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

LCCMR ID: 018-A2

Project Title:

Endocrine Disrupting Chemicals in the Cannon River Watershed

LCCMR 2010 Funding Priority:

A. Water Resources

Total Project Budget: $ $238,918

Proposed Project Time Period for the Funding Requested: 3 years, 2010 - 2013

Other Non-State Funds: $ $0

Summary:

Determine concentrations of endocrine disrupting chemicals discharged from wastewater treatment facilities within the Cannon River watershed and provide education to reduce these chemicals in surface waters.

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Sponsoring Organization: Cannon River Watershed Partnership

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Location:

Region: SE

County Name: Goodhue, Rice, Steele

City / Township: Cannon Falls, Northfield, Owatonna and Faribault

_____ Knowledge Base	_____ Broad App.	_____ Innovation
_____ Leverage	_____ Outcomes	
_____ Partnerships	_____ Urgency	_____ TOTAL

PROJECT TITLE: Determining endocrine disrupting chemical (EDC) concentrations in the Cannon River watershed from wastewater treatment facilities (WWTF).

I. PROJECT STATEMENT

The Cannon River watershed covers an approximately 941,000 acre area in southeastern Minnesota, located south of the Twin Cities metro area. Portions of the watershed have been assessed for impairments and are now on the Minnesota Pollution Control Agency 303(d) impaired waters list for turbidity, nutrients, and mercury. However, these previous surface water quality assessments did not evaluate endocrine disrupting contaminants (EDC) from wastewater treatment facilities effluent discharge that pose an immediate threat to aquatic fish populations. The overall goals of this project are to improve water quality conditions within the Cannon River watershed by assessing the concentration of EDCs being discharged into surface waters, provide the necessary educational outreach programs to the public to reduce usage and improper disposal of EDCs, and reduce chemical stresses on fish populations. To achieve these goals, four daily discharging wastewater treatment facilities will be selected throughout the watershed and sampled weekly for EDC concentrations. Development and initiation of educational outreach opportunities will be essential to provide the public with information on the effects and proper disposal of EDCs to protect water resources. The project results will be presented in an annual report; project updates will be published in the Cannon River Watershed Partnership's newsletter, posted on our web site, shared with lake associations, county commissioners, city councils, concerned citizens, conservation districts, and presented at conferences as funds permit.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Establishment of project advisory board **Budget:** $2,312

The advisory board responsibilities will include providing input on EDC evaluation process, project design, assist with planning and promotion of educational outreach activities and providing feedback from members. The advisory board will be comprised of representatives from groups such as: pharmacists, State and Federal agencies, WWTF operators, St. Olaf faculty, concerned citizens, and the Cannon River Watershed Partnership (CRWP).

Deliverable	Completion Date
1. Recruit individuals for the advisory board	July, 2010
2. Develop project agenda and outreach events	July, 2010
3. Discuss water quality results	December, 2010-2012
4. Project closeout meeting	May, 2013

Result 2: Project management and collection of EDC samples **Budget:** $225,339

CRWP staff will collect weekly wastewater effluent samples beginning in August through November, 2010. In 2011 and 2012, samples will be collected from March to November from the four selected WWTF locations. Samples will be shipped to USGS National Water Quality laboratory in Colorado for analysis using the selected EDC parameters determined for the project. Ten percent of all samples collected will be duplicate or sample blanks.

Deliverable	Completion Date
1. Project management	July, 2010-June 2013
2. Collection of effluent wastewater samples	August-November, 2010
3. Collection of effluent wastewater samples	March-November, 2011-2012
4. Complete field, lab, and Chain of Custody forms	March-November, 2010-2012
5. Ship samples to laboratory for analysis	March-November, 2010-2012
6. Compile data and write final report	June, 2013

Result 3: Provide public education and outreach materials **Budget:** $9,347

CRWP staff will be responsible to develop the necessary educational and instructional materials to provide pharmacists, concerned citizens, local and state agencies, sportsman clubs, WWTF operators, and other organizations to reduce EDC concentrations to surface waters. CRWP will also be responsible in sponsoring at least two public outreach events and work to establish partnerships with local pharmacies for expired pharmaceutical drug disposal.

Deliverables:	**Completion Date**
1. Present up to five presentations to citizen groups	December, 2010-June, 2013
2. Provide project updates in CRWP newsletter	December, 2010-June, 2013
3. Press releases and newspaper articles	July, 2010-2012
4. Design and sent out annual project mailer	March, 2011-2012
5. Develop EDC materials	December, 2010
6. Host three outreach events	December, 2010- June, 2013
7. Host expired pharmaceutical collection days	August, 2010/2011/2012

Result 4: Submittal of water quality data to database systems **Budget:** $1,920

Water quality data will be reviewed, entered, and submitted annually into databases.

