

**Date:** February 6, 2012  
**To:** SUSAN THORNTON



**From:** Liz Harper, Assistant Regional Manager

**Subject:** **TECHNICAL LANGUAGE CORRECTION - M.L. 2010, CHP. 362, SEC. 2, SUBD. 7C**

The Department of Natural Resources is seeking the following technical language correction to M.L. 2010, Chp. 362, Sec. 2, Subd. 7c, *Linking Habitat Restoration to Bioenergy and Local Economies* (Barb Spears' Project):

\$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~~ using the woody byproduct material for bioenergy source or other products. The commissioner may provide grants or otherwise transfer some or all of these funds to other public or private entities to accomplish these purposes. The commissioner may sell the material from public or private property to any viable market, provided that all of the proceeds are spent to further the purposes of this appropriation. This appropriation is available until June 30, 2013, by which time the project must be completed and delivered.

The Department believes these changes are needed to insure that the Department has the authority to carry out the approved work program. Below is a short descriptor of each change and the reason for the change.

- Changing postharvest restoration language to woody by-product language - Clarifies that we are utilizing the woody by-product of the restoration efforts.
- Adding "or other products" - Aligns appropriation language with LCCMR-approved work program by clarifying that by-product material will be used for "other products" in addition to bioenergy. LCCMR work program includes use as mulch, pellets, animal bedding, etc.
- Adding grant language - Aligns appropriation language with LCCMR-approved work program by clarifying intent to provide funding through a grant process. Adds clarification that money may be distributed using methods other than the grant process. The latter change is needed to provide for separate award processes for DNR and non-DNR projects.
- Adding material sale language: Aligns appropriation language with LCCMR-approved work program by providing authority for the DNR to sell the woody biomass material from all land ownerships. The second result of the work program is to "Expand Woody Biomass Market Opportunities" including developing and managing a formal bid process and utilizing collected revenues to offset current or future project costs.

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

**Date of Progress Report:** January 20, 2012  
**Date of Next Progress Report:** June 30, 2012  
**Date of Work Program Approval:** January 15, 2010  
**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 and Water Resources Division  
**Mailing Address:** 1200 Warner Road  
**City / State / Zip:** St. Paul, MN 55106  
**Telephone Number:** 651-259-5849  
**E-mail Address:** barbara.spears@state.mn.us  
**Fax Number:** 651-772-7977  
**Web Site Address:** [http://www.dnr.state.mn.us/eco/habitat\\_biomass.html](http://www.dnr.state.mn.us/eco/habitat_biomass.html)

**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>108,869</b>
	<b>Equal Balance:</b>	<b>\$</b>	<b>491,131</b>

**Legal Citation: M.L. 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 material.

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.

Of the \$600,000 appropriation, \$475,000 is available for projects through June 30, 2013:

- \$300,000 will be granted to non-DNR public and private landowners through a competitive process.
- \$175,000 will be retained for projects on DNR-owned land.

Critical requirements for all projects 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.

Participating landowners agree to donate the woody biomass material to the DNR. DNR staff will identify viable markets for the woody biomass material (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. Revenues collected from the sale of woody biomass material 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 (STS) and Conservation Corps Minnesota) to provide direct benefits to ecosystems and economies.

## **III. PROGRESS SUMMARY AS OF: December 31, 2011**

Status of projects funded during Round 1: the Belwin Conservancy project is in progress with final post-harvest restoration activities to be completed spring 2012; Frontenac State Park is in progress with mechanized cutting expected to begin January 2012; the Ramsey County project is completed awaiting the final report. The

Umbanhowar Prairie (private)/Warsaw WMA (DNR) joint project is in final funding discussions.

To date, 183 acres of non-DNR land and 99 acres of DNR land totaling 282 acres have been enrolled for harvest at an estimated total cost of \$318,000 for an average cost of \$1,128 per acre; 129 acres are enrolled for restoration funding assistance at an estimated cost of \$36,754 for an average cost of \$285 per acre.

