

## Environment and Natural Resources Trust Fund (ENRTF) 2010 Work Program

**Date of Report:** January 15, 2010  
**Date of Next Progress Report:** December 31, 2010  
**Date of Work Program Approval:**  
**Project Completion Date:** June 30, 2013

### I. PROJECT TITLE: **Linking Habitat Restoration to Bioenergy and Local Economies**

**Project Manager:** Barb Spears  
**Affiliation:** MN Department of Natural Resources, Ecological Resources Division  
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**Web Site Address:** <http://www.dnr.state.mn.us/grants/habitat/biomass.html> (for current woody biomass project, will be updated as appropriate)

**Location:** The primary target area of focus is within an approximate 75 -mile radius of St. Paul encompassing the Metro (primarily), Central, and Southeast regions of Minnesota and include all or significant portions of Anoka, Benton, Blue Earth, Carver, Chisago, Dakota, Dodge, Goodhue, Hennepin, Isanti, Kanabec, Le Sueur, McLeod, Meeker, Mille Lacs, Nicollet, Olmsted, Pine, Ramsey, Rice, Scott, Sherburne, Sibley, Stearns, Steele, Wabasha, Waseca, Washington, and Wright Counties. This distance was determined based on project management activities, such as site visits; ecological considerations and available potential markets/uses for the woody biomass material (see Attachment C).

<b>Total ENRTF Project Budget:</b>	<b>ENRTF Appropriation</b>	<b>\$</b>	<b>600,000</b>
	<b>Minus Amount Spent:</b>	<b>\$</b>	<b>0</b>
	<b>Equal Balance:</b>	<b>\$</b>	<b>600,000</b>

**Legal Citation: ML 2010, Chap. 362, Sec. 2, Subd. 7c**

#### **Appropriation Language:**

\$600,000 is from the trust fund to the commissioner of natural resources to restore high quality native habitats and expand market opportunities for utilizing postharvest restoration as a bioenergy source. This appropriation is available until June 30, 2013, by which time the project must be completed and final products delivered.

### II. PROJECT SUMMARY AND RESULTS:

This innovative project restores critical habitats and high quality native plant communities by removing ecologically inappropriate woody vegetation (exotic and/or

native species such as common buckthorn, Amur maple, eastern red cedar, pine plantations, and box elder) while stimulating local economies through established and emerging markets for the woody biomass.

This project builds on the success of a one-time legislative appropriation in 2007 that piloted the “Linking Habit Restoration to Bioenergy” project by expanding market opportunities for the biomass and assesses the feasibility of market-driven ecological restoration.

Funding will be granted to public and private landowners through a competitive process. Critical requirements include ecological value and recovery potential of the project site, current ecologically-based management plan, project-specific harvest plan, post-harvest restoration plan and demonstrated capacity and long-term commitment to effectively manage the site to achieve and maintain restoration goals. Limited funding may be provided to bridge budget gaps for restoration activities immediately following biomass harvest based on demonstrated need.

DNR staff will identify viable markets for the woody biomass (such as mulch, pellets, animal bedding, firewood, and other products) and develop and manage a formal bid process to connect potential buyers and users to the material. Funds raised from the sale of woody biomass will be reinvested for further purposes of the project.

The goals of this project are to enhance biodiversity, utilize woody material traditionally burned or landfilled, stimulate local woody biomass markets, support local businesses and NGO’s, and utilize and employ labor crews (such as Sentencing to Service and Minnesota Conservation Corps) to provide direct benefits to ecosystems and economies.

### **III. PROGRESS SUMMARY AS OF:**

### **IV. OUTLINE OF PROJECT RESULTS:**

#### **RESULT 1: Woody Biomass Harvest and Post-Harvest Restoration Projects**

##### **Description:**

Remove ecologically inappropriate woody vegetation (exotic and/or native species such as common buckthorn, Amur maple, eastern red cedar, pine plantations, and box elder) from critical habitats and high quality native plant communities. More than 7,000 acres of public and private lands needing restoration have been identified within 75 miles of St. Paul. These acres include critical priority habitats in subsets of the Eastern Broadleaf Forest and Prairie Parkland Provinces. Priority will be given to project sites ranked as outstanding or high by the MN County Biological Survey and the “key key” habitats (prairie and surrogate grasslands, savanna and jack pine woodland, upland and lowland coniferous forest, wetlands, rivers and streams, and lakeshores) as described in “Tomorrow’s Habitat for the Wild and Rare: Minnesota’s State Wildlife Action Plan”

Harvesting will be conducted only under appropriate site conditions and with proper equipment and techniques to protect the site. It is anticipated that the majority of the projects will occur during frozen ground conditions with adequate snow cover which generally means December through February. Immediate post-harvest restoration activities are anticipated to occur during the growing season from March through November.

