



Conservation Advisory Board Meeting Agenda

Thursday, April 13, 2023

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Notice of Meeting

Conservation Advisory Board

Thursday, April 13, 2023

4:00 p.m.

This meeting will be held in person for Conservation Advisory Board members and designated, limited staff only.

The public may view the meeting live on HCA's You Tube Channel:
<https://www.youtube.com/user/HamiltonConservation>

- 1. Welcome** – Dan Bowman
- 2. Declaration of Conflict of Interest** – Dan Bowman
- 3. Approval of Agenda** – Dan Bowman
- 4. Delegations**
- 5. Member Briefing**
 - 5.1. 2022 Annual Report – Lisa Burnside Page 1
 - 5.2. Watershed Report Card – Scott Peck Page 21
- 6. Chair's Report on Board of Directors Actions** – Dan Bowman
 - CA 2304 Westfield 2022 Accessions List
 - CA 2305 Advance Purchase Day Use Passes – 2023 Pilot Program
 - CA 2306 Invasive Species Program Plan 2023
- 7. Approval of Minutes of Previous Meeting**
 - 7.1. Minutes – Conservation Advisory Board (February 9, 2023) – Dan Bowman Page 31
- 8. Business Arising from the Minutes**
- 9. Staff Information/Presentation for Facilitated Input**
 - 9.1. Invasive Species Strategy Update – Mike Stone Page 40
(presentation and current strategy)
- 10. Staff Reports/Memorandums**

Reports for Recommendation

- | | | |
|--|--------------|---------|
| 10.1. Watershed-based Resource & Conservation Area
Management Strategies Development | – Scott Peck | Page 67 |
| 10.2. Project Technical Advisory Committee –
Responsibilities & Member approval for Insurance
Requirements | – Mike Stone | Page 73 |

Memorandums to Receive

- | | | |
|--|---------------------|---------|
| 10.3. East Hamilton Mountain Master & Management Plans | – Madolyn Armstrong | Page 81 |
| 10.4. 2022 Conservation Area Annual Attendance | – Bruce Harschnitz | Page 87 |

11.New Business

12.Next Meeting – Thursday, June 8, 2023 at 4:00 p.m.

13.Adjournment

5.1

2022 ANNUAL REPORT

HAMILTON CONSERVATION AUTHORITY



Our Vision

A healthy watershed for everyone.

Our Mission

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

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2022 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 & Acting Chair

November 2022

Dan Bowman

Jim Cimba

Cynthia Janzen

Maria Topalovic

Councillor Brad Clark

Councillor Tom Jackson

Councillor Esther Pauls

Councillor Russ Powers

Susan Fielding

MESSAGE FROM HCA'S CAO & ACTING CHAIR

We are pleased to present our annual report for 2022. We have so much to celebrate in terms of what we accomplished last year in all of our strategic plan priority areas, even as we adapted to legislative changes at year end and coped with lingering impacts of the COVID-19 pandemic early in the year.

We were very excited to reach a milestone in the development of the new Saltfleet Conservation Area on Hamilton's east mountain with the completion of the first of four wetland areas located in the upper Stoney Creek and Battlefield watersheds. These wetlands will reduce the impacts of flooding and erosion in lower Stoney Creek and further the long-term vision of the entire Saltfleet Conservation Area which will provide increased natural areas, additional trails and recreation opportunities for the public and protect property and residents downstream. The Heritage Green Community Trust has been a key contributor to the Saltfleet Conservation Area and wetlands. A new trail, named the Heritage Green Community Trust (HGCT) Trail, gives visitors a view of the eastern wetland from the top of the berms that surround it, and connects the area to the Dofasco 2000 Trail, an 11.5-kilometre path for both hikers and cyclists.

2022 also saw the advancement of many other projects on HCA conservation area lands including the completion of cabins at Valens Lake available for reservation in 2023, upgrades to the boat launch ramp at Fifty Point, significant internal roadway enhancements, and many improvements to trails and bridges across our conservation areas.

We ceased the long running Christie Antique and Vintage Show following the two-year COVID interruption. Increasing costs to run the show and the unprecedented surge of public interest in enjoying our conservation areas in their natural state made it the logical decision to step away. We were able to welcome the return of the Maple Syrup event at Westfield and outdoor environmental education classes. We were also thrilled to reopen the Wild Waterworks waterpark which we manage for the City of Hamilton, overcoming the challenge of a national lifeguard shortage by holding our first ever in-house training course to help train and certify new lifeguards.

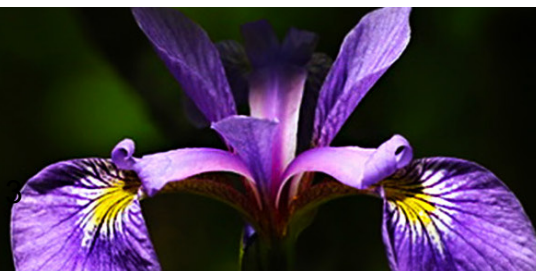
We undertook key watershed restoration projects with significant progress made regarding removal, mapping and management of invasive species. We also acquired additional lands for the Saltfleet Conservation Area. We continued to protect people and property by undertaking natural hazard projects including updated floodplain mapping and enhancements to our dams.

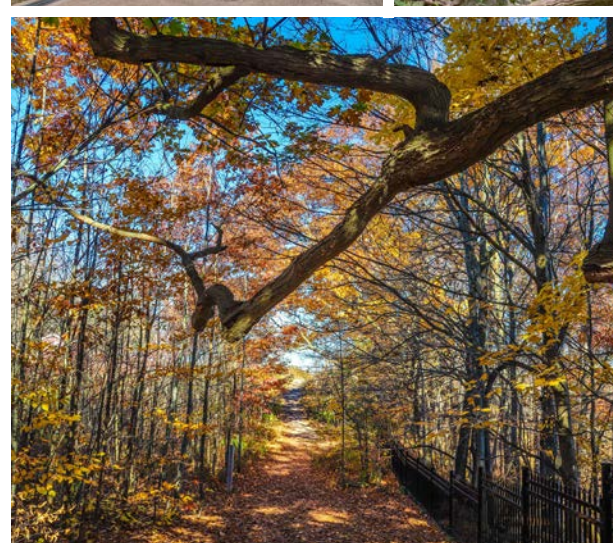
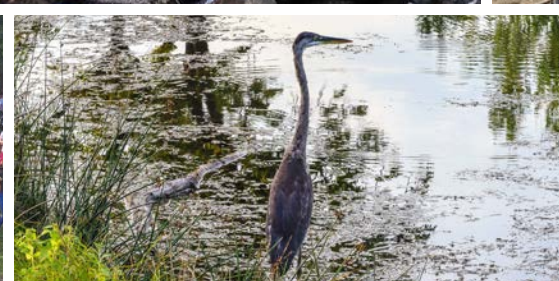
Following the municipal election, we bid farewell to City of Hamilton councillors who were board members: Lloyd Ferguson, Tom Jackson, Esther Pauls and Russ Powers. We thank those City of Hamilton councillors for their dedication and contributions. We also welcomed our new City of Hamilton councillors to our board: Craig Cassar, Matt Francis, Alex Wilson, and Maureen Wilson.

We have received much acknowledgment and appreciation for all we do at HCA and the value and protection it provides to local communities. We are resilient and confident that we can successfully adapt to any changes or challenges that may come our way. Through the efforts of our dedicated board and hard-working staff, we continue to deliver the important programs and services which support our vision of a healthy watershed for everyone.

Lisa Burnside, CAO

Santina Moccio, Acting Chair







Organizational Excellence

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

HCA WEBSITE STATISTICS

- Users: 561,987
- Sessions: 782,691
- Page Views: 1,491,130
- Devices:
- Mobile: 68%
- Desktop: 30%
- Tablet: 2%

There were 17 media releases sent out related to our various programs.

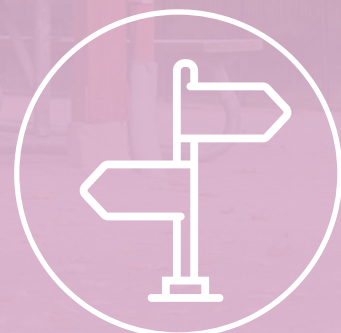
HCA was mentioned in 433 news articles in 2022.

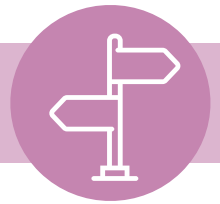
HCA SOCIAL MEDIA FOLLOWERS

- Facebook – 22,489
- Twitter – 9,080
- Instagram – 12,045
- LinkedIn – 2,615

HCA FINANCIAL STATISTICS

- 65% of operating revenue is self-generated.
- Top three self-generated revenue sources continue to be gate admission, marina operations and camping fees.



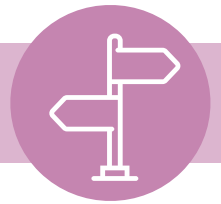


2022 Highlights

- Successful grant applications which resulted in \$541,065.13 for projects such as the Saltfleet Conservation Area Wetland Restoration Project, stewardship work, summer student positions and Westfield Heritage Village programs.
- Supported a dynamic work culture, safe working environments, professional development, and effectiveness of staff through:
 - Revising and updating eight existing safe working procedures and creating two new procedures for the safety of staff.
 - Providing health and safety training related to First Aid, Chainsaw use, Brush Chipper operation, Trenching Safety Awareness, Mobile Elevated Work Platform training, Confined Space Entry and Working at Heights training.
 - Creating new employee training videos to help orient all new staff on HCA and our membership pass program.
 - Undertaking a mental health and resiliency workshop for HCA managers and supervisors.
 - Providing a health and wellness lunch and learn session for staff on “Breaking Down Mental Health Barriers and Managing Stress”.
 - Recognizing the National Day for Truth and Reconciliation with Indigenous awareness workshops for all HCA staff at Westfield. HCA staff were provided orange shirts with a design by local Indigenous artist Kyle Joedicke.
 - Initiated discussions in late 2022 regarding the development of a Land Acknowledgment unique to the HCA which is anticipated to be implemented in 2023.
- Held our inaugural HCA Staff Social at the Dundas Trail Centre. It was great for staff to interact and catch up in person as pandemic restrictions eased.
- Participated in the consultation/commenting process regarding proposed legislative changes to the *Conservation Authorities Act*.
- Hosted 26 film shoots at various HCA conservation areas, providing revenue for those areas.
- Refreshed HCA’s Membership Pass program for 2022 with new rewards and a new look.
- Introduced online gift cards that can be used to buy HCA Memberships, or make reservations for camping, pavilions, and events.



ORGANIZATIONAL EXCELLENCE



- Completed 20 blogs, eight photoshoots and five video shoots to help communicate both internally and externally about what HCA does and why. Photoshoots included the reopening of Saltfleet Conservation Area, special events at Westfield Heritage Village, invasive species work, and stewardship projects. The photoshoots both document the work carried out, and give HCA materials to be able to share that work with the public.
- Increased effective communication and engagement by using Bang the Table, an online stakeholder engagement tool on projects such as our pilot trail app while in the development stages and components of the Saltfleet Conservation Area's Master Plan.
 - Over 1,200 people visited the HCA Bang the Table site, www.conservationtalkhca.ca.
 - 196 respondents completed surveys.
 - 370 people were informed, by downloading documents, utilizing site tools like key dates, or visiting multiple project pages.
 - 971 people visited at least one project page.
- Streamlined policies to enhance business service delivery including:
 - Endorsing an Inventory of Programs and Services to guide our compliance with the *Conservation Authority Act* regulations.
 - Implementing Right to Disconnect and Electronic Monitoring policies to guide our compliance with updates to the *Employment Standards Act*.
- Continued our efforts to modernize HCA's records management systems by:
 - Creating new procedures to document the disposition of records according to our policy and industry standards.
 - Initiating development of a file classification scheme for HCA's records. This system will complement and facilitate implementation of HCA's records retention schedule.
- Collaborated and shared services and expertise through numerous forums and working groups with neighbouring conservation authorities and other partners. HCA staff participated, presented and assisted with the organization of events.
- Undertook a network assessment to identify priorities for modernization of our IT infrastructure, which resulted in a number of network upgrades.



Water Management

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.

SECTION 28 CONSERVATION AUTHORITIES ACT PERMIT PROCESSING

- 87 Total Permits
- 31 Total Major Permits
- 94% of Major Permit applications were processed within the required time period
- 56 Total Minor Permits
- 88% of Minor Permit applications were processed within the required time period (based on the 2010 MNRF standard, per out Client Service Commitment
- 48% of major permits and 50% of minor permits were processed within 2019 CO recommended standards

NUMBER OF WATERSHED CONDITION STATEMENTS / MESSAGES

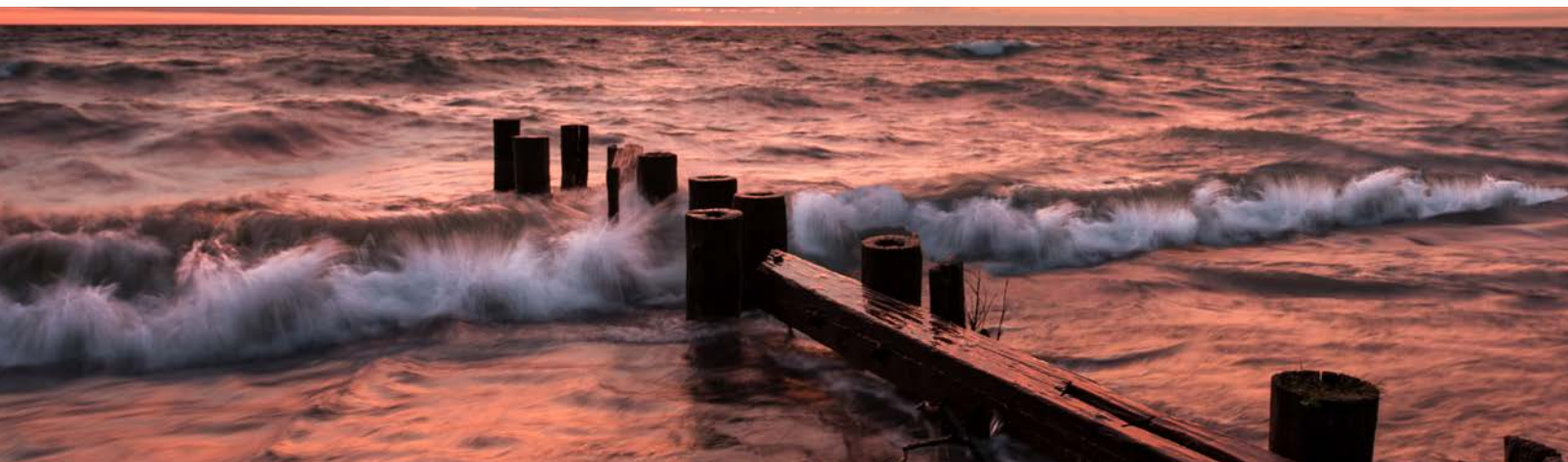
- Water Safety: 3
- Flood Outlook: 0
- Flood Watch: 5
- Flood Warning: 1
- Flood Outlook – Lake Ontario Shoreline: 0
- Flood Watch – Lake Ontario Shoreline: 2
- Termination Messages (Return to normal watershed conditions): 7
- Low Water Level 1: Summer
- Low Water Level 2: Fall





2022 Highlights

- Worked with consultants on floodplain mapping for: Red Hill Creek, Stoney Creek and Battlefield Creek. Floodplain mapping is key in HCA's review of planning and permit applications to direct development outside of hazardous areas. The eastern end of the watershed will now have completed and updated floodplain mapping.
- Worked with consultants to undertake a Lake Ontario and Hamilton Harbour Shoreline Plan. This work will:
 - Identify hazards associated with lake related flooding and erosion.
 - Provide information regarding existing shoreline protection measures and near shore characteristics, allowing for a better understanding of how the shoreline functions.
 - Assist with reviewing shoreline development proposals, shoreline protection measures, and will assist in directing development to safe location, away from hazardous areas.
- Enhanced flood control infrastructure with projects at Christie Lake and Valens Lake related to:
 - Installation and operation of a new safety boom for the dam at Christie Lake.
 - Installation of new fencing and signage at both Christie Lake and Valens Lake for public safety enhancement.
- The water quality monitoring program continues to assess our long-term watershed health as it relates to water quality for surface water and groundwater with the following program work undertaken:
 - Monitoring for the provincial surface water and groundwater quality monitoring network.
 - Surface water quality monitoring for the Cootes Paradise contributing watercourses.
 - The above program work feeds into the provincial water quality monitoring network and the HCA's work with the Hamilton Harbour Remedial Action Plan.
 - Working with the City of Hamilton, staff completed erosion monitoring of local watercourses to determine the impacts of erosion and potential restoration areas.
- 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 seven surface water sites and nine groundwater sites.
 - Annual City of Hamilton water monitoring projects including groundwater well inspections and groundwater well water quality sampling at 72 wells (33 sampled in year one, 39 sampled in year two) and erosion monitoring at 15 sites.





Natural Heritage Conservation

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

Forestry staff removed over 870 hazard trees and pruned an additional 60 with the majority of hazards continuing to be ash trees affected by the Emerald Ash Borer beetle.

