all three sites in the Heenan drain, indicating degraded conditions overall. Sites upstream and at the outfall had low species diversity as over 70% of the invertebrates at each site belonged to a single taxon. Downstream at Site 3, EPT species were found again, Chironomidae species was lower than at the outfall, and the most dominant species accounted for less than 40% of the total invertebrate abundance. Continued monitoring at this site with detailed analyses will be important especially as Lucan continues to grow in population and wastewater treatment demand.

Benthic Biomonitoring in Hellgrammite Creek

Hellgrammite Introduction

Hellgrammite Creek is a Coldwater stream that flows into the Bayfield River near the town of Clinton, Ontario. Named for the Dobson fly larva–a benthic invertebrate that survives only in relatively clean and oxygenated water–this creek has historically provided a natural and pristine environment for flora and fauna rarely found elsewhere in the region. Coldwater stream systems are rare in the Ausable Bayfield watershed, making this watercourse additionally important for cold-water fish species.

Hellgrammite Creek flows south from the Hullett Provincial Wildlife Area through an agricultural landscape with cropped fields that at times are as close as fifteen meters from the watercourse. Moving downstream, the creek branches as it enters a more forested and swampy landscape. Here, a forest and vegetated floodplain provide roughly a 300 m wide separation from neighbouring pasture and other agricultural activities. Hellgrammite Creek then briefly passes along the edge of an agricultural field before flowing into the Clinton Conservation Area and Bayfield River.

In recent years, monitoring staff at Ausable Bayfield Conservation Authority have sensed that water quality and benthic invertebrate communities have been decline, possibly reflecting changes in surrounding agricultural land use practices from pasture-based livestock farming and hay to cash cropping of corn and soybeans. Long-term monitoring at this site has been important for tracking of changes to water quality and broader environmental conditions.

Objective

Hellgrammite Creek is a long-term benthic invertebrate monitoring site, and as such provides a picture of long-term changes to environmental conditions. It was believed that recent changes to land-use practices upstream of this site may be a cause of water quality declines, so an objective was to determine if the benthic community had changed over a 20-year monitoring period.

Hellgrammite Methods

Site Selection

Three sites were surveyed at Hellgrammite Creek beginning in 2000 (Table 5; Figure 4). HBHEL1 (Site 1) is the most upstream sampling site and has been surveyed seventeen times over the past 20 years. Repeated sampling over many years at this site provides a long-term picture of aquatic changes. Sites 2 and 3 were sampled just once (Site 2) and twice (Site 3).

Table 5. Benthic invertebrate sampling at three sites in Hellgrammite Creek.

Site Name	Years Surveyed	Location description
Site 1 HBHEL1	2000, 2002, 2003, 2004, 2006, 2008, 2009, 2010, 2012, 2013, 2014-2018, 2020, 2021	Most upstream sampling site at Hellgrammite Creek
Site 2 HBHEL2	2003	Intermediate sampling site at Hellgrammite Creek
Site 3 HBHEL3	2003, 2005	Most downstream sampling site at Hellgrammite Creek

