

Annual Report 2019



AUSABLE BAYFIELD
CONSERVATION

CREATING AWARENESS | TAKING ACTION

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FRONT COVER PHOTO: The front cover photo is courtesy of Williams Drainage Inc. It shows work at Huron County Soil and Crop Improvement Association's drainage innovation project, at Huron County Demonstration Farm, at Huronview complex near Clinton, during the Drainage Innovation Day.



BACK COVER PHOTO: The colourful cover crops photo on the back cover is by Ausable Bayfield Conservation's Nathan Schoelner. It was taken at GerardCornelisFarms Inc.

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Mission

Protect, improve, conserve,
and restore the watershed
in partnership with the community

Vision

Healthy watersheds
where our needs and the needs of the natural
environment are in balance

Ausable Bayfield Conservation Authority (ABCA) Board of Directors – 2019



George Irvin,
Chair
Bluelwater



Doug Cook,
Vice Chair
Lambton Shores;
Warwick



Mike Tam
West Perth



Bob Harvey
Adelaide Metcalfe;
Middlesex Centre



Alex Westman
Lucan Biddulph



Marissa Vaughan
South Huron;
Perth South



Ray Chartrand
Huron East



Adrian Cornelissen
North Middlesex



Dave Jewitt
Central Huron

Budget belt is tighter but our job remains the same

By George Irvin, Chair, Ausable Bayfield Conservation Authority (ABCA) Board of Directors

The financial belt is tighter each year for municipalities and governments at all levels – and for conservation authorities too. The challenge for the Ausable Bayfield Conservation Authority (ABCA) Board of Directors, and staff, is to continue to deliver successful programs and services even in times of belt tightening.



George Irvin

Ausable Bayfield Conservation protects life and property through programs such as regulations, planning, flood plain management, flood forecasting and warning, and regulation of development, interference with wetlands, and alterations to shorelines and watercourses (through *Ontario Regulation 147/06*).

We also provide nature preservation and enjoyment and recreation at conservation areas. We help to protect

Chair's Message

groundwater, creeks, rivers, and Lake Huron through environmental monitoring, conservation education, wetland restoration, tree planting, soil health, and habitat improvements, among other programs.

It's not easy to deliver these programs effectively when resources are limited but we have a job to do and we need to find a way to do it. I commend directors and staff for working hard to find ways to deliver much-needed programs while keeping program costs down.

We appreciate the support of ratepayers, municipalities, and all our partners including donors, volunteers, and funding partners. We could not do it without you. Together, we have achieved a great deal ... but there is much work we have left to do.

Our municipalities, directors, and staff have been busy and making progress. I thank them all.

Corporate Services



Brian Horner
General Manager;
Sec.-Treasurer



Judith Parker
Corporate Services
Coordinator



Bev Brown
Financial Services
Coordinator



Sharon Pavkeje
Corporate Services
Assistant



Tim Cumming
Comm. Specialist



Tracey McPherson
GIS/IT
Coordinator



Aaron Clarke
DWSP GIS
Specialist



Elizabeth Balfour
GIS
Technician

Corporate Services staff at ABCA are front-line staff providing key assistance to all departments, the Board of Directors, committees, member municipalities, and the public. The department helps staff to fulfil the community's mission and vision in the *Conservation Strategy*.

Strong partnership with municipalities helps us make progress

By Brian Horner, General Manager and Secretary-Treasurer

The people of Ausable Bayfield watersheds, and staff of Ausable Bayfield Conservation Authority, were very busy and productive in 2019. I thank them all. We could not have done it without the partnership with our local municipalities. Together, landowners and staff have planted tens of thousands of trees this past year. Thousands of people attended our education events and came away with new appreciation of how to protect soil health, water quality, and habitat for species at risk.

Community donors and volunteers raised tens of thousands of dollars, at the Conservation Dinner and the charity golf tournament, for local projects. The Pedestrian Bridge on the South Huron Trail community campaign surpassed \$300,000, meeting the fundraising goal for the Jones Bridge project. Generous donors continue to support a bridge legacy preservation fund.

Our board approved a new *Shoreline Management Plan*. This provides a practical course for the future and clear

General Manager's Report

rules for development proponents and for staff. It will make it possible to approve appropriate developments and ensure development is responsible and safe.

The strong relationship between Ausable Bayfield Conservation and our member municipalities is more important than ever. The vision of our local municipalities created the former Ausable River Conservation Authority, Ontario's first, in 1946. We need that same vision as we work together to find ways to continue our work protecting local watershed resources.

We will continue to work with governments and municipalities and other partners. Working together, we can realize the community's mission (to protect, improve, conserve, and restore the watershed in partnership with the community) and vision (healthy watersheds where our needs and the needs of the natural environment are in balance).

Ausable Bayfield Conservation staff directory for year 2019

Corporate Services

- Brian Horner
General Manager and Secretary-Treasurer
- Judith Parker
Corporate Services Coordinator
- Bev Brown
Financial Services Coordinator
- Sharon Pavkeje
Corporate Services Assistant
- Tim Cumming
Communications Specialist
- Tracey McPherson
GIS/IT Coordinator
- Aaron Clarke
DWSP GIS Specialist
- Elizabeth Balfour
GIS Technician

Stewardship, Land and Education

- Kate Monk
Stewardship, Land and Education Manager
- Ian Jean
Forestry and Land Stewardship Specialist
- Tony Drinkwalter
Field Services – Land
- Jeff Van Niekerk
Field Services
- Nathan Schoelier
Stewardship Technician
- Denise Iszczuk
Conservation Educator
- Nina Sampson
Conservation Educator
- Dale Cable
Rock Glen Conservation Area Superintendent

Anita Hodgins

Rock Glen Conservation Area Assistant

Healthy Watersheds

- Mari Veliz
Healthy Watersheds Manager
- Kari Jean
Aquatic Biologist
- Hope Brock
Healthy Watersheds Technician
- Abigail Gutteridge
Healthy Watersheds Technician
- Angela Van Niekerk
Wetlands Specialist
- Shevaun Verhoog
Healthy Watersheds Intern

Water and Planning

- Geoffrey Cade
Water and Planning Manager

Daniel King

*Regulations Coordinator;
Prov. Offences Officer*

Meghan Tydd-Hrynyk
Planning and Regulations Officer

Davin Heinbuck
Water Resources Coordinator

Tommy Kokas
Water Resources E.I.T.

Ross Wilson
Water and Soils Resource Coordinator

Drinking Water Source Protection

Donna Clarkson
*Program Co-Supervisor;
and Risk Management Official*

Mary Lynn MacDonald
*Program Co-Supervisor;
and Risk Management Official*

Former staff who have advanced on career path

Ausable Bayfield Conservation wishes all the best to three former staff members who left ABCA in 2019 and who have moved on to other career opportunities. Congratulations and best wishes to Dan Bittman, Water Quality Technician; Leslie Coleman, Water Resources Technician; and Megan Leedham, Wetland Technician.



Dan Bittman
Water Quality Technician



Leslie Coleman
Water Resources Technician



Megan Leedham
Wetland Technician



Directors of Ausable Bayfield Conservation Authority (ABCA) and Ausable Bayfield Conservation Foundation (ABCF) toured the watershed and learned about watershed improvements being made by participating landowners such as Mike Conlin.



Workplace Hazardous Materials Information System (WHMIS) training is part of the ABCA health and safety program. Staff took this training in February.

Information systems improved in 2019; Mapping updated

By Tracey McPherson, GISP, GIS/IT Coordinator

“Mapping is fundamental to the process of lending order to the world.” – Robert Rundstrum, 1926

“The best thing about a Boolean is even if you are wrong; you are only off by a bit.” – Unknown

Geographic Information Systems (GIS) and information technology (IT) services at Ausable Bayfield Conservation ensure information, and access to information, are available now and in the future.

Geographic Information Systems, or GIS, has become an integral part of the day-to-day operations at Ausable Bayfield Conservation. All staff members have access to GIS information through an internal

Geographic Information Systems (GIS) and Information Technology (IT)

mapping application called GeoPortal. Individual GIS staff members work hard to keep data layers up to date, create and link databases, create maps, and complete project-specific analysis.

Information Technology, or IT, provides all computer networking and hardware and software support to staff. IT is responsible for:

- Purchasing of all hardware and software
- Maintenance of all hardware and software
- Troubleshooting issues

GIS actions taken in 2019:

- Increased use of ArcGIS Online.
- Updated water and hazard mapping.
- Completed mapping and data requests for staff, consultants, and partners.

