

# Hemlock Woolly Adelgid

in the Canandaigua Lake  
Watershed

## Hemlock Woolly Adelgid Monitoring and Outreach in the Canandaigua Lake Watershed

### FINAL REPORT

February 28 2017

A collaborative effort between:



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## Executive Summary

First detected in the Canandaigua Lake watershed in November 2014, the Hemlock Woolly Adelgid is quickly becoming one of the more familiar invasive forest pests in our area. Public education and media attention have helped bring awareness to the community, and local monitoring efforts have started to track the progress of HWA in our watershed forests.

Our partners at the NYS DEC, the NYS Hemlock Initiative, the Town of Canandaigua, and Finger Lakes Community College are currently involved in important monitoring and assessment efforts on public lands in the Canandaigua Lake watershed. Because this invasive has strong ties to water quality impacts, the Canandaigua Lake Watershed Association saw a unique opportunity to get involved in the fight against HWA by utilizing this grant to extend outreach to private property owners, who are by far the principal owners of hemlocks in the watershed.

Efforts through this grant included the development of an HWA brochure *“A guide for property owners on the impacts of Hemlock Woolly Adelgid”*, which was distributed to 875 property owners in the Canandaigua and Honeoye Lake watersheds through a targeted mailing. Information on recognizing the signs of HWA, monitoring infestations, and treatment options were presented. Data provided by Ontario County Planning and FLCC helped us develop a list of property owners with confirmed presence of eastern hemlock- allowing us to get the most detailed information into the hands of property owners that may be up against HWA infested trees.

During this grant period, three public outreach events were hosted on the impacts of the Hemlock Woolly Adelgid – two in Canandaigua and one at the South end of the watershed in Naples. Workshops were attended by 112 individuals, many of whom were private property owners looking to get details on treatment options and reporting techniques. A “woods walk” through Grimes Glen provided hands-on training for volunteers. Sixteen individuals served as volunteers in some capacity, whether through local monitoring efforts, assistance with the distribution of educational materials in their neighborhoods, or serving as potential caretakers of insectaries.



Volunteer Cindy Smith examines a hemlock branch at a training event in Grimes Glen, Ontario County.

Local monitoring of watershed forests was an additional component of this initiative. Volunteers and paid “scouts” surveyed 28 locations around Canandaigua Lake and the western Finger Lakes region. Of these 28 locations, 11 were on private properties, and 17 were on public lands. All but 5 sites reported observations of HWA. 51 data points were recorded on these sites, which will assist with statewide monitoring efforts through the NYS Hemlock Initiative.

### By the Numbers:

<b>28</b> Sites surveyed for HWA	<b>16</b> Volunteers engaged in HWA locally
<b>51</b> Data points recorded	<b>112</b> Workshop attendees
<b>875</b> Property owners contacted with HWA information	

## Final Report – Initiatives and Deliverables

Because the HWA is only detectable to the naked eye on trees between November and March, the work of an annual project like this was compressed into an eight-month period, from the contract signing in early July until the end of February. The project followed the Progress Report filed with the grant application with few variations.

### Progress Report – Attachment 1

## Protocol – Treatment and Biocontrols

A protocol to prioritize the location of the release of biocontrols (insects) was one of the first, and last, considerations. Draft recommendations were shared with Cornell’s NYS Hemlock Initiative, Dr. Bruce Gilman, volunteers, concerned citizens and landowners, and comments on the Priorities have been favorable. Priority areas include Tannery Creek, and private lands on Seneca Point, where infestation is heavy and property owners are interested in establishing and monitoring hedges as insectaries.

The Canandaigua Lake Watershed Association was aware that the options for treatment of HWA were very limited and to some extent needed to be coordinated, so we developed a policy when discussing HWA infestations on private properties. Our policy development was driven by the actions of a small group of property owners on a particular “point” at the south end of Canandaigua Lake who had mature hemlocks near their homes and cottages. As a group, they hired a licensed contractor to do a chemical application to their trees. We added a description of this action to our several workshops, but warned that our policy was NOT to recommend widespread use of these chemicals especially near water. CLWA’s policy is only to recommend chemical treatment of large, valuable hemlocks in close proximity to property such as homes. Otherwise we counsel property owners that more general treatment of hemlocks must wait for safe, effective biological controls to be developed for NYS. The NYS Hemlock Initiative is working on just this issue. It should be noted that the eventual condition of the watershed vis-à-vis HWA will NOT be an extirpation of HWA; instead, we hope that biocontrols will limit HWA populations so that some hemlocks (sadly not all) will survive.



