

# ANNUAL REPORT 2021

Hamilton Conservation Authority



**Hamilton  
Conservation  
Authority**

A Healthy Watershed for Everyone

Our **Vision** - where we want to be

A healthy watershed for everyone

Our **Mission** - what we do

To lead in the conservation of our watershed and connect people to nature

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## 2021 HCA Board of Directors

### Municipality

City of Hamilton

City of Hamilton

City of Hamilton

City of Hamilton

City of Hamilton

City of Hamilton

City of Hamilton

City of Hamilton

City of Hamilton

City of Hamilton

Township of Puslinch

### Member

Councillor Lloyd Ferguson, Chair

Santina Moccio, Vice-Chair

Dan Bowman

Jim Cimba

Cynthia Janzen

Maria Topalovic

Councillor Brad Clark

Councillor Tom Jackson

Councillor Esther Pauls

Councillor Chad Collins (January – September 2021)

Councillor Russ Powers (November – December 2021)

Susan Fielding

## Message from HCA's Board Chair and CAO

2021 has been another incredible year for HCA. While the ongoing COVID-19 pandemic has been difficult in many ways, staff at every level have continued to safely respond and adapt our operations to perform regulation and monitoring duties while welcoming more visitors than ever. We continued to progress in all five of our priority areas and are pleased to share the results of our combined efforts in this report.

We were very excited this year to officially open our newest conservation area, Saltfleet Conservation Area. Also at that site, the first wetland restoration project was tendered and awarded. This wetland project will reduce downstream flood risk and erosion to residential and commercial properties in Stoney Creek by enhancing and enlarging existing wetland areas, creating new wetland areas and restoring the natural features and functions of watercourses in the area. Once all four planned wetlands are created, the combined areas will have the ability to hold the equivalent of 236 Olympic-size swimming pools.

2021 has demonstrated that our conservation areas continue to play an important role for watershed residents and visitors from across the Greater Toronto and Hamilton Area. A poll by the Nature Conservancy of Canada showed nine out of ten Canadians value nature now more than ever before. There is also more awareness of nature in our lives, from backyard birds to greater use of trails and camping. We saw this play out with a record number of annual membership passes sold, and over 1.2 million visitors coming to our owned and operated areas. We added 177 acres of land to our holdings, looking to and planning for the future.

The pandemic also helped us leverage technology for public engagement and communication with new and enhanced virtual communication tools. Over 2,500 people visited our new engagement platform site [www.conservationtalkhca.ca](http://www.conservationtalkhca.ca). Regarding our work with invasive species management, we raised awareness by creating multiple HCA Insider videos, blogs, and Invasive Species Awareness Week social posts. Our heritage buildings at Westfield went virtual with 360 degree tours. LinkedIn and TikTok became new parts of our social media platforms to share information on our work and projects.

We are exceptionally proud of our team at HCA, both Board and staff, and their collective talents, hard work and resilience. We also welcomed new staff that have joined us during this unprecedented time of virtual meetings and hybrid work arrangements. Together, we are delighted to share this annual report and our 2021 accomplishments as we continue to pursue our mission of providing a healthy watershed for everyone.



Councillor Lloyd Ferguson  
HCA Board Chair



Lisa Burnside  
HCA CAO



A Healthy Watershed for Everyone

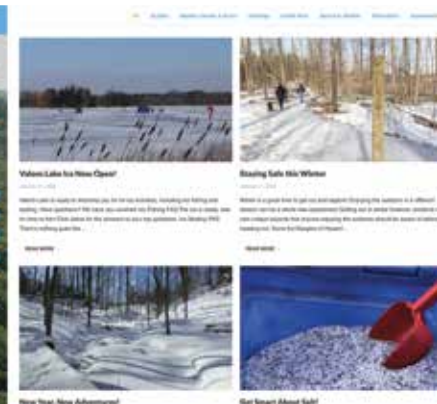


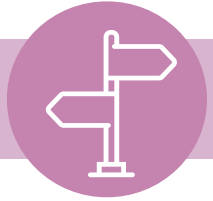


## Organizational Excellence



- HCA Website reached a new milestone with **2 million page views** with mobile phones being the most popular way to access
- **Over 60% of operating revenue is self-generated.** Top 3 self-generated revenue sources continue to be day admissions, marina operations and camping fees. Two of which, being day admissions and camping, reached new heights during the ongoing pandemic
- There were **12 media releases** sent out related to our various programs
- HCA was mentioned in **203 news articles** in 2021
- HCA social media followers
  - **Facebook – 19,832**
  - **Instagram – 11,305**
  - **Twitter – 8,999**
  - **LinkedIn (new in 2021) – 1,389**
  - **TikTok (new in 2021) – 569**





Organizational Excellence is focused on ensuring corporate and financial viability and the HCA's relevance in the community.