The biomass for the Ramsey County project sold to the highest bidder for \$0; the next bid requested that the State pay \$700 for the cost to remove the material. Ramsey County is under quarantine for the Emerald ash borer and the Minnesota Department of Agriculture was consulted regarding transportation of regulated articles. A biomass sale was posted for the Frontenac State Park project with no bids received; follow-up with potential buyers/users is underway.

The Round 2 Grant Opportunity (Request for Proposals) (RFP) for non-DNR projects that had been cancelled in April 2011 was revised and posted to the DNR Grants webpage due October 31, 2011. Of the four proposals received, two are being pursued. The Round 3 Grant RFP is due April 30, 2012 with strong interest already received for this funding.

**PROGRESS SUMMARY AS OF: June 30, 2011**

Of the three projects funded during Round 1, Belwin Conservancy is in progress; Frontenac State Park was postponed until fall 2011/winter 2012 due to poor site conditions caused by early, heavy snow; and the Ramsey County project is scheduled to begin July 2011. An additional project, a public (DNR)/private landowner collaboration, is still in negotiations.

To date, 198 acres are enrolled for harvest at an estimated cost of \$174,000 for an average cost of \$878 per acre; 128 acres are enrolled for restoration funding assistance at an estimated cost of \$42,925 for an average cost of \$335 per acre.

The Round 2 Grant Opportunity (Request for Proposals) (RFP) was advertised and posted to the DNR Grants webpage due April 30, 2011. The Grant Opportunity (RFP) was cancelled until further notice to allow for project administration improvements and to clarify the project funding allocation process. A panel to review and score project funding applications from non-DNR applicants has been created.

The initial process to conduct a formal sale of the woody biomass material removed from project sites was developed and implemented. A biomass sale was conducted in association with the Belwin Conservancy's project of 44 acres and sold to the highest bidder for \$10,600; the second highest bidder was \$7,250. The process for ensuring that the woody biomass material is sold prior to biomass harvest is being developed.

Observations and lessons learned are being compiled from conversations with project partners, biomass buyers/users, technical experts, other interested parties, and through direct experiences.

#### **PROGRESS SUMMARY AS OF: December 31, 2010**

Prepared a Grant Opportunity (RFP) package due September 10, 2010. Seven applications were received from public and private landowners and were reviewed and scored by appropriate DNR staff. One applicant immediately withdrew their project (DNR land); 3 projects are proceeding this winter; one project is pending; a second project has been withdrawn (DNR land), and one project was not funded (did not meet criteria). Of the three projects proceeding, two have been granted funding for immediate post-harvest restoration. Information is being compiled on landowners who indicate an interest in this project for future funding notices. The next application deadline is April 30, 2011.

Viable markets and buyers/users for the woody biomass material are being identified. Projects involving DNR-owned land are assessed by DNR Forestry for alternative timber or biomass sales. Consultations with DNR staff and others involved in woody biomass utilization have provided valuable information and contacts. A database of potential buyers/users has been created and will be updated as contacts are further identified.

Existing woody biomass project documents are being updated or adapted for this funding opportunity and new documents are being created based on current applicable policies, grant requirements, guidelines, etc. The project fact sheet has been revised and is available from the updated woody biomass project webpage: [http://www.dnr.state.mn.us/eco/habitat\\_biomass.html](http://www.dnr.state.mn.us/eco/habitat_biomass.html). Language has been incorporated that addresses safety and environmental issues relating to immediate post-harvest restoration activities.

Issues and requirements for the transport of noxious weeds and ash tree material have been addressed with the Minnesota Department of Agriculture.

#### **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 is provided primarily for the cutting, moving, and preparation of the woody biomass material for collection and transport and will be provided to non-DNR public and private landowners through a competitive process. Additional project-related costs may be covered.

Limited funding may be provided 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 Project Manager will work with project partners throughout the funding process and project implementation, and will monitor and report project progress and accomplishments.