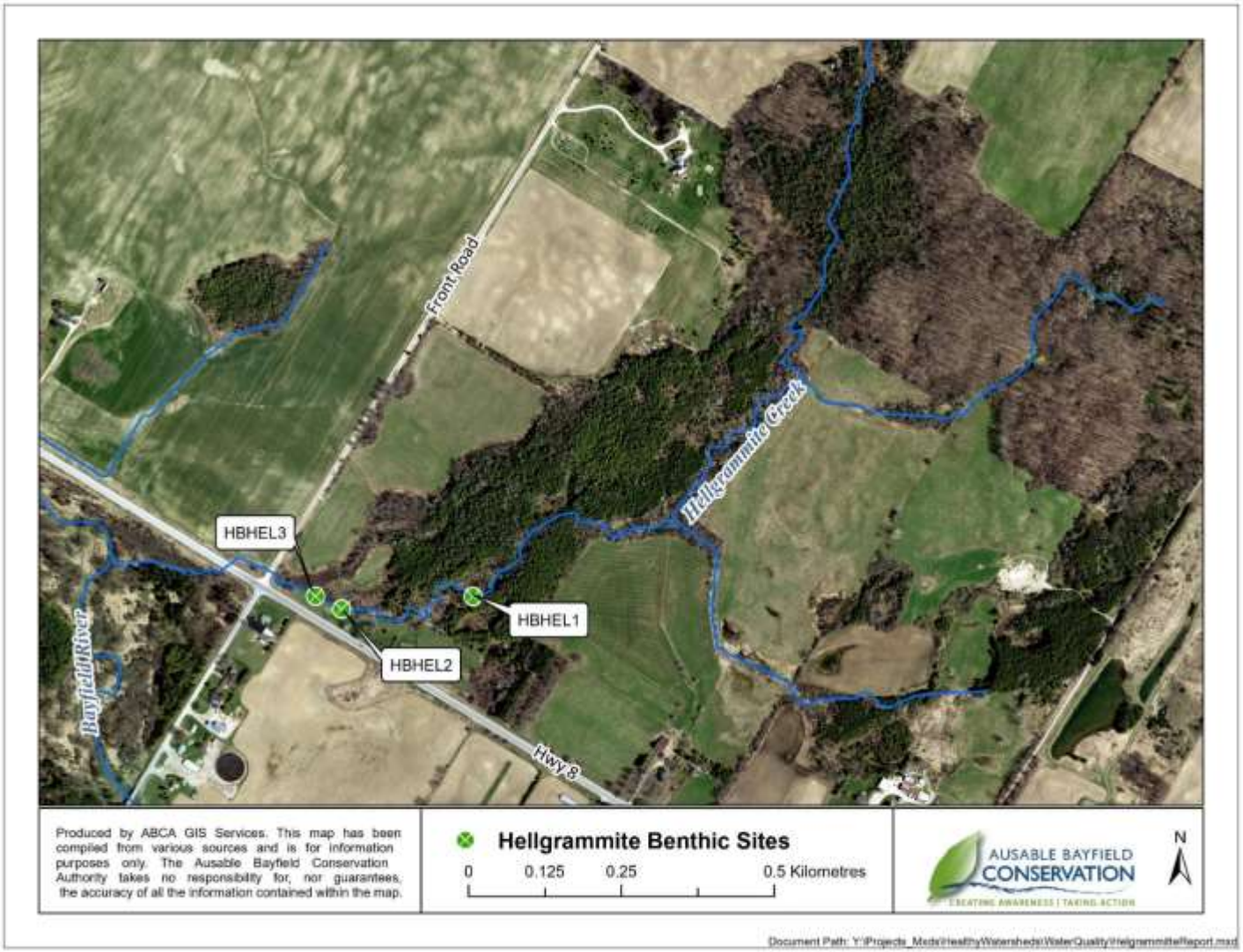


Figure 4. Benthic macroinvertebrate sampling locations in Hellgrammite Creek.

Field Methods and Analyses

Field methods and benthic data analysis followed the protocols described on Page 2. Data related to upstream agricultural land use were sourced through Agriculture and Agri-Food Canada (AAFC).

Hellgrammite Results and Discussion

In general, Hellgrammite Creek had a high relative percentage of EPT species, indicating good aquatic conditions at this site (**Error! Reference source not found.**). In most years, Percent EPT was several times greater than pollution-tolerant Percent Chironomidae and Percent Naididae. Although water quality at this site appears to be superior to many watercourses in the Ausable Bayfield watershed, long-term monitoring of this site shows some cause for concern. Percent EPT has been steadily dropping since the start of monitoring, decreasing from a maximum of 69.50% in 2002 to 41.48% in 2021. There have also been two years of monitoring (2012, 2018) when Percent EPT dropped to less than 5%. Percent Naididae (worms) appears to have risen, with a steady increase in abundance since 2011. The cause of this decline in EPT is unknown, although benthic invertebrates can be affected by factors including water depth, oxygen content, pH, and presence of woody debris, leaf litter, and decaying material (Miler *et al*., 2018).

Upstream land use may be one factor impacting aquatic conditions at this site (

Appendix ***2***). Two of six fields upstream of the monitoring site have recently been converted from pasture or hay to conventional cropping of corn and soybeans. Conventional farming practices are characterized by the use of pesticides, herbicides, and fertilizers, often with intensive tillage practices. This type of farming system has potential to contribute excess nutrients and chemicals to the environment through run-off, especially when compared with conservation tillage, hay, or pasture-based farming. Studies on associations between microbenthic communities, sediment exposure, and anthropogenic activities have negatively correlated benthic condition with point source loadings and total nitrogen (Dauer *et al*., 2012). Low dissolved oxygen and eutrophication have also been negatively correlated with benthic community condition (Dauer *et al*., 2012). Pesticides such as noenicitinoids may further negatively impact benthic invertebrates (Anderson *et al*., 2015). Although there are many potential causes for the observed decline in EPT species, it is possible that changes to upstream agricultural practices are having downstream impacts on the benthic community at this site.

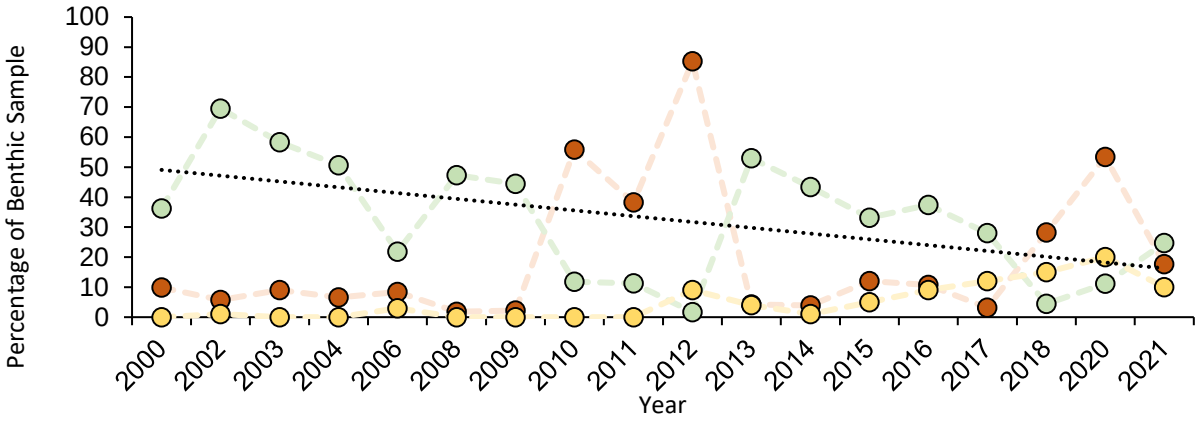


Figure 5. Relative abundance (percentage) of Chironomidae, EPT, and Naididae species at Hellgrammite Creek Site 1 (HBHEL1). Chironomidae species are represented by red circles, EPT species are represented by green circles, and Naididae species are represented by yellow circles. A trendline for relative abundance of EPT species is shown as a black dotted line.

