



Conservation Advisory Board Meeting Agenda

Thursday, February 10, 2022



Notice of Meeting
Conservation Advisory Board
Thursday, February 10, 2022
4:00 p.m.

This meeting will be held by WebEx videoconference.

The meeting can be viewed live on HCA's You Tube Channel:
<https://www.youtube.com/user/HamiltonConservation>

1. Chair's Remarks – Bowman

2. Declaration of Conflict of Interest – Bowman

3. Approval of Agenda – Bowman

4. Delegations

5. Election of Vice-Chair – Bowman

6. Member Briefing

7. Chair's Report on Board of Directors Actions – Bowman

CA 2126 Fifty Point Conservation Area & Marina Master Plan

CA 2127 Spencer Gorge Conservation Area Reservation System

8. Approval of Minutes of Previous Meeting

8.1. Minutes – Conservation Advisory Board (December 9, 2021) – Bowman

9. Business Arising from the Minutes

10. Staff Reports/Memorandums

10.1. Westfield Heritage Village Accession and Deaccession Lists – Brown / Lloyd

10.2. 2022 Annual Membership Pass Program Renewal Strategy – Davidson

10.3. HCA 10 Year Masterplan Strategy Update Report – Hall

10.4. Conservation Areas Attendance and General Update – Harschnitz

10.5. LDD (Gypsy) Moth Surveys & 2022 Control Program Report – McDonell

11.New Business

12.Next Meeting – Thursday, April 14, 2022 at 4:00 p.m.

13.Adjournment

HAMILTON CONSERVATION AUTHORITY

Conservation Advisory Board

MINUTES

December 9, 2021

Minutes of the Conservation Advisory Board meeting held on Thursday, December 9, 2021, commencing at 4:00 p.m., by videoconference and livestreamed via YouTube.

PRESENT: **Dan Bowman - in the Chair**
 Lydia Cartlidge
 Cynthia Janzen **Joanne Di Maio**
 Wayne Terryberry **Duke O’Sullivan**

Santina Moccio – Ex-Officio

REGRETS: **None**

STAFF PRESENT: **Lisa Burnside, Grace Correia, Gord Costie, Matt Hall,**
 Lesley McDonell, Neil McDougall, Scott Peck, Kathy
 Smith, Mike Stone, Jaime Tellier, and Nancy Watts

OTHERS: **None**

1. Chair’s Remarks

The Chair called the meeting to order and welcomed everyone present. Former Chair Maria Topalovic was recognized and thanked her for her many years of leadership to this committee. Dan noted he was Chair of CAB in the past and appreciated to the opportunity to resume the role.

2. Declaration of Conflict of Interest

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

3. Approval of Agenda

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

**CA 2124 MOVED BY: Cynthia Janzen
 SECONDED BY: Duke O'Sullivan**

THAT the agenda be approved.

CARRIED

4. Delegations

There were none.

5. Election of Vice-Chair

The Chair advised that as it was the final meeting of the year, the election would be deferred until after the Board of Directors Annual General Meeting in February.

6. Member Briefing

6.1. Turtle Road Mortality Mitigation Efforts along Cootes Drive

Lesley McDonnell shared a video produced by the Royal Botanical Gardens on the turtle road mortality efforts along Cootes Drive. The initiative is a joint effort among public landowners and a volunteer organization to fence and redirect turtles and other wildlife away from the road. Monitoring and reporting are also key components of the project. The measures implemented have been successful in decreasing the number of turtles injured and killed along the stretch of road. Efforts to maintain and improve the measures will continue. Lesley commented that funding for the portion of fencing along HCA's property was provided by the Hamilton Conservation Foundation, HCA and the Great Lakes Protection Initiative. Breaks in HCA's fencing have been repaired and vegetation along the fence is maintained. The Chair commented on the valuable partnerships and importance of the work.

6.2. Conservation Authorities Act – Phase 1 Regulations

Lisa Burnside presented on three new provincial regulations made to the Conservation Authorities Act and answered the members' questions.

Lisa noted the mandatory programs and services regulation outlines the categories that will be considered mandatory moving forward and Conservation Authorities are pleased to see the inclusion of passive recreation. Lisa advised the new regulations do not appear to be intended to change any of our programs and services directly; the intent is to clarify who will be responsible to fund the activities, be it the Province, the Municipality or through self-generated revenue.

Conservation Authorities are required to complete and publish transition plans outlining the steps and timeframes that will be followed to comply with the new regulatory requirements.

The Rules of Conduct in Conservation Areas regulation consolidates the current individual conservation authority 'Conservation Area' regulations made under Section 29 of the Conservation Authorities Act into one Minister's regulation. There are no significant updates to the regulation and does not change HCA's current operations.

Lisa also advised the regulations did not include the requirement to establish an advisory board, however, Conservation Authorities are permitted to establish committees.

The transition plan was approved by the Board of Directors at the November meeting. The next step will be completing the programs and services inventory.

The Chair thanked Lisa and staff for all of their efforts to meet the provincial requirements.

7. Chair's Report on Board of Directors Actions

There was none.

8. Approval of Minutes of Previous Meeting

8.1. Minutes – Conservation Advisory Board (June 10, 2021)

**CA 2125 MOVED BY: Wayne Terryberry
 SECONDED BY: Joanne Di Maio**

**THAT the minutes of the June 10, 2021 Conservation Areas
Advisory Board meeting be approved.**

CARRIED

9. Business Arising from the Minutes

There was none.

10. Staff Reports/Memorandums

10.1. Fifty Point Conservation Area & Marina Master Plan

Kathy Smith presented a summary of the report and answered the members' questions.

Staff confirmed the Board-approved strategy whereby all master plans are scheduled to be updated in the next ten years.

The rise in use and attendance along with limited potential for future land acquisition to expand the conservation area was noted. Given the future development in the surrounding area, the committee discussed pressures on the marina and day-use and how the campground fits in the mix. Staff advised that the campground was discussed in detail among stakeholders, elimination was not considered, however expansion was not carried forward in this master plan. Efforts will be made to enhance the existing campground. Consideration was also given to the balance of seasonal camping vs nightly camping in the future.

The Chair commented on the importance of master plans in providing road maps for the future. He also highlighted the over 400 public comments providing input into the plans. Staff were asked to comment on the most frequent comments received. Kathy advised of common themes being pedestrian access, as well as flagging safety concerns related to lack of sidewalks and traffic issues for pedestrians. As a result, recommendations to the municipality regarding the area surrounding HCA's property and upgrading Baseline Road were added to the plan as well as exploring adding a secondary entrance on Kelson Road seasonally on the Grimsby side.

Strategies for improving visitor, site, and operational management to accommodate increasingly high visitation and anticipated growth in the area were discussed as well as the significant natural features of the conservation area.

Matt Hall shared that Kathy Smith is transitioning into retirement and thanked her for her contributions to HCA. The Chair recognized Kathy for all of her work on the master plans.

CA 2126

MOVED BY: Lydia Cartlidge

SECONDED BY: Duke O'Sullivan

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

THAT this report and accompanying Master Plan of November 2021 be received as information for project background and general understanding; and further

THAT the Fifty Point Conservation Area Master Plan 2021 be approved.

CARRIED

10.2. Spencer Gorge Conservation Area Reservation System

Gord Costie presented a summary of the report and answered the members' questions.

It was noted that visitation was lighter than 2020, however, the weather was not as good and the easing of pandemic restrictions did open up more recreation options for people to once again experience. While numbers were down, the reservation system coupled with support from city parking and bylaw, were effective in keeping traffic congestion to a minimum and the reservation system has provided a vastly improved visitor experience.

Given that the 2021 demonstrated that HCA parking lots can handle the weekday capacity, the recommendation moving forward in 2022 is that no reservation will be required week days until the Fall colour season which allows for regular day use and membership pass access without reservation. This operating approach addresses feedback from both the community and passholders to provide access when there was capacity. Should attendance and visitor volume increase beyond parking lot capacity, staff can quickly pivot and update the reservation system as needed.

The Chair noted the reservation system has been a great success story for HCA.

CA 2127

MOVED BY: Cynthia Janzen

SECONDED BY: Wayne Terryberry

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

WHEREAS the pilot 2020 and 2021 reservation system for Dundas Peak, Tew Falls, and Webster Falls, was highly successful at improving the Conservation Area experience by

controlling and regulating the number of visitors, and for reducing vehicle traffic and congestion within the nearby community;

WHEREAS staff were directed to evaluate the effectiveness of the pilot reservation system and report back on the operations in 2021;

WHEREAS staff were directed to monitor and evaluate the reservation system as a potential and continuous part of the operations in addressing parking and visitor management strategies for the area;

THEREFORE, be it resolved

THAT the reservation system be integrated as part of the ongoing operation of Spencer Gorge Conservation Area based on the following parameters:

THAT future reservation periods for Spencer Gorge Conservation Area continue to reflect the dates of May to November, with specific start and end dates to be determined by staff; and further

THAT the reservation period operates based on weekend and Public Holiday reservation requirements in 2022 until mid-September when 7 day a week reservation will be required for Fall colours; while still providing the ability of staff to undertake real time adjustments for reservation system requirements to add additional reservation days if required.

CARRIED

10.3. Conservation Areas Experiences Update

Gord Costie highlighted the renewal of the Hamilton Mountain Conservation Areas (HMCA) with new dedicated full-time staff and the opening two additional areas for the HMCA, Saltfleet CA and the Chippewa Trail Parking Lot. He also commented on the greatest surge in HCA Membership Pass sales in the history of the organization, and high levels of service through record attendance again in 2021. An attendance report will be brought forward in 2022. He also advised the annual Haudenosaunee deer harvest in the Dundas Valley was undertaken and has now ended for the season.

CA 2128

MOVED BY: Wayne Terryberry

SECONDED BY: Lydia Cartlidge

THAT the verbal update on the Conservation Areas Experiences Update be received as information.

CARRIED

11. New Business

There was none.

12. Next Meeting

The next meeting of the CAB is scheduled for Thursday, February 10, 2022 at 4:00 p.m.

13. Adjournment

On motion, the meeting was adjourned.

Report

TO: Conservation Advisory Board

FROM: Lisa Burnside, Chief Administrative Officer (CAO)

RECOMMENDED BY: Gord Costie, Director Conservation Area Services

PREPARED BY: Rondalyn Brown, Manager, Westfield Heritage Village
Peter Lloyd, Collections Officer, Westfield Heritage Village

MEETING DATE: February 10, 2022

RE: Westfield Artifact Accessions/Deaccessions for 2021

STAFF RECOMMENDATION

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

THAT the Westfield 2021 Artifact Accessions and Deaccessions List as noted in the February 10, 2022 Accessions/Deaccessions report be accepted as the artifacts to be added to, or removed from, the Westfield Heritage Village Conservation Area and the Hamilton Conservation Authority collection.

BACKGROUND

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.

The current public health situation has changed the day to day focus of collection management at Westfield Heritage Village. The number of donations offered by the public has dropped a great deal and exhibit activity in the heritage buildings is static while we await opportunities to reopen. The focus of collections has turned inward and longstanding issues of storage and conservation have come to the fore.

The history of the collection itself is playing a role in this year's collection report. Westfield has been collecting antique objects for sixty years. In that time there have been many changes in collection standards and strategies. In the early years a "more is better" approach led to a flood of items which would not pass our current collections criteria. In a few cases, the entire contents of defunct country stores or small businesses were accepted in bulk. There have been efforts in the past to assimilate or digest these objects into the collection. In about 1980 there was an attempt to introduce museums best practice by going through the collection and giving registration numbers to the objects. Items for which no original donor could be identified had the prefix "X" added to their artifact number. Again, starting in 1985, when the museum was temporarily mothballed, a push was made to get numbers on to unregistered objects. Between 1985 and 1988, thousands of objects were registered to the collection, to have them accounted for in the database, with no information on their original source or donor.