<b>Summary Budget Information for Result 1:</b>	<b>ENRTF Budget:</b>	<b>\$563,100</b>
	<b>Amount Spent:</b>	<b>\$ 97,734</b>
	<b>Balance:</b>	<b>\$465,366</b>

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

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

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

- The table below provides specific information as it relates to the deliverables listed above for Result #1 including associated estimated costs unless noted as actual.

**Deliverables: Non-DNR Projects**

<b>Project Name/ Landowner</b>	<b>Total Harvest Acres</b>	<b>Harvest \$\$</b>	<b>Total Resto Acres</b>	<b>Resto \$\$</b>	<b>Other \$\$</b>	<b>Est. Total \$\$</b>	<b>Status</b>
Koester Dry Hill Oak Savanna, Koester Farm Partnership	24	\$36,000	40	\$4,360	\$0	\$40,360	Grant agreement in progress.
Carleton College Cowling Arboretum, Carleton College	38	\$57,000	38	\$3,069	\$1,534	\$61,603	In final discussion.
Umbanhowar Prairie, Charles Umbanhowar	7	\$8,500	7	\$1,400	\$0	\$9,900	In final discussion.
Stagecoach Prairie Natural Area, Belwin Conservancy	44	\$44,000 (actual)	44	\$27,925	\$418 (actual)	\$72,343	Final post- harvest restoration due spring 2012.
Battle Creek Regional Park, Ramsey County	70	\$75,000	70	\$0	\$0	\$75,000	Cutting/biomass sale complete. Final report due.
<b>Total</b>	<b>183</b>	<b>\$220,500</b>	<b>199</b>	<b>\$36,754</b>	<b>\$1,952</b>	<b>\$292,206</b>	

**Deliverables: DNR Projects**

Project Name	Total Harvest Acres	Harvest \$\$	Total Resto Acres	Resto \$\$	Other	Est. Total	Status
Frontenac State Park	84	\$75,000	84	\$0	\$0	\$75,000	Mechanized cutting to begin early 2012.
Warsaw WMA (DNR)	15	\$22,500	29	\$0	\$0	\$22,500	In final discussion.
<b>Total</b>	<b>99</b>	<b>\$97,500</b>	<b>113</b>	<b>\$0</b>	<b>\$0</b>	<b>\$97,500</b>	

<b>GRAND TOTAL</b>	<b>282</b>	<b>\$318,000</b>	<b>312</b>	<b>\$36,754</b>	<b>\$1,952</b>	<b>\$389,706</b>	
--------------------	------------	------------------	------------	-----------------	----------------	------------------	--

- Round 1 Funding: three non-DNR projects and two DNR projects were funded during Round 1. The Belwin Conservancy project is in progress with final post-harvest restoration activities to be completed spring 2012; the Ramsey County project is completed awaiting the final report; and the Umbanhowar Prairie (private) is in final discussion as a joint project with the Warsaw WMA (DNR). The DNR Frontenac State Park is in progress with cutting activities expected to be completed winter 2012. The DNR Warsaw WMA is in final discussion as a joint project with the Umbanhowar Prairie.
- Round 2 Funding: The Grant Opportunity (RFP) that had been cancelled in April 2011 for non-DNR projects was revised (see Attachment D) and posted to the DNR Grants webpage with applications due October 31, 2011. Notification of the RFP was sent directly to those who had previously expressed interest. Four proposals were received and two are being pursued: Koester Farm Partnership (private landowner) and Carleton College Cowling Arboretum.
- DNR projects were also solicited at the same time as the Round 2 RFP. There was interest within the DNR but no formal applications were submitted for consideration.
- Round 3 Funding: The Round 3 RFP is due April 30, 2012 and was included in the Round 2 RFP notice. Many inquiries have already been received indicating strong interest for this funding.
- Detailed information about each project is attached (see Attachment G).

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

- The table below provides specific information as it relates to the deliverables listed above including associated estimated costs unless noted as actual.



