



# Save Georgia's Hemlocks

## NEIGHBORHOOD HEMLOCK HELP PLANNING GUIDE

Unified neighborhood action is the most effective way to safeguard the health, beauty, and value of your shared and private property against the serious threat posed by the hemlock woolly adelgid, the invasive insect that is attacking and killing (or *will* attack and kill) every hemlock tree in north Georgia unless they are treated. Three keys to the success of such action are adequate planning, effective communication, and community support.

The suggestions that follow are provided to neighborhood leaders as a flexible framework that has worked well in both large and small communities. Save Georgia's Hemlocks applauds your efforts, offers our educational and organizational support, and appreciates your sharing of experiences and improvements that we can pass on to help others.

### 1. Acquire an understanding of the problem and available solutions.

There are a couple ways to approach this. The best way to get started is to schedule a Hemlock Help Clinic for your whole neighborhood association, or at a minimum for the board of directors; it would include a PowerPoint presentation on the problem and available solutions, time for Q&A, and a demonstration of using a soil injector. If this is not possible, you could post an article on the neighborhood web site, publish it in a neighborhood newsletter, or mail/e-mail it to association members. It should give an overview of the problem and available solutions and encourage members to visit the web site [www.savegeorgiashemlocks.org](http://www.savegeorgiashemlocks.org) or call Hemlock Help Line 706-429-8010 to learn more.

A scripted version of the slide presentation can be found on the Resources page of our web site. This page also contains quite a few informational pieces and a series of Save Georgia's Hemlocks articles that can be shared as is or used as information sources for articles of your own.

### 2. Define overall goal, objectives, and project leadership.

The goal and objectives for a neighborhood hemlock project can be decided by the board of directors, voted on by the neighborhood association as a whole, or left to the discretion of each individual property owner. Our recommendation is that the POA board make these high level decisions and then communicate them appropriately to the membership (see item 6 below).

#### 2a. Goal

The overall goal should be both environmentally responsible and economically reasonable. Options include:

- to save *every* hemlock in the neighborhood (not advisable),
- to save *certain* ones in the neighborhood (the best option), or
- to allow each property owner to make his/her own informed choice (based on adequate education).

Saving *every* hemlock is not advisable because of the cost and because hemlocks need a certain amount of space for health growth. Optimal spacing for mature hemlocks is at least 20 feet apart unless they're being grown as a hedge.

If the chosen goal is to save *certain* hemlocks, the best recommendation is to save as many large ones as possible and then choose a number of middle-sized and small ones to save in order to provide for successional growth. Any hemlocks that will not be treated should be cut so as not to leave a banquet that would encourage the adelgids to remain or to return sooner than later. Also, those that are in poor condition or growing too close together for maximum tree health should be cut. Save Georgia's Hemlocks can provide advice on how to make these choices.

## **2b. Objectives**

Objectives are statements dealing with the main steps for accomplishing the goal. Objectives are basically items 3 – 8 below, expanded to include a schedule and the names of individuals responsible for the various tasks.

For private property, the objectives should address whether each owner is required to treat their trees, has the option to treat their trees, must give permission for treatment that will be provided by or arranged by the POA, or has the option to decline treatment that will be provided by or arranged by the POA. The POA board may want to seek a legal opinion on this matter.

For both shared and private property, the objectives should address how the cost will be paid. For example, are there POA funds to cover the shared and/or private property? Will each homeowner be assessed a certain part of the cost for treating the shared property? Will each homeowner choose his own method, strike his own deal, and cover his own costs?

## **2c. Project Leadership**

The POA should have one person in charge of the hemlock project. This person will take the lead on all remaining steps and is encouraged to assemble and utilize a team of helpers. Save Georgia's Hemlocks can assist with educational and organizational support.