GIS results:

- Increased data availability to partners and stakeholders.
- Increased staff capacity to use Global Positioning Systems (GPS) and GIS for fieldwork.
- Supported internal projects and data collection needs.

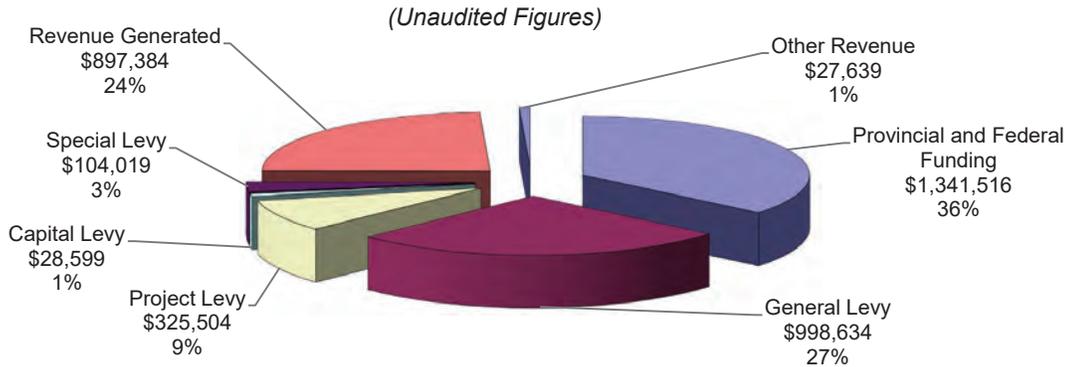
IT actions taken in 2019:

- Implemented Office 365 – removed on-site mail server.
- Fibre optic cable installed connecting buildings.
- Replaced a failed server.
- Moved ABCA/ABCF related websites to new hosting provider.
- Created/Programmed scripts for pulling monitoring data into web pages.

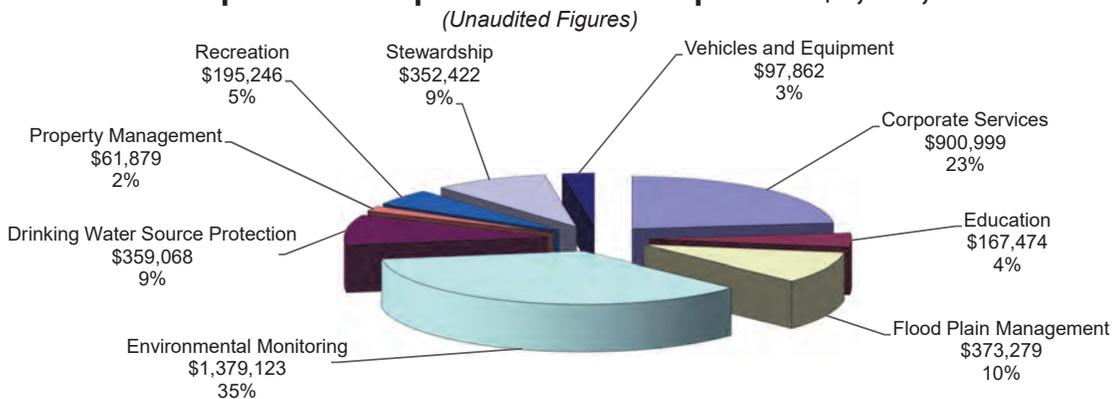
IT results:

- Reduced overhead and costs for on-site mail system. Highly available mail system.
- Stable and cost-effective off-site backups.
- Increased knowledge on systems and disaster recovery techniques.
- Secure reliable websites.
- Created quality information to support decisions.
- Ensured a robust, secure and ongoing network support system.

2019 Sources of Revenue – Total Revenue \$3,723,295



2019 Department Expenses – Total Expenses \$3,887,352



Communications Report – Public Outreach

Just as trees grow, our tools of communication are growing too

By Tim Cumming, Communications Specialist

Communications is in my job title but effective two-way communication is on the front burner for every staff person here.

We thank the 1,500+ people who follow Ausable Bayfield Conservation’s Facebook page and the 1,200+ who follow our Twitter feed. Social media is an effective, cost-effective way for us to stay in touch with you. Of course, when possible, in-person contact creates the best communication.

A quick search engine query tells me communication is “the imparting or exchanging of information or news” and a “means of sending or receiving information, such as telephone lines or computers.” Wikipedia defines it with some big words as “... the act of conveying meanings from one entity or group to another through the use of mutually understood signs, symbols, and semiotic rules.” (If you had to look up ‘semiotic’ in the dictionary, don’t worry – I did too. It has to do with signs, symbols and more).

Speaking of symbols – let me use that

Communications Report

familiar hashtag (#) and say: #IAmConservation, #YouAreConservation, and #WeAreConservation

There are many disciplines of communication, from risk to crisis to interpersonal communication. If I’ve learned anything about communications at work (or, at home, in marriage), it’s that communication sounds easy but it isn’t. Here at Ausable Bayfield Conservation we work with you to find ways to communicate better; listen better; to share information in ways that work for you; to evaluate our tools and strategies; and to make changes when needed. Let us know how we’re doing. Talk again soon! (or, I should say, ‘Listen again soon.’)

On another note: I was pleased ABCA and the Municipality of South Huron named me to South Huron’s Climate Adaptation Advisory Committee. I look forward to providing input into the municipality’s important work to adapt to climate change locally.



Geoffrey Cade
Water and Planning Manager



Daniel King
Regulations Coordinator;
Prov. Offences Officer



Meghan Tydd-Hrynyk
Planning and Regulations Officer



Davin Heinbuck
Water Resources Coordinator



Tommy Kokas
Water Resources E.I.T.



Ross Wilson
Water and Soils Resource Coordinator

Water and Planning staff play an important role in the protection of life, property, and watershed resources. Working with the public, municipalities, and other partners they are involved in a number of community projects, flood forecasting and warning, and planning and regulations.

Some ways water management is protecting life, property

By Geoffrey Cade, Manager of Water and Planning

The best way to manage impacts associated with natural hazards (such as flooding and erosion) is to be proactive and avoid them.

In the *Water Management* section of this year's *Annual Report*, you will read about Ausable Bayfield Conservation Authority's multi-layered efforts, in partnership with its member municipalities and the Province of Ontario, to help protect our watershed residents. We do this through our flood warning program, our planning and regulations program, and through flood and erosion control infrastructure.

In terms of flood forecasting and warning, Water and Soils Coordinator Ross Wilson created a process which considers lake level, wind direction, speed and duration to help ABCA staff assess shoreline flooding and erosion hazards. This, in turn, helps us to inform municipalities of pending dangers.

In his report, Water Resources Coordinator Davin Heinbuck outlines significant flood events that took place in 2019. One of these flood events resulted in four inches of rain (100 millimetres) in the Parkhill area. In that event, the Cameron-Gillies Diversion Channel successfully directed flood waters away from the community of Parkhill to the ABCA's reservoir. Events in 2019 also resulted in the operation of the Parkhill Flood Control Dam.

In our Regulations program, Regulations Coordinator Daniel King outlines the conservation authority's role in managing development that already exists in hazardous areas. It has been a busy time for this program as high water levels in Lake Huron have again caused significant erosion along the shoreline.

Municipal Plan Input/Planning Report and Shoreline Management Plan (SMP) Update

By the numbers – Planning 2019

Minor Variances	25
Severances	37
Official Plan Amendments	2
Zoning Bylaw Amendments	16
Stormwater Management	1
Formal Property Inquiries	64

In the first half of 2019, the ABCA's Board of Directors approved an update of the *Shoreline Management Plan (SMP)*. This is an important document for the ABCA, municipalities, and proponents of shoreline development. The SMP provides important guidelines that not only help direct development away from hazardous areas of the Lake Huron shoreline but also avoid aggravating that hazard. The *Shoreline Management Plan* was previously updated in 2000.



The year 2019 was one in which the benefits of a watershed approach were evident in reducing the effects of flooding and other natural hazards. The following *Water Management* reports, and other staff reports in this *Annual Report* document, give a better idea of how the Ausable Bayfield Conservation Authority protects life and property in your watershed.



Several flooding events took place in our watershed in 2019. Above, water surrounds a residential structure. Below, in St. Joseph, high water hits shore.