**Round 1 Deliverables: Non-DNR Projects – Grant Opportunity (RFP) Due Date 9/10/10**

Project Name	Total Harvest Acres	Harvest \$\$	Total Resto Acres	Resto \$\$	Other \$\$	Est. Total \$\$	Status
Stagecoach Prairie Natural Area, Belwin Conservancy	44	\$44,000 (actual)	44	\$27,925	\$418 (actual)	\$72,343	In progress
Battle Creek Regional Park, Ramsey County	70	\$75,000	0	\$0	\$0	\$75,000	Start July 2011
Umbanhowar Prairie (Private)/ Warsaw WMA (DNR)	TBD	TBD	TBD	TBD	TBD	TBD	In negotiation
<b>Total</b>	<b>114</b>	<b>\$119,000</b>	<b>44</b>	<b>\$27,925</b>	<b>\$418</b>	<b>\$147,343</b>	

**Round 1 Deliverables: DNR Projects - Application Due Date 9/10/10**

Project Name	Total Harvest Acres	Harvest \$\$	Total Resto Acres	Resto \$\$	Other	Est. Total	Status
Frontenac State Park	84	\$55,000	84	\$15,000	\$0	\$70,000	Some hand-cutting completed/all cutting postponed
Umbanhowar Prairie (Private)/ Warsaw WMA (DNR)	TBD	TBD	TBD	TBD	TBD	TBD	In negotiation
<b>Total</b>	<b>84</b>	<b>\$55,000</b>	<b>84</b>	<b>\$15,000</b>	<b>\$0</b>	<b>\$70,000</b>	

<b>GRAND TOTAL</b>	<b>198</b>	<b>\$174,000</b>	<b>128</b>	<b>\$42,925</b>	<b>\$418</b>	<b>\$217,343</b>	
--------------------	------------	------------------	------------	-----------------	--------------	------------------	--

- Round 1 Funding: Of the three projects funded, Belwin Conservancy is in progress and the project name was changed from “Sauers Pond Natural Area” to “Stagecoach Prairie Natural Area”; Frontenac State Park was postponed until fall 2011/winter 2012 due to soft surface soils from early, heavy snow and poor cutting conditions due to snow depth; and the Ramsey County project is scheduled to begin July 2011. An additional project, a public (DNR)/private landowner collaboration, is very complex with many details that are being negotiated before funding will be granted.
- Round 2 Funding: A Grant Opportunity (RFP) (see Attachment D) was prepared and posted to the DNR Grants webpage with applications due April 30, 2011. This was cancelled until further notice to allow for project administration improvements and to clarify the project funding allocation process. There was

strong interest in this funding and contact names were captured for the future notice.

- A panel was created, facilitated by the Project Manager, to review and score project funding applications from non-DNR applicants. This panel is comprised of members internal and external to the DNR representing expertise in ecological/habitat restoration, woody biomass removal and wood products marketing. Review Panel members will be contacted when the Grant Opportunity (RFP) is posted.

**Result Status as of December 31, 2010:** Three projects are currently underway for an estimated total of 198 acres with total of \$217,425 encumbered. Below is a summary of each of the funded projects.

#### **Round 1 Funded Projects – Fall 2010/Winter 2011**

##### **Frontenac State Park, Minnesota Department of Natural Resources; Frontenac, Goodhue County,**

**Status:** In progress.

**Description:** 84 acres. Oak woodland restoration. This project site is located at the southern boundary of Frontenac State Park, a 2,854 acre park on the shore of Lake Pepin (Mississippi River) in the northern portions of the Blufflands Ecological Subsection. This project site is also culturally significant. Both pre-contact surface mounds from the woodland tradition and post-contact depression/embankment features are found within the project site boundaries.