## 2021 Highlights

- Funding relationships resulted in over \$2 million dollars in grants for projects such as the Saltfleet Conservation Area Wetland restoration project, summer student positions, and climate change strategy internship.
- Continued to successfully and safely maintain our operations during the ongoing pandemic and supported Hamilton Public Health efforts to make COVID-19 vaccinations more accessible in local communities. In this regard, the HCA hosted the mobile vaccination bus on our properties Christie Lake, Valens Lake, Confederation Beach Park and Westfield Heritage Village.
- Supported a dynamic work culture, safe working environments, professional development, and effectiveness of staff through:
  - Revising and updating 7 safe working procedures and creating 3 procedures for the safety of staff
  - Implementing a mandatory vaccination verification and testing policy to positively impact HCA's overall health and safety culture during the pandemic
  - Providing Provincial Offences Officer and First Aid training
- Completed 18 blogs, 20 photoshoots and 3 video shoots to help communicate both internally and externally what HCA does, and why. Photoshoots included electrofishing, invasive species treatments, plantings, a feature video on Saltfleet Conservation Area, hiking and Christmas at Westfield Heritage Village, a feature video for the Conservation Areas Workshop on the Valens Lake cabins, fall hiking at the Eramosa Karst and Dundas Valley and many more.
- Increased communication and engagement more effectively by using Bang the Table, an online stakeholder engagement tool for our community engagement on projects such as the Fifty Point Master Plan, the Natural Heritage Offsetting Discussion Paper and feedback on the Westfield Heritage Village 360 Tour:
  - Over 2,500 people visited the HCA Bang the Table site, [www.conservationtalkhca.ca](http://www.conservationtalkhca.ca)
  - 698 people completed surveys
  - 1,115 were informed, by downloading documents, utilizing site tools like key dates, or visiting multiple project pages
  - 2,189 visited at least one project page
- Streamlined policies to enhance business service delivery, including:
  - Implemented a Government Relations policy to outline HCA's approach to advocacy efforts
  - Updated our Hazard Tree policy to follow reasonable and best risk management practices





- Endorsed a Transition Plan to guide our compliance with new Conservation Authority Act regulations and successfully applied for exceptions for the rotation of our Chair and Vice Chair as well as term limits to allow our Board to operate most democratically and efficiently
- Continued our efforts to modernize HCA's records management systems by:
  - Completed inventories of all records held by HCA and utilizing the information collected to draft an updated records retention schedule. The draft retention schedule has been submitted to a coordinated legal review of retention schedules among CA's
  - Created and approved a Records Management Program Overview and Procedures document to guide the implementation of HCA's Records Management Policy
- Collaborated and shared services and expertise through numerous forums and working groups with neighbouring conservation authorities and other partners, including the virtual Latonnell Conservation Symposium and Conservation Areas Workshop. HCA staff participated, presented, and assisted with the organization of the events.





## Water Management



- Section 28 Conservation Authorities Act – Permit Processing
  - **99** Total Permits
  - **23** Total Major Permits
  - **91%** of Major Permit applications were processed within the required time period (Based on 2010 MNRF standard, per our Client Service Commitment)
  - **76** Total Minor Permits
  - **82%** of Minor Permit applications were processed within the required time period (Based on 2010 MNRF standard, per our Client Service Commitment)
  - **61%** of Major Permits and **47%** of Minor Permits were processed within 2019 CO recommended standards
- Number of Watershed Condition Statements / Messages
  - Water Safety: **1**
  - Flood Outlook: **0**
  - Flood Watch: **1**
  - Flood Warning: **0**
  - Flood Outlook – Lake Ontario Shoreline: **0**
  - Flood Watch – Lake Ontario Shoreline: **2**
  - Termination Messages (Return to normal watershed conditions): **3**





Water Management is undertaken to protect the watershed for people, property, flora and fauna, and natural resources through flood and erosion control, water quality programs, low flow augmentation and adaption strategies to adapt to changing climatic conditions.

