CONSERVATION ADVISORY BOARD

February 12, 2026

Hamilton Conservation Authority

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Hamilton Conservation Authority

A Healthy Watershed for Everyone

Notice of Meeting
Conservation Advisory Board

Thursday, February 12, 2026

4:00 p.m.

at Westfield Heritage Village Conservation Area,

1049 Kirkwall Road, Rockton

This meeting will be held fully in-person

There will be no livestream of the meeting given its offsite location. It is open to the public to attend in person

1. **Welcome** – Wayne Terryberry

2. **Declaration of Conflict of Interest** – Wayne Terryberry

3. **Approval of Agenda** – Wayne Terryberry

4. **Delegations**

5. **Election of Vice Chair**

6. **Member Briefing**

7. **Chair's Report on Board of Directors Actions** – Wayne Terryberry

   CA 2531 Ecological and Water Resources Monitoring Comprehensive Plan

8. Approval of Minutes of Previous Meeting

8.1. Minutes – Conservation Advisory Board (December 11, 2025) – Wayne Terryberry Page 1

9. Business Arising from the Minutes

10. Staff Reports/Memorandums

Reports for Recommendation

10.1. Volunteer Program Business Plan – Claire Webber Page 7

10.2. 2025 Westfield Artifact Accessions and Deaccessions – Rondalyn Brown/ Peter Lloyd Page 21

10.3. Hemlock Woolly Adelgid Management Plan – Ben Laing Page 43

Memorandums to be Received

10.4. Dundas Valley Study Area Master and Management Plans – Project Overview – Madolyn Armstrong Page 87

11. New Business

12. Next Meeting – Thursday, April 9, 2026 at 4:00 p.m.

13. Adjournment

HAMILTON CONSERVATION AUTHORITY

Conservation Advisory Board

MINUTES

December 11, 2025

Minutes of the Conservation Advisory Board meeting held on Thursday, December 11, 2025 at 4:00 p.m., at the HCA main office, 838 Mineral Springs Road, in Ancaster, and livestreamed on YouTube.

PRESENT:	**Wayne Terryberry – in the Chair** **Tyler Cunningham** **Jamie Freeman** **Haley McRae** **Sherry O'Connor** **Noah Stegman**
REGRETS:	**Brad Clark, Craig Cassar, Susan Fielding, Natalie Faught, Cortney Oliver**
STAFF PRESENT:	**Madolyn Armstrong, Jonathan Bastien, Lisa Burnside, Marlene Ferreira, Matt Hall, Lesley McDonell, Allison Morgan, Eva Novoselac, Scott Peck, Mike Stone, Jaime Tellier, Claire Webber, Sandra Winninger and Zgurzynski**
OTHERS:	**Media – None**

1. Welcome

The Chair called the meeting to order and welcomed everyone present.

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. Lisa Burnside

indicated an Addendum was circulated which contained two items: the Motion from the December 4th Board Meeting regarding Bill 68/ERO and the HCA's response to the Environmental Registry Ontario (ERO) 025-1257 regarding the consolidation of Ontario's Conservation Authorities. These will be addressed on the agenda as items 5.1.2 and 5.1.3 respectively.

CA2525 **MOVED BY: Tyler Cunningham**
SECONDED BY: Jamie Freeman

THAT the agenda be approved as amended.

CARRIED

4. Delegations

There were none.

5. Member Briefing

5.1. Overview of MECP November 18, 2025 presentation

Lisa Burnside provided an overview of the presentation shared with conservation authorities and municipalities by the Ministry of Environment, Conservation and Parks. Wayne Terryberry encouraged members to submit their comments to the ERO prior to the December 22nd deadline.

CA 2526 **MOVED BY: Sherry O'Connor**
SECONDED BY: Noah Stegman

THAT the Member Briefing regarding the overview of MECP November 18, 2025 presentation be received

CARRIED

5.1.2 Motion, from Board of Directors December 4, 2025 meeting, regarding Bill 68/ERO

Lisa Burnside provided a summary of the Motion regarding Bill 68 and the ERO as passed by the Board of Directors.

CA 2527 **MOVED BY: Tyler Cunningham**
SECONDED BY: Noah Stegman

THAT the Member Briefing regarding the Motion from the Board of Directors December 4, 2025 meeting regarding Bill 68/ERO be received.

CARRIED

5.1.3 HCA's response to Environmental Registry Ontario (ERO), 025 -1257 regarding the Consolidation of Ontario's Conservation Authorities

Lisa Burnside reviewed the HCA's response to ERO 025-1257 and answered members' questions.

CA 2528 **MOVED BY: Jamie Freeman**
SECONDED BY: Tyler Cunningham

THAT the Member Briefing regarding HCA's response to Environmental Registry Ontario (ERO), 025 -1257 regarding the Consolidation of Ontario's Conservation Authorities be received.

CARRIED

5.2 Trail Signage System Implementation Update

Madolyn Armstrong shared a presentation and provided an update of the trail signage system implementation and answered members' questions

CA 2529 **MOVED BY: Jamie Freeman**
SECONDED BY: Hayley McRae

THAT the Member Briefing regarding the Trail Signage System Implementation Update be received.

CARRIED

6. Chairman's Report on Board of Directors Actions

Wayne Terryberry indicated that the following items were approved at the December 4, 2025 Board of Director's meeting:

6.1 CA 2522 HCA's Planning Regulations Policy Document

6.2 CA 2523 Final Eramosa Karst Conservation Area Master Plan and Chippawa Rail Trail Management Plan for Approval

7. Approval of Minutes of Previous Meeting

7.1. Minutes – Conservation Advisory Board (October 9, 2025)

CA 2530 **MOVED BY: Noah Stegman**
SECONDED BY: Sherry O'Connor

THAT the minutes of the October 9, 2025 Conservation Advisory Board meeting be approved.

CARRIED

8. Business Arising from the Minutes

There was none.

9. Staff Reports/Memorandums

Reports for Recommendation

9.1. Ecological and Water Resources Monitoring Comprehensive Plan

Lesley McDonell provided a summary of the report highlighting that the goal of the Plan is to integrate all of the current monitoring programs: aquatic, terrestrial, water quality and the Natural Areas Inventory, address gaps in monitoring efforts which will provide a broader understanding of the health of the watershed and will help report on trends and changes overtime. Communication strategies will also be developed to explain watershed science and report on the impacts of climate change.

Questions regarding monitoring locations were raised. Scott P noted that monitoring occurs on HCA owned/managed lands, except for three sites, where there are existing agreements (City of Hamilton and Bruce Trail Association) as part of Category 1 programs. Noah Stegman indicated that McMaster University has sensors in lower Ancaster Creek as part of a well monitoring program in addition to reports relating the tracking of insect populations that could be shared with the HCA's ecology department.

In response to a question regarding the monitoring of erosion in the Dundas Valley, it was noted that the Dundas Valley receives storm water run-off from the communities of Dundas and Ancaster, which effects the Valley recreationally as well as environmentally. Monitoring will help determine the overall health of the Valley.

CA 2531 **MOVED BY: Jamie Freeman**

SECONDED BY: Tyler Cunningham

THAT the Conservation Advisory Board recommend to the Board of Directors,

THAT the document titled "Hamilton Conservation Authority's Ecological and Water Resource Monitoring Programs – A Comprehensive Plan for Program Development, Integration and Implementation November 2025", be approved.

CARRIED

Memorandums to be Received

9.2. Natural Areas Inventory Project Update

Kasia Zgurzynski provided an update on the project indicating that the project is a collaborative effort between many organizations including the HCA, City of Hamilton, the RBG and McMaster University, to identify significant natural areas for protections, identifying threats to biodiversity as well as opportunities for restoration across Hamilton. Statistics were shared, including the number of locations where work has been completed as well as the type of sampling completed. Clarification was provided with respect to the use of iNaturalist data and how it is used.

CA 2532 **MOVED BY: Tyler Cunningham**
SECONDED BY: Noah Stegman

THAT the memorandum entitled Natural Areas Inventory Project Update be received.

CARRIED

9.3 2025 Riparian Buffer Analysis Project Process and Results

Eva Novoselac provided a summary of the memorandum, highlighting that riparian buffers of the watercourses within the Hamilton Harbour watershed were analyzed to identify their restoration potential. The project was last completed in 2003, allowing for a comparison of conditions and identifying where riparian buffer enhancement is most needed.

CA 2533 **MOVED BY: Sherry O'Connor**
SECONDED BY: Noah Stegman

THAT memorandum entitled Riparian Buffer Analysis Project Process and Results be received

CARRIED

9.4 HCA 2025 Climate Change Initiatives Update and 2026 Priorities

Allison Morgan gave an overview of the memorandum, highlighting the HCA uses its Climate Change Strategy to guide the organization's efforts to reduce greenhouse gas emissions. Since 2019, total green house gas emissions have been reduced by 66 tCO_2e, due in part to the upgrade fleet vehicles; two hybrid electric trucks and one electric truck were purchased. Additional projects are planned for 2026, such as implementing charging stations for HCA fleet vehicles at HCA conservation areas.

Discussion occurred with respect to finding ways to further reduce greenhouse emissions. It was noted that by 2034, 100% of the eligible vehicles within the fleet will be replaced with alternately fueled vehicles. Some vehicles and equipment are not eligible for replacement as the alternative is not operationally efficient.

CA 2534 **MOVED BY: Haley McRae**
SECONDED BY: Noah Stegman

THAT memorandum HCA 2025 Climate Change Initiatives Update and 2026 Priorities be received

CARRIED

10. New Business

There was none.

11. Next Meeting

The next meeting of the CAB is scheduled for Thursday, February 12, 2026 at 4:00 p.m., at the HCA Main Administration Office – Woodend Auditorium.

12. Adjournment

On motion, the meeting was adjourned.

Report to:	Conservation Advisory Board
Approved for Circulation By:	Lisa Burnside, CAO
Reviewed By:	T. Scott Peck, MCIP, RPP, Deputy CAO, Director, Watershed Management Services Amanda Martin, Executive Director, Hamilton Conservation Foundation
Prepared By:	Claire Webber, Volunteer Engagement Coordinator
Meeting Date:	February 12, 2026
Subject:	Volunteer Program Business Plan

Recommendation:

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

THAT the HCA Volunteer Business Plan be approved as presented

Executive Summary:

The Volunteer Program Business Plan works towards the strategic priority of "Connecting People to Nature" and encompasses both the Corporate and Community Volunteer Programs, setting clear goals for the 2026 programming season and beyond.

The aim of the Volunteer Program is to increase the involvement of community members and interest groups, businesses, and partner organizations in a variety of environmental-based projects within HCA property. This will lead to increased public awareness of the efforts of the HCA team to prioritize ecological stewardship and emphasize the great work that is being done to enhance conservation efforts in our spaces.

As such, the Volunteer Program will expand community engagement, connect people to nature, and advance HCA's strategic goals.

Staff Comment / Discussion:

The HCA's Strategic Plan 2025-2029 under the "Connecting People to Nature" priority has identified the following initiative.

- Enhance volunteer engagement opportunities and outreach efforts, promoting a sense of stewardship and community involvement.

The Volunteer Program Business Plan addresses this strategic initiative and highlights the HCA's priority to providing the community with opportunities to meaningfully engage in natural areas by participating in volunteer projects. Further, it also highlights our interest in fostering relationships within the community through non-governmental organizations, the municipality, academic institutions, community groups, interest groups, and individuals.

Likewise, the Hamilton Conservation Foundation's new strategic plan has identified the opportunity to formalize its Corporate Engagement Strategy to offer employee engagement and team-building opportunities for corporate groups, while raising funds to support the important work that HCA does.

This work directly coincides with HCA's Strategic Plan (2025-2029) Priority under "Connecting People to Nature" to support the volunteer engagement coordinator to review existing and upcoming projects and identify new opportunities and outreach efforts.

<u>Program Enhancements</u>

- Experience Menu
    - Establish a menu of volunteer experiences to offer to corporate and community groups (tree plantings, invasive species removals, trail maintenance, guided hikes, etc.)
- Website Updates
    - Publish experience menu content and ongoing offerings on HCA & HCF websites to allow for open access to event and booking details
- Group Bookings
    - Organize and deliver five corporate volunteer experiences for the 2026 programming season. This will include a gift or sponsorship of the program, and groups will receive an Impact Report and social media features
    - Facilitate 12 open community events that are accessible to the general public as an entry point to the community of volunteers
- Shared Calendar

    - Create a seasonal suite of community volunteer opportunities and input dates into shared events calendar
- Stats Tracking
    - Track all volunteer profiles, hours, and event details via DonorPerfect for easier reporting and data analysis
- Volunteer Recognition
    - Facilitate three levels of volunteer appreciation—thank you messages, personalized thank you cards & calendars, a Volunteer Appreciation Night in November 2026 at Woodend

Implementation
HCA will minimize the need for additional resources by matching volunteer opportunities with current projects outlined in the Ecology and Stewardship workplans.

The number of volunteer events per department will be limited in an effort to alleviate the existing workload and provide human power to assist with projects like invasive removals, plantings, and trail maintenance.

This thoughtful approach ensures that the program is not a burden on the staff team but rather a boon to park operations and internal departmental goals.

Collaboration with the marketing and communications team is critical to support each volunteer offering, including access to EventBrite, promotional support, digital and social media promotion.

Participation in the suite of volunteer events will be monitored and evaluated throughout the programming lifecycle to inform future decision making.

Strategic Plan Linkage:

The initiative refers directly to the HCA Strategic Plan 2025 – 2029:

- **Strategic Priority Area – Connecting People to Nature**
    - Expand volunteer engagement opportunities through the establishment of an HCA Volunteer Program

Agency Comments:

N/A

Legal / Financial Implications:

Costs associated with the proposed 2026 Volunteer Programming season will be offset through corporate donations raised through the program itself, with any excess funds supporting HCA restoration and trail improvement projects.

A budget line will be established through the Hamilton Conservation Foundation to track revenue and spending and allow for accurate reporting and responsible fiscal management. This will also provide opportunities to forecast budget requirements in future years as the program continues to grow and evolve.

Volunteers will sign off on all liability waivers, Notice of Collection and photo consent prior to engaging in volunteer activities through HCA.

Related Reports and Appendices:

Volunteer Program Business Plan 2025-2026.pdf

Hamilton Conservation
Authority | Foundation

Volunteer Program Business Plan 2025 - 2026

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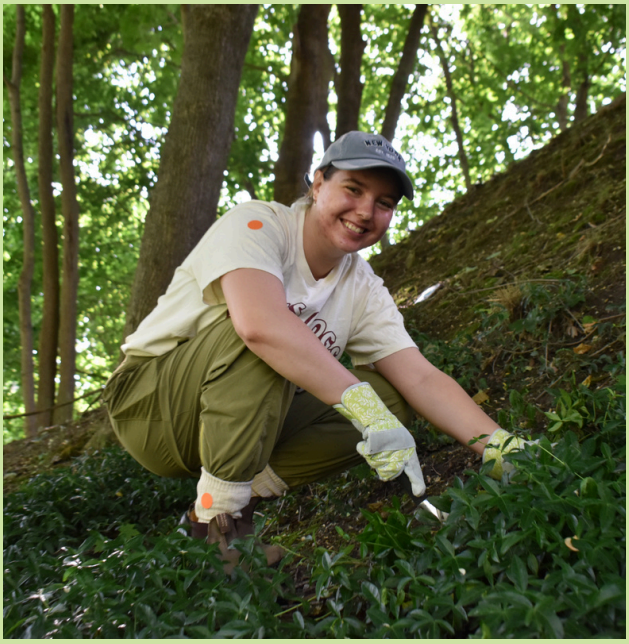

Introduction

The Hamilton Conservation Authority and Hamilton Conservation Foundation previously offer a small number of volunteer opportunities for corporate groups and community members. As the need for Corporate Social Responsibility (CSR) and Environmental Social Governmental (ESG) strategies and recognition grow, so does our opportunity to make an impact. Additionally, developing Corporate and Community Engagement Strategies within the Volunteer Program is central to both the Hamilton Conservation Foundation and Hamilton Conservation Authority's Strategic Plans.

In this proposal, we will outline how the Corporate and Community Volunteer Engagement Strategies will work in tandem, defining the scope of each program and highlighting the goals that we will work towards. It is worthy of note that these programs will be facilitated simultaneously, and will require dedication and flexibility to best achieve both sets of goals during the 2026 programming season.

Background Research

Prior to the creation of this proposal, I conducted a series of Discovery Calls with various Conservation Authorities to gain an understanding of how their programs function operationally, as well as how their volunteer and corporate engagement strategies were initially developed. This information was used to inform our Business plan by developing comparable processes and procedures, as well as using lessons learned from these colleagues.

Further details are outlined in **"HCA Volunteer Program Discovery Call Summary Report" (June 2025)**

Programming Elements:

- Program numbers & scale
- Staffing
- Software
- Waivers
- Reporting
- Budget
- Participant Recruitment
- Volunteer Recognition
- Corporate Engagement Program Pricing

Results & Discussion:

- All CAs facilitate private events for corporate groups and ask for a donation to offset the costs of event facilitation, though this ask varies greatly

- Ensuring that there are enough projects for both corporate and community groups within the field season can be difficult and we will need to figure out our priorities as a CA

Corporate Volunteer Strategy

Developing a Corporate Engagement Strategy is central to the Hamilton Conservation Foundation's Strategic Plan to **offer employee engagement and team-building** opportunities for corporate groups.

Additionally, these opportunities will be aligned with the HCA's priority projects and Conservation Area plans, and will work towards the strategic goal of **Connecting People to Nature**

5
Corporate Group Volunteer Experiences

10k
Fundraising Goal for 2026

01 | Experience Menu

Establish a menu of volunteer experiences for corporate groups

- Tree Plantings
- Invasive Species Removals
- Trail Maintenance
- Beyond!