Hellgrammite Recommendations

Declines in EPT species and the increase of pollution-tolerant species at this site is worrisome. Since the onset of monitoring at this site, there have been obvious declines in the abundance of species reliant on high water quality, with a marked increase in pollution-tolerant species. Although the cause of these declines is not clear, water quality at this site may be improved by the implementation of best-management practices that limit soil erosion and run-off, conversion of farm fields back to pasture or hay, and careful use of agricultural pesticides and fertilizers. Continued monitoring at this site will be important to determine if water quality at this ecologically important site continues to deteriorate.

Main Conclusions

Water quality monitoring at Hensall, Heenan, and Hellgrammite sites has shown that benthic biomonitoring is a useful tool for tracking the health of aquatic systems. As expected, relative abundance of the most sensitive benthic species was lowest within a landfill leachate zone at Hensall, and nearest to a sewer outfall at the Lucan Wastewater Treatment Plant (Heenan site), compared with neighbouring sampling sites further from the leachate source and outfall. At the Hellgrammite site, relative abundance of pollution-sensitive species has been in steady decline over the 20-year monitoring period, which may be linked to upstream agricultural practices. Most sites at the Heenan and Hensall sites are also characterized by a high relative abundance of pollution-tolerant species and low species diversity, indicative of poor water quality in general at these sites.

Future considerations for benthic analyses could include bioassessment metrics tailored for freshwater systems in agriculture-dominated landscapes. Although percent EPT and percent Chironomidae were useful tools for assessing the benthic community at these sites, the use of these metrics alone ignores most of the benthic invertebrates collected in most samples, and therefore should be considered as only part of an assessment of aquatic health. The inclusion of benthic biomonitoring using several metrics of analyses with additional water quality monitoring methods (e.g., water chemistry, fish community sampling) helps to create a comprehensive aquatic monitoring program.

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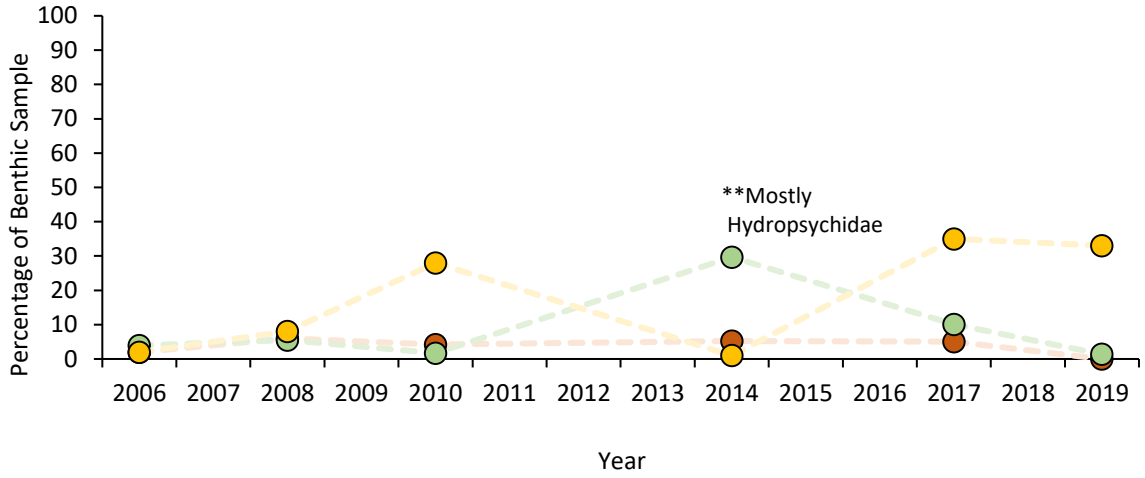
Appendix 1

a)



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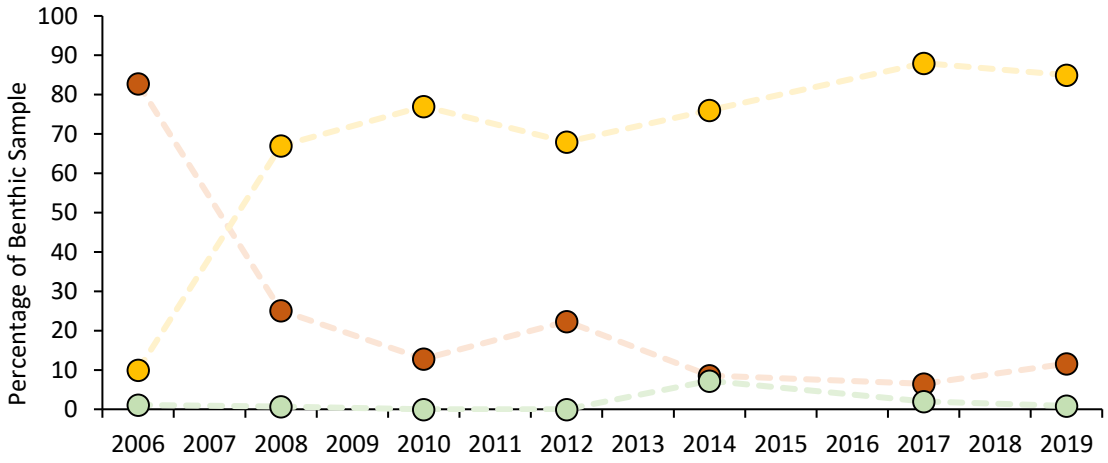