## 2021 Highlights

- Continued work with a consultant to complete flood plain mapping for the numbered watercourses in Stoney Creek and Battlefield and Stoney Creek watersheds. Flood plain mapping is key in HCA's review of planning and permit applications to direct development outside of hazardous areas.
- Enhanced flood control infrastructure funded through the Provincial Water and Erosion Control Infrastructure funding programs for:
  - Safety boom for the dam at Christie Lake Conservation Area. The new public safety boom will prevent the public from accessing the face of the dam and meet current guideline requirements. The tender was awarded in 2021 and the boom is anticipated to be installed and in operation by late spring 2022.
  - Public safety projects at Valens Lake and Christie Lake for a new monitoring well at Valens Lake and new fencing and public safety signage at Christie Lake. The tender was awarded in 2021 and work will be completed by late spring 2022
- Initiated work with a consultant to complete a Shoreline Management Plan for Lake Ontario and Hamilton Harbour within the HCA watershed. The major goals of the shoreline management plan are to:
  - Protect new development from coastal hazards and ensure that it does not impact the environmental features and functions of the shoreline
  - Increase the resilience of coastal communities
  - Minimize danger to life and property damage from flooding, erosion, and associated hazards along the shoreline.
  - Ensure that the shoreline development adequately addresses hazards through a combination of public and private management and development alternatives
  - Incorporate nature-based options to reduce coastal hazards.
- Continued our partnership with the Halton-Hamilton Source Protection Region with the following highlights for 2021
  - Reported on annual progress to demonstrate collaborative protection of sources of municipal drinking water
  - Completed technical assessments of contaminant transport pathways for wellhead protection areas
  - Maintained membership on the Source Protection Committee, ensuring continued direction for the Halton-Hamilton Source Protection Plan
  - Began consultation on the comprehensive updates of the source protection plan and assessment reports





- Continued to invest in monitoring programs and networks including assessing impacts of nutrient and sediment loading through:
  - Provincial water quality and groundwater quality monitoring completed for 6 surface water sites and 7 groundwater sites
  - Annual Rothsay water quality sampling program assessing and confirming no water quality issues regarding effluent discharges to the watercourse and Christie Lake.
  - Annual City of Hamilton water monitoring projects including groundwater well inspections at 86 wells, groundwater well water quality sampling at 38 wells and erosion monitoring at 21 sites.
- Hamilton Harbour Remedial Action Plan (HHRAP) sampling program is in its eighth year and continues to provide valuable data to partners in the pursuit of delisting Hamilton Harbour as an area of concern and to restoring water quality and the beneficial uses of the ecosystem.
- Continued stewardship program grants to support low impact development projects; diverting 222,820 litres of stormwater annually through the grants provided for these two projects which included:
  - Downspout disconnection, rain barrel installation and reduction in driveway impermeability
  - Infiltration trenches and rain gardens





## Natural Heritage Conservation



- Forestry staff removed over **800** hazard trees and pruned an additional **130**
- Spring botanical survey at Saltfleet Conservation Area identified **16** species of spring ephemerals including Red trilliums and Sharp-lobed Hepatica

### Invasive Species Management on HCA Properties

- **17** different invasive species managed
- **7** HCA Insider videos created for the public, 2 blogs, and 5 Invasive Species Awareness Week social posts
- **53** total plots of phragmites chemically treated and cut to drown
- **1,841** invasive shrub stems chemically treated and over **8,260** invasive shrub stems mechanically removed over 6 conservation areas
- **140** garbage bags of invasive herbaceous removed over 12 conservation areas and **1,407** invasive herbaceous stems chemically sprayed







Natural Heritage Conservation is the conservation, restoration and enhancement of watershed natural areas and ecology.

