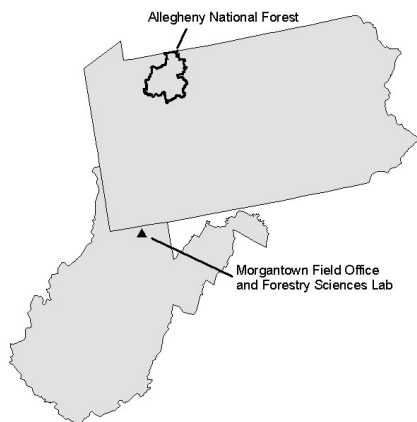


Healthy Forest Restoration Act Projects Title IV-Silvicultural Assessment

Project Title: Silvicultural thinning treatments for hemlock woolly adelgid (HWA) damage mitigation (NE Station).

Significance: Hemlock woolly adelgid is an introduced insect that is spreading across the range of eastern hemlock and Carolina hemlock in the eastern U.S. Both hemlock species are being killed by the insect and do not appear to have any resistance to the insect. The valuable ecosystem services provided by hemlock are being lost as the trees die and are replaced by hardwood species.

Approach: A research or administrative study on 180 acres is being developed (currently in the stand selection/study plan development phase) to address the question of whether thinning mixed



hemlock-hardwood-white pine stands to increase the vigor of hemlock trees prior to the arrival of hemlock woolly adelgid will increase the survivability of hemlock when HWA attacks the stand. Mixed stands on the Allegheny National Forest (ANF) will be selected, thinning treatments installed using the Title IV categorical exclusion prior to the arrival of HWA, and then annual or biannual measurements of tree responses and HWA populations will be done as HWA invades these stands. HWA is currently about 5 to 10 years from the ANF. This project is a joint effort between the Northeastern Research Station, Northeastern Area State & Private Forestry, and the Allegheny National Forest.

Outcome(s): The major outcome will be knowledge on the effectiveness of thinning treatments to increase the growth and vigor of eastern hemlock and then whether the increased vigor of hemlock reduces the mortality and stand changes that occur from HWA infestation.

Benefits: Silviculture can be used to maintain hemlock vigor and genetic resources while other control techniques, such as biological control, are being developed and implemented that would allow us to retain and manage hemlock and the valuable ecosystem services it provides.

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