Funding for the cutting, moving, and preparation of the woody biomass material for transport will be provided to public and private landowners through a competitive process. Additional project-related costs may be covered. See Attachment D for more specific details on project selection criteria and process, granting process, and grantee requirements. Attachment E, referenced in Attachment D, is a template outline for the harvest plan required by grantees.

Limited funding may be provided to a Grantee to bridge budget gaps for immediate post-harvest restoration activities (such as initial prescribed burning, chemicals and chemical application, stump grinding, site preparation, etc.), based on a DNR approved restoration plan and demonstrated need, for up to 1 year after harvest; after which time the landowner is expected to fully implement the required restoration plan. Funding need and amount will be determined and agreed upon prior to final project selection.

The goal is to implement a minimum of 12 biomass harvest projects for a minimum total of 300 acres of critical habitats and high quality native plant communities under restoration.

The Woody Biomass Project Coordinator will work with project partners throughout the granting process and project implementation, and monitor and report project progress and accomplishments.

**Summary Budget Information for Result 1: ENRTF Budget: \$563,100**  
**Amount Spent: \$0**  
**Balance: \$563,100**

The below estimated budget numbers are based on project costs for previous woody biomass projects conducted through the “Linking Habitat Restoration to Bioenergy” project. The average project size in acres was 19 for a total of 14 projects completed in 2 years. The average cost per acre was \$1,500 for the cutting, moving and staging of the woody material. The highest per acre rate paid was approximately \$2,300.

<b>Deliverable</b>	<b>Completion Date</b>	<b>Budget</b>
<b>1.</b> Round 1 - harvest biomass from a minimum of 150 acres at an estimate of \$1,500/ac	February 2011	\$225,000
<b>2.</b> Round 1 – Immediate post-biomass harvest restoration activities, as needed.	November 2012	\$ 46,050
<b>3.</b> Round 2 - harvest biomass from a minimum of 150 acres at an estimate of \$1,500/ac	February 2012	\$225,000
<b>3.</b> Round 2 - Immediate post-biomass harvest restoration activities, as needed.	November 2012	\$ 46,050

4. Round 3 - biomass harvest projects and post-biomass harvest restoration with additional eligible landowners (if project funds are available).	May 2013	\$ 21,000
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**Result Completion Date:** June 30, 2013

**Result Status as of** December 31, 2010:

**Result Status as of** June 30 2011:

**Result Status as of** December 31, 2011:

**Result Status as of** June 30, 2012:

**Result Status as of** December 31, 2012:

**Final Report Summary:** June 30, 2013

**RESULT 2:** Expand Woody Biomass Market Opportunities

**Description:** Expand opportunities for competitive woody biomass markets by identifying viable woody biomass markets and buyers/users and develop a formal process to connect them to the material from the woody biomass harvest projects. Buyers/users must be confirmed prior to biomass harvesting to ensure that the material will be used. Revenues collected will offset project costs and be made available for additional projects. Current market variables and volatility prevents an estimate of potential revenues.

Technical experts in biomass marketing and utilization have agreed to assist in this aspect: Mark Lindquist, DNR Biofuels Program Manager; Anna Robertson, DNR Forestry Biomass Program Coordinator; Keith Jacobson, DNR Forestry Utilization and Marketing Program Director; Lance Sorenson, DNR Forestry Regional Utilization and Marketing Staff; Mohammed Iddrisu, RC&D Forester; Steve Bratkovich, Dovetail Partners, Inc.; and Don Arnosti, Institute for Agriculture and Trade Policy. Specific project partners will vary as projects are selected and will represent public and private landowners, biomass market interests, small businesses and restoration companies, NGO's and others as identified.

The Woody Biomass Project Coordinator will work with project partners throughout the contracting process and project implementation, and monitor and report project progress and accomplishments.