02 | Website Updates

Publish experience menu content and ongoing offerings on HCF website

- Accordion-style display
- Prices included, with flexibility for budgets
- See "Ways of Giving" proposal for more information & pricing suggestions

03 | Group Bookings

Goal to book 5 corporate volunteer experiences for 2026 season

- Includes an event sponsorship
- Impact Reports & social media features

Community Volunteer Strategy

Further to the goal of **Connecting People to Nature**, the community volunteer strategy will aim to foster relationships within the community through non-governmental organizations, the municipality, academic institutions, community groups, interest groups, and individuals.

We will strive to become a haven for new graduates by providing opportunities for hands-on experiential learning, career development, and building networks within the environmental field.

01 | Shared Calendar

Create a seasonal suite of community volunteer opportunities and input dates into Shared Events Calendar

- Goal: 1 open community volunteer event per month

02 | Stats Tracking

Track all volunteer profiles, hours, and event details via Volunteer Management Software for easier reporting and data analysis

- Goal: Add 100 active volunteers to the DonorPerfect VMS database in 2026

03 | Working Group

Establish a Volunteer Engagement Working Group with stakeholders from across various departments.

- Goal: increase number of volunteer opportunities and cross-departmental collaborations

12
open community events in 2026

100
active volunteers in 2026

Volunteer Committees

The previous Volunteer Committee included a wide range of stakeholders involved in various aspects of the volunteer program. With the appointment of the Volunteer Engagement Coordinator, and to ensure that everyone's time is well-spent, we are suggesting that the group is split into a Steering Committee and a Working Group.

01 | Steering Committee

- **Waivers & Liability**
  - Digital Waivers (migration to SmartWaiver as per Digital Transformation Plan)
  - Review Liability Concerns & ensure best practices are being met (creation of Youth Liability Waiver, etc.)
- **Business Planning**
  - Review ongoing proposals and program changes, review & approve budgeting and offer recommendations
- **Programming**
  - Opportunity to bring ideas and new collaborators to the program
  - High-level insight on strategic direction & planning for upcoming priorities within the Strategic Plan and Master Plans

02 | Working Group

- **Waivers & Liability**
  - Review Superintendents role during volunteer events
  - Review volunteer event booking protocol
- **Programming**
  - Opportunity to bring ideas and new collaborators to the program
  - Disclose any volunteer events that have been booked by parks staff (sent in advance of the meeting to compile a seasonal calendar)

This change will result in:

- Increased staff engagement in the volunteer program across HCA
- Opportunities to collaborate & create a rich and diverse set of experiences for our volunteers

Volunteer Recognition

To ensure that our volunteers feel that their contributions are acknowledged, we will facilitate three levels of volunteer appreciation. This will provide volunteers with insight into how their efforts support the broader picture at HCA.

Thank you messages

After each event, including post-event report with impact statistics
Includes survey link to provide anonymous feedback

Personalized thank you letters & calendars

Volunteers with 10+ hours
Corporate groups who made a donation
Sent in December 2025

Volunteer Appreciation Night

Hosted at Woodend in 2026
Light refreshments and mingling
Slideshow of photos & kudos from the year
Trivia game with prizes

Budget Proposal 2026

In order to effectively run a Volunteer Program, we are requesting an annual operating budget. This will allow for accurate fiscal reporting, responsible financial management, and budget forecasting for future years as the program continues to grow and evolve.

Below are the proposed budget expenses for the 2026 fiscal year. Revenue sources can be generated from corporate donations and grants, allowing the program to become self-sustaining in years to come.

HCA & HCF Volunteer Program Budget Proposal 2026

Revenue Sources	Estimated Revenue	Notes
Events		
5+ Corporate Events	$5,000.00	Existing partnerships for annual events (RBC, Aviva, etc.) new leads and connections
Grants related to volunteering	$5,000.00	Trans Canada Trail, Wawanesa, etc.
Total=	$10,000.00	

Expense	Estimated Cost	Notes
Direct Costs		
Food & Refreshments	$2,000.00	Granola bars, apples, etc.
Volunteer Appreciation	$1,200.00	Annual volunteer appreciation night, swag for volunteers with 50+ hours
Training & Development	$250.00	Creating videos and other training resources for leadership positions
Trail Clean Up Equipment	$750.00	Garbage bags, recycling bags, gloves
Pick Stick Replacements	$300.00	Replacing broken pick-sticks over time
Misc. Event Supplies	$500.00	Name tags, Cups for water jug, hand sanitzer, etc.
Capital Expenditures		
DonorPerfect Volunteer Matrix or Better Impact	$3,000.00	$100/month when invoiced and paid annually + HST (DP) or annual fee (BP)
Canopy for Outdoor Events	$350.00	Extra canopy for use when tent is unavailable
Indirect Costs		
Staff Travel (mileage)	$1,650.00	When HCA Fleet Vehicles are unavailable in busy field season
Total=	$10,000.00	

Next Steps

We look forward to putting these goals and strategies into action! As the program continues to grow and evolve, we encourage all stakeholders to:

- **Provide feedback** to help build HCA's Volunteer Program into something we can all be proud of
- **Get involved** by joining in on a volunteer event or collaborating as a host
- **Build the HCA volunteer community** by speaking with volunteers and connecting with them to learn about their own goals and experiences

Let's continue Connecting People to Nature in meaningful ways throughout our beautiful watershed!

Thank you for your continued support and guidance as we continue to enhance the volunteer program at HCA & HCF

Claire Webber
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Hamilton Conservation Authority

A Healthy Watershed for Everyone

10.2

Report to: Conservation Advisory Board

Reviewed & Approved for Circulation By: Lisa Burnside, CAO

Prepared By: Rondalyn Brown, Manager, Westfield Heritage Village
Peter Lloyd, Collections Officer, Westfield Heritage Village

Meeting Date: February 12, 2026

Subject: 2025 Westfield Artifact Accessions and Deaccessions.

Recommendation:

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

THAT the Westfield 2025 Artifact Accessions and Deaccessions List be accepted as the artifacts to be added to the Westfield Heritage Village Conservation Area and the Hamilton Conservation Authority collection or artifacts to be removed from the WHVCA and HCA collection.

Executive Summary:

Westfield is a living history museum dedicated to the collection, preservation and presentation of objects associated with the cultural and natural history of this area. Westfield maintains an artifact and archival collection consisting of more than 25,000 objects reflecting the social, cultural and material history of the area. The museum is committed to managing this collection according to current professional standards for acquisition, preservation, documentation, research, deaccession and use of the artifact collection.

Objects acquired for the collection will be consistent with the mandate, goals and priorities of the site. Objects collected will normally represent the types of material goods that would have been locally manufactured, routinely available or the product of local activity in Southern Ontario from the period 1790-1925. They must be in a condition suitable for display or research.

Objects in the collection that have been accessioned in error or that are in very poor condition, and or incomplete to the extent that they are no longer an asset to the museum, will be removed from the collection in accordance with our collection policy and the best practices of the Ontario Museums community.

The purpose of this report is to bring forward items to add to, or subtract from, the artifact collection as detailed by staff below.

Staff Comment / Discussion:

Westfield staff is diligent about adhering to the very important collections management and provincial museum standards to ensure the HCA is managing the artifact collection in a professional manner.

Westfield 2025 Artifact Accessions List

The following items are recommended to be accepted into the Westfield Heritage Village Conservation Area permanent artifact collection in 2025.

- Deck of playing cards, early 20th Century
- Card Table cover
- Bridge Tournament score cards, group of 5
- Fabric art patterns, group of 3
- 1 Pair checkered mittens
- Set of four brass beading trays
- 6 miniature china doll torsos
- Steel guitar slide
- Brass pocket match box
- Dress, 1898
- 1 Pair, brass carriage lamps
- Set of 7 cups and saucers Mason's Vista pattern, mid 1800's
- Medical weigh scale and bassinet for weighing babies
- Electric lamp, S and S brand, Brass shade, early 20th Century
- Buggy Jack
- Group of two garden rakes, wood and metal
- Group of three glass decanters
- Silver plate decanter stand
- Clockwork rotisserie "spit jack" for open hearth cooking
- Wooden tea cart early 20th Century

- Group of 3 rug hooking devices
- Group of two hooking awls
- Group of seven crochet hooks
- 1 Pair, sewing scissors, crane motif.
- Group of 12 glass bottles, hand made
- Telephone, Daffodil style, early 20th Century

Westfield 2025 Artifact Deaccessions List

Please see the attached Excel file (Westfield deaccession list 2025.xlsx) to review the list of items recommended to be removed from the Westfield Heritage Village Conservation Area permanent artifact collection, due to their very poor and incomplete condition, in 2025.

Strategic Plan Linkage:

The initiative refers directly to the HCA Strategic Plan 2025 - 2029:

- **Strategic Priority Area – Connecting People to Nature**
  - Initiatives – Strengthen and continue to deliver environmental and cultural heritage education and outreach programs that connect people to nature and foster conservation

Agency Comments:

Not applicable.

Legal / Financial Implications:

HCA assumes liability and responsibility for the appropriate and professional management of the Westfield Heritage Village artifact collection.

Related Reports and Appendices:

- Westfield Deaccession List 2025

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Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	001.0013.0001	eye glasses, pince					Deaccessioned 2025	Warehouse	
O	001.0074.0004	rug, rag - canvas					Deaccessioned 2025	Warehouse	
O	005.0040.0006	tin container “instant aids for cuts and					Deaccessioned 2025	Storehouse	
O	005.0040.0007	tin container “instant aids for cuts, bu					Deaccessioned 2025	School	
O	005.0052.0066	rag rug, hooked					Deaccessioned 2025	Storehouse	
O	005.0053.0003	crock, 1 gallon, medalta					Deaccessioned 2025	Warehouse	
O	007.0006.0010	soup bowl			china, bridgewood and son, white with gold trim, gold grape design, @ 1880s		Deaccessioned 2025	Warehouse	
O	014.0008.0001	Hooked Rug, small			Hooked rug, displaying red house child and cat, by cinderella price (from binkly church)		Deaccessioned 2025	Warehouse	
O	015.0016.0002	medicine bottle, clear glass, scapsici			medicine bottle, clear glass, capsici		Deaccessioned 2025	Warehouse	
O	015.0051.0002	apothedcary stock bottle, P. curcum a e					Deaccessioned 2025	Drug Store	
O	018.0005.0001	tea tin			marshall bros. london, on., gray		Deaccessioned 2025	Warehouse	
O	018.0006.0001	tea tin			marshall bros. london, on., gray		Deaccessioned 2025	Warehouse	
O	018.0007.0001	tin, square			grey		Deaccessioned 2025	Warehouse	
O	018.0014.0001	fuel can, red cap			red cap, 1gal.		Deaccessioned 2025	Warehouse	
O	018.0017.0001	crate, corned beef			small, wood, hereford corned beef		Deaccessioned 2025	Warehouse	
O	018.0020.0001	tin, neilson pure cocoa			cylinder		Deaccessioned 2025	Warehouse	
O	018.0030.0001	tin			squared, no label		Deaccessioned 2025	Warehouse	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	018.0038.0001	tea tin			dragon and stork images, white with rust		Deaccessioned 2025	Warehouse	
O	018.0042.0001	tin, painted white			silver gloss starch, burned bottom		Deaccessioned 2025	Warehouse	
O	018.0048.0001	scale, columbia, functional, 17489			landers, frary & clark, green		Deaccessioned 2025	Warehouse	
O	018.0055.0001	tin, chewing tobacco			big ben chewing tobacco, red and yellow, no lid		Deaccessioned 2025	Warehouse	
O	018.0056.0001	tin, chewing tobacco			big ben chewing tobacco, red and yellow, no lid		Deaccessioned 2025	Warehouse	
O	018.0061.0001	cigarette maker, model a, v-master			10147, metal, wood, paper		Deaccessioned 2025	Warehouse	
O	018.0064.0001	lid, silver colour, unknown item			raised top		Deaccessioned 2025	Warehouse	
O	018.0067.0001	tea tin			marshall bros. & co. tea merchants		Deaccessioned 2025	Warehouse	
O	018.0078.0001	can, sample gin pills			small, worn condition		Deaccessioned 2025	Warehouse	
O	018.0079.0001	tin, puretest a.s.a tablet					Deaccessioned 2025	Warehouse	
O	018.0092.0001	tin, cigarettes			buckingham cigarettes, philip morris & co., rough shape		Deaccessioned 2025	Warehouse	
O	018.0099.0001	box, cigars			marguerite long, no lid		Deaccessioned 2025	Warehouse	
O	018.0100.0001	lid, cigar box			millgan's arabella habana cigar box lid, woman on cover		Deaccessioned 2025	Warehouse	
O	018.0115.0001	tin, bean and westlake's			black, unknown blue stones were inside		Deaccessioned 2025	Warehouse	
O	018.0193.0001	scale tray holder, black, large					Deaccessioned 2025	Warehouse	
O	018.0197.0001	scale, health-o-meter			broken glass		Deaccessioned 2025	Warehouse	
O	018.0200.0001	jar, phosphate buffer drymix ph7.2			brown, fisher science co.		Deaccessioned 2025	Warehouse	
O	018.0205.0001	jar, benzocaine merch powder			small		Deaccessioned 2025	Warehouse	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	018.0206.0001	jar, gray's syrup of red spruce gum			small		Deaccessioned 2025	Warehouse	
O	018.0213.0001ab	jar and package, riasol external fluid			4oz, poisonous		Deaccessioned 2025	Warehouse	
O	018.0215.0001	tin, cough lozenges			keating's		Deaccessioned 2025	Warehouse	
O	018.0216.0001	jar, sedocaine ointment			clear, roberts biological labratories, black and green		Deaccessioned 2025	Warehouse	
O	018.0231.0001	tin, grey, large					Deaccessioned 2025	Warehouse	
O	018.0234.0001	tin, medium, silver					Deaccessioned 2025	Warehouse	
O	018.0235.0001	tin, medium, silver					Deaccessioned 2025	Warehouse	
O	018.0236.0001	tin, medium, silver					Deaccessioned 2025	Warehouse	
O	972.0036.0000	BOTTLE, MEDICINE					Deaccessioned 2025	WAREHOUSE	
O	972.0038.0000	BOTTLE, MEDICINE					Deaccessioned 2025		
O	972.0043.0000	BOX					Deaccessioned 2025	WAREHOUSE	
O	973.0635.0003	CANE					Deaccessioned 2025		
O	973.0642.0000	TIN					Deaccessioned 2025		
O	973.0667.0000	CAN					Deaccessioned 2025		
O	973.0668.0002	BOX plaster					Deaccessioned 2025	Warehouse	
O	973.0669.0000	CAN furnace cement					Deaccessioned 2025	Warehouse	
O	973.0682.0000	LID					Deaccessioned 2025		
O	973.0686.0001	PIPE					Deaccessioned 2025	WAREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	973.0696.0001	BOX					Deaccessioned 2025	WAREHOUSE	
O	973.0696.0002	BOX					Deaccessioned 2025	WAREHOUSE	
O	973.0696.0003	BOX					Deaccessioned 2025	WAREHOUSE	
O	973.0698.0001	CAN					Deaccessioned 2025	WAREHOUSE	
O	973.0800.0003	INDIAN CLUB					Deaccessioned 2025	WAREHOUSE	
O	973.0908.0001	SKATE, ICE					Deaccessioned 2025	WAREHOUSE	
O	976.0041.0001	BOX					Deaccessioned 2025		
O	977.0003.0896	CAN					Deaccessioned 2025		
O	977.0003.0941	JAR					Deaccessioned 2025	WAREHOUSE	
O	978.0341.0001 a-c	BAND BOX					Deaccessioned 2025	Gillen	
O	978.0346.0003	TRAY, SERVING					Deaccessioned 2025	WAREHOUSE	
O	978.0346.0012	ORNAMENT, HAIR					Deaccessioned 2025	WAREHOUSE	
O	978.0346.0015	ORNAMENT, HAIR					Deaccessioned 2025	WAREHOUSE	
O	978.0346.0037	FILE, NAIL					Deaccessioned 2025	WAREHOUSE	
O	978.0386.0001	CHALKBOARD					Deaccessioned 2025		
O	978.0389.0001	CHALKBOARD					Deaccessioned 2025		
O	978.0414.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0418.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	978.0423.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0428.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0435.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0441.0001	PROBLEMATICAL					Deaccessioned 2025	WAREHOUSE	
O	978.0442.0001	PROBLEMATICAL					Deaccessioned 2025	WAREHOUSE	
O	978.0448.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0453.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0466.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0467.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0469.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0470.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0471.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0472.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0473.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0474.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0476.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0477.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0478.0001	LID					Deaccessioned 2025	WAREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	978.0479.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0481.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0482.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0486.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0492.0001	FLASK, POCKET					Deaccessioned 2025	WAREHOUSE	
O	978.0494.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	978.0503.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	978.0513.0001	FLASK, POCKET					Deaccessioned 2025	WAREHOUSE	
O	978.0518.0001	JAR, CANNING					Deaccessioned 2025	WAREHOUSE	
O	978.0519.0001	JAR, CANNING					Deaccessioned 2025	WAREHOUSE	
O	979.0001.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	979.0008.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	979.0010.0001	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	979.0066.0001	SAUCEBOAT					Deaccessioned 2025	WAREHOUSE	
O	979.0071.0001	JUG					Deaccessioned 2025		
O	979.0076.0001	TEAPOT					Deaccessioned 2025		
O	979.0077.0001 a-b	TEAPOT					Deaccessioned 2025		
O	979.0140.0005	RUG					Deaccessioned 2025	Warehouse	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	980.0571.0001-66	JAR					Deaccessioned 2025	WAREHOUSE	
O	980.0572.0030	HAIRPIN					Deaccessioned 2025	WAREHOUSE	
O	980.0585.0008	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	980.0585.0011	IRON, CURLING					Deaccessioned 2025	WAREHOUSE	
O	982.0031.0017	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	982.0032.0006 a-b	JAR, CANNING					Deaccessioned 2025		
O	983.0007.0018	TABLE COVER, Tassled					Deaccessioned 2025	Storehouse	Box a-36
O	983.0017.0002	BOX					Deaccessioned 2025	WAREHOUSE	
O	983.0017.0003	BOTTLE					Deaccessioned 2025	WAREHOUSE	
O	983.0028.0008	CASE, MEDICINE					Deaccessioned 2025	SERVICE, GEN-4	
O	985.0468.0001	BOTTLE, APOTHECARY					Deaccessioned 2025	WAREHOUSE	
O	986.0342.0001	TRAY, SERVING					Deaccessioned 2025	WAREHOUSE	
O	986.0371.0001 a-b	POT, CHAMBER					Deaccessioned 2025		
O	986.0493.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	986.0494.0001	LID					Deaccessioned 2025	WAREHOUSE	
O	986.0508.0001	Cup, tea					Deaccessioned 2025		
O	986.0517.0001	LID					Deaccessioned 2025		
O	986.0522.0001	BOTTLE, APOTHECARY					Deaccessioned 2025		