In 2021 a review of storage areas identified several large storage cartons of highly repetitive, poor condition items which have been sequestered in the storage area with an accumulation of damaged and incomplete furniture items. The vast majority of items identified in the process were of unknown origin and presented a burden on the proper management of the collection.

Deaccessioning is a methodical process in which artifacts, which are no longer an asset to the collection, are responsibly removed. Each item is assessed on criteria, such as proper identification, condition, duplication, exhibit potential, storage demands and provenance. Based on that review, a list was made of registered objects that are being recommended for removal from the permanent collection. Next steps for these items include: being offered to other institutions within the public trust, being sold to raise money to support the preservation of the collection as a whole, being responsibly gifted and finally, respectful disposal. It is important to note that all of these objects are still at Westfield and are in a segregated storage area awaiting a decision.

In 2021 Westfield purchased a new collections management software program called Past Perfect. Please find attached the Deaccession List Report from this program.

STAFF COMMENT

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 2021 Artifact Accessions List

The following items are recommended to be accepted into the Westfield Heritage Village Conservation Area permanent artifact collection in 2021.

- Box of assorted type and type borders, late Victorian, 47 pieces
- Group of 2 brace and bits, 1860's
- Stanley # 80 plane
- Millwright's auger
- Circle scribing tool, brass
- Metal worker's hammer
- Large keyhole saw
- Jam cupboard circa 1900
- photo "Mount family" 1910
- Double action flax spinning wheel, 1850's
- "Eglin" spinning wheel, 1860's
- "Ideal Lever" spinning wheel, 1860's
- Wool winder, wooden gears, 1860's

Westfield 2021 Artifact Deaccessions List

Please find attached the artifacts/items recommended to be removed from the Westfield Heritage Village conservation Area permanent artifact collection in 2021.

STRATEGIC PLAN LINKAGE

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

- **Strategic Priority Area – Conservation Area Experience**
 - Initiatives – Identify and support a more diverse and accessible range of programs for our conservation area users

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.

CONCLUSIONS

These measures will help care for and manage the Westfield Heritage Village Conservation Area artifact collection and will preserve important pieces of local history for the community.

Westfield 2021 Artifact Deaccessions List

| ACCESSNO | OBJNAME | STATUS |
|-----------------|--------------------------------|-----------|
| 973.0000.0001 | MAT, TABLE | DEAC 2021 |
| 973.0764.0002 | BOX, TRINKET | DEAC 2021 |
| 975.0007.0001 a | QUILT PIECE | DEAC 2021 |
| 975.0007.0001 b | QUILT PIECE | DEAC 2021 |
| 975.0007.0001 h | QUILT PIECE | DEAC 2021 |
| 975.0007.0001 k | QUILT PIECE | DEAC 2021 |
| 975.0007.0001 l | QUILT PIECE | DEAC 2021 |
| 975.0007.0001j | QUILT PIECE | DEAC 2021 |
| 976.0048.0001 | SEWING SUPPLIES | DEAC 2021 |
| 976.0052.0001 | SEWING SUPPLIES | DEAC 2021 |
| 976.0055.0001 | braid, black silk | DEAC 2021 |
| 976.0067.0001 | braid, black silk | DEAC 2021 |
| 976.0091.0001 | braid, green-blue | DEAC 2021 |
| 976.0104.0001 | braid | DEAC 2021 |
| 976.0108.0001 | Braid | DEAC 2021 |
| 976.0115.0001 | braid | DEAC 2021 |
| 976.0117.0001 | braid | DEAC 2021 |
| 976.0122.0001 | cord | DEAC 2021 |
| 976.0134.0001 | braid | DEAC 2021 |
| 976.0135.0001 | silk braid white | DEAC 2021 |
| 976.0136.0001 | braid, white linen | DEAC 2021 |
| 976.0143.0001 | braid silk, blue | DEAC 2021 |
| 976.0296.0001 | TOWEL, DISH | DEAC 2021 |
| 976.0301.0001 | BLANKET | DEAC 2021 |
| 976.0303.0001 | PILLOWcase, heavy cotton print | DEAC 2021 |
| 977.0003.0267 | BELT | DEAC 2021 |
| 977.0003.0481 | MUFFLER | DEAC 2021 |
| 977.0003.0485 | MUFFLER | DEAC 2021 |
| 977.0003.0813 | mATERIAL | DEAC 2021 |
| 977.0003.0815 | SCARF | DEAC 2021 |
| 977.0003.0817 | SCARF | DEAC 2021 |
| 977.0003.0826 | envelope, containing initials | DEAC 2021 |
| 977.0003.0998 | lace | DEAC 2021 |
| 977.0003.1189 | WRAPPER | DEAC 2021 |
| 977.0003.1190 | two packages of cotton braid | DEAC 2021 |
| 977.0003.1204 | cotton trim | DEAC 2021 |
| 977.0003.1206 | black lace | DEAC 2021 |
| 977.0003.1210 | lace | DEAC 2021 |
| 977.0003.1226 | Lace, sample | DEAC 2021 |
| 977.0015.0001 | SHEET | DEAC 2021 |
| 978.0076.0001 | COLLAR | DEAC 2021 |
| 978.0086.0001 | COLLAR | DEAC 2021 |
| 978.0115.0001 | BLOUSE | DEAC 2021 |

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|-----------------|-----------------|-----------|
| 978.0345.0001 | SEWING SUPPLIES | DEAC 2021 |
| 978.0395.0001 | CAPE | DEAC 2021 |
| 979.0158.0003 | NAPKIN | DEAC 2021 |
| 979.0158.0004 | NAPKIN | DEAC 2021 |
| 979.0164.0001 | SCARF, BUREAU | DEAC 2021 |
| 979.0193.0001 | HANDKERCHIEF | DEAC 2021 |
| 979.0210.0001 | APRON | DEAC 2021 |
| 979.0230.0004 | SASH | DEAC 2021 |
| 979.0258.0001 | APRON | DEAC 2021 |
| 979.0294.0001 d | BONNET | DEAC 2021 |
| 979.0310.0001 | pANTALOONS | DEAC 2021 |
| 981.0009.0016 a | SCARF, BUREAU | DEAC 2021 |
| 982.0030.0003 | CARPET SECTION | DEAC 2021 |
| 983.0001.0066 | TABLE COVER | DEAC 2021 |
| 983.0007.0026 a | CUFFS | DEAC 2021 |
| 983.0007.0027 | COLLAR | DEAC 2021 |
| 983.0007.0028 | COLLAR | DEAC 2021 |
| 983.0007.0035 | COLLAR | DEAC 2021 |
| 983.0007.0036 | COLLAR | DEAC 2021 |
| 983.0007.0037 | COLLAR | DEAC 2021 |
| 985.0143.0002 a | GLOVES | DEAC 2021 |
| 985.0143.0006 a | GLOVES | DEAC 2021 |
| 985.0143.0007 a | GLOVES | DEAC 2021 |
| 985.0144.0001 a | GLOVES | DEAC 2021 |
| 985.0145.0001 a | GLOVES | DEAC 2021 |
| 985.0149.0001 | GLOVES | DEAC 2021 |
| 985.0150.0003 a | GLOVES | DEAC 2021 |
| 985.0150.0005 a | GLOVES | DEAC 2021 |
| 985.0995.0003 | COLLAR | DEAC 2021 |
| 985.0995.0006 | COLLAR | DEAC 2021 |
| 986.0014.0001 | COLLAR | DEAC 2021 |
| 986.0015.0008 | COLLAR | DEAC 2021 |
| 986.0015.0009 | COLLAR | DEAC 2021 |
| 986.0015.0010 | COLLAR | DEAC 2021 |
| 986.0015.0011 | COLLAR | DEAC 2021 |
| 986.0015.0012 | COLLAR | DEAC 2021 |
| 986.0015.0013 | COLLAR | DEAC 2021 |
| 986.0015.0014 | COLLAR | DEAC 2021 |
| 986.0015.0015 | COLLAR | DEAC 2021 |
| 986.0015.0016 | COLLAR | DEAC 2021 |
| 986.0015.0017 | COLLAR | DEAC 2021 |
| 986.0015.0018 | COLLAR | DEAC 2021 |
| 986.0015.0019 | COLLAR | DEAC 2021 |
| 986.0015.0020 | COLLAR | DEAC 2021 |

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|-----------------|-----------------|-----------|
| 986.0015.0021 | COLLAR | DEAC 2021 |
| 986.0015.0022 | COLLAR | DEAC 2021 |
| 986.0015.0023 | COLLAR | DEAC 2021 |
| 986.0015.0024 | COLLAR | DEAC 2021 |
| 986.0015.0025 | COLLAR | DEAC 2021 |
| 986.0015.0026 | COLLAR | DEAC 2021 |
| 986.0015.0027 | COLLAR | DEAC 2021 |
| 986.0015.0028 | COLLAR | DEAC 2021 |
| 986.0015.0029 | COLLAR | DEAC 2021 |
| 986.0015.0030 | COLLAR | DEAC 2021 |
| 986.0015.0031 | COLLAR | DEAC 2021 |
| 986.0015.0032 | COLLAR | DEAC 2021 |
| 986.0015.0033 | COLLAR | DEAC 2021 |
| 986.0015.0034 | COLLAR | DEAC 2021 |
| 986.0015.0035 | COLLAR | DEAC 2021 |
| 986.0015.0036 | COLLAR | DEAC 2021 |
| 986.0015.0037 | COLLAR | DEAC 2021 |
| 986.0015.0038 | COLLAR | DEAC 2021 |
| 986.0015.0039 | COLLAR | DEAC 2021 |
| 986.0015.0040 | COLLAR | DEAC 2021 |
| 986.0015.0041 | COLLAR | DEAC 2021 |
| 986.0015.0042 | COLLAR | DEAC 2021 |
| 986.0015.0043 | COLLAR | DEAC 2021 |
| 986.0015.0044 | COLLAR | DEAC 2021 |
| 986.0015.0045 | COLLAR | DEAC 2021 |
| 986.0015.0046 | COLLAR | DEAC 2021 |
| 986.0015.0047 | COLLAR | DEAC 2021 |
| 986.0015.0048 | COLLAR | DEAC 2021 |
| 986.0015.0049 | COLLAR | DEAC 2021 |
| 986.0015.0050 | COLLAR | DEAC 2021 |
| 986.0015.0051 | COLLAR | DEAC 2021 |
| 986.0015.0052 | COLLAR | DEAC 2021 |
| 986.1062.0002 | Sewing Supplies | DEAC 2021 |
| 986.1212.0001 | collar box | DEAC 2021 |
| 986.1252.0001 a | STOCKING | DEAC 2021 |
| 986.1417.0001 | SEWING SUPPLIES | DEAC 2021 |
| 986.2415.0001 | LEGGING | DEAC 2021 |
| 987.0328.0001 | COMMODE | DEAC 2021 |
| 987.0501.0005 | MAT, TABLE | DEAC 2021 |
| 987.0586.0001 | HANGING | DEAC 2021 |
| 987.0589.0001 | TAPESTRY | DEAC 2021 |
| 987.0655.0001 | APPLIQUE | DEAC 2021 |
| 987.0673.0001 | SEWING SUPPLIES | DEAC 2021 |
| 987.3184.0001 | GLOVE | DEAC 2021 |