**Amount Funded:** \$70,000

- Cutting/moving/staging of woody biomass material: \$55,000
- Immediate post-biomass harvest restoration activities: \$15,000

**Biomass Type:** Primarily buckthorn; other mixed shrubs and mixed hardwood species.

**Operations:** DNR bid solicitation has been posted with a due date of January 13, 2011 for mechanized cutting and staging. The pre-bid meeting is scheduled for January 6, 2011. Conservation Corps Minnesota crews will hand-cut and move material from the culturally sensitive areas. District Energy St. Paul will grind and transport the material for use as bioenergy.

**Press/Media:** None to date.

##### **Battle Creek Regional Park, Ramsey County Parks and Recreation; Maplewood, Ramsey County**

**Status:** In progress.

**Description:** 70 acres. Oak woodland restoration. Located less than 5 miles from downtown St. Paul, the natural vegetation of Battle Creek is a mixture of prairies, oak savanna, oak woods and wetlands. There are also several smaller unique habitats. These include seep swamps with skunk cabbage and marsh marigolds; and mesic hardwoods with yellow birch, white pine. Much of the natural vegetation has been highly degraded. Invasive species have become widespread in most habitats. The most troublesome species include buckthorn, black locust, garlic mustard, and purple loosestrife. Wildlife diversity is high.

**Amount Funded:** \$75,000

- Cutting/moving/staging of woody biomass material: \$75,000
- Immediate post-biomass harvest restoration activities: None

**Biomass Type:** Primarily buckthorn; other mixed shrubs and mixed hardwood species.

**Operations:** Ramsey County will utilize two contractors currently under master contract with the County. The material will be hand-cut and then moved by Sentencing to Service crews into piles along the trail system. The material will then be transported and staged at the adjacent woody yard located at the Ramsey County Corrections Facility. All material will be ground and used by District Energy St. Paul as bioenergy.

**Press/Media:** None to date.

### **Sauers Pond Natural Area, Belwin Conservancy; Afton, Washington County**

**Status:** In progress.

**Description:** 44 acres. Dry-mesic prairie. The Belwin Conservancy owns 1,300 acres which are managed, in part, to protect the Valley Creek trout stream. The Sauers Pond Natural Area is being managed principally to promote grassland birds. Currently, the vegetation includes remnant and restored prairies, old pastures, pine plantations, a lowland hardwood forest, and moderately-degraded oak woodlands.

**Amount Funded:** \$72,425

- Cutting/moving/staging of woody biomass material: \$44,000
- Immediate post-biomass harvest restoration activities: \$27,925
- Other = project-related signage: \$500

**Biomass Type:** 15 acres of pine plantations; 20 acres of mixed hardwoods, and 9 acres of mixed shrubs including buckthorn.

**Operations:** Belwin Conservancy has a master contract with a small company to cut, move, and stage the material. Utilization of the material is yet to be determined.

**Press/Media:** None to date.

**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 identified prior to biomass harvesting to ensure that the material will be used. Revenues collected from the sale of woody biomass material will be reinvested for further purposes of the project. 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: DNR Biofuels Program Manager; DNR Forestry Biomass Program Coordinator; DNR Forestry Utilization and Marketing Program Director; DNR Forestry Regional Utilization and Marketing Staff; Steve Bratkovich, Dovetail Partners, Inc.; and Don Arnosti, Consultant. 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 Project Manager 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:        \$ 6,712**  
    **Balance:                \$17,888**

<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, 2011:**

- The table below provides specific information as it relates to the deliverables listed above for Result #2.

**Deliverables: Revenue, volume, and disposition for woody biomass sales.**

<b>Project Name</b>	<b>Total Harvest Acres</b>	<b>Revenue</b>	<b>Volume</b>	<b>Disposition</b>	<b>Status</b>
Stagecoach Prairie Natural Area, Belwin Conservancy	44	\$10,600	450 cords pine 1 load of pine logs 70 loads = 1,728 tons	Sawmill Cabin logs Bioenergy	Completed Feb 2011
Battle Creek Regional Park, Ramsey County	70	\$0	TBD	TBD	Due 12/31/11
<b>Total</b>	<b>114</b>	<b>\$10,600</b>			