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	986.0523.0001	BOTTLE, APOTHECARY					Deaccessioned 2025		
O	986.0525.0001	BOTTLE, APOTHECARY					Deaccessioned 2025	Warehouse	
O	986.0526.0001	BOTTLE, APOTHECARY					Deaccessioned 2025	Warehouse	
O	986.0528.0001	PENDULUM					Deaccessioned 2025		
O	986.0540.0001	BOX					Deaccessioned 2025		
O	986.0547.0001	CAN					Deaccessioned 2025		
O	986.0554.0001	JAR, CANNING					Deaccessioned 2025		
O	986.0573.0001	CANISTER					Deaccessioned 2025		
O	986.0588.0001 a-b	JAR, CANNING					Deaccessioned 2025		
O	986.0592.0001 a-c	JAR, CANNING					Deaccessioned 2025		
O	986.0656.0001	LID					Deaccessioned 2025		
O	986.0665.0001	LID					Deaccessioned 2025		
O	986.0951.0001	HAIRPIN					Deaccessioned 2025	WAREHOUSE	
O	986.1116.0001 a-b	HOOP, EMBROIDERY					Deaccessioned 2025	STOREHOUSE	
O	986.1482.0001	BOWL					Deaccessioned 2025	WAREHOUSE	
O	986.1517.0001	TRAY, SERVING					Deaccessioned 2025	WAREHOUSE	
O	986.1562.0001	GOBLET					Deaccessioned 2025	WAREHOUSE	
O	986.1592.0001	CHALKBOARD					Deaccessioned 2025		

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	986.1613.0001	BOX					Deaccessioned 2025		
O	986.1621.0001	TIN					Deaccessioned 2025		
O	986.1684.0001	TIN					Deaccessioned 2025	Warehouse	
O	986.1685.0001	TIN					Deaccessioned 2025		
O	986.1686.0001	BIN, STORAGE					Deaccessioned 2025	WAREHOUSE	
O	986.1740.0001 a-b	PLATE, HOT					Deaccessioned 2025	WAREHOUSE	
O	986.1741.0001	CADDY					Deaccessioned 2025	WAREHOUSE	
O	986.1847.0001	INSULATOR					Deaccessioned 2025		
O	986.1950.0001	TIN					Deaccessioned 2025	WAREHOUSE	
O	986.1951.0001	TIN					Deaccessioned 2025	WAREHOUSE	
O	986.2352.0001	BOX					Deaccessioned 2025		
O	987.0029.0001	RAZOR					Deaccessioned 2025	WAREHOUSE	
O	987.0166.0001	BOX					Deaccessioned 2025	WAREHOUSE	
O	987.0313.0001 a	BOTTLE					Deaccessioned 2025		
O	987.0316.0001 a	BOTTLE					Deaccessioned 2025	Warehouse	
O	987.0318.0001 a	BOTTLE					Deaccessioned 2025	SERVICE, GENERAL-1C	
O	987.0566.0001	COFFEE POT					Deaccessioned 2025	WAREHOUSE	
O	987.0676.0001	RAZOR					Deaccessioned 2025	WAREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	987.0676.0002	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2E	
O	987.0676.0003	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2E	
O	987.0676.0004	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2E	
O	987.0676.0005	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2E	
O	987.0676.0006	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2E	
O	987.0676.0007	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2E	
O	987.0677.0001 dp1	RAZOR					Deaccessioned 2025	WAREHOUSE	
O	987.0677.0002	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2D	
O	987.0677.0003	RAZOR					Deaccessioned 2025	SERVICE, MAIN-2D	
O	987.1502.0001	BOWL					Deaccessioned 2025	Warehouse	
O	987.2113.0001	PROBLEMATICAL					Deaccessioned 2025	WAREHOUSE	
O	987.2151.0001	TIN					Deaccessioned 2025	WAREHOUSE	
O	987.2228.0001	SPOOL					Deaccessioned 2025	Marr Shop	
O	987.2386.0001	CAN					Deaccessioned 2025	BARN 2A-2	
O	987.2551.0001	MIRROR, HAND					Deaccessioned 2025	WAREHOUSE	
O	987.2642.0001	IRON, CURLING					Deaccessioned 2025	WAREHOUSE	
O	987.2741.0001	KNIFE, PAPER					Deaccessioned 2025	WAREHOUSE	
O	987.2850.0001	BOX					Deaccessioned 2025	BARN 2A-5	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	987.2867.0001	CHEST, SILVER					Deaccessioned 2025	WAREHOUSE	
O	987.2905.0001	PROBLEMATICAL					Deaccessioned 2025	WAREHOUSE	
O	987.3075.0001	STEREOSCOPE					Deaccessioned 2025	SERVICE, UP-3	
O	987.3493.0001 a-c	TELEPHONE					Deaccessioned 2025	SERVICE, MAIN-6C	
O	987.3625.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	987.3626.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	987.3632.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	987.3633.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	987.3634.0001 a-b	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	987.3635.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	987.3636.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	987.3665.0001	CASE, MEDICINE					Deaccessioned 2025	WAREHOUSE	
O	987.4109.0001 a-b	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4110.0001 a-b	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4111.0001	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4113.0001	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4134.0001	LID, CHAMBER POT					Deaccessioned 2025	WAREHOUSE	
O	987.4135.0001 a-e	CRUET STAND					Deaccessioned 2025	WAREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	987.4149.0001	JAR					Deaccessioned 2025	WAREHOUSE	
O	987.4159.0009	Container			contained in 987.4159.0001		Deaccessioned 2025	Warehouse	
O	987.4184.0001	BOWL					Deaccessioned 2025	WAREHOUSE	
O	987.4209.0001	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4210.0001	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4211.0001	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4212.0001	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4213.0001	EYEGLASSES					Deaccessioned 2025	WAREHOUSE	
O	987.4218.0001	KNIFE, BUTCHER					Deaccessioned 2025	WAREHOUSE	
O	994.0025.0034	SAUCER					Deaccessioned 2025	WAREHOUSE	
O	994.0027.0022	PAN					Deaccessioned 2025	WAREHOUSE	
O	995.0005.0010	RUG WOVEN RED/GOLD					Deaccessioned 2025	Warehouse	
O	995.0005.0011	RUG, WOVEN RED/GREEN					Deaccessioned 2025	STOREHOUSE	
O	995.0305.0001	RUG RAG 5' x 6' RED WHI BLA PUR BLU					Deaccessioned 2025		
O	995.0493.0001	BOX MEAT WOODEN					Deaccessioned 2025	Warehouse	
O	995.0542.0001	BOTTLE WITH GLASS STOPPER TOBACCO JUICE					Deaccessioned 2025	Warehouse	
O	995.0703.0001	BASKET, ROUND, CLOTH LINED					Deaccessioned 2025	STOREHOUSE	
O	996.0027.0001	RAG RUG					Deaccessioned 2025	STOREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	996.0030.0001	TIN, CARR'S CHOCHLATE BISCUITS					Deaccessioned 2025	WAREHOUSE	
O	996.0044.0002	GLASSES, MAGNIFYING					Deaccessioned 2025	WAREHOUSE	
O	997.0432.0001	KNIFE, BUTTER, SILVER SABRE BLADE, FRENC					Deaccessioned 2025	Warehouse	
O	997.0435.0001	KNIFE, DINNER, FAUX IVORY HANDLE					Deaccessioned 2025	Warehouse	
O	997.0443.0001	tray, silver plate, large					Deaccessioned 2025	Warehouse	
O	997.0575.0001	metal crest “ala”					Deaccessioned 2025	Warehouse	
O	997.0580.0001	TWEEZERS, sTEEL					Deaccessioned 2025	Warehouse	
O	997.0585.0001	NAIL FILE					Deaccessioned 2025	Warehouse	
O	997.0589.0001	SEALER, PERFECT SEAL					Deaccessioned 2025	Warehouse	
O	997.0610.0001	BOTTLE, VIOLET BLUE, BROKEN NECK					Deaccessioned 2025	Warehouse	
O	997.0619.0001	BOTTLE, LOZEGE, LGE, ROBERT GIBSON					Deaccessioned 2025	Warehouse	
O	997.0626.0001	SEALER, GEM					Deaccessioned 2025	Warehouse	
O	997.0668.0001	razor, straight					Deaccessioned 2025	Warehouse	
O	997.0672.0001	barrette, tortoise shell look					Deaccessioned 2025	Warehouse	
O	998.0041.0001	bottle medicine, “bronchial mixture”					Deaccessioned 2025	Warehouse	
O	999.0016.0001	rag rug, oval, 4’, multi colour			spiral weave, stitched together		Deaccessioned 2025	Warehouse	
O	999.0017.0001	rag rug, hooked, primative,			red, white and blue, 3’x2’		Deaccessioned 2025	Warehouse	
O	x970.0006.0001	RUG					Deaccessioned 2025	Storehouse	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	x970.0032.0001	PROBLEMATICAL					Deaccessioned 2025	WAREHOUSE	
O	x970.0339.0001	BOTTLE, APOTHECARY					Deaccessioned 2025		
O	x970.0359.0001	TIN					Deaccessioned 2025		
O	x970.0361.0001	TIN					Deaccessioned 2025		
O	x970.0363.0001	BOTTLE, APOTHECARY					Deaccessioned 2025		
O	x970.0402.0001 dp1	JAR					Deaccessioned 2025	WAREHOUSE	
O	x970.0469.0001	IRON, CURLING					Deaccessioned 2025	WAREHOUSE	
O	x970.0531.0001	TIN					Deaccessioned 2025		
O	x970.0532.0001	TIN					Deaccessioned 2025		
O	x970.0556.0001	CAN, OIL					Deaccessioned 2025	SPINNING SHOP	
O	x970.0557.0001	CAN, OIL					Deaccessioned 2025	SPINNING SHOP	
O	x970.0558.0001	CAN					Deaccessioned 2025	SPINNING SHOP	
O	x970.0561.0001	CAN					Deaccessioned 2025	SPINNING SHOP	
O	x970.0562.0001	CAN					Deaccessioned 2025	SPINNING SHOP	
O	x970.0563.0001	CAN					Deaccessioned 2025	SPINNING SHOP	
O	x970.0588.0001	TIN					Deaccessioned 2025	SPINNING SHOP	
O	x970.0869.0001	TEAPOT					Deaccessioned 2025		
O	x970.0946.0001	CUP					Deaccessioned 2025		

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	x971.0095.0002 a-b	HOLDER					Deaccessioned 2025	SERVICE, GEN-5	
O	x971.0309.0001	VASE					Deaccessioned 2025	Misener	
O	x971.0322.0001	VASE					Deaccessioned 2025	WAREHOUSE	
O	x971.0355.0001	PITCHER, SYRUP					Deaccessioned 2025	WAREHOUSE	
O	x971.0369.0001	BOWL					Deaccessioned 2025	WAREHOUSE	
O	x971.0380.0001	VASE					Deaccessioned 2025		
O	x971.0384.0001	GLASS, PARFAIT					Deaccessioned 2025	WAREHOUSE	
O	x971.0389.0001	GLASS					Deaccessioned 2025	WAREHOUSE	
O	x971.0510.0001	VASE					Deaccessioned 2025	SERVICE, MAIN-2F	
O	x971.0519.0002	GLASS					Deaccessioned 2025		
O	x971.0533.0001	JAR, CANNING					Deaccessioned 2025	WAREHOUSE	
O	x971.0568.0001	PITCHER					Deaccessioned 2025	WAREHOUSE	
O	x971.0577.0002	PITCHER					Deaccessioned 2025	WAREHOUSE	
O	x971.0579.0001	POT, CHAMBER					Deaccessioned 2025	D'Aubigny Inn	
O	x971.0723.0001	BOTTLE, MEDICINE					Deaccessioned 2025	WAREHOUSE	
O	x971.0856.0001	BOTTLE, APOTHECARY					Deaccessioned 2025		
O	x972.0029.0001	CUP, MUSTACHE					Deaccessioned 2025	SERVICE, MAIN-2F	
O	x972.0109.0000	Cup, tea					Deaccessioned 2025		

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	x972.0110.0000	Cup, tea					Deaccessioned 2025	WAREHOUSE	
O	x972.0150.0000	COMPACT					Deaccessioned 2025	WAREHOUSE	
O	x972.0187.0000	BOWL					Deaccessioned 2025	WAREHOUSE	
O	x972.0248.0000	KNIFE, DINNER					Deaccessioned 2025	WAREHOUSE	
O	x972.0365.0000	CHALKBOARD					Deaccessioned 2025		
O	x972.0413.0000	TIN					Deaccessioned 2025		
O	x972.0417.0000	TIN					Deaccessioned 2025		
O	x972.0474.0000	PITCHER					Deaccessioned 2025	WAREHOUSE	
O	x972.0485.0000	PLATE, DESERT					Deaccessioned 2025		
O	x972.0530.0000	POT, CHAMBER					Deaccessioned 2025	WAREHOUSE	
O	x972.0661.0001	BOWL, MIXING					Deaccessioned 2025	SERVICE, MAIN-2F	
O	x972.0867.0001	BOWL					Deaccessioned 2025	WAREHOUSE	
O	x974.0152.0001	cup, tea					Deaccessioned 2025	WAREHOUSE	
O	x974.0154.0001	Cup, tea					Deaccessioned 2025		
O	x974.0155.0001	cup, tea					Deaccessioned 2025	WAREHOUSE	
O	x974.0215.0001 a-b	TEAPOT					Deaccessioned 2025	WAREHOUSE	
O	x974.0220.0001 a-b	BOWL, SUGAR					Deaccessioned 2025	WAREHOUSE	
O	x974.0223.0001 a-b	BOWL, SUGAR					Deaccessioned 2025	WAREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	x974.0224.0001	BOWL, SUGAR					Deaccessioned 2025	WAREHOUSE	
O	x974.0227.0001 a-b	DISH, VEGETABLE					Deaccessioned 2025	WAREHOUSE	
O	x974.0230.0001	BOWL, SUGAR					Deaccessioned 2025	WAREHOUSE	
O	x974.0239.0001	PITCHER					Deaccessioned 2025	MISENER	
O	x974.0245.0001 dp2	PITCHER, CREAM					Deaccessioned 2025	WAREHOUSE	
O	x974.0276.0001	PLATE, DINNER					Deaccessioned 2025	WAREHOUSE	
O	x974.0277.0001	PLATE, SOUP					Deaccessioned 2025	WAREHOUSE	
O	x974.0407.0001	CAN, varnish			contains varnish!		Deaccessioned 2025	Warehouse	
O	x974.0836.0001	BASIN, WHITE CHINA/ STONEWEAR					Deaccessioned 2025	WAREHOUSE	
O	x974.0889.0001	BASIN					Deaccessioned 2025	Warehouse	
O	x974.0994.0001	CHALKBOARD					Deaccessioned 2025		
O	x974.0995.0001	CHALKBOARD					Deaccessioned 2025		
O	x975.0093.0001	FAN					Deaccessioned 2025	WAREHOUSE	
O	x975.0319.0001	ORNAMENT, HAIR					Deaccessioned 2025	WAREHOUSE	
O	x975.0343.0001 b	BOX					Deaccessioned 2025		
O	x975.0355.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	x975.0359.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	x975.0379.0002	HATPIN					Deaccessioned 2025	WAREHOUSE	

Westfield Deaccession List 2025

CAT	OBJECTID	OBJNAME	CREATOR	TITLE	DESCRIP		STATUS	HOMELOC	LOCFIELD1
O	x975.0417.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	x975.0420.0001	HATPIN					Deaccessioned 2025	WAREHOUSE	
O	x975.0456.0001	RUG					Deaccessioned 2025	WAREHOUSE	

Hamilton Conservation Authority

A Healthy Watershed for Everyone

10.3

Report To:	Conservation Advisory Board
Approved for Circulation By:	Lisa Burnside, CAO
Reviewed By:	T. Scott Peck, MCIP, RPP, Deputy CAO/ Director, Watershed Management Services Mike Stone, MCIP, RPP, Senior Manager, Watershed Planning, Stewardship & Ecological Services
Prepared By:	Lesley McDonell, Supervisor Stewardship and Ecological Services Ben Laing, Invasive Species Technician Bryson McEwen, Invasive Species Technician
Meeting Date:	February 12th, 2026
Subject:	Hemlock Woolly Adelgid Management Plan

Recommendation:

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

THAT the *Hemlock Woolly Adelgid Management Plan (January 2026)* be adopted; and further

THAT the management plan's recommended strategy, Strategy 5 – Protect Trees in Riparian Areas, be implemented.

Executive Summary:

Hemlock woolly adelgid (HWA) is an invasive insect that feeds on eastern hemlock trees and typically results in tree death within 4-15 years regardless of tree age or health. HWA was first detected in Hamilton in 2023 at the Royal Botanical Gardens and has since been found in Dundas Valley Conservation Area (DVCA) through a 2025 survey project. In response, HCA has drafted a management plan to guide prioritization, treatment and monitoring of HWA in the watershed. This includes proposed chemical treatment of eastern hemlocks in selected riparian areas on a rotating basis to prioritize the protection of the most valuable trees and ecologically significant areas.