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|-----------------|-------------------|-----------|
| 987.3189.0001 | SEWING SUPPLIES | DEAC 2021 |
| 987.3211.0001 | CHAIR, OCCASIONAL | DEAC 2021 |
| 987.3248.0001 | NIGHTGOWN | DEAC 2021 |
| 987.3250.0001 | SKIRT | DEAC 2021 |
| 987.3252.0001 | TABLE RUNNER | DEAC 2021 |
| 987.3284.0001 | CAPE | DEAC 2021 |
| 987.3291.0001 | TEXTILE FRAGMENT | DEAC 2021 |
| 987.3293.0001 | TABLE COVER | DEAC 2021 |
| 987.3300.0001 | TABLE RUNNER | DEAC 2021 |
| 987.3302.0001 | MAT, TABLE | DEAC 2021 |
| 987.3303.0001 | MAT, TABLE | DEAC 2021 |
| 987.3414.0001 d | BOX, SEWING | DEAC 2021 |
| 987.3609.0001 | HANDKERCHIEF | DEAC 2021 |
| 987.3611.0001 | DOILY | DEAC 2021 |
| 987.3647.0001 | PURSE | DEAC 2021 |
| 987.3661.0001 | PURSE | DEAC 2021 |
| 987.3751.0001 | NIGHTGOWN | DEAC 2021 |
| 987.3755.0001 | NIGHTGOWN | DEAC 2021 |
| 987.3799.0001 | CURTAIN | DEAC 2021 |
| 987.3813.0001 | APRON | DEAC 2021 |
| 987.3844.0001 | NIGHTGOWN | DEAC 2021 |
| 987.3936.0001 | DOILY | DEAC 2021 |
| 987.3952.0001 | PILLOWCASE | DEAC 2021 |
| 987.3953.0001 | MAT, TABLE | DEAC 2021 |
| 987.3954.0001 | MAT, TABLE | DEAC 2021 |
| 987.3967.0001 | SHAWL | DEAC 2021 |
| 987.3980.0001 | NAPKIN | DEAC 2021 |
| 987.3981.0001 | CURTAIN | DEAC 2021 |
| 987.4007.0001 | TABLECLOTH | DEAC 2021 |
| 987.4011.0001 | SKIRT | DEAC 2021 |
| 987.4025.0001 | MAT, TABLE | DEAC 2021 |
| 987.4031.0001 | CLOTHING PIECE | DEAC 2021 |
| 987.4042.0001 | DOILY | DEAC 2021 |
| 987.4054.0001 | PILLOW | DEAC 2021 |
| 987.4229.0001 | MAT, TABLE | DEAC 2021 |
| 987.4229.0002 | MAT, TABLE | DEAC 2021 |
| 987.4239.0001 | DOILY | DEAC 2021 |
| 994.0004.0019 | CHAIR | DEAC 2021 |
| 994.0004.0103 | CHAIR | DEAC 2021 |
| 995.0058.0001 d | COLLAR LACE | DEAC 2021 |
| 995.0454.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0460.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0463.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0465.0001 | SEWING SUPPLIES | DEAC 2021 |

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|----------------|-----------------------------|-----------|
| 995.0467.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0468.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0469.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0470.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0471.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0472.0001 | SEWING SUPPLIES | DEAC 2021 |
| 995.0473.0001 | SEWING SUPPLIES | DEAC 2021 |
| | QUILT FAN PATTERNED BLUE & | |
| 995.0695.0002 | PURPLE | DEAC 2021 |
| | CUSHION, VICTORIAN, FLORAL | |
| 996.0033.0001 | PATTERN | DEAC 2021 |
| x971.0619.0001 | BANDBOX | DEAC 2021 |
| x971.0620.0001 | BANDBOX | DEAC 2021 |
| x974.0107.0001 | PURSE | DEAC 2021 |
| x975.0054.0001 | SCARF, NECK | DEAC 2021 |
| x975.0058.0001 | KERCHIEF | DEAC 2021 |
| x975.0061.0001 | MUFFLER | DEAC 2021 |
| x975.0064.0001 | MUFFLER | DEAC 2021 |
| x975.0072.0001 | SCARF, NECK | DEAC 2021 |
| x975.0135.0001 | TABLE COVER | DEAC 2021 |
| x975.0156.0001 | GLOVE | DEAC 2021 |
| x975.0184.0001 | COLLAR | DEAC 2021 |
| x975.0428.0001 | CAPE | DEAC 2021 |
| x975.0445.0001 | PILLOW | DEAC 2021 |
| x975.0462.0001 | JACKET | DEAC 2021 |
| x975.0464.0001 | TABLECLOTH | DEAC 2021 |
| x983.0000.0019 | QUILT | DEAC 2021 |
| x983.0000.0051 | QUILT PIECE, craZY QUILTING | DEAC 2021 |

Report

TO: Conservation Advisory Board

FROM: Lisa Burnside, Chief Administrative Officer (CAO)

**RECOMMENDED
AND APPROVED BY:** Neil McDougall, Secretary-Treasurer
Sarah Gauden, Marketing Manager

PREPARED BY: Lindsay Davidson, Assistant Marketing Manager

MEETING DATE: February 10, 2022

RE: 2022 Annual Membership Program Renewal Strategy

STAFF RECOMMENDATION:

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

THAT the 2022 Annual Membership Program Renewal Strategy Report be received for information regarding our Annual Membership Pass Program; further;

THAT staff be directed to implement the six-point strategy outlined in the 2022 Annual Membership Program Renewal Strategy Report dated February 10, 2022,

BACKGROUND

The Hamilton Conservation Authority officially launched the annual membership pass, branded as the "key to the great outdoors" in 2003. Before this, there were only individual membership programs at some HCA conservation areas. With the official launch of a watershed-wide pass program, the membership pass became known as Nature Rewards. The membership pass program is designed as an annual membership pass, valid for twelve months from the date of purchase. It allows a vehicle and its passengers admission into HCA's many conservation areas.

With the launch of this program, HCA quickly realised the value a membership pass had not only to the overall effectiveness of HCA operations by weatherproofing, streamlining entry at gates, reducing the need for honour stations as swipe gates/payment was implemented in areas but also with what it offered to customers in terms of value-added items. The membership pass has come with various rewards and perks and has taken on a few different looks through the years. The rewards and perks offered have been items such as day visits to a conservation area to share with family and friends, discounts on boat rentals and early access to gate admission.

STAFF COMMENTS

At present, the pass costs \$115.00 +HST for a new member and \$95.00 +HST for a senior aged 65+. All memberships come with the following rewards:

- One day pass to share with friends and neighbours (day pass is good for a carload of up to 6 people).
- 15% discount on HCA rentals (pavilions and group picnic sites).
- Early morning access with automated gates.
- Year-round access. All areas are open 12 months a year.

Passes can be purchased in person at our main office and various conservation areas. They can also be purchased over the phone and are mailed out via Canada Post. Our most popular option in becoming a member is purchasing a membership online. Online purchases accounted for 45% of total sales in 2021 and are also mailed via Canada Post.

The membership program grew steadily but slowly for several years before the pandemic. New initiatives and partnerships were introduced to help increase the level of sales and also improve citizen awareness of the HCA. HCA has been the top membership pass selling Conservation Authority for several years and has often been a model to others. Throughout the pandemic, along with record-high attendance levels, came record high pass sales. The pandemic's restrictions on movement increased people's need for outdoor space. HCA experienced, and continues to experience high attendance levels as many new visitors come looking for outdoor activities and have placed a much higher value on nature than ever before.

Below, Figure 1 demonstrates the overall growth HCA has experienced since 2017.

Figure 1.

| Year | Total Passes Sold | Percent Increase/ Decrease |
|------|-------------------|---------------------------------|
| 2017 | 5,247 | - |
| 2018 | 6,528 | 24% over 2017 |
| 2019 | 6,035 | -7% over 2018 |
| 2020 | 8,933 | 48% over 2019 |
| 2021 | 12,561 | 108% over 2019 41% over 2020 |

As previously mentioned, we have seen extreme growth in our online sales which is shown in Figure 2. The remainder of pass sales are made up at the various sales locations.

Figure 2.

| Year | Percent of total sales |
|------|------------------------|
| 2017 | 20% |
| 2018 | 25% |
| 2019 | 29% |
| 2020 | 44% |
| 2021 | 45% |

The breakdown of type of pass purchased in 2021, is illustrated in Figure 3 below.

Figure 3.

| Type | Percentage of sales |
|---------|---------------------|
| New | 55% |
| Renewal | 30% |
| Senior | 15% |

In 2021, 98% of our members came from within an hour drive of our areas. The remaining 2% came from further out in Ontario, with a handful from three other provinces and even the United States. These were likely purchased as gifts or by snowbirds. Figure 4 outlines this breakdown.

Figure 4.

| Location | Percent of sales |
|------------|------------------|
| Hamilton | 68% |
| GTA | 11% |
| Burlington | 8.5% |
| Tri Cities | 7% |
| Brant | 3.5% |

Our primary target audience for memberships is young families, active seniors, and outdoor enthusiasts, including birders, hikers, runners, boaters, and campers.

As we continue to navigate this pandemic, our goals for the membership pass program will be to retain the increased number of members and new customers we gained over the past two years. As part of this retention effort, HCA held the pass price for 2022. Additionally, we have identified several initiatives and strategies to enhance renewal, as outlined in the strategy section below.

2022 Annual Membership Program Renewal Strategy

HCA already undertakes some initiatives to engage and connect with our members and encourage them to renew. This includes the following:

- Invitation to subscribe to our monthly e-newsletter, where subscribers are updated on the latest news and programs HCA undertakes. Currently this e-newsletter boasts 12,000+ subscribers.
- Reduced fee for renewal with a \$10 discount for renewal (within 60 days of expiry)
- Continuing the pilot started in 2021 whereby passholders were invited to engage with our new Bang the Table platform to participate in surveys and input on Master Plan initiatives; initiatives in 2022 will again include Master Plan initiatives as well as input on new trail mapping and all other content placed on the platform

In addition to continuing the initiatives above, staff are also recommending the following six-point strategy:

- 1) Undertake postal code analysis to gain insight on the demographic attributes of our pass holders to help direct marketing and media campaigns.
- 2) Enhancing our Content Management System through our provider (CAMIS), which serves as a tool for database management of passholders. This tool allows us to better identify renewals of individual passes, enhance the delivery of electronic renewal letters, and strengthen communication connections with passholders.
- 3) Improving our webstore through our provider (CAMIS), which provides our online sales. These improvements include discount codes, shipping options, purchasing as a gift, gift card purchases and allowing HCA to better partner with local businesses on bulk purchases.
- 4) Launching campaigns with our media partners, which includes but is not limited to Bell Media, Metroland Media, Google and various other outlets, including social media campaigns, to market the membership pass to our target audiences based on locations identified by market research and on the available demographic information and consumer behaviour information made available.
- 5) Creating a membership pass training program which will include a training booklet and an accompanying training video to help the conservation areas and office staff regularly involved in the sales process of passes to promote and explain benefits of pass membership.
- 6) Identifying the Assistant Marketing Manager, as the designated membership pass champion of the program, to set annual goals and deliverables, provide dedicated staff support, and ensure all areas have the necessary sales tools and equipment needed to complete sales.

In addition to implementing a strategy for retaining passholders starting in 2022, HCA is excited to announce a new partnership with the Hamilton Public Library, Grimsby Public

Library, and Wellington County Library. HCA has provided membership passes to these library systems, allowing library patrons to visit HCA areas at no cost. This partnership helps address any financial barriers to offer complimentary free access so that everyone can enjoy our fantastic conservation areas. The partnership with the local library systems is in place until December of 2024. The evaluation of the success of this partnership will be ongoing as the libraries will report usage data and provide any other relevant statics.

