# Environment and Natural Resources Trust Fund
# 2010 Request for Proposals (RFP)

## LCCMR ID: 222-G

**Project Title:**

GIS Foodshed Analysis in the Red River Basin

**LCCMR 2010 Funding Priority:**

G. Creative Ideas

**Total Project Budget: $** $319,278

**Proposed Project Time Period for the Funding Requested:** 2 years, 2010 - 2012

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

**Summary:**

GIS mapping, citizen engagement and long-range planning are combined to assess the potential for food self sufficiency in the Red River Valley, producing healthy food, economic benefits, and sustainable production.

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**Location:**

**Region:** NW

**County Name:** Becker, Beltrami, Clay, Clearwater, Hubbard, Kittson, Lake of the Woods, Mahnomen, Marshall, Norman, Polk

**City / Township:**

_____ Knowledge Base _____ Broad App. _____ Innovation

_____ Leverage _____ Outcomes

_____ Partnerships _____ Urgency _____ TOTAL

**PROJECT TITLE: GIS Foodshed Analysis in the Red River Basin**

## I. PROJECT STATEMENT

How will diverse communities across the American landscape feed themselves and generate their own energy in the face of environmental and economic pressures? This emerging vision of regionally based, diversified food production is gaining momentum across the US. The Red River Valley is no exception. For decades in this tall grass and short grass prairie region, land use decision-making and design of cropping systems have responded to policy and market signals based on an industrial, globalized food and fiber system. This pattern has led to:

- loss of hydrologic function
- degraded upland, wetland and riparian habitats
- compromised public health from diet-related diseases

Citizens and collaborating experts in the Red River Basin are now prepared to rethink how best to "re-regionalize" their food system in such a way that provides:

- ecosystems services
- resilient wildlife habitats
- health-promoting diets for the region's residents
- new, long-term economic opportunities based on regional food production

In order to meet these aims, the methods of food production and processing must be better integrated, involving multiple scales of diversified agricultural production that respond to changing environmental conditions and produce more healthful food for local consumption.

This proposed effort will generate a robust decision-making tool applicable at farm, community, and regional scales to inform stakeholders of choices and tradeoffs and consider alternatives to current patterns of agricultural production in the region. Activities include:

- Spatial mapping and analysis of diversified crop and livestock production for the region that would meet the nutritional needs of citizens residing in the region
- Regular convening of citizen leadership groups to assist with development of above spatial mapping tool and work with results to undertake further, concrete planning
- Execution of 3 public forums involving citizens and policymakers following completion of research to present results and explore possibilities for further collaboration and development

## II. DESCRIPTION OF PROJECT RESULTS

**Result 1:** *Citizen engagement to inform modeling effort.* **Budget: $ 50,492**

Study circles composed of a diverse group of stakeholders will explore a regional food system as it relates to water quality, habitat, land use, cropping patterns and food security.

| **Deliverables** | **Completion Date** |
|---|---|
| 1. Recruit members for 4 study circles in the Red River Basin | By Sept 2010 |
| 2. Conduct 6 -8 session study circle curriculum (developed 2009) | By Feb 2011 |
| 3. Synthesize the priorities and visions of these groups, include in model | By March 2011 |

**Result 2:** *Landscape-based Foodshed Analysis* **Budget $ 226,276**

GIS-based analysis that integrates a concept of human nutrition (a variety of grains, meat, dairy, fruit and vegetables) cropping system, and ecosystem services. This approach is scalable, allowing community, county, regional, state and multi-state analysis. Christian Peters, Cornell University, has pioneered the methodology.

| Deliverables | Completion date |
|---|---|
| 1. Develop assumptions for Human Nutritional Equivalent in RRB | by March 2011 |
| 2. Obtain appropriate data | by April 2011 |
| 3. Implement GIS modeling effort – scale is NW MN, or state of Minnesota | by June 2011 |
| 4. Share output with study circles | by September 2011 |

**Result 3:** *Environmental Stewardship and Farmland Preservation* **Budget $ 42,610**

Convene 3 public dialogues that are oriented toward (1) policymakers in the Red River Valley region; (2) alternative agriculture advocates across Minnesota; and (3) policymakers focusing on agriculture and natural resources across Minnesota. These dialogues are intended to generate concrete ideas for land use planning and potential policies that provide multiple benefits and lead to resilient landscapes.

| Deliverables | Completion date |
|---|---|
| 1. Design and convene 3 dialogues | by November 2011 |
| 2. Obtain evaluation information from participants | by November 2011 |
| 3. Determine follow-up applications in region | by December 2011 |

## III. PROJECT STRATEGY

### A. Project Team/Partners

- University of Minnesota Regional Sustainable Development Partnerships – Northwest Region *(Linda Kingery, Executive Director)*
- UMN Regional Sustainable Development Partnerships – Statewide Office *(Dr. Margaret Adamek, Research Fellow in Local Foods, Sustainability and Wellness)*
- University of Minnesota – Duluth *(Dr. Randel Hansen, food systems planning)*
- UMN Center for Urban and Regional Affairs *(Mike Greco, agricultural land use planning)*
- Land Stewardship Project *(community-based food systems)*
- Minnesota Center for Environmental Advocacy *(This project will be integrated with proposed LCCMR project "*Strategic Wetland Restoration in the Red River Basin" *under separate cover)*

### B. Timeline Requirements

The proposed project activities would commence in August 2010 and terminate in December 2011.