Staff Comment / Discussion:

HWA is an invasive aphid-like insect which feeds on eastern hemlock trees by diverting water and nutrients found in the needles. This insect reproduces rapidly, resulting in a population of insects that eventually starve and kill their host trees. In 2023, local stakeholders and land mangers began to identify HWA as an emerging threat based on detection sites at the Royal Botanical Gardens in the Spencer Creek sub-watershed. In response, HCA staff began conducting passive visual surveys in 2024. In 2025 grant funding from the Invasive Species Centre allowed the HCA to hire two summer invasive species field staff. These staff conducted a detailed visual survey and tree inventory program in high priority areas, beginning at Lower Spencer Conservation Area and working west into DVCA. These surveys confirmed the presence of HWA throughout the area, in a distribution that suggests the pest is present in low numbers but widespread throughout DVCA.

HWA is expected to continue to spread across southern Ontario throughout the native range of eastern hemlocks. Based on case studies from the United States and experience of local land managers such as Royal Botanical Gardens, HWA is forecasted to kill many of the over 20,000 eastern hemlocks found in DVCA. This impact to eastern hemlocks would reduce local biodiversity, both from the loss of individual trees, and the species of birds, insects, and mammals that rely on them, some of which are species at risk. Eastern hemlocks are frequently found on north facing ravine slopes near water, and in some cases close to HCA trails and infrastructure, and the decline of these trees may also lead to erosion, water quality, and hazard tree management issues.

Currently, there is no long-term solution available for the management of HWA, though research is underway to certify the use of a biological control agent in Ontario. To mitigate some of the forecasted impacts to eastern hemlocks found on HCA property, a management plan is required to complete the following:

- To identify priority areas of hemlock dominated ecosystems and individually inventory trees in those areas to facilitate future treatment;
- To provide the most cost-effective and efficient management recommendations and strategies based on existing best management practices and consultation with local stakeholders, land managers, and contractors;
- To outline a multi-year plan to reflect the persistence of this pest and the need for integrated pest management techniques until a long-term management option is available; and
- To meet the HCA’s strategic goal of natural heritage conservation by managing natural lands through monitoring, strategies, and management plans.

The management plan recommends a treatment strategy (Strategy 5) that prioritizes the protection of eastern hemlock trees that are immediately adjacent to creek systems, in an area called the riparian zone. Eastern hemlock trees in the riparian zone provide notable benefits including erosion control, flood mitigation, and stream cooling that is key to maintaining fish habitat. The management plan proposes a four-year cycle involving the treatment of a subset of trees in priority areas each year. Treatment would consist of injecting a chosen herbicide ("IMA-jet") into the base of selected trees, which would kill any HWA feeding on the tree. IMA-jet is a neonicotinoid, a class of chemical pesticides which do not target specific species and will kill any species that feeds on the tree; however, the management plan provides rationale, based on cost, impact, and existing scientific literature to support this mode of action as the preferred management strategy.

Sample Population	Number of Trees Included
Estimated eastern hemlocks in DVCA	20,000+
Hemlocks inventoried in 2025	1798
Trees that meet treatment requirements	928
Trees selected for strategy 5 for year 1	273

The use of pesticides and herbicides by HCA as part of its land management activities has been previously considered by the Board of Directors. In July 2013 the Board approved a staff policy recommendation that pesticides may be used in a very minimal way as part of land management practices and on a project specific basis when required to combat invasive species or for ecological restoration purposes. Larger scale pesticide and herbicide proposals require approval of the Board of Directors. This is a project specific proposal needed to address a significant invasive species issue and is not considered a large-scale project.

During the lifetime of the management plan, HCA staff will continue to:

- Coordinate with local stakeholders, including the City of Hamilton, government agencies, and land managers to share resources, knowledge, and facilitate a collaborative response to HWA;
- Inventory trees in the selected priority areas to facilitate treatment; and
- Explore long term management options, including other pesticides, bio-controls, and silvicultural techniques.

Strategic Plan Linkage:

The initiative refers directly to the HCA Strategic Plan 2025 – 2029:

- **Strategic Priority Area – Natural Heritage Conservation**
    - Managing natural areas of HCA lands through monitoring, inventories, strategies and approved master and management plan

recommendations to ensure the enhancement of natural areas and ecosystems

Agency Comments:

All positive detections of HWA were reported to the Canadian Food Inspection Agency (CFIA). Following numerous detections on HCA property and elsewhere in Hamilton, the CFIA has designated the City of Hamilton as a regulated area through an Infested Place Order. Under this designation, the movement of hemlock nursey stock, timber, firewood, or other plant products from inside the boundaries of Hamilton to another area is forbidden.

Financial Implications:

The HWA management plan outlines project costs for the treatment of hemlock trees and associated costs for staff time and materials. A matrix is provided that estimates a range of costs based on the chosen chemical and whether the treatment is completed by HCA staff or via a hired contractor. The recommendation to use a contractor to treat between 150 and 300 trees per year would cost between $10,000-$20,000 per year, based on quotes received in 2025.These costs are accounted for in the HCA's 2026 Invasive Species budget. It is also noted that these costs do not include related initiatives, such as hazard tree management and restoration plantings which have separate budget allocations included in the 2026 operating budget.

Related Reports and Appendices:

HCA Hemlock Woolly Adelgid Management Plan

HCA Hemlock Woolly Adelgid Management Plan

Hamilton Conservation Authority

2025

Hamilton Conservation Authority

Table of Contents

1.0 Executive Summary

Hemlock woolly adelgid (HWA) is an invasive sap-sucking insect which feeds on, and eventually kills, eastern hemlock trees. Once introduced to an area, HWA spreads and multiplies rapidly, resulting in a population of insects that typically kill their host tree within 4-15 years. HWA was first detected in the HCA watershed near Cootes Paradise in 2023 and has now been detected as a widespread, low to medium level infestation throughout the Dundas Valley. The presence of this insect is a major threat to the health of Hamilton Conservation Authority (HCA) owned forests since eastern hemlock is common throughout certain properties, particularly in Dundas Valley Conservation Area. Eastern hemlock trees have no natural resistance to HWA, and there are currently no native or introduced predators of the insect in Ontario, meaning that widespread mortality of this tree species is likely to occur without intervention by local landowners. This report provides a summary of the current state of HWA in Hamilton and reviews the management strategies and actions which can be used to mitigate the impact of this emerging forest pest.

2.0 Background Information

The following background information on eastern hemlock trees and hemlock woolly adelgid has been included in this report to emphasize the importance of hemlock ecosystems to the health of the watershed and to provide context for the management strategies and actions recommended in this plan.

2.1 Eastern Hemlock

2.1.1 Significance

The eastern hemlock is a large, slow-growing conifer, and is the only species of its genus to be found in Ontario. These trees reach maturity around 250-300 years old, though some trees can live to a maximum of 1000 years and have been termed the “Redwoods of the East” due to their long life and size (Barr et al., 2025; U.S. Forest Service, 2025).

Eastern hemlocks are widely considered to be a foundation species with high ecological value (Havill et al., 2014). Foundation species have profound effects on the areas they inhabit, to the degree of defining many of the ecosystem’s characteristics (Ellison et al., 2005). Eastern hemlocks prefer cool, moist sites, which are commonly found in north-facing ravine slopes in the Dundas Valley, and can also be found in some wetland ecosystems (Farrar, 1995). Eastern hemlock trees create shaded, cool environments which are beneficial or necessary for many species of plants and animals and provide unique native understory growth due to the shady environment they create

(Hemlock Restoration Initiative, n.d.). These cool environments also help maintain cool water temperature in local water courses for sensitive species (Ross et al., 2003).

Hemlock-dominant ecosystems provide habitat for many bird species such as the blackburnian warbler, black throated green warbler, Acadian flycatcher, hermit thrush, and blue-headed vireo. These bird species are specialists which require the use of hemlocks for nesting and roosting (Tingley et al., 2003). The Acadian flycatcher and Louisiana waterthrush, which have been recorded in the Dundas Valley and utilize eastern hemlocks, are listed as species at risk (Ministry of Environment, Conservation and Parks, 2024).

Stands of eastern hemlock also provide other ecosystem services such as carbon storage, erosion control, flood mitigation, and streambed stabilization (Barr et al., 2025; Nova Scotia Hemlock Initiative, 2021; Ford & Vose, 2007). Ravine and stream bank stabilization reduces sedimentation loads which in turn mitigates negative water quality impacts that are caused by the runoff of nutrients into streams (Hemlock Restoration Initiative, n.d.; Poling & Dolloff, 2016). Through stabilizing streambeds, eastern hemlocks prevent trail washouts caused by stream erosion and simultaneously prevent flooding by up-taking a large volume of water per tree per day during spring flows (Ford & Vose, 2007).

Hemlock trees also play significant recreational and cultural roles as well. The large stands of hemlocks in Dundas Valley Conservation Area provide aesthetic value for recreational trail users, and Indigenous communities use hemlocks in traditional crafts and medicinal practices (Barr et al., 2025; Nova Scotia Hemlock Initiative, 2021).

2.1.2 Distribution on HCA Properties

From HCA ecological land classification (ELC) data, the Dundas Valley Conservation Area and Lower Spencer Conservation Area are estimated to have 181.6 hectares of hemlock dominated ecosystem (Figure 1). Using hemlock density data collected from surveys completed in 2025, it is estimated that there are approximately 27,900 eastern hemlock trees in the Dundas Valley and Lower Spencer Conservation Areas alone.

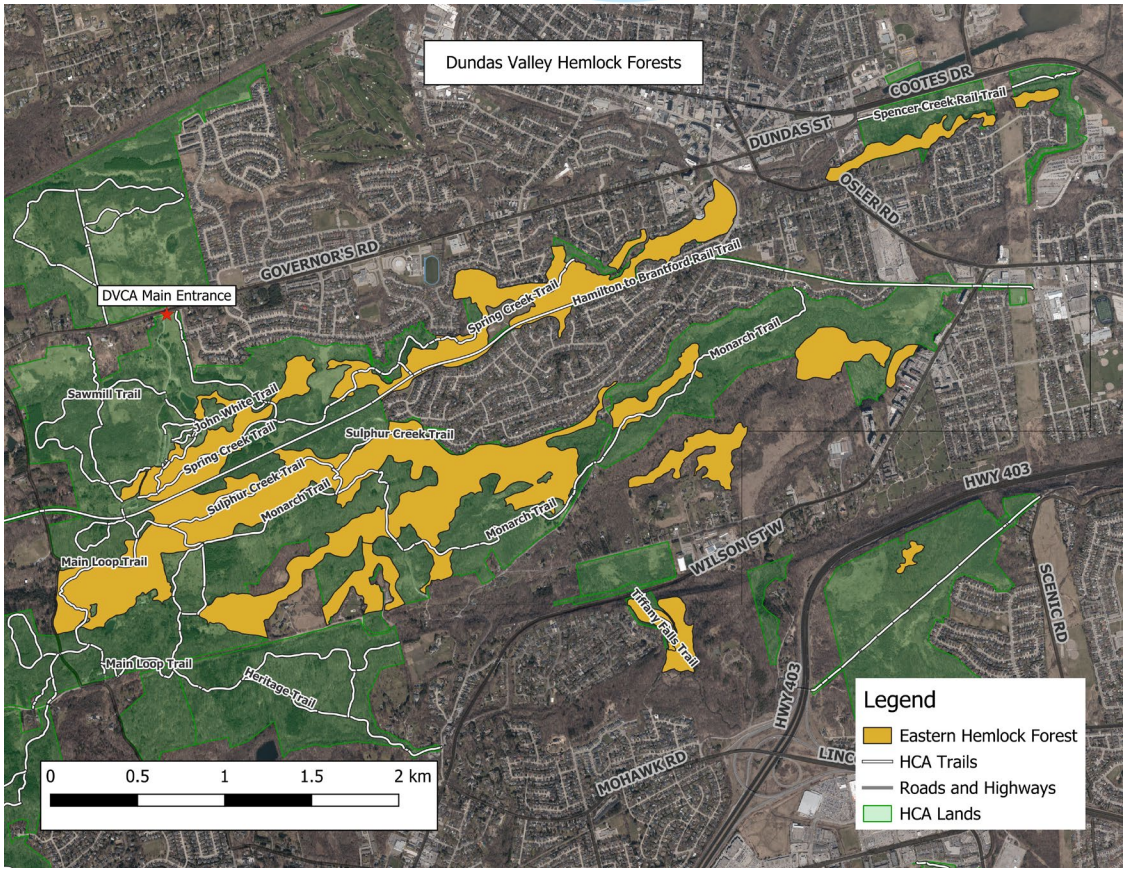

Figure 1. Eastern hemlock dominant forests within the Dundas Valley area.

Outside the Dundas Valley, HCA manages an additional 18.6 hectares of land that has been identified as hemlock dominant, spread across Tiffany Falls, Iroquoia Heights, Spencer Gorge, and Crooks Hollow, though this does not capture mixed forests in places like Fletcher Creek and Felker's Falls. This represents an estimated 2,850 additional eastern hemlock trees.

2.2 Hemlock Woolly Adelgid

2.2.1 Identification

In eastern North America, hemlock woolly adelgid reproduces asexually (without mating). This reproduction style allows HWA to rapidly expand its population once established in a new area, quickly surpassing the threshold where damage to eastern hemlock starts to occur. It is during the reproductive cycle that the namesake white cottony ('woolly') egg sacs appear on the underside of needles on eastern hemlock trees, often found at the tips of branches, and are most prominent in early spring

(Figures 2 & 3). However, in high-level infestations, remnants of woolly masses can be seen more readily at other times of year, including throughout summer and fall.

Figures 2 & 3. Hemlock woolly adelgid egg masses found on HCA lands.

The presence of HWA on a tree causes its health to decline, which is another possible indicator of an infestation. Specific signs include premature dieback of branches and twigs, grey coloration of needles, needle loss, and a lack of new growth (Havill et al., 2014). These signs can be used to identify groups of eastern hemlock trees which may be infested with HWA before inspecting in detail.

2.2.2 Regional Distribution and Spread

HWA was first introduced from Japan to eastern North America some time before 1951 in the state of Virginia and has spread to over half of the eastern hemlock's range since then (Havill et al., 2014). In the northeastern United States, most ecosystems containing eastern hemlock are now infested with HWA, and within the last 15 years, detections have begun to occur in Canada. The insect was first detected in Ontario in 2012 and 2013 in Etobicoke and Niagara Falls respectively. HWA was also detected in Nova Scotia in 2017, which is currently the site of the largest infestation in eastern Canada (Canadian Food Inspection Agency, n.d.).

As of October 2025, HWA has been found in several locations throughout southern Ontario, including the Regional Municipality of Niagara, Haldimand County, the Township of Alnwick/Haldimand, the City of Toronto, and the City of Hamilton. These municipalities, except for the City of Toronto, have been declared as regulated areas for HWA by the Canadian Food Inspection Agency (CFIA) (Canadian Food Inspection Agency, n.d.) The regulated area designation prohibits the movement of eastern hemlock materials out of the municipality to slow the spread of HWA (Figure 4).

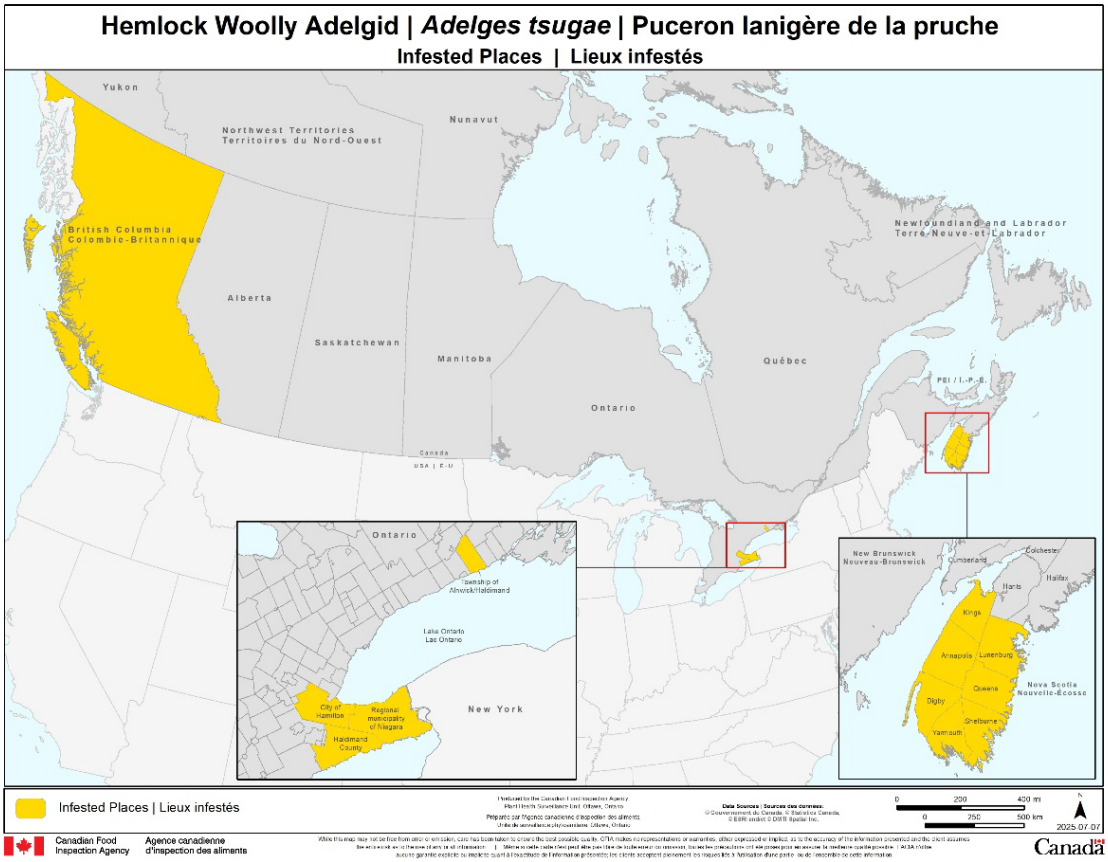

Figure 4. Map of CFIA regulated areas as of Aug 31, 2025.

