



United States
Department of
Agriculture

Forest
Service

Chattahoochee-Oconee
National Forests
Supervisor's Office

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Route To:

Subject: Public Scoping for Hemlock Woolly Adelgid Suppression

To: Forest Stakeholder

The Eastern, or Canada, hemlock tree (*Tsuga canadensis*) is under attack in Georgia. The hemlock woolly adelgid (*Adelges tsugae*) - called "HWA" - is a destructive introduced insect pest of forest and ornamental hemlock trees in the eastern United States. A native of Japan, the adelgid was introduced into the US Pacific Northwest in the 1930's and first reached the southeastern US in Virginia in the 1950's. The adelgid feeds at the bases of hemlock needles by inserting its sucking mouthparts and sucking up the tree sap. The needles dry up, turn gray, and fall off. New growth is not formed and tree vigor gradually declines. Heavily infested trees can be killed in as little as four years.

Slow to spread at first, the adelgid has moved rapidly in recent years and now extends from Maine to Georgia. It was first found in Georgia in 2002. Hemlocks have already begun dying due to HWA infestation in northeastern Georgia in the headwaters of the Chattooga Wild and Scenic River. The adelgid has also been located westward into the headwaters of the Hiawassee and Chattahoochee Rivers.

Most of the hemlock in Georgia occurs on the Chattahoochee National Forest within the Blue Ridge Mountains where it is strongly associated with the most sheltered locations, especially along streams. Individual trees occur out into the upper Piedmont in cool, moist locations such as stream sides or sheltered slopes.

The HWA can be expected to continue to be spread throughout the range of Eastern hemlock, primarily by birds that carry them on their feet or legs. No natural resistance has been found in Eastern hemlock. Without action, the outlook for the native hemlock tree in the Georgia wilds is for at least 90% of them to be dead within 10 years and likely in less time, based on current knowledge and experience. It is not feasible, with existing control methods, to suppress the adelgid on each and every hemlock.

We are asking for your comments on our proposal to protect selected Hemlock areas by targeted adelgid control at locations throughout the Blue Ridge Mountain portion of the Chattahoochee National Forest. That proposal is described more fully in the remainder of this letter.

Robert Jacobs, Regional Forester for the Southern Region of the US Forest Service, Atlanta, GA, is the decision maker on this proposal to protect selected hemlock areas throughout the Chattahoochee National Forest, excluding that portion of the forest west of US Highway 411 (hemlock does not occur there). An attached map shows; (1) the hemlock areas the Forest



Service proposes to protect, and (2) the anticipated protection method(s) for each. Though not currently posted, you can check our Forest website at www.fs.fed.us/conf/ for more detailed versions of this map in the future.

The proposal is designed to meet two specific needs:

1. Keeping hemlock alive to prevent potential loss of genetic differences. The genetic variation within either the entire hemlock population or within just the native hemlock population of Georgia is not currently known. We propose to protect a network of hemlock groups that can exchange pollen among themselves, thus conserving whatever genetic variation currently exists.
2. Keeping hemlock alive that provides important plant and animal habitat, especially for Proposed, Endangered, or Threatened species under the Endangered Species Act; Regional Forester sensitive species; and Forest locally-rare species. Protection of animal habitat includes consideration of aquatic species such as native brook trout.

This proposal, subsequent analysis, and the final decision *will not include* the protection of hemlock in developed recreation settings *except as they coincide with the strategy for maintaining potential genetic differences*. Developed recreation areas include well-known locations such as Anna Ruby Falls and Dukes Creek Falls. These areas either will have, or already do have, separate decisions that do not require the preparation of an environmental assessment. However, those decisions also must comply with NEPA and have, or will include their own efforts to notify the public and seek public issues with any proposed activities.

Protection would be by one or both of two methods at each location. Each of the two methods has associated conditions. The method, its conditions, and preferred use are as follows:

- (1) Release of non-native predator beetles that eat only adelgid larvae and have been cleared for release in the wild by the US Department of Agriculture.

Beetle release may be several hundred to several thousand. Release depends upon beetle availability, an infestation level sufficient to provide ample prey, and a large enough population of hemlock within the typical beetle dispersal distance of ¼ mile. Sites would be evaluated individually prior to release.

Predator beetles are the preferred method for large areas and for long-term control, provided they successfully establish reproducing populations. The need for future supplemental releases is dependent upon whether or not introduced beetles establish a population in balance with adelgid reproduction in the wild.

- (2) Injection of a nicotine-like insecticide taken up by the tree that kills the adelgid when it eats it.

Injection of insecticide must be done in compliance with the product label. Application is calibrated to the size of each individual tree being protected. Application is not made where the insecticide could reach groundwater or streams.

Insecticide would be used as an interim measure while beetles are becoming established and would be discontinued once monitoring had shown beetles had established viable populations that effectively control the adelgid. It would be used for the protection of genetic conservation areas or where highly valued trees in relatively small groups occur outside developed recreation areas. Re-treatment could be needed every other year because the insecticide is biodegradable and loses effectiveness over time.

A combination of beetle release and insecticide treatment could be used on large areas with hemlock, such as in stream corridors. Insecticide use would be focused on ensuring the survival of small areas of hemlock while predator beetles become established to protect surviving trees in the larger area.