- A spreadsheet of potential biomass market and buyers/users contacts was regularly updated. The contact information was gathered through personal contacts, web research, membership lists and references from other buyers/users and colleagues.
- Direct contact was made with additional potential buyers/users to learn more about their operations and to respond to their requests for information about this project.
- The initial formal process to offer the woody biomass material for sale and connect potential buyers/users with the material was revised based lessons learned and new information. Language for a sale bid solicitation was revised to address Emerald ash borer quarantine issues and movement of other regulated invasive species per consultation with the Minnesota Department of Agriculture, USDA-AHPIS, and the Wisconsin Department of Natural Resources.
- The biomass sale for the Ramsey County project was conducted and sold to the highest bidder for \$0; the only other bid received requested that the State pay \$700 for the cost to remove the material.
- A biomass sale was posted for the Frontenac State Park project with no bids received; follow-up with potential buyers/users is underway.
- Several counties in Minnesota are under quarantine for the Emerald ash borer. The Minnesota Department of Agriculture and USDA-APHIS were consulted regarding transportation of regulated articles from the quarantined Ramsey County project site and for future woody biomass projects that may involve intrastate movement of material from or through quarantined counties. Also, the Wisconsin Department of Natural Resources was consulted regarding invasive species material that may enter their state as a result of this woody biomass project.

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

- A spreadsheet of potential biomass market and buyers/users contacts was regularly updated. The contact information was gathered through personal contacts, magazine and newsletter reviews, and web research.
- Direct contact was made with potential buyers/users to learn more about their operations and to respond to their requests for information about this project.
- A formal process to receive the woody biomass material as a donation from the participating landowner has been developed.
- An initial formal process to offer the woody biomass material for sale and connect potential buyers/users with the material has been developed and implemented. The process included developing language for a bid solicitation and advertising the solicitation to buyers/users previously identified, project contacts, and posting to the Minneapolis Biomass Exchange website.
- The first and only biomass sale thus far was conducted in association with the Belwin Conservancy's Stagecoach Prairie Natural Area project. The material from 44 acres was sold to the highest bidder for \$10,600, the second highest bidder was \$7,250 and Environmental Wood Supply, LLC (service provider to District Energy St. Paul) bid zero (they would grind and collect the material at

no charge). A total of 450 cords of pine logs went to a sawmill in Colfax, WI and the remaining material was ground and transported to District Energy St. Paul at a total of 70 loads; 1,728 tons of material.

**Result Status as of December 31, 2010:** Developed a spreadsheet to compile contact information for biomass markets and buyers/users that will be updated as contacts are identified. Direct contacts have been made to learn more about the current markets and interests in woody biomass material from these projects. Samples of bid solicitations and contracts have been collected for use in solicitation of buyers/users of the material and for woody biomass collection operations.

**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.

<b>Summary Budget Information for Result 3:</b>	<b>ENRTF Budget:</b>	<b>\$12,300</b>
	<b>Amount Spent:</b>	<b>\$ 4,423</b>
	<b>Balance:</b>	<b>\$ 7,877</b>

<b>Deliverable</b>	<b>Completion Date</b>	<b>Budget</b>
<b>1.</b> Database, reports on multiple metrics including project costs and revenues collected.	June 30, 2013	\$4,100
<b>2.</b> Assessment of the feasibility of market-driven ecological restoration	June 30, 2013	\$4,100
<b>3.</b> 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, 2011:**

- Project data was compiled for the DNR’s Grant Outcomes Website to provide project descriptions, indicators and targets information to website visitors. The website is located at: <http://www.dnr.state.mn.us/grants/outcomes/index.html>
- Presentations about this project were made to the DNR’s Climate and Renewable Energy Steering Team and the Bio-fuels Team to update members about this effort.