INVASIVE SPECIES MANAGEMENT ON HCA PROPERTIES

- Managed 23 species over 13 Conservation Areas.
- Controlled 11,215 invasive trees and shrub mechanically and chemically.
- Controlled 2.9 hectares of invasive herbaceous plants mechanically and chemically.
- Removed 102 industrial sized garbage bags of invasive herbaceous plants.
- Treated 2.2 hectares of non-native phragmites.
- Removed approximately 3389 Spongy Moth (LDD) egg masses and 1648 caterpillars from five conservation areas.
- Held five invasive removal events on HCA land.
- Hosted our Hamilton invasive species workshop which brings together all organizations that work with invasive species within the City of Hamilton.





2022 Highlights

- Implemented and invested in the further development of the Saltfleet Conservation Area Wetland Restoration Project to offset the impacts of climate change:
 - Completed a milestone with the construction of the first of four wetlands and the opening of the area to the public.
 - Secured an additional 50 acres of land key to the project.
 - Initiated design work for the second and third wetlands.
- Carried out invasive species control and removal strategies in our watershed including:
 - Undertook monitoring and removal for Spongy Moth (formerly LDD moth).
 - 64 plots and 26 trails were surveyed at Felker's Falls, Dundas Valley, Iroquoia Heights, Borer's Falls, Westfield Heritage Village, and Valens Lake Conservation Areas.
 - Egg masses were scraped by staff and volunteers from trees of concern at Valens Lake, Christie Lake, Dundas Valley and Westfield and burlap was also put up on trees as a preventative measure.
 - Finished photo monitoring with a significant difference in defoliation compared to 2021.
 - Piloted an independent volunteer effort scraping egg masses along the Dundas Valley trails, and scraped over 2,330 egg masses.
- Mapping of phragmites completed with 22 new populations mapped.
- Sprayed 5.4 acres of phragmites from 58 different populations across eight conservation areas. Began cutting to drown phragmites at Valens Lake and Fletcher Creek where we are unable to chemically treat.
- Specific invasive species removals were completed as follows:
 - Dog strangling vine was treated at five locations across HCA, and three bags of pods were removed from where we were unable to chemically treat.
 - Six populations of Japanese Knotweed were treated chemically and mechanically. 61 bags of knotweed were removed in the process.
 - Dug out a small population of over 70 stems of Wild Parsnip at Fifty Point.
 - Treated 513 Tree of Heavens within Dundas Valley and Spencer Gorge.
- Stewardship work on Invasive Species:
 - Four Water Quality and Habitat Improvement Programs (WQHIP) projects on private lands, controlling phragmites and Japanese Knotweed.
 - Worked with 26 private landowners related to invasive species on their properties.
 - Held 11 invasive removal events at nine different properties.
 - Managed 14 species, removing over 4200 plants and nine garbage bags of herbaceous plant material.
 - Hosted a virtual invasive species workshop for the public focusing on the identification and control of species.
- A volunteer invasive removal event was held in the spring, focusing on hundreds of buckthorns and roses on private landowners' agricultural property in the headwaters of Sulphur Creek.
- Continued and expanded aquatic and terrestrial monitoring programs to assess watershed health and assist with HCA land management:
 - Conducted winter hawk and owl surveys as well as spring bird and waterfowl surveys at the Hamilton Mountain Conservation Areas. The spring surveys revealed 2,888 individuals and 30 species of birds (ten species of waterfowl) observed. Highlights included Cackling Goose, Blue-winged Teal, and Wilson's Snipe.



- Conducted forest regeneration and deer browse surveys in Dundas Valley.
- Monitored the beaver dams and beaver activity at Fifty Point, Lower Spencer Creek, Spring Creek, Ancaster Creek, and Crooks' Hollow.
- Completed frog surveys at Christie Lake, Windermere Basin and East Mountain in addition to benthic sampling for annual and year 1 sites for the Aquatic Resources Monitoring Program (ARMP).
- Conducted ecological land classification (ELC) surveys on Hamilton Mountain Conservation Area properties in support of master plan projects.
- Initiated engineering related monitoring and ecological photo monitoring at the Saltfleet Conservation Area Wetlands Project to assess function and document changes over time.
- Completed monitoring at ten forest health monitoring plots across the watershed.
- Enhanced natural heritage features with plantings across our watershed including:
 - Installed 225 live stakes made from cut down dogwoods into Spencer Creek, where phragmites control have taken place over the last two years.
 - At least ten different types of native plant seeds have been collected by Ecology staff across the watershed and redistributed to areas where invasive species removals have occurred to encourage regeneration.
 - Planted over 1,700 trees, shrubs, and herbaceous plants with volunteers on four separate projects, in two sub-watersheds (Spring and Sulphur Creek). All were directly or indirectly adjacent to HCA conservation lands.
 - Delivered "Soil Safari", an interactive workshop, on the importance of soil to students at the Dundas Valley Trail Centre. This event was hosted by the Compost Council of Canada.
 - Seven Ecocise events were held by our Stewardship staff, with volunteers learning about common invasive species in the watershed and how to effectively remove them.



Conservation Area Experience

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.

HCA welcomed over 1.7 million visitors to our conservation areas in 2022

- 50 acres of land acquired to expand our landholdings for the Saltfleet Conservation Area and contribute towards the Saltfleet Wetland Restoration Project.
- Westfield's first Christmas event since the pandemic "Christmas in the Woods" sold out all 858 reservations.
- Fifty Point was awarded a Diamond rating by the Clean Marine Eco-Rating Program. Marinas voluntarily join the program to participate in a 220-point assessment.
- Valens Lake cabins were completed. Eight cabins will be available for reservation in 2023.





2022 Highlights

- Completed and adopted the Fifty Point Conservation Area Master Plan with the work being done in house by HCA staff.
- Spencer Gorge Conservation Area reservation service successfully continued to manage visitations, bringing visitors to Dundas Peak, Tew Falls and Webster Falls. 7,435 reservations were made on weekends and holidays throughout the spring and summer, and daily through the fall colour season.
- Invested in projects to enhance and expand recreation experiences including:
 - Installed new fencing at Webster Falls and Devil's Punchbowl Conservation Areas.
 - Upgraded the Crooks' Hollow trail system with gravel, a new more accessible entrance, and culverts to divert water in areas where the trail would rut regularly.
 - Created and installed new interpretive signage at the Dundas Valley Trail Center which are featured throughout the building. These signs inform patrons of the trails, as well as providing information on wildlife in the Valley.
 - Installed a new bridge at Tiffany Falls as well as trail and parking lot upgrades.
 - Installed a Mobi-Matt at the Christie Lake beach, providing accessible wheelchair access to the water.
 - Installed new kayak launcher at Christie Lake.
 - Added a second seasonal side entrance to Fifty Point Conservation Area on Kelson Road for HCA Members as part of a pilot project. The entrance was used at peak times to alleviate long lines and traffic congestion at the main entrance.
 - Completed dredging of the Fifty Point marina channel to ensure clear and safe passage for boaters.
 - Newly constructed boat ramp at Fifty Point was completed, upgrading the marina's original interlock ramp from 1984.
 - Initiated planning work for the west campground expansion at Valens Lake.
 - Enhanced 1.8km of existing trails at Westfield, along with finalizing designs on 2.4km of new trails, including three bridges over water crossings which will be completed in 2023.
 - Improved over 175m of the Dofasco 2000 Trail boardwalk with new material, with the remaining 200m of the boardwalk replacement work currently underway and nearing completion.
 - Created and installed new interpretive signage for the Hermitage Ruins in Dundas Valley, detailing the history and restoration of the site.
 - Renovated several area offices including for the Hamilton Mountain, Confederation Beach Park, and Westfield Heritage Village. A new storage yard was also completed for the Hamilton Mountain Conservation Areas.
 - Christie Lake entrance road was rebuilt, ensuring a smoother entrance for visitors.
 - Wild Waterworks reopened with an upgraded point of sale system following a two-year pause caused by the pandemic.



CONSERVATION AREA EXPERIENCE



- Deer harvest agreement with the Haudenosaunee Wildlife and Habitat Authority was renewed for a further three years.
- Rolled out online bookings for pavilions at Christie Lake and Valens Lake Conservation Areas.
- With the eased COVID restrictions many large-scale events returned to the conservation areas throughout the year, including trail races, fundraisers, “learn to fish” activity, school cross-country meets, and more.
- HCA held six bird hikes in the spring and fall, and also saw the return of Films in the Forest at Fifty Point, with screenings of Luca in July and Jurassic World Dominion in September.
- Westfield Heritage Village introduced a new reservation system to manage visitor numbers and ensure an enjoyable experience for those attending their events. 2022 weekly Sunday programs and large events returned, including Maple Syrup, Fairies in the Forest, Halloween Pumpkin Party, and Christmas in the Woods.
- The 2022-2023 winter camping program at Valens Lake was sold out shortly after it opened for registration with 60 campers participating.





Education & Environmental Awareness

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.

TOP STUDENT QUESTIONS POSED TO OUR OUTDOOR EDUCATORS REFLECTING THEIR CURIOSITY AND INTEREST IN THE ENVIRONMENT:

- Other than squirrels, what animals hide food for the winter?
- What is the top predator in the Dundas Valley?
- How often do evergreen trees drop their needles?

CUMULATIVE TOTAL OF ALL HCA VOLUNTEER EVENTS:

- A total of 30 volunteer events were hosted, with organizations such as Mohawk College, Guest Plumbing, Carmen's, Rotary Club, MTE Consulting, Nature Canada, and Kin Canada
- 547 volunteers participated for a total of 1,318.5 hours
- Approximately 291 lbs of garbage was collected and removed at clean-up events
- Volunteers helped our ecology team plant 2,071 native species and remove 2.54 hectares of invasive species

WESTFIELD HERITAGE VILLAGE VOLUNTEERS:

- 102 volunteers provided over 6,400 volunteer hours towards programs and upkeep of the historical buildings



EDUCATION AND ENVIRONMENTAL AWARENESS



2022 Highlights

- HCA Outdoor Education staff offered a series of teacher training sessions, along with the regular scheduled virtual bookings. Teachers who wanted to utilize their own school yards for outdoor education were assisted with curriculum programs such as: Plants and Animals, Habitats and Communities, Biodiversity, Seed Saving, and Climate Impacts.
- A new HCA-HWDSB contract was negotiated for another five years of programming. The agreement included three key programming options for the teachers when booking with the HCA. These included in person programming in the Dundas Valley, and options for online and mobile session with HCA staff attending the schools.
- In September, schools could once again book their Environmental Education field trips with HCA. 63 classes and approximately 1,500 students came out by year end and students were eager to be on field trips for the first time in two years! Grade 8 students from Lake Avenue Public School were enthralled by the sighting of a young four point buck along the trail edge in the Dundas Valley.
- Westfield Heritage Village was able to restart their education programs. Teachers were eager to bring their students for the refreshed 'Down on the Farm' program. In total, 136 bookings were made for the program in 2022.
- 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.
- Stewardship staff worked with a student teacher studying at the University of Windsor and a local high school to produce bat boxes, turtle nest protectors and swallow boxes for Valens Lake.
- Provided stewardship programs for both urban and rural areas to help private landowners learn about how they can protect, enhance and restore natural areas and waterways on their properties:
 - One well decommissioned.
 - Two low impact development projects funded through stewardship program grants to support a permeable driveway and a rain garden which diverts 123,250 litres of stormwater annually.
 - Nine projects funded through the Water Quality and Habitat Improvement Program.
 - Over 670 metres of riparian area improved.
 - Undertook habitat creation and enhancement for species at risk (Barn Swallow and Bobolink).



MESSAGE FROM 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.

2022 AT A GLANCE

The Foundation raised a total of \$762,446 in our 2021-2022 fiscal year. The first installment on a \$2 million pledge from Heritage Green Community Trust contributed greatly to the Foundation's fundraising success this year.

The return of the Environmental Education Program to the outdoors also resulted in increased donations to the program which, together with generous support of our Unrestricted (Highest Priority) Fund, allowed us to continue to meet our commitment to fully fund HCA's Outdoor Environmental Education Program.

Because of our generous donors, the Foundation was able to contribute \$525,000 toward the construction of the first wetland at Saltfleet Conservation Area.

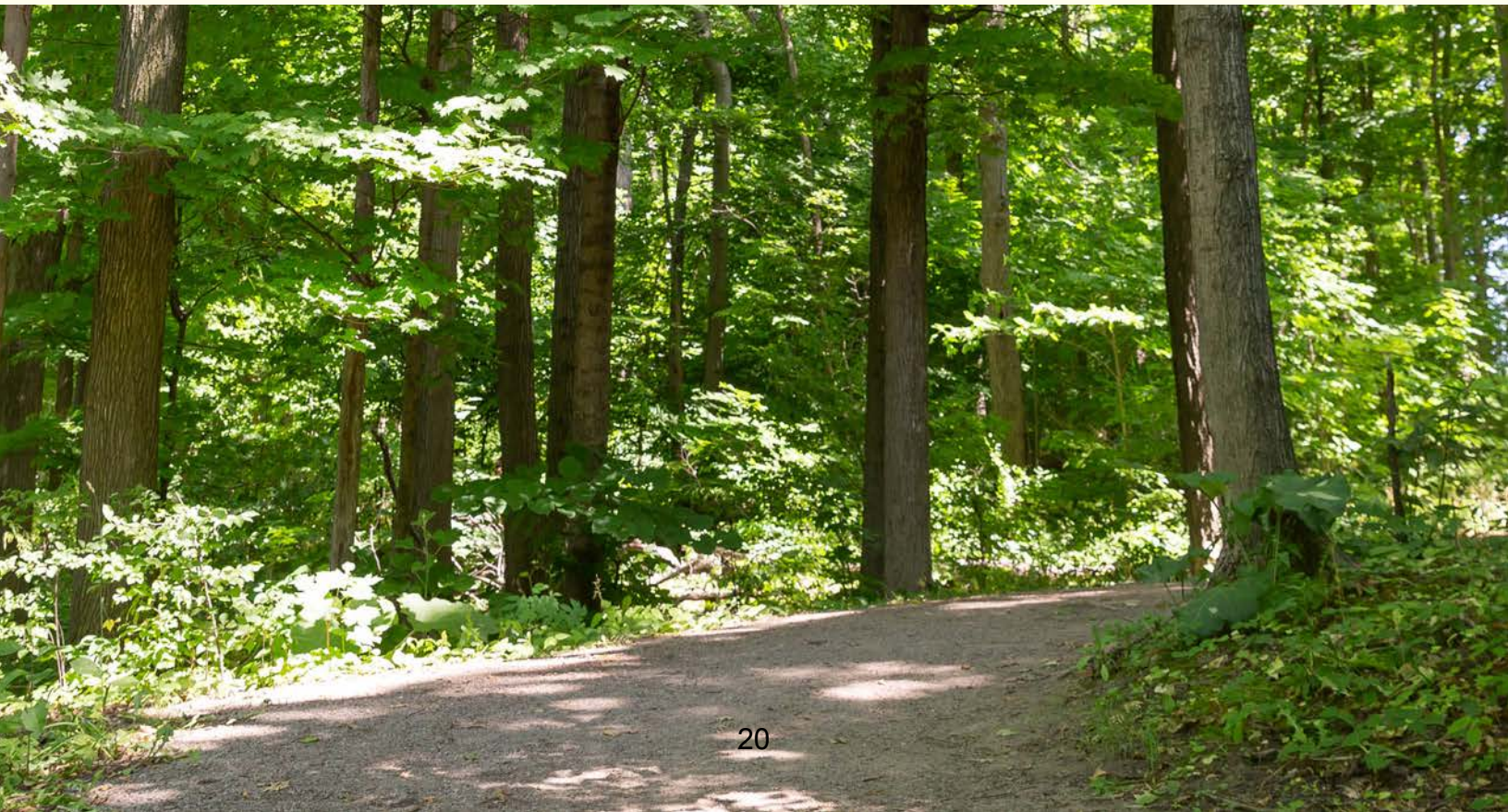
In addition, the Foundation was also able to contribute to improvements in several conservation areas, including trail upgrades at Crooks Hollow, the addition of horse hitching posts and an accessible fountain in Dundas Valley, bridge work at Tiffany Falls, accessible beach mats at Christie Lake, and interpretive signage at the Hermitage to highlight the restoration work done and funded in previous years. We were also able to fund a scope of work study for the restoration of the locomotive tender at Westfield Heritage Village.







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ANCASTER, ONTARIO L9G 4X1
P: 905-525-2181
WWW.CONSERVATIONHAMILTON.CA



Hamilton Conservation Authority Watershed Report Card 2023

5.2



Hamilton Conservation Authority
has prepared this report card as a
summary of the state of your forests,
wetlands and water resources.



WHERE ARE WE?



What is a Watershed?

A watershed is an area of land drained by a creek or stream into a river which then drains into a body of water such as a lake. Each of the streams or creeks within a watershed have their own sub-watersheds. Everything in a watershed is connected. Our actions upstream can affect conditions downstream.

Why Measure?

Measuring helps us better understand our watershed. We can target work where it is needed and track progress. We measured:



Groundwater Quality



Surface Water Quality



Forest Conditions



Wetland Conditions

GRADING

A	Excellent
B	Good
C	Fair
D	Poor
F	Very Poor
	Insufficient Data

What is a watershed report card?

Ontario's Conservation Authorities report on watershed conditions every five years. The watershed report cards use Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners.