## **3. Assess scope of project on private and shared property.**

The assessment step is designed to establish the level of HWA infestation and the number of acres involved and to estimate the number of trees to be treated, amount of chemicals needed, amount of manpower and time needed, and cost of various options. The results can be used to confirm or adjust the initial goal and objectives before they are communicated to the membership.

### **3a. Level of Infestation**

Establishing the level of HWA infestation is the necessary first step because it governs the kind of chemical treatment that is appropriate. Assistance in making this evaluation may be requested from the Georgia Forestry Commission, the UGA Extension Service, or Save Georgia's Hemlocks.

### **3b. Number of Acres**

Establishing the number of acres is usually easy. A POA generally knows how many acres are private and how many are public. It is also helpful to know how many private properties and acres belong to non-residents or part-time residents as this can impact project coordination later.

### **3c. Number of Trees and Diameter Inches**

Estimating the number of trees to be treated can be done in either of two ways. (1) A person or group can walk the properties to count and measure the hemlocks to be treated. Measuring the hemlocks means measuring the trunk diameter at breast height (dbh) of each hemlock to be saved and adding them together for a grand total. (2) A person or group can select a representative area, count and measure those trees, and then use that information to estimate the total for the whole area.

### **3d. Amount and Cost of Chemicals**

Estimating the amount and cost of chemicals needed is based on the level of infestation, chemical to be used, and the total number of diameter inches to be treated. If the infestation is light to moderate, the average cost for Imidacloprid treatment ranges from \$.18 - \$.54 per diameter inch for the do-it-yourself option or \$1.00 - \$2.00 per diameter inch for professional treatment. If the infestation is heavy, the average cost for Safari treatment ranges from \$.86 - \$3.44 per diameter inch for the do-it-yourself option or \$3.00 - \$9.00 per diameter inch for professional treatment.

#### **4. Identify resources and limitations.**

##### **4a. Manpower**

Manpower resources can be managed in one of two ways – doing it yourself (DIY) or hiring a professional. Doing it yourself is usually more economical but involves acquiring the chemical, borrowing or buying a soil injector, understanding the treatment process, and doing the work.

Where the terrain is difficult or dangerous or when homeowners are not inclined or able to do the treatment themselves, hiring a professional is advised. The Contacts page of the web site contains a list of qualified local professionals who are properly licensed and insured, specialize in treating hemlocks, offer treatment methods other than trunk injection, and charge “good neighbor” rates. All of those listed are equally recommended. An experienced professional can treat between 100 and 350 trees in a full day, depending on the terrain, size of the trees, and amount of undergrowth; a non-professional normally averages half that number.

##### **4b. Money**

Cost for DIY includes purchasing the chemical and paying a refundable deposit to borrow an injector or purchasing an injector. If the neighborhood decides on DIY, it may be advisable to purchase at least one soil injector in order to have convenient access to it since most counties have only one for lending. An injector can be acquired for as little as \$275 plus tax and shipping (see item 8 below), and the chemical cost can be estimated as described in 3d above. There are many sources for the treatment products and injectors, including the Internet; a partial list is provided on the Contacts page of our web site. Neighborhood associations are advised to shop and compare.

##### **4c. Other Considerations**

In making a project plan, neighborhood associations are advised to consider (in addition to cost) factors such as manpower, time, terrain, level of work effort, and the physical abilities and preferences of residents.

#### **5. Develop work plan for private and shared property.**

Approaching private and shared property as separate phases of the project allows the most flexibility. It is suggested that shared property be done first, partly because managing it is easier and gives the project team some experience, but also because it allows individual property owners to observe what’s being done, learn more about it, and generate support for the project.

The work plan for shared property is fairly simple, whether the decision is to DIY or hire a professional. If the POA contracts with a professional, there should be a written agreement for the rate and the schedule, and payment is normally made upon completion of the project.

The work plan for private property should, at a minimum, include an explanation of the option chosen (DIY or hiring a pro), a time frame in which the work should be completed, information on the cost, and a list of the helping resources that are available. Helping resources always include the Hemlock Help Line (706-429-8010) and the Treatment Instructions from the Resources page of the web site. They can also include a special Hemlock Help Clinic and/or assistance from trained Facilitators.

