

Tailgate Briefing – USFS Hemlock Treatment

For Team Leaders

Ask team leaders to arrive at least 1/2 hour before volunteers are scheduled to report, and welcome them as they arrive.

1. Make sure each team leader is properly attired with PPE:
 - Dressed for the weather and terrain
 - Long pants and long sleeved shirt, sturdy shoes/boots with socks, work gloves, face coverings during Covid
 - Hard hats
2. When all team leaders are present, describe nature of project:
 - Treating or retreating ___ hemlocks for the woolly adelgid
 - Kind of soil injector to be used and output per pump
 - Chemical to be applied and mixing ratio
3. Give each team leader:
 - A map of the project area with their assigned work site marked; mention stream crossings or other hazards.
 - A set of data sheets for the trees at their work site with instructions on how to mark the data sheets
 - The names of their team members (if known in advance) and any special information about abilities/disabilities if known
4. Give each team leader a work bag, a supply of chemical, and the necessary equipment/supplies for their team (see *Checklist*). Team leaders should already be familiar with the work kit contents, but mention that it contains only the items they'll be using.
 - Clipboard, treatment log sheets, and pen – Use to record tree diameters and any special notes.
 - Apron – Someone other than person with injector or sprayer should wear this.
 - Diameter tape – Keep in apron and use to measure trees.
 - Laminated mixing / dosing card – Keep in apron and use to determine number of pumps based on tree diameter and wet/dry mixture. If any injectors have nonstandard output, point out the attached mixing/dosing card with adjusted mixing instructions.
 - Permanent marker – Use to make check-mark on metal tags of treated trees if trees already have tags
 - Nitrile gloves – Use when mixing, pouring, or cleaning up chemical.
 - Hand sanitizer and towels – Use to clean skin if contacted by chemical and clean up before lunch.
 - Small measuring cup w/bottle cap – Use to check calibration of injector if this hasn't already been done.
 - Funnel and paper paint filters – Use for filling injector tank or sprayer tank.
 - Gallon baggie – Put used funnel, gloves, and filters in it to keep work kit clean.
 - Strap with carabiner clip – Use as shoulder strap to carry injector if desired.
 - Small hammer, plastic box of metal tags & aluminum nails – Use to tag or re-tag treated trees.
 - Flagging tape – Use to mark start/finish points or to mark treated trees if tags aren't available.
 - Trash bag – Use for woods clean-up and end-of-day clean-up.
5. Point out location of general / replenishment materials that are on hand if needed (see *Checklist*).
6. Remind team leaders of schedule for the day and indicate whether all teams will assemble for lunch or each team will take lunch at their work site.
7. Present brief refresher as needed and any new or project-specific procedures:
 - Mixing chemical – Indicate wet or dry soil ratio (Imid only); make 96 oz of mixture at a time if using Kioritz soil injector; make 1gallon mixture at a time if using EZ-Ject. Use WARM water for powdered or granular product; if must dip from stream, use clean jug only.
 - Finding trees – Indicate whether trees to be treated are already tagged/marked and how to identify trees with missing tags; whether permissible to add new trees or replacements for trees that can't be found or have died.



- Tagged trees (or trees that should have tags) should be treated or retreated first. Then if there is enough time and chemical and if a site doesn't have the full complement of tagged trees, teams can select and treat additional viable ones up to limit per site. Explain parameters and priorities for choosing additional trees.
- Clearing ground cover at base of tree, if necessary – just 1 foot from trunk, replacing after treatment. Use feet to do this, not hands.
- Measuring – For anyone unfamiliar, demonstrate use of diameter tape; reading tape at zero mark, not metal tip; measuring each stem of multi-trunk trees and adding for total, measuring trees on slope from the up-side, rounding up to next inch if ½ or greater.
Suggestion: Have each person determine where 4.5 feet comes to on their own body
- Applying treatment – Indicate number of holes for soil application equals diameter but minimum of 4 holes; within 1 foot of trunk, 4-5 inches deep. Don't use depth plate for foot pressure for Kioritz, but do use foot plate for EZ-Ject. Keep injector moving until clean-up time.
- Marking treated trees – Mark existing metal tag with permanent marker checkmark. If tree is being tagged for the first time, tag is missing, or bark has grown around old one, apply new tag at breast height on side away from road, trail or camp site. Drive nail straight in and leave it protruding 1 inch, then tap head of nail slightly downward.
- Updating data sheets – Indicate info to record; how to mark if unable to locate tree, if tree is dead, or if new tag is applied; any other info that would help identify tree in the future.
- Rotating jobs throughout the day to give team members a variety of experience.
- Reporting other hemlock pests or problems observed.