Hamilton Conservation Authority

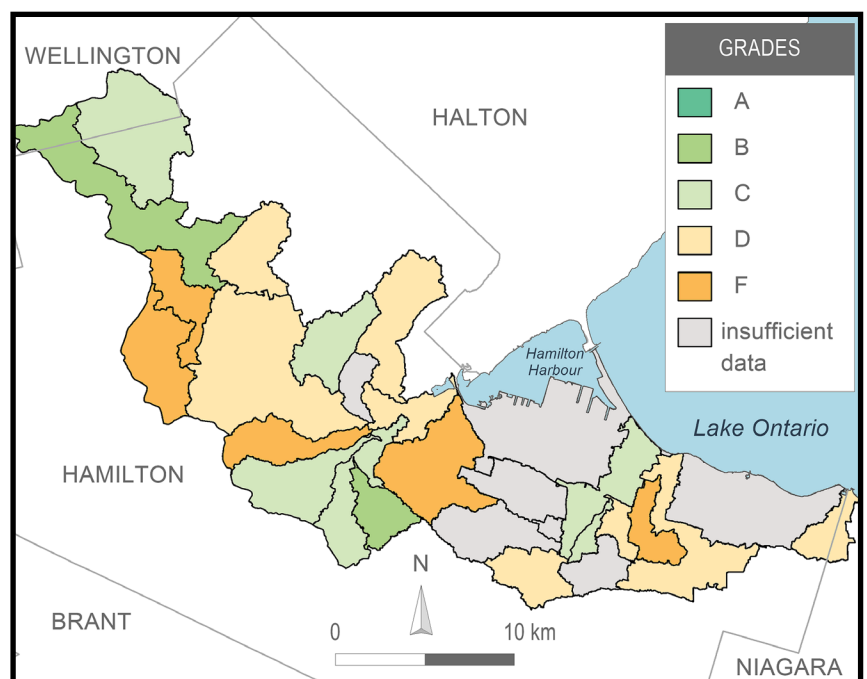
SURFACE WATER QUALITY

Monitoring stream-water quality can help us understand the impacts of land-use activities on water quality, enabling us to make informed decisions about managing and protecting our water resources. We measured three indicators that reflect key issues related to surface water quality across the province: nutrients (total phosphorous), bacteria/waste (E. coli), and aquatic health (benthic macroinvertebrates).

Twenty-one subwatersheds within the greater Hamilton watershed had sufficient water quality indicator data in order to be included in this Watershed Report Card. This is an increase over the 2018 Watershed Report Card and is a result of increased monitoring efforts over the last several years.

What Did We Find?

- Subwatersheds with higher grades tend to be in areas with more natural cover, including higher amounts of forest cover.
- Subwatersheds with lower grades tend to be in more urban or suburban areas due to reduced natural vegetation and a high level of impervious or paved surfaces.
- Grades for subwatersheds are as follows: two grade 'B', six grade 'C', eight grade 'D' and five grade 'F'.
- Five subwatersheds increased their grade from 2018, ten experienced a decrease and two remained the same.
- In some instances, the reported change in water quality could relate to the expansion of water quality and benthic monitoring programs to encompass more data than was contained within the 2018 Watershed Report Card, as well as improvements made to stormwater infrastructure and Low Impact Development initiatives.



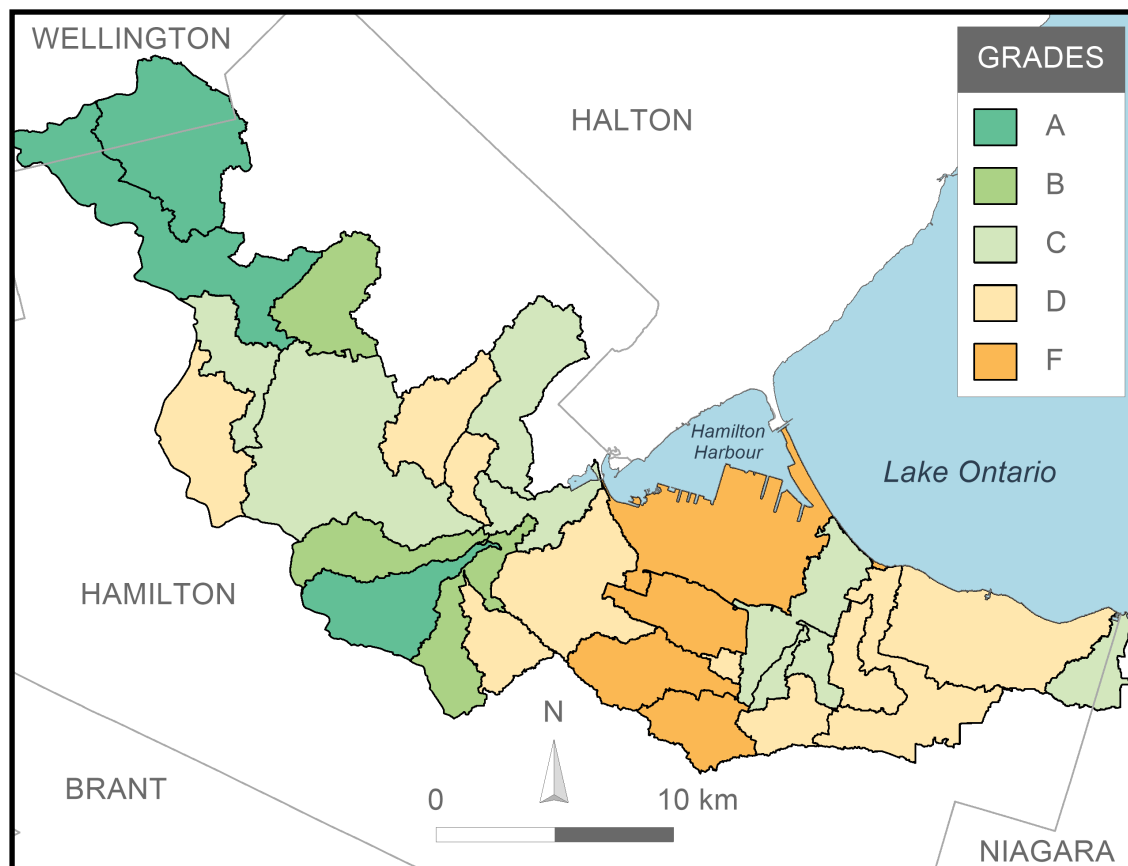


Hamilton Conservation Authority **FOREST CONDITIONS**

Forests help to clean our air and water, provide habitat and shade, improve water infiltration, and help to reduce both erosion and flooding. Percentages of forest cover, forest interior (100m from the forest edge), and streamside cover were measured based on an analysis of aerial photographs using Geographic Information Systems (GIS) and combined to provide a grade for twenty-eight subwatersheds. Windbreaks, street trees, shrublands, thickets, early successional woodlands and young plantations do not count as forest cover in this report card.

What Did We Find?

- Large tracts of forest cover can be found in the areas of Dundas Valley, upper Flamborough and Puslinch.
- Subwatersheds with lower grades tend to be in urban, urbanizing and agricultural subwatersheds.
- Grades for subwatersheds are as follows: three grade 'A', three grade 'B', eight grade 'C', ten grade 'D' and four grade 'F'.





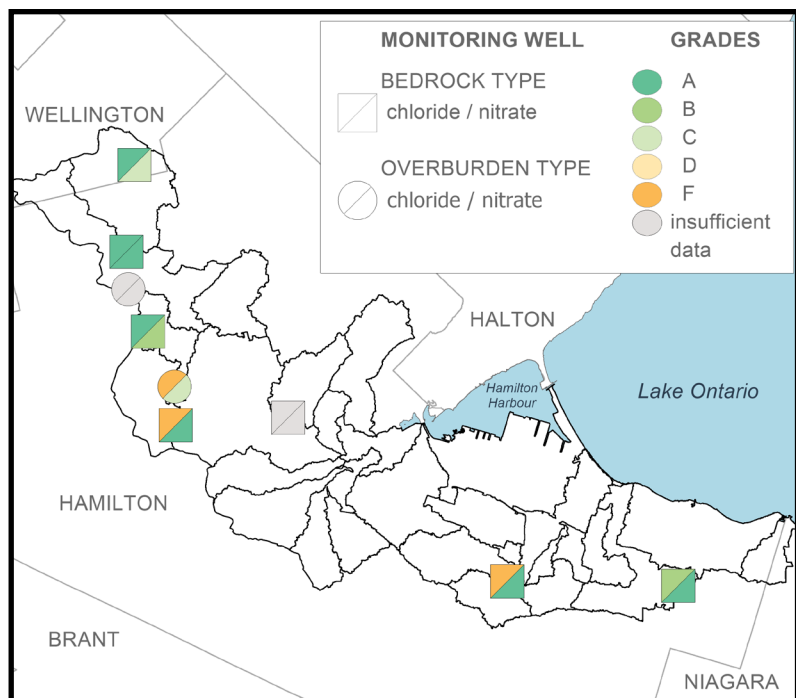
Hamilton Conservation Authority **GROUNDWATER QUALITY**

Groundwater chemistry data is measured in order to protect groundwater sources. Concentrations of nitrate + nitrite as well as chloride were measured at seven Ontario Ministry of the Environment, Conservation and Parks groundwater monitoring wells.

An important factor in assessing the results of a wells water quality is its depth. The Hamilton Conservation Authority differentiates its wells into two different categories; overburden and bedrock. Shallow overburden wells are generally underlain by bedrock, whereas bedrock wells are drilled deep below the ground into the underlying bedrock. Of the seven wells assessed in this Watershed Report Card, six are below bedrock and one is within the overburden. These wells are used for monitoring purposes only.

What Did We Find?

- No change from 2018 grades.
- For nitrate + nitrite concentrations: four wells grade 'A', one well grade 'B' and two wells grade 'C'.
- For chloride concentrations: three wells grade 'A', one well grade 'B' and three wells grade 'F'.
- The overburden well near the former Beverley School received the lowest overall grade.
- The well with the best overall grade was in the heavily vegetated area of Beverley Swamp.
- Chloride concentrations at some monitoring wells approached or exceeded the drinking water standard or guideline.
- Although road salt is a commonly known source for chloride in groundwater, other sources are weathering of soils and salt-bearing geological formations.



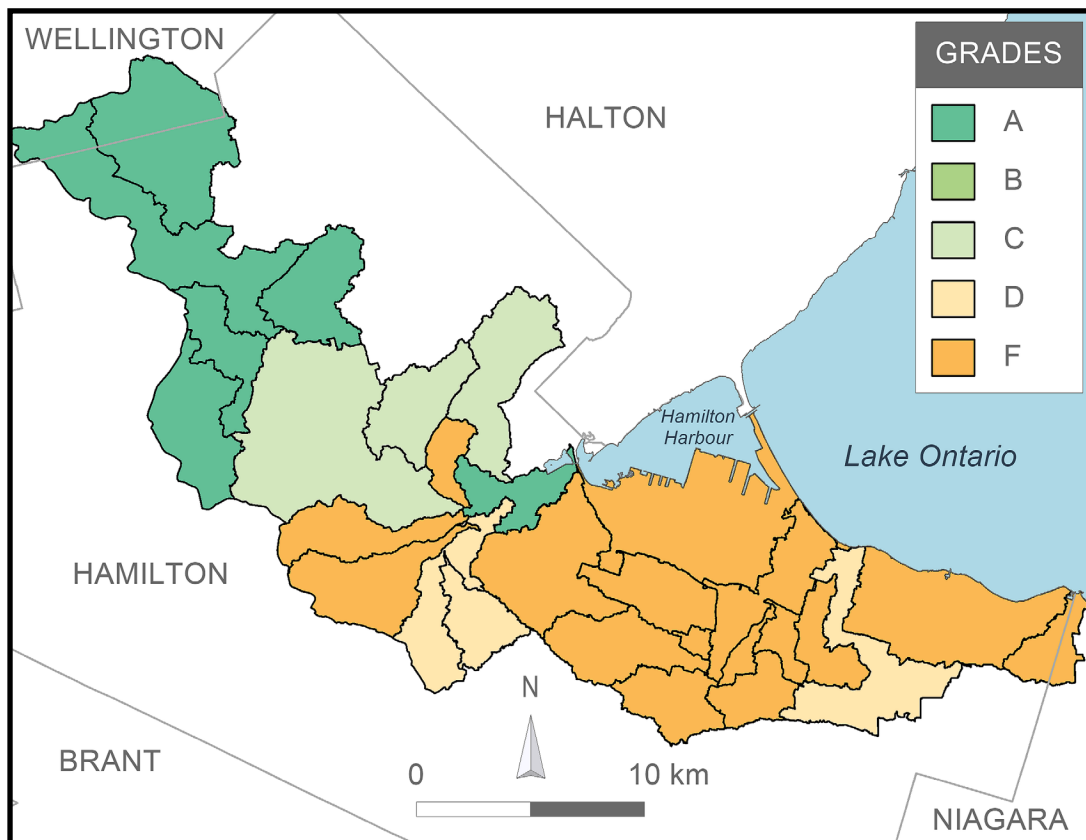


Hamilton Conservation Authority **WETLAND COVER**

There are many benefits to wetlands including groundwater recharge and discharge. They filter water and store floodwaters during rain events. Wetlands are also areas of high biodiversity and productivity, providing habitat and food to many plant and animal species. Percentages of wetland cover was measured based on an analysis of aerial photographs using Geographic Information Systems (GIS) to provide a grade for twenty-eight subwatersheds.

What Did We Find?

- There are large wetland systems in the western portion of HCA's Watershed, such as some subwatersheds of Spencer Creek and Fletcher Creek.
- Subwatersheds with lower grades tend to be in urban, urbanizing and agricultural subwatersheds.
- Grades for subwatersheds are as follows: six grade 'A', zero grade 'B', three grade 'C', three grade 'D' and sixteen grade 'F'.



WHAT IS OUR WATERSHED'S KEY ISSUE?



Changing Climate

- In the Hamilton area, records show that our climate has changed over the last 40 years.
- Scientists attribute increasing temperatures to the burning of fossil fuels, such as gasoline from cars.
- The warmer atmosphere causes shifts in normal climate patterns and these changes can result in more severe weather and larger storms.
- With changing climate conditions there is potential for increased flooding along area watercourses and the Lake Ontario Shoreline.
- Climate change is impacting our local ecosystems and the wildlife within them. Extended drought, heat waves and milder winters with minimal snowfall and below freezing temperatures can result in the introduction of disease and invasive species.



Urban Land Uses and Stormwater Runoff

- Water from rain or snow (known as stormwater) runs off hard surfaces, like buildings and pavement, into nearby sewers or streams.
- Stormwater runoff causes streams to become “flashy”, where stream flow quickly rises and falls because of urbanization.
- The high stream flows associated with stormwater result in streambank erosion.
- Stormwater is associated with poor water quality because it carries sediments and contaminants, such as road salt directly into streams.
- Flooding can occur as a result of overburdened municipal infrastructure.

Invasive Species

- Invasive species are terrestrial or aquatic plants, animals, diseases or pests that threaten, harm or out-compete native species when introduced outside of their natural environment. Invasive species threaten Canada's ecosystems, economy and society.
- Invasive species can come from across the country or across the globe.
- Invasive species have been increasing and are recognized as one of the greatest threats to biodiversity.

HOW CAN WE ENHANCE THE WATERSHED?



What can you do?

Support the need for:

- More natural areas like forests, wetlands, meadows, hedgerows, living fencerows, urban trees and parks to help provide recreation opportunities and improved mental health benefits for people, and to reduce stormwater runoff, flooding and erosion.
- Local environmental monitoring programs and ecological restoration initiatives on public and private lands.
- Inclusion of ecological linkages and stormwater low impact development in new and existing developments.
- Protection of existing natural areas like woodlots, thickets, shrublands, fields, valleys, streams, floodplains.

Reduce:

- Stormwater runoff on your property by redirecting stormwater to permeable surfaces such as lawns and gardens.
- Nutrients entering streams by adopting agricultural best management practices.
- The amount of waste your household creates by purchasing products with limited packaging, re-using, composting and recycling.

Take action by:

- Contacting the Hamilton Conservation Authority and the municipality to learn about services and programs for private property owners to help you manage your property in an ecologically conscious way.
- Never dumping anything down a storm drain.
- Properly disposing of harmful pollutants – check with the municipality for more information.
- Using alternatives to road salt and pesticides.
- Learning to identify and control invasive species on your property.
- Planting locally native trees, shrubs, and flowers in your property.
- Donating to the Hamilton Conservation Foundation.
- Getting involved and attending community meetings, joining groups and staying informed.
- Making your voice count and advocating for the environment.



*Do you have questions not answered by this document?
Visit **conservationhamilton.ca** or contact us for more information:*

Hamilton Conservation Authority

838 Mineral Springs Rd, Ancaster, ON L9G 4X1

E-mail: nature@conservationhamilton.ca | **Website:** conservationhamilton.ca

Phone: 905-525-2181

The Watershed Report Card is available online and in other formats upon request.

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HAMILTON CONSERVATION AUTHORITY

Conservation Advisory Board

MINUTES

February 9, 2023

Minutes of the Conservation Advisory Board meeting held on Thursday, February 9, 2023 at the HCA Main Administration Office – Woodend Auditorium and livestreamed to YouTube, commencing at 4:00 p.m.