STRATEGIC PLAN LINKAGE

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

- **Strategic Priority Area – Conservation Area Experience**
 - Identify and undertake approaches to increase sales of annual membership passes
 - Identify and act upon revenue generation/cost reduction and investment in visitor services opportunities in our conservation areas
 - Identify and support a more diverse and accessible range of programs for our conservation area users
- **Strategic Priority Area – Organizational Excellence**
 - Update our website to increase access to information and services

AGENCY COMMENTS

N/A

LEGAL/FINANCIAL IMPLICATIONS

N/A

CONCLUSIONS

The HCA annual membership pass has a long history and has evolved over time. The pandemic has brought visitors to our conservations like never before. These lands are unique pockets of local greenspace that help our watershed thrive, connect people to nature, and provide a wide range of recreation for residents of Hamilton and beyond. There has been a phenomenal growth in pass sales, and the challenge will be to keep this higher base intact after the pandemic restrictions are in the past and our customers have full recreation options. In this regard, staff have developed a six-point membership pass renewal strategy.



Report

TO:

FROM: Lisa Burnside, Chief Administrative Officer (CAO)

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

MEETING DATE: February 10, 2022

RE: HCA Ten Year Master Plan Update Strategy

STAFF RECOMMENDATION

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

THAT the amended Master Plans Implementation Priority List of the HCA Ten Year Master Plan Update Strategy be approved.

BACKGROUND

Master and Management Plans are intended to provide a long-term vision for our areas, including direction for management and improvements within the properties. In early 2019, the HCA adopted a Ten Year Master Plan Update Strategy, with the overall goal of having an updated plan for all HCA owned and managed lands completed. This report is intended to outline current strategy's status, as well as to provide updated timelines to complete the remaining HCA plan reviews, which are necessary to realize the overall strategy's goal.

HCA definitions for Master and Management Plans are as follows:

Master Plans:

- Are prepared for active conservation areas. They provide a detailed property evaluation for land and resource management, development decisions and include a public consultation process.

Management Plans:

- Are prepared for lands where resource management is a priority and are generally less detailed than Master Plans. These plans set goals and objectives for property management and are supplemental to their associated Master Plan Study Area. Management Plans will include a public consultation process when not being developed within the overall scope of a broader area Master Plan.

Over the past four years, the HCA has undertaken and implemented Master and Management Plans, for the following HCA properties:

- Westfield Heritage Village Conservation Area
- Valens Lake Conservation Area
- Fletcher Creek Ecological Preserve
- Upper Watershed Beverly Swamp Conservation Lands
- Lafarge 2000 Trail
- Fifty Point Conservation Area

Current Master & Management Plans underway for 2022 include:

- Saltfleet Conservation Area
- Devil's Punch Bowl Conservation Area
- Vinemount Conservation Lands
- Winona Conservation Lands
- Dofasco 2000 Trail

STAFF COMMENT

In order to highlight the remaining Conservation Area lands in need of plan updates, the following appendices have been provided:

Master Plan Study Area Map (Appendix 1.0)

- This map illustrates the locations of the Master Plan Study Areas and the landholdings associated within each one. The Study Area groupings shown are based on a sub-watershed basis in order to gather relevant scientific data within each area, which will then allow HCA staff to glean much more valuable insight into the appropriate Land Zoning Classifications for the plans.
- No changes have been made to this map since it was previously adopted, it is provided for reference purposes only.

Master Plans Implementation Priority List – Rev. 1 (Appendix 2.0)

- This table highlights the updated priority sequence of the related plan reviews based on HCA staff input from multiple departments. The proposed timelines have been considered with regard to a number of considerations; including current and future use of the areas, anticipated site pressures, HCA resources

available and relevant ecological information for the areas. This priority list is used to direct where field reviews and studies will be required prior to plan initiation.

- Updates to this list include:
 - Revising the Scheduled Review Period for the East Mountain C.A. Study Area from 2026 to 2023-2024.
 - Revising the Scheduled Review Period for the Christie Lake C.A. Study Area from 2022 to 2026-2029.
 - Inclusion of completed Study Area Plans and their next anticipated Scheduled Review Periods.
- Moving the East Mountain CA Study for the next review provides for complete updated plans for the Hamilton Mountain with the new business unit that was created in 2021 and will provide greater focus and promotion of these areas that HCA is seeking to develop
- Additionally, given recent staffing changes with the phased retirement of our Design Projects Manager, new staff are developing their knowledge and expertise and would benefit from experience of completing the smaller Hamilton Mountain areas prior to tackling the complexity of our final study areas of Christie Lake and Dundas Valley

STRATEGIC PLAN LINKAGE

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

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

AGENCY COMMENTS

N/A

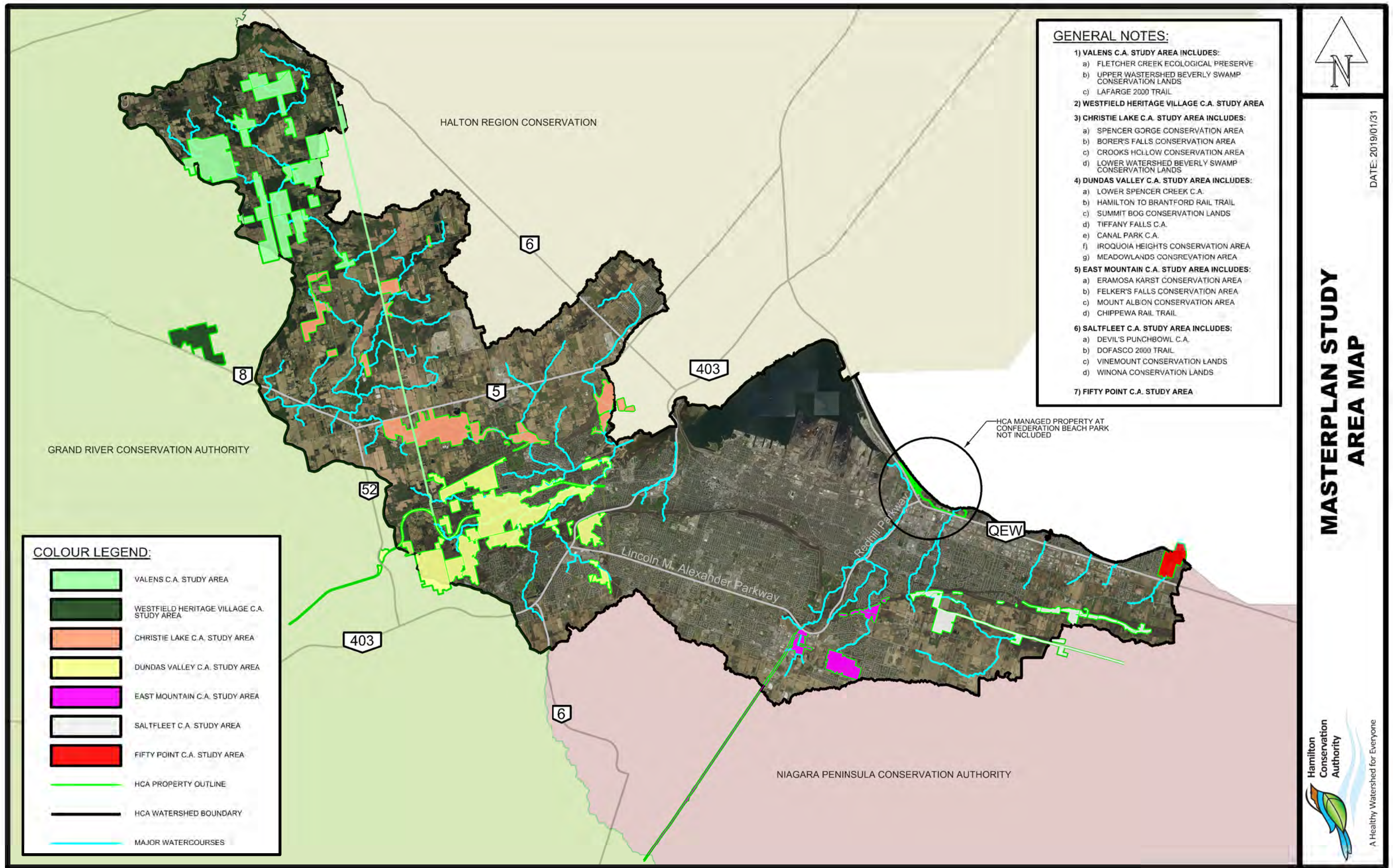
LEGAL/FINANCIAL IMPLICATIONS

These plan updates are expected to utilize HCA in-house staffing expertise and resources in order to develop and implement as necessary. Third party consultation expertise will be sought to aid in the development of the plans when necessary. Due to their overall size and complexity; plan reviews of both the Dundas Valley C.A. Study Area and Christie Lake C.A. Study Area, are expected to require consultant assistance

in order to facilitate their completion. It is anticipated that expenses associated to Master and Management Plan development will be funded through regular annual HCA Capital Project budget allocations.

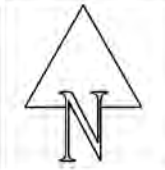
CONCLUSIONS

It has been acknowledged previously that all HCA owned and managed properties should have current, modern, and working plans in order to effectively direct HCA staffing and resources to manage, restore and improve areas in an appropriate way. The recommended strategy updates contained in this report, will allow the continuation of HCA Master and Management Plan work to progress in the most effective and efficient way possible.



- GENERAL NOTES:**
- 1) **VALENS C.A. STUDY AREA INCLUDES:**
 - a) FLETCHER CREEK ECOLOGICAL PRESERVE
 - b) UPPER WATERSHED BEVERLY SWAMP CONSERVATION LANDS
 - c) LAFARGE 2000 TRAIL
 - 2) **WESTFIELD HERITAGE VILLAGE C.A. STUDY AREA**
 - 3) **CHRISTIE LAKE C.A. STUDY AREA INCLUDES:**
 - a) SPENCER GORGE CONSERVATION AREA
 - b) BORER'S FALLS CONSERVATION AREA
 - c) CROOKS HOLLOW CONSERVATION AREA
 - d) LOWER WATERSHED BEVERLY SWAMP CONSERVATION LANDS
 - 4) **DUNDAS VALLEY C.A. STUDY AREA INCLUDES:**
 - a) LOWER SPENCER CREEK C.A.
 - b) HAMILTON TO BRANTFORD RAIL TRAIL
 - c) SUMMIT BOG CONSERVATION LANDS
 - d) TIFFANY FALLS C.A.
 - e) CANAL PARK C.A.
 - f) IROQUOIA HEIGHTS CONSERVATION AREA
 - g) MEADOWLANDS CONSERVATION AREA
 - 5) **EAST MOUNTAIN C.A. STUDY AREA INCLUDES:**
 - a) ERAMOSKA KARST CONSERVATION AREA
 - b) FELKER'S FALLS CONSERVATION AREA
 - c) MOUNT ALBION CONSERVATION AREA
 - d) CHIPPEWA RAIL TRAIL
 - 6) **SALTFLEET C.A. STUDY AREA INCLUDES:**
 - a) DEVIL'S PUNCHBOWL C.A.
 - b) DOFASCO 2000 TRAIL
 - c) VINEMOUNT CONSERVATION LANDS
 - d) WINONA CONSERVATION LANDS
 - 7) **FIFTY POINT C.A. STUDY AREA**

- COLOUR LEGEND:**
- VALENS C.A. STUDY AREA
 - WESTFIELD HERITAGE VILLAGE C.A. STUDY AREA
 - CHRISTIE LAKE C.A. STUDY AREA
 - DUNDAS VALLEY C.A. STUDY AREA
 - EAST MOUNTAIN C.A. STUDY AREA
 - SALTFLEET C.A. STUDY AREA
 - FIFTY POINT C.A. STUDY AREA
 - HCA PROPERTY OUTLINE
 - HCA WATERSHED BOUNDARY
 - MAJOR WATERCOURSES