- Additional observations and lessons learned are being compiled from conversations with project partners, biomass buyers/users, technical experts, other interested parties, and through direct experiences. These include:
  - Compiling a complete contact list of buyers/users is challenging as many of these operators are small businesses not easily identified through traditional formal networks (the web, public membership lists). Informal networks may prove to be the most important opportunity to collect this information.
  - Relying on large facilities to source woody biomass material for bioenergy can be problematic if/when that facility suffers long-term mechanical problems affecting the entire system.
  - Providing a complete and accurate volume estimate of woody biomass material prior to cutting and staging is problematic. A traditional timber cruise (when a forester is available) provides some good data, but for these projects, much more than “timber” is removed. There does not appear to be an accepted methodology to calculate the volume of standing shrubs (such as buckthorn) or saplings which can contribute a significant amount biomass depending on the project.

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

- A spreadsheet has been developed and is maintained to compile metrics including project costs and revenues collected, target habitat, acreage, utilization of the woody biomass material, and volume.
- Observations and lessons learned are being compiled from conversations with project partners, biomass buyers/users, technical experts, other interested parties, and through direct experiences. These include:
  - Project timing is very important in order to accomplish the many steps to recruit, select, initiate and complete a project. Administrative and logistical factors such as budget cycles, project administration, and seasonal conditions, all have an impact and need to be considered.
  - Providing a consistent program with a regularly scheduled grant opportunity (RFP) would allow potential project partners time to plan and prepare for a project and may result in more applicants per funding round.
  - Woody biomass markets are highly competitive, market-driven, complicated and rather volatile making it very difficult to predict marketability of the material.
  - Transportation distance to a bioenergy facility or other biomass market is an important factor affecting the utilization of the woody biomass material.
  - Buyers/users may compete with each other or work collaboratively (ex. Belwin Stagecoach Prairie Natural Area Project).
  - Biomass facilities have contracts with suppliers who guarantee an agreed upon volume and quality of material delivered on an annual basis and are thus paid a premium as compared to other companies who may deliver periodic loads. Identifying and contacting supply

contractors regarding a potential biomass sale may help them fulfill their contracts as well as create competition for the material resulting in a higher bid offer. The ability of supply contractors to pay a premium is dependent on their access to other sources of material which is influenced by many variables including storm events and land clearing for development.

- The potential for ecological or habitat restoration projects to provide a source of woody biomass material is still a relatively new concept and not readily acknowledged by the biomass industry as a whole.
- It is most efficient to sort woody material types during harvest operations versus at the time of collection and transport from the project site. Sorting makes the material more attractive to a potential buyer/user.
- Invasive species, such as buckthorn and emerald ash borer, are a complicating factor for projects involving the movement of woody plant material within and transportation from project sites.
- Ideally, the most efficient and ecologically sound model for this work is for one contractor to perform the cutting as well as purchase/remove the woody biomass material. There are currently very few contractors that can do a complete project from cutting to staging to utilization. Currently, a project is completed in several steps which increases impact to the land and creates complications for project management. However, competition between vendors at each of these stages does help keep overall project costs down.
- Restoration projects involving the removal of woody biomass material, while seemingly small as compared to land clearing or forestry projects, are important to all the parties directly or indirectly involved as they provide direct jobs throughout all facets of the project from planning through implementation to completion; indirect jobs for project support networks (supplies and equipment replacement/repair); and woody biomass material for end users and their systems/networks.

**Result Status as of December 31, 2010:** No significant progress to report as of 12/31/10.

**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**

Reference Attachment A: Budget Detail for 2010 Projects.

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

**Project Funds:** \$475,000 to implement woody biomass harvest and post-harvest restoration projects; \$300,000 to be granted to non-DNR public and private landowners



through a competitive process; and \$175,000 will be retained for projects on DNR-owned land.

**Equipment/Tools/Supplies:** \$500 for safety equipment and supplies (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 Coordinator (Project Manager), DNR EWR Central Region Assistant Regional Manager, and DNR Regional Plant Ecologist. Others providing technical assistance include DNR Biofuels Program Manager, DNR Biomass Program Coordinator, DNR Utilization and Marketing Program Director, and other DNR Regional Utilization and Marketing Staff, and Don Arnosti, Consultant. 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.