HWA can spread over both short and long distances. Over short distances within a continuous forest, HWA spreads between trees by crawling, being carried by wind, through human activities, and by clinging to birds and other animals as they move (Havill et al., 2014). Over long distances, HWA spreads on migrating birds and through human movement of hemlock plant material, including nursery stock (Parker et al., 2023).

2.2.3 Local HWA Distribution and Stakeholders

HWA was first detected in Hamilton in March 2023 at the Royal Botanical Gardens (RBG) Cootes Paradise Nature Sanctuary, and subsequently on neighboring City of Hamilton and McMaster University owned lands (Barr et al., 2025). As of October 2025, HWA has been found on HCA land throughout most of the Dundas Valley and Lower Spencer Conservation Areas. There have also been recent detections at the McMaster Nature Forest Reserve and the RBG Arboretum (Figure 5).

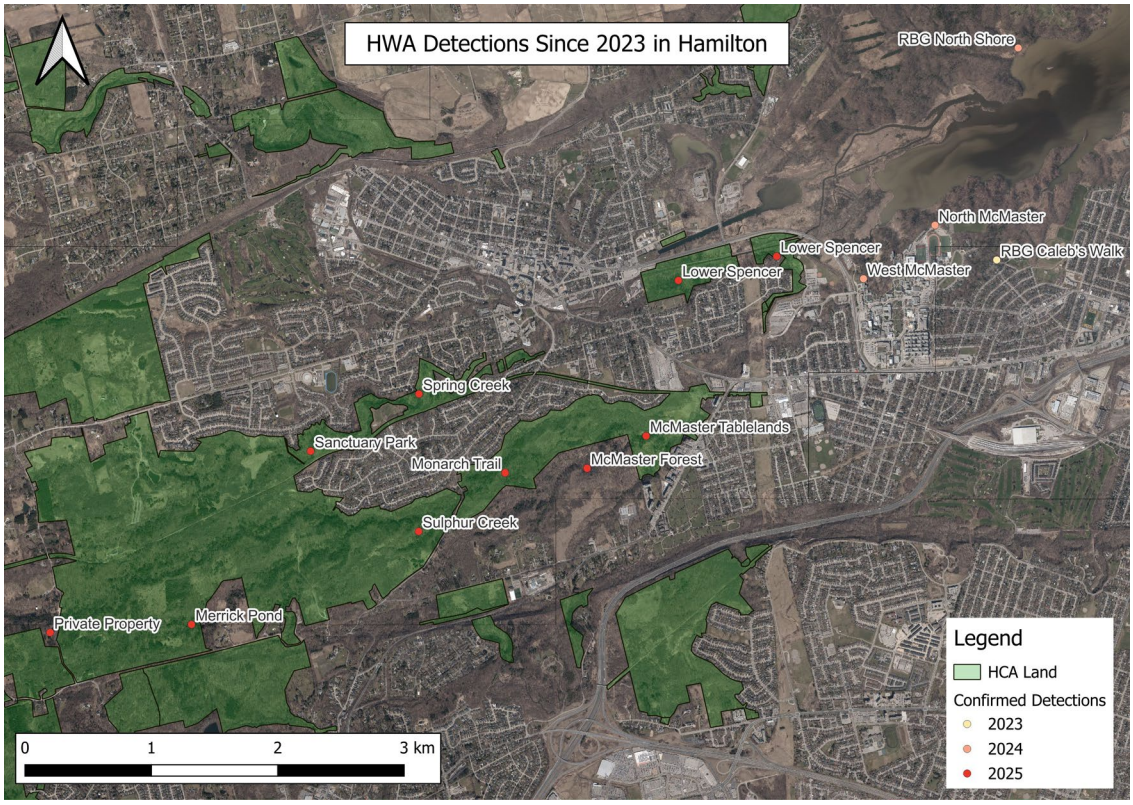

Figure 5. All hemlock woolly adelgid detection sites in Hamilton to date.

The primary regulatory organization involved in the management of hemlock woolly adelgid is the CFIA. The CFIA confirmed the positive detection of HWA in the Dundas Valley Conservation Area in 2025 and has declared the City of Hamilton a regulated area. Other organizations currently involved in the study and management of HWA in Ontario and Canada more broadly include the Canadian Forest Service (CFS) and Natural Resources Canada (NRC), the Ministry of Natural Resources (MNR), Invasive Species Centre (ISC), Ontario Nature, and the Ontario Woodlots Association (OWA). On the local level, HCA staff have been actively coordinating HWA work with the RBG, City of Hamilton, Hamilton Naturalists Club (HNC), McMaster University, Conservation Halton, and the Niagara Peninsula Conservation Authority (NPCA).

2.2.4 Impacts of HWA

Every eastern hemlock tree is susceptible to infestation and mortality by HWA regardless of size or age of the tree (Emilson et al., 2018). Historically, HWA induced mortality has been limited by cooler northern temperatures, though HWA's range is expanding with rising average temperatures due to climate change (Paradis et al., 2008). According to observations made at infestation sites in the United States, HWA is typically fatal to all eastern hemlocks within a time span of 4-15 years, depending on habitat quality (Havill et al., 2014). In some severely infested areas, eastern hemlock mortality has been as high as 95% (Havill et al., 2014).

With the decline of eastern hemlock, forest communities that were once hemlock dominated will shift to new ecosystem types. Newly created gaps in the forest canopy may result in colonization by invasive species including common and glossy buckthorn, multiflora rose, and garlic mustard (Eschtruth and Battles, 2009; Frappier et al., 2003; Invasive Species Centre, n.d.). Areas not colonized by fast-growing invasive species may become hardwood-dominated or mixed forest stands containing trees such as maple, yellow birch, American beech, and oak (Jenkins et al., 2000; Havill et al., 2014). Succession of any remaining eastern hemlock trees may be impacted by deer browsing on young tree seedlings, which is applicable to the Dundas Valley Conservation Area as white-tailed deer are abundant in this area. Additionally, reproduction of new hemlock trees is slow since eastern hemlocks are considered a slow growing tree and don't reach sexual maturity until they are 15 years old. Eastern hemlocks require specific conditions to facilitate sapling growth and show a strong preference or dependence on nurse logs.

HWA-induced mortality will remove habitat for certain terrestrial species, some of which are species at risk. These include the hemlock dependent bird species listed in section 2.1.1 and other common bird species such as the northern cardinal, eastern wood pewee, tufted titmouse and several species of woodpeckers (Tingley et al., 2003). Some mammals that rely on shade created from hemlock-dominant stands and therefore will be impacted include white-tailed deer, flying squirrels, and American minks (Nova Scotia Hemlock Initiative, 2021).

Additionally, eastern hemlock decline will result in the lessening of stream-cooling properties, negatively impacting local cold and cool water fisheries (Ross et al., 2003). Watercourses may be further impacted by the loss of stream stabilization benefits, leading to erosion, trail washouts, and worsened stream flooding (Ford & Vose, 2007). Soil erosion will result in the loading of sediment and nutrients into waterways, which further degrades the habitat of fish and other aquatic organisms (Wood & Armitage, 1997; Poling & Dolloff, 2016).

Trees such as eastern hemlocks also sequester carbon from the atmosphere which remains stored in dead tree trunks for long periods. A significant percentage of

this carbon storage capacity will be lost with the rapid die-off of eastern hemlocks (Ignace et al., 2018; Barr et al., 2025).

The aesthetic value of hemlocks in Dundas Valley Conservation Area is high. Spring Creek Trail, the Hamilton-Brantford Rail Trail, Monarch Trail, Sulphur Creek Trail, and sections of the Main Loop Trail heavily feature ravines populated with eastern hemlocks. This is also true for areas within Spencer Gorge and Tiffany Falls Conservation Areas. As HWA-driven tree mortality increases, visitor experiences in those areas may be negatively affected.

In addition, it is likely that significant costs related to hazard tree management will be incurred in the future, caused by the impacts of HWA. Mass tree die-off will result in dead standing trees immediately adjacent to trails, posing health and safety risks for staff and patrons. HCA and privately-owned infrastructure may also be threatened by this increase in hazard trees. The HCA Hazard Tree Policy also provides guidance on management, monitoring, and evaluation of hazard trees (HCA, 2022). As hemlocks are observed to decline in the valley, this document can be used to support risk assessment of specific trees or stands to help prioritize management and project costs.

Understanding the wide-ranging and profound harm that is projected to occur from hemlock woolly adelgid in Hamilton, acting to mitigate these impacts is strongly recommended (Derry et al., 2024).

3.0 Actions Taken to Date

3.1 Prior to 2025

Since 2023, HCA has participated in the Hemlock Woolly Adelgid Hamilton Chapter Working Group, consisting of members from the City of Hamilton, HNC, McMaster, RBG, and HCA. Each of the member organizations owns land with significant amounts of eastern hemlock and are either actively managing HWA or seeking to undertake management activities. This working group has been a valuable outlet for sharing information and coordinating management on a local scale.

In 2024, HCA's Invasive Species Technicians completed a brief survey for HWA, primarily along the Sulphur Creek corridor. The survey was very limited due to time constraints, and no positive detections were found. Staff also deployed passive interception traps in spring 2024 at Lower Spencer Conservation Area, and similarly, no positive detections were made. eDNA traps at Felkers Falls have also yet to detect HWA further east in the HCA watershed.

3.2 2025 Survey and Inventory

With the close proximity of the HWA detection on RBG and McMaster lands, it was determined that a more thorough survey was necessary for HCA lands.

To assess the potential level of infestation of HWA on HCA property, staff applied for funding from the Invasive Species Centre's Invasive Species Action Fund to hire two contract technicians to complete a thorough survey of the Lower Spencer Conservation Area and portions of the Dundas Valley Conservation Area. The survey had two objectives: to detect and accurately map the presence of the HWA infestation and to complete an inventory of hemlock trees in targeted areas to gather information for management activities.

Areas of dense hemlock forest within these areas were chosen for the survey and were divided into the following sections: Lower Spencer, Spring Creek East, Spring Creek Central, Sulphur Creek East, and Sulphur Creek Central (Figure 7). These areas were chosen based on their proximity to existing detections of HWA at the RBG and McMaster, and due to the high likelihood of HWA spreading on migrating birds through the ecological corridors of Dundas Valley. Specific survey locations within the conservation areas were identified through Ecological Land Classification (ELC) data which outlines concentrated eastern hemlock populations. Considering the severe infestation of HWA on RBG property, the nearby forest at Lower Spencer was surveyed first, before moving west into other parts of the Dundas Valley.

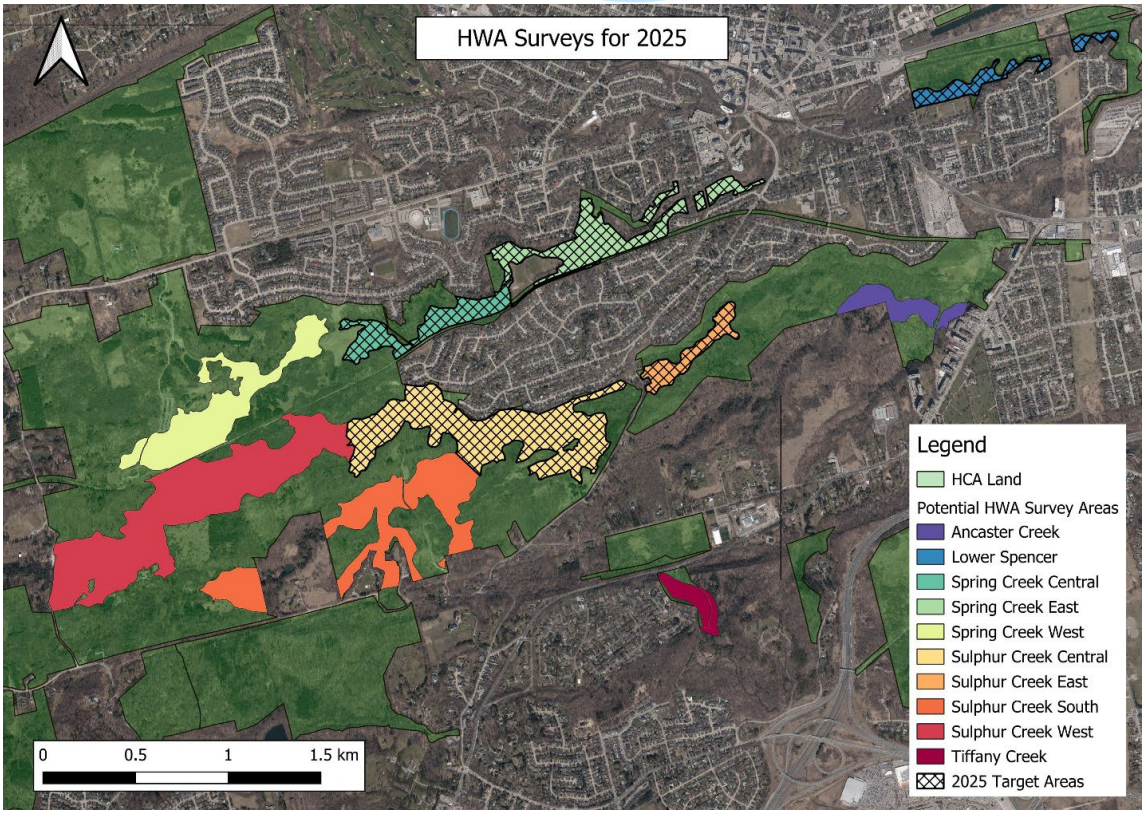

Figure 6. Survey areas identified and prioritized for 2025.

While initially marked for survey by HCA staff, the Ancaster Creek area was incidentally surveyed in 2025 by students from McMaster University and was subsequently removed from the target areas list.

The remaining areas, Spring Creek West, Sulphur Creek South, Sulphur Creek West, and Tiffany Falls were not surveyed due to both time limitations and visual surveys becoming less effective for emerging infestations by mid-summer. Presence surveys could be expanded in the future to finish the remaining areas of Dundas Valley, but with the results of the 2025 survey as summarized below, it is assumed that HWA has spread throughout the entirety of the Dundas Valley, supported by further sightings at Merrick Orchard and a private property on Sulphur Springs Road later in 2025.

3.2.1 Presence Survey Results

Presence surveys began on May 16th, 2025, and continued until July 18th, 2025. During this survey, every one in ten eastern hemlock trees encountered was inspected for HWA. Over a total area of 53.1 hectares, 816 individual trees were inspected, representing a coverage area of approximately 8,160 trees. Staff were able to cover the entire target area set out at the beginning of the field season. During the presence surveys, staff identified 77 trees which displayed woolly masses or other clear signs of

HWA, representing 9.3% of the surveyed trees. The passive interception traps deployed at Lower Spencer Conservation Area also yielded several insects matching the description of HWA, although these were all found in areas later confirmed to have HWA based on the visual survey method, and so were not investigated further. The locations of positive detections are broken down below, and in Figure 8:

- 5 trees at Lower Spencer
- 14 trees at Spring Creek Central
- 9 trees at Spring Creek East
- 40 trees at Sulphur Creek Central
- 8 trees at Sulphur Creek East (Monarch Trail)
- 1 tree at Merrick Orchard (incidental observation)

When a tree with HWA was discovered, a suspected detection notice was submitted to the CFIA. The CFIA then completed follow-up investigations and collected samples, confirming the presence of HWA. Resulting from these detections, a CFIA-issued prohibition of movement of all hemlock tree material was established for the Lower Spencer and the Dundas Valley Conservation Areas. In August 2025, the entire Regional Municipality of Hamilton was declared a regulated area for HWA.

Figure 7. Locations of HWA detections on individual trees during 2025 survey.

3.2.2 Tree Inventory Results

Following the completion of presence surveys, an inventory of hemlock trees in high priority areas was completed in August 2025. Across these high-priority areas, location and characteristic data was captured for 1798 trees (Figure 9). 1596 trees were recorded along Spring Creek in the vicinity of Bumble Bee and Sanctuary Park, with an additional 202 trees inventoried along Monarch trail. These areas were chosen for key characteristics including high traffic trails, hazard risks, stream cooling, steep slope and riverbank erosion concerns, large and healthy trees, and species at risk habitat.

The purpose of the tree inventory was to collect information that HCA will use to evaluate response strategies and to plan management and is especially necessary to forecast the cost of chemical control methods. Since inventory is required prior to management, the dataset of trees inventoried in 2025 will provide the scope of management activities for 2026. Management in areas beyond the current scope will require further prioritization and inventory.

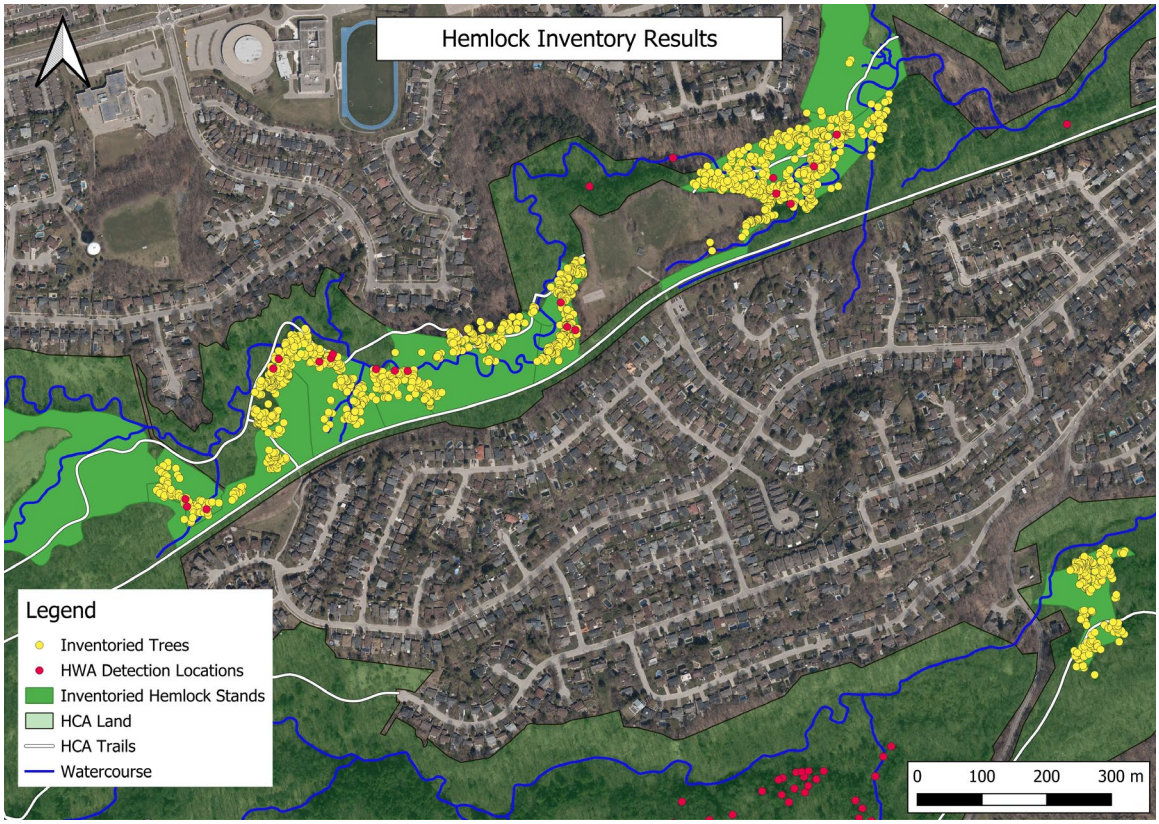

Figure 8. Hemlock trees inventoried in priority areas, overlaid with positive detections.