**Summary Budget Information for Result 2:** ENRTF Budget: \$24,600  
Amount Spent: \$0  
Balance: \$24,600

<b>Deliverable</b>	<b>Completion Date</b>	<b>Budget</b>
1. List of woody biomass markets and buyers/users; developed at the outset of the project and regularly updated.	February 2013	\$8,200
2. Contracts with buyers/users of woody biomass material for collection of material from harvest projects completed as each project is implemented.	February 2013	\$8,200
3. Record of disposition of material, volumes, and revenues collected.	June 30, 2013	\$8,200

**Result Completion Date:** June 30, 2013

**Result Status as of** December 31, 2010:

**Result Status as of** June 30 2011:

**Result Status as of** December 31, 2011:

**Result Status as of** June 30, 2012:

**Result Status as of** December 31, 2012:

**Final Report Summary:** June 30, 2013

**RESULT 3:** Analyze, evaluate, and disseminate results

**Description:** Compile and analyze project data to articulate lessons learned. Information will be communicated to target markets, landowners, resource professionals and others.

**Summary Budget Information for Result 3:** ENRTF Budget: \$12,300  
Amount Spent: \$0  
Balance: \$12,300

<b>Deliverable</b>	<b>Completion Date</b>	<b>Budget</b>
1. Database, reports on multiple metrics including costs and revenues	June 30, 2013	\$4,100
2. Assessment of the feasibility of market-driven ecological restoration	June 30, 2013	\$4,100
3. Mechanisms and strategy to communicate and disseminate information	June 30, 2013	\$4,100

**Result Completion Date:** June 30, 2013

**Result Status as of December 31, 2010:**

**Result Status as of June 30 2011:**

**Result Status as of December 31, 2011:**

**Result Status as of June 30, 2012:**

**Result Status as of December 31, 2012:**

**Final Report Summary:** June 30, 2013

**V. TOTAL ENRTF PROJECT BUDGET: \$600,000**

**Personnel:** \$123,000 for 0.75 unclassified FTE to serve as the project manager.

**Grant Agreements:** \$563,100 with selected public and private landowners to implement woody biomass harvest and post-harvest restoration projects.

**Equipment/Tools/Supplies:** \$500 for project management supplies and safety equipment (i.e. hard hat, safety glasses, safety vest, insect repellent, etc.). **Acquisition (Fee Title or Permanent Easements):** \$0

**Travel:** \$1,500 for project site visits and meetings

**Additional Budget Items:** \$0

**TOTAL ENRTF PROJECT BUDGET: \$600,000**

**Explanation of Capital Expenditures Greater Than \$3,500:** N/A

## **VI. PROJECT STRATEGY:**

**A. Project Partners:** Primary project team members are Barb Spears, DNR Woody Biomass Project Manager, Jan Wolff, DNR Eco Central Region Manager, and Hannah Texler, DNR Regional Plant Ecologist. Other project partners providing technical assistance include Mark Lindquist, DNR Biofuels Program Manager; DNR Forestry staff; Anna Robertson, DNR Biomass Program Coordinator and Keith Jacobson, DNR Utilization and Marketing Program Director; Lance Sorenson, DNR Regional Utilization and Marketing Staff; Mohammed Iddrisu, RC&D/DNR Forester; and Don Arnosti, Institute for Agriculture and Trade Policy. Specific project partners will vary as projects are selected and will represent public and private landowners, biomass market interests, small businesses and restoration companies, NGO's and others as identified.

**Note: These project partners serve as technical resources and will not receive any funding from this appropriation.**

**B. Project Impact and Long-term Strategy:** Future expansion of this project could include: broadening the scope to include forest health initiatives (such as emerald ash borer); replicating this approach in other parts of the state as biomass markets develop; focusing efforts on one specific project area and associated local economy to efficiently and effectively accomplish multiple objectives; and creating a landowner-based woody biomass cooperative to support local biomass markets.

The long-term vision for this effort is to achieve an ecologically sound and systematic approach that addresses: current and future issues of habitat restoration and enhancement; renewable energy and climate change; invasive species, and natural resources conservation planning and implementation – all of which are effected, to some degree, by the impacts and opportunities of woody biomass.

**C. Other Funds Proposed to be Spent during the Project Period:** An estimated \$88,000 in-kind directly related to this project (e.g. DNR Staff as outlined in Attachment B; and volunteers and STS crews) is expected to be contributed to this project (but not tracked for reporting purposes). Approximately \$84,000 in Department Operations and Division Support charges accruing to this project will be covered by Division general funds or other eligible Division funds (see Attachment B.)