In photo above, from October 2019 storms, high water is seen at Rock Glen Conservation Area in Arkona. Below, high water hits the beach in Grand Bend.



There were multiple significant flood events in 2019 in watershed

By Davin Heinbuck, Water Resources Coordinator

Through the winter of 2018-2019, several freeze-thaw cycles resulted in very minor flooding on several occasions. The highest streamflow event across the watershed occurred in early February. On February 4, a brief warm-up with rain saw the snowpack disappear. The resulting flows were enough to break up and move the thin river ice. Minor ice jams formed in several areas, but not long enough to result in any ice-jam-related flooding issues.

The first major event of 2019 impacted the southern portion of the watershed on May 25. Heavy rains of 75-100 millimetres (mm) were recorded over a four-hour period, along a storm track that centred on Arkona, Parkhill, and Ailsa Craig. The flooding resulted in widespread but relatively minor damage to municipal infrastructure such as roads and drainage.

The Cameron-Gillies flood diversion channel infrastructure was effective in reducing flows through Parkhill by about 50 per cent. Local conditions warranted the operation of Parkhill Dam to manage debris, which was blocking outflows from the reservoir. ABCA issued a flood warning on May 25, with forecasts calling for storms later in the day and the potential for 30 mm more rainfall. Fortunately, these storms developed east of the watershed.

The second major flooding event of the year was the coastal flooding of Mud Creek (primarily), and the Ausable River in the Port Franks area, and Grand Bend. With near-record-high lake levels, strong winds out of the west and northwest had the potential to result

Flood Forecasting and Warning

in flooding issues along the lakeshore. Autumn of 2019 was marked by several rounds of large weather systems, and their associated strong winds. The most impactful wind



event occurred on October 16 and 17. Storm surges from Lake Huron flooded low-lying areas of the Ausable River and Mud Creek and, to a lesser extent, Parkhill Creek in Grand Bend. In the Port Franks area, the blocked mouth of Mud Creek resulted in many residences and roadways becoming inundated with water.

High lake levels, and waves over the next two days, could not facilitate a remedy but the lake level receded and the creek mouth was able to be cleared and water levels dropped quickly.

One other significant flooding event occurred in Grand Bend on July 27. A tornadic storm originating over Lake Huron caused a low-pressure associated meteo-tsunami. This weather phenomenon resulted in a brief surge in water levels of nearly one metre in depth. Structures, roads and other property, situated in or along Parkhill Creek, were most affected.

In total, ABCA issued 10 Flood Outlook/Water Safety messages; three Flood Watches; and one Flood Warning.

ABCA hosts Flood Emergency Planning Meeting in Exeter

By Davin Heinbuck, Water Resources Coordinator

Ausable Bayfield Conservation Authority (ABCA) hosted the annual Flood Emergency Planning meeting at the Masonic Hall in Exeter on February 19, 2019. We invited ABCA member municipalities and other stakeholders to take part in the meeting.

The more than 30 attendees included representatives from seven watershed municipalities as well as staff and/or Community Emergency Management Coordinators (CEMCs) from four counties. The Ontario Provincial Police (OPP) were represented by officers from two counties and there were attendees from two media outlets and from neighbouring conservation authorities.

The keynote speaker was Gerald Cheng, a Warning Preparedness Meteorologist with Environment and Climate Change Canada. His presentation, titled *Weather: A Year in Review and a Look Ahead*, provided a summary of recent weather patterns and what was forecasted to come.

Of interest to all participants, Gerald provided information on special forecast products, including the WeatherCAN app, with personalized weather alerts. Of local significance, Gerald gave some insight into the Exeter Radar Renewal scheduled for the summer of 2019.

Flood Emergency Planning

The new radar have improved resolution through storm cells, cover a larger range, and provide updated images every six minutes, compared to the current 10 minutes.

ABCA staff reported on the conservation authority's roles and responsibilities in flood emergencies, and the current watershed conditions with a flood outlook.

The meeting continues to provide a forum for discussion and planning to make all agencies better prepared to deal with flooding emergencies.



ABCA Water Resources Coordinator Davin Heinbuck and Gerald Cheng, Warning Preparedness Meteorologist at Environment and Climate Change Canada, presented at the annual Flood Emergency Planning meeting.

New datalogger provides real-time water levels for Port Franks

By Davin Heinbuck, Water Resources Coordinator

Ausable Bayfield Conservation Authority, in cooperation with the Ontario Ministry of Natural Resources and Forestry (MNRF) and Environment and Climate Change Canada (ECCC), maintains and operates a data collection network within its watershed area to provide watershed municipalities and residents with advance warning of flood events that could threaten life and property in the watershed.

The data collection network allows staff to monitor conditions throughout the watershed, including water levels and precipitation. Computerized monitoring systems in the field transmit information by telephone or satellite directly to the office in Exeter. The ABCA network consists of the following:

- Fourteen automated monitoring stations, 12 of which are for water level.
- Most stations monitor a combination of precipitation, temperatures and other meteorological sensors.
- One dedicated climate monitoring station (in cooperation with Ontario Ministry of the

Water Level and Streamflow Monitoring

Environment, Conservation and Parks – MECP)

- Twenty volunteer rain gauge readers provide information through a web-based data entry system.

In 2019, improvements to the Port Franks water level station were made through the installation of a datalogger with satellite telemetry capabilities. This will help ensure access to real-time water levels, critical to monitoring conditions and flooding potential in Port Franks and the surrounding area.

The ongoing monitoring programs continue to provide information for Ontario Low Water Response, Flood Forecasting and Warning, and other conservation authority programs. Monitoring of precipitation and water quantity within the watershed ensures we have early indications of any potential flooding (or low water conditions) so that Flood Messages or Low Water Advisories can be provided to our watershed municipalities in a timely manner.

Groundwater analyzed for nutrients, metals, chemistry

By Davin Heinbuck, Water Resources Coordinator

The Provincial Groundwater Monitoring Network (PGMN) is a partnership between conservation authorities and the Ontario Ministry of the Environment, Conservation, and Parks (MECP). This is a network of more than 400 groundwater monitoring wells across Ontario.

Ausable Bayfield Conservation Authority (ABCA) has 16 wells throughout the watershed: five bedrock wells; and 11 overburden wells. We have logged hourly groundwater level data for nearly 18 years at most well sites. Staff download groundwater data on site, or by GOES satellite at selected sites where real-time data such as rainfall is required.

Groundwater level data shows that annual cycles are fairly consistent and highlights the critical annual recharge periods of autumn and spring. Long-term groundwater levels have remained relatively stable over the monitoring period but the groundwater level changes in a single year has shown more variability. Weather patterns, such as drought or periods of higher than normal precipitation, drive these changes. Based on the program's relatively short period of record it is challenging to accurately determine long-term trends.

Water quality sampling is another critical component of the PGMN and ABCA has groundwater quality data available for each well from 2003 to 2019. To match

Groundwater Resources and the Provincial Groundwater Monitoring Network (PGMN)

the core requirements province-wide, water quality is analyzed for nutrients, metals, and general chemistry. Exceedance notices are issued to the landowner and the respective municipality and local health unit when water quality parameter exceeds the provincial guidelines. To date, numerous exceedance notices have been issued but most have been for Sodium and Fluoride, which occur naturally in elevated levels throughout much of Southwestern Ontario. With Ontario's recent alignment with Health Canada and the World Health Organization's standard for maximum allowable concentration of arsenic in drinking water set at 0.010mg/L, PGMN wells located in areas of naturally elevated arsenic have become subject to exceedances. The previous Ontario Drinking Water Standard was 0.025mg/L for arsenic.

ABCA staff have reviewed and corrected, as necessary, all PGMN data. Water quality and quantity data has been uploaded to MECP's public website. Through an interactive map, water level and quality information is available free to the public at:

data.ontario.ca/dataset/provincial-groundwater-monitoring-network

PGMN data also supports the Flood Forecasting and Warning and Ontario Low Water Response programs.

Water levels very low in Ausable Bayfield watersheds in summer of 2019

In 2019, Ausable Bayfield Conservation Authority continued to be involved in the Ontario Low Water Response (OLWR) Program which was created after extreme dry conditions were experienced in parts of Ontario in 1999.

The local ABCA Low Water Response Team (WRT) is made up of municipal and provincial agency representatives and representatives of ABCA; Ontario Stone and Sand and Gravel Association; Golf Course Owners Association; Thedford-Grand Bend Vegetable Growers; Huron County Federation of Agriculture; and the Ontario Federation of Anglers and Hunters.