**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 \$7,560 in Department Operations and Division-wide 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 Resources Trust Fund appropriation may be supplemented by other state funding (e.g. bonding and potentially L-SOHC, invasive

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 concluded June 30, 2011. 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 [http://www.dnr.state.mn.us/eco/habitat\\_biomass.html](http://www.dnr.state.mn.us/eco/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 Grant Opportunity (RFP) will be posted on the DNR Grants webpage (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.

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

### **Dissemination Status:**

#### **As of December 31, 2011:**

- Project data was compiled for the DNR's Grant Outcomes Website to provide project descriptions, indicators and targets information to website visitors. The website is located at: <http://www.dnr.state.mn.us/grants/outcomes/index.html>
- Presentations about this project were made to the DNR's Climate and Renewable Energy Steering Team and the Bio-fuels Team to update members about this effort.
- Previous Progress Reports are posted to the DNR project website located at [http://www.dnr.state.mn.us/eco/habitat\\_biomass.html](http://www.dnr.state.mn.us/eco/habitat_biomass.html) and a notice to interested parties is sent electronically with this link to the current information.
- Information is provided upon request.

#### **As of June 30, 2011:**

- The project fact sheet "Linking Habitat Restoration to Bioenergy and Local Economies" has been revised and is attached to this report as Attachment E.
- Data are being collected, recorded, filed and shared as appropriate.

**As of December 31, 2010:** The webpage “Linking Habitat Restoration to Bioenergy” located at [www.mndnr.gov/grants/habitat/biomass.html](http://www.mndnr.gov/grants/habitat/biomass.html) has been updated to “Linking Habitat Restoration to Bioenergy and Local Economies” located at [http://www.dnr.state.mn.us/eco/habitat\\_biomass.html](http://www.dnr.state.mn.us/eco/habitat_biomass.html). This webpage also links to an updated version of the project fact sheet and the LCCMR-approved Work Program. The current RFP for grant applications is posted on the DNR Grants webpage (also linked to the Office of Grants Management) under “Habitat Improvement” at [http://www.dnr.state.mn.us/grants/habitat/biomass\\_grant.html](http://www.dnr.state.mn.us/grants/habitat/biomass_grant.html). The notice of the RFP, including links to these webpages, was sent to an RFP mailing list and through a press release. Participation in workshops, conferences and meetings, internal and external to the DNR, has provided outlets to share information on this project through the fact sheet, formal presentations, and panel discussions. Examples of these outlets include the “Biomass issues in Northeast MN” workshop in Mora, the MN/WI Invasive Species Conference in St. Paul, and DNR “transformation” staff meetings involving the merger of the Ecological Resources and the Waters Divisions. Additional information is disseminated through telephone and email in response to inquiries about the overall project, funding opportunities, and biomass utilization opportunities.

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

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

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

#### **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	<u>Result 1 Budget:</u>	<u>Amount Spent</u> (12/27/11)	<u>Balance</u> (12/27/11)	<u>Result 2 Budget:</u>	<u>Amount Spent</u> (12/27/11)	<u>Balance</u> (12/27/11)	<u>Result 3 Budget:</u>	<u>Amount Spent</u> (12/27/11)	<u>Balance</u> (12/27/11)	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	35,205	50,895	24,600	6,712	17,888	12,300	4,423	7,877	123,000
<b>Project Funds: Biomass Harvest Projects and Post-Harvest Restoration.</b> Grant Agreements with non-DNR public and private landowners for a total of \$300,000; a total of \$175,000 retained for DNR projects.	475,000	62,303	412,697	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	226	1,274	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>\$563,100</b>	<b>\$97,734</b>	<b>\$465,366</b>	<b>\$24,600</b>	<b>\$6,712</b>	<b>\$17,888</b>	<b>\$12,300</b>	<b>\$4,423</b>	<b>\$7,877</b>	<b>\$600,000</b>