Deliverables	**Completion Date**
1. Review data results from each monitoring season	November, 2010-2012
2. Enter water quality into STORET database	December-March 2010-2012
3. Submit data	December, 2010-2012

III. PROJECT STRATEGY

A. Project Team/Partners

The project team will be comprised of local and state agencies, USGS staff, WWTF operators, and CRWP staff. CRWP staff will be responsible for overall project management and development, sample collection, lab submittal, project report writing, data entry and analysis, and development of outreach initiatives. The role of the USGS will be to provide technical assistance on the project design and goals, sampling methodology, data analysis, and provide access to their National Water Quality Laboratory for sample analysis. Local and state agencies will serve as an advisory board member, provide technical advice on project management, allow for water quality data storage on their databases, and serve as an intermediate with the WWTF. Lastly, WWTF role will be to provide access to WWTF effluent discharge sampling points for weekly sampling, provide technical assistance with wastewater treatment methodologies, and assist in answering questions pertaining to future technologies to remove EDC's from effluent discharge.

B. Timeline Requirements

The basis for requiring this project to cover a three-year period was to acquire a reasonable amount of EDC samples to provide a viable and consistent measure of EDC chemicals in surface water streams in the Cannon River watershed. Also, having a longer monitoring period will provide allowances for any seasonal fluctuations (drought and flooding conditions) and changes in EDC usage over the monitoring season that could affect concentrations of EDC's in the stream system.

C. Long-Term Strategy

This proposal is not part of a long-term project and should be considered an investigative study trying to gain an understanding of EDC concentrations within the Cannon River watershed. However, the water quality results could lead to more detailed investigations in the future of EDC contamination targeting specific reaches in the Cannon River watershed that have shown higher concentration of EDC's.

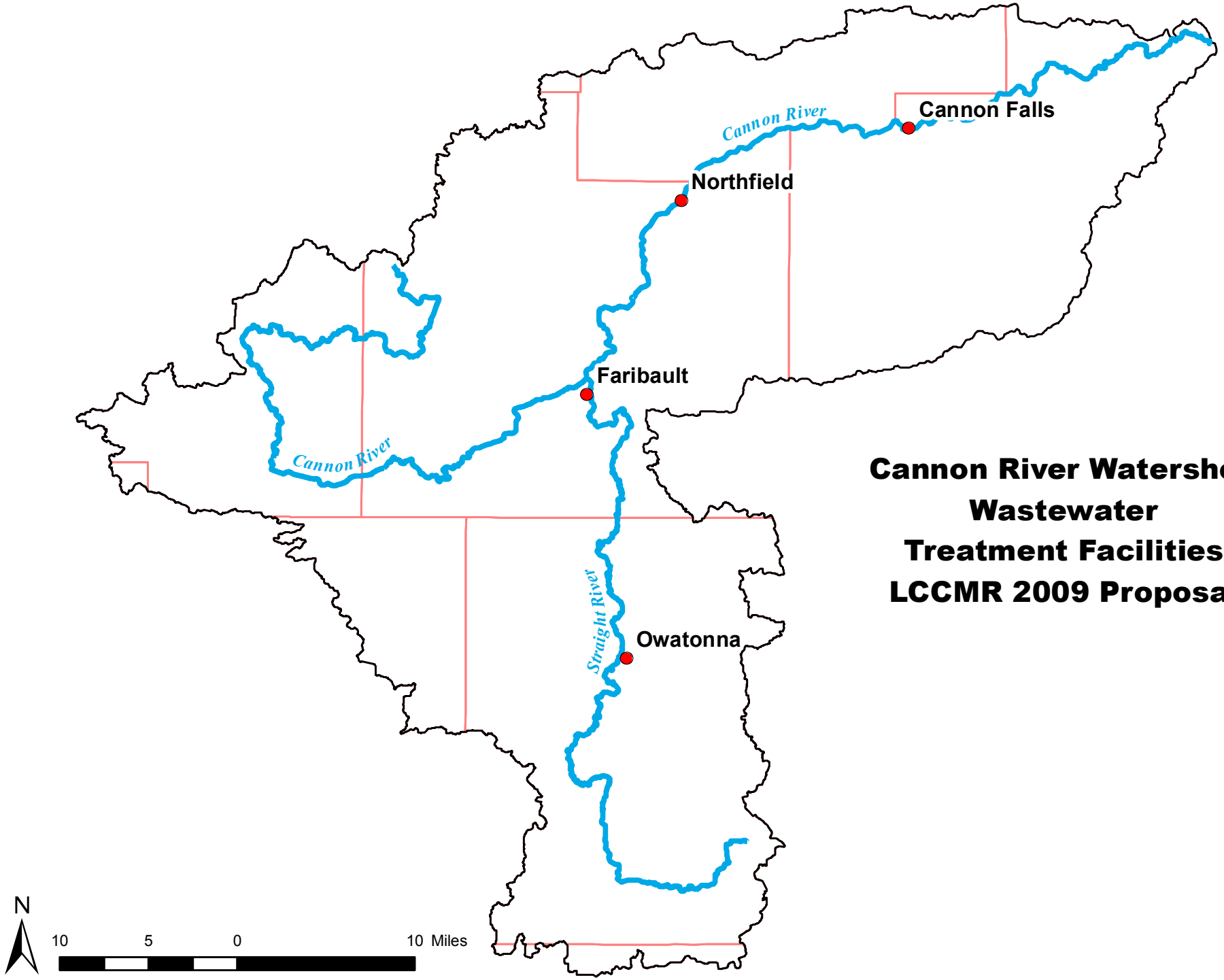
Determining endocrine disrupting chemicals (EDC) concentrations in the Cannon River watershed from wastewater treatment facilities (WWTF).

