**2007 Project Abstract**
For the Period Ending June 30, 2010

**PROJECT TITLE:** Local Water Management Matching Challenge Grants
**PROJECT MANAGER:** David Weirens
**AFFILIATION:** Board of Water and Soil Resources
**MAILING ADDRESS:** 520 Lafayette Road
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**WEBSITE:** www.bwsr.state.mn.us
**FUNDING SOURCE:** Environment and Natural Resources Trust Fund
**LEGAL CITATION:** ML 2007, Chap.30, Sec. 2, Subd. 5.

**APPROPRIATION AMOUNT:** $350,000

## Overall Project Outcome and Results

Grants were awarded to 4 counties, 5 soil and water conservation districts, 2 water management organizations, and 1 joint powers board for the purpose of implementing high priority actions identified in current state approved and locally adopted comprehensive water management plans. The funds were used to complete the following projects:

- Prevented agricultural tile flows from discharging to surface waters and monitored nitrate concentrations of these flows in the Nile Mile Creek watershed.
- Protected nearly 900 acres of land adjacent to lakes and streams in Cass and Aitkin Counties.
- Implemented 10 grazing plans to reduce fecal coliform loading to the Root River.
- Generated watershed delineations and lake volume calculations that contributed to the adoption of development restrictions on 44 lakes in Itasca County.
- Completed preparations that ultimately will stabilize a streambank to protect a cemetery in Hallock from a slumping streambank.
- Designed and stabilized a 2-mile segment of a judicial ditch in the Bostic Creek watershed of Lake of the Woods County.
- Demonstrated that straw bales result in decreased phosphorus concentrations in ditch flows to Lake Volney in Le Sueur County.
- Installed a grade stabilization structure in a gully to prevent the deposit of sediment into the St. Croix River.
- Restored shoreland along Mille Lacs Lake in Mille Lacs County.
- Reduced the discharge of stormwater from the City of Wadena.
- Tested the quality of water in the Mt. Simon Aquifer and sealed three wells in Washington County.

## Project Results Use and Dissemination

Results of the specific projects are available upon request from the Board of Water and Soil Resources.

# Trust Fund 2007 Work Program Final Report

**Date of Report:** August 13, 2010
**Trust Fund 2007 Work Program Final Report**
**Date of Work Program Approval:** June 5, 2007
**Project Completion Date:** June 30, 2010

**I. PROJECT TITLE**: Local Water Management Matching Challenge Grants


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|---|---|
| **Project Manager**: | David Weirens |
| **Affiliation:** | Board of Water and Soil Resources |
| **Mailing Address:** | 520 Lafayette Road |
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**Location:** Statewide application.

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| **Total Trust Fund Project Budget:** | **Trust Fund Appropriation:** | **$**350,000 |
| | **Minus Amount Spent:** | **$**277,326 |
| | **Equal Balance:** | **$**72,674 |

**Legal Citation: ML 2007, Chap. 30, Sec. 2, Subd. 5.**

**Appropriation Language:** $350,000 is from the trust fund to the Board of Water and Soil Resources to accelerate the local water management challenge grant program under Minnesota Statutes, sections 103B.3361 to 103B.3369, through matching grants to implement high priority activities in state-approved comprehensive water management plans. For the purposes of this paragraph, the match must be a nonstate contribution and may be either cash or qualifying in-kind. The grants may be provided on an advance basis as specified in the work program. This appropriation is available until June 30, 2010, at which time the project must be completed and final products delivered, unless an earlier date is specified in the work program.

## II. and III. FINAL PROJECT SUMMARY.

Grants were awarded to 4 counties, 5 soil and water conservation districts, 2 water management organizations, and 1 joint powers board for the purpose of implementing high priority actions identified in current state approved and locally adopted comprehensive water management plans. The funds were used to complete the following projects:

- Prevented agricultural tile flows from discharging to surface waters and monitored nitrate concentrations of these flows in the Nile Mile Creek watershed.
- Protected nearly 900 acres of land adjacent to lakes and streams in Cass and Aitkin Counties.

- Implemented 10 grazing plans to reduce fecal coliform loading to the Root River.
- Generated watershed delineations and lake volume calculations that contributed to the adoption of development restrictions on 44 lakes in Itasca County.
- Completed preparations that ultimately will stabilize a streambank to protect a cemetery in Hallock from a slumping streambank.
- Designed and stabilized a 2-mile segment of a judicial ditch in the Bostic Creek watershed of Lake of the Woods County.
- Demonstrated that straw bales result in decreased phosphorus concentrations in ditch flows to Lake Volney in Le Sueur County.
- Installed a grade stabilization structure in a gully thereby preventing the deposit of sediment into the St. Croix River.
- Restored shoreland along Mille Lacs Lake in Mille Lacs County.
- Reduced the discharge of stormwater from the City of Wadena.
- Tested the quality of water in the Mt. Simon Aquifer and sealed three wells in Washington County.

