

Pesticide Application Plan
Control of Hemlock Woolly Adelgid at Lake George Wild Forest (Northwest Bay area)

A. PURPOSE/TARGET SPECIES

This insecticide application is intended to kill the invasive insect pest Hemlock Woolly Adelgid (HWA), to protect treated Eastern hemlock trees from attack by HWA for five or more years, and to slow the proliferation and spread of HWA into nearby forests. HWA is a highly invasive and destructive pest of Eastern hemlock (*Tsuga canadensis*) and Carolina hemlock (*T. caroliniana*). It is ranked high (Relative Score = 76.00) under New York's Non-Native Animal Species Assessment Process and is listed as prohibited under 6 NYCRR Part 575. HWA is spread by wind, birds, and the movement of infested host material (firewood, nursery stock, etc.) by humans. Lacking predators in its non-native range, HWA can cause hemlock decline and mortality within four to twenty years. Trees growing under stressful conditions (drought, poor site, etc.) will succumb more quickly to the insect. In addition, this insecticide application is intended to kill Elongate Hemlock Scale (EHS) in one area of the campground that is known to be infested by that pest. EHS is an invasive insect that causes additional stress to trees infested by HWA.

B. LOCATION & DESCRIPTION OF APPLICATION SITE

The application site is located on the peninsula known as the Tongue, in the vicinity of Northwest Bay in Lake George Wild Forest (see Figure 1).

The treatment area itself will consist of an area of less than 200 acres. This application is intended to treat and protect hemlocks within treatment area. No more than 51,200 diameter inches of hemlock within this area will be treated.

C. PESTICIDES SELECTED FOR USE

1. Lesco Bandit 2F, EPA Reg. No. 432-1312; Doc. ID. 538136
Lesco Bandit 2F EPA Reg. No. 432-1312 with 2(ee) recommendation for basal bark application to control Hemlock Woolly Adelgid in Eastern Hemlock; Doc. ID. and 545660
2. Imajet, EPA Reg No. 74578-6; Doc. ID. 548266.
3. Safari 20 SG EPA Reg. No. 86203-11-59639 EPA SLN No. NY-120009 with SLN for Basal Trunk Spray for Control of Hemlock Woolly Adelgid and Elongate Hemlock Scale on Hemlocks Only

D. ANTICIPATED APPLICATION EFFECTS

Significant reduction or elimination of the target species to maintain the health of Eastern hemlock, an ecologically important species in the area. Imidacloprid will provide residual protection (up to seven years) from future invasion.

E. METHOD OF APPLICATION

Trees to be treated within the application area will be marked in advance by DEC staff. The application site is divided into one-acre grids to accurately track the total amount of product applied per acre and stay within the manufacturer's limits. Insecticide(s) will be applied to

infested trees (to reduce or eliminate existing adelgid populations) and nearby uninfested trees (to provide long-term protection from HWA). They will be applied onto the bark of selected hemlock trees, or directly injected into the trunk of selected hemlock trees, according to the product labels and manufacturer's safety instructions. While most trees will be treated only with imidacloprid (Bandit or Imajet), a subset of selected trees may also be treated with dinotefuran (Safari) based on tree and pest conditions on the ground. The application will be performed with the on-site supervision of a person holding a New York State Commercial Applicator Permit (Category 9).

F. TIMING OF APPLICATION

During the fall of 2024 (September 30th – December 20th)

G. WEATHER CONDITIONS REQUIRED

For basal bark spray applications: Wind – calm (0-10 mph). No significant rainfall expected within 24 hours after application. No application during rainfall, or when bark is saturated by rain. Direct injection applications may be used during any weather conditions.

H. PERSONNEL REQUIRED

A minimum of one and up to four DEC staff who are certified pesticide applicators or technicians will be present to perform the insecticide application. Additional personnel and volunteers may be on site to assist with treatment, tree marking and data collection. Trees to be treated within the application area will be marked in advance by DEC staff.

I. MONITORING METHODS

Ocular inspection of treated trees and surrounding area, with upper canopy sampling to determine effectiveness as needed.