#### **6. Communicate goal, objectives, and work plan with membership.**

Before proceeding further, it is important for the POA board to communicate with the membership to explain what the problem is, why it is vitally important to address it, what will be done to solve it, how it will be done, the expected results of the project, and how to get more information. The communication could also include information on how to get involved, such as an invitation for individuals to become Facilitators.

It is recommended that a mass mailing or e-mailing be done by the project leader and followed up with one or more informational meetings for interested members. The team leader and/or team members should be prepared to receive phone calls from members with questions, and any questions that the team is not comfortable to handle can be referred to the Hemlock Help Line.

## **7. Identify local Facilitators and schedule training.**

The importance of having trained local Facilitators cannot be overemphasized. The training is provided at no cost by Save Georgia's Hemlocks, takes about 4 hours (2 for classroom instruction and 2 for hand-on demo and practice), and can be scheduled any time or place that's convenient for the participants. In a neighborhood of 30 – 50 homes, two Facilitators are normally enough. Above that, it is suggested that you have at least one for each 100 properties.

Facilitator functions can include (1) visiting a neighbor's property and helping them understand whether their trees are lightly, moderately, or heavily infested as this dictates what kind of treatment is appropriate; (2) helping the neighbor decide whether to DIY or hire a professional; (3) telling them where to look on the web site to find places to buy chemical, rent an injector, and get treatment instructions; and (4) giving other do-it-yourselfers a brief demo on how to use the injector properly. In addition, if the POA decides to DIY the shared areas, trained Facilitators can get the job done well, quickly, and economically.

## **8. Procure treatment materials and arrange to purchase or borrow application equipment.**

### **8a. Treatment Material**

The recommended treatment material for mildly to moderately infested hemlocks is Imidacloprid 75% WSP (water soluble powder). The smallest quantity available for purchase is a pack of four 1.6 ounce packets, but it can also be purchased by the case or even a pallet. The recommended treatment material for heavily infested hemlocks or very large hemlocks (32+ inches) is Safari 20 SG (Dinotefuran), sold in a 3-pound container.

For a list of brand names under which Imidacloprid is sold, see the HWA Controls page and then click on Chemical Controls. Merit is Bayer's original Imidacloprid product for HWA. There are also quite a few generic products that are chemically equivalent, equally effective, and less expensive. Dinotefuran is sold only as Safari.

For a partial list of the local vendors that sell the treatment product, see the Contacts page of the web site. For either product, you should know the total number of diameter inches that need to be treated. In addition, if you're ordering Imidacloprid, you'll need to state that you want "75% WSP Imidacloprid in 1.6 oz packaging for treating the hemlock woolly adelgid." If you don't say it exactly that way, you might wind up with a version of the product in a slightly larger size that is labeled as a termiticide and therefore has the wrong instructions for your purposes and would constitute an off-label use.

### **8b. Soil Injector**

To find out where to borrow a Kioritz soil injector, see the Contacts page of the web site and find the listing for your county. When you borrow an injector, a refundable deposit is normally required. If you decide to buy an injector, see the Contacts page for a partial list of sources. Neighborhoods are advised to shop and compare products and prices and to place your order as soon as possible because injectors are sometimes in short supply.

## **9. Execute work plan and maintain appropriate records.**

The project leader is responsible for execution of the work plan and maintenance of appropriate records.

### **9a. Work Plan and Expense Tracking**

It is suggested that the project leader establish a way to track each step as it is completed, make adjustments or follow-ups as needed, and publish short reports periodically to the board and membership to show progress as it occurs. Expense tracking should include keeping tabs on both immediate expenses (such as for purchases of chemicals and/or application equipment) and accrued expenses (such as for the number of days/hours worked by hired personnel to be paid at the end of the project).