During the year, the WRT held one meeting and was provided monthly watershed condition reports.

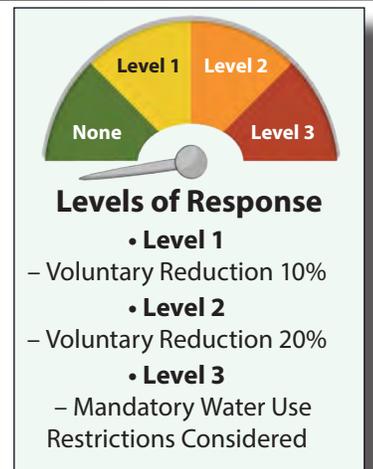
Very dry conditions, during the summer of 2019, resulted in Low Water Advisories across our watershed. A Level 1 Low Water Advisory was issued for the Bayfield River in August, and was upgraded in September to a Level 2. A Level 1 Low Water Advisory was issued for the Ausable River and Parkhill Creek watersheds in early September as well. A return of wet weather in late October allowed for all advisories to be lifted.

Ontario Low Water Response (OLWR)

About 20 volunteer rain gauge readers continue to provide valuable information on the extent and amount of precipitation in the watershed.

This program provides the public and member municipalities with information on the condition of our watersheds and possible drought problems.

When there are higher stresses on water resources – including surface water (such as creeks, rivers, and Lake Huron); and groundwater in aquifers, the Water Response Team issues low water advisories of level 1, 2, or 3. For practical water conservation tips, visit the water quantity page at abca.ca. – *Davin Heinbuck*



ABCA purchases safety booms for Parkhill, Morrison dams

By Ross Wilson, MSc, PAg, CCA-ON, Water and Soils Resource Coordinator

Ausable Bayfield Conservation Authority (ABCA) owns and maintains two dams – Parkhill Dam and Morrison Dam.

In 2015-16, ABCA undertook a Dam Safety Assessment to review the structural conditions, operation and maintenance programs in accordance with current Dam Safety Guidelines as identified by the Canadian Dam Association (CDA) and the Ontario Ministry of Natural Resources and Forestry (MNRF). The required works, along with a phased approach to complete the works, was reported to the ABCA Board of Directors in July 2016.

Structures, Operations, and Maintenance

During 2019, the works involved the purchase of one new safety boom for Morrison Dam and two safety booms for Parkhill Dam. All the safety booms were delivered in December 2019 and will be assembled and installed in early spring 2020.

The safety booms are a critical safety feature of the dams as they warn and direct people away from the spillway or the inlet structures. New safety booms were necessary to replace the 20-year-old deteriorated log booms which did not meet current safety standards.

Flood and erosion control structures need maintenance

By Ross Wilson, MSc, PAg, CCA-ON, Water and Soils Resource Coordinator

Ausable Bayfield Conservation Authority inspects and performs maintenance on its flood and erosion control structures, as part of the ABCA mandate and agreements with watershed municipalities.

These structures include Parkhill Dam, Morrison Dam, a flood diversion channel, and erosion control structures in various parts of the watershed. Ongoing inspection and maintenance work on these structures ensures the structures will continue to protect watershed residents from flooding and erosion hazards into the future.

Detailed inspections of all structures are completed annually with additional inspections completed on an as-needed basis. Needed maintenance is identified and plans are made to complete the improvements. In 2019, a follow-up inspection of the Walker Drain confirmed the

Water and Erosion Control

2018 inspection which revealed substantial failure of the protective wire lining the channel. The concrete bridge deck at Morrison Dam continues to deteriorate slowly each year. Water and Erosion Control Infrastructure (WECI) funding was applied for both of these projects in 2019 but neither grant application was successful. Application for 2020 funding will be repeated for these projects. The Armstrong West Erosion Control project consists of seven bendway weirs and riprap-reinforced shoreline. High lake levels and large storm surge events combined to overtop those portions of the riprap with the lowest elevation. Additional riprap is required to raise the lowest elevations of the riprap to match the rest of the shoreline. WECI funding will be applied for, for this project, in 2020.

Flood structures mitigate flood impact when maintained properly

By Ross Wilson, MSc, PAg, CCA-ON, Water and Soils Resource Coordinator

Maintenance of flood control dams, such as Parkhill Dam, is an ongoing activity. Both annual and periodic maintenance is required proactively so the dam can function as designed when needed. As the timing of floods is not predictable, dams must be in a constant state of readiness.

Elevation surveys of the earthen embankments are completed biennially to ensure embankments are stable and not deteriorating. The last survey in 2019 confirmed that embankments continue to be structurally stable. Maintenance and operation of the flood gates are completed biennially as well. Drawdown of the

reservoir level in preparation for this work was started in early September 2019. Unfortunately, untimely rains occurred, which refilled the reservoir, forcing the postponement of this maintenance work until 2020.

Repair work was completed in 2013 to the Cameron-Gillies Diversion Channel allowing this feature to work as originally designed and constructed during the flood on May 25, 2019.

As a result of past maintenance, the Parkhill Dam was able to successfully pass two large floods in the last eight-month period, including an intense 100-millimetre rain event hitting the Parkhill area on May 25, 2019.



Flooding is a natural hazard. The photo above shows November 2019 water over Mud Creek Trail (a municipal road off Outer Drive, in Port Franks south of Mud Creek.)

High lake levels, natural hazards underscore need for planning ahead

By Daniel King, Regulations Coordinator

The lake levels of Lake Huron remained high in 2019 with no indication of relief in the forecast for the coming year (2020). These conditions are a sobering reminder of why the shoreline of Lake Huron is considered hazard land in the *Conservation Authorities Act*.

Staff at Ausable Bayfield Conservation Authority (ABCA) have had success reviewing and issuing permits on the Lake Huron shoreline following new policies laid out in the updated *Shoreline Management Plan* passed by the ABCA Board of Directors in February of 2019.

A number of high wind events in the autumn of 2019 saw accessory structures, such as decks, destroyed by erosion. Many of these are either legacy structures, installed before regulation of the shoreline in 2006, or were installed without permit review by the conservation authority or municipality. Not only is damage to these structures costly for the owners but, if left to fall into the lake and other watercourses, this debris can exacerbate hazards and wash up on other property leaving these landowners with the expensive task of removal.

Mapping of the ABCA regulation limit on the shoreline, and throughout the watershed, is made available publicly on the Ausable Bayfield Conservation Authority website. Anyone who is unsure of what natural hazards may exist on his or her property should review this mapping.

Regulated hazards throughout the rest of the watershed also continue to require time of regulations staff. New development potentially affected by flood plains, valleys, wetlands, slope instability, and other regulated areas are considered by staff on an ongoing basis. Inland flooding, related to the high lake levels as well as storm events, is a poignant reminder of the damage to property that can occur when homes, cottages and other buildings are exposed to these natural hazards.

In all cases, the maxim “failing to plan is planning

Ontario Regulation 147/06 – Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses

2019:

- 77 applications for permission
 - 94 minor work permits
 - 11 drain reports reviewed
- 28 drain maintenance reviews
(Standard compliance requirements)



High lake levels, combined with high winds and storm events, limit life span of shore protection structures.

This photo, of the Central Huron shoreline north of Bayfield, is from November 2019.

to fail” remains true. Whether considering new construction, buying property that includes regulated hazards, or maintaining existing development in a hazardous area, early consultation with conservation authority staff reduces project delays, costly redesigns, and is sure to save time and money.

Drinking Water Source Protection



Matt Pearson, Source Protection Committee Chair, at left in photo, presented a gift of acknowledgment to Don Jones, who retired after a dozen years of dedicated service as a member of the local committee protecting municipal drinking water sources.



From left to right: Chair Matt Pearson thanks retiring source protection committee members Gerry Rupke (Ausable Public-at-Large); Kerri Ann O'Rourke (Property Owner and Residents' Associations); Bruce Godkin, P. Eng. (Industry); Keith Black (Agriculture); and Karen Galbraith (Maitland Valley Public-at-Large).

Province of Ontario approves source protection plan amendments

By Donna Clarkson and Mary Lynn MacDonald, Program Co-Supervisors, ABMV Source Protection Region

We said a heartfelt thank you and goodbye in 2019 to some esteemed friends retiring after years of dedicated service on the Ausable Bayfield Maitland Valley Source Protection Committee (SPC). Retiring members, who served since 2007, included Karen Galbraith, Gerry Rupke, Keith Black and Don Jones. Also retiring was Kerri Ann O'Rourke,



Donna Clarkson



Mary Lynn MacDonald

Drinking Water Source Protection



Bruce Godkin, and Mark MacKenzie.