PRESENT:

Dan Bowman – in the Chair	Tyler Cunningham
Helena Cousins	Natalie Faught
Joanne Di Maio – Webex	Haley McRae
Cynthia Janzen	Cortney Oliver – Webex
Sherry O’Connor	Wayne Terryberry
Duke O’Sullivan – Webex	

Santina Moccio – (Ex-officio)

REGRETS: **None**

STAFF PRESENT: **Rondalyn Brown, Lisa Burnside, Grace Correia, Gord Costie, Lindsay Davidson, Scott Fleming, Diana Gora, Matt Hall, Bruce, Harschnitz, Jyoti Kasav, Peter Lloyd, Scott Peck, Mike Stone, Jaime Tellier, and Nancy Watts**

OTHERS: **None**

1. Welcome

The Chair called the meeting to order, welcomed the new members, and asked everyone to introduce themselves.

2. Declaration of Conflict of Interest

The Chair asked members to declare any conflicts under the HCA Administrative By-law. There were none.

3. Approval of Agenda

The Chair requested any additions or deletions to the agenda. There were none.

**CA 2301 MOVED BY: Joanne DiMaio
 SECONDED BY: Duke O'Sullivan**

THAT the agenda be approved.

CARRIED

4. Delegations

There were none.

5. Member Briefing

5.1. Valens Lookout Platform Project

Matt Hall presented three design concepts for replacement of an existing lookout tower at Valens Lake Conservation Area. Design considerations included utilizing a similar footprint to the existing platform, accessibility, lifespan of construction materials, maximizing viewing opportunities, weather protection, style, and budget. Concepts A, B and C were shown and described as Like-for-Like, Balanced Approach, and Showpiece, respectively. Concept C was noted as preferred by staff as it met all design considerations.

Matt answered a number of questions regarding the design features, accessibility and equity of experience for all users. The two storey concepts were designed to allow for wheelchair access, while also maintaining the footprint of the structure to minimize environmental impacts to the surrounding area. Staff will try to maximize the viewing experience while also maintaining the appropriate slope for accessibility. It was also suggested to consider including a design component on the lower level that is unique. Staff will take the suggestions back for consideration on design and cost.

Funding for Concept C was also discussed. Should the costs exceed the budget, there are options to consider that may include efficiencies in other capital projects, accessing the capital reserve, and/or approaching the Hamilton Conservation Foundation for funds. Staff are also investigating grants for the accessible aspects of the project.

**CA 2302 MOVED BY: Cynthia Janzen
 SECONDED BY: Tyler Cunningham**

THAT the presentation entitled Valens Lookout Platform Project be received.

CARRIED

6. Chair's Report on Board of Directors Actions

There were no items brought forward from the past meeting.

7. Approval of Minutes of Previous Meeting

7.1. Minutes – Conservation Advisory Board (November 10, 2022)

CA 2303

MOVED BY: Joanne Di Maio

SECONDED BY: Duke O'Sullivan

THAT the minutes of the November 10, 2022 Conservation Areas Advisory Board meeting be approved.

CARRIED

8. Business Arising from the Minutes

There was none.

9. Staff Information/Presentation for Facilitated Input

9.1. Spencer Gorge 2023 Operations / Reservation Service

Gord Costie and Bruce Harschnitz presented a summary of the proposed operational plan for 2023 as HCA continues to evolve the reservation service.

The proposed service for 2023 includes:

- Reduce reservation requirements from every weekend to long weekends only from May to September:

Victoria Day – Sat/Sun/Mon

Civic Holiday – Sat/Sun/Mon

Canada Day – Fri/Sat/Sun/Mon

Labour Day – Sat/Sun/Mon

- Continue with daily advanced reservation requirement for the Fall Colour Period from the fourth Saturday in September to the second weekend in November

Questions for facilitated input were posed to CAB members to review strengths, weakness, and opportunities.

Benefits/Strengths

The revised service will provide users with the opportunity to visit without the added reservation fee, will provide greater access for visitors not comfortable with technology, and allow more flexible scheduling for users. The system will also allow visitors to take advantage of available capacity observed at both Tew Falls and Webster Falls. It was noted the proposed changes will allow for a natural rhythm for local users while also continuing to manage visitation to the area when high visitation is expected.

The revised operations will continue to resolve the issues that initially necessitated the reservation system; local resident concerns regarding high visitation will continue to be addressed, parking and traffic congestion will continue to be mitigated, and visitor experience will continue to be improved.

It was felt that overall, most people will be supportive of the changes.

Challenges

Greensville residents may become concerned that visitation pressures will rebound. Staff advised that if an uptick in visitation is observed, HCA can pivot back to a reservation system, if needed.

Opportunities

A communications plan will help to avoid confusion resulting from changes to the system, including keeping signage, google references, websites, social media, etc. up-to-date.

It was recommended that the communication plan include residents, Bruce Trail, passholders and those with memorial benches advising of the specific days when they will have access to the area with and without reservation. It was suggested that the communication explain the change which strives to balance greater visitor and pass holder access while controlling visitation when high visitation levels can be expected; and that this an evidence-based change based on parking lot capacity and supported by comments received.

There was discussion regarding consideration for a hybrid model of a reservation system with walk-ins allowed. In this regard, staff determined that the hybrid model would be too challenging to be able to predict consistent visitation levels for the community. There would also be an inconsistency in cost between those that paid the reservation fee and those that arrived as walk-ins.

It was suggested to consider offering day-of reservations by changing the closing of the reservation booking time. It was noted that the public has become familiar with

how reservations work and have come to expect them. This may be an adjustment to the operational adjustment in the future following staff consideration and review of reservation service capabilities.

It was clarified that the Spencer Gorge Reservation System was previously approved by the Board of Directors to be an ongoing operational matter and therefore was brought to the Conservation Advisory Board for input on the changes rather than a recommendation to the Board of Directors. The Board of Directors will be made aware of the changes to the reservation system at the upcoming meeting on March 2nd, 2023.

**CA 2304 MOVED BY: Cynthia Janzen
 SECONEDED BY: Wayne Terryberry**

**THAT the memorandum entitled Spencer Gorge 2023
Operations / Reservation Service be received.**

CARRIED

10. Staff Reports/Memorandums

10.1. Westfield Heritage Village Accession List

Peter Lloyd presented a summary of the report, providing additional details on the items recommended for accession, including photos linking one of the items, a receipt from the Hugh Moore & Son hardware and dry goods store, to local history in Dundas.

**CA 2305 MOVED BY: Natalie Faught
 SECONEDED BY: Sherry O'Connor**

**THAT the Conservation Advisory Board recommends to the
Board of Directors:**

**THAT the Westfield 2022 Artifact Accessions List as noted in
the February 9, 2023 Accessions report be accepted as the
artifacts to be added to the Westfield Heritage Village
Conservation Area and the Hamilton Conservation Authority
collection.**

CARRIED

10.2. Advanced Day Pass Program Pilot

Lindsay Davidson presented a summary of the report and answered the members questions.

Staff brought forward the concept for a pilot advance purchase day use pass at select HCA conservation areas in 2023 to help address visitor management at our main gate entry areas to help reduce line-ups and congestion during peak operating season. HCA is able to provide a bar code that can be scanned from a phone or printed paper to facilitate entry into the Conservation Areas.

**CA 2306 MOVED BY: Cynthia Janzen
 SECONDED BY: Tyler Cunningham**

WHEREAS HCA continues to identify and act upon investment in visitor services opportunities in our conservation areas;

THEREFORE, BE IT RESOLVED THAT the report entitled "Advanced Purchase Day Use Passes – 2023 Pilot Program" be received and further;

THAT the Conservation Advisory Board (CAB) recommend to the Board of Directors that staff be authorized to initiate the 2023 pilot program as outlined in the report at Christie Lake, Valens Lake, Fifty Point and Westfield Heritage Village Conservation Areas; and further

THAT staff report back to CAB on the outcome and success of the 2023 pilot program.

CARRIED

10.3. Invasive Species Program Plan 2023

Mike Stone provided an overview of the invasive species strategy and associated program. He introduced HCA's Invasive Species Technicians, Diana Gora and Jyoti Kasav. Diana and Jyoti presented a summary of the report and answered the members' questions.

HCA staff are planning to continue with the invasive species program in 2023 through invasive species removal work in priority areas, support to HCA's Conservation Areas through removals and completion of Prioritization Plans, and private landowner outreach and education initiatives.

**CA 2307 MOVED BY: Sherry O'Connor
 SECONDED BY: Haley McRae**

THAT the Conservation Advisory Board recommends to the Board of Directors:

THAT the Invasive Species Program Plan for 2023 be adopted.

CARRIED

11. New Business

There was none.

12. Next Meeting

The next meeting of the CAB is scheduled for Thursday, April 13, 2023 at 4:00 p.m.

13. Adjournment

On motion, the meeting was adjourned.

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HCA Invasive Species Strategy Update

Conservation Advisory Board

April 13, 2023

Mike Stone, Lesley McDonnell and Colin Oaks



A Healthy Watershed for Everyone

HCA Invasive Species Strategy Update

- The purpose of this session is to obtain comments and direction from the Conservation Advisory Board that will be utilized by HCA staff to assist in the preparation of an update to the 2016 HCA Invasive Strategy.



What are they?



Garlic Mustard

Invasive species are:

“plants, animals, aquatic life and micro-organisms that outcompete native species when introduced outside of their natural environment and threaten Canada's ecosystems, economy and society. They can come from across the country or across the globe.” (Government of Canada, 2014)



Spongy Moth Caterpillars

Why do we manage them?

- Biggest threat to biodiversity after habitat loss
- Aggressive and fast-growing
- Outcompete native species
- High viability and seed production
- No/few natural predators
- Some are a threat to infrastructure



Burning Bush Removal Before and After

HCA's 2016 Invasive Species Strategy

Board approved 2016

Goal: to ensure a healthy watershed at the ecosystem level, reduce the ecological and economic impacts of invasive species, and provide support to land owners and HCA land managers.



Common Buckthorn



Winged Euonymus

Objectives:

- To maintain current information on invasive species and their distribution on HCA properties and throughout the watershed, through regular monitoring and surveys;
- To identify priority invasive species and geographic areas to be managed within the watershed;
- To prevent the establishment of new populations of known or new invasive species; and
- To provide information regarding invasive species and their impacts in support of education and outreach activities.

HCA's 2016 Invasive Species Strategy

Current strategies with the plan:

- Prevention
- Communication
- Best Management Practices
- Prioritization
- Action Plans
- Collaborations
- Research and Monitoring

Invasive species strategy is aligned with the current HCA Strategic Plan 2019-2023

Progress since 2016

- Mapped 51 invasive species across 23 Conservation Area properties watershed wide
- Removed or treated 42 plant species
- Held two Hamilton Invasive Species Workshops with numerous stakeholders
- Hired two invasive species technicians
- Monitor for occurring and incoming tree pests





Invasive Species mapped 2021-2022

BASE MAP

 Hrcaprop_DETAIL


T_Invasive_species_polygon_2022

 Common Buckthorn / *Rhamnus cathartica* / P-RHACATH


 Common Mullein / *Verbascum thapsus* / P-VERTHAP

 Glossy Buckthorn / *Frangula alnus* / P-RHAFRAN

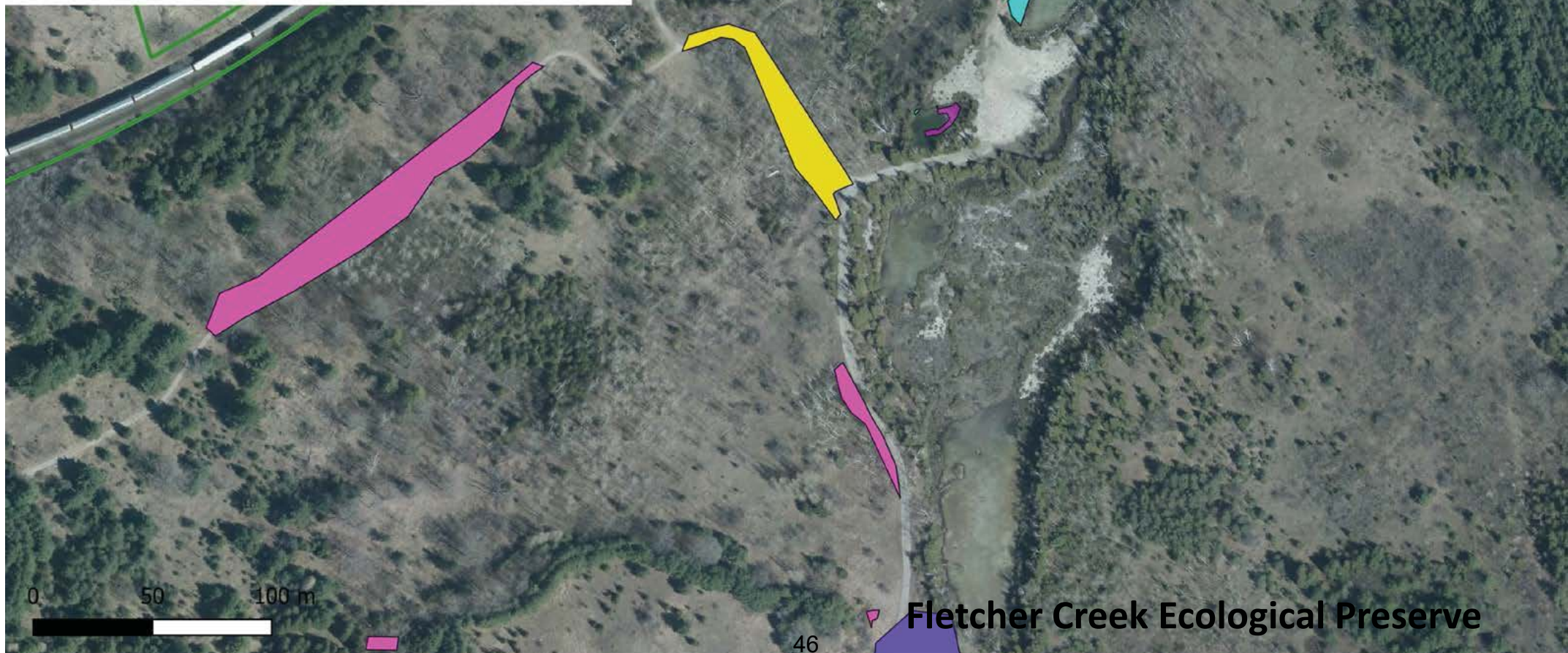
 Honeysuckle Species / *Lonicera* Sp. / P-

 Lilac Species / *Syringa* sp. / P-SYR_SP

T_Invasive_species_polygon_2021

 Common Buckthorn / *Rhamnus cathartica* / P-RHACATH

 Common Reed / *Phragmites australis* / P-PHRAUST

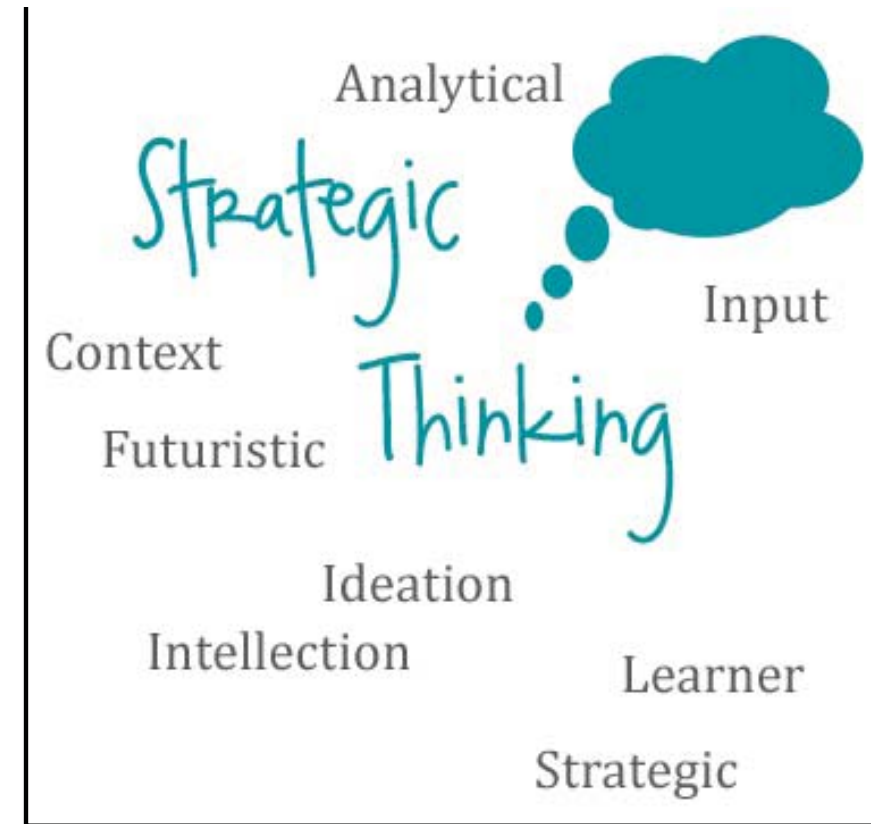


Current Issues and Work Program

- Forest health threats due to invasive tree diseases
- Shortage of available contractors to treat invasive plant species
- Low uptake of prevention methods
- High demand for skilled workers
- Priority to map invasive plant species along trails at Master Plan properties
- Focus on removal of top three invasive species – Dog Strangling Vine, Knotweed and Phragmites
- O. Reg 686/21 – Mandatory Programs and Services – Conservation and Management of Authority Lands

Strategy Update

- Current strategy is 7 years old
- HCA's invasive species program has changed a lot since it was written
- More known about the distribution of invasive species watershed- wide now
- Have created good partnerships
- Have identified many more invasive species than the 10 listed in current strategy



Beech Leaf Disease

Questions

1. Is the scope of the current invasive species strategy adequate?
2. What challenges or concerns do you anticipate in updating the Strategy?
3. What are the key issues that should be considered in the review and update of the Invasive Species Strategy?
4. What are the top priorities / deliverables to be addressed over the next 5 years?