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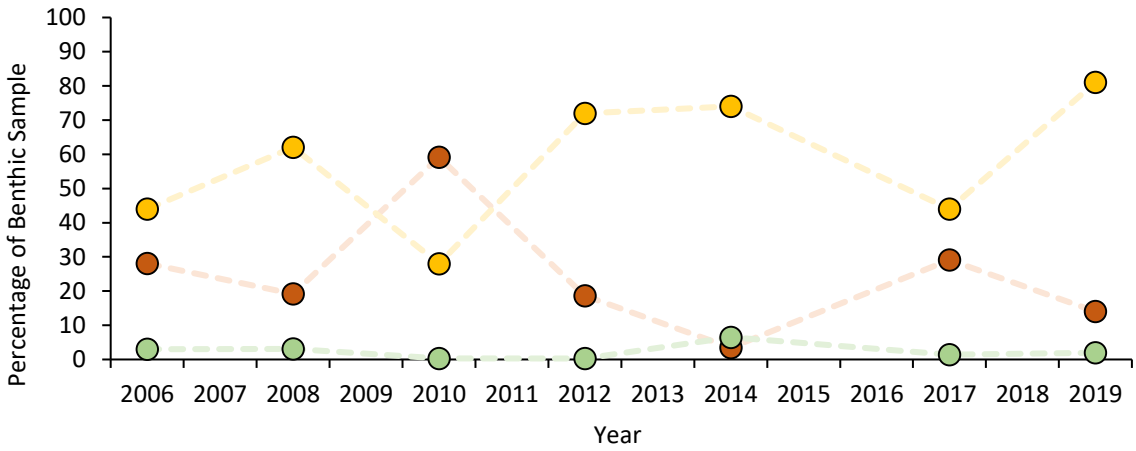

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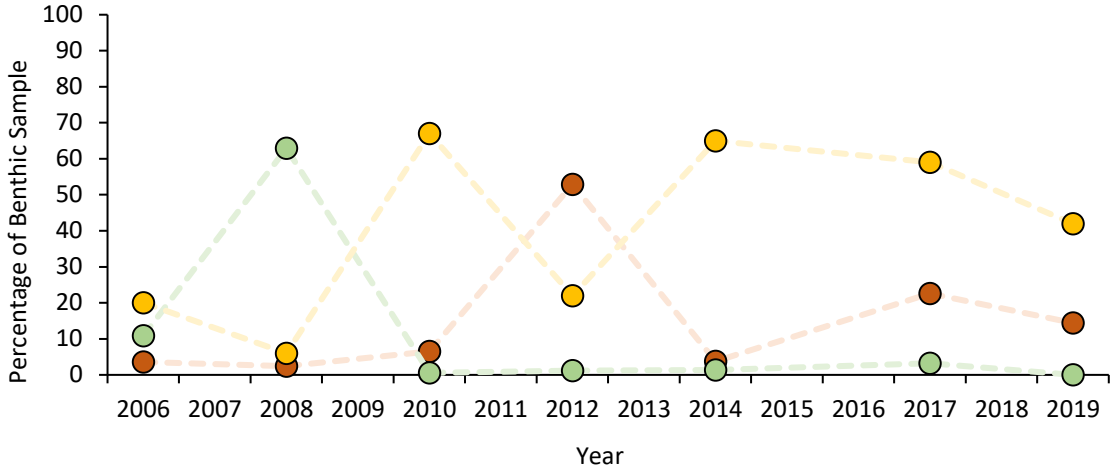
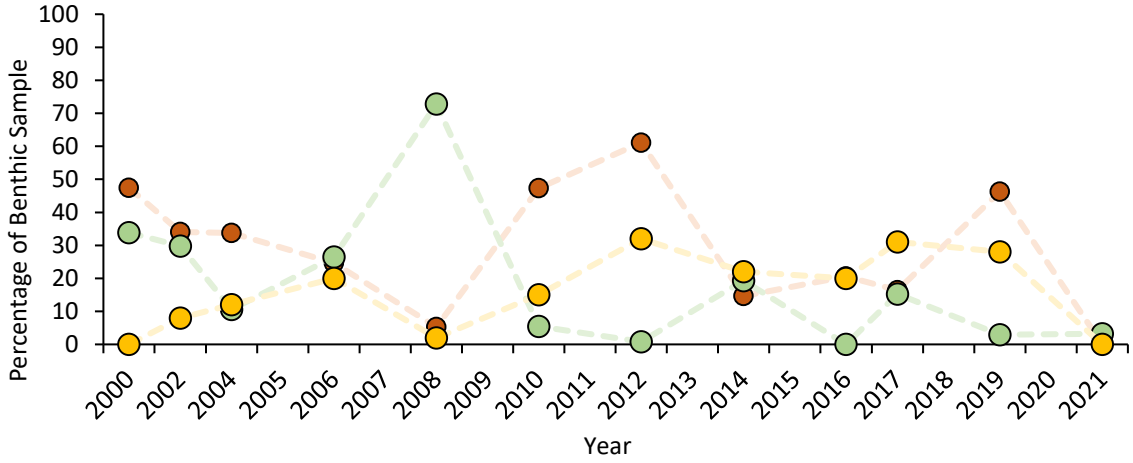


e)



Appendix 1. Relative abundance (percentage) of Chironomidae, EPT, and Naididae species at the Hensall Landfill site: a) Site 1 DD01, b) Site 2 DD02, c) Site 3 DD03, d) Site 4 DD04, e) Site HABLA1. Chironomidae species are represented by red circles, EPT species are represented by green circles, and Naididae species are represented by yellow circles.