For Volunteers

1. **Welcome volunteers** as they arrive and introduce them to their team leaders. Ask team leaders to cover sign-in, name tags, health problems and remedies, proper attire/PPE, any anticipated difficulty with assigned work site, and schedule for the day. Team leaders should retain sign-in sheets for emergency contact info until end of project and then turn in to project leader.
2. **Explain project significance** to natural and human communities (*adjust depending on audience*):
 - **Aesthetically**, these beautiful trees contribute greatly to the enjoyment of those who live, work, and play among them, as well as the many people who come to north Georgia for tourism and recreation.
 - **Ecologically**, hemlocks help maintain the health and biodiversity of our forests and provide food and habitat for a diverse population of birds and other animals, shade for native plants, and cool temperatures for trout streams.
 - **Environmentally**, hemlocks are vital for protecting the quality of our waterways and watersheds, preventing soil erosion on mountain slopes and around waterways, and maintaining our air quality.
 - **Economically**, healthy mature trees such as hemlocks support jobs and local tax revenues associated with tourism and recreation and supporting the value of private properties and the community as a whole.
 - **And on a personal note**, hemlocks are the favorite tree of so many people who grew up visiting the woods, taking their children and grandchildren to the woods for memorable family outings, and teaching lessons of respect and personal responsibility, wise use of resources, and environmental stewardship.
 - **Add any information** that is specific to this project or site, such as protecting endangered species.
 - **But the hemlocks are under attack** by an invasive insect, Hemlock Woolly Adelgid (HWA), and most will die unless action is taken to prevent it – which is where we come in. By treating the trees chemically, as we will do today, we will be protecting them for another 5-6 years.
3. **Introduce treatment product(s):** The treatment product you'll be using contains the active ingredient Imidacloprid, a mild nicotine derivative that's also in flea collars. It kills the insects, isn't toxic to humans, and provides residual protection for an average of 5-6 years after treatment. However, just for safety, anyone who is handling the chemicals or application equipment will wear gloves.
4. **Introduce application method(s):** The application method will be soil injection using a Kioritz or EZ-Ject soil injector to place the treatment material directly into the feeder root zone. The tree takes up this systemic material and disperses it throughout the entire plant. The treatment binds quickly to the organic matter in the soil and migrates less than a foot from each injection point.
5. **Remind everyone of environmental safety** (as the task and setting dictate):
 - Don't allow chemicals to spill into waterways or go down drains.
 - Don't wash equipment in waterways or down drains.
 - Trees that are right on waterway should be treated on side away from stream.
 - Don't use more or less chemical than is called for.

6. **Remind everyone of personal safety:**
 - Ask if anyone has serious allergies and whether they've brought what they need with them.
 - Wear PPE, face masks during Covid, nitrile gloves if handling chemical, hard hats.
 - Look out for holes, snakes, bees, poison ivy, briars / tangling vines, eye-level branches, steep / slippery terrain.
 - Be careful crossing streams; avoid slippery rocks and logs; don't get wet if weather is cold.
 - Be mindful of heat and adequate hydration, cold and hypothermia, changing weather conditions.
 - Keep eyes open for hazards and ears open for falling branches or trees.
 - Stay within sight/speaking distance of other team members.
 - Seek project leaders immediately in case of spill, accident, or other emergency.
7. **Ask if there are any questions** and let teams know the project leader(s) will be traveling from team to team throughout the day to replenish supplies, handle communications, or address any issues that may arise.

GET TO WORK, BE SAFE, AND HAVE FUN!