
Linking habitat restoration to bioenergy

Central Minnesota's wild and wooded lands are being taken over by trees and shrubs that don't belong there, degrading habitat in the process. A new project aims to create healthier habitat by removing these woody invaders and turning them into something useful: bioenergy.

Natural resources agencies, nonprofits, local government, private landowners, and volunteers are working to manage and restore prairie, oak savanna, and woodland habitats in east-central Minnesota. Many of these areas are overgrown with invasive species and other undesirable shrubs and trees.

Oak savanna, for instance, is one of the most critically endangered ecosystems in the world. Once common in parts of east-central and southern Minnesota, these habitats are now nearly gone. Over 99% have either disappeared or converted to shady thickets dominated by invasive non-native shrubs such as buckthorn.

Minnesota's State Wildlife Action Plan has designated 60 of the animals that live in oak savanna habitats as species of greatest conservation need. These sensitive species are greatly threatened by conversion and loss of habitat.

Existing restoration plans call for the removal of undesirable woody vegetation. However, the costs associated with the removal and disposal of this material often prevent or delay the completion of habitat restoration projects. At the same time, a growing number of entities in the region are looking for alternative sources of energy. District Energy of St. Paul, for instance, converts woody biomass to energy to supply most of downtown St. Paul's energy needs. Other local facilities also are considering using woody biomass as fuel for energy production.

Through a new project funded by the legislature in July 2007, the DNR will grant funds to landowners to implement habitat restoration plans by removing the undesirable woody trees and shrubs that landowners otherwise could not afford to remove. The DNR coordinates the project to ensure that principles of ecological restoration are followed and that the woody material is readily available to local biomass facilities.



Before Restoration Activities



After Restoration Activities

QUESTIONS & ANSWERS

Q: What is the DNR's new woody biomass project?

A: Through this project the DNR facilitates the restoration of overgrown prairie, oak savanna and woodlands by removing undesirable woody vegetation, and making the resulting woody material available for conversion to energy.

Q: How did it come about?

A: Recognizing the need for habitat restoration and alternative energy sources, the legislature, in July 2007, provided \$500,000 to the DNR Division of Ecological Resources to “prepare, authorize, and implement habitat restoration plans on public or private properties” while providing roadside access to the woody biomass for use by local bioenergy facilities.

Q: How will the program work?

A: Funds are granted to public or private entities to cut woody material and prepare it for collection by bioenergy facilities. Pilot projects will inform both criteria for selecting viable sites and cost effective approaches for carrying out the project.

Q: What benefits will this project provide?

A: The project will help restore healthy native habitats needed by plants and animals, provide an alternative energy source, supplement landowner

resources for habitat restoration and management, and reduce the amount of woody biomass that might otherwise be burned on-site because of lack of resources to cut and transport large quantities of material.



Photo: U.S. Fish and Wildlife Service

Many wildlife species, such as the redheaded woodpecker above, need healthy and suitable habitat to survive.

Q: Why are restoration efforts critical to healthy habitat – can't nature just take care of itself?

A: Native plants and animals depend on specific habitat conditions. In the absence of natural processes, such as fire, habitats change in ways that make them unsuitable for native species. For example, woody plants and non-native species invade or are introduced and then spread, shading out and out-competing native plant species. The altered habitats may then not meet the requirements of native animals for food and shelter. Cutting and removing these

undesirable woody invaders restores and improves habitat conditions.

Q: Where would the woody biomass come from?

A: More than 7,000 acres of restorable habitat in need of tree and shrub removal have been identified on public and private land within 75 miles of St. Paul. Examples include: national wildlife refuges, state wildlife management areas, state scientific and natural areas, state, county and city parks, and private lands.

For more information about this project contact:

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