DATE: 2019/01/31

MASTERPLAN STUDY AREA MAP

**Master Plans Implementation Priority List - Rev. 1
2019 - 2029**

| Study Areas | Scheduled Review Period | NEPOSS / NEC Designation | Current Plan |
|--|--------------------------------|-------------------------------------|---------------------|
| <u>Saltfleet C.A. Study Area:</u> | 2022-2023 | | |
| Saltfleet Conservation Area | | | N/A |
| Devil's Punchbowl Conservation Area | | ✓ | 1976 |
| Dofasco 2000 Trail | | | 2000 |
| Vinemount Conservation Lands | | ✓ | 1979 |
| Winona Conservation Lands | | ✓ | 1979 |
| <u>East Mountain C.A. Study Area:</u> | 2023-2024 | | |
| Eramosa Karst Conservation Area | | | 2015 |
| Felker's Falls Conservation Area | | ✓ | 1980 |
| Mount Albion Conservation Area | | ✓ | 2000 |
| Chippewa Rail Trail | | | 1998 |
| <u>Dundas Valley C.A. Study Area:</u> | 2024-2027 | | |
| Dundas Valley Conservation Area | | ✓ | 1997 |
| Lower Spencer Creek Conservation Area | | | 2010 |
| Hamilton to Brantford Rail Trail | | ✓ | 2009 |
| Summit Bog Conservation Lands | | ✓ | 1978 |
| Tiffany Falls Conservation Area | | ✓ | 2009 |
| Canal Park Conservation Area | | | |
| Iroquoia Heights Conservation Area | | ✓ | 1993 |
| Meadowlands Conservation Area | | | 2012 |
| <u>Christie Lake C.A. Study Area:</u> | 2026-2029 | | |
| Spencer Gorge Conservation Area | | ✓ | 2013 |
| Christie Lake Conservation Area | | ✓ | 2006 |
| Borer's Falls Conservation Area | | ✓ | 2002 |
| Crooks Hollow Conservation Area | | ✓ | 2014 |
| Lower Watershed Beverly Swamp Conservation Lands | | | 1976 |

**Master Plans Implementation Priority List - Rev. 1
2019 - 2029**

| Study Areas | Scheduled Review | NEPOSS / NEC Designation | Current Plan |
|---|--------------------|-----------------------------|--------------|
| Completed Studies: | | | |
| <u>Westfield Heritage Village C.A. Study Area:</u> | 2029-2030 | | |
| Westfield Heritage Village Conservation Area | | | 2018 |
| <u>Valens C.A. Study Area:</u> | 2030 - 2032 | | |
| Valens Conservation Area | | | 2020 |
| Fletcher Creek Ecological Preserve | | | 2020 |
| Upper Watershed Beverly Swamp Conservation Lands | | | 2020 |
| Lafarge 2000 Trail | | | 2020 |
| <u>Fifty Point C.A. Study Area:</u> | 2032 - 2033 | | |
| Fifty Point Conservation Area | | | 2021 |