### C. Long-Term Strategy

The proposed project is not currently conceived to require additional investment. We would like to explore the feasibility of either a subsequent statewide foodshed analysis or foodshed analyses covering each region of the state. The effort outlined in this proposal would provide an important precedent, establish strengths and challenges of proposed model, and inspire statewide foodshed planning.

# Project Budget

## IV. TOTAL PROJECT REQUEST BUDGET 2 years

| **BUDGET ITEM** *(See list of Eligible & Non-Eligible Costs, p. 13)* | **AMOUNT** |
|---|---|
| **Personnel:** | |
| Project Coordinator Position, oversees the project, makes the connections to faculty, grad students, regional stakeholders, plan and host dialogs. 50% FTE each year for 2 years, salary plus 34% fringe rate. (*Margaret Adamek, PhD)* | $ 108,486 |
| Regional Coordinator; makes regional connections to residents, technical assistance and policy makers, tracks budget. 20% FTE, salary plus 34% fringe rate for 2 years | $ 36,950 |
| Geographic Information System Specialist - Graduate student in Center for Urban and Regional Affairs - | 60,000 |
| Community Food System Planner - faculty 20% FTE for 2 years, salary and fringe (UMD faculty) | $ 53,600 |
| Study Circle Organizers - Extension Educators 5% FTE in year 1 only x 4 groups | $ 16,000 |
| **Contracts:** | |
| Land Stewardship Project - Consult on policy development based on analysis | $ 15,000 |
| **Equipment/Tools/Supplies:** printing for study circles 40 x $30; meeting documents, maps and charts - $3000; materials for dialogues - 60 * $20. | $ 5,400 |
| **Acquisition (Fee Title or Permanent Easements):** | NA |
| **Travel:** study circles - 40 study circle participants x 6 meetings; 6 team meetings * 6 people; 60 dialog participants, facilitator's travel. | $ 23,842 |
| **TOTAL PROJECT BUDGET REQUEST TO LCCMR** | $ 319,278 |

## V. OTHER FUNDS

| **SOURCE OF FUNDS** | **AMOUNT** |
|---|---|
| **Other Non-State $ Being Applied to Project During Project Period:** Application in development to Agriculture & Food Research Initiative with UM Extension which would replicate the project in other regions, pending | $ 400,000 |
| **Other State $ Being Applied to Project During Project Period:** NW RSDP to provide $10,000 for consulting by Christian Peters to advise foodshed analysis using methods he developed. pending | 10,000 |
| **Funding History:** | NA |

## ORGANIZATION DESCRIPTION AND PROJECT MANAGER QUALIFICATIONS

The Regional Sustainable Development Partnerships work to sustain Minnesota's natural resource-based communities and industries by addressing community-identified agriculture, natural resources, and tourism issues in partnership with the University of Minnesota. Three core goals shape the work of the Regional Partnerships, and form the basis on which we evaluate our effectiveness. These goals are:

- build and strengthen **effective relationships** between the **University of Minnesota**, and the **citizens and communities it serves.**
- strengthen the long-term **social, economic, and environmental health** of greater Minnesota through **active citizen leadership.**
- advance the understanding of regional **sustainability** by **investing** in **research, education and outreach** projects.

Funded by the Minnesota Legislature, Regional Partnerships have been established in Northwest, Northeast, Central, West Central, and Southeast Minnesota. Each Regional Partnership has a board made up of citizens with backgrounds and interests in agriculture, natural resources, tourism, and sustainability as well as University faculty and staff from a wide range of departments. To date, the Regional Partnerships have funded over 182 projects for a total of approximately $3,000,000.

The Northwest Regional Partnership has played an instrumental role for over a decade in the Red River Valley, supporting numerous initiatives and joint projects that build rural vitality, improve environmental quality, and nurture regional, sustainable food systems.

### Project Manager

**Margaret Adamek, PhD,** serves as a Research Fellow in Local Foods and Sustainability for the Regional Partnerships. In her role, she is responsible for building capacity of citizens, Minnesota's land grant university, and partner organizations to strengthen regional food systems. She has worked in northwest Minnesota for nearly twenty years, with a special emphasis on tribal communities. For the last fifteen years, Dr. Adamek has worked on innovative sustainable agriculture and civic engagement programs at the University of Minnesota that offer a holistic approach to developing food production and consumption practices that improve landscape and human health. This array of work has resulted in a broad expertise base in convening community participation and learning, sustainable community-led solutions, multidisciplinary research projects, and numerous qualitative and quantitative research methods. Adamek has directed multiple large scale projects and non-profit organizations, with a current consulting practice in project design, organizational development and strategic planning. The bulk of her client base is with agricultural and environmental organizations, agencies, and educational institutions. She possesses a bachelor's degree from Carleton College and a doctorate from the University of Minnesota in Adult Learning, Curriculum, and Instruction.

For the purposes of the proposed project, Dr. Adamek will oversee the design and development of the community engagement process, convene and facilitate the work of participating faculty and students, and design and execute public forums. She will develop workplans and provide oversight of overall effort.