4.0 Management Strategies

Due to the cost of HWA management, the short time frame before onset of tree mortality, and the large volume of eastern hemlock trees on HCA land, it will not be feasible to protect every tree from hemlock woolly adelgid. Therefore, it is necessary to define a management strategy that will provide the greatest benefit with available resources. The management strategy will define which specific trees are eligible to be treated, and the subset of those which will be focused on. Eligible trees are defined by having a diameter at breast height of at least 15 centimeters to allow for herbicide injection and must show indicators of tree health. Using these criteria, the number of eligible eastern trees in the sample size decreases from 1798 to 929.

Each of the following strategy options evaluates a different approach to managing HWA stemming from a specific objective. Five management strategy options have been identified and evaluated by HCA staff. These strategies have been drawn from available resources including the New York State Hemlock Initiative landowner toolkit (Cornell University, 2025), the Kejimkujik National Park hemlock stand prioritization framework (Kejimkujik National Park and National Historic Site, 2021), the Royal Botanical Gardens hemlock management options assessment (Barr et al., 2025) and discussions with other land managers in Ontario who have experience managing HWA infestations.

Each strategy estimates the percentage of forecasted hazard trees that would be mitigated by that approach, using the sample area described in Section 2.2.4. This calculation is based on the best information available but should only be used as an estimate when extrapolating to areas outside of the sample.

Accompanying each strategy is an explanation of why it is or is not recommended for adoption. "**Strategy 5: Protect Trees in Riparian Areas**" is the only strategy recommended by HCA at this time, which would protect 273 trees in year 1.

Table 1. Sample tree counts during surveying and inventorying

Sample Population	Number of Trees Included
Estimated eastern hemlocks in DVCA	20,000+
Hemlocks inventoried in 2025	1798
Trees that meet treatment requirements	928
Trees selected for strategy 5 for year 1	273

4.1 Strategy 1: Do Not Manage and Monitor Impacts

The objective of this strategy is to commit no resources to HWA management or the protection of eastern hemlock ecosystems in the HCA watershed.

Under this strategy, it is expected that eastern hemlock trees throughout Dundas Valley and Lower Spencer Creek would begin to experience noticeable decline within four years, and death within 15 years, based on case studies for HWA infestations elsewhere in North America. HCA would observe and note changes to natural areas but take no direct action to mitigate the spread of HWA. This response could include monitoring to observe HWA impacts and could also include restoration activities such as planting conifers in former hemlock ecosystems.

The death of eastern hemlocks throughout the Dundas Valley would result in widespread impacts, especially in riparian areas, including degraded water quality, loss of habitat for many species, erosion, colonization by invasive plant species, and loss of cultural value. Significant annual hazard tree management costs would be incurred as many dead standing trees would become hazards to both trail users and to any nearby infrastructure within striking distance. No (0%) forecasted hazard trees in the sample area would be mitigated by this strategy.

Conclusion: HCA staff do not recommend this management strategy. The impact to the rare and sensitive ecosystem of Dundas Valley would be profound, and taking no preventative action does not align with HCA's Natural Heritage Conservation Strategic Priority through the 2025-2029 Strategic Plan. Additionally, cost savings from choosing to not manage HWA would be counteracted by the resources required to manage hazard trees.

4.2 Strategy 2: Protect Entire Areas of High General Value

The objective of this strategy is to preserve cohesive pockets of eastern hemlock forest that rank highly across multiple attributes.

Trees chosen for management under this strategy are all eastern hemlocks eligible for treatment that fall within defined areas determined to be of high value on a ranked list. This ranking is determined using stand prioritization frameworks which have been employed to manage HWA in both New York State and Nova Scotia. The frameworks consider an array of attributes which include existing tree health, proximity to water, erosion prevention, public use, likeliness of hazard tree creation, climate resilience, and species at risk habitat. Within areas covered by the 2025 eastern hemlock inventory, the seven highest scoring areas were selected. These seven stands contain 513 trees, which could be further prioritized or treated in order of stand importance.

To accomplish this objective within currently surveyed areas, HCA would apply pesticide to all healthy and eligible trees within designated areas and monitor for effectiveness moving forward. This response could include restoration activities such as re-planting in areas where untreated eastern hemlocks would still be killed by HWA.

Pesticides would be chosen based on site conditions, including proximity to water and presence of sensitive species.

Enacting this response beyond currently surveyed areas would first require a desktop assessment followed by a more comprehensive survey of future potential treatment areas to gather data required for the stand prioritization framework. In areas identified as high value, an inventory of all eastern hemlocks within the vicinity would be required to appropriately plan for treatment. HCA staff would then conduct (or arrange) pesticide application, efficacy monitoring, and planning for future re-treatments. The resources required for survey and inventory to implement this strategy are high.

The primary benefits of this strategy are the preservation of larger intact areas of hemlock ecosystem and that protected trees would provide a benefit across multiple axes – water resources management, ecological conservation, visitor experience, and hazard mitigation. However, there are drawbacks to this approach. Choosing this method would require treating a greater number of trees to achieve the benefits of protecting whole stands, significantly increasing costs. Since priority stands often consist of several hundred trees, a four-year program would likely only treat a small selection of stands and have much smaller geographic coverage. By treating exclusively riparian trees, a strategy outlined later, a similar four-year program would protect trees across a much larger area. Additionally, this strategy poorly addresses the preservation of stream cooling and stabilization since only some of the hemlocks chosen for treatment would be next to watercourses. These are critical ecosystem functions of eastern hemlocks which, if lost, would impact ecosystem functions that support water quality, flood prevention efforts, and fisheries. Lastly, treating a concentrated area of trees is not conducive to mitigating future hazard trees alongside HCA's trail system. Thirty-three (33%) of forecasted hazard trees in the sample area would be mitigated by this strategy, but this number is expected to be lower in other areas of Dundas Valley.

Conclusion: HCA staff do not recommend this strategy. While this approach does align well with HCA's strategic priorities related to natural heritage conservation and addresses multiple risks of HWA, the degree of mitigation provided for each of the impacts is limited, specifically with respect to water resource management (HCA, 2024). Additionally, the time required for survey of future treatment locations is significantly greater than strategy 5.

4.3 Strategy 3: Protect the Largest and Healthiest Trees

The objective of this strategy is to protect individual large, healthy hemlocks which have high ecosystem value and are most likely to remain healthy if treated.

Trees chosen for protection under this strategy are those which are over 40 cm DBH and are not suppressed by other trees in the canopy. These trees also received the

highest score for canopy health, which is a positive indicator that treatment is more likely to be effective. Of the trees currently inventoried, 168 eastern hemlocks were identified as large and healthy canopy trees. This approach is derived from literature which supports that isolated, healthy hemlocks are valuable on the landscape due to the number of species that rely on them (Nova Scotia Hemlock Initiative, 2021). Protecting scattered individuals would help maintain ecosystem services and habitat across many different areas of HCA land.

To implement this strategy, target trees would be identified in the current sample and treated chemically. Staff would monitor the treated trees for health moving forward. Similar to the other strategies, this response could include restoration activities such as re-planting in areas where untreated eastern hemlocks would still be killed by HWA.

Beyond currently inventoried areas, a more thorough survey and inventory of hemlock ecosystems in Dundas Valley and satellite properties would be required to identify more trees that meet the criteria for treatment. HCA staff would then conduct or arrange pesticide application, efficacy monitoring, and planning for future re-treatments. The resources required for survey and inventory to implement this strategy are high.

Advantages of this strategy include the protection of high value old-growth trees and an increased likelihood that more treated trees would survive in the long term. The primary drawback of this strategy is that inventory work to identify trees for future treatment would be very time-consuming and is beyond the capacity of current staff. Further, although some of the trees treated with this approach would also be considered potential hazards and located in general high value areas or in riparian areas, others would be in areas that do not match any of the desired criteria. Lastly, the dispersed nature of the targeted trees would result in greater labour costs for treatment by arborist contractors or increased staff time if pesticide application occurs in-house. Fifteen (15%) of forecasted hazard trees in the sample area would be mitigated by this strategy.

Conclusion: This strategy is not recommended by HCA staff. Due to the intensive survey requirements of this approach, implementation is not feasible with current resources. Additionally, several key risks of HWA are not addressed by this option, and costs are high in relation to the forecasted benefit.

4.4 Strategy 4: Protect Trees with High Cultural, Hazard, and Public Access Value

This strategy reflects a more patron and cost-focused approach to protecting hemlocks in the Dundas Valley and selects trees for protection based on hazard risk and trailside aesthetic value.

All trailside and potential hazard trees within the 2025 inventory area were selected for this strategy. Potential hazard trees are all trees which could conceivably strike the trail if they were to fall in that direction once dead. During the 2025 inventory, 458 trees that are eligible to be treated were also identified as potential hazard trees. These trees are centered around the major trails passing through the inventoried area, including the Monarch Trail, the Hamilton-Brantford Rail Trail, and the Spring Creek Trail. Hazard trees also include those along private property boundaries and those that were identified near unofficial trails. To reduce the number of trees which would need to be treated, trees by unauthorized trails could be removed from the sample.

To most effectively implement this strategy, more extensive internal consultation would be required. Hazard trees are among the largest sample sizes of the possible management strategies and would need to be refined further to create a manageable list of trees. This may include identifying which trails receive the most public traffic, or which areas are valued by patrons for their hemlock populations.

The primary advantage to this strategy is reducing the number of potential hazard trees and associated removal costs, which is projected to require significant budget investment from HCA over the next few decades as eastern hemlocks experience dieback due to HWA. Additionally, hemlocks are a key aspect of the valley's identity, and protecting trees easily in public view would help maintain the shade and stability of public trails, as well as continue to support some ecological integrity. Under this strategy, the scope of treatment would be well defined, which would result in a faster inventory before engaging in treatment beyond currently surveyed locations. Disadvantages include a possible initial delay in responding to HWA. It is also possible that focusing solely on hazard tree mitigation would result in sensitive ecological areas remaining untreated.

The amount of forecasted hazard trees in the sample area that would be mitigated by this strategy is not known, but it is assumed this strategy would result in the highest percentage of the available options.

Conclusion: This strategy is not recommended at this stage since the prioritization of trailside trees over those that may provide greater ecological function and water resources management benefits could result in significant long-term impacts on watershed health. The ecosystem services provided by eastern hemlocks are nearly unique to this tree species. Additionally, more information is needed under this approach before further mapping, prioritization, and management can occur. Lastly, hazard tree prevention is still considered under the recommended strategy, though to a lesser degree. Any hazard tree mitigation on HCA property will need to be implemented in conjunction with the HCAs Hazard Tree Policy.

4.5 Strategy 5: Protect Trees in Riparian Areas

The objective of this strategy is to preserve continuous corridors of eastern hemlock trees that immediately border creek systems.

Trees chosen for management under this strategy are all eastern hemlocks eligible for treatment that are adjacent to creek systems and are actively providing stream cooling and streambank stabilization. This includes all trees which provide shade to nearby streams. Within areas covered by the 2025 eastern hemlock inventory, 273 trees are of the appropriate size and health level for treatment and meet the location criteria (Figure 10).

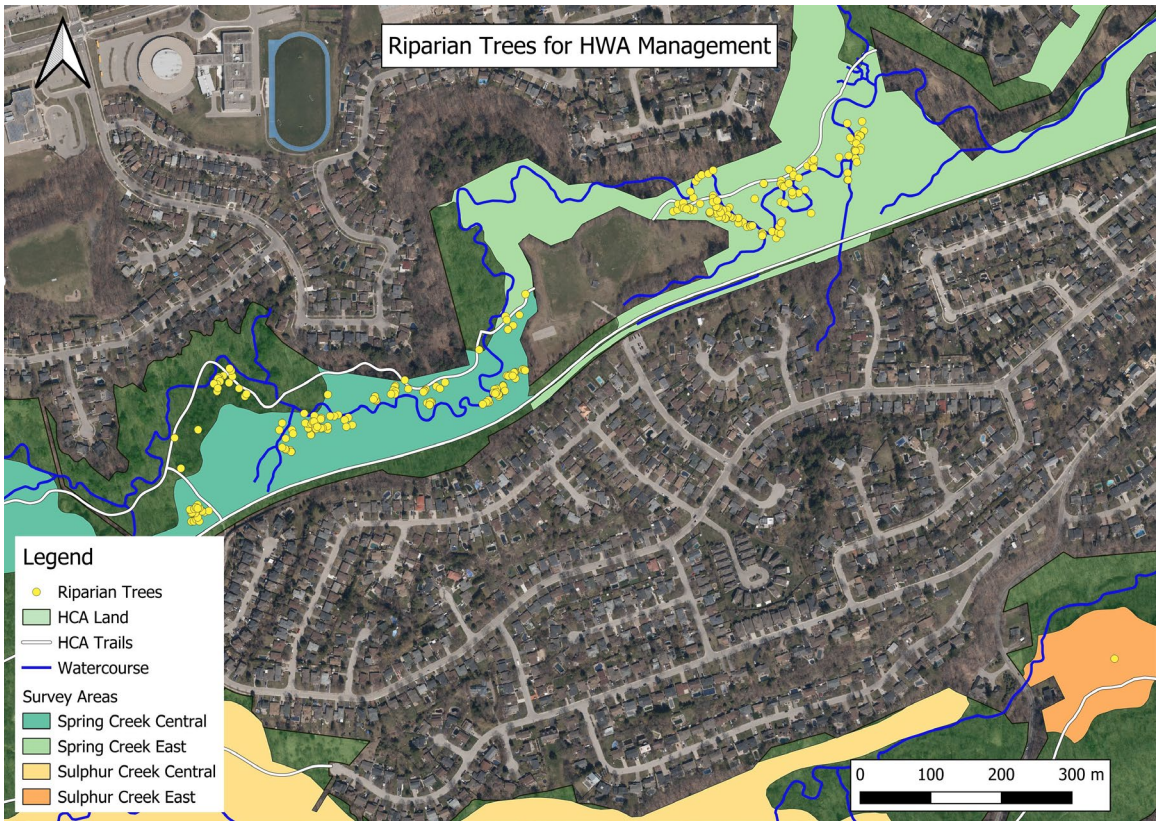

Figure 9. Riparian trees identified as priority for management.

To enact this strategy within currently-surveyed areas, HCA would apply pesticide to the selected trees using the services of a licensed contractor and possibly internally by HCA staff in the future. The trees would then be monitored for effectiveness of treatment. This response could also include restoration activities such as re-planting in riparian areas where trees were either too unhealthy or too small to chemically treat, and in non-riparian areas where untreated eastern hemlocks would still be killed by HWA.

In locations beyond currently surveyed areas, a tree inventory in the upper reaches of Spring and Sulphur Creeks would be required to collect the data necessary for treatment beyond 2026. This could expand to other not-yet-surveyed HCA properties listed in section 2.1.2 depending on the speed of the inventory. Staff would then conduct or facilitate pesticide applications, efficacy monitoring, and planning for future re-treatments. Silviculture could also be explored as a management technique during either the current or future stage of treatments if and where appropriate.

The main benefit of this strategy is the preservation of trees in highly valuable riparian zones, which provide stream shading, erosion control, flood mitigation, and critical animal habitat. Further, this approach also mitigates some of the risks to visitor experience and natural hazard creation. For example, 135 of the 273 trees are also identified as hazard risks, 54 meet the requirements of an ideally large and healthy tree, and 38 meet all the desirable criteria. In the Dundas Valley Conservation Area, HCA trails are often located in riparian corridors, so many trees in those areas meet multiple criteria which make them desirable for treatment. A secondary benefit of this strategy is the clearly defined treatment area and set objectives. The clear scope of the creek-side buffer will result in an efficient tree inventory process which could be completed more quickly than the comprehensive survey required by the other strategies. Additionally, trees that are next to water are more resistant to the adverse effects of HWA, meaning that pesticide applications have an increased chance of success compared to drier sites. The slopes found in riparian areas are also generally less severe than other areas, which will simplify treatment efforts. Lastly, many of the key ecosystem services provided by hemlocks – stream shading, water uptake, and habitat for example – are qualities difficult to replicate with other tree species. With riparian trees protected, restoration plantings could focus on mimicking the ecosystem services that are able to be replicated more easily by other species, namely slope stabilization and carbon storage.