Thank you!



**Hamilton
Conservation
Authority**

A Healthy Watershed for Everyone

Hamilton Conservation Authority Invasive Species Strategy



2016

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1. Introduction

Invasive species have been an increasing element of concern for ecologists, biologists, and land managers over the last 15 years. Invasive species are, “plants, animals, aquatic life and micro-organisms that outcompete native species when introduced outside of their natural environment and threaten Canada's ecosystems, economy and society. They can come from across the country or across the globe.” (Government of Canada, 2014).

The International Union for Conservation of Nature (IUCN, 2014) considers invasive species to be the second highest threat to biodiversity conservation after habitat destruction. This organization has an invasive species specialist group that tracks invasive species and their impacts across the globe. According to the Government of Canada, there are hundreds of invasive species in our country (Government of Canada, 2014). These include, birds, mammals, reptiles, amphibians, crustaceans, aquatic and terrestrial plants, marine and freshwater fish, algae, fungi, and molluscs. The impacts of these species are large and cross all sectors including the economy, environment and human health. The Government of Canada developed “An Invasive Alien Species Strategy for Canada” in 2004 (Environment Canada, 2004). The strategy is broad in scope and includes direction on prevention, early detection, rapid response to new invaders and management of established and spreading invaders. The finalization of a strategy and dedication of federal dollars resulted in the development of the Invasive Alien Species Partnership Program and creation of the Invasive Species Centre. The Partnership Program was terminated in 2012, however the Invasive Species Centre continues to operate and is focused on research, prevention, education and outreach, as well as engaging provincial governments, municipalities, conservation organizations and the general public in dialogue about invasive species.

In Ontario, one of the first documents developed to shed light on invasive species as a growing issue for biodiversity was “Sustaining Biodiversity: A Strategic Plan for Managing Invasive Plant Species in Southern Ontario” (Havinga, Invasive Plant Working Group, 2000). The document outlines eight strategies and related specific actions for addressing invasive species, which were intended to support the efforts of the various organizations and agencies involved in land management and conservation in Ontario and serve as a catalyst for further action and partnerships. Ontario also has a biodiversity strategy (Ontario Biodiversity Council, 2011), which identifies invasive species as one of the five major threats to biodiversity in Ontario. It discusses the economic and environmental threat of invasive species as well as the cumulative impacts they can pose. These include climate change, fragmentation and other factors allowing invasive species to gain a foothold in an ecosystem faster and easier than before.

In November 2015 Ontario took new significant steps towards addressing the impacts of invasive species on biodiversity and the economy, through the passing of the *Invasive Species Act*. This Act will come into force November 3, 2016. It will allow the province to classify the threat level of invasive species, prohibit the import and possession of significant threat species and give the Minister the power to implement temporary threat designations on newly discovered invaders. The Act will apply to species prescribed by the regulation or designated by the Minister. The act contains prohibitions and authorizations in regards to invasive species.

The impacts of invasive species are wide spread and include the disruption of native ecosystems, loss of biodiversity and economic impacts to humans. Invasive species have the ability to outcompete native plants and animals. This can cause a cascade effect within the food chain. For example Zebra mussels filter plankton from the water column, thus reducing this food source for fish and clam species native to the Great Lakes. This may have caused a drop in these fish populations since the introduction of Zebra mussels (Government of Ontario, 2006). Effects such as this impact not only biodiversity but also the economy.

The Government of Ontario has quantified some of the economic impacts of invasive species. Invasive species threaten many sectors of the Ontario economy, including fishing, hunting, agriculture and tourism. Impacts have included reduced value of commercial and recreational fisheries, effects on crop production and decreased property values. The Ministry of Natural Resources and Forestry has determined that invasive plants have cost the agricultural and forestry industries approximately \$7.3 billion annually. The impacts from Zebras mussels alone in Ontario have cost \$75-91 million annually (Ontario Ministry of Natural Resources (OMNR), 2012). It is likely that the majority of species established in Ontario are now here to stay. Many of these species are hard to control once established. The issues related to invasive species are complex as is their management.

The Hamilton Conservation Authority (HCA) in cooperation with its partners has completed three Natural Areas Inventories (NAI), over the past twenty years, with the most recent NAI ('Nature Counts 2') completed in 2014. The NAI is a comprehensive study of the natural areas within the watershed, both public and private although not all parcels are studied in each round of the NAI. This study provides information on the distribution and types of terrestrial invasive species in the watershed. Although the NAI study boundary encompasses a larger jurisdiction than the HCA watershed, it represents the best summary of invasive plant species available locally. The last NAI identified sixty-three invasive plant species within the City of Hamilton (NAI, 2014) which represent 4% of total plant species records. There were also an additional four hundred and forty-four non-native plant species, not considered invasive, identified during the

NAI. Considering these additional species, 34.6% of all the plants recorded in the City of Hamilton are non-native. The NAI only speaks to terrestrial invasive species in our watershed. Few studies have been completed to catalogue our aquatic invasive species. This will be a major component of future works coming out of this strategy.

The percentage of non-native plant species identified (approximately 35%) is not unexpected given some of the watershed's characteristics. Favorable climate, proximity to the Great Lakes port system and degraded ecosystems have contributed to this percentage. These conditions makes Hamilton vulnerable to the introduction of invasive species more so than other areas that are less urbanized and not adjacent to a large port system. Ports contribute to the introduction of invasive species and are often the first point of entry as different species are transported from other countries in shipping containers or in the ballast water of the ships. Urbanization can also escalate the distribution of invasive species through habitat loss and fragmentation. Given these conditions, HCA considers the control and management of invasive species to be the key priority for addressing loss of biodiversity.

2. Legislation and Policy Framework

There are a variety of laws, regulations, policies and guidelines in place at all levels of government that can assist in preventing the introduction of invasive species and provide direct action to the management of those species. At the federal level these include *Ballast Water Control and Management Regulations* under the *Canada Shipping Act*, which require ocean-going vessels to flush their tanks with salt water before entering the St. Lawrence Seaway and the Great Lakes (Government of Ontario, 2015). Fisheries and Oceans Canada maintains *Aquatic Invasive Species Regulations* under the *Fisheries Act* with the objective of preventing the introduction of aquatic invasive species into Canadian waters and to provide for the control and management of their establishment and spread, once introduced.

At the provincial level, some of the key relevant legislation includes the *Weed Control Act*, *Public Lands Act* and *Invasive Species Act*. Over the last two years several plant species have been added and removed from the noxious weed list under the *Weed Control Act* (Government of Ontario, 2015). This list is used by weed inspectors to control plants and minimize their impact on agriculture. In 2014 the *Public Lands Act* was changed to allow the removal of invasive aquatic plants. This change was necessary as the beds of most water bodies in Ontario are crown land and the MNRF manages these lands under the *Public Lands Act* (Government of Ontario, 2015). There are in-water works timing windows and other rules that need to be followed with this legislation. Ontario introduced regulations in 2005 that prohibits the possession,

purchase and sale of several live invasive fish, including Round and Tubenose Goby, Rudd, Ruffe, and the Snakehead family, and four Asian carp species (bighead, black, grass and silver) (Government of Ontario, 2015).

The *Invasive Species Act* received royal assent in November of 2015. When the law comes into force in November 2016 it will allow the province to classify invasive species based on their threat level and prohibit the import and possession of significant threat species. This legislation will be the first of its kind in Canada.

HCA supports the adoption of policies and legislation that will prevent the introduction of invasive species and provide tools to manage the threats posed by invasive species already present. HCA will continue to monitor and review changes to relevant legislation and policy pertaining to invasive species to ensure the strategies and actions employed by HCA in addressing invasive species remain current and effective.

3. Goals and Objectives

The “*Hamilton Conservation Authority Invasive Species Strategy*” (the ‘Strategy’) outlines HCA’s goals and objectives in relation to invasive species and the strategies to be employed on HCA owned lands and promoted throughout the watershed to address the threats they pose. It addresses issues related to both terrestrial and aquatic invasive species.

In developing and implementing the Strategy, HCA’s main goals are to ensure a healthy watershed at the ecosystem level, reduce the ecological and economic impacts of invasive species, and provide support to land owners and HCA land managers. This invasive species strategy aligns with the following goals in HCA’s Strategic Plan:

- Strategic goal #2 - Natural Heritage Conservation – the HCA conserves, restores and enhances watershed natural areas and ecological systems.
- Strategic Goal # 3 – Conservation Area Experience - the HCA provides customers high quality, diverse conservation areas to promote outdoor recreation, health and well-being, strengthening public awareness of the benefits of being in or near our conservation areas.
- Strategic Goal # 4 – Education and Environmental Awareness - the HCA provides active outdoor learning experiences for students, teachers and the community, increasing knowledge and awareness of the value of our environment and heritage.

In support of the Strategy’s goals, the following objectives have been defined and are focused on invasive species detection, prevention and management:

- To maintain current information on invasive species and their distribution on HCA properties and throughout the watershed, through regular monitoring and surveys;
- To identify priority invasive species and geographic areas to be managed within the watershed;
- To prevent the establishment of new populations of known or new invasive species; and
- To provide information regarding invasive species and their impacts in support of education and outreach activities.

To achieve the above noted goals and objectives HCA has identified seven strategies, which are focused on prevention, communication, best management practices, prioritization, implementation, collaboration and research and monitoring. Further information regarding each of these strategies and proposed related actions under each is provided in more detail below. Strategies and associated actions will be implemented on a priority basis and as resources allow.

4. Strategies

4.1. Prevention

Prevention is key with invasive species. Both the federal and provincial governments have developed strategies in regards to invasive species which focus on prevention (Government of Canada, 2014 and OMNR, 2012). Many of the introduced species (invasive) are hardy species in their native home ranges and thrive in degraded ecosystems. When invasive species are introduced into other landscapes outside of their native range, it is their hardiness and void of natural predators to keep them in check that makes it relatively easy for them to become established. Once established they are difficult to eradicate. Often full eradication requires a large amount of resources and sometimes is not possible. These species are introduced through a number of different pathways. Within the HCA watershed, the main pathways for introduction are garden plants and the nurseries that sell invasive plant species, ballast water from ships and recreational activities (hiking, biking and boating). The natural environment within HCA's watershed is at particular risk due to our active port and shipping industries. Invasive species such as the Brown Marmorated Stink Bug has been observed and captured in shipments and imported goods from many provinces including Ontario (OMNR, 2012). HCA proposes to do the following in regards to prevention:

- Investigate the cost of installing boat washing stations at Valens and Christie Lake Conservation Areas for private boats to prevent future aquatic invasive species introductions.
- Review operational procedures at Conservation Areas (CA) to prevent the movement of invasive species from CA to CA, including the development of clean equipment protocols.
- Monitor Canadian Food Inspection Agency (CFIA) and Ontario Invasive Plants Council (OIPC) websites for information on new invasive species, to ensure prevention strategies remain current.
- Attend industry directed workshops on invasive species, to stay current on federal and provincial prevention strategies and management techniques.
- Invest in educational signage at HCA's active CA which describes invasive species, their impact on the natural environment and how to prevent their introduction.

4.2. Communication

Communication is very important to the achievement of HCA's goals and objectives for this Strategy. This includes both internal and external communication. Control can be expensive, time consuming and in some instances impossible (Asian Carp Regional Coordinating Committee, 2015). Through education on the introduction, spread and threat of invasive species Conservation Area users as well as staff will be better able to prevent new introductions and be better prepared for managing occurring invasive species. Part of the communication strategy will be the development and maintenance of a list of the top ten terrestrial and top ten aquatic invasive species (Appendix A). HCA proposes to do the following:

- Develop a webpage dedicated to invasive species found in the HCA watershed, including:
 - Place links on HCA's website to relevant NGO and Government websites that discuss invasive species, their habitats and introduction pathways;
 - Focus this website on top invaders linking the public to best management practices and other websites.
- Provide links to web-based forums for the public to report invasive species in our Conservation Areas such as EDD MapS.

- Develop a brochure specific to the HCA watershed for distribution at public events that highlights the main terrestrial and aquatic invasive species and what the public can do to help.
- Conservation Area Master Plans will include a section on invasive species and what occurs in each CA.
- Promote through private landowner stewardship initiatives the importance of the control of invasive species and their impact on biodiversity.

4.3. Best Management Practices (BMP's)

Best Management Practices (BMP's) have been developed for a variety of invasive species through the Ontario Invasive Plants Council, Ministry of Natural Resources and Forestry, other Conservation Authorities and municipal governments. HCA will research appropriate BMP's for the invasive species in its watershed. Strategies proposed in this regard include:

- Create a best management practice at HCA in regards to Clean Equipment and the transfer of invasive species from CA to CA.
- Review and recommend existing BMP's for the control of the top invasive species in our watershed for aquatic and terrestrial species.
- Create BMP's for the use of native species in HCA planting and restoration projects to combat invasive species.

4.4. Prioritization

As noted above, the NAI documented sixty-three invasive plant species in the City of Hamilton as of 2014. This is a large number of plant species to address on HCA properties and watershed wide. Therefore, HCA has prioritized ten terrestrial invasive species to which available HCA resources will be focused (see Appendix A). These ten are the most aggressive species currently found in the HCA watershed or are just establishing and eradication may be possible.

Aquatic organisms are quite difficult to manage; they can become wide-spread quickly, can be prolific breeders (i.e. goldfish), and tend to colonize quickly. Therefore, HCA efforts towards aquatic invasive species will focus on mapping, monitoring and small scale management initiatives for master plans and management plans within HCA's various landholdings. HCA has prioritized ten aquatic invasive species that include, fish,

plant, invertebrates or virus/parasite to which our resources will be focused (see Appendix A). Since aquatic invaders can establish quickly, HCA has also developed a list of species that are not yet found in the watershed but are a possible threat species to watch (i.e. found within neighboring watershed and/or the Great Lakes system).

Prioritization must occur for both species and properties/natural areas. Certain Conservation Areas because of the biodiversity contained within them are a higher priority for invasive species control than other areas. HCA has some information from the NAI regarding general locations of invasive species. Some of this information is more than ten years old depending on when a natural area or conservation area was surveyed last. HCA plans to do the following in regards to prioritization:

- Develop and maintain a priority list of terrestrial and aquatic invasive species (Appendix A).
- Complete surveys for aquatic invasive species to identify further priorities.
- Promote the use of EDD MapS (<http://www.eddmaps.org/ontario/>) in our jurisdiction for the identification and location information for invasive species.
- Review information gathered from the NAI and work on prioritization of invasive species based on important natural areas.
- Create criteria to prioritize invasive species management at Conservation Areas (i.e. significance of the area, Species at Risk abundance and distribution, threat posed by the invasive species).

4.5. Action Plans

HCA will continue to inventory invasive species on HCA owned properties in order to develop species and/or area specific action plans to help prioritize actions based on species and or ecosystem type (sensitive). With prioritization and action plans in place HCA can begin to engage volunteers and staff in the removal of invasive species. This will involve staff from HCA's Conservation Areas along with staff ecologists and volunteers for invasive removal. Species that require chemical control will be assessed and controlled by certified applicators and supervised by HCA staff. The use of chemicals will be evaluated on a case by case, and species by species basis, balancing the need for chemicals, the appropriateness of their use for certain species and the manual labour required for mechanical removal. This is a long-term commitment and funding will actively be sought to continue with implementation. HCA proposes to complete the following:

- Continue invasive species surveys and mapping within master planning processes for each Conservation Area (CA).
- Specifically target aquatic invasive species surveys as these are not well surveyed or understood in our watershed.
- Develop an invasive species control (action) plan for CA as required, and incorporate these plans into the master plan as appropriate.
- Implement these plans for priority species at priority CA as time and budget permit.
- Organize volunteer removal days in various priority Conservation Areas.
- Work collaboratively with the City of Hamilton and Royal Botanical Gardens on invasive species removal initiatives.
- HCA staff (1 or 2 employees) become Ontario certified pesticide applicators therefore making implementation more cost effective and faster.

4.6. Collaborations

Collaboration and partnership will play an important role towards the advancement of the actions and efforts proposed within the Strategy to address invasive species. There are many partners in the Hamilton area that HCA could coordinate efforts with for both private and public land. Some of these partners include, Royal Botanical Gardens, Hamilton Naturalist Club, Bruce Trail Conservancy, City of Hamilton, Cootes to Escarpment initiative and the Hamilton Stewardship Network. Collaboration can take place in a variety of ways and may include the following:

- Work with the Hamilton Watershed Stewardship Program to support local landowner initiatives in invasive species removal.
- Support stewardship initiatives through the Cootes to Escarpment Eco-park (within the HCA watershed).
- Work with the Dundas Valley 50 year vision to support initiatives in the Dundas Valley.
- Continue to support federal and provincial initiatives (e.g. EDD MapS).
- Work with partners to share information in regards to invasive species management, removals, mapping etc.