Appendix 2. Crop type and probable management of agricultural fields upstream of Hellgrammite benthic biomonitoring sites (HBHEL1, HBHEL2, HBHEL3).

Field	Year	Crop	Probable Management
1	2011	Cereals	Unknown
	2012	Soybeans	No-till
	2013	Winter Wheat	No-till
	2014	Corn	Conventional
	2015	Soybeans	Conventional
	2016	Corn	Conventional
	2017	Soybeans	Conventional
	2018	Winter Wheat	No-till
	2019	Soybeans	No-till

	2020	Corn	Conventional
	2021	Corn	Conventional
2	2011	Corn	Conventional
	2012	Soybeans	No-till
	2013	Winter Wheat	No-till
	2014	Corn	Conventional
	2015	Soybeans	Conventional
	2016	Corn	Conventional
	2017	Soybeans	Conventional
	2018	Winter Wheat	No-till
	2019	Soybeans	No-till
	2020	Wheat	No-till
	2021	Corn	Conventional
3	2011	Cereals	Unknown
	2012	Hay / Pasture	Permanent Cover
	2013	Hay / Pasture	Permanent Cover
	2014	Hay / Pasture	Permanent Cover
	2015	Hay / Pasture	Permanent Cover
	2016	Soybeans	No-till
	2017	Soybeans with Hay / Pasture	No-till
	2018	Winter wheat with Hay / Pasture	No-till
	2019	Soybeans	No-till
	2020	Wheat	No-till
	2021	Corn	Conventional
4	2011	Corn	Conventional
	2012	Cereals (NW part in hay/pasture)	Unknown
	2013	Hay/Pasture	Permanent Cover
	2014	Hay/Pasture	Permanent Cover
	2015	Soybeans with Hay / Pasture	No-till
	2016	Corn	Conventional
	2017	Corn or Soybeans (unclear)	Conventional
	2018	Corn	Conventional
	2019	Soybeans	Conventional
	2020	Wheat	No-till
	2021	Corn	Conventional
5	2011	Corn	Conventional
	2012	Corn	Conventional
	2013	Corn	Conventional
	2014	Corn	Conventional
	2015	Corn	Conventional
	2016	Corn or Soybeans (unclear)	Conventional
	2017	Corn	Conventional
	2018	Corn or Soybeans (unclear)	Conventional
	2019	Corn	Conventional
	2020	Corn	Conventional
	2021	Corn	Conventional

6	2011	Corn	Conventional
	2012	Beans (Edible?)	Conventional
	2013	Corn	Conventional
	2014	Corn	Conventional
	2015	Winter Wheat	Conventional
	2016	Soybeans	No-till
	2017	Winter Wheat	No-till
	2018	Soybeans or Edible Beans	Conventional
	2019	Corn	Conventional
	2020	Corn or Bean (unclear)	Conventional
	2021	Wheat	No-till

ABCA
71108 Morrison Line, RR 3
Exeter, ON N0M 1S5

Statement of Profit & Loss

January through September

Accrual Basis

	2021 Actual 1st Nine Months	2022 Annual Budget	2022 Total Nine Months	2022 Forecast Dec 31 '22	% of Budget
Revenue					
Grant, Provincial/Federal	435,664	341,706	316,388	472,261	138%
Levy, General	554,839	1,119,184	559,594	1,119,188	100%
Levy, Projects	113,348	249,594	124,800	249,600	100%
Levy, Special Benefit	0	82,703	0	82,703	100%
Levy, Special Benefit, WECI	0	6,000	0	6,000	100%
Rental	41,576	62,700	40,134	67,480	108%
Conservation Area User Fees	187,746	110,200	113,453	116,953	106%
Sales & Service	555,690	639,009	618,611	760,045	119%
Donations	6,717	400	7,102	7,102	1776%
Interest	13,673	18,400	24,589	36,883	200%
Partnership Contributions	1,091,248	984,037	767,521	1,489,535	151%
Sundry	675	0	38	38	0%
Deferred from Prior Year - Revenue	1,142,888	1,167,732	1,367,944	1,367,944	117%
Deferred to Future Year - Expense	0	(564,660)	0	(1,414,073)	250%
Total Revenue	4,144,063	4,217,005	3,940,174	4,361,660	103%
Expense					
Purchased Services	300,381	419,228	281,597	460,462	110%
Advertising	5,642	8,327	6,325	8,434	101%
Memberships, Dues, Licenses	51,507	57,901	45,609	51,710	89%
Maintenance and Repair	20,191	74,429	56,999	95,999	129%
Property Taxes	38,415	62,096	37,169	59,558	96%
Office Operations	92,673	125,405	90,956	121,274	97%
Rental	8,237	11,243	8,607	11,476	102%
Training and Development	3,930	22,962	9,673	12,897	56%
Travel Costs and Accommodations	3,689	14,352	4,950	6,601	46%
Uniforms	1,046	8,408	2,293	7,057	84%
Utilities	25,934	38,598	29,214	42,952	111%
Vehicles and Field Equipment	60,052	92,184	62,226	98,968	107%
Program	966,636	715,591	455,372	903,372	126%
Board Of Director's	12,020	25,221	11,510	24,265	96%
Wages and Benefits	1,847,712	2,590,316	1,997,710	2,547,023	98%
Total Operating Expense	3,438,065	4,266,261	3,100,209	4,452,049	104%
Net Operating Income	705,999	(49,256)	839,965	(90,389)	184%
Other (Income) Expense					
Capital	40,127	52,096	55,787	55,787	107%
Amortization	135,557	178,955	133,106	176,171	98%
From Reserve - Revenue	(64,219)	(146,407)	(109,805)	(199,211)	136%
To Reserves - Expenses	60,550	45,055	32,440	61,007	135%
Total Other Expense	172,014	129,699	111,527	93,753	72%
	(172,014)	(129,699)	(111,527)	(93,753)	72%
Net Income	**533,984**	**(178,955)**	**728,438**	**(184,142)**	103%