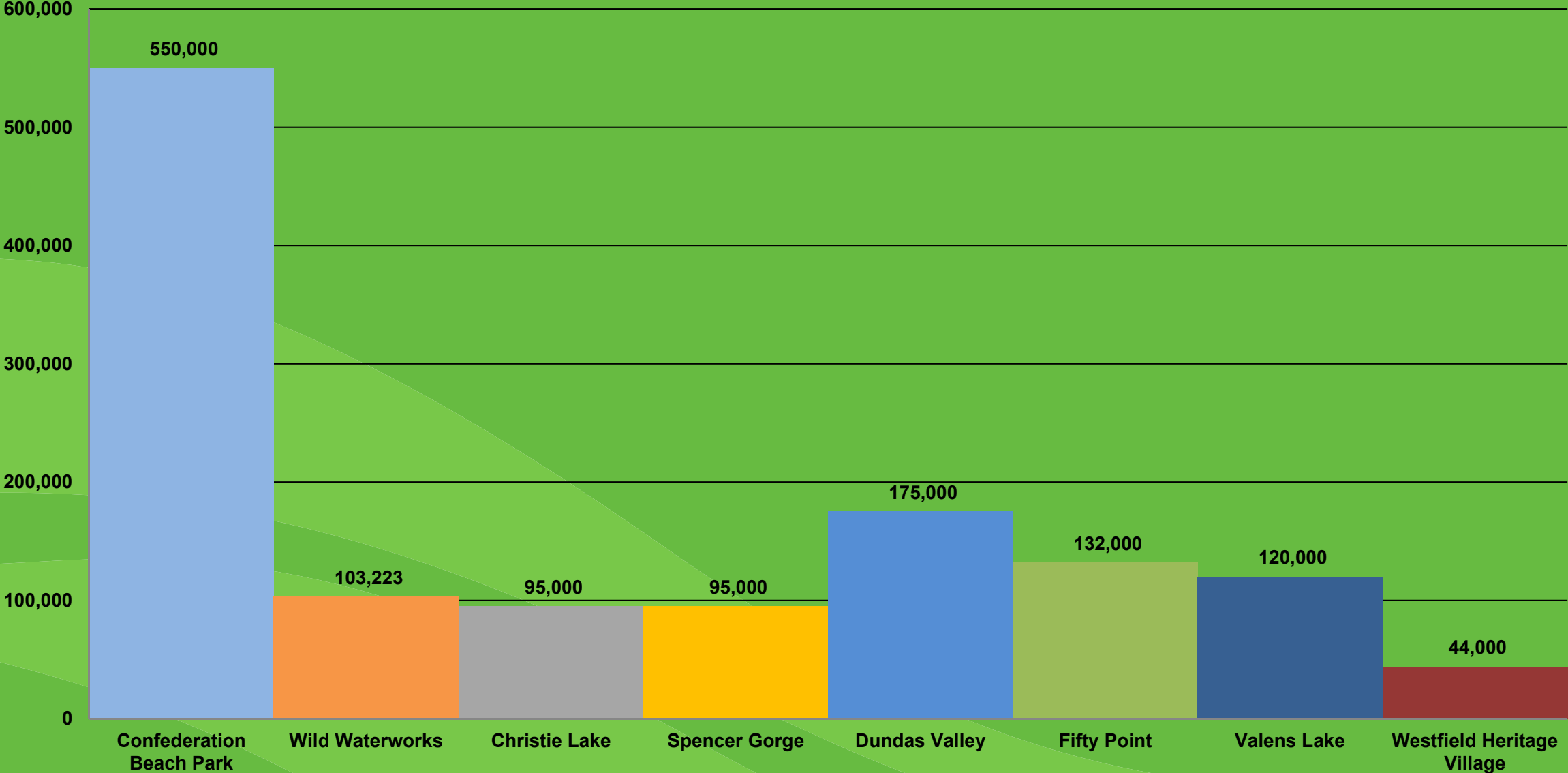
2021 Conservation Area Attendance

Conservation Advisory Board February 10, 2022

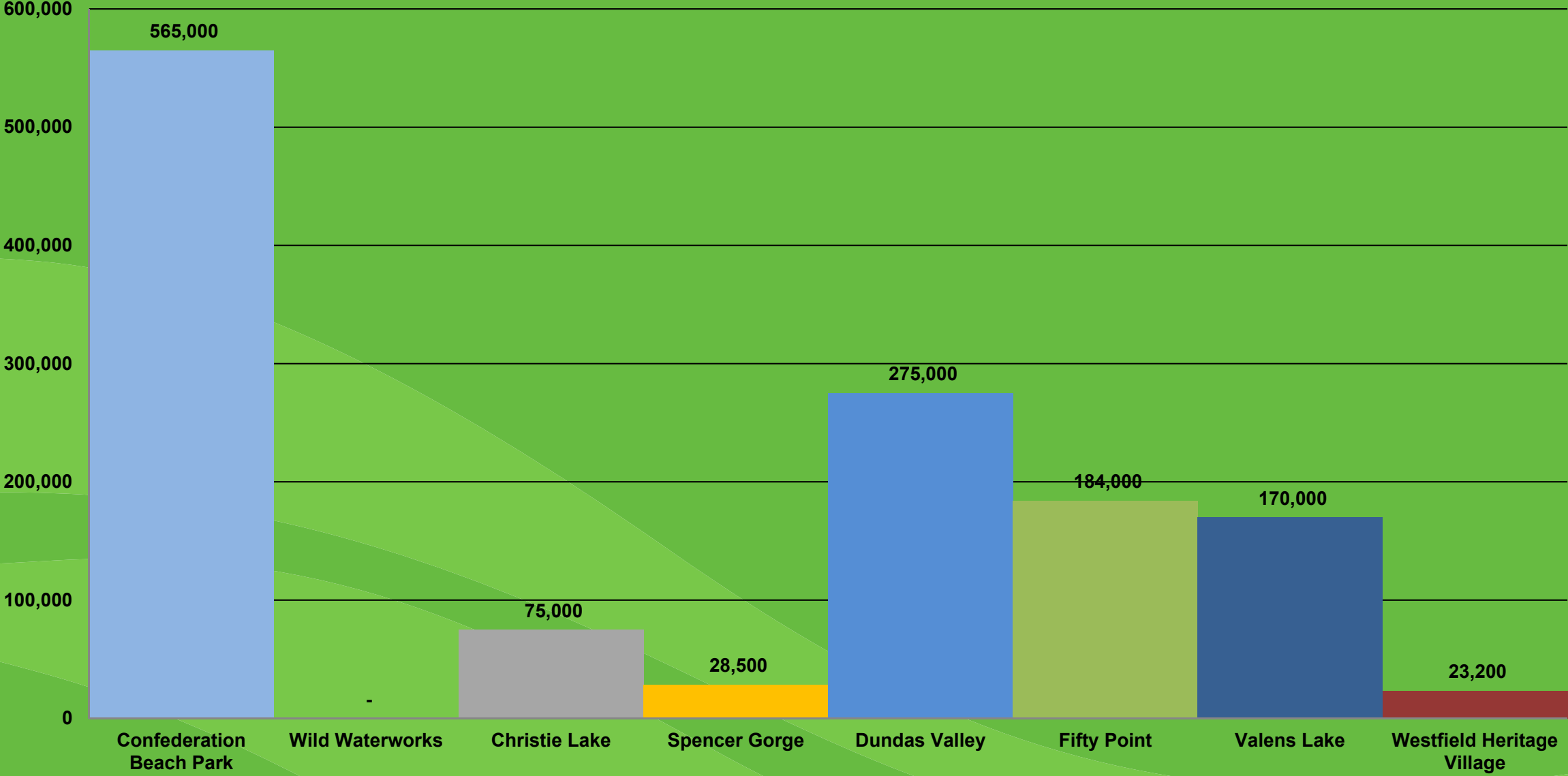


A Healthy Watershed for Everyone

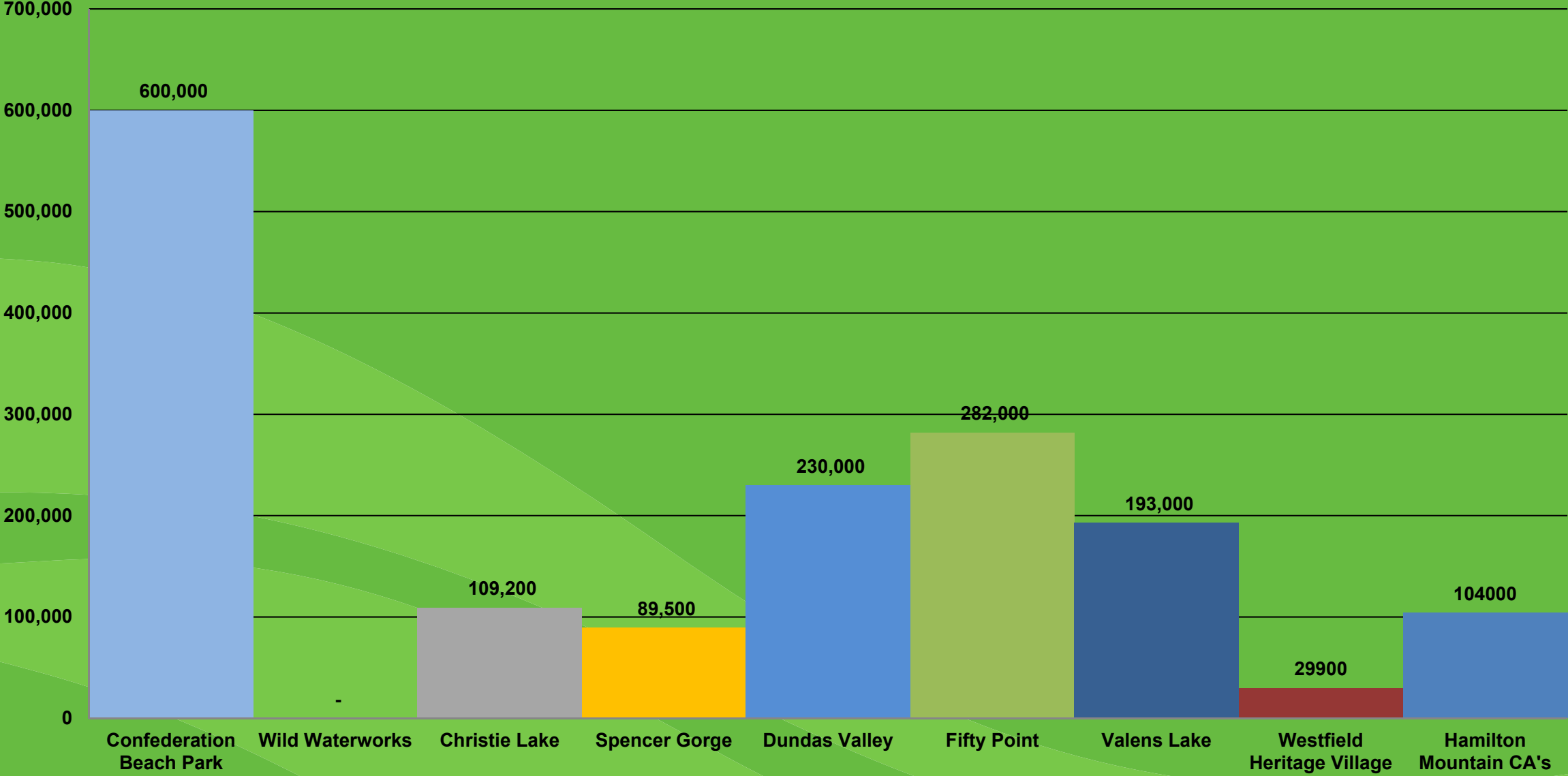
2019 Annual Attendance Estimate



2020 Annual Attendance Estimate



2021 Annual Attendance Estimate



PAY STATIONS & AUTO GATE SYSTEMS

- First pay station installed in 1995 at Valens Lake CA
- In 2021 – 21 conservation area parking lots equipped with auto gates or pay & display systems
 - 10 areas feature auto gate systems
 - 11 areas feature pay & display systems
 - 4 busiest areas (Devil's Punchbowl, Tiffany Falls, Artaban Rd, and Hermitage) have twin pay stations to improve customer service and functionality

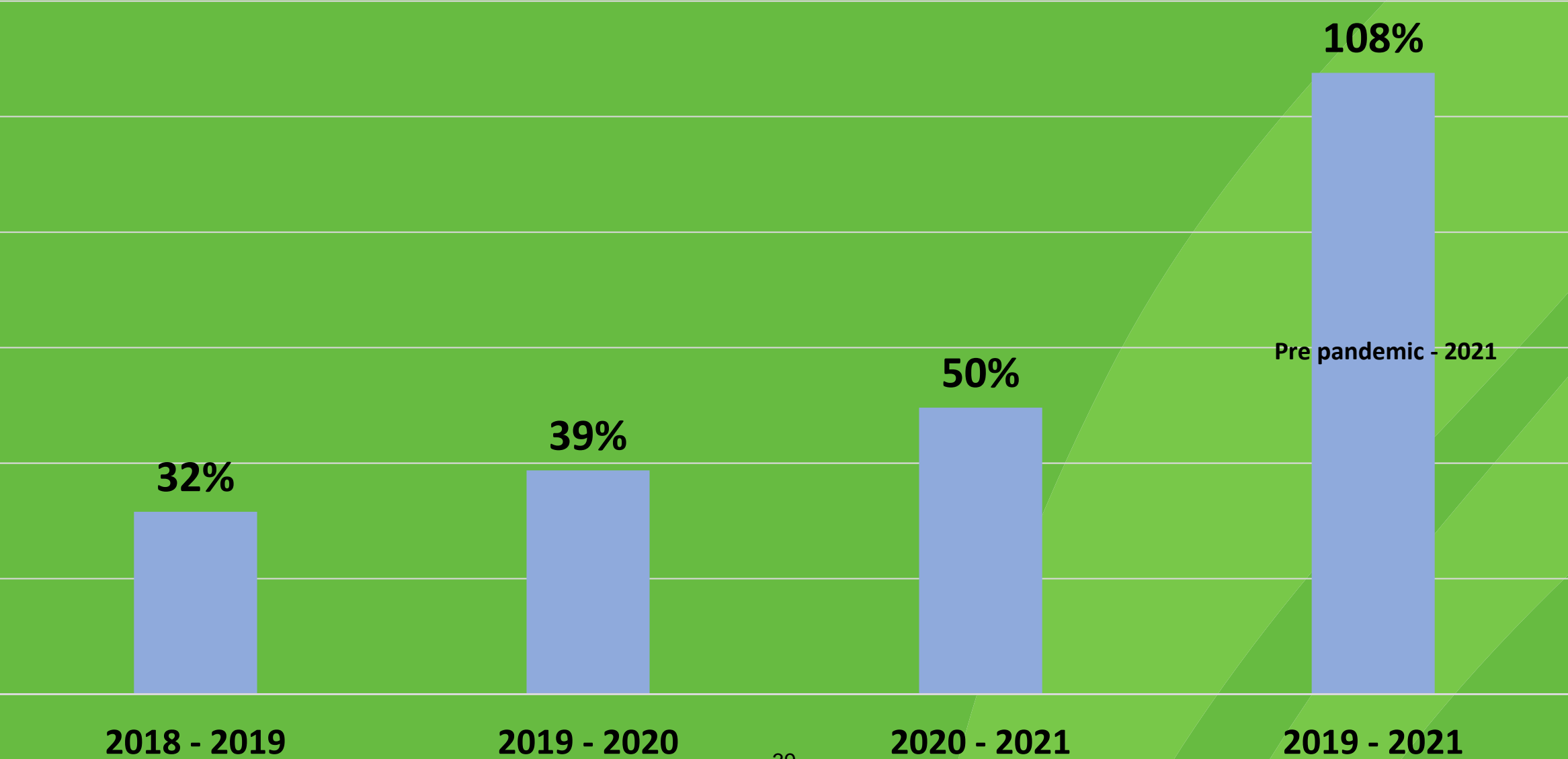
PAY STATIONS & AUTO GATES

- Auto gate and pay & display systems create a level playing field for all visitors and added value to the HCA Membership Pass program
- +100,000 transactions handled by electronic pay stations in 2021, representing \pm 300,000 visitors
- 4 busiest areas handled 67,000 (or 67%) of those transactions

PAY STATION REVENUE INCREASE

2018 TO 2021

(ACROSS EXISTING STATIONS)



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Thank You



A Healthy Watershed for Everyone

Report

TO: Conservation Advisory Board

FROM: Lisa Burnside, Chief Administrative Officer (CAO)

RECOMMENDED BY: T. Scott Peck, MCIP, RPP, Deputy Chief Administrative Officer and Director, Watershed Planning & Engineering

PREPARED BY: Lesley McDonell, Terrestrial Ecologist
Mike Stone, MCIP, RPP, Manager, Watershed Planning, Stewardship & Ecological Services

DATE: February 10, 2022

RE: LDD (Gypsy) Moth Surveys and 2022 Control Program

STAFF RECOMMENDATION

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

THAT this report be received for information regarding our LDD moth surveys and results; and further;

THAT the HCA not undertake a spray program to control LDD Moths in 2022, and;

THAT the HCA undertake a targeted approach (banding, egg mass scraping) that focuses on high value oak trees in our forests for 2022.

BACKGROUND

The European Gypsy Moth (*Lymantria dispar*) was introduced to North America in the late 1860's near Boston, Massachusetts. This moth has, for now, been renamed LDD. They were brought from Europe to North America for silk production and subsequently escaped and expanded their range. The LDD moth was first detected in Ontario in 1969; however, widespread occurrence and associated defoliation impacts did not occur until 1981.

The LDD moth is a tree defoliator and prefers oak, sugar maple, beech and white pine trees. The life cycle of the LDD moth is very similar to many other native moth species.

These moths produce one generation annually and its life cycle consists of four distinctive life stages: egg, larva (caterpillar), pupa and adult.

The Hamilton Conservation Authority (HCA) has been surveying for LDD moth egg masses since 2004. These surveys have been conducted throughout the Dundas and Ancaster Area, mainly through the Dundas Valley Conservation Area (DVCA). Surveys are completed in January and February each year. The east and west ends of the DVCA were surveyed in addition to Borer's Falls, Valens and Iroquoia Heights Conservation Areas. Felker's Falls and Westfield were also surveyed this year as a result of emails and phone calls from Conservation Area staff and the public about the defoliation of the trees.

Survey Locations and Methods

Kaldar plots and walking transect methods are used to count LDD moth egg masses on trees. Kaldar plots are standardized 10m x 10m plots in which all LDD moth egg masses are counted along with the number of trees and the species of tree. Walking transects involve walking trails throughout the conservation area and recording egg masses observed. This is typically completed in lower infestation areas or when large areas need to be surveyed in a limited amount of time. LDD moth egg mass counts are an accepted way of predicting defoliation rates for the upcoming summer months. They can also be used to predict the severity of infestation and the defoliation rate. Defoliation rate is an estimate of the amount of leaf mass in the canopy eaten by LDD moth larvae.

Surveys were completed by HCA staff in the Dundas Valley, Borer's Falls, Iroquoia Heights, Westfield and Felker's Falls Conservation Areas during December 2021 and January 2022. These locations were based on the results of the defoliation surveys completed by staff in spring/summer 2020, as well as in response to information provided by the City regarding their survey results, and phone calls received from the public about areas affected by defoliation. The larger survey area helped to expand our understanding of LDD moth outbreaks and their migration pattern through the Dundas Valley and across the watershed.

Egg mass counts and associated expected impacts can be generally defined as follows:

Egg masses per Ha and defoliation forecast

| Egg mass/Ha | Defoliation forecast | Defoliation forecast range (%) |
|--------------------|-----------------------------|---------------------------------------|
| 0 | Nil | 0-5 |
| 0-1,250 | Light | 6-25 |
| 1,251-3,750 | Moderate | 26-65 |
| 3,750-5,000 | Heavy | 66-90 |
| >5,000 | Severe | 91-100 |

Walking transect # Egg masses per tree

| # of new egg masses/tree | Defoliation forecast | Defoliation forecast range (%) |
|---------------------------------|-----------------------------|---------------------------------------|
| 0 | Nil | 0-5 |
| 0-10 | Light-Moderate | 6-25 |
| 11-50 | Moderate-Severe | 26-65 |
| >51 | Severe | >65 |

Survey Results

The results of the winter 2021/2022 egg mass surveys on HCA lands indicate that noticeable defoliation (moderate to severe) will likely occur within the majority of Conservation Areas surveyed (see table 1).

