

# 2019 National Silviculture Workshop Field Tours

We will be offering the following field tours in conjunction with the National Silviculture Workshop.

## **PotlatchDeltic Stud Mill (Optional, May 21, 2019)**

This stud mill is one of the most mechanized in the county. An intimate look at how this plant achieves total utilization of every stick of wood that enters the plant. Transportation will leave the Sanford Center at 7:00 PM and return at approximately 9:00 PM.

## **Chippewa National Forest and Cutfoot Experimental Forest (Optional, May 22, 2019)**

The Chippewa National Forest and Cutfoot Experimental Forest Field Tour will include several stops highlighting research or activities geared toward restoration. Commercial timber operations have been integral to many of these.

Depending on registration, up to six buses may be used on a staggered schedule. All buses will travel the same route and visit the same sites.

- Bus 1 would depart Sanford Center at 6:00 AM and return at 4:00 PM
- Bus 2 would depart Sanford Center at 6:30 AM and return at 4:30 PM
- Bus 3 would depart Sanford Center at 7:00 AM and return at 5:00 PM
- Bus 4 would depart Sanford Center at 7:30 AM and return at 5:30 PM
- Bus 5 would depart Sanford Center at 8:00 AM and return at 6:00 PM
- Bus 6 would depart Sanford Center at 8:30 AM and return at 6:30 PM

### **Stop 1 Reforestation**

*Travis Jones, Zone Silviculturist; Josh Krecklau, Reforestation Technician.*

Because increasing long lived conifers in an objective in the Chippewa NF Forest Plan, and are important to the Leech Lake Band of Ojibwa (LLBO), as well as many resource areas, the CNF plants on average 1.5 million conifer seedlings annually. Survival averages around 50% 3 years post-planting. There are several obstacles to overcome. Deer & rabbit browsing can be extreme. Bud capping is used as a deterrent to deer. Due to high site indices, hardwood competition is often intense. Graminoids are also a problematic on some sites. Herbicides are never used to control veg. competition because the LLBO objects to the use of chemicals on the Reservation. All release is done by hand, releasing individual trees, and leaving diversity, especially fruiting shrubs, for tribal gathering.

## Stop 2 Ash Research Project

*Dr. Tony D'Amato, University of Vermont; Gary Swanson, Forest Silviculturist; Josh Kragthrope, NRS Technician.*

This project is designed to increase our understanding of the ecological and hydrological impacts of EAB in black ash forests in Minnesota. Treatments, implemented in 2012, include clearcutting, group selection, and girdling to simulate EAB-induced ash mortality, with a goal of characterizing how the loss of ash will impact native plant communities, the spread of invasive species, and site hydrology. A key component of this research is evaluation of performance of planted "replacement" tree species on these saturated soils that are resistant to EAB and future climate adapted.

## Stop 3 Growing Stock Study

*Dr. Brian Palik, NRS Research Ecologist; Doug Kastendick, NRS Ecologist; Jim Parma, Marketing Manager, Bell Timber, Inc.*

This 70 years old replicated experiment examines response to thinning and growth and yield of red pine in extended rotation stands maintained at different levels of growing stock basal area. An added dimension of this study is examination of how density management can be used as a tool to reduce vulnerability (of growth) of red pine to a future dryer (growing season) climate.

## Walk through Growing Stock Study to Zon Memorial

### Stop 4 Zon Memorial

*Dr. Linda Nagel, Colorado State University.*

Raphael Zon was the father of FS Research and the founder of the FS Experimental Forest system. His ashes were scattered near the memorial dedicated to him on the Cutfoot Experimental Forest. Located behind the memorial is the 90-year-old "Common Sense" thinning study that Zon established, marked, and measured.

## Lakeside Lunch – 60 minutes

### Stop 5 American elm research project

*Dr. Charlie Flower, NRS Research Ecologist; Dr. Cornelia Pinchot, NRS Research Ecologist; Gary Swanson, Forest Silviculturist.*

In 2007, the Chippewa National Forest (CNF), and the Northern Research Station (NRS initiated a project to restore the American elm to the Forest's landscape. Dutch Elm Disease (DED) has greatly reduced or eliminated the American elm component of hardwood forests and riparian ecosystems on the Chippewa National Forest (CNF). The objective of this project is to strengthen DED tolerance in American elm on the landscape of the CNF without narrowing the genetic base of the remaining elm population. The eventual goal will be three seed orchards on the Forest from which American elms will resume their role in ecosystem function on a landscape scale.

### Stop 6 Advanced Silviculture for Climate Change (ASCC)

*Dr. Brian Palik, NRS Research Ecologist; Dr. Linda Nagel, Colorado State University & Josh Kragthrope, UMN Research Fellow.*

This large scale, replicated study is the first installation of the Adaptive Silviculture for Climate Change (ASCC) experiment, a national network of partnerships between researchers and managers to test scientifically sound, on-the-ground adaptive management approaches that confer resistance or resilience to climate change or that transition a forest to a future-adapted condition.

### Stop 7 Retention Study – *Tamarack Point*

*Dr. Tony D’Amato, University of Vermont; Doug Kastendick, NRS; Keith Karnes, LLBO Forester.*

This replicated, operational scale experiment evaluates options for enhancing ecosystem resilience through restoration of structural complexity and compositional diversity using variable retention harvesting and invasive shrub reduction. The overall objectives are to create complex two cohort structure, enhance tree diversity, and restore woodland structure.

### Stop 8 Timber Sale

*Greg Van Orsow, Timber Operations Team Leader; Brian Bignall, Wood Procurement Manager - PotlatchDeltic.*

A stop at a recent timber sale. The forest industry is strong in Minnesota. It is a symbiotic relationship where the Forest supplies wood for markets. At the same time keeping industry strong provides ample opportunities for management and restoration.