To meet these needs, Mr. Jacobs will consider: (1) all land area of the Chattahoochee National Forest within the native range of hemlock for the selection of areas to protect, and (2) all protection methods for the selected areas.

No management designation of the Forest would be off-limits. For example, Congressionally-designated Wilderness Areas, the Coosa Bald Scenic Area, the Appalachian Trail corridor, the Chattooga Wild and Scenic River, the Ed Jenkins National Recreation Area, Regional Forester designated Scenic Areas, recommended wilderness study, inventoried roadless areas, and recommended additions to wild and scenic rivers would each be considered.

The needs cannot be met without considering the complete distribution of hemlock in Georgia because; (1) hemlock pollen dispersion distance for genetic interaction is estimated to be no more than five miles, (2) a strong genetic conservation network would ensure interaction among three or four groups rather than only two to buffer against the loss of any selected group, and (3) the size and distribution of the various 'special' designations are such that they would greatly reduce the number of genetic conservation areas that can exchange pollen if they were to be excluded from consideration.

Protection activities approved by the Regional Forester would begin in calendar year 2005 where the adelgid already occurs and as infestation is detected on other areas as the adelgid moves westward. Activities would continue annually or periodically until; (1) predator beetle populations reach a population in balance with the adelgid at a level not causing epidemic hemlock mortality, or (2) conditions change such that either; (i) the decision is no longer the best way to meet the objectives, or (ii) the objectives themselves need to be re-visited. An example might be the discovery of a new, more effective method of reducing adelgid populations.

Please mail your concerns or other comments about the project as we have described it to:

HWA Team
1755 Cleveland Highway
Gainesville, GA 30501

by Monday, February 28, 2005. We ask you to be as specific as you can and tell us *what* concerns you, *where* your concern applies if it is specific to an area or areas, and *why* you have that concern. It would also be useful if you would tell us what you value about hemlock; for example, its beauty, summertime shade, open forest floor, connection with fond memories, etc. You may also email your comments to 'rstephens@fs.fed.us'. Please include "HWA" in the 'Subject' line of any email and a daytime phone number in either hardcopy or email comments so we can contact you to clarify points we don't understand.

We also invite you to identify additional hemlock areas you think are deserving of protection by mail to the same address or by a personal visit, provided that they meet the following criteria;

- there are at least 50 hemlock trees in a single area of 3 acres or less, and
- those trees are at least equal in height to the tallest trees of other species growing alongside them.

As with text comments, we ask that you tell us *why* you believe it is important to protect hemlock at that location as specifically as you can. It is also critical that we know *where* the area is located. We ask that you use one of the following three ways to identify additional areas:

1. Print a copy of the locality from a 1:24000 scale topographic map with a large enough surrounding area to include geographic feature references. Topographic maps are available for Georgia online at <http://ga-ims.er.usgs.gov/website/drg24/viewer.htm>
Be aware that these maps are not the most current edition and therefore may not have all existing cultural features such as roads, trails, or buildings. Mark the map face with your nomination and mail with your explanation of its importance and any other text comments.
2. Provide: (1) a GPS co-ordinate location for the approximate center of the area; (2) the datum used, such as WGS84; and (3) either one of; (a) an estimate of size, or (b) a sketch map of the shape. Mail this information along with your explanation of the areas' importance and any other text comments.
3. Call the District Office nearest you and schedule a time to meet with a Forest Service representative to identify areas on paper 1:24000 scale topographic maps. District personnel will get these to the HWA Team. District names, addresses, and phone numbers are available on the Forest website at www.fs.fed.us/conf/.

Your responsive input will help us focus our efforts and produce a higher-quality decision. Also, those who comment will either be sent a copy (or informed of how they may access one) of the

public comment – or draft version – of the environmental assessment that analyzes environmental effects and supports the Regional Forester’s decision. There will also be a thirty-day comment period on that draft and any comments received then will also be considered before the final decision is made; however, early comments are usually the most valuable and we urge you not to wait.

For those of you wanting to read more details, several good web resources are available.

- Additional information on the hemlock woolly adelgid is available on the web from the USFS Northeastern Area State and Private Forestry office in Morgantown, WV. <http://www.fs.fed.us/na/morgantown/fhp/hwa/hwasite.html>
- The environmental assessment for the Nantahala and Pisgah National Forests in North Carolina is available online at http://www.cs.unca.edu/nfsnc/nepa/hwa_revised_ea.pdf.
- A technical synopsis of information on the insecticide imidacloprid can be found on the Extension Toxicology Network at <http://extoxnet.orst.edu/pips/imidaclo.htm>

If you need more information to comment, please call Ron Stephens, Forest Silviculturist, at 770-297-3020 between 7:30 AM and 4:00 PM EST Monday through Friday. If Ron is not immediately available, you can leave a message and he will return your call in a reasonable time.

Details of Forest Service planning procedures may be found at <http://www.fs.fed.us/emc/nepa/index.htm>. You may also call John Petrick, Forest Planner, at 770-297-3005 between 8AM and 4:30PM Monday through Friday if you have questions.

Thank you in advance for your efforts to assist in conserving Georgia hemlock for future generations.

/s/ *Kathleen Atkinson*

KATHLEEN ATKINSON
Forest Supervisor