## IV. OUTLINE OF PROJECT RESULTS*:*

**Result 1** Grants to Implement Local Water Management Activities

**Description:** Eligible local governments (counties, watershed districts, watershed management organizations, and soil and water conservation districts) will be invited to submit applications via email, eLINK and the BWSR website. Partner agencies will be invited to review and rank applications received. All project categories require a 50 percent cash or in kind match.

The solicitation to eligible local governments will specify that priority funding consideration will be given to projects that develop and implement innovative practices, programs, or plans to protect or restore surface and ground waters.

Project Categories: The grant maximums that will be imposed for each project category are shown below as is the target budget for each category that will guide funding decisions.

Land and Water Treatment. (Target Budget: $150,000) The maximum grant is $25,000/LGU or $75,000/project.
Planning and Environmental Controls. (Target Budget: $100,000) The maximum grant is $25,000/LGU or $75,000/project.
Monitoring and Modeling. (Target Budget: $100,000) The maximum grant is $25,000/LGU or $75,000/project.

In anticipation of the enactment of the LCCMR's funding proposals, BWSR opened an application period for eligible local governments that ran from March 1 to April 13. This open application period generated 63 proposals requesting $1,459,705 in grant funds

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| **Summary Budget Information for Result 1:** | **Trust Fund Budget:** | **$**350,000 |
| | **Amount Spent:** | $277,326 |
| | **Balance:** | **$**72,674 |

| Deliverable | Completion Date | Budget | Status |
|---|---|---|---|
| 1. List of project applications | April 13, 2007 | $0 | Completed |
| 2. Process, review and ranking of applications | May 23, 2005 | $0 | Completed |
| 3. List of funded projects, descriptions, deliverables, and grant contracts | June 27, 2007 | $350,000 | Completed |
| 4. Project deliverables-specific activities that each project has completed | June 30, 2010 | $0 | Completed |

**Final Report Summary:** Eleven of the 12 funded projects completed all or substantial portions of their project workplans. Significant outcomes of each project are briefly discussed below.

Brown-Nicollet-Cottonwood Joint Powers Board. The project pumped flows from tile lines in agricultural fields to a wetland that was previously restored under the USDA Continuous Reserve Program. The project's purpose was to prevent these flows from discharging to surface waters with resulting nitrate contributions. Very little of the water pumped to the wetland (an average of 865 cubic feet per day) drained out via surface flows. Approximately 58% percent of tile flows were exported to the wetland. Nitrate concentrations were very low (6 ppm) likely due to dry conditions that drew water from another nearby wetland. This project also included a field day that was attended by drainage contractors, farmers and landowners. Grant funds of $16,641 were matched with $29,692 of local funds. Granted funds ($7,859) were returned as the proposed wind generator pump was not installed due to excessive cost.

Cass County. This project was a partnership between Cass, Crow Wing, and Aitkin Counties that resulted in the protection of nearly 900 acres of land adjacent to lakes and streams. The initial step was assembling a database of all parcels on 10 lakes in each county with a width 4 times the minimum lot width. This information was shared with lake associations and landowners. This project offered landowners funds to cover the costs of enrolling lands in conservation easements – appraisals, surveys, legal fees and other expenses. The grant of $56,000 leveraged match of $869,310 largely in the form of the value of land placed in conservation easements.

Fillmore Soil and Water Conservation District. The purpose of this project is to reduce fecal coliform loading to the Root River through improved grazing management. This project resulted in the implementation in whole or in part of 10 grazing management plans. Plans implemented through this project addressed overgrazing, reduced cattle interactions with streams, and must be located in a riparian area. Best management practices implemented on these farms included developing animal trails and walkways, implementing prescribed grazing, and fencing. Outreach and education for producers was accomplished by co-sponsoring and conducting 15 field days, 3 educational pasture walks and a four-day grazing school throughout the Root River watershed. Grant funds spent on these initiatives totaled $35,642, which was matched by a like amount of local funds. In addition, over $120,000 of federal and other state funds were leveraged by this project. However, $39,358 in grant funds were returned. This was principally due to the Southeast Minnesota Flood of 2007 that

required a response by the Fillmore SWCD and other SWCD's in the Root River watershed. The return of grant funds resulted in fewer grazing plans being implemented than otherwise would have occurred.

Itasca Soil and Water Conservation District. This project completed watershed delineations and volume calculations of 100 lakes in Itasca County. The data generated by this project was used by Itasca County in adopting development restrictions on 44 lakes