

**Environment and Natural Resources Trust Fund  
2011-2012 Request for Proposals (RFP)**

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**LCCMR ID: 097-C3+4**

**Project Title:** 3rd Crop Transition Management for Increased Ecological Value

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**Category:** C3+4. Technical Assistance and Community-Based Planning

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**Total Project Budget:** \$ 312,751

**Proposed Project Time Period for the Funding Requested:** 3 yrs, July 2011 - June 2014

**Other Non-State Funds:** \$ 0

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**Summary:**

Leveraging native perennial and cover crop plantings through strategic landscape placement to increase ecological value, build soil health and reduce agricultural nonpoint pollution from cropping systems through demonstration and outreach.

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**Name:** Linda Meschke

**Sponsoring Organization:** Rural Advantage

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Fairmont MN 56031

**Telephone Number:** 507-238-5449

**Email:** linda@ruraladvantage.org

**Web Address:** www.ruraladvantage.org

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**Location**

**Region:** SW, SE

**Ecological Section:** North Central Glaciated Plains (251B)

**County Name:** Blue Earth, Brown, Cottonwood, Faribault, Le Sueur, Martin, Nicollet, Watonwan

**City / Township:**

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<input type="checkbox"/> Funding Priorities	<input type="checkbox"/> Multiple Benefits	<input type="checkbox"/> Outcomes	<input type="checkbox"/> Knowledge Base
<input type="checkbox"/> Extent of Impact	<input type="checkbox"/> Innovation	<input type="checkbox"/> Scientific/Tech Basis	<input type="checkbox"/> Urgency
<input type="checkbox"/> Capacity Readiness	<input type="checkbox"/> Leverage	<input type="checkbox"/> Employment	<input type="checkbox"/> TOTAL <input type="checkbox"/> %

# 2011-2012 MAIN PROPOSAL

**PROJECT TITLE:** 3<sup>rd</sup> Crop Transition Management for Increased Ecological Value

## I. PROJECT STATEMENT

Agricultural nonpoint pollution remains one of the biggest challenges facing natural resource professionals across Minnesota. Cropping system change, in the long term, can resolve this issue in a sustainable manner benefiting producers as well as society. Third crops strategically placed in the landscape as part of an improved *cropping system* can result in significantly improved ecological value from agricultural production areas. Building from our previous 3<sup>rd</sup> Crop and Madelia Model work we intend to provide technical assistance, outreach education and demonstration of four different scenarios showing how producers can manage this *transition* to a cropping system that increases ecological value through the use of 3<sup>rd</sup> crops in the Madelia Model bioenergy fuelshed. During the next five years over 13,000 acres [27%] of CRP will expire in the Madelia Model area. Strategies for maintaining these acres in a perennial crop use and understanding the ecological value they provide as part of the broader farm cropping system will benefit producers. We will develop a workbook that describes the four demonstration sites; provides guidance on methods to transition from a conventional corn-soybean cropping system to one that provides higher ecological value; provides an economic analysis of the four scenarios; and identifies and quantifies the ecological value.

## II. DESCRIPTION OF PROJECT ACTIVITIES

**Activity 1:** 3<sup>rd</sup> Crop Transition Management Demonstrations **Budget:** \$ 108,000

Scenarios will be established at four sites in the Madelia Model fuelshed area demonstrating a variety of transition methods a producer may incorporate to increase the ecological value from their farm. We will select locations representing these four themes: corn/soybean; corn/soybean with livestock; wellhead protection; and expiring CRP. Sites will include establishment of both cover crops and perennial grasses on environmentally sensitive areas. Watonwan SWCD will assist the project by serving as the local liaison and assist with implementation and planning throughout the project. Sites will be used for annual outreach.

Outcome	Completion Date
1. Identify cooperators and establish four demonstration sites	December 2012
2. Identify and annually quantify ecological value	June 2014
3. Consult with cooperators annually to ensure compliance and evaluation	June 2014
4. Work with cooperators to develop annual field days	June 2014

**Activity 2:** Technical Assistance to Producers and Outreach **Budget:** \$ 122,751

Rural Advantage will provide agronomic and marketing technical assistance [TA] to producers who are transitioning to perennial crops for bioenergy use as part of the Madelia Model where a bio-refinery is scheduled to be operating in the fall of 2015 and other markets. Developing a mindset with producers and natural resource providers that supports the identification and implementation of methods that increase ecological value from cropping systems will be an important aspect of the TA provided. Watonwan SWCD will be the local liaison and assist in the planning and development of the four demonstration sites in Activity 1. Most of the technical assistance will be through one-on-one consulting to assist farmers with these nontraditional cropping transitions. The UMN Extension Conservation Agronomist will assist with outreach to producers and natural resource managers in the region. CINRAM and Institute for Agriculture and Trade Policy [IATP] staff will assist with identifying methods/ practices for increasing ecological value from farm systems, evaluation of effectiveness and determining trends.