Ausable Bayfield Conservation Authority
71108 Morrison Line, RR 3
Exeter, ON N0M 1S5

AUSABLE BAYFIELD CONSERVATION
CREATING AWARENESS | TAKING ACTION

Statement of Profit & Loss

January through September

(Unaudited) Accrual Basis

Table 1: Consolidated

	2021	2022				
	Actual	1st Six		Total	Annual	% of
	Jan - Sep	Months	3rd Qtr	Nine months	Budget	Budget
Revenue						
Grant, Provincial/Federal	435,664	314,964	1,425	316,388	341,706	93%
Levy, General	554,839	559,594	0	559,594	1,119,184	50%
Levy, Projects	113,348	124,800	0	124,800	249,594	50%
Levy, Special Benefit	0	0	0	0	82,703	0%
Levy, Special Benefit, WECI	0	0	0	0	6,000	0%
Rental	41,576	38,649	1,485	40,134	62,700	64%
Conservation Area User Fees	187,746	33,164	80,289	113,453	110,200	103%
Sales & Service	555,690	453,657	164,954	618,611	639,009	97%
Donations	6,717	6,029	1,073	7,102	400	1776%
Interest	13,673	13,762	10,827	24,589	18,400	134%
Partnership Contributions	1,091,248	384,076	383,445	767,521	984,037	78%
Sundry	675	38	0	38	0	0%
Deferred from Prior Year - Revenue	1,142,888	1,367,944	0	1,367,944	1,167,732	117%
Deferred to Future Year - Expense	0	0	0	0	(564,660)	0%
Total Revenue	4,144,063	3,296,677	643,497	3,940,174	4,217,005	93%
Expense						
Purchased Services	300,381	180,132	101,465	281,597	419,228	67%
Advertising	5,642	3,995	2,331	6,325	8,327	76%
Memberships, Dues, Licenses	51,507	44,335	1,274	45,609	57,901	79%
Maintenance and Repair	20,191	51,544	5,455	56,999	74,429	77%
Property Taxes	38,415	24,354	12,815	37,169	62,096	60%
Office Operations	92,673	66,272	24,683	90,956	125,405	73%
Rental	8,237	5,842	2,765	8,607	11,243	77%
Training and Development	3,930	5,017	4,655	9,673	22,962	42%
Travel Costs and Accommodations	3,689	2,050	2,900	4,950	14,352	34%
Uniforms	1,046	685	1,608	2,293	8,408	27%
Utilities	25,934	19,974	9,240	29,214	38,598	76%
Vehicles and Field Equipment	60,052	33,674	28,552	62,226	92,184	68%
Program	966,636	415,942	39,430	455,372	715,591	64%
Board Of Director's	12,020	5,870	5,640	11,510	25,221	46%
Wages and Benefits	1,847,712	1,240,024	757,686	1,997,710	2,590,316	77%
Total Operating Expense	3,438,065	2,099,710	1,000,500	3,100,209	4,266,261	73%
Net Operating Income	705,999	1,196,968	(357,003)	839,965	(49,256)	-1705%
Other Expense						
Capital	40,127	14,956	40,831	55,787	52,096	107%
Amortization	135,557	89,756	43,350	133,106	178,955	74%
From Reserves - Revenue	(64,219)	(73,204)	(36,602)	(109,805)	(146,407)	75%
To Reserves - Expenses	60,550	22,526	9,914	32,440	45,055	72%
Total Other Expense	172,014	54,034	57,493	111,527	129,699	86%
Net Income	**533,984**	**1,142,934**	**(414,496)**	**728,438**	**(178,955)**	0%

Ausable Bayfield Conservation Authority
71108 Morrison Line, RR 3
Exeter, ON N0M 1S5