## 2021 Highlights

- Implemented and invested in the further development of the Saltfleet Conservation Area wetland restoration project to offset the impacts of climate change:
  - Completed design for the first wetland at the Saltfleet Conservation Area and the project tender was posted and awarded. Construction of this first wetland is anticipated to begin in early January 2022 and complete by summer 2022
- Carried out invasive species control and removal strategies in our watershed including:
  - Hired two ecology technicians to help with invasive species and ecology surveys
  - Continued work to control, monitor, and map invasive species including phragmites control which began with cut to drown and seed head removal in late summer, with spray treatment in September. Phragmites plots were treated throughout Dundas Valley, Fletcher Creek, Valens Lake and Fifty Point, with additional spraying of Westfield and Lower Spencer's phragmites and manna grass. Two plots of Japanese Knotweed were chemically treated at Woodend and Lower Spencer
  - Removed invasive shrubs, such as buckthorn, winged euonymus, multiflora rose and barberry from Dundas Valley, Westfield, Fletcher Creek Ecological Preserve, and Borer's. Additional chemical treatment for the shrubs that are too large to mechanically remove was carried out with over 500 shrubs treated
  - Created videos and blogs on topics such as 'How to Manage Phragmites by Spading and Cane Cutting', managing phragmites at HCA and Japanese Knotweed control using boat wrap
  - As LDD (*Lymantria dispar dispar*, formerly known as gypsy moth) caterpillars hatched and began defoliating the trees in the conservation areas, area staff and Ecology removed 2,432 LDD caterpillars and 178 pupas from Valens Lake and 2,079 caterpillars and 174 pupas were removed from Christie Lake, protecting significant landscape trees against this invasive species. A single LDD moth caterpillar can consume one square meter of leaves in a season
- Continued and expanded aquatic and terrestrial monitoring programs to assess watershed health:
  - Completed forest health monitoring at 10 sites across the watershed
  - Collected seven different species of tree and shrub seeds for use in restoration areas where invasive species have been removed
  - Presented a tour of the Lower Spencer Creek Restoration Project to the McMaster University Students Association of the Canadian Water Resource Association
  - Completed spring botanical surveys on the East Escarpment for the 2022 Saltfleet / Hamilton Mountain master plan. The surveys showed wide variety of spring ephemerals, plant species that re-emerge seasonally but then die back and remain dormant underground



- Carried out a successful migration monitoring at Fifty Point where 116 species of birds were recorded over 12 visits, including species at risk, such as Red headed Woodpecker, Bobolink and Eastern Meadowlark
- Hosted several community plantings, at Confederation Beach Park, Valens Lake and Mount Albion Conservation Areas
- Enhanced natural heritage features with plantings across our watershed including:
  - A large planting of 1,455 plants was completed in late October with farmstead owners in Middle Spencer Creek, thanks to the hard work of many dedicated volunteers and staff. This project will help to restore over 330 metres of creek with a riparian buffer anywhere between 15 to 36 metres in width
  - Two volunteer plantings were also held in the Spring Creek sub watershed, one where hardy plants were added to a ravine slope to prevent erosion, and the second location was open woodland that had lost its canopy due to the loss of Ash trees
  - Planted 100 disease resistant American Elm trees across the watershed, where conditions best suited. These trees are all clones from an over 100-year-old elm tree at the University of Guelph that has withstood Dutch Elm disease
  - 19 Ecocise events held by our Stewardship staff, with volunteers learning about common invasive species in the watershed and how to effectively remove them, helping out watershed landowners at the same time
  - To raise awareness and provide solutions for one of the most invasive species in the watershed, an online workshop entitled “How to Identify and Manage Japanese Knotweed on Your Property” was held in September
  - Stewardship is wrapping up 2021 photo monitoring for the year, returning to completed projects in various stages. Photographs are taken post completion at 1, 5 and 10 year intervals





## Conservation Area Experience



- **Membership pass sales increased to over 12,000 passes - doubling 2019 sales**, the largest number in our history
- HCA welcomed over **1.2 million visitors** to our conservation areas in 2021, another new record.
- **177 acres of land acquired**, expanding our landholdings
- HCA automated pay stations recorded **over 100,000 self-pay transactions at 21 parking lots** across the watershed.