<b>Outcome</b>	<b>Completion Date</b>
1. Provide 3 <sup>rd</sup> crop transition management & planning technical assistance	June 2014
2. Hold at least one summer field day and one winter workshop annually	March 2014
3. Present lessons learned to a state or national level conference annually	April 2014
4. Disseminate information on how to increase ecological value from conventional cropping systems to producer groups annually	March 2014

**Activity 3: Economic Analysis of the Four Demonstration Scenarios Budget: \$ 80,000**

The Center for Natural Resources and Agricultural Management [CINRAM] at the University of Minnesota will provide a graduate student to complete the economic analysis of the four demonstration scenarios. In addition they will assist with method/practice identification and determining ecological value.

<b>Outcome</b>	<b>Completion Date</b>
1. Economic analysis of four demonstration scenarios	June 2013
2. Adaptation for inclusion in the workbook [Activity 4]	December 2013

**Activity 4: 3<sup>rd</sup> Crop Transition Management Guidance Workbook Budget: \$ 2,000**

The final product will be a guidance document and workbook that describes what strategies producers and natural resource professionals can implement to increase the ecological value from agricultural landscapes. The document will include chapters on transition planning, methods/practices to increase ecological value, case studies of the four scenarios with an economic analysis, and methods and worksheets to identify baselines and progress trends on individual farms. We will print 500 copies plus have the document available on the Rural Advantage and CINRAM websites for distribution.

<b>Outcome</b>	<b>Completion Date</b>
1. Further develop the framework for the workbook	December 2012
2. First draft with methods/practices identified	September 2013
3. Final draft, ready to print	December 2013
4. Workbook printed, on the web, 2 dissemination workshops held	June 2014

### III. PROJECT STRATEGY

#### A. Project Team/Partners

The project team will consist of personnel from Rural Advantage, CINRAM [UMN], Extension, Institute for Agriculture and Trade Policy [IATP] and Watonwan SWCD. Rural Advantage will be the project director and provide technical assistance, planning, and assist with the outreach components. Extension will lead outreach including material development, field days and workshops. Watonwan SWCD will be the local liaison. CINRAM will lead the economic analysis and with IATP will assist with identifying appropriate methods and practices to increase ecological value.

#### B. Timeline Requirements

This project will be completed over three years.

#### C. Long-Term Strategy and Future Funding Needs

This project grows out of 3<sup>rd</sup> crop work these partners have been developing since 2001 and a long term vision for agricultural production systems that assist in meeting local and state water quality goals, increase ecological value, and economically sustain the families living in rural areas. The ten year perennial contracts will allow for evaluation for longer term trends. This would be completed with non-LCCMR funding.