- Support the implementation of the Stewardship Action Plans as they relate to invasive species.
- Engage non-government organizations to partner and work on changing traditional landscape planting programs and lists with our municipal partners to exclude non-native invasive species;

4.7. Research and Monitoring

In order to combat invasive species monitoring the watershed for new occurrences is important. In addition, it is also important for HCA to regularly check the CFIA website and consult with other organizations that are aware of new and incoming invasive species, like the Ontario Invasive Plants Council. HCA has both an aquatic and terrestrial monitoring program that are watershed wide. These have the capacity to detect invasive species as they establish in the watershed. In addition, as mentioned previously, HCA has completed 3 cycles of the Natural Areas Inventory which is a City of Hamilton wide program that has detected a number of new occurrences of a variety of invasive plant species. HCA proposes to complete the following:

- Fifty terrestrial Ecological and Assessment Monitoring (EMAN) plots throughout the watershed are being established and there is also an extensive aquatic monitoring program within the creek systems of the watershed. These are monitored over the course of 5 year (terrestrial) and 3 year (aquatic) cycles. Invasive species are noted during these monitoring cycles.
- HCA will conduct botanical inventories in support of Conservation Area master planning processes. Invasive species noted during these surveys will be mapped and subsequently discussed in the master plan.

5. Conclusion

Invasive species present a unique issue in the conservation of biodiversity in Ontario; they are now only second to habitat loss as the highest threat to biodiversity. The federal and provincial governments both have strategies around dealing with invasive species. The province also now has an *Invasive Species Act*. In developing and implementing an invasive species strategy the HCA will be supporting the biodiversity and conservation priorities and efforts of both the provincial and federal governments, while also addressing the unique issues within the HCA watershed. Addressing our objectives through the strategies and actions outlined will assist HCA in focusing our efforts in regards to invasive species.

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Appendix A

Top ten terrestrial invasive species

Common name	Scientific name	Distribution
Oriental bittersweet	<i>Celastrus orbiculatus</i>	Limited, Christie Lake Conservation Area, Dundas Valley Conservation Area
Japanese knotweed	<i>Fallopia japonica</i>	Limited, Dundas Valley Conservation Area, Iroquoia Heights Conservation Area
Dog strangling vine	<i>Vincetoxicum rossicum</i>	Limited, Spencer Gorge Conservation Area, York Road Acreage, Borer's Rock Chapel Conservation Area
European buckthorn	<i>Rhamnus cathartica</i>	Widespread
Garlic mustard	<i>Alliaria petiolata</i>	Widespread
Spotted knapweed	<i>Centaurea biebersteinii</i>	Limited, Valens Conservation Area
Tree of heaven	<i>Ailanthus altissima</i>	Limited, Dundas Valley and Spencer Gorge Conservation Areas
Wild Parsnip	<i>Pastinaca sativa</i>	Limited
Invasive Honeysuckles	<i>Lonicera sp.</i>	Widespread
Phragmites	<i>Phragmites australis</i>	Widespread

Top ten aquatic invasive species

Common name	Scientific name	Distribution
Common carp	<i>Cyprinus carpio</i>	Widespread
Goldfish	<i>Carassius auratus auratus</i>	Widespread
Zebra mussel	<i>Dreissena polymorpha</i>	Limited: Located within Christie Lake CA and Lower Spencer creek (within Cootes Paradise)
Round goby	<i>Neogobius melanostomus</i>	Limited: Lower Spencer creek, Redhill creek watersheds
VHS (virus)	N/A	Widespread
Columnaris (virus)	N/A	Limited: Christie Reservoir
Rusty crayfish	<i>Orconectes rusticus</i>	Limited: Lower Spencer creek watershed
European common reed	<i>Phragmites australis ssp. australis</i>	Widespread: riparian areas along streams, wetlands and roadside ditches
Purple loosestrife	<i>Lythrum salicaria</i>	Widespread: floodplain areas and wetlands
Rudd	<i>Scardinius erythrophthalmus</i>	Limited: Lower Spencer creek watershed

Report

TO: Conservation Advisory Board

FROM: Lisa Burnside, Chief Administrative Officer (CAO)

**RECOMMENDED
PREPARED BY:** T. Scott Peck, MCIP, RPP, Deputy CAO/Director,
Watershed Management Services

MEETING DATE: April 13, 2023

RE: Ontario Regulation 686/21 – Required Strategies and
Plans

STAFF RECOMMENDATION

THAT the Conservation Advisory Board recommends to the Board of Directors:

THAT the Board of Directors endorse the approach for the completion of the strategies and plans required in Ontario Regulation 686/21 as detailed in the report titled “Ontario Regulation 686/21 – Required Strategies and Plans”, dated April 13, 2023.

BACKGROUND

Bill 229, the Protect, Support and Recover from COVID-19 Act (Budget Measures), 2020 received Royal Assent on December 8, 2020. Schedule 6 of Bill 229 details several revisions to the Conservation Authorities Act. Ontario Regulation 686/21 under the revised Conservation Authorities Act was subsequently approved and serves to implement the changes made to the Conservation Authorities Act. Ontario Regulation 686/21 provides direction regarding mandatory programs and services for conservation authorities. The regulation provides direction over several program areas however, this report will focus on the required strategies and plans detailed in the regulation.

Ontario Regulation 686/21 requires that a Conservation Authority prepare the following plans and strategies by December 31, 2024.

1. A conservation area strategy for all lands owned or controlled by the HCA
2. A land inventory for every parcel of land the authority owns or controls

3. A watershed-based resource management strategy
4. The development and implementation of an operational plan related to the HCA's water and erosion control infrastructure (Valens Lake and Christie Lake dams).
5. The development and implementation of an asset management plan related to the HCA's water and erosion control infrastructure.

Ontario Regulation 686/21 provides specific requirements for the conservation area strategy, the land inventory and the watershed-based resource management strategy. The regulation also details that the conservation area strategy and the watershed-based resource management strategy should involve public and stakeholder consultation and both the conservation area strategy and the watershed-based resource management strategy are required to be posted on the HCA website. The periodic review and updating of the strategies and plans are also required. The specific requirements for each strategy is outlined in Appendix "A". There are no specific requirements outlined in the regulation related to the operational plan and asset management plan for the HCA's water and erosion control infrastructure.

STAFF COMMENT

Staff have developed an approach to complete the required strategies and plans by December 31, 2024. The development of the strategies and plans will be led by Watershed Management Services with the assistance of a working group for the strategies. The following working groups have been established:

1. Conservation Area Strategy and Land Inventory - Scott Peck (WMS), Scott Fleming (Finance), Matt Hall (CAPSS), Gord Costie and Bruce Harschnitz (CAS), Jaime Tellier (CAO's Office) and Lisa Burnside (CAO)
2. Watershed-Based Resource Management Strategy – Scott Peck, Mike Stone and Jonathan Bastien (WMS), Scott Fleming (Finance) and Lisa Burnside (CAO)

The Watershed-Based Resource Management Strategy working group will also provide assistance in the development and review of the water and erosion control infrastructure operational and asset management plans.

The requirements for each plan and strategy will be reviewed with each working group. The intent is to complete a background review to determine existing information available and to determine whether this is current and what additional information may be required. From this, a draft issues list will be developed that will be used to develop the specific draft strategies. It is noted that the bulk of this work will relate to the conservation area strategy and the watershed-based resource management strategy. The Land Inventory and the Conservation Area Strategy are inter-related and the strategy needs to be completed concurrently with the Land Inventory.

As noted, the regulation provides no specific direction regarding the operational plan and the asset management plan. The operational plan relates to the operation of the

HCA's 2 dams. The HCA already has operational plans and directives, dam safety and public safety documents in place. The intent is to review these existing documents, identify any gaps, update the information as required and use this existing and updated information to finalize the operational plan. Further, the operational information will be used to inventory the HCA's infrastructure. With assistance from the HCA's finance department and utilizing sample asset management plans from other conservation authorities, the draft asset management plan will be developed.

Lastly, Conservation Ontario has developed best management practices for the development of the strategies as well as consultation guidelines. HCA staff have been involved in the development of the strategy guidelines. These guidelines will also be used to assist staff in the development of the strategies. As the strategies and plans are developed, HCA staff will provide updates to the Conservation Advisory Board and the Board of Directors and will consult with stakeholders and the public. It is anticipated that the final versions of the strategies and plans will be brought to the Conservation Advisory Board in October 2024 with final approval of the documents by the Board of Directors in November 2024. This timing will allow the HCA to meet the deadline for completion of the strategies and plans of December 31, 2024.

STRATEGIC PLAN LINKAGE

HCA's Strategic Plan 2019 – 2023 outlines its major strategic priority areas and related initiatives for advancing HCA's Vision to provide a healthy watershed for everyone. HCA implements a wide variety of programs to fulfill this mandate. The completion of the noted strategies and plans will provide information that will assist in the achievement of these program objectives and HCA's Strategic Plan more generally.

AGENCY COMMENTS

N/A

LEGAL/FINANCIAL IMPLICATIONS

The strategies and plans are noted in the HCA Program Inventory as Category 1. Staff time required to develop the strategies and plans is anticipated to be covered within existing budget allocations as staff do not envision including additional money to the HCA levy request to complete the required strategies and plans.

CONCLUSIONS

The development and approval of the noted strategies and plans is a legislated requirement. HCA staff will implement the direction for the completion of the strategies and plans as detailed in this report to meet the legislated requirements while consulting with stakeholders and the public and will have this work completed to meet the December 31, 2024 deadline as detailed in the regulation.

Appendix “A”

Strategy Requirements

Conservation Area Strategy

A conservation area strategy shall include the following components:

1. Objectives established by the authority that will inform the authority’s decision-making related to the lands it owns and controls, including decisions related to policies governing the acquisition and disposition of such lands.
2. Identification of the mandatory and non-mandatory programs and services that are provided on land owned and controlled by the authority, including the sources of financing for these programs and services.
3. Where the authority considers it advisable to achieve the objectives referred to in point 1, an assessment of how the lands owned and controlled by the authority may,
 - i. augment any natural heritage located within the authority’s area of jurisdiction, and
 - ii. integrate with other provincially or municipally owned lands or other publicly accessible lands and trails within the authority’s area of jurisdiction.
4. The establishment of land use categories for the purpose of classifying lands in the land inventory based on the types of activities that are engaged in on each parcel of land or other matters of significance related to the parcel.
5. A process for the periodic review and updating of the conservation area strategy by the authority, including procedures to ensure stakeholders and the public are consulted during the review and update process
6. The authority shall ensure stakeholders and the public are consulted during the preparation of the conservation area strategy in a manner that the authority considers advisable.
7. The authority shall ensure that the conservation area strategy is made public on the authority’s website, or by such other means as the authority considers advisable.

Land Inventory

The land inventory shall include the following information for every parcel of land the authority owns or controls:

1. The location of the parcel.

2. The identification of any information the authority has in its possession in respect of the parcel, including any surveys, site plans or other maps.
3. When the authority acquired the parcel.
4. Whether the parcel was acquired using a grant made under section 39 of the Act.
5. Whether the parcel was acquired through an expropriation.
6. Whether the authority owns the parcel or has a registered legal interest in the parcel, including an easement.
7. Identification of the land use categories mentioned in paragraph 4 of subsection 10 (1) that apply to the parcel.
8. For the purpose of ensuring a program or service is not included as a mandatory program or service, identification of whether,
 - i. a recreational activity is provided on the parcel that requires the direct support or supervision of staff employed by the authority or by another person or body, or
 - ii. commercial logging is carried out on the parcel.
9. Whether or not the parcel or a portion of the parcel is suitable for the purposes of housing and housing infrastructure development, including identifying,
 - i. any applicable zoning by-law passed under section 34 or 38 of the *Planning Act* or any predecessor of them,
 - ii. if the parcel or a portion of the parcel augments any natural heritage located within the authority's area of jurisdiction, and
 - iii. if the parcel or a portion of the parcel integrates with other provincially or municipally owned lands or other publicly accessible lands and trails within the authority's area of jurisdiction. O. Reg. 686/21, s. 11 (1); O. Reg. 594/22, s. 2.
10. The land inventory shall include a process for the periodic review and updating of the inventory by the authority. O. Reg. 686/21, s. 11 (2).

Watershed-Based Resource Management Strategy

The watershed-based resource management strategy shall include the following components:

1. Guiding principles and objectives that inform the design and delivery of the programs and services that the authority is required to provide under section 21.1 of the Act.
2. A summary of existing technical studies, monitoring programs and other information on the natural resources the authority relies on within its area of

jurisdiction or in specific watersheds that directly informs and supports the delivery of programs and services under section 21.1 of the Act.

3. A review of the authority's programs and services provided under section 21.1 of the Act for the purposes of,

i. determining if the programs and services comply with the regulations made under clause 40 (1) (b) of the Act,

ii. identifying and analyzing issues and risks that limit the effectiveness of the delivery of these programs and services, and

iii. identifying actions to address the issues and mitigate the risks identified by the review, and providing a cost estimate for the implementation of those actions.

4. A process for the periodic review and updating of the watershed-based resource management strategy by the authority that includes procedures to ensure stakeholders and the public are consulted during the review and update process.

5. The authority shall ensure stakeholders and the public are consulted during the preparation of the watershed-based resource management strategy in a manner that the authority considers advisable.

6. The authority shall ensure that the watershed-based resource management strategy is made public on the authority's website, or by such other means as the authority considers advisable.

Report

TO: Conservation Advisory Board
FROM: Lisa Burnside, Chief Administrative Officer (CAO)

RECOMMENDED BY: T. Scott Peck, MCIP, RPP, Deputy COA and Director, Watershed Management Services

PREPARED BY: Jeff Stock, Watershed Stewardship Technician,
Cherish Gamble, Watershed Stewardship Technician,
Mike Stone, MCIP, RPP, Manager, Watershed Planning,
Stewardship & Ecological Services

MEETING DATE: April 13th, 2023

RE: Project Technical Advisory Committee –Responsibilities
and Member approval for Insurance Requirements

STAFF RECOMMENDATION

THAT the Conservation Advisory Board recommends to the Board of Directors:

THAT to meet annual insurance coverage requirements, the responsibilities of the Project Technical Advisory Committee for the Hamilton and Halton Watershed Stewardship Programs be approved as identified in this report; and further

THAT the members on the Project Technical Advisory Committee be appointed for a three-year term, from April 1st, 2023 to March 31, 2026.

BACKGROUND

Since 1994, the Hamilton Conservation Authority (HCA) and Conservation Halton (CH) have worked collaboratively to administer the Hamilton-Halton Watershed Stewardship Program (HHWSP). Through the HHWSP, HCA and CH work strategically and cooperatively to undertake stewardship activities within the Hamilton Harbour watershed and Cootes to Escarpment EcoPark System, while also maintaining independent programs to deliver stewardship services within their respective watersheds. The shared program has been highly successful over the years and has

resulted in the contact of over 4,000 landowners with at least half of these being in the Hamilton Conservation Authority's watershed.

While both HCA and CH contribute funding to the program for staffing and landowner contact, funds for stewardship projects on private lands have typically been raised through different sources, including the HCA capital funding program and application to various grant programs.

The Project Technical Advisory Committee (PTAC) was formally established by the Advisory Boards and the full Boards of Directors of the two conservation authorities in 2009. PTAC acts as a review and approval committee for funding applications under the HHWSP's Water Quality and Habitat Improvement Projects grant program. Attached is the terms of reference that has been established for PTAC and a list of the individuals who have volunteered to sit on the committee for the next term. HCA and CH staff are in the process of reviewing the terms of reference and committee representation to determine if updates to the terms and/or additional committee members may be warranted.

STAFF COMMENT

Staff of the HHWSP appreciate the commitment that Project Technical Advisory Committee members have made to date, to assist in the delivery of the HHWSP to watershed landowners. This report serves to formally recognize their work, as well as to identify committee membership for the next three years. The term of appointment for PTAC members will extend from April 1, 2023 to March 31, 2026, which coincides with the typical fiscal year of the majority of the granting organizations. This report and the identification of the PTAC membership also provides the basis for extending insurance coverage to members, as discussed further below.

STRATEGIC PLAN LINKAGE

The initiative refers directly to the HCA Strategic Plan 2019-2023:

- **Water Management**
 - Invest in programs to address the impacts of nutrient and sediment loading on watershed streams, creeks, rivers and receiving water bodies.
 - Work with the City of Hamilton, and our partners on the Hamilton Harbour Remedial Action Plan to address nutrient and sediment loading within the Hamilton Harbour Watershed.
 - Continue the HCA's Watershed Stewardship Program and work with landowners to increase environmental awareness and restoration projects.

- **Natural Heritage Conservation**
 - Work with our partners on stewardship initiatives for the Hamilton Watershed Stewardship Program and the Cootes to Escarpment EcoPark System
- **Education and Environmental Awareness**
 - Enhance stewardship programs for both urban and rural areas.
 - Identify and support outreach opportunities within all of our program areas.
 - Promote the connection between environmental health and human wellness.