We welcomed new committee members Dave Frayne and Allan Rothwell. In 2020, we welcome Alyssa Keller. Our thanks go to the Province of Ontario, Conservation Ontario, our local municipalities, and our local landowners for cooperative partnerships.

Activities:

- In 2019, the Source Protection Authority (SPA) called for applications for new SPC members.
- As of January 1, 2020, the SPC is to be reduced from 15 to 12 members. This reflects the workload for this phase of the program.
- In 2019, the Province of Ontario approved amendments to our source protection plans (SPPs), reflecting changes in six municipal well systems.
- Education in summer 2019, with local real estate agents, was well received.
- Staff piloted a climate change model at a local municipal well to better understand how future climate change may affect municipal wells.
- The SPC began work on SPP review, to determine which policies need to be revised or added.

Outcomes:

- The SPA submitted our second annual Progress Report in 2019, showing work to implement source protection plans is progressing well.
- Ninety per cent of legally binding source protection plan policies to address significant threats to drinking water have been put into action, further protecting sources of local municipal drinking water. Staff worked with local landowners and businesses to complete more than 75 risk management plans since source protection plans took effect in 2015.
- Education through various media, including in-person outreach and social media, have engaged and informed people and businesses to make positive changes that have reduced risk to local municipal drinking water sources, helping to keep them safe and clean.

Healthy Watersheds support community learning

By Mari Veliz, Healthy Watersheds Manager

The year 2019 was an exciting one for the Healthy Watersheds team.

We helped the Huron County Soil and Crop Improvement Association (HSCIA) establish an Innovation Tile project at the Huronview Demonstration Farm. At this site, Huron County continues to provide our community with solutions to complex issues.

Historically, the property was a House of Refuge Farm to help the less fortunate in our society. Today the property serves as a demonstration farm that balances modern agriculture with soil and water improvements.

Field drainage is important for growing food and preventing soil erosion, but it can have trade-offs for downstream water quality unless the drainage water is somehow controlled. Tiles were installed at a 0.1% grade to follow the contoured curves of one field at Huronview with a control gate on each line that can be adjusted to limit water leaving the pipe. The adjacent field has conventional drainage system on one half and an untiled portion on the other. Side-by-side-by-side, surface and sub-surface water flows and quality, along with soil health and yields, are measured to understand whether this could be a solution for the future. This project provides all partners with the opportunity to understand different perspectives of the same issue, an important endeavour as all of us try to better understand and address environmental issues at home and in our



Mari Veliz

Watershed Communities Taking Action



Elizabeth Balfour, of Ausable Bayfield Conservation, discusses the water quality monitoring component of the innovative drainage project at Huronview (Huron County) Demonstration Farm, with the Honourable Ernie Hardeman, Ontario Minister of Agriculture, Food and Rural Affairs, at the Drainage Innovation Field Day hosted by Huron County Soil and Crop Improvement Association (HSCIA) on Saturday, June 15, 2019.

community. Follow Ausable Bayfield Conservation and HSCIA websites for results.

The following community projects highlighted in this section of the Ausable Bayfield Conservation Authority 2019 *Annual Report* share the fundamental goal of working with local communities on monitoring projects that benefit our local environment. Communities along the shores of Lake Huron, in Grand Bend, Bayfield and the Ausable River Watershed, all want to know more about the effectiveness of the actions taken and what more can be done to improve our local environment.

Table 1: 2019 ABCA Water Quality and Bio-monitoring Stations

Type of station	Number
Dry weather – water quality	32
Wet weather – water quality	11
Best Management Practices Verification	7
Citizen Science	6
Fish	25
Reptiles (turtles)	5
Freshwater mussels	5
Benthic macroinvertebrates	33

The number of stations reflects the funding commitments from year to year.

Table 2: 2019 Community Outreach by ABCA Healthy Watersheds Team

Community Outreach	Number
Community Groups	15
Community Events	15
Watershed Communities in Action*	5

* Bayfield, North of Bayfield, Ailsa Craig, Grand Bend, Port Franks

Healthy Watersheds



Mari Veliz
Healthy Watersheds Manager



Kari Jean
Aquatic Biologist



Hope Brock
Healthy Watersheds Technician



Abigail Gutteridge
Healthy Watersheds Technician



Angela Van Niekerk
Wetlands Specialist



Shevaun Verhoog
Healthy Watersheds Intern

Healthy Watersheds staff monitor water quality and quantity and aquatic communities, including fish, freshwater mussel and benthic communities; enhance wetlands; and conduct watershed studies, including *Watershed Report Cards*, and community outreach.

Water quality trends in Healthy Lake Huron tributaries

By Abigail Gutteridge, Healthy Watersheds Technician and Dan Bittman, Water Resources Technician

Conservation authority staff, along the Lake Huron shoreline, have collected water quality samples, from lake tributaries, for more than a decade.

It takes time to understand the effectiveness of watershed plans and rural best management practices (BMPs) on water quality. Since 2010, conservation authority staff collected 3,450 samples. This was part of the Healthy Lake Huron: Clean Water, Clean Beaches partnership in five Healthy Lake Huron priority sub-watersheds (as of September 2018). It is important to note that, when we evaluate effectiveness of land-based BMPs, the sampling program needs to reflect the times when water runs across the landscape. Also, pollutant concentrations relate to water flow. This means we need to calculate the loads of pollutants carried in the water

Water Quality Sampling

to evaluate water quality.

We found nutrient concentrations (nitrate-nitrogen and total phosphorus) in Healthy Lake Huron watersheds are higher than levels needed to protect aquatic life and prevent eutrophication.

Staff noted some improvements. There was significant reduction in sediment and nutrient concentrations in the South Pine River (total phosphorus), Gully Creek (phosphate-phosphorus, nitrate-N and sediment), and Trick's Creek (nitrate-N). Total phosphorus concentrations rose significantly in Trick's Creek over this period, however. It is encouraging to see improvements but we need to continue efforts to improve water quality in these sub-watersheds.

Working together to protect dynamic, fragile lake ecosystem

By Daniel King, Regulations Coordinator and Provincial Offences Officer, and Mari Veliz, Healthy Watersheds Manager

Collaboration and engagement with the communities along the Lake Huron shoreline remain priorities for Ausable Bayfield Conservation Authority.

With rising lake levels and intense storms over the past year, the partnership between conservation authorities, shoreline residents, and other lake and shoreline organizations will become more critical. As such, with financial assistance from Environment and Climate Change Canada, ABCA and other conservation authorities adjacent to the Lake Huron

Collaboration along Lake Huron's shoreline

watershed are partnering to engage the community to more fully understand coastal processes and to work together to protect the lake's dynamic and fragile ecosystem through sustainable shoreline management practices.



Healthy Watersheds Technician Abigail Gutteridge at public outreach event in Lucan.

CAP provides opportunity to engage more people in stewardship

By Abigail Gutteridge, Healthy Watersheds Technician

The Healthy Lake Huron: Clean Water, Clean Beaches partnership was a successful recipient of funding through the Canadian Agricultural Partnership (CAP), delivered by Agriculture and Agri-Food Canada.

This project seeks to develop and build ‘stewardship clusters’ within the Lake Huron watersheds. This concept recognizes that producers seek advice from many trusted sources (e.g., crop advisors, drainage contractors, and the economic sector). By asking different community sectors about their role as influencers there may be opportunities to identify new approaches to stewardship and engage with producers who do not traditionally

Canadian Agricultural Partnership in the Lake Huron Watersheds

attend stewardship events or undertake agricultural best management practices (BMPs).

Healthy Lake Huron consists of four conservation authorities (Ausable Bayfield; Maitland Valley; Saugene Valley; and St. Clair Region), along with Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA); Ontario Ministry of the Environment, Conservation and Parks (MECP); Environment and Climate Change Canada (ECCC); and planning and public health staff from upper and lower tier municipalities.

Bayfield takes action to slow stormwater in rural and urban areas

By Hope Brock, Healthy Watersheds Technician

Bayfield and area residents were able to implement recommendations from the Main Bayfield Watershed Plan in 2019 thanks to funds from the Fred A. and Barbara M. Erb Family Foundation.

