

Young People Improving Vigor of Young Forest Stands Crop Tree Release on Frederick City Watershed

-Paul Eriksson
Watershed Forester, Western Maryland RC&D

Students from the Forest Technology Program at Penn State, Mont Alto campus are working to assure a healthier forest in Frederick. As part of the implementation of the Forest Stewardship Plan for the Frederick Municipal Forest, non-commercial improvement cuttings or “crop tree release” will be conducted in several stands throughout the forest.

A “crop tree” is any tree in the stand that we want to favor. It could be favored for timber or for wildlife value. A tree is favored because it meets a certain objective to accomplish a goal in the Forest Stewardship Plan. For the City of Frederick, one of their goals was to maintain or improve wildlife habitat. By choosing those trees that have particular wildlife value, we move toward that goal. In a crop tree release, you only remove those trees that are directly competing with the trees you want to favor.

The young stands (approximately 10 to 20 years old) that are to be treated, originated from stands that were salvage harvested after mortality due to severe defoliation from gypsy moth (*Lymantria dispar*) outbreaks in the early 1980's. The stands are now dominated by black gum (*Nyssa silvatica*), red maple (*Acer rubrum*), and sweet/black birch (*Betula lenta*). While these species can be very aesthetically pleasing, they fill very limited habitat needs for wildlife, are lower valued timber species, and limit the diversity of tree species found in the overall forest. The trees that are favored include; northern red oak, white oak, hickory, bigtooth aspen, eastern white pine, and hemlock. By identifying and releasing these trees from competition, it will encourage diversity of species within the stand (lowering the risk of catastrophic loss due to insect or disease outbreak) as well as assure the continued survival, growth, seed production, and reproductive capability of a significant number of species of trees that have good value for timber and wildlife.

Approximately 50 crop trees per acre (30 foot by 30 foot spacing) are identified and selected for release. The trees are marked before any cutting is done. There are places in the stand where no acceptable crop trees can be found, so the number of crop trees per acre is less than 50. Non-crop trees are left to stand unless they are directly competing with crop trees. The removal work is done using a chain saw or hand tools (saws and axes).

Using the students from Mont Alto, the work is accomplished while the students learn about crop tree release and the tools need to accomplish the job. Another benefit of this relationship is that it fulfills another goal of the Forest Stewardship Plan: using the forest for educational purposes.