J. SAFETY PROCEDURES

According to label instructions (attached). Necessary protective clothing such as long-sleeved shirt and long pants, and waterproof chemical resistant gloves will be worn.

K. PUBLIC NOTIFICATION

Warning signs will be posted at the site and along nearby trails. The nearest residences are less than one mile (over water) from the application site, and there are DEC trails within the application area. Land access to the application area requires a hike of over 3 miles. Hemlock trees that are not on DEC property, or that have been previously treated by DEC, will not be treated.

L. POST APPLICATION EVALUATION

A visual inspection of treated trees and surrounding area will be conducted at least one-year post-application to gauge treatment effectiveness. If needed, insecticide application rates may be adjusted for future treatments based on monitoring results, in accordance with the product labels. Survey efforts will be continued or expanded in the region for at least three consecutive years.

M. ALTERNATIVE METHODS

1. Treat only with dinotefuran, omit imidacloprid:

Systemic treatment with dinotefuran (Safari 20SG) only is likely to achieve the rapid control of HWA that is desired. However, it would only allow a temporary short-term protection from further infestation by HWA.

3. Cut and remove or destroy infested and suspected trees:

Mechanical removal of the visibly infested trees is not certain to effect the desired control; as low-level HWA infestations are likely present on neighboring trees, and can be very difficult to detect. There is also a potential risk of moving the pest to new locations if infested materials are moved. Finally, the ecosystem functions of the hemlock trees would be lost.

4. Biological control:

Biological controls (or biocontrols) are a potential long-term option for suppression of existing HWA populations. The use of systemic insecticides at the application site does not preclude the potential for future use of biocontrols at the treatment location. DEC staff will consult with New York State Hemlock Initiative scientists prior to treatment to ensure that pesticide treatment will complement rather than interfere with plans for biocontrol releases in 2024 and beyond.

5. No treatment:

Without intervention, HWA will continue to exist and spread at this location, resulting in decline and eventual mortality of infested, untreated Eastern hemlocks. The ecological and aesthetic impacts resulting from such a scenario would be significant.

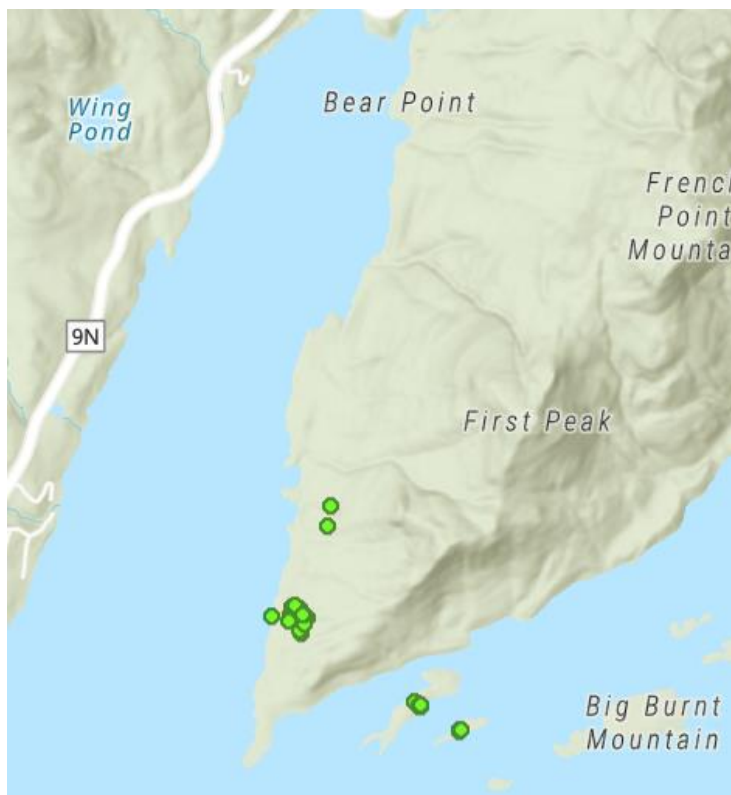


Figure 1: Northwest Bay treatment area and infested hemlocks