Throughout the watershed, landowners installed one berm, enhanced one wetland, planted 2,880 trees and 115 acres of cover crops. To help slow down

Bayfield and Area

urban stormwater, the Bayfield River Valley Trail Association sold 79 rain barrels. The Municipality of Bluewater, along with the Pioneer Park Association, the Huron County Health Unit, and Ausable Bayfield Conservation, finalized a management plan for the Pier Beach in Bayfield.

Port Franks and Municipality of Lambton Shores protect turtles

By Hope Brock, Healthy Watersheds Technician and Kari Jean, Aquatic Biologist

Biologists at Ausable Bayfield Conservation Authority (ABCA) better understand turtles and the habitats turtles use thanks to the turtle monitoring program and the great work of all the volunteers.

Residents reported 100 reptile sightings in the Grand Bend-Port Franks area in 2019. ABCA provided nest protection cages to six homeowners who observed turtles laying eggs on their property.

Community-Based Turtle Monitoring

Our staff collected six nests. The nests faced the risk of destruction. Staff safely returned the hatchlings to the nearest watercourse. ABCA staff installed five basking logs in L Lake. Volunteers of the community monitoring network observed that turtles used the logs right away.

We gratefully acknowledge funding from Ausable Bayfield Conservation Foundation.

Old Ausable Channel one of Ontario’s only habitats for three species

By Kari Jean, Aquatic Biologist

The Old Ausable Channel (OAC) is one of the few remaining locations in Ontario where Pugnose Shiner, Lake Chubsucker, and Grass Pickerel – three fish Species at Risk (SAR) – can be found.

Monitoring the habitat conditions and status of these SAR fishes is necessary to make informed management decisions involving the OAC. Recent studies have shown dissolved oxygen concentrations to be low for extended time periods during winter when ice cover was present and also during summer when water temperatures are

Old Ausable Channel (OAC)

higher. Thick, dense aquatic vegetation is found in the OAC which can use available oxygen as it decomposes.

The local community came together to hold a meeting of concerned neighbors and agencies to look at the issues facing this ecosystem. As one outcome of this meeting, the local community following the advice of Fisheries and Oceans Canada and completed a low impact project in the OAC to alleviate dense aquatic vegetation.

Rarest species-at-risk mussel populations appear to decline

By Kari Jean, Aquatic Biologist

The Ausable River watershed continues to be of national significance and a priority for Fisheries and Oceans Canada. The Ausable River watershed is home to 26 freshwater mussel species, including six Species at Risk (SAR).

Mussels are important contributors to good river health and are sensitive to sediment and nutrients. Their presence is one indicator of habitat conditions.

In 2006, seven long-term mussel monitoring stations were established and surveyed for mussels. Surveys were repeated in 2011, 2018 and 2019 at the same locations. Sampling at the same sites will help to track changes in mussel populations over time. Preliminary results generally indicate some improvement from 2011 to 2018-19 in mussel numbers across the sites but this did not apply to the most rare and sensitive species-at-risk mussels, which seem to be declining. Ausable Bayfield Conservation Authority is evaluating how resources can be better targeted towards locations in the watershed and types of actions that will provide the greatest success in recovering SAR.

Education and outreach events were hosted in Grand Bend, Ailsa Craig, and Port Franks to provide information to community members about: Ausable River fish, freshwater mussels and reptile species; their

Ausable River Recovery – Monitoring and Community Outreach



Shevaun Verhoog, an Intern from Niagara College, assisted the Healthy Watersheds Department with water quality and bio-monitoring projects in the summer and autumn of 2019.

habitat threats; and opportunities to protect aquatic species at risk through good stewardship practices.



Stewardship Technician Nathan Schoelier and Healthy Watersheds Technician Hope Brock conduct electro-fishing monitoring in a local drain in 2019.



Kari Jean, Aquatic Biologist with Ausable Bayfield Conservation, educates local young people about fish species in our watershed.

Perch, Sunfish, Bass, Trout, Salmon among fish species in drains

Many rural watercourses in Ontario have been designated as municipal drains. Drains are classified into categories developed by Fisheries and Oceans Canada (Department of Fisheries and Oceans, or DFO). Classification is based on a drain’s flow characteristics and types of fish living within it and helps to determine the best time of year for drain maintenance activities.

Fisheries and Oceans Canada provided funding

Fish Living in Municipal Drains

in 2019 that allowed ABCA to complete fisheries assessments in 15 drains. Additionally, the ABCA worked in partnership with two local municipalities to assess fish communities in three drains adjacent to municipal facilities. Types of fish found in the drains included: different species of minnows; Perches; Sunfishes; Bass; and young Trout and Salmon.

– Kari Jean



This scenic photo, courtesy of Ruth and Greg Strapp, shows the Strapp family wetland near Denfield.

Wetlands protect water, reduce flood risk as natural infrastructure

By Angela Van Niekerk, Wetlands Specialist

Ausable Bayfield Conservation protects and enhances wetlands to provide ecosystem services for our community. These sensitive ecosystems are stressed from invasive species, land conversion, pollution, and climate change. The Ausable Bayfield watershed currently has 2.4 per cent wetland cover from times prior to European settlement.

In 2019, local landowners have restored six wetlands, planted 1,455 trees at two sites and enhanced nine sites next to wetlands, creeks, or ponds by planting 986 native wetland plants and shrubs. We provided four community/school education events reaching 220 people. Together, with the community, we have added 2.6 acres of wetlands, buffered 568 metres of creeks, and restored 11.8 acres to trap sediment and treat water runoff from upland areas.

Wetlands and natural areas provide recreational

Wetlands

opportunities for us to explore, play and learn. Wetlands are natural infrastructure, protecting our drinking water, providing billions of dollars yearly in economic benefits for people in Ontario. These important areas also provide habitat for local plants and animals.

Please consider enhancing any natural area on your property.

We thank the funders who supported these 2019 projects: EcoAction Community Funding Program (Government of Canada); WWF-Canada's Loblaw Water Fund; Habitat Stewardship Program for Species at Risk; Ducks Unlimited Canada; Pine River Watershed Initiative Network; and Canada Nature Fund.

Thank you to all of the landowners who have protected or enhanced wetlands and other natural areas on your properties.



Monarch chrysalid



Red-spotted Newt



American toad



Pied-billed Grebe



Fawn

Wetlands wildlife includes Monarch chrysalid; Red-spotted Newt; American toad; Pied-billed Grebe; more.

Conservation Land Management



Volunteers from Lambton Shores Nature Trails, Thames Talbot Land Trust, and Thames Valley Trail Association cut 150 hazard trees along the Ausable Valley Trail.

Ten bridge structures in trail, conservation areas inspected in 2019

By Kate Monk, Stewardship, Land and Education Manager

Consulting engineering firm B. M. Ross and Associates Limited, of Goderich, inspected 10 bridge structures at sites owned or managed by Ausable Bayfield Conservation Authority: Bannockburn, Morrison Dam, and Rock Glen conservation areas and MacNaughton-Morrison Section of the South Huron Trail.

Their report provides valuable information on the condition of the structures and future maintenance or replacement recommendations. Most of the structures were constructed since the 1970s and all are meant for pedestrian and light maintenance equipment use. They are critical to conservation area visitors, education programs, and stewardship as the bridges provide safe access to major sections of conservation area properties. Major maintenance will be included in the five-year budget.

Lambton Shores Nature Trails (LSNT) continue to improve and care for natural lands, including some ABCA lands, in and near Lambton Shores. More than 600 volunteer hours contributed to ensuring free and safe access to hiking trails. A story-time trail was installed at the Ausable River Cut Conservation Area. Approximately 150 hazard trees (mostly dead Ash and Pine) were cut along the Ausable Gorge trails at Mystery Falls and Sadler Tract. The work party included

Conservation Land Management

volunteers from the LSNT, Thames Talbot Land Trust, and Thames Valley Trail Association. The trail community is saddened by the passing of leader and visionary Klaus Keunecke in late 2019. His dedication to nature trails and protecting environmentally sensitive lands is inspirational.

Corner signs were erected at several conservation forests to better define property boundaries to assist hunters, hikers and neighbours. Conservation forests are well-used by hunters with 284 active passes in 2019 (246 individual passes and 38 family passes). Revenue from the sale of Conservation Passes assists with the costs of property ownership and patrols. Quad traffic, particularly in the Ausable Gorge, Parkhill Conservation Area, and Hay Swamp continues to damage these environmentally-sensitive areas.