In addition, this Environment and Natural Resource Trust Fund appropriation may be supplemented by other state funding (e.g. bonding and potentially L-SOHC, invasives species, heritage enhancement, and RIM match) and non-state funds (e.g. Federal SWG, private funds, and partial landowner donations) as needed and appropriate.

**D. Spending History:** The Department of Natural Resources, Division of Ecological Resources (DNR) received \$500,000 from the legislature as part of the 2007 environment, natural resources, energy, and commerce finance bill, Laws of 2007, Chapter 57, Article 2, Sec. 3, subd. 6 (see Attachment F). That project began December 2007 and will conclude June 30, 2010. The one-time funds were used to pilot an innovative woody biomass project that directly addresses habitat and energy recommendations in three strategic areas identified in the *LCCMR Six-year Strategic Plan* (SSP) adopted in 2009: 1) Land and Water Restoration and Protection; 2) Sustainable Practices; and 3) Economic Incentives for Sustainability.

**VII. DISSEMINATION:** Information relating to this project will be disseminated in a variety of ways including a website currently located at [www.mndnr.gov/grants/habitat/biomass.html](http://www.mndnr.gov/grants/habitat/biomass.html) that will be updated as appropriate for this project. Articles and presentations will be provided as requested or otherwise identified. A fact sheet will be updated and shared electronically and at meetings to generate interest in project proposal submissions. The RFP will be posted on the DNR website (linked to the Office of Grants Management). Data documentation is accomplished through spreadsheets, electronic files for documents as well as project images, and project management folders. Project status reports will be prepared for LCCMR and others as requested.

**VIII. REPORTING REQUIREMENTS:** Periodic work program progress reports will be submitted not later than December 31, 2010; June 30, 2011; December 31, 2011; June 30, 2012; and December 31, 2012. A final work program report and associated products will be submitted between June 30 and August 1, 2013 as requested by the LCCMR.

**IX. RESEARCH PROJECTS:** N/A



Attachment A: Budget Detail for 2010 Projects - Summary and a Budget page for each partner (if applicable)										
Project Title: Linking Habitat Restoration to Bioenergy and Local Economies										
Project Manager Name: Barb Spears										
Trust Fund Appropriation: \$600,000										
2010 Trust Fund Budget	Result 1 Budget:	Amount Spent (date)	Balance (date)	Result 2 Budget:	Amount Spent (date)	Balance (date)	Result 3 Budget:	Amount Spent (date)	Balance (date)	TOTAL BUDGET
	Biomass Harvest Projects			Expand Woody Biomass Market Opportunities			Analyze, Evaluate and Disseminate Results			
<b>BUDGET ITEM</b>										
<b>PERSONNEL: wages and benefits</b> Barb Spears, .75 FTE @ \$41,000/yr x 3 yrs	86,100	0	86,100	24,600	0	24,600	12,300	0	12,300	123,000
<b>Grant Agreements: Biomass Harvest Projects and Post Harvest Restoration.</b> Grant Agreements with landowners for pre-project planning, project management, stump treatment/removal, immediate post-harvest restoration activities (if needed) and reporting;	450,000	0	450,000	0	0	0	0	0	0	475,000
<b>Contracts:</b> Contracts with buyers/users of biomass material will provide assurance to collect the material and legal protection of the site during biomass collection operation.	0	0	0	0	0	0	0	0	0	0
<b>Non-capital Equipment / Tools:</b> Hard hat, safety glasses, safety vest and other safety equipment and supplies.	500	0	500	0	0	0	0	0	0	500
<b>Printing</b>	0	0	0	0	0	0	0	0	0	0
<b>Supplies :</b> Office supplies for organizing and managing project files.		0		0	0	0	0	0	0	
<b>Travel expenses in Minnesota</b>	1,500	0	1,500	0	0	0	0	0	0	1,500
<b>Other:</b>	0	0	0	0	0	0	0	0	0	0
<b>COLUMN TOTAL</b>	<b>\$538,100</b>	<b>\$0</b>	<b>\$538,100</b>	<b>\$24,600</b>	<b>\$0</b>	<b>\$24,600</b>	<b>\$12,300</b>	<b>\$0</b>	<b>\$12,300</b>	<b>\$600,000</b>