Conservation Area Experience is the provision of high quality, diverse conservation areas that promote outdoor recreation, health and well-being and strengthen public awareness of the importance of being in or near our conservation areas.

## 2021 Highlights

- Completed and adopted the Valens Lake Conservation Area Master Plan and updated and developed the Fifty Point Conservation Area Master Plan with the work being done in house by HCA staff.
- Implemented 6-month pilot reservation service for Spencer Gorge Conservation Area. Successfully managed visitation numbers with 14,112 reservations being made, bringing 40,506 visitors to Dundas Peak, Tew Falls and Webster Falls.
- Invested in projects to enhance and expand recreation experiences including:
  - Creation of a new conservation area business unit for the Hamilton Mountain Conservation Areas with a new full-time superintendent, Conservation Area Technician and casual staff
  - Officially opened of the Saltfleet Conservation Area parking lot and temporary trail connection to the Dofasco 2000 Trail and the Devil's Punchbowl Conservation Area
  - Opened the Chippewa Trail parking lot to service the Chippewa Trail and East Mountain Trail Loop
  - Improved over 750 ft of the Dofasco 2000 Trail boardwalk with new material
  - Westfield Heritage Village introduced a new 360° virtual tour of the village. Visitors can explore the village and see the charm of the buildings up-close and learn about the spirit of early Canadian history by electronically exploring the village, buildings and artifacts at Westfield from home or on site. This experience supplements information from volunteer interpreters and enhances self-guided walks on days when in-person interpretation is not offered. Finalized design plans for two new trail loops for Westfield Heritage Village Conservation Area. These will extend the trail network west and follow the routes prescribed in the Westfield Master Plan
  - Acquired 70 acres of land from the City of Hamilton to solidify HCA land holdings in the Dundas Valley Conservation Area while allowing upgrades to the trail system and connectivity for the community's use
  - Acquired 7.2 acres of land in Flamborough to strengthen the public lands link between Fletcher Creek and Valens Lake Conservation Areas.
  - Acquired 100 acres of land to add to the Fletcher's Creek Ecological Preserve.
  - Continued construction on the Valens Lake cabins with the six smaller cabins now complete and the conversion of the former Drumlin Pavilion well underway. The cabins are expected to open to the public in 2022
  - Installed 2 new pedestal signs at the Dundas Peak to provide geological and historical interpretive information
  - Completed over 325 ft of shoreline protection work at Fifty Point Conservation Area
  - 9 Conservation Areas received upgrades to pay and display machines and/or Autogate systems, including Fletcher Creek, Chippewa, Saltfleet, Webster Falls, Middletown, Summit Bog, Tiffany Falls, Artaban and Eramosa Karst parking lots
  - Purchased 9 brand new Kubota Zero Turns, to standardize our fleet of mowing equipment and streamline maintenance and repairs



# Conservation Area Experience



- With the easing of COVID restrictions, some events returned to the conservation areas this summer. For example, several trail races, school cross-country meets, and bird hikes were hosted.
- Long weekends at Valens Lake Conservation Area's 125 electrical sites were sold out by March 11, 2021, which is a new record. The 2021-2022 winter camping program at Valens Lake was sold out shortly after it opened for registration with 64 campers participating.
- Provided a self-guided maple syrup experience at Westfield Heritage Village. Visitors were still able to come for a walk on the trails and learn about the process of sap to syrup with new information panels on the trail to the sugar shack.
- Created a new experience for both Easter and maple syrup at Westfield. Visitors were encouraged to hunt for wooden eggs made by one of our volunteers and scattered in the trees on the trail system. Visitors could then go to the General Store and receive a maple treat for describing their favourite egg. During maple syrup time, kids of all ages can find any number of the 14 wooden maple leaves scattered around the village.
- Fifty Point Marina sold out its winter boat storage for the first time ever.
- Westfield participated in the virtual Doors Open event making it possible to showcase Westfield's history to a wide audience.