The boardwalk deck was replaced on the MacNaughton-Morrison Trail through donations. The official opening of the Jones Bridge, downstream of Morrison Dam, on April 27, 2019, was a highlight and culminated the successful project to provide a safer option for trail users to cross the Ausable River.



Kate Monk
Stewardship, Land and Education Manager



Ian Jean
Forestry and Land Stewardship Specialist



Tony Drinkwalter
Field Services – Land



Jeff Van Niekerk
Field Services



Nathan Schoelier
Stewardship Technician



Denise Isczuk
Conservation Educator



Nina Sampson
Conservation Educator



Dale Cable
Rock Glen Conservation Area Superintendent.

Stewardship, Land and Education staff help to implement boots-on-the-ground land stewardship improvements in the watershed, conduct monitoring, educate people of all ages, provide nature education and recreation, and more.

Landowners, community, staff plant tens of thousands of trees

By Ian Jean, Forestry and Land Stewardship Specialist

Residents continue to protect watershed health by planting trees. Through spring and fall planting, Ausable Bayfield Conservation Authority staff planted more than 36,000 trees at 40 farm and rural properties in the watershed. This included 15 farm windbreaks, 16 watercourse and woodland buffers, and nine larger reforestation projects.

Tree Planting Program

In addition, 135 individuals and businesses purchased more than 10,000 trees for planting themselves through the ABCA Tree Program. More than 175 individuals, farms or other businesses ordered trees from us. These efforts help to protect and improve forest cover, biodiversity, and overall watershed health.

Pursuing cost-share funding to support landowners who wish to undertake beneficial tree planting projects is an important role for staff. Habitat Stewardship Program, Forests Ontario, Huron County Clean Water Project, the Species at Risk Stewardship Fund, the Fred A. and Barbara M. Erb Family Foundation, and Ontario Soil and Crop Improvement Association programs provided financial support for tree planting.



Ian Jean presents to community groups.

Municipalities, community groups, and schools all supported tree planting in 2019. Our staff planted 100 trees and provided planting services for Bluewater's roadside tree program; supplied 20 trees for the Bluewater Communities in Bloom fall tree program; provided 65 trees and shrubs in Lambton Shores to replace Ash trees on municipal land along The Cut; provided 32 Cedar trees for planting along Lambton Shores Nature Trails; provided 52 trees for parks and roadside tree replacement by Lucan Biddulph; and provided 100 trees for the South Huron Communities in Bloom tree sale. We provided tree planting and outdoor conservation education in spring and autumn, at Huron Centennial School, Brucefield, with more than 250 trees and shrubs planted; and planted more than 80 trees at spring and autumn events plus outdoor conservation education at Wilberforce Public School.

ABCA Conservation Lands provide ecological benefits to area

With more than 8,000 acres of forested land, ABCA is the largest forest owner in the watershed. This includes more than 3,000 acres of provincially significant Conservation Lands enrolled in the Conservation Land Tax Incentive Program (CLTIP). No property tax is paid on CLTIP eligible lands.

The conservation authority manages provincial Conservation Lands to protect significant features. Management activities include invasive species removal, species monitoring, and research. Monitoring and management of *Phragmites* and Dog Strangling Vine, two species identified in the provincial *Invasive Species Act*, is ongoing. In 2019 herbicide treatment of *Phragmites* was completed at Rowe Tract and Treibner Tract in Hay Swamp as well as Parkhill Conservation Area and Kime Tract. Dog Strangling Vine was treated at Devil's Elbow and Cameron Tract in Hay Swamp.

Just more than 5,000 acres is enrolled in the Managed Forest Tax Incentive Program. Our Forest Management Plan provides the framework for management. The principal objective is to maintain and enhance productive and renewal capacities of the forests as well as the genetic, species, ecological diversity and function of the forest ecosystems.

Forest Management on ABCA Lands

Active management, including selective timber harvest, takes place on 100-200 acres annually. Thinning of conifer plantations was a main activity in 2019. Conifer thinning accelerates conversion of planted conifer stands to native deciduous forests. Planting of native Oak, Hard Maple, and Tulip Tree follows thinning operations to enhance wildlife habitat and species diversity.

Marked timber is sold through the tender process. Moggie Valley Timber, of Holland Centre, near Owen Sound, submitted the high bid of \$55/cord for Pine and Spruce sawlogs marked at three properties in Hay Swamp. A total of 1,023 cords of Pine and Spruce sawlogs were harvested, using a mechanical tree harvester, in July and August. Revenue from the sale of timber helps offset the cost of owning the forested land.

Miller Wood Products, of Exeter, started an Ash salvage operation at Johnson Management Area west of Exeter in September. A total of 336 trees are marked for cutting. Wet conditions in late autumn forced suspension of operations before completion. Work will resume during frozen or dry conditions in 2020. – *IJ*

Watershed Stewardship



Koos and Nathalie Vermue, farmers from the Bayfield area, won the Conservationist of the Year Award at the March 21, 2019 Partner Appreciation Evening. Left to right are Abigail Gutteridge, Healthy Watersheds Technician; Koos and Nathalie; and Doug Cook, Vice Chair, ABCA Board of Directors.



Mari Veliz, Healthy Watersheds Manager, presents a thank you gift to Trevor Dickinson, Professor Emeritus at University of Guelph. The awards evening keynote speaker talked about impacts on streamflow and flooding and how weather patterns are changing in rural and urban areas.



Planting trees, in this photo from the year 2019, were, from left to right, ABCA tree planting crew members Aimee Rush; Kevin Yang; and field services staff Tony Drinkwalter. Grants help landowners with their tree planting projects. Local tree planting helps to protect air, water, and soil.

Stewardship helps to implement Ausable River Action Plan

By Kate Monk, Stewardship, Land and Education Manager

Ausable Bayfield Conservation Authority completed its last Habitat Stewardship Program agreement with the Canadian Wildlife Service Branch of Environment and Climate Change Canada.



Kate Monk

The ABCA has received funding each year since 2002 to help implement the Ausable River Recovery Strategy (now the Ausable River Action Plan). The funding started with educational signage and has grown to a comprehensive program of education and outreach, research and monitoring, as well as on-the-ground stewardship to reduce sedimentation and pollution, including tree planting, watercourse fencing, erosion control, and cover crops. In April, ABCA began a new relationship with Department of Fisheries and Oceans for Habitat Stewardship Program (HSP) for Species at Risk funding. This is a transition year with future Ausable River Action Plan implementation funding coming from Canada Nature Fund.

The Huron County Clean Water Project added a new category in 2019: septic system repairs and replacement. Three septic systems on the Lake Huron shoreline received grants.

Staff helped watershed landowners complete 105 stewardship projects and access \$240,176 in grant funding. The total value of the projects is \$534,543. This is good for the environment, landowners, and

Private Land Stewardship Program

Stewardship Projects and Grants by Municipality

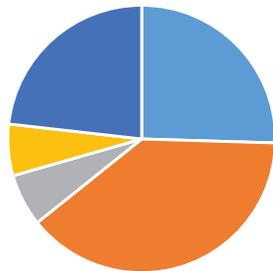
Municipality	Number of Projects	Grants
*Ashfield-Colborne-Wawanosh	2	\$10,900
Adelaide Metcalfe	1	\$10,291
Bluewater	29	\$63,274
Central Huron	18	\$46,600
Huron East	20	\$61,113
Lambton Shores	1	\$0
Lucan Biddulph	1	\$1,000
Middlesex Centre	1	\$0
North Middlesex	10	\$37,298
South Huron	22	\$18,701
TOTALS	105	\$249,177

NOTES: Totals do not include funding from programs delivered by Ontario Soil and Crop Improvement Association (OSCIA) that did not receive assistance from Ausable Bayfield Conservation staff members.

*Municipality in Maitland Valley watershed.

the economy. Tree planting, to control erosion and provide habitat, remained the largest stewardship category, followed by cover crops. Staff provided *Phragmites* spraying services for the County of Huron, municipalities, and private landowners.

Conservation Education Youth Participation



■ Field Trips ■ In School ■ Non-Profit ■ Community Action ■ Special Events

A breakdown of participation by local young people in Ausable Bayfield Conservation education programs.



Rock Glen Conservation Area is a popular destination for outdoor conservation education.



Students took positive action on the ground at their schools with the help of Watershed Champions grants.



There were 2,460 youths who took part in special events including the Wetlands Wonders Event.



Students discover aquatic life at river study.

