

HWA INCREMENTAL TREATMENT PLAN

(Year 1 with dinotefuran; Years 2 through 7 with dinotefuran AND imidacloprid)

OBJECTIVE

The objective of this plan is over the course of seven or more years to treat all the hemlocks on CSA with diameters greater than 5 inches. The rationale for concentrating our efforts on larger trees is two-fold. First, normally not all small trees survive to maturity. Secondly, it would cost more to cut down larger trees if they were to die.

PLAN DESCRIPTION (see the diagram, below)

The plan would build on this year's treatment (year 1 in the diagram) of the most distressed trees with dinotefuran (depicted in red in the diagram). While this insecticide is only good for a couple of years, it is faster acting than imidacloprid and would do the better job of saving already distressed trees. I assume that we may have treated 5% of the hemlocks on CSA property this fall.

On a periodic or ongoing basis, volunteer members would identify trees along Cobmoosa's roadways that they believe show signs of distress due to adelgid infestation. One or two other volunteers would measure the diameter of each tree, catalog it, and apply a solution of dinotefuran and imidacloprid (depicted in purple in the diagram) to the basal bark of each distressed tree. The dinotefuran would address the infestations rapidly, while the imidacloprid would provide long term protection. (The period of protection is depicted by the blue arrows in the diagram.). Care would need to be taken with the combined solution not to exceed the maximum dose per acre per year of dinotefuran. (Dinotefuran has a lower permitted dose per acre per year than imidacloprid.).

If the total maximum per acre per year of dinotefuran has been reached and there are additional hemlocks still to be treated, they could be treated with imidacloprid alone (depicted in dark blue in the diagram) until either 15% of the hemlocks have been treated, or the maximum dosage per acre per year has been reached on the CSA property.

The annual target would be to treat an additional 15% of CSA hemlocks each year through 2027. This schedule would treat all the CSA hemlocks within seven years. If it is not possible to treat the full 15% in a given year, the most severely distressed hemlocks would still have been treated.

If it proves possible to treat 15% each year, the treatment cycle would involve ongoing treatment of each hemlock in rotation with imidacloprid every six years. The trees treated in 2021, for example, would be retreated in 2027, the ones treated in 2022 would be retreated in 2028, etc.

In the event the treatment cycle needed to be stretched out to more than seven years, the CSA hemlocks would still be saved because, each year, the most severely distressed hemlocks would have been the focus of treatment each year.

ADVANTAGES

There are many advantages to this plan. First, it would result in treating all the distressed hemlocks on CSA land. Each year this treatment would be focused on saving the most distressed trees along the roadways. This should result in few if any large CSA hemlocks dying from the HWAs even if treatment of all hemlocks took longer than seven years.

Secondly, it would divide the task of treating the trees into manageable segments. The cost of treatment would be spread over seven or more years which would make it relatively easy to work the costs into the annual budgets.

Since the plan extends over a period of years, there is ample opportunity to adapt it in response to the additional knowledge that we will undoubtedly gain over time.

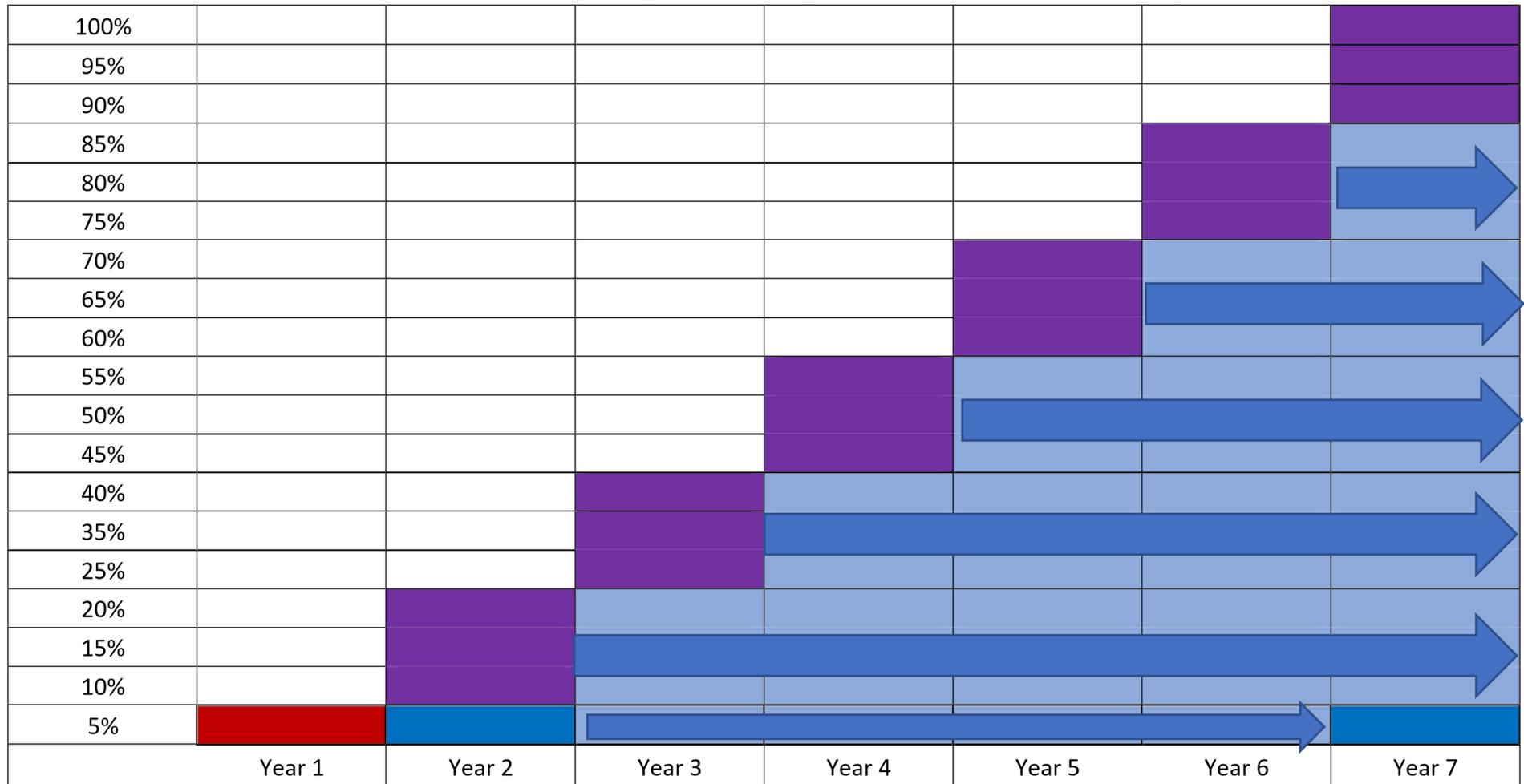
It would only require a limited but manageable number of member volunteers each year to identify the distressed hemlocks, treat the trees, and log the treatments. The fact that these tasks would be spread over seven years means that none of these tasks would be overwhelming in any year.

Finally, this treatment strategy could be replicated by members on their own properties, and by other associations along the lake shore.

Paul Jordan

October 17, 2021

INCREMENTAL TREATMENT OPTION: Year 1 with dinotefuran; Years 2 through 7 with dinotefuran AND imidacloprid



- = dinotefuran only
- = imidacloprid only
- = dinotefuran AND imidacloprid
- = period of protection