Thick infestation observed at a private property on Seneca Point, Ontario County

While initial plans for this grant period included \$500 for the release of biocontrols, CLWA was advised by Mark Whitmore that funding for biocontrol’s through the NYS Hemlock Initiative looks promising, and that funds would be better spent in the local community. It was decided that CLWA would work locally with Jim Engle of White Oak Nursery to establish hemlock hedges to serve as insectaries.

### Deliverable: Priorities for Biocontrol Application – Attachment 2



## Local Monitoring – Paid and Volunteer Efforts



Volunteers go over monitoring techniques at a training event in early December.

This project benefited from 10 days of paid professional work and 10 days of work by CLWA staff paid for by CLWA during the contract period. During the project, 28 site visits were made by paid and volunteer staff. During each visit, an average of three acres were investigated, for a total of 84 acres. 17 of the visits were to publicly accessible lands and 11 to privately owned lands, at the owners' request. Reporting forms developed by the NYSHI were filled out, and a matrix of site visits was maintained (attached).

A corps of six trained scouts were developed during the course of the project, and they contributed about 116 hours to scouting and recording information (both sighting HWA and HWA absence).

*Deliverable: 2016-2017 Site Visits for HWA Monitoring - Attachment 3*

## Educational Outreach

The project developed and presented three workshop programs for interested citizens and volunteers at both ends of the watershed in November and December 2016 and February 2017. Invitations to the first two workshops went out along with a HWA brochure developed specifically for this purpose to 875 property owners in the Canandaigua Lake watershed, and 112 property owners and volunteers attended these workshops. CLWA used maps of hemlock groves developed by Dr. Bruce Gilman and the Ontario County Planning Department to improve the targeting of the mailing. CLWA also used social media postings, press and radio to advertise the dangers of HWA and invitations to the workshops.

*Deliverable: HWA Brochure – Attachment 4*

### THREE STEPS TO HELP IDENTIFY HWA

**STEP 1: LEARN HOW TO IDENTIFY**

Look for Eastern Hemlock in or near gullies or on steep slopes, where their tenacious root structure holds highly erodible soils in place.

- Flat, blunt evergreen needles arranged in pairs
- Glossy on top, pale green underneath




- Two white lines on the underside of each needle
- Hemlocks have the smallest cones, half an inch in length, of any other local evergreen

**STEP 3: TAKE ACTION**

- Keep a lookout for the tell-tale signs of HWA when hiking with friends and family
- Focus on high risk locations, like watershed gullies
- Report suspected infestations
- Call CLWA to have a "HWA Scout" visit your property to verify the presence of HWA



**Spread the word about HWA:**

- Tell your neighbors, family and friends about the threat
- Help your neighbors scout for signs of HWA on their trees and hedgerows
- Initiate a neighborhood action team – help by distributing info and treatment options

**STEP 2: LOOK FOR SIGNS OF HWA**

- Check underside of branches near the ground, and examine branches that fell to the ground after a storm
- Look for small, woolly egg masses attached near the base of needles on the underside of hemlock branches
- Best time for detection is between January and May, but the white wool can be seen year round
- When examining trees from afar, look for gray foliage tint



**How to Report HWA in the Canandaigua Lake Watershed**

If you suspect hemlock trees on your property may be infested with HWA, call the Canandaigua Lake Watershed Association Office at (585) 394-5030, or send photos to [info@canandaigualakeassoc.org](mailto:info@canandaigualakeassoc.org)

Your early detection will help us gain a clearer picture of HWA coverage in the watershed.

**Have a Smartphone?**

Download the iMapInvasives App for your smartphone and select "Hemlock Initiative – 2016" as the project. Snap a picture of suspected infestations, and submit! The app records your GPS coordinates and will help us increase our mapping capabilities in the Finger Lakes Region.