Statement of Profit & Loss

January through September
(Unaudited) Accrual Basis

Table 2: Drinking Water Source Protection

	2021	2022				
	Actual Jan - Sep	1st Six Months	3rd Qtr	Total Nine months	Annual Budget	% of Budget
Revenue						
Grant, Provincial/Federal	159,774	149,042	1,425	150,467	242,662	62%
Interest	430	518	595	1,113	1,000	111%
Deferred from Prior Year - Revenue	48,597	47,261	0	47,261	49,553	95%
Deferred to Future Year - Expenses	0	0	0	0	(31,668)	0%
Total Revenue	208,801	196,822	2,020	198,841	261,547	76%
Expense						
Purchased Services	16,147	7,440	6,284	13,725	23,000	60%
Advertising	0	0	0	0	0	0%
Memberships, Dues, Licenses	0	458	88	546	0	0%
Office Operations	14,105	13,588	675	14,263	20,200	71%
Rental	5,189	3,621	1,821	5,442	6,904	79%
Training and Development	0	41	0	41	300	14%
Travel Costs and Accommodations	29	77	35	112	1,075	10%
Uniforms	0	0	0	0	350	0%
Utilities	1,035	690	345	1,035	1,380	75%
Vehicles and Field Equipment	72	41	41	81	1,000	8%
Program	0	0	72	72	0	0%
Board Of Director's	3,657	295	2,300	2,595	13,142	20%
Wages and Benefits	127,972	79,386	52,068	131,453	194,196	68%
Total Operating Expense	168,206	105,636	63,728	169,364	261,547	65%
Net Operating Income	40,595	91,186	(61,708)	29,477	0	0%
Other Expense						
From Reserve - Revenue	0	0	0	0	0	0%
To Reserves - Expenses	0	0	0	0	0	0%
Total Other Expense	0	0	0	0	0	0%
Net Income	**40,595**	**91,186**	**(61,708)**	**29,477**	**0**	0%

Ausable Bayfield Conservation Authority
71108 Morrison Line, RR 3
Exeter, ON N0M 1S5

AUSABLE BAYFIELD CONSERVATION
CREATING AWARENESS | TAKING ACTION

Statement of Profit & Loss

January through September

(Unaudited) Accrual Basis

Table 3: ABCA Excluding DWSP

	2021	2022				
	Actual	1st Six		Total	Annual	% of
	Jan - Sep	Months	3rd Qtr	Nine months	Budget	Budget
Revenue						
Grant, Provincial/Federal	275,890	165,922	0	165,922	99,044	168%
Levy, General	554,839	559,594	0	559,594	1,119,184	50%
Levy, Projects	113,348	124,800	0	124,800	249,594	50%
Levy, Capital	0	0	0	0	0	0%
Levy, Special Benefit	0	0	0	0	82,703	0%
Levy, Special Benefit, WECI	0	0	0	0	6,000	0%
Rental	41,576	38,649	1,485	40,134	62,700	64%
Conservation Area User Fees	187,746	33,164	80,289	113,453	110,200	103%
Sales & Service	555,690	453,657	164,954	618,611	639,009	97%
Donations	6,717	6,029	1,073	7,102	400	1776%
Interest	13,243	13,244	10,231	23,476	17,400	135%
Partnership Contributions	1,091,248	384,076	383,445	767,521	984,037	78%
Sundry	675	38	0	38	0	0%
Deferred from Prior Year - Revenue	1,094,290	1,320,683	0	1,320,683	1,118,179	118%
Deferred to Future Year - Expense	0	0	0	0	(532,992)	0%
Total Revenue	3,935,262	3,099,855	641,478	3,741,333	3,955,458	95%
Expense						
Purchased Services	284,233	172,691	95,181	267,872	396,228	68%
Advertising	5,642	3,995	2,331	6,325	8,327	76%
Memberships, Dues, Licenses	51,507	43,876	1,187	45,063	57,901	78%
Maintenance and Repair	20,191	51,544	5,455	56,999	74,429	77%
Property Taxes	38,415	24,354	12,815	37,169	62,096	60%
Office Operations	78,568	52,685	24,008	76,693	105,205	73%
Rental	3,048	2,221	944	3,165	4,339	73%
Training and Development	3,930	4,976	4,655	9,632	22,662	43%
Travel Costs and Accommodations	3,660	1,973	2,865	4,838	13,277	36%
Uniforms	1,046	685	1,608	2,293	8,058	28%
Utilities	24,899	19,284	8,895	28,179	37,218	76%
Vehicles and Field Equipment	59,981	33,634	28,511	62,145	91,184	68%
Program	966,636	415,942	39,358	455,300	715,591	64%
Board Of Director's	8,363	5,574	3,340	8,915	12,079	74%
Wages and Benefits	1,719,740	1,160,638	705,602	1,866,240	2,396,120	78%
Total Operating Expense	3,269,858	1,994,073	936,755	2,930,829	4,004,714	73%
Net Operating Income	665,404	1,105,782	(295,278)	810,504	(49,256)	-1645%
Other Expense						
Capital	40,127	14,956	40,831	55,787	52,096	107%
Amortization	135,557	89,756	43,350	133,106	178,955	74%
From Reserves - Revenue	(64,219)	(73,204)	(36,602)	(109,805)	(146,407)	75%
To Reserves - Expenses	60,550	22,526	9,914	32,440	45,055	72%
Total Other Expense	172,014	54,034	57,493	111,527	129,699	86%
Net Income	**493,389**	**1,051,748**	**(352,771)**	**698,977**	**(178,955)**	0%

M I N UT E S

ARKONA LIONS MUSEUM MANAGEMENT COMMITTEE

Tuesday, October 4, 2022
2:00 p.m.

Rock Glen Conservation Area
Arkona Lions Museum and Information Centre

MEMBERS PRESENT
Glenn Stott - Arkona Lions Club
Doug Cook – ABCA

MEMBERS ABSENT
Bob Harvey – ABCA
Adam Wisniewski – Arkona Lions Club/Museum Curator

OTHERS PRESENT
Nathan Schoelier, Abigail Gutteridge, Mike Bax – ABCA Staff

CALL TO ORDER
Chair Glenn Stott called the meeting to order at 2:05 p.m. and welcomed everyone to the meeting.

ADOPTION OF AGENDA
MOTION #MC 4/22 **Moved by Doug Cook**

"RESOLVED, THAT the Arkona Lions Museum Management Committee agenda for October 4, 2022 be approved."