### **9b. Other Records**

In addition, it is very important that the project leader consolidate and maintain records on how many trees are treated, the total number of diameter inches treated, the total number of acres treated, and the total amount of chemical used. Records can also include the number of property owners who did or did not participate, the number of volunteer hours spent, and anything else the POA board might want to report back to association members.

## **10. Frequently Asked Questions**

### **10a. Should you “pre-treat” hemlocks?**

Generally not. Treating hemlocks when there is no infestation on the property or very nearby is like treating a cold before you catch one. The treatment products have a “life span” of effectiveness, and pre-treating uses up some of that life span before it’s needed. That said, keep in mind that Imidacloprid is somewhat slow in the uptake, so if very nearby hemlocks are infested, it may be advisable to initiate treatment in order for the chemical to be well up into the tree when the adelgids arrive.

### **10b. When should you treat hemlocks?**

You should plan to treat as soon as an infestation is discovered on the property or very nearby. Spring is the very best time to treat, with fall being the second best time. Most of the rest of the year is OK for treating, except deep winter (January and February) or times of extreme drought are not recommended.

It is generally best to treat all the hemlocks chosen to be saved at the same time. Here are the reasons.

(1) It is not always possible to be sure which trees are infested and which ones are not because part of the year the HWA egg sacs are very visible and other times they're hard to see. In some cases the infestation starts on the lower branches where it's easy to spot, and other times it starts at the top of the tree where it's hard to see from the ground. So the prudent assumption is that if the adelgids can be seen on some trees, they're also on other trees where they can't be seen.

(2) The HWA infestation spreads amazingly quickly down here in the south, traveling 15 to 25 miles per year. So if you discover adelgids on one of your hemlocks, they will very soon be on the others, and it is best to go ahead with treatment at the beginning of an infestation rather than waiting until it becomes serious.

(3) From a practical standpoint, most POAs or individual homeowners find it a more manageable process to do it all at one time rather than piecemeal, having to inspect individual trees on a weekly basis, making multiple purchases of chemicals, and borrowing an injector multiple times. In addition, if a professional is hired to do the treatment, it is generally less expensive if they do all the work at one time instead of making multiple trips to the property.

(4) Trees that are 25 inches or more in trunk diameter need to be treated two years in a row in order to give them the concentration of active ingredient needed for full protection. So if they're all done at once, it's more likely the POA or homeowner can keep up with the one-year anniversary for all his big trees rather than having to keep a weekly calendar for re-treatment of individual trees.

### **10c. How does Imidacloprid behave?**

Imidacloprid applied by soil injection is the safest, most economical, and most effective way to treat mildly to moderately infested trees hemlocks. It is easy enough that it can be done by most homeowners. The active ingredient is the same one used in flea collars for dogs and cats. In the ground, the material spreads about 6-12 inches from each injection point, so there is very precise control over where the chemical goes.

Imidacloprid has a relatively slow uptake rate to reach full strength in the entire tree – 6 to 12 to 18 months, depending on the size of the tree. The larger the tree, the longer the time required for the treatment to reach full strength. It provides an average protection period of 5 years, sometimes as long as 6 or 7 years, before retreatment is necessary, but property owners should keep an eye on their trees to assess how they’re doing over time.

Mixed Imidacloprid solution that is leftover doesn’t store well and should be poured under hemlock trees, never into a stream or drain. Leftover unopened packets can be stored in airtight Ziploc baggies for future use if placed in a dark dry place or can be donated to Save Georgia’s Hemlocks in exchange for a tax receipt.

NOTE: The information provided here concerning chemical treatments is based on product labels and advice from experts, including various public land managers, product representatives, and the University of Georgia. It is the user’s responsibility to read and follow the label instructions when using pesticide treatments. More information and more help are available through the Hemlock Help Line 706-429-8010 and from our web site [www.savegeorgiashemlocks.org](http://www.savegeorgiashemlocks.org).