Identification techniques for property owners from HWA brochure. Fall 2016

## Follow Up

There is a continuing need for ongoing education for private property owners. CLWA will continue to formalize relationships with Dr. Bruce Gilman, Finger Lakes Community College, local towns and municipalities, and potential volunteers. CLWA will continue its relationship with the NYS Hemlock Initiative as potential suppliers of biocontrol agents. CLWA is moving ahead to assist willing property owners in prioritized areas of the watershed to site, plant and harvest insects for biocontrol from hemlock hedge/insectaries. Such insectaries will serve as protection for their immediate vicinity and a source of insects to be “seeded” into other areas.

Monitoring in the Canandaigua Lake watershed will continue (and is continuing into March 2017), with sites needing to be revisited each year to track the progress of this invasive. As the monitoring season ends, data will continue to be compiled and will be uploaded to MapInvasives (March 2017).

## Conclusion

The Canandaigua Lake Watershed Association thanks the Finger Lakes PRISM for this opportunity to expand HWA outreach in the Western Finger Lakes region. Public education is a vital component to limiting the movement of invasive species throughout our region. Efforts to engage the public on invasive species observation, management, and control supplements the important work being done by agencies across the state. While we may not be able to eradicate invasives from our environment entirely, we can forge strong working partnerships with like-minded community groups to help minimize their impact.

## Attachment 1

**HEMLOCK WOOLY ADELGID MONITORING  
IN THE CANANDAIGUA LAKE WATERSHED  
FINAL REPORT- February 28, 2017**

<b>WHEN</b>	<b>WHAT</b>	<b>WHO</b>	<b>COMPLETION</b>	<b>WHEN COMPLETED</b>
July 8-October 2016	Begin to develop criteria for deployment of biocontrols	Steve Lewandowski, Finger Lakes Hemlock Initiative, scouts and volunteers	X	August, 2016
July-August 2016	Identify property owners with hemlocks and develop mailing list	Lindsay McMillan, Sherri Norton, OCPD	X	September, 2016
Late August 2016	Develop informational brochure on HWA	LM	X	September 2016
August-September 2016	Develop cadre of trained HWA scouts	SL, FLHI	X	December 2016
September-October 2016	Plan and deliver training workshop for scouts and property owners	FLHI, SL	X	November and December 2016, February 2017
September - November 2016	Develop social media coverage of training workshop	LM	X	December 2016. February 2017
September 2016 and January 2017	Distribute educational materials and brochure to property owners (twice)	SL and LM	X	October 2016, October, 2016
January-February, 2017	Plan and deliver second educational workshop with site visit for property owners	FLHI	X	December 2016
February-April, 2017	Develop final criteria for biocontrol locations	FLHI, SL, property owners, scouts, volunteers	X	February, 2017
February 28, 2017	Deliver Final Report	LM and SL	X	2/28/17

## Attachment 2

**PRIORITIES FOR BIOCONTROL APPLICATION  
HEMLOCK WOOLY ADELGID IN THE CANANDAIGUA LAKE WATERSHED**

**Criteria :**

Presence of Hemlocks (#trees in contiguous area)	10	50	250	500
Presence of HWA (% infested)	High	Medium	Low	None
Unique Species factor	Plants high (endangered)	Animals high (endangered)	Animals low	Plants Low
Adjacent Land Use	Public use	Private use	Mixed use	
Natural Capital score	High	Medium	Low	unknown
Slopes	Very severe (over 40%)	Severe (25-40%)	Steep (15-25%)	Moderate
Accessibility for treatment, monitoring	Very	Somewhat	Difficult	Almost impossible
Water Quality factor (acres drained, shaded = temperature)	Large drainage, mostly shaded	Medium drainage, some what shaded)	Small drainage, little shade	Small, no cover

**Candidates:**

\*Grimes Creek  
\*Tannery Creek  
\*Eelpot Creek  
\*Reservoir Creek  
\*Parish Gully  
\*Hicks Gully  
\*Seneca Point  
\*Menteth Point  
\*Tichenor Point  
\*Fisher Gully

\*Deep Run  
\*Gage Gully  
\*Clark Gully  
Lower Naples Creek  
Stid Hill  
South Hill  
Bare Hill  
Hi Tor  
Lower West River (Robbers Gulch)

\* With single stream often gully, other drained by multiple streams