## Education and Environmental Awareness



### Stewardship:

- Hosted **9** events for public and staff
- **75** garbage bags of invasive species removed from private landowner sites

### Volunteer events:

- **12** volunteer events hosted
- **174** volunteers participated for a total of **697** hours
- **\$13,940** of in-kind value for the volunteer's time contributions
- **308** garbage bags of trash collected and removed at cleanup events
- **4,734** native species planted
- **3.77** hectares of invasive species removed

### Top Student Questions posed to our Outdoor Educators reflecting their curiosity and interest in the environment:

If you need soil for plants to grow, how are there plants in our oceans?

I know Coyotes howl and yip, but can they actually bark like my dog?

Are all exotic plant and animal species invasive and what invasive species have we removed in Canada?







Education and Environmental Awareness is the opportunity to provide outdoor learning experiences for students, teachers, and the community, increasing knowledge and awareness of the value of our environment and heritage.

## 2021 Highlights

- The pandemic continued to alter the way we were able to connect with students for outdoor environmental education. To counter these challenges, we shifted to online platforms to reach students. Our education team eagerly created innovative, interactive and exciting online program opportunities to support teachers and keep students connected to nature.
  - In 2021, our suite of virtual programs expanded to 16 program sessions including What's Alive: Animals and Insects; Plants and Pollinators; Habitats & Communities; Diversity of Living Things; Soils – Worms and Conservation; What's Alive: Spring Session; What's Alive: Summer Session; What's Alive: Weather Wise; Let's Explore Winter; Interactions in the Environment – We are all connected; Tracks in the snow; Let's Talk Snowshoes; Winter Birds; Frogs and their Calls; and Spring: What Lives in the Soil
  - We booked over 100 virtual environmental education sessions in 2021 with the Hamilton public school board
  - In co-operation with Mohawk College, six HCA Conservation Clip videos for public education and the community were developed. Topics included: Winter, What's Alive; Weather Wise; Let's Explore Winter! Interactions in the Environment; Forest Nature Hike; Tracking; Wildlife Shelters; and How to prepare for a visit to HCA Parks
- Supported community participation and volunteer group coordination with three community cleanup events, two at Confederation Beach Park and one on the Hamilton to Brantford Rail Trail.
- Promoted the connection between environmental health and human wellness through the Healthy Hikes campaign to encourage residents to step into nature at our conservation areas.
- Westfield Heritage Village developed a self-guided educational package for groups coming on site. It included laminated History at Home information and scavenger hunts which groups would use to customize their own outdoor experience.
- Westfield created over 32 short 'Westfield Moments' videos, posted to their YouTube channel. Videos include specific history of artifacts and topics from inside the historic buildings. The interview series with Rope Loft was particularly relevant and impactful to current events related to residential schools and the first National Truth and Reconciliation Day.
- Enhanced Stewardship programs for both urban and rural areas through the Hamilton Watershed Stewardship Program including:
  - 3 Stewardship awards presented
  - 4 wells decommissioned
  - Worked with 7 landowners for plantings, resulting in 2.8 kgs of native seeds dispersed and 8,546 trees, shrubs and herbaceous plants planted
  - Held 3 volunteer plantings, with 85 total volunteer hours and 34 volunteers participating

# Message from the Hamilton Conservation Foundation

## Who we are

The Hamilton Conservation Foundation protects and enhances natural and cultural legacies by raising and stewarding funds for the Hamilton Conservation Authority.

The Foundation raises funds in three key areas:

- Acquiring and Protecting Environmentally Sensitive Land
- Teaching Children About Nature
- Celebrating Cultural Heritage



## 2021 at a glance

Although another challenging year for the Foundation, there are successes to celebrate. Our donors contributed just over \$285,000 for priority conservation projects, a 6% increase over 2020.

The generosity of our donors, both to the Foundation's Environmental Education Fund and its Highest Priority Fund, ensured that the Foundation once again was able to meet its commitment to fully fund HCA's Education program.

Tree plantings continue to be popular with our donors and allowed the Foundation to fund three plantings across the Hamilton watershed at Fifty Point, Valens Lake, and Mount Albion Conservation Areas.

Conservation areas and trails continue to be well used, and the Foundation was able to contribute approximately \$60,000 to trail and bridge improvements this year, primarily in Dundas Valley.

The HCA and Foundation family (staff, retirees, Board and Committee members) support the initiatives of the HCA and Foundation in many ways, including making donations to the Foundation, exceeding \$11,000 in 2021.









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