AGENCY COMMENTS

N/A

LEGAL/FINANCIAL IMPLICATIONS

The members on the committee are not paid for their services but they are undertaking work on behalf of Hamilton Conservation Authority. By formally recognizing the committee, the volunteer committee members can be provided with insurance for their decisions through the Conservation Authority's insurer. Adding the members as volunteers to our insurance does not affect the Hamilton Conservation Authority's premiums.

CONCLUSIONS

The Hamilton and Halton Watershed Stewardship Programs have been successfully utilizing this volunteer committee for the review of projects that are undertaken on private lands. Annual endorsement of PTAC members is required for insurance purposes.

TERMS OF REFERENCE FOR THE PROJECT TECHNICAL ADVISORY COMMITTEE

GOAL

To assist the Hamilton Conservation Authority and Conservation Halton in the implementation of their Water Quality/Habitat Improvement Programs (WQHIP) which serve to provide landowners with the technical and grant assistance necessary to improve water quality and habitat in the watersheds of Hamilton and Halton Conservation Authorities.

MANDATE

The Project Technical Advisory Committee (PTAC) is a voluntary advisory committee that approves grants for water quality and habitat improvement projects. PTAC has been established by the conservation authorities in accordance with these adopted Terms of Reference. PTAC members are bound by these Terms of Reference and are ultimately responsible to the Hamilton Conservation Authority and Conservation Halton.

PURPOSE

The purpose of PTAC is to:

1. Sit as the grant approvals committee when it may:
 - a) recommend eligible items under the WQHIP including grant rates and grant ceilings;
 - b) ensure that the WQHIP is administered on a priority basis;
 - c) review landowners' grant applications submitted to the conservation authorities;
 - d) approve eligible grant applications under the WQHIP; and
 - e) review WQHIP effectiveness as required.
2. Provide a forum for the exchange of information on agricultural, rural and urban issues and initiatives and to advise on potential concerns; and
3. Encourage public awareness and education of agricultural, rural and urban issues.

MEMBERSHIP

PTAC consists of the following volunteer members which are appointed for a term of three years with an option for a second term.

- Agricultural Organizations
- City of Hamilton
- Conservation Halton
- Fisheries and Oceans Canada
- Halton Region
- Hamilton Conservation Authority
- Individual Landowners
- Ontario Ministry of Natural Resources and Forestry
- Royal Botanical Gardens

PTAC members represent a variety of natural resources management, agricultural organizations and landowners. The representatives of organizations or agencies should have special urban, rural and agricultural qualifications, water quality and habitat interests and abilities, as well as the ability and willingness to devote the necessary time to PTAC.

MEETINGS

PTAC meets, annually, or as required. Agendas for meetings will be made available to PTAC one week in advance of meeting. Flexibility will allow meetings to be held in various locations throughout the communities that are most convenient for PTAC members. Meetings will be used to review Water Quality and/or Habitat Improvement Funding Application and Agreement forms, WQHIP program success, WQHIP Terms of Reference, and other determined topics.

SUPPORT STAFF

Conservation authority staff will be assigned to provide secretariat and research support to PTAC.

PTAC meeting minutes will be provided to PTAC members following each meeting.

PROJECT TECHNICAL ADVISORY COMMITTEE MEMBERS

Ontario Federation of Agriculture

Nadine Gill-Aarts, Member Service Representative (Currently on leave)

Member for the following terms:

First Term: 2020, 2021, 2022 (Janice Janiec filled in 2022)

Second Term: April 1, 2023 – March 31, 2026

Charlene Yungblut (filling in for Nadine temporarily)

Member Service Representative

Halton, Hamilton-Wentworth, Niagara

City of Hamilton

Kara Bunn, Manager, Parks and Cemeteries, Environmental Services, Public Works

Member for the following term:

First Term: 2018, 2019

Second Term: 2020, 2021, 2022

Third Term: April 1, 2023 – March 31, 2026,

Fisheries and Oceans Canada

Sarah Matchett

Member for the following Term:

First Term: 2020, 2021, 2022

Second Term: April 1, 2023 – March 31, 2026

Watershed Resident Members

Paul Smith

Member for the following terms:

First Term: 2012, 2013, 2014

Paul participated on the committee in 2015 and 2016.

Second Term: 2017, 2018, 2019

Third Term: 2020, 2021, 2022

Fourth Term: April 1, 2023 – March 31, 2026

Sheila O'Neil

Member for the following terms:

First Term: 2020, 2021, 2022

Second Term: April 1, 2023 – March 31, 2026

Alba Dicenso

First Term: 2022

Second Term: April 1, 2023 – March 31, 2026

Graham Buck

First Term: 2022

Second Term: April 1, 2023 – March 31, 2026



CONSERVATION AUTHORITY STAFF RESPONSIBLE FOR PRESENTING GRANT APPLICATIONS TO PROJECT TECHNICAL ADVISORY COMMITTEE

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Memorandum

TO: Conservation Advisory Board

FROM: Lisa Burnside, Chief Administrative Officer (CAO)

RECOMMENDED BY: Matthew Hall, Director; Capital Projects & Strategic Services

PREPARED BY: Madolyn Armstrong, Landscape Designer and
Kathy Smith, Landscape Architect; Capital Projects & Strategic Services

MEETING DATE: April 13, 2023

RE: East Mountain Conservation Areas Master Plan and Management Plan Updates

BACKGROUND

HCA's 10 Year Master Plan Update Strategy sets out a ten-year schedule for HCA properties to receive updated Master Plans and Management Plans. As per this Strategy, the properties scheduled for review and updates in 2023 are: Eramosa Karst Conservation Area, Mount Albion Conservation Area, Felker's Falls Conservation Area, and the Chippawa Rail Trail. This memorandum and the appended study area map are provided for project background and general understanding.

A new Master Plan will be written for Eramosa Karst Conservation Area (EKCA). The new 2023 Master Plan will update and replace the 2007 EKCA Master Plan and 2013 EKCA Feeder Lands Operating Plan. EKCA is 111 hectares (274 acres) in area and located south of the Niagara Escarpment. The karst topography formed by the dissolving of rock and characterized by sinkholes (dolines), sinking streams, caves, and subterranean drainage that is found at EKCA is uncommon in Ontario. The karst features found in the conservation area have caused it to be designated as an Area of Natural and Scientific Interest (Eramosa Karst ANSI). The conservation area provides passive recreational trails for visitors to appreciate the sensitive karst landscape and its associated ecology and presents opportunities for environmental education. A portion of the East Mountain Trail Loop also passes through this conservation area.

A new Master Plan will be written for Mount Albion Conservation Area (MACA). This new Master Plan will update and replace the 2000 Master Plan. MACA is a 41 hectare (101 acre) passive conservation area located on the Niagara Escarpment south of the Lincoln Alexander Parkway at Dartnall and Stone Church Road. Hannon Creek, a tributary of the Red Hill Creek, flows through the centre of the property from south to north. These lands are within the Niagara Escarpment Plan Area (NEP). HCA began acquiring the lands in 1970 to provide access to the public for recreational activities such as hiking, picnicking, nature observation and winter sports. The property is a significant node and staging area for the Chippawa Rail Trail, and offers multi-use recreational trail connections to the Red Hill Creek Valley System, and the City of Hamilton's East Mountain Trail Loop.

A new Management Plan will be written for Felker's Falls Conservation Area (FFCA). This new Management Plan will update and replace the 1975 Master Plan prepared at the time of the land acquisition. FFCA is located above and below the Niagara Escarpment and contains natural areas of significance in the urbanized Hamilton watershed. It is also within the NEP area. The conservation area contains Felker's Falls, which is a waterfall over the Escarpment for the east branch of the Redhill Creek. The wooded areas of the Escarpment are managed by HCA, and the Bruce Trail Conservancy maintains the Bruce Trail running through the property. The East Mountain Trail Loop also passes through FFCA.

A new Management Plan will be written for the Chippawa Rail Trail (CRT). This new Management Plan will update the 1998 Master Plan, which guided the initial construction of the trail. The plan will focus on the HCA owned portion of the trail from Stone Church Road East to Haldibrook Road. The Chippawa Rail Trail follows the abandoned Canadian National Railways line acquired by HCA in 1996. This 15km trail is part of the Niagara section of the Trans Canada Trail from Hamilton to Caledonia. HCA manages 12km of the trail north of Haldibrook Road. The parking lot on Dartnall Road in the Mount Albion Conservation Area serves as a staging area for the trail.

STAFF COMMENT

This set of plans is intended to provide direction and guidance for the next ten years of operation for Eramosa Karst Conservation Area, Mount Albion Conservation Area, Felker's Falls Conservation Area and the Chippawa Rail Trail. These plans will provide HCA with detailed property evaluations for land and resource management, visitor management, and include a public consultation process. A staff team with the necessary experience and expertise is assembled for this project, to deliver these comprehensive plans.

The new Master Plans for EKCA and MACA will consolidate background information for the properties, provide new information on current site conditions, update ecological information and inventories, and help guide HCA's capital development. Since the last Master Plans were completed for these properties, development of the surrounding lands has occurred. These updated plans will help guide HCA's long-term management

and protection of these natural areas as visitation from the surrounding community increases.

The new Management Plans for FFCA and the Chippawa Rail Trail will provide HCA with updated resource management information, and recommend best management practices for these lands. Significant items to be explored include a review of the natural resources and trail infrastructure, evaluation of the current recreational uses, and recommendations for capital improvements.

Public consultation for the Master and Management Plans is anticipated as follows:

- Visitor surveys will be posted on HCA's Bang the Table site from the Victoria Day long weekend in May until mid-August to gather information and receive comments for the plans.
- The Bang the Table site will remain open for public viewing and comments until the plans are finalized. Draft documents will also be made available on the site for public review and comment.
- Flyers with QR codes linking to the visitor surveys will be posted in the study areas at key public locations.
- Staff will operate a public information booth at Eramosa Karst Conservation Area on two Saturdays, one in July and one in August.
- The plans, visitor surveys, and public information booths will be promoted on HCA's social media.
- Visitor attendance will be recorded by automated trail and vehicle counters to be installed on the properties by staff.

During the public consultation period, HCA will also be working with the appropriate agencies and stakeholders to receive information and comments.

Work in progress on the plans will be brought to CAB for review and comment in October 2023 and early 2024, with anticipated Board of Directors review and approval by mid 2024.

STRATEGIC PLAN LINKAGE

The initiative refers directly to the HCA Strategic Plan 2019 - 2023:

- **Strategic Priority Area – Conservation Area Experience**
 - Initiatives – Update and develop master and management plans, and implement priorities to further enhance conservation area for current and future generations.

AGENCY COMMENTS

The properties under review contain lands in the watershed of the Niagara Peninsula Conservation Authority, lands in the City of Hamilton, and lands under the jurisdiction of

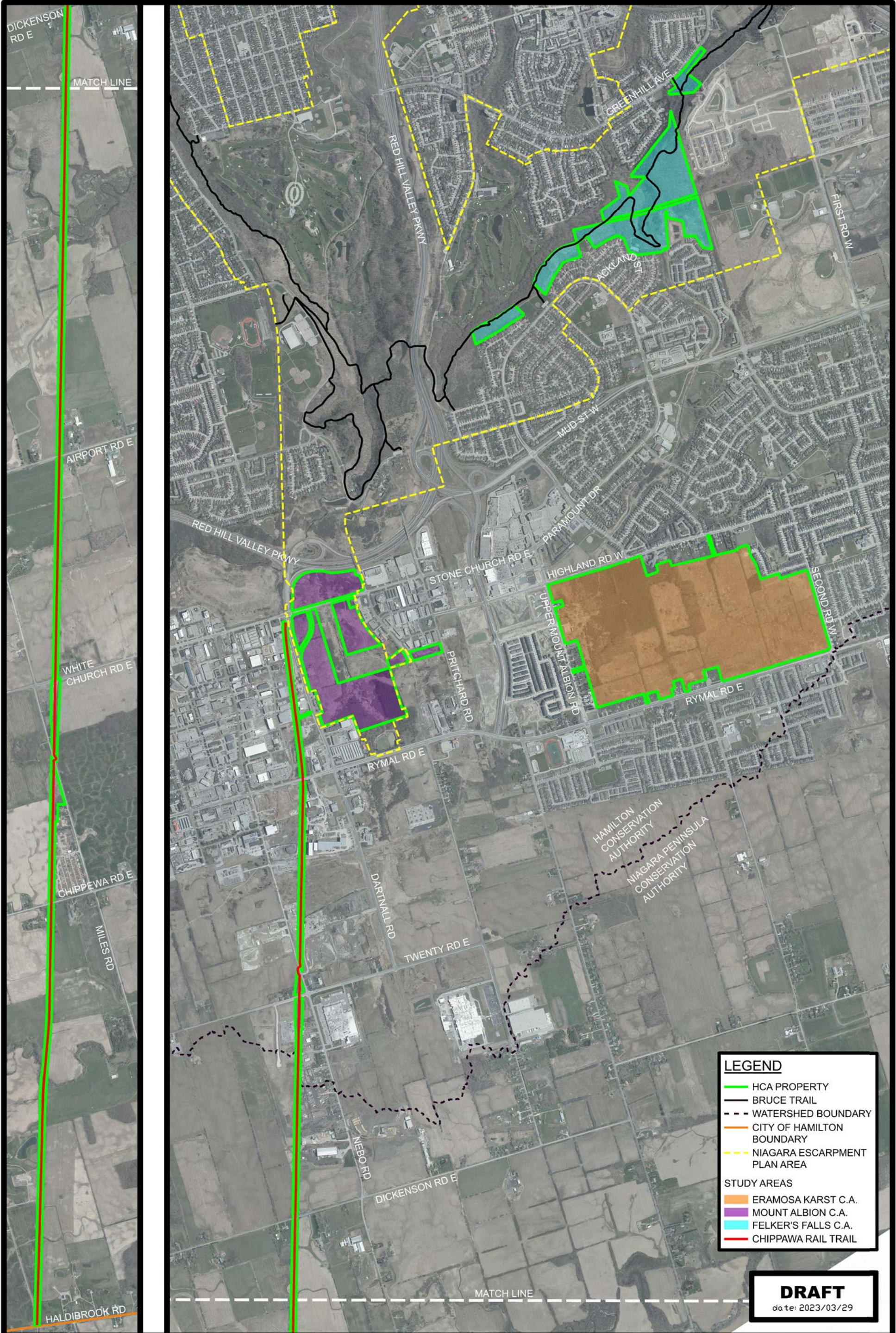
the Niagara Escarpment Commission. These agencies will be consulted and circulated for comment during the draft plan review process.

LEGAL/FINANCIAL IMPLICATIONS

Funding for the preparation of these plans has been arranged through pre-approved annual HCA Capital project and Operational accounts.

CONCLUSIONS

These plans will support the goals as outlined in HCA's 2019-2023 Strategic Plan as well as the 10 Year Master Plan Update Strategy.