Table 1 Defoliation forecast spring/summer 2022

| Conservation Area | Average egg masses/Ha | Overall Forecast |
|----------------------------------|-----------------------|------------------|
| Dundas Valley (West end) | 18,616 | Severe |
| Dundas Valley (Central) | 14,580 | Severe |
| Felker's Falls | 6,214 | Severe |
| Borer's Creek (northern portion) | 13,659 | Severe |
| Valens (landscape trees) | 14, 835 | Severe |
| Westfield | 16, 162 | Severe |
| Iroquoia Heights | 13, 420 | Severe |

The attached maps indicate the predicted defoliation level for spring 2022 based on our egg mass counts this fall and winter.

Discussion

The most recent Forest Health Condition Report from the Province of Ontario is from 2020. This report describes the levels of various forest pests across the Province of Ontario. The province surveys for LDD moth both as egg mass surveys on the ground and by helicopter as visual defoliation surveys. The summation of these surveys over the last 4 years indicates that LDD moth are at moderate to severe levels across Southwestern Ontario including Hamilton. The defoliation was similar in 2020 as the past 4 years over Hamilton. The high levels of LDD moths are attributed to increasingly warm winters and dry springs. LDD moth are now considered an endemic species, here to stay. On HCA properties our monitoring and forecasting program indicates that this species is persistent and not cycling over 8-10 years as it has in the past. It is cycling through HCA forested properties more quickly and there are areas of predicted severe defoliation each year.

Locally, the Dundas Valley was sprayed with *Bacillus thuringiensis* var. *kurstaki* (Btk for short) in 2018 and 2019. Btk is a naturally occurring bacterium that occurs in soils and forms the base for biological control of LDD caterpillars. Based on the level of egg masses found in each location the spray was effective in reducing defoliation in 2018 and 2019. Although none to very low level of egg masses was found in the spray zones for 2019 and 2020, these levels only remained low for two years, as noted in Chart 1. As of 2021/2022 the predicted defoliation is back to the severe level. In addition, locations sprayed in 2018 in order to sustain mature Red Oak trees in part of the Dundas Valleys was over the long term, unsuccessful. Over the past two years Red Oak trees within these spray zone have died. As the trees were dying HCA had the health of these trees reviewed in the field in 2019 by the Forest Heath Technicians from the provincial and federal government. The result of this review was death caused by environmental factors including drought, pollution and root rot. In addition, the dual defoliation by Fall Cankerworm and LDD moth in 2018 was an additional impact.



Chart 1: LDD moth egg masses/Ha 2018-2022 in Dundas Valley and Iroquoia Heights Conservation Areas

One of the goals of the Btk spray for LDD moth is to try and conserve mature Oak trees in the Dundas Valley and at other Conservation Areas. These trees are one of the preferred foods of the LDD moth and as a result can be preferentially defoliated. As

seen on table 2 below, in plots surveyed, oak trees (red and white) contained the majority of egg masses despite not being the dominate tree in our survey plots, except at Felker's Falls CA.

Table 2 Egg mass counts on Oak trees

| Conservation Area | % of Oak trees in survey plots | % of egg masses on oak trees |
|----------------------------------|--------------------------------|------------------------------|
| Dundas Valley (West end) | 24 | 60 |
| Dundas Valley (Central) | 25 | 67 |
| Felker's Falls | 63 | 91 |
| Borer's Creek (northern portion) | 12 | 42 |
| Westfield | 29 | 77 |
| Iroquoia Heights | 31 | 75 |

Finally, much of the scientific research on the secondary impacts of Btk on other moth species, butterflies, birds and amphibians is more than 10 years old.

STAFF COMMENT

With the information provided in the Discussion section outlining the endemic nature of LDD moth and its short replication cycle (2 years), it is staff recommendation to not spray Btk to control this species in 2022. The following provides staffs rational for this recommendation.

1. LDD moth are now endemic to our forest system, and no longer considered to be a 10-year cyclical species. As such, spraying for LDD control on a once every 10-year cycle would not be expected to affect a population reduction;
2. Our monitoring has shown that oak trees within the forest have died despite our best efforts to spray them for LDD moth reduction;
3. The spray in 2018 was for two defoliators LDD moth and Fall Cankerworm which when combined led to a longer more impactful defoliation; which is not the case with 2022;
4. There are natural controls that will lead to LDD population decline (perhaps collapse). These include a bacterium, a virus and parasitic wasps. Staff noted that a number of LDD caterpillars succumbed to the virus this past summer. In addition, many egg masses have evidence (pin holes) of the parasitic wasp laying eggs;
5. The decline of oak in highly stressful habitats (dry hill tops and urban/forest interface) could be viewed as an ecosystem adjustment to a now endemic species;
6. Focusing efforts on invasive species with no known natural controls may be a more effective use of HCA resources. These species such as Common Buckthorn and Japanese Knotweed are changing whole ecosystems at the ground level with widespread impacts on biodiversity;
7. The majority of tree species in our forests can survive repeat defoliation.

Staff recommend continuing with egg mass scraping on our landscape trees at Valens and Christie Lake Conservation Areas in 2022. This along with burlap banding and caterpillar picking was successful in 2021 with conserving the tree canopies of these landscape trees. In addition, individual oak trees (in forested areas), with severe levels of egg masses and therefore predicted defoliation will be scraped and banded in various Conservation Areas. The scraping and banding of individual trees (in forests) will occur in areas where the oak trees are driving the high levels of LDD moth egg mass counts. HCA will target our green infrastructure in this initiative to help maintain trees along trails and reduce the need for hazard tree removal. Staff will also review the possibility of this becoming a volunteer program in which individuals can adopt an oak tree and help maintain its canopy and health through scraping and banding.

Staff have spoken with the forestry/natural heritage staff at other Conservation Authorities in areas where defoliation levels have been moderate to severe over the last few years. Some of these Conservation Authorities have sprayed small areas of their properties with severe defoliation. Conservation Halton has sprayed their Waterdown Wood property, an oak dominated forest, that has seen high oak decline due to a number of factors. Toronto Region Conservation Authority has sprayed in areas which hosts a Tree Top Trekking companies to preserve trees used for this operation. Finally, Royal Botanical Gardens sprayed in 2021 and plan to again in 2022 to conserve their oak savanna, a provincially rare ecosystem.

STRATEGIC PLAN

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

- **Strategic Priority Area – Natural Heritage Conservation**
 - Initiatives – Maintain and enhance the natural heritage features of HCA lands and manage these lands on an environmentally sustainable basis

AGENCY COMMENTS

Not Applicable

LEGAL/FINANCIAL IMPLICATIONS

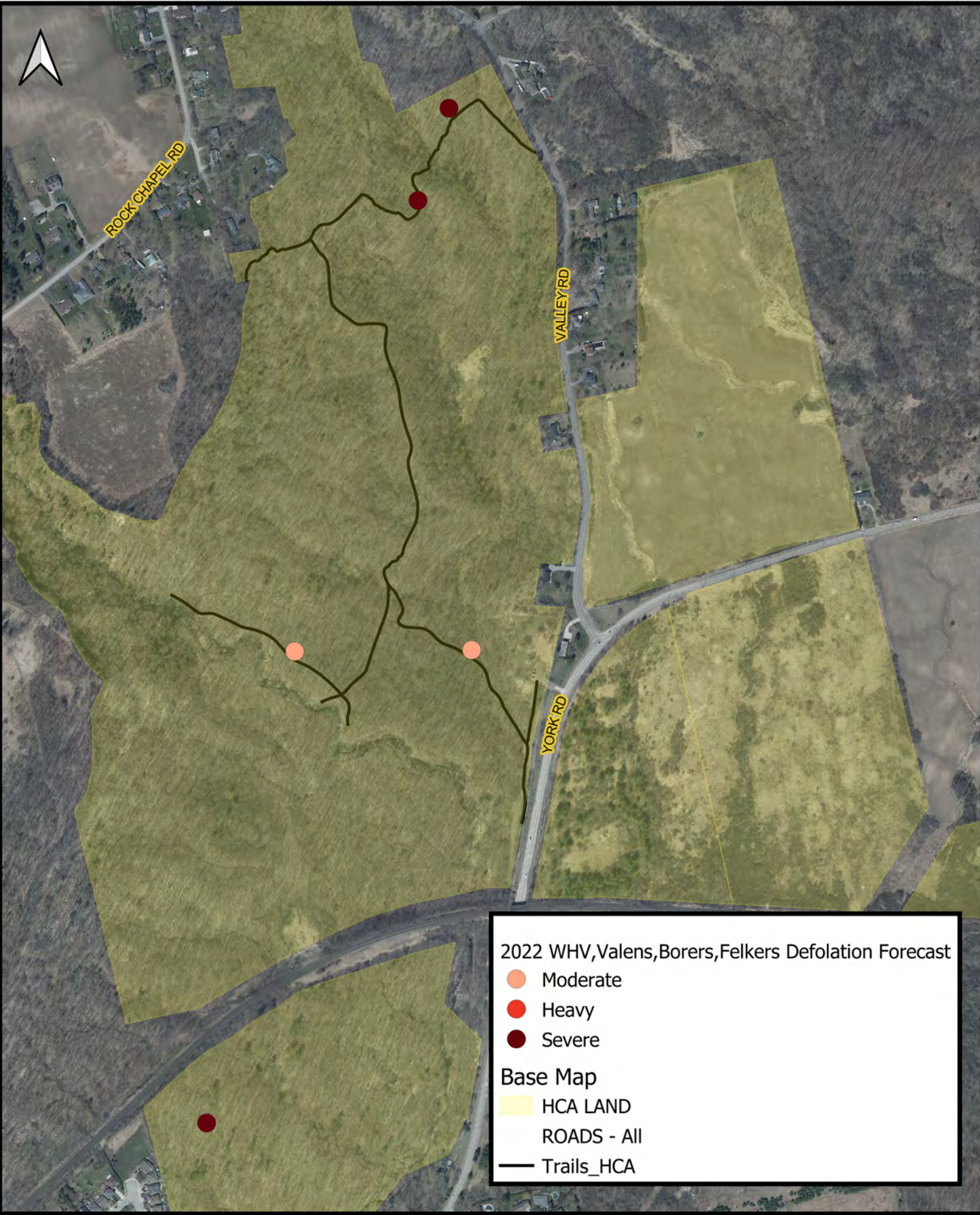
Not Applicable

CONCLUSIONS

Extensive LDD moth egg mass surveys have been conducted throughout the Dundas Valley Conservation Area and surrounding Conservation Areas. The Ministry of Northern Development, Mines and Forests now considers this species endemic to Southern Ontario. The last 4 years of surveys in the Dundas Valley have shown that even with an aerial spray program LDD moth declines have lasted only two years. In addition, our oak trees have died despite an aerial spray to reduce LDD moth impacts.

HCA staff are recommending that HCA move away from a forest wide aerial spray program to a targeted approach that focuses on high value oak trees in our forests for 2022. In this way we can reduce the overall impacts of a spray program while engaging volunteers and conserving high value oak trees.