## 2011-2012 Detailed Project Budget

*3rd Crop Transition Management for Increased Ecological Value*

### IV. TOTAL TRUST FUND REQUEST BUDGET

**3 years**

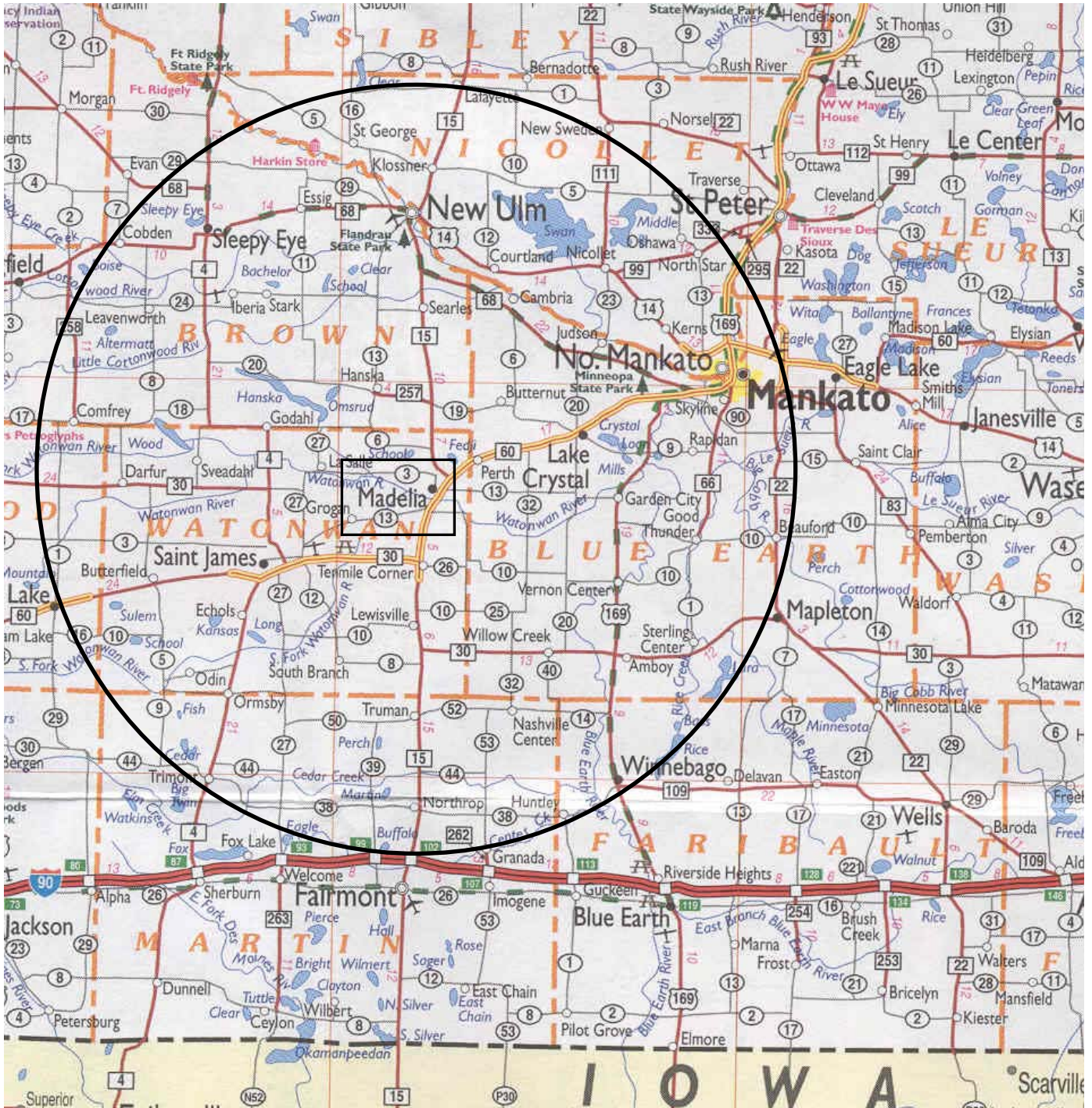
<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>Personnel:</b> Jeff Jensen - Rural Advantage .5 FTE Technical Assistance & Project Coordination <i>Salary - \$19.00/hr x 1040 hr x 3 y = \$59,280</i> <i>Fringe - \$3.92/hr x 1040 hr x 3y = \$12,231</i>	\$ 71,511
<b>Contracts:</b> UMN Extension- Conservation Agronomist- Jill Sackett- Outreach Lead - .10 FTE \$8,000/y x 3y = \$24,000; Watonwan SWCD - Jack Krech, Manager - Local Liaison - \$10,000/y x 3y = \$30,000; IATP - Jim Kleinschmidt- methods & ecological values - \$5,000/y x 3y = \$15,000; CINRAM - Dr. Dean Current - methods, ecological values & economics, student oversight- \$10,000/y x 3y = \$30,000; CINRAM - UMN Graduate Student - \$50,000	\$ 149,000
<b>Equipment/Tools/Supplies:</b> Printing & copying - 500 workbooks x \$4.00 = \$2,000; Postage - 2000 pieces x \$.44 x 3y = \$2,640; Soil Testing- special suite of tests 4 farms x 3 tests [check, perennial, cover crop] x \$100 x 3y = \$3,600	\$ 8,240
<b>Travel:</b> Rural Advantage - in-state travel - 2,000 mi/y x \$0.50/mi x 3y = \$3000; Bus Rental for Annual Field Day \$1,000 x 3y = \$3,000	\$ 6,000
<b>Additional Budget Items:</b> On Farm Treatments - Four sites -- Cooperator Incentive - 4 cooperators x \$1,000 x 3y = \$12,000; Treatment1] corn/soybean- Perennials [P] 10A x \$100 /A x 10y = \$10,000; Cover Crops [CC] 40A x \$25 x 2y = \$2,000 2] corn/soybean w/livestock - P 10A x \$100 x 10y = \$10,000; CC 40A x \$25 x 2y = \$2,000 3] Wellhead Protection- P 20A x \$100 x 10y = \$20,000; CC 20A x \$25 x 2y = \$1,000 4] Expiring CRP - P 20A x \$100 x 10y = \$20,000; CC 20A x \$25 x 2y = \$1,000	\$ 78,000
<b>TOTAL ENVIRONMENT &amp; NATURAL RESOURCES TRUST FUND \$ REQUEST</b>	<b>\$ 312,751</b>