LEGEND

- HCA PROPERTY
- BRUCE TRAIL
- WATERSHED BOUNDARY
- CITY OF HAMILTON BOUNDARY
- NIAGARA ESCARPMENT PLAN AREA

STUDY AREAS

- ERAMOSA KARST C.A.
- MOUNT ALBION C.A.
- FELKER'S FALLS C.A.
- CHIPPAWA RAIL TRAIL

DRAFT
date: 2023/03/29



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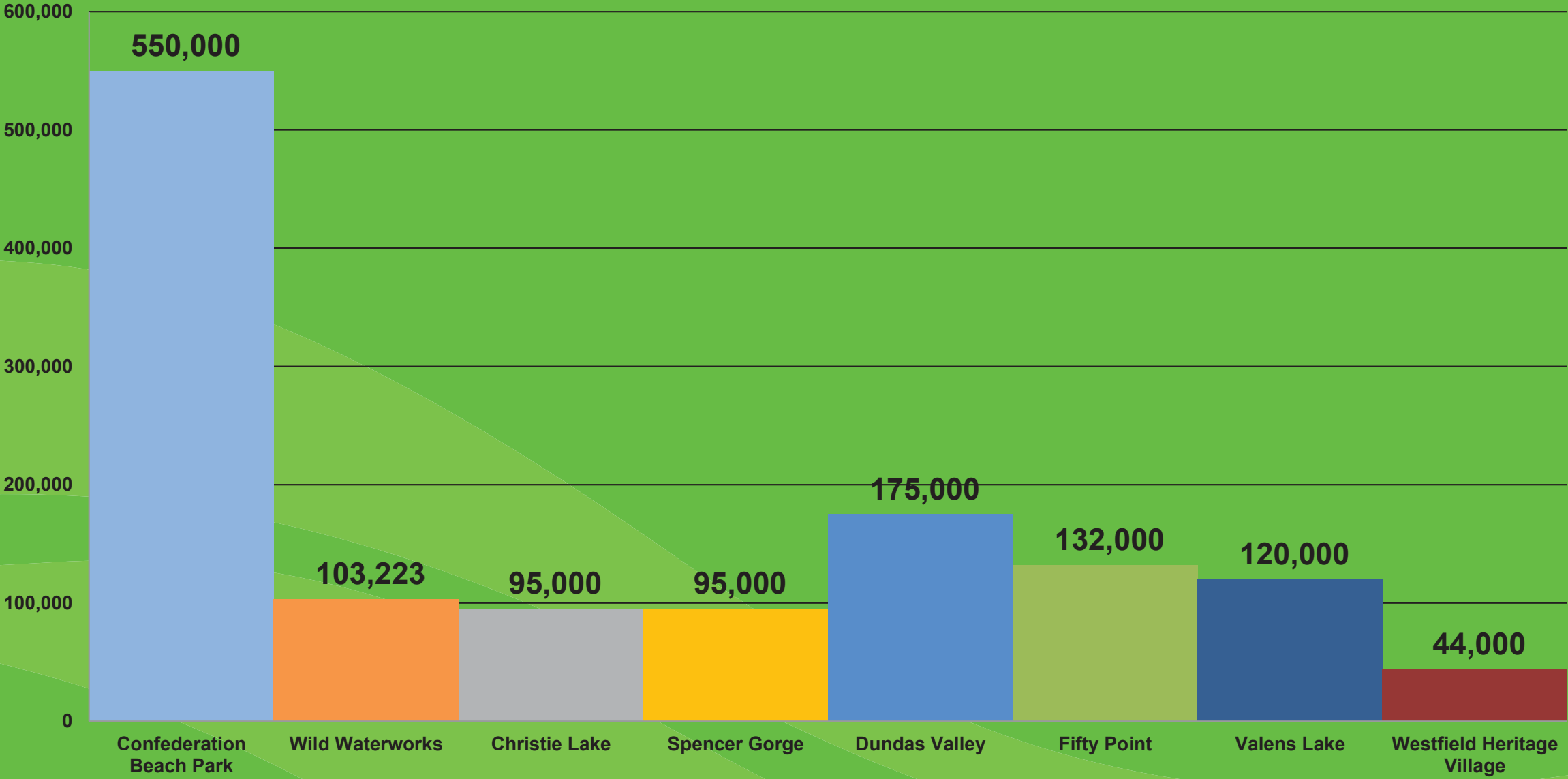
2022 Conservation Area Attendance

Conservation Advisory Board - April 13, 2022

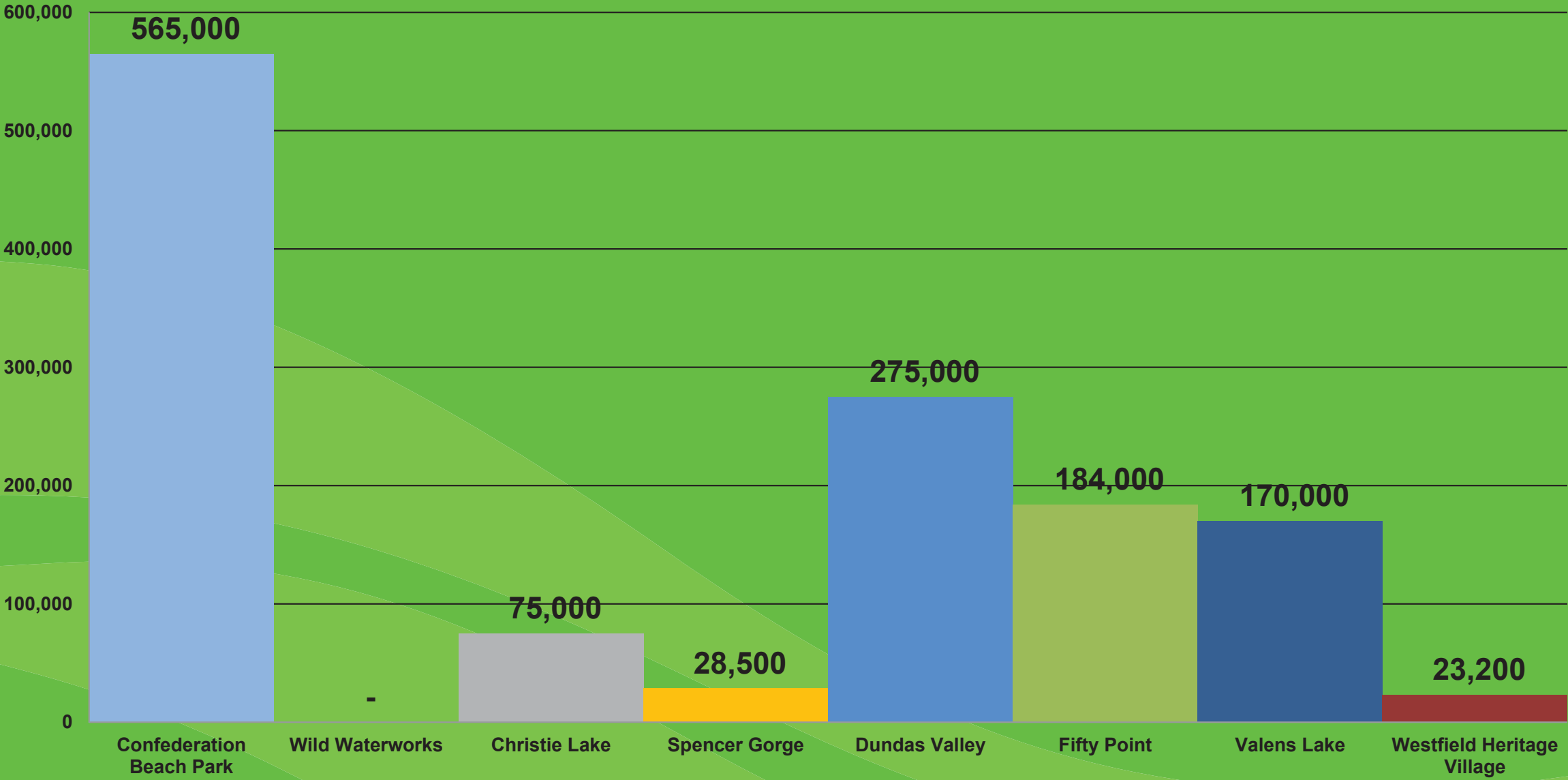


A Healthy Watershed for Everyone

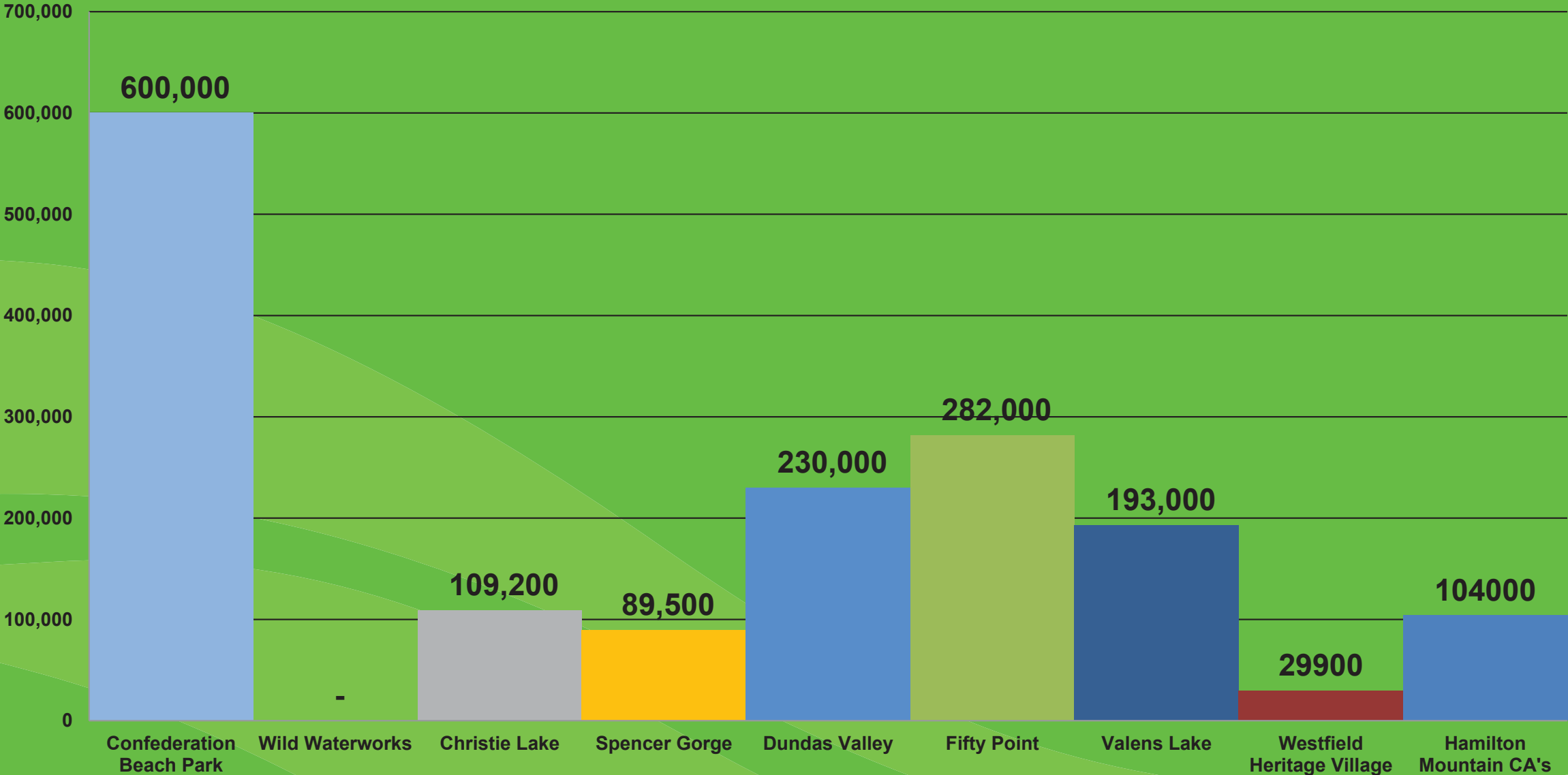
2019 Annual Attendance Estimate - ~1.31 million people



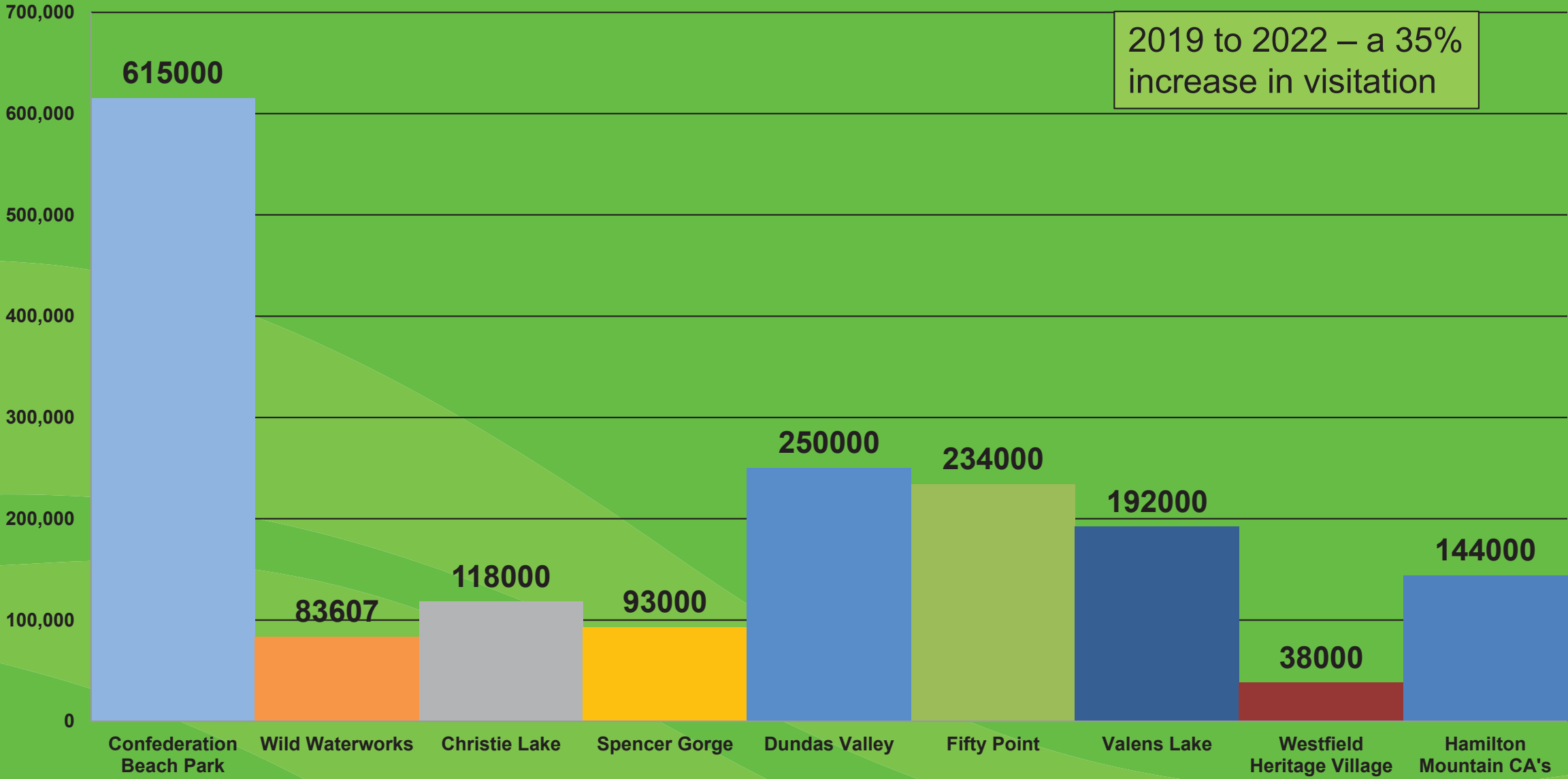
2020 Annual Attendance Estimate - ~ 1.32 million people



2021 Annual Attendance Estimate - ~1.64 million people



2022 Annual Attendance Estimate - ~1.77 million people



PAY STATIONS & AUTO GATE SYSTEMS

- First pay station installed in 1995 at Valens Lake CA
- 2022 – 21 conservation area parking lots equipped with auto gates or pay & display systems
 - 10 areas feature auto gate systems, 11 areas feature pay & display systems



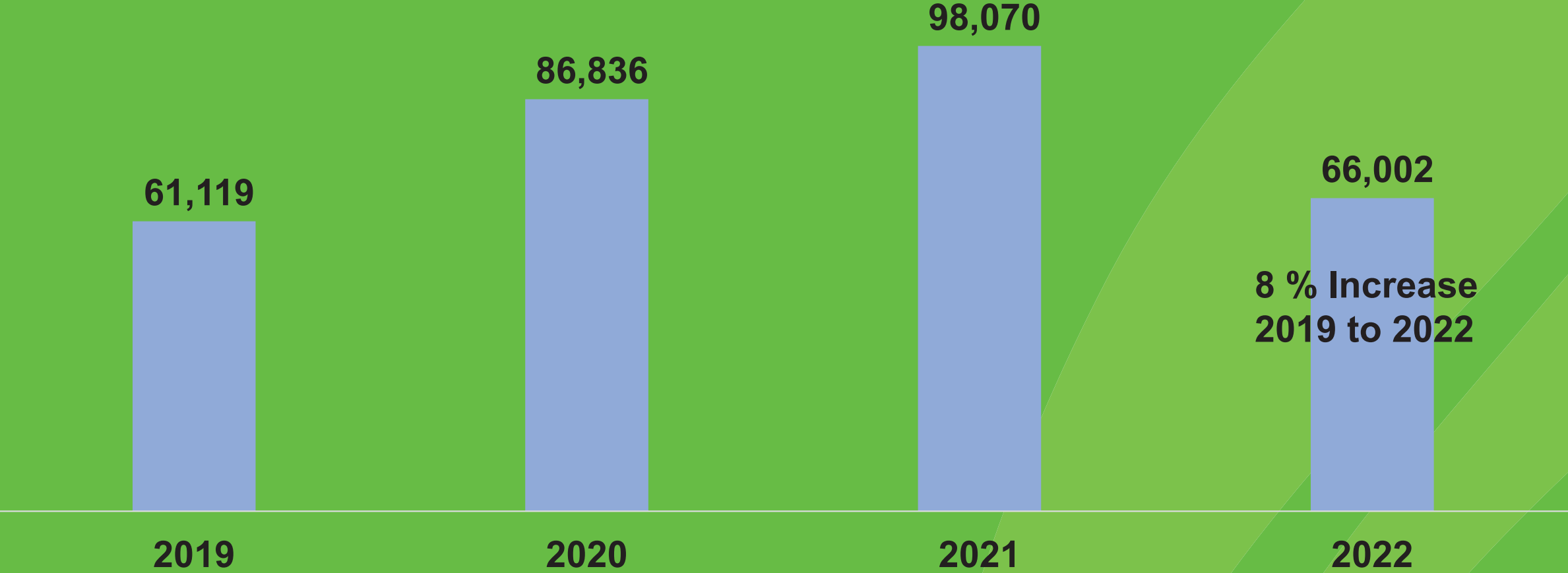
- In 2023 – Webster Falls auto gates to be installed

PAY STATIONS & AUTO GATES

- Auto gate and pay & display systems create a level playing field for all visitors and added value to the HCA Membership Pass program
- +66,000 transactions handled by electronic pay stations in 2022, representing \pm 200,000 visitors
- 4 busiest areas (Devil's Punchbowl, Tiffany Falls, Artaban Rd and Hermitage) handled 41,788 (or 63.3%) of those transactions and have twin pay stations to improve customer service and functionality



PAY STATION TRANSACTION COMPARISON 2019 TO 2022



Thank You