

## Biomass Harvest Effects on Mammals and Amphibians

The Upper Mississippi Forest Partnership and the National Fish and Wildlife Foundation jointly initiated the Upper Mississippi River Watershed Fund. The Foundation funds projects that benefit the forests of the Upper Mississippi while improving wildlife habitat and water quality.

### Background

Biomass harvests remove wood that would otherwise not be sold and converts it to energy or other uses. Biomass harvests can also reduce the amount of excess woody material in the woods, which lowers the risk of wildfires, especially near communities.

Petroleum prices and government policies may soon make using woody biomass a viable alternative to using fossil fuels. As a result, the demand for logging residues that were previously left onsite is likely to increase in the future.

Existing biomass management recommendations—*Site-level Forest Management Guidelines for Biomass Harvesting on Forest Management Sites*—have not been evaluated in Minnesota. Leaving too little woody material in the forest could adversely affect mammals and amphibians that depend on downed and decayed wood.

### Location

This project is located in the Upper Mississippi River watershed in northeastern Minnesota in previously harvested areas that had different levels of residue removal.

### Goals

- Measure amphibian and small mammal responses to biomass harvests at different levels in forests that vary in age and type
- Ensure that a full complement of mammal and amphibian species remains after biomass harvest

### Results

Three types of sites are being compared: sites where biomass was harvested, conventionally harvested sites where no biomass was removed, and sites where no harvesting of any kind has taken place.

Changes in mammalian and amphibian populations will be evaluated on sites that were harvested between 1 and 15 years ago. Researchers will also study the immediate changes that take place after harvest and whether populations return to preharvest levels.

### Outcomes/Accomplishments

The data will enable forest managers to remove biomass to reduce wildfire risks and for use as an alternative fuel, yet conserve adequate woody debris for mammals and amphibians.

Evaluating the existing biomass management recommendations and modifying them as necessary to maintain and conserve species diversity will be more effective than delaying decisions until larger and more costly actions are needed.

### Partners

University of Minnesota

### Grant Amount

\$ 10,637



For more information:

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