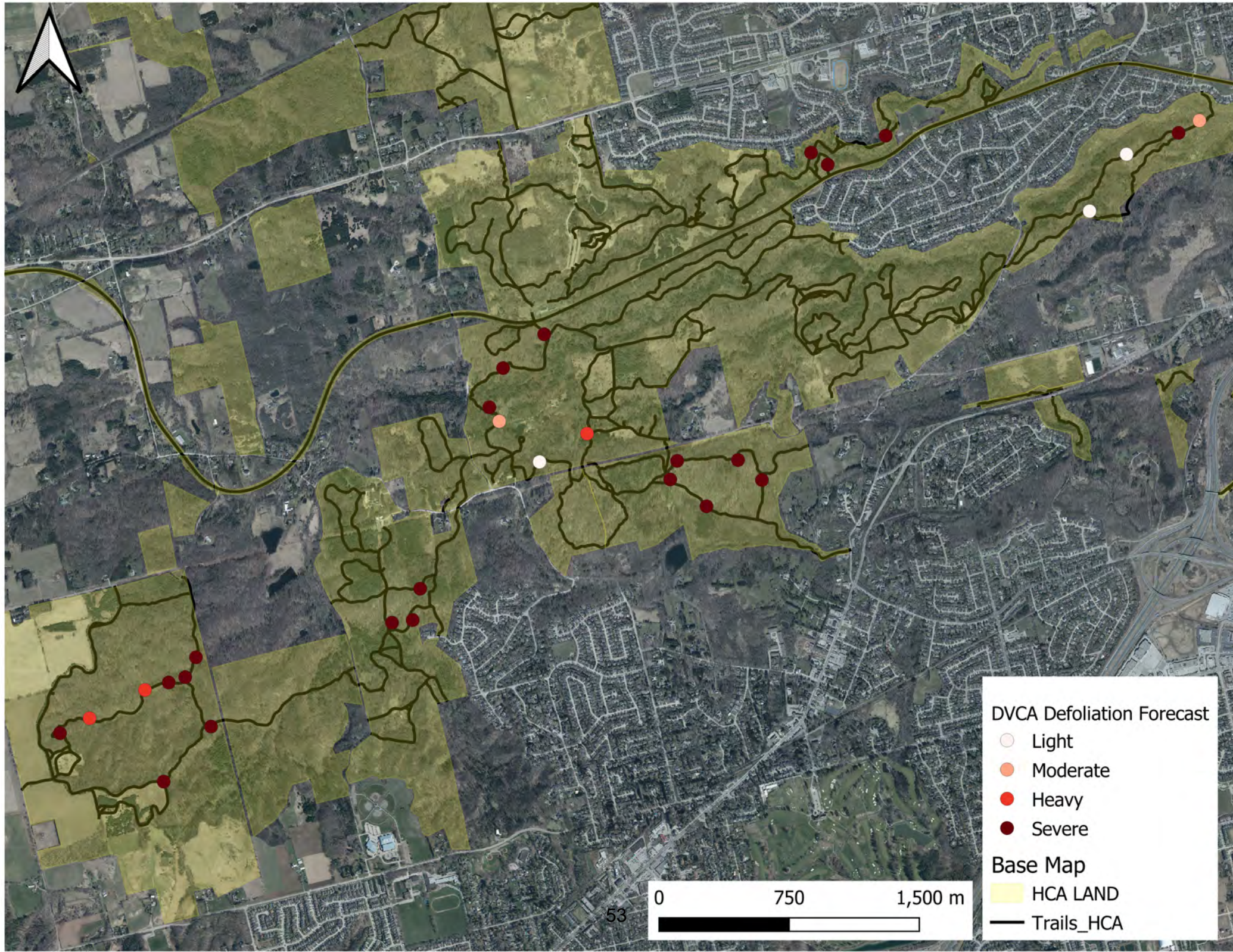




Borer's



52 Felker's

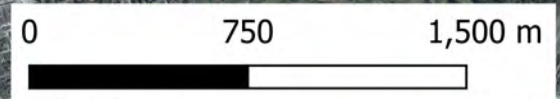


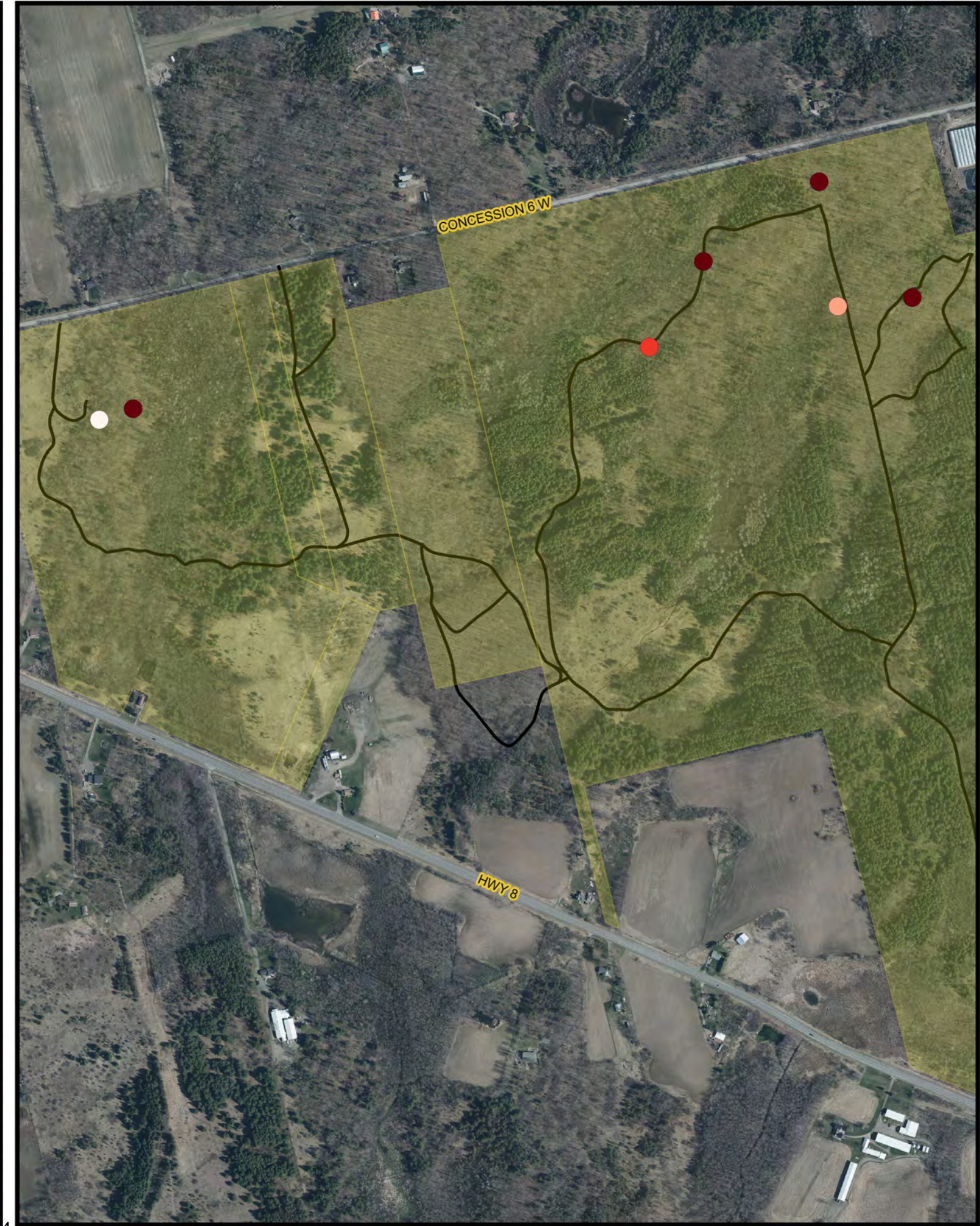
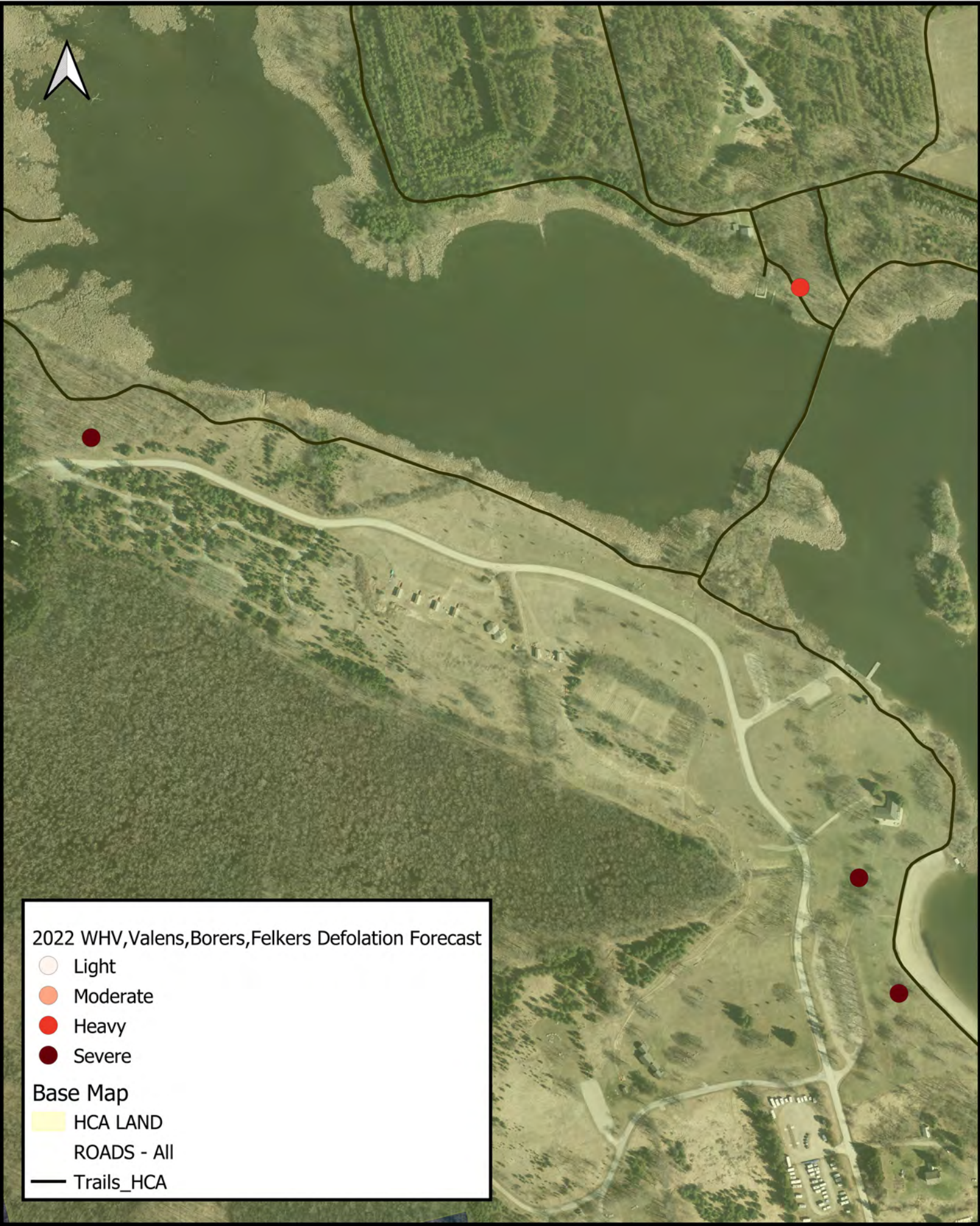
DVCA Defoliation Forecast

- Light
- Moderate
- Heavy
- Severe

Base Map

- HCA LAND
- Trails_HCA





Valens

Westfield Heritage Village