Hundreds of students learn positive actions through education

By Denise Iszczuk and Nina Sampson, Conservation Educators

Our education staff provide meaningful educational opportunities for youth to learn about water, soil, and living things. We deliver conservation education programs watershed-wide at conservation areas, schools, libraries, and more. In 2019, we engaged 10,600 youths through school programs, school field trips, non-profit programs, and special events.

Ausable Bayfield Conservation interacts with most students through school-based programs. These programs focus on the *Conservation Strategy*, developed by the community for Ausable Bayfield watersheds, and are linked with the Ontario Curriculum expectations.

About half the time, ABCA visits the schools to deliver a program and the rest of the time students visit a conservation area for a field trip. Exploration and observation of living things in the schoolyard is one of the most popular programs delivered in the school.

Rock Glen Conservation Area is the preferred destination for a school field trip (1,288 youths), followed by Morrison Dam Conservation Area (859), then Clinton Conservation Area (536). The Fantastic

Conservation Education

Fossils program is popular and offers the students a chance to explore Rock Glen and learn about rocks and fossils and also to visit the Arkona Lions Museum and Information Centre. Morrison Dam and Clinton conservation areas have rivers that provide safe and accessible locations for students to study river systems and what lives in them. River studies are a highlight for any class where students discover what lives in the water and learn what that tells us about the health of the river.

ABCA delivers programs to non-profit groups like Scouts, Guides, YMCA camps, and libraries. There were 670 youths who participated in programs like snowshoeing, owl prowls, river studies, and eco-hikes. Most notable are the 15 programs where education staff ‘brought the outside in’ at 10 watershed libraries.

There were nine conservation projects and 660 youths involved with planting native trees, shrubs, wildflowers, or grasses in their community. Included in these numbers are four Watershed Champions Grants of \$500 each to watershed schools.

Dave Frayne
(Chair)
Exeter



Bob Radtke
(Past Chair)
Ailsa Craig



Anne Melady
Dublin



David McClure
Grand Bend



Charles Miner
(Vice Chair)
Exeter



Peter Darbshire
Exeter



Roger Lewington
Bayfield



Robert Norris
Staffa



Conservation Foundation fosters partnerships, supports action

By Dave Frayne, Chairman, Ausable Bayfield Conservation Foundation (ABCF)

The Ausable Bayfield Conservation Foundation (ABCF) provided funding to the following eligible projects:

Conservation Education

- \$508 towards a live owl presentation at the Owl Prowl with 230 attending.
- \$500 towards student busing for an Ausable River species at risk program.
- \$2,919 subsidy for students participating in an outdoor education program.
- \$2,060 for 20 free programs to non-profit groups and libraries.

Wetlands and Natural Areas

- \$1,500 towards species at risk turtle monitoring program in the Port Franks area.
- \$600 for Ausable River outreach in Ailsa Craig – Ontario Fishing Weekend and Gala Days.
- \$1,000 towards monitoring Species at Risk Mussels in Ausable River.
- \$1,000 towards Old Ausable Channel habitat monitoring from Grand Bend to Pinery Park.
- \$2,906 for planting trees to enhance biodiversity in Ausable Bayfield Conservation Authority (ABCA) conifer plantations.

New Commemorative Woods

An initiative of the Lakeshore Eco Network has led ABCF to sign an agreement with Municipality of Lambton Shores to establish a commemorative woods in the Grand Bend area at Klondyke Sports Field. In spring 2020 there will be 20 groves of trees planted from donations received at the 2019 Grand Bend Rotary Autumn Gala.

Conservation Foundation

Junior Conservationist

Taylor Roth, of the Kippen area, was chosen as Junior Conservationist for a two-month summer position working at ABCA in all departments.



Taylor Roth

Continued on next page



Student Environmental Award

Meghan Glavin, of the Crediton/Mt. Carmel area, received the Student Environmental Award. She will use the \$1,000 bursary when attending University of Guelph to study Geography. She receives the award (photo above) from ABCF Chair Dave Frayne.

Conservation Foundation, community achieve success together

Continued from previous page



Morrison Dam Tree Dedication Service

Approximately 300 family and friends attended the memorial tree dedication service hosted with Haskett Funeral Homes at Morrison Dam Commemorative Woods on September 15, 2019.



Morrison Dam Fishing Derby

The popular 35th Fishing Derby was held May 5, 2019 with 235 anglers registered. Primrose Trout in Mono supplied Rainbow Trout. This event was possible because ABCF and Exeter Lions Club each contributed \$1,250 to stock the reservoir.



Jones Pedestrian Bridge

This was a real success story as the community raised \$330,000 for Jones Bridge, a new pedestrian bridge on the South Huron Trail. Cutting the ribbon, on April 27, 2019, at the official grand opening, are: Brian Horner, ABCA GM; Derrick VanDriel, Project Supervisor, VanDriel Excavating Inc., Clinton; Declan VanDriel; Ian McCrae; Dave Frayne, Chair, Bridge Community Working Group and ABCF; George Finch, Mayor, Municipality of South Huron; and Kate Monk, ABCA Manager of Stewardship, Land and Education.



Conservation Dinner

The 30th Conservation Dinner was held April 11, 2019 and raised \$63,000 to be split with Exeter Lions Club. The Conservation Dinner has surpassed \$1.2 million raised in its history. From left to right are Dave Frayne, ABCF Chair; Dinner Committee Co-Chairs Jim Beckett and Larry Taylor; Charles Corbett, Chair of the first Dinner in 1990; Craig Glavin, First Vice-President, Exeter Lions Club; and Doug Cook, ABCA Vice Chair.



Accessible Trails

The 14th annual South Huron Trail Golf Tournament raised \$5,500 towards replacement decking on Stirling Bridge. From left to right are Dave Frayne, ABCF Chair, and winning team Terry O'Rourke, Bernie Howorth, and Henry Winters.

Huron Tract Land Trust Conservancy

Board of Directors – Huron Tract Land Trust Conservancy (HTLTC)



Roger Lewington
(Chair)
Bayfield



Don Farwell
Stratford



Max Morden
St. Marys



Paul Spittal
Bayfield



Peter Twynstra
Ailsa Craig



Philip Walden
Thedford



Steve Bowers
Brussels



Kim McCabe
London,
Bayfield
(New in
Sept. 2019)



Steve Boles
Exeter
(Retired
from board
July 2019)

Family donates Heaman Tract in memory of Jack Heaman

By Roger Lewington, Chairman, Huron Tract Land Trust Conservancy (HTLTC)

It is exciting times for the Huron Tract Land Trust Conservancy as landowners continue to approach us, wanting to leave a land legacy.

Capturing the Voices of Donors

Judy Maddren, of Soundportraits in Stratford, produced professional audio interviews with: Greg Mayhew (Mayhew Tract); Dave Gillians (Bayfield River Flats Natural Area); and Ilse Elliott (Woodburne Farm).

Check out the interviews at htltc.ca where listeners can hear donors' thoughts on donating land to the land trust. This project was made possible thanks to a \$1,000 matching grant from Huron Heritage Fund.

New Member

Huron Tract Land Trust Conservancy welcomes its newest director, Kim McCabe. We also thank Steve Boles, who has retired from the board, for his eight years of volunteer service as a director.



Heaman Tract

A June 3, 2019 dedication ceremony recognized the 5.5-acre Heaman Tract, near Ailsa Craig, donated by Janet Heaman in memory of Jack Heaman. From left to right are: Sandra (née Heaman) Vanos; Jan Heaman; Larry Heaman; Janet Heaman; Roger Lewington, HTLTC Chair; Peter Twynstra, HTLTC Director; Rick Heaman; and Melanie Heaman.

Huron Tract Land Trust Conservancy

Ensuring a land legacy



Mission:

Ensuring a land legacy.

Vision:

An inspired community that values and protects natural lands and habitat.



Mayhew Tract

The land trust adopted the Mayhew Tract Master Plan for an inventory of wildlife and vegetation species and to guide property management decisions.



Bayfield Flats Natural Area

Controlling and removing invasive Japanese Knotweed and Giant Hogweed was undertaken here. Bayfield River Valley Trail Association installed four heritage signs and armourstone seating.



Woodburne Farm

The second phase of turning an open field into a 32-acre forest took place in the spring. Ausable Bayfield Conservation staff planted 7,000 conifers and 4,000 deciduous trees on 17 acres. This added to 15 acres planted in 2018 that had a 95% survival.



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