One major drawback of this strategy is that riparian areas naturally lie on and at the base of slopes. If exclusively treating trees that are in riparian areas, there is a risk that untreated trees growing up-slope of the treated trees will fall into the protected trees when they die. This may break or uproot the riparian trees, counteracting the benefits of preserving them. Additionally, this strategy does not prioritize eastern hemlock trees which are valuable for cultural and aesthetic value. Other HCA forests containing eastern hemlock forests would still experience widespread decline and require restoration efforts. Twenty-nine (29%) of forecasted hazard trees in the sample area would be mitigated by this strategy.

Conclusion: Staff recommend that this strategy be adopted by HCA. Treating riparian trees not only protects ecological integrity and mitigates flooding and erosion, but also preserves canopy hemlocks, mitigates hazard tree risks and costs, and

preserves visitor experience in some locations. The risk of up-slope dead trees falling on preserved riparian trees can be mitigated by slightly expanding the treatment area to provide a protective buffer.

5.0 Management Actions

The following section provides a summary of the actions HCA can take to control HWA under the chosen management strategy. Immediate actions recommended under "Strategy 5: Protect Trees in Riparian Areas" are tree monitoring, inventory, and chemical control. Other available management actions include biological control, silviculture, and restoration, which together form an integrated approach as recommended by industry best practices (Emilson & Stastny, 2019; Jackson, n.d.).

5.1 Chemical Control

Chemical control involves the inoculation of eastern hemlock trees through systemic pesticide application to mitigate the impact of HWA on HCA property. Systemic pesticides are applied to the host trees and kill insects which feed on them. This pesticide application will be completed by licensed contractors accompanied by HCA staff, and possibly by HCA Invasive Species Technicians if/when appropriate. Trees in riparian areas will be prioritized for treatment according to the recommended management strategy. The application frequency, application method, and pesticide have all been chosen to best fit the recommended management strategy and target areas.

Using chemical control to manage HWA is a stop-gap solution until long-term control options become available. As will be discussed in more detail in the biological controls section, it is likely that a viable long-term management option for HWA will not be available for several years at minimum. A rapid response using a targeted application of pesticide will protect selected eastern hemlock trees from HWA mortality for as long as HCA can continue treating them. Due to the amount of eastern hemlock trees on HCA property, it will not be feasible to treat all trees, even those exclusively in riparian areas, so it will be necessary to prioritize which trees to protect with chemical applications. Successful pesticide treatment requires a multi-year approach and eventual re-treatment of areas once the chemical protection window expires.

Four chemical options are currently available for use in Ontario, with some on emergency-use basis due to the threat of HWA (Table 2). Emergency-use registration permits chemicals that are not usually available to manage an emerging threat and are generally approved on a 3-year cycle by the Pest Management Regulatory Agency (PMRA). Using a chemical under emergency use does mean it may not be available in future years depending on need and approval from the PMRA.

Table 2. Approved Chemical Control Options available in Ontario as of 2025.

	Tree Azin	IMA-jet 10%	Starkle 20SG	Xytect 2F
Active Ingredient	Azadirachtin 5% (non-Neonicotinoid)	Imidacloprid (Neonicotinoid)	Dinotefuran (Neonicotinoid)	Imidacloprid (Neonicotinoid)
Application Mode	Tree injection	Tree injection	Spray (basal bark)	Spray (basal bark)
Status	Registered	Emergency use	Emergency use	Emergency use
Years of Protection	1-2 years	4-5 years	1-2 years	5-7 years
Time before effective	48 hours or 1-3 months	6-9 months	3-4 weeks	6-9 months
Usage near water	Yes	Up to water's edge	5-7 m buffer from water	3m buffer from water
Cost (40 cm DBH)	$ 72	$ 13.68	$ 3.88	$ 3.48
Application timing	April-June or September-first frost	April-May or August-September	March-November	April-May or September-October

	Tree Azin	IMA-jet 10%	Starkle 20SG	Xytect 2F
Benefits	- Not a neonicotinoid. - Fast acting. - Can be injected near water. - Degrades naturally. - Readily available for purchase. - Available through contractor. - No risk of spray drift/wash off due to injection.	- Cost effective due to lower chemical cost and longer effective period. - Lower labour requirement, enabling wider coverage. - Readily available for purchase. - Available through contractor. - Can be injected near water. - No risk of spray drift	- Very cost effective due to low chemical cost and long effective period. - Moderate labour requirement. - Spray does not wound tree. - Can be simultaneously applied with Xytect 2F for immediate and persistent coverage.	- Very cost effective due to low chemical cost and long effective period. - Moderate labour requirement. - Spray does not wound tree. - Can be simultaneously applied with Starkle 20SG for immediate and persistent coverage.
Drawbacks	- Very expensive due to chemical cost and requirement to inject every 1-2 years. - Labour intensive, limiting possible coverage area. - Repeat injection more severely wounds the tree. - Requires purchase of injection equipment.	- Neonicotinoid, will result in non-target impacts to other canopy-feeding insects. - Highly toxic to aquatic organisms. - Infrequent injection mildly wounds the tree. - Requires purchase of injection equipment.	- Neonicotinoid, will result in non-target impacts to other canopy-feeding insects. - Highly toxic to aquatic organisms. - Risk of spray drift. - Cannot be applied near water. - Less readily available for purchase. - Not available through contractor.	- Neonicotinoid, will result in non-target impacts to other canopy-feeding insects. - Highly toxic to aquatic organisms. - Risk of spray drift. - Cannot be applied near water. - Less readily available for purchase. - Not available through contractor. - Application limit per hectare.

The chemical control method presents challenges and drawbacks. Since the longest-acting chemical controls protect eastern hemlock trees for a maximum of 5-7 years, it is likely that repeat treatments will be necessary due to HWA's persistence on the landscape. The chemical control method will have significant costs for staff time, pesticide equipment and supplies, and/or contractor fees. Another potential challenge is the limited availability of some pesticides and the possibility that any products under emergency registration may be de-registered. Local stakeholders have indicated this as an issue for Starkle 20SG and Xytect 2F specifically. Lastly, all chemical treatments pose risks to insect populations who use hemlocks as a host. Despite these challenges, chemical treatment is still being evaluated as an option as it currently is the only available control method for HWA.

5.1.1 Assessment of Neonicotinoid Pesticides

Apart from TreeAzin, each of the approved pesticide control options for hemlock woolly adelgid contain a neonicotinoid class chemical. When assessing the use of a neonicotinoid pesticide for control of HWA, the potential negative impacts of the pesticide should be weighed against both the other available chemical options and the impacts of electing to not control HWA.

The Canadian Forest Service (CFS) publication entitled "Review of non-target impacts of imidacloprid" reviews a group of studies that examine the toxicity of imidacloprid, the chemical present in most neonicotinoid chemical options for HWA (Sweeney, 2021). This review concludes that imidacloprid is "practically non-toxic" to most fish and frogs, except for rainbow trout fry to which it is moderately toxic. The chemical was also found to be moderately toxic to mammals and some birds but is highly toxic to other bird species. Additionally, it is not carcinogenic based on studies in rats and mice. Unfortunately, Imidacloprid is highly toxic to a wide range of insects and does not specifically target hemlock wooly adelgid.

Beyond measures of pure toxicity, it is valuable to examine the level of risk to organisms once the chemical is injected into trees in the environment. To analyze this issue, concentrations of imidacloprid measured in the environment were compared to the lethal concentration threshold for species that are found in habitats around eastern hemlock. It should be noted that most of the studies referenced were completed in areas where direct soil injection or soil drenching (pouring pesticide into the soil around tree roots) were the main application method. The chemical application methods in Ontario involve stem injection or basal bark spray, both of which are more targeted methods.

In stream systems, the CFS review concludes that even the most sensitive fish and amphibians (rainbow trout fry) are unlikely to be directly affected by imidacloprid near treated eastern hemlock stands. Benthic macroinvertebrates were also found to not be affected by imidacloprid in those same areas. In the tree canopy, it was found that

some needle-feeding species of insect did experience population declines within the first year following treatment, but that overall arthropod abundance and diversity were not impacted. Additionally, populations of hemlock-dependent bird species that were sampled similarly experienced no decline in population. Some concerns were raised about the long-term impacts of imidacloprid on arthropod populations, and by extension on the birds which feed on them. HCA staff have found no research addressing the long-term impacts of imidacloprid on these populations. Further, very little study has been completed to date on impacts to pollinators in eastern hemlock forests. Neonicotinoids are known to cause unintended negative and sometimes lethal effects in many pollinating organisms. However, imidacloprid use in hemlock forests is expected to have little impact on pollinators because eastern hemlock is wind pollinated and hemlock pollen is not likely to be collected much by pollinating insects. In the soil, some arthropods were found to be harmed by imidacloprid, though this was not consistent across studies. Should HCA elect to apply chemical via stem injection in particular, risk to organisms in the soil could be limited compared to the studies which used soil injection or soil drenching. Lastly, concerning risk to people, imidacloprid within eastern hemlock trees was found to exist in concentrations that would have an extremely low likelihood of harming a human.

To summarize the findings of this review, it is likely that the use of a neonicotinoid pesticide would harm some insect species that feed on eastern hemlock needles and potentially some organisms in the soil near treatment areas. In the short term, birds, fish, amphibians, benthic invertebrates, and pollinators are not likely to be adversely affected. However, there is limited research on the long-term effects of neonicotinoids on organisms in hemlock-dominant ecosystems, which is a significant knowledge gap in the decision of whether to use this class of chemical.

5.1.2 Assessment of Non-Neonicotinoid Pesticide

To provide a point of comparison to imidacloprid, staff have completed research into the other chemical control option, azadirachtin, which is the active chemical ingredient in TreeAzin. The Canadian Pesticide Management Regulatory Agency (PMRA) has produced a consultation document which outlines possible risks of this chemical (Pesticide Management Regulatory Agency, 2018). While azadirachtin is potentially harmful to bee broods, when examined in the context of use in eastern hemlock stands, it is not expected to harm pollinators for the same reason stated above for imidacloprid. Potential risks to birds and mammals were below the level of concern, and impacts to organisms in the soil are also expected to be low. The potential for azadirachtin to enter streams near treated trees has not been studied, however the chemical is toxic to aquatic organisms and has been labelled accordingly. Impacts to non-target needle-feeding organisms has also not been outlined.

The PMRA has determined that azadirachtin is not expected to pose significant risk to non-target organisms due to its general low toxicity levels and targeted application method. However, the use of this chemical in eastern hemlocks has not been widely studied and there are significant knowledge gaps of impacts to organisms feeding on hemlock needles and those in neighboring aquatic environments.

5.1.3 Assessment of No Pesticide Use

While chemical controls are likely to have some undesirable impacts on organisms other than HWA, the loss of most, or all, eastern hemlock trees in the Dundas Valley would ultimately result in an absence of the habitat required to support those same organisms. Therefore, they would eventually disappear from the area even if chemical treatment is not chosen. This conclusion is supported by the CFS review examined in section 5.1.1 (Sweeney, 2021). In addition to the loss of habitat, degraded water quality, erosion, colonization by invasive plant species, and loss of cultural value would occur as a result of electing for no chemical treatment. Living trees preserved by chemical treatment will continue to provide valuable benefits to the ecosystem, keep hazard tree costs down, control erosion, and provide shade, aesthetic value, and cultural value for trail users.

5.1.4 Chemical Recommendation

Bearing in mind the long-term and impacts of opting for no chemical control, staff recommend that HCA should choose to implement pesticide applications for the management of hemlock woolly adelgid. **Based on the best practice recommendations, pricing, benefits, and drawbacks of the chemicals available, it is recommended that IMA-jet be selected to control HWA in riparian areas.** The concerns related to neonicotinoids and impacts on other species are noteworthy and undesirable. However, the sole non-neonicotinoid option, TreeAzin, is prohibitively expensive and largely impractical in the long term. Based on current chemical and contractor costs, treating the trees selected for 2026 with TreeAzin would cost between $20,000-$25,000 more than an IMA-jet treatment of the same sample, and would need to be repeated at more frequent intervals in future years. IMA-Jet is applied to eastern hemlock trees through injection. Injections limit the risk of chemical runoff or drift into watercourses, which could occur with a basal bark spray. As a result, it is considered one of the safer application options.

Table 3 outlines the cost of various chemical control scenarios using TreeAzin and IMA-Jet 10, completed by a licensed contractor, HCA staff in-house, or a combination of both. The table assumes that 150 high-priority trees will be treated per year, though this number may change in reality depending on cost and funding. There are also increased staff time expenses for further surveys and inventory to facilitate the treatment of new trees which must be cataloged until Year 3. A four-year budget cycle was chosen as IMA-jet loses viability after four years inside the tree, requiring

retreatment. TreeAzin has a two-year cycle, meaning retreatment of trees under a TreeAzin management plan would start in year 3.

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Table 3. Estimated cost of chemical options for four years of treatment with available methods.

		TreeAzin (Contractor)	TreeAzin (In house)	TreeAzin (Combo)	IMA-jet 10 (Contractor	IMA-jet 10 (In house)	IMA-jet 10 (combo)
Year 1	**Contractor**	$30,000.00	$ -	$15,000.00	$10,000.00	$ -	$6,000.00
	Staff Time	$6,160.00	$8,120.00	$8,120.00	$6,160.00	$8,120.00	$8,120.00
	Equipment	$ -	$5,050.00	$5,050.00	$ -	$5,050.00	$5,050.00
	Product	$ -	$26,900.00	$13,450.00	$ -	$3,200.00	$1,700.00
	Subtotal	**$36,160.00**	**$40,070.00**	**$41,620.00**	**$16,160.00**	**$16,370.00**	**$20,870.00**
Year 2	**Contractor**	$30,000.00	$ -	$15,000.00	$10,000.00	$ -	$6,000.00
	Staff Time	$6,160.00	$8,120.00	$8,120.00	$6,160.00	$8,120.00	$8,120.00
	Equipment	$ -	$ -	$ -	$ -	$ -	$ -
	Product	$ -	$26,900.00	$13,450.00	$ -	$3,200.00	$1,700.00
	Subtotal	**$36,160.00**	**$35,020.00**	**$36,570.00**	**$16,160.00**	**$11,320.00**	**$15,820.00**

Year 3	**Contractor**	$30,000.00	$ -	$15,000.00	$10,000.00	$ -	$6,000.00
	Staff Time	$6,160.00	$8,120.00	$8,120.00	$6,160.00	$8,120.00	$8,120.00
	Equipment	$ -	$ -	$ -	$ -	$ -	$ -
	Product	$ -	$26,900.00	$13,450.00	$ -	$3,200.00	$1,700.00
	Subtotal	$ **36,160.00**	**$ 35,020.00**	**$36,570.00**	$**16,160.00**	$ **11,320.00**	**$15,820.00**
Year 4	**Contractor**	$30,000.00	$ -	$15,000.00	$10,000.00	$ -	$6,000.00
	Staff Time	$6,160.00	$8,120.00	$8,120.00	$6,160.00	$8,120.00	$8,120.00
	Equipment	$ -	$ -	$ -	$ -	$ -	$ -
	Product	$ -	$26,900.00	$ 13,450.00	$ -	$3,200.00	$1,700.00
	Subtotal	$**36,160.00**	**$35,020.00**	**$36,570.00**	$**16,160.00**	$**11,320.00**	**$15,820.00**
Total	**Product(s)**	$ -	$107,600.00	$53,800.00	$ -	$12,800.00	$6,800.00
	Contractor	$120,000.00	$ -	$60,000.00	$40,000.00	$ -	$24,000.00
	Staff Time	$24,640.00	$32,480.00	$32,480.00	$24,640.00	$30,380.00	$32,480.00
	Equipment	$ -	$5,050.00	$5,050.00	$ -	$5,050.00	$5,050.00
	Grand Total	**$144,640.00**	**$145,130.00**	**$151,330.00**	**$64,640.00**	**$48,230.00**	**$68,330.00**

5.2 Monitoring and Inventory

Monitoring and inventory are methods of collecting data in the field which track the status of trees in management areas and provide necessary information to plan HWA control.

Under the chosen management strategy, it is recommended that staff complete monitoring for tree health during and after treatment in areas where chemical control will occur. This ensures that HCA can monitor the efficacy of treatment and adapt to changing conditions as they arise.

“Strategy 5: Protect Trees in Riparian Areas” will require the completion of future tree inventories to determine the number and location of eastern hemlock trees that are eligible for preservation through chemical control. This inventory will also collect data such as tree size which is required to budget and plan for chemical control. Due to the defined scope of this inventory, the current objective is for HCA’s Invasive Species Technicians to complete this work. As of the writing of this management plan, Conservation Areas that may be targeted for future inventory and chemical control include Dundas Valley CA along Sulphur Creek west of Bumblebee Park and Spring Creek west of Old Dundas Road, and Tiffany Falls and Spencer Gorge. One week of inventory work by the existing two invasive species staff is accounted for in the first three years of costs in the proposed management plan.

Since the proposed treatment area under “Strategy 5” is defined by creek corridors, widespread surveys such as those completed in 2025 are not needed at this time. Field work will focus on inventorying trees for treatment instead of further detection of HWA. However, future presence surveys HWA may be conducted in auxiliary properties such as Tiffany Falls where HWA has not yet been detected, should staff time allow.

5.3 Biological Control

Biological control involves the release of a species-specific predator into the environment that reduces the population of HWA by eating or parasitizing it. When successful, it is a sustainable long-term control method that allows for passive management of pests such as HWA by reducing insect populations to levels below where damage occurs. Biological control is the end goal for the long-term protection of hemlocks on HCA land, since it is not practical to continue chemical treatments indefinitely. It has been shown that biological controls are successful in maintaining the health of eastern hemlocks following preventative chemical management (Mayfield et al., 2015). However, the introduction of a biological control would require either the release of the predators on a nearby property or for HCA to work with biocontrol researchers to release on HCA land.

Research to certify a biological control is underway, with releases of candidate insects in locations as close as New York State and Nova Scotia. However, no releases have yet taken place in Ontario, and the insects spread very slowly so are not expected to reach Hamilton through natural movement for several decades. The release of these insects is delayed in Ontario due to movement restrictions and operational roadblocks, but work is being completed by the CFS and academic institutions to bring the solution to Ontario.