Carried by Consensus.

ADOPTION OF MINUTES
MOTION #MC 5/22 **Moved by Doug Cook**

"RESOLVED, THAT the minutes of the Arkona Lions Museum Management Committee meeting of September 15, 2021 be approved."

Carried by Consensus.

BUSINESS OUT OF THE MINUTES
None.

2022 FINANCIAL STATEMENT & GATE ATTENDANCE
Abbie Gutteridge presented the Profit and Loss Statement for January through September 2022. Of note, for 2022 projects, the accessible door on the lower level was completed, and the large expense was for the upgrade of the Rock Glen parking lot. Attendance at Rock Glen Conservation Area returned to a level that was consistent with 2019, pre-pandemic. Interest in the museum remains high with visitors every week. Mike Bax noted that more season passes for Rock Glen were sold this year, many to regular campers at Rock Glen Family Resort. Tracking how many times pass holders use the park is a challenge, so it is likely that the number of visitors is actually slightly higher that what was reported. The committee also wondered if there was another method for payment, other than cash, if staff are not at the gatehouse. Staff will look into options and report back to the group.

MOTION #MC 6/22 Moved by Doug Cook

"RESOLVED, THAT the Financial Statement and Gate Attendance report be received as presented."

Carried by Consensus.

2022 STAFFING
Nathan Schoelier provided the committee with an update on staffing through the 2022 season at Rock Glen Conservation Area. Mike Bax returned as Superindendent of the conservation area. Additionally, Jonathan Levitt and Kelly Graham were hired as Conservation Area Attendents. This was Jonathan's third season at Rock Glen. All staff worked very well and it was a smooth season at Rock Glen.

MUSEUM ACQUISITION POLICY DEVELOPMENT
Nathan Schoelier gave the committee an update regarding an Acquisition Policy for the museum. A number of older draft policies that were developed in the 1980s were found and could provide a base for a new policy. Nathan also contacted Dana Thorne at the Lambton Heritage Museum to get a copy of their policy. Nathan will send the various draft policies to the group, and suggested that the committee could work on developing a new draft policy over the winter months.

EVENTS & PROJECT UPDATES

a) Accessible Entranceway
   Nathan Schoelier reported that the accessible door on the lower level has been completed. The door still requires some trim and finishing, but the mechanism is in place and working. At present, Mike Bax has the only key to unlock the door, but will make copies for the ABCA Educators. The door will remain locked unless a school program requires it to be opened.

b) Grand Re-Opening for the Museum
Glenn Stott noted that the museum was opened all season for visitors, but that there are still some museum items that they would like to wrap up before a grand re-opening. He and Adam are hoping that it will be ready for a grand re-opening in Spring 2023, after the May 24 long weekend. They are hoping to have an hour long program with the Baxter Family.

Some of the items that still need to be completed are re-labeling of artifacts, and two murals which were supposed to have already been completed. These will complement the two murals that were already commissioned for the museum. The group also agreed that the television monitor that is for the microscope should only be used with supervision.

c) Antique Car Show
The Car Show was held on September 17, 2022. A total of 86 antique cars were entered into the show and it was estimated that there were over 250 people in attendance. The organizer of the event would like it to be free admission, so the committee suggested that they may want to explore the option of having sponsors for the event, to help offset some of the costs.

HERITAGE SARNIA LAMBTON

Nathan Schoelier reported that the Summer Passport Program went ahead at the Museum this year. Participants were able to receive their stamp from staff at the gatehouse. Staff did not find that there was a great deal of uptake on the program and maybe stamped approximately ten passports. The lack of participation could be due to the fact that the Arkona Lions Museum is a little further away from several of the other participating museums.

MUSEUM CURATOR REPORT

Glenn Stott gave the Museum Curator report for Adam. They were very happy that the museum was up and running again this season. As previously mentioned, they are still waiting on two murals by Lauren Clark, which were supposed to arrive in June 2022.

Glenn and Adam have developed a list of items to work at over the coming year, including:

- Signage for the front of the museum, as well as a new sign denoting the museum hours
- Fixing some of the loose carpeting and a new area mat for the front museum entrance
- There is some question of if there would be room in the Education Room for some display items. Glenn and Adam can work with Denise to see if there will be space available and what displays might be appropriate for the Education Room
- A self guided tour for the museum that will help visitors when volunteers are not available
- Cleaning up the back storage room. A disposition policy might be helpful in this case.
- A better storage area, and perhaps an area as an office would be helpful when Glenn and Adam are working in the museum
- Improved heating and ventilation

- A large map of Rock Glen and area to be kept in the museum, or perhaps just outside of it.

While this is not an exhaustive list, completing some of these items would provide improvement to the museum. Nathan noted that in the Draft 2023 Budget, they have made an increase to cover the cost of utilities. If a partnership with the Arkona Lion's could install a new furnace system, the increase to the utilities budget would be helpful. Nathan also suggested looking into a composite material for a new vinyl sign for outside of the museum. The current wood sign is starting to rot, and a composite material would be long lasting, and vinyl lettering could be easily replaced in the future, if needed.

OTHER BUSINESS

None.

NEXT MEETING

The next meeting is scheduled for Monday, May 1 at 9:30 a.m., unless the Chair calls an earlier meeting.

ADJOURNMENT

The meeting was adjourned the meeting at 3:15 p.m.

Glenn Stott	Abigail Gutteridge
Chair	Corporate Services Coordinator