IV. TOTAL PROJECT REQUEST BUDGET (3 years)

BUDGET ITEM	AMOUNT
Personnel: Executive Director(6% FTE) -will provide overall project management, participate on the advisory board, assist with data analysis activities, provide assistance in newsletter publication and data submission, and assist with interim and final report writing. (86% will be applied to salary and 14% will be applied to benefits.)	$ 3,250
Water monitoring program coordinator(37% FTE) **-**will be responsible for collection and shipment of samples, provide newsletter updates, participate on the advisory board, update project results, conduct data analysis, present project results, interact with general public, enter data into database formats, provide writing assistance on outreach materials, and complete project reports. (86% will be applied to salary and 14% will be applied to benefits.)	$ 18,600
Community membership and outreach coordinator(13% FTE) -will be responsible for planning and hosting outreach events, develop EDC information materials, send out mailings, network with pharmaceutical businesses, coordinate press releases, and newspaper articles. (86% will be applied to salary and 14% will be applied to benefits.)	$ 6,480
Finance director(6% FTE) - will track project grant and match funding, provide input on reports and participate in advisory board meetings. (86% will be applied to salary and 14% will be applied to benefits.)	$ 3,000
Water quality project coordinator(6% FTE) -will format and design of bi-monthly newsletter materials, assist with WWTF sampling, website project postings, mailer design, and all outreach materials. (86% will be applied to salary and 14% will be applied to benefits.)	$ 3,000
Administrative assistant(6% FTE) -is responsible for paying invoices and carrying out miscellaneous office duties. (86% will be applied to salary and 14% will be applied to benefits.)	$ 3,000
Contracts: USGS National Water Quality Laboratory-water quality lab analysis of WWTF samples.	$ 184,800
Equipment/Tools/Supplies: Office supplies, mailing, outreach materials, and newsletter paper.	$ 3,500
Travel: Travel to WWTF for weekly EDC sampling collection.	$ 6,050
Travel to present project data to citizen groups, environmental groups, local,	$ 500
Outreach events/collection days.	$ 330
Advisory board meetings.	$ 248
Additional Budget Items: Water quality sample shipment costs	$ 6,160
TOTAL PROJECT BUDGET REQUEST TO LCCMR	$ 238,918

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
In-kind Services During Project Period:		
USGS staff time to attend advisory board meeting and provide project technical assistance	$ 1,750	
MPCA staff time to attend advisory meetings, setup and standardize methodology for STORET database	$ 2,000	
WWTF operators time to attend advisory meetings, answer questions and assist in WQ sampling	$ 1,750	



Cannon River Watershed Wastewater Treatment Facilities LCCMR 2009 Proposal

Project Manager Qualifications and Organization Description

Lucas Bistodeau has seven years of experience working in the environmental field, both in an academic and private setting and is a diverse and well-qualified project manager. Current and previous project experience required supervision of various staff and remedial activities, daily interactions with private and public sector, local and state regulatory agencies, provided project and budget management, knowledge of various environmental monitoring equipment and programs, data logging information into state databases, extensive collection, analysis, and presentation of data on various ecological problems. In addition to his project experience, Lucas has an undergraduate and master's degree in Biology that will provide him with the necessary educational background and tools to make this project a success.

The Cannon River Watershed Partnership (CRWP) was incorporated in 1990 as a 501(c) non-profit as a result of interest in the watershed from concerned citizens, the Minnesota Chapter of The Nature Conservancy, the Minnesota Department of Natural Resources, Board of Water and Soil Resources, and the Minnesota Pollution Control Agency. The organization's mission has been to engage people in protecting and improving the water quality and natural systems of the Cannon River watershed. Over the past 19 years our work has ranged from educational efforts, public policy, conservation projects, water quality monitoring, work with agricultural producers on conservation tillage, community wastewater facilitation, and urban storm water monitoring. CRWP has had extensive interaction with our citizen stream and lake monitors for many years. Our volunteers have collected data that resulted in many turbidity and excess nutrient impairment listings as part of the 303(d) list for 2006. CRWP has worked with water planners on a variety of projects and water quality issues, most notably the Straight River Fecal Coliform TMDL, the Byllesby Reservoir Phosphorus TMDL (in progress), and the Lower Cannon River Turbidity TMDL (approved by EPA in 2007). CRWP will continue to seek project funding with the overall goal to improve the watershed's water quality.