Biological controls would likely require little staff input or time and may be overseen by a government agency or academic institution. Monitoring for efficacy could be worthwhile, and staff time to coordinate with relevant authorities may also be required, but this management option would largely be passive.

Since the possibility of biocontrol for HWA in southern Ontario is still a long way away, management by other means is strongly recommended to support hemlock stands until a predatory species can be introduced.

5.4 Silviculture

Silviculture is a forest health management technique which uses stand thinning, tree planting, and other tools to affect the composition of forest stands to promote health. Relating to HWA, this technique is recommended for use in un-infested stands as a proactive measure to promote forest quality. In forests with widespread infestations, silviculture can provide some mitigation of harm from HWA but is primarily used to gain an economic return from trees that will likely succumb to the insect.

When felling, pruning, or cutting hemlocks, material should remain on site wherever possible. With the CFIA ruling the City of Hamilton a regulated area, no hemlocks parts or products can be taken out of the municipality, however, they are technically allowed to be moved around within it. Regardless, the movement of material may still expedite or create an infestation in a new area with the Dundas Valley or other HCA properties. Leaving cut material on site will mitigate local spread and allow for potential regrowth of hemlocks by utilizing fallen trunks or stumps as nurse logs. Although small trees may fail in a heavy HWA infestation, promoting positive conditions for regeneration may be beneficial over the long term. If plant material must be removed from site, it should be taken the shortest distance required.

Some areas surveyed for HWA and inventoried for treatment are located within lands defined under the HCA's Managed Forest Plan (Puttock, 2017). This includes the corridor around Spring Creek that has been targeted for the first phase of treatment. Under the Managed Forest Plan, there is consideration given to invasive insects, including HWA, and it is recommended these areas be monitored for presence, which

has been completed. The management of HWA and the Managed Forest Plan will continue to be updated to reflect the shared priorities and areas of focus when required.

Implementation of the silviculture technique would require further research and consultation with a forestry services provider. This option may be explored in the future, but it is unclear whether this technique would be feasible and provide a significant enough benefit to invest in.

5.5 Restoration

Restoration involves planting new tree species in areas currently or formerly dominated by hemlocks. Details of a replanting program are beyond the scope of this report and will need to be addressed in a separate document such as a master plan or other strategy.

The primary benefit of tree planting in impacted areas is that these trees would mimic ecosystem functions such as stream cooling, erosion control, and habitat for some species, as well as maintain a similar aesthetic for trail users. However, replanted trees will also take many years to grow to the point where their benefits can compare to those provided by the thousands of mature hemlocks found in the Dundas Valley. As stated previously, many of the ecosystem functions and habitat provided by eastern hemlocks are unique, and a replanting program, though beneficial, will not on its own restore the environment in which hemlocks used to dominate in the overstory. Therefore, it is recommended to begin plantings in tandem with chemical treatment, and restoration should include replacement trees in areas expected to lose their hemlocks, as well as plug plantings and shrubs in the understory and in riparian areas to prevent the encroachment of other invasive species. Replanting with younger eastern hemlocks is unlikely to be effective unless a biocontrol is introduced.

6.0 Conclusion

Hemlock woolly adelgid is an invasive insect recently detected in the Dundas Valley Conservation Area, and it has been found throughout the property as of 2025. The presence of HWA is predicted to have a profound and long-lasting negative impact on the health of forests in HCA's Conservation Areas which contain eastern hemlock trees.

Eastern hemlock trees are a long-lived, foundational species on the landscape, defining the ecosystems which they inhabit. These trees provide specialized habitat for rare plant and animal species, control erosion, prevent flooding, and provide aesthetic benefits to trail users. In areas where HWA is not controlled, it is forecasted that these trees will begin to die in as few as four years.

There exists a number of options for mitigating the damage caused by HWA, most of which involve the application of pesticides to preserve the health of selected trees. The objective of pesticide application is to act as a stop-gap by preserving tree health until a biological control predator for HWA can be introduced as a long-term solution. However, the biological control option has several operational and regulatory obstacles to overcome before being implemented in Ontario. This will likely not occur for several years, resulting in the need for other immediate management action.

Due to the large number of eastern hemlocks on HCA property, it will not be possible to chemically treat all eastern hemlock. Staff have reviewed five strategies for prioritizing which trees to preserve through pesticide application. The chosen strategy focuses on maintaining the health of trees immediately bordering creek systems, in an area called the riparian zone. This strategy was chosen in part because eastern hemlock trees in the riparian zone provide many unique benefits to the environment that other tree species cannot replicate.

For the application of pesticide to preserve tree health, staff recommend the use of IMA-jet 10%, applied by a licensed contractor to targeted areas. Based on the budget estimation in this report, staff aim to treat 150 trees annually for four years, resulting in the protection of 600 trees total. The efficacy of the chosen herbicide will lapse after four years, meaning that it will be necessary to return to the previously treated trees to re-apply after that period. The objective is to continue this approach until a viable biological control is released in or reaches Hamilton.

The management strategy outlined in this report is based on the most recently available knowledge and recommendations from resources such as Natural Resources Canada, the Invasive Species Centre, and scientific publications. The chosen management approach may need to be adapted in the future to reflect updated information or due to available resources.

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Hamilton Conservation Authority

A Healthy Watershed for Everyone

10.4

Memorandum to: Conservation Advisory Board

Approved for Circulation By: Lisa Burnside, CAO

Reviewed By: Matthew Hall, Director; Capital Projects & strategic Services

Prepared By: Madolyn Armstrong, Landscape Architect; Capital Projects & Strategic Services

Meeting Date: February 12, 2026

Subject: Dundas Valley Study Area Master and Management Plans – Project Overview

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Executive Summary:

HCA staff, along with consulting firm 'thinc design', are in the early stages of developing new Master and Management Plans for the Dundas Valley Study Area. This Study Area includes the following properties, which will be split over two work phases:

Phase 1 properties include:

- Iroquoia Heights Conservation Area
- Lower Spencer Creek Conservation Area and Canal Park
- Meadowlands Conservation Area
- Tiffany Falls Conservation Area

Phase 2 properties include:

- Dundas Valley Conservation Area
- Hamilton to Brantford Rail Trail
- Summit Bog Conservation Lands

The purpose of this Memorandum is to provide CAB members with an overview of the properties being reviewed during Phase 1 of this process, along with the scope and timing of the overall project.

Staff Comment / Discussion:

<u>About the Dundas Valley Study Area</u>

New Master Plans and Management Plans are developed for HCA properties as part of

the HCA 10 Year Master Plan Update Strategy, which was approved by the Board of Directors in 2019. As part of this Strategy, the HCA watershed is divided into seven study areas. The Dundas Valley Study Area will be the sixth study area undertaken. A map of the Dundas Valley Study Area is included in this memorandum as 'Appendix 1'. There are seven new plans that will be developed within this study area.

To better manage the writing of seven plans at one time, the properties will be divided into two Study Area Phases. Work on the plans in Phase 1 will begin first. Once draft plans have been created and are under review, work on the Phase 2 plans will begin. Once complete, Phase 1 plans will be brought to the Board for approval followed by the Phase 2 plans.

About the Phase 1 plans

1. Iroquoia Heights Conservation Area Management Plan

   This 88-hectare passive conservation area includes recreational trails and views of Lake Ontario and the Hamilton and Dundas areas. This plan will update and replace the 1993 Master Plan ratified by MNRF. This property is located along the Niagara Escarpment and within the Niagara Escarpment Plan Area. The Bruce Trail and the Chedoke Radial Trail are connected to this property. Key topics in the development of this plan will include accommodating different user groups, supporting visitation and connections to trail networks, and updating natural area field reviews and recommendations.

2. Lower Spencer Creek Conservation Area Management Plan (includes Canal Park)

   Lower Spencer Creek is a 30-hectare natural area with one linear trail. This Management Plan will update and replace the 1997 Spencer Creek Watershed Management Plan and 2010 Lower Spencer Creek Subwatershed Stewardship Action Plan. Neighbours to this property include Royal Botanical Gardens and McMaster University. Key topics will include enhancing connections to local trail networks and supporting visitation while protecting the creek and the surrounding natural area.

   This Plan will also include Canal Park, which is a 1-hectare park with a looped trail and pavilion. The plan will incorporate background studies, development plans, capital project development and site management since it was acquired in 2008. Enhancing connectivity and visitor access will be key topics along with supporting the natural habitat found on this small property.

3. Meadowlands Conservation Area Management Plan

   Meadowlands is a 38-hectare fragmented natural area with minimal recreational trails. It is located within a heavily developed residential area. This plan updates and replaces the 2012 Meadowlands Conservation Area Management Plan. Public engagement was a key part of the 2012 plan, as an expanded trail system was considered at the time. Key topics in the development of this plan will include how to accommodate existing and potential recreational use, improvements needed to the

existing trail system, along with updated natural area field reviews and recommendations.

4. Tiffany Falls Conservation Area Management Plan

   Tiffany Falls totals 18 hectares and includes a very popular day-use parking lot and trail to the base of a waterfall along Tiffany Creek. This Master Plan updates and replaces the Tiffany Falls sections of the 1997 Dundas Valley Conservation Area Master Plan. This property is located along the Niagara Escarpment and within the Niagara Escarpment Plan Area. The Bruce Trail route goes through this property. Tiffany Falls is a small conservation area that receives high visitation. Key topics in the development of this plan will include planned changes to parking and access for the area stemming from the Visitor Use Management Plan that was recently completed, along with connections to the Dundas Valley and updated natural area recommendations.

These plans are intended to provide direction and guidance for the next ten years of operation for these HCA properties. These plans will provide HCA with detailed property evaluations for land and resource management, visitor management, and include a public consultation process. The new plans 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.

Master Planning Project Team

Following a formal Request for Proposal process, the professional consulting firm 'thinc design' was selected on October 2, 2025, by the HCA's Board of Directors to assist HCA staff in the development of these plans. thinc design is a landscape architecture, planning and urban design consulting practice based in Toronto. thinc design has extensive experience in developing master plans for natural areas and incorporating community, stakeholder and Indigenous engagement. Their team has created multi-year plans for both natural and urban areas with diverse user groups, recreational offerings and conservation in mind.

HCA staff and thinc design will be working closely together on developing these Master and Management Plans. Some roles in developing the plans will still be completed in-house by HCA staff, and some roles will become the responsibility of the consultant. Below is a summary of the tasks that the HCA and thinc design will be responsible for:

Roles to be completed by HCA staff:

- All ecological fieldwork and writing about ecological findings and recommendations in the Plans.
- Reviewing internal background files for the properties and writing the background sections of the Plans.
- Writing the Site Concept and Financial sections of the Plans.
- Creating mapping and figures for the Plans.
- Developing capital budgets to include in the appendices of the Plans.

- Collecting data with trail and vehicle counters.
- Corporate communications through HCA website and social media.

Roles to be completed by thinc design:

- Coordinating and facilitating engagement with the following groups:
    - HCA staff and staff working group meetings
    - HCA Board of Directors and Conservation Advisory Board
    - The public
    - External stakeholder groups and agencies
    - Local Indigenous communities
- Managing and compiling the draft and final documents.
- Writing sections of the Plans including the Introduction, Executive Summary, Management Practices, Programming and Summary sections based on information gathered through consultation and information provided by HCA staff.
- Coordinating and managing internal and external review and commenting periods for the documents.
- Presenting final Plans to HCA Board of Directors and Conservation Advisory Board for approval.

Project Timeline and Scope of Work

The preparation of HCA Master and Management Plans is typically divided into four Stages of work.

- Stage 1 – Background Review and Preparation
- Stage 2 – New Information Gathering
- Stage 3 – Draft Document Development
- Stage 4 – Final Document and Approvals

The plans in Phase 1 are now at the beginning of Stage 2, which includes engagement with the HCA staff working group, HCA Conservation Advisory Board and Board of Directors, the public, external stakeholders and local Indigenous communities.

Public engagement for the Phase 1 plans is anticipated as follows:

- Visitor surveys posted on HCA's Bang the Table website in spring 2026 to gather information and receive comments.
- The Bang the Table site will remain open for public viewing and commenting until the plans are finalized. Draft documents will be posted for public review and comment.
- Flyers with QR codes linking to the visitor surveys will be posted throughout the study areas at high traffic areas.
- Pop-up information tables will be held in the areas to engage with visitors, and public open house events will be planned for Phase 1 and Phase 2.
- The plans, visitor surveys and engagement opportunities will be promoted on HCA's social media platforms.
- Visitor attendance data will be gathered with trail and vehicle counters to be installed and monitored by staff.

Consultation with external groups including Indigenous communities will be led by the consultants at thinc design, with direction from HCA staff. This will include correspondence and some meetings to discuss key topics in each plan, as well as circulating the draft documents for review and comment after they have been reviewed by the staff working group.

Once the plans have been drafted, concepts will be brought to the Conservation Advisory Board for review and input. This will happen separately for Phase 1 and Phase 2 plans. CAB members will also have an opportunity to review and comment on the draft documents before they and finalized.

It is anticipated that the Phase 1 plans will be brought to the Board for approval in late 2027, and the Phase 2 plans will be brought forward in 2028. Properties within the Niagara Escarpment Plan Area will then be brought to the Niagara Escarpment Commission for endorsement and MNR for approval.

Strategic Plan Linkage:

The initiative refers directly to the HCA Strategic Plan 2025 – 2029:

- **Strategic Priority Area – Natural Heritage Conservation**

  Initiative – Manage natural areas on HCA lands through monitoring, inventories, strategies and approved master and management plan recommendations to ensure enhancement of natural areas and ecosystems.

- **Strategic Priority Area – Organizational Excellence**

  Initiative – Increase our engagement with First Nations Peoples to learn about and incorporate traditional knowledge in stewardship and teachings on the Treaty and traditional lands within the HCA watershed.

  Initiative – Uphold our ties to federal, provincial, and municipal partners to work together to advance conservation efforts.

- **Strategic Priority Area – Connecting People to Nature**

  Initiative – Manage and enhance conservation lands utilising best management practices to support nature appreciation and recreation activities, as communities continue to grow and look to HCA’s conservation areas to spend time in nature.

  Initiative – Continue development of master and management plans and implementation of priority capital reinvestments.

Agency Comments:

The properties to be reviewed for updated Master and Management Plans include lands in the watershed of the Grand River Conservation Authority, lands in the City of

Hamilton, and lands within the Niagara Escarpment Plan Area. These agencies will be consulted and circulated for comment during the draft plan review process.

The final Plans for lands within the Niagara Escarpment Plan Area including Dundas Valley Conservation Area, Iroquoia Heights Conservation Area, Tiffany Falls Conservation Area, Hamilton to Brantford Rail Trail and Summit Bog Conservation Lands will be sent for endorsement by the NEC and approval by MNR once they have been approved by the HCA Board of Directors.

Legal / Financial Implications:

Sufficient funding for this work has been allocated within the HCA Capital Projects Budget for 2026. Additional capital funding will be requested over 2027 and 2028 in order to complete all aspects of the scope of work.

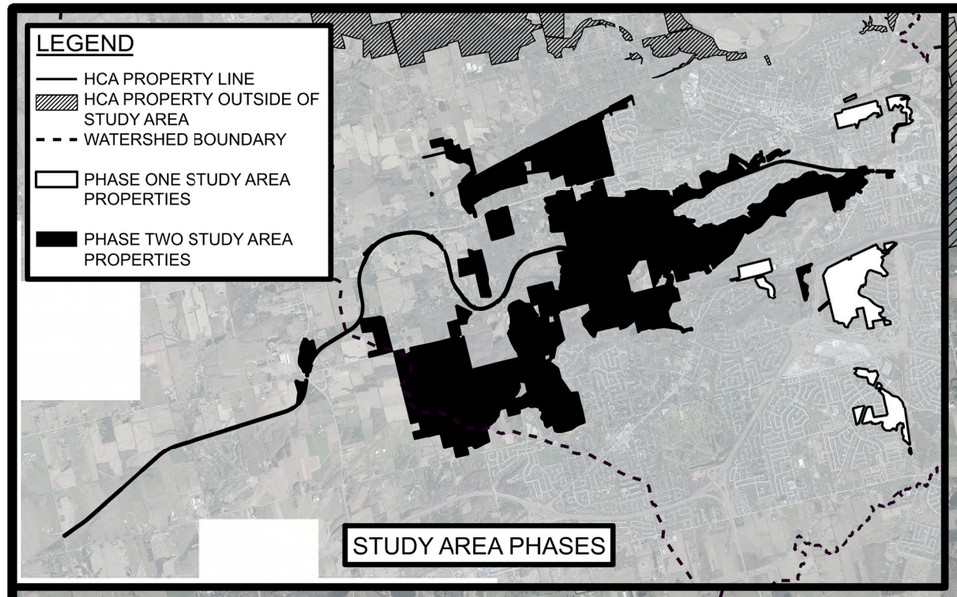
Related Reports and Appendices:

Appendix 1 – Dundas Valley Study Area Map

STUDY AREA MAP
DVCA MASTER & MANAGEMENT PLANS

DATE: 2025/01/24

DRAFT
date: 2025/01/24



CANAL PARK
HWY 8
GOVERNORS RD
MAIN ST W
HWY 403
HWY 52
MINERAL SPRINGS RD
WILSON ST
MOHAWK RD
LINCOLN ALEXANDER PKWY
SULPHUR SPRINGS RD
STONE CHURCH RD
POWERLINE RD
JERSEYVILLE RD W
FIELD RD
HWY 403

LEGEND
HCA PROPERTY LINE
HCA PROPERTY OUTSIDE OF STUDY AREA
WATERSHED BOUNDARY

STUDY AREAS - PHASE ONE
LOWER SPENCER CREEK C.A. (INCLUDES CANAL PARK)
IROQUOIA HEIGHTS C.A.
MEADOWLANDS C.A.
TIFFANY FALLS C.A.

STUDY AREAS - PHASE TWO
DUNDAS VALLEY C.A.
HAMILTON TO BRANTFORD RAIL TRAIL
SUMMIT BOG C.L.

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