### V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>Other Non-State \$ Being Applied to Project During Project Period:</b> <i>We expect to apply for additional funds to continue evaluating the ecological value change trends beyond the life of this grant and through the ten year perennial contracts.</i>	\$ -	N/A
<b>Other State \$ Being Applied to Project During Project Period:</b> <i>None</i>	\$ -	N/A
<b>In-kind Services During Project Period:</b> There will be both farm and natural resource managers participating in field days, workshops and outreach events. We estimate at least 6 events x 25 people x \$15/hr = \$2,250; Project Administration by Rural Advantage \$36.01 x 100 hr x 3y = \$10,803	\$ 13,053	Secured
<b>Remaining \$ from Current ENRTF Appropriation (if applicable):</b>	\$ -	N/A
<b>Funding History:</b> 2003 LCMR - Native Plants & 3rd Crops for Water Quality- \$622,000; 2005 LCMR - 3rd Crops for Water Quality - \$500,000; Bush Foundation- 3rd crops & Madelia Model - \$254,000; McKnight Foundation [2 grants]- 3rd Crops & Madelia Model- \$370,000; Xcel Energy [ECoPayPack] \$100,000; 2007 CIG- ecological services - \$53,500; 2008 CIG - ecological services- \$84,375; NCR-SARE [Cover Crops] \$74,709	\$ 2,058,584	completed or in progress

3<sup>rd</sup> Crop Transition Management for Increased Ecological Value  
2011-2012 LCCMR Proposal Map

**Madelia Model Fuelshed**  
Area Within A 25 Mile Radius of Madelia, Minnesota



## Project Managers Qualifications and Organization Description

**Linda Meschke**, President, Rural Advantage

Ms. Meschke has over 22 years of experience in working on water resource issues in south central Minnesota. Her work has been focused on the implementation of innovative conservation practices to address agricultural non point source pollution. She currently is working on landscape diversification that includes targeting of perennials or 3<sup>rd</sup> Crops throughout the intense corn and soybean region of south central Minnesota.

In 2004 she began to develop the concept for what is now the Madelia Model. The Madelia Model demonstrates how rural communities can benefit from developing local renewable energy facilities that utilize perennial biomass to provide multiple benefits, such as clean water, sustainable family farms, increased business opportunities and more jobs, in addition to local renewable energy.

Ms. Meschke has extensive experience in working with producers/ landowners; local governments; non profits; University of Minnesota researchers and educators and private industry to bring them together and work toward common goals. In collaboration with multiple partners she has developed and successfully lead over \$10 million dollars in projects in the Greater Blue Earth River watershed area that have resulted in an estimated reduction of at least 9 percent of the pollution loading going to the Minnesota River from the Blue Earth River system.

She is currently an SWCD Supervisor for Martin County and was recently named an Associate Fellow for the Institute for the Environment at the University of Minnesota. She has additional experience working as the Water Planner, Wetland Administrator and Agricultural Inspector for Martin County, Minnesota; farm partner; doing loan servicing for Farmers Home Administration during the farm crisis of the mid 1980's; and as a Vocational Agricultural Instructor and FFA Advisor.

### Rural Advantage

Linda Meschke, with other partners, established on November 13, 2003 a 501[c][3] non profit called Rural Advantage under MN Statutes Chapter 317A to provide a vehicle to continue to advance the 3<sup>rd</sup> crop work in Minnesota and the Midwest. Linda Meschke is President of Rural Advantage. Rural Advantage's mission is to promote the connections between agriculture, the environment and rural communities in order to improve ecological health, economic viability and rural vitality. Objectives include:

- Advance landscape diversification to improve ecological health, rural vitality and farm profitability.
- Cultivate a more sustainable approach to agriculture that is diverse, resilient and responsible; and supports natural and agricultural 'systems' thinking.
- Foster rural economic development that supports rural families and local communities.
- Promote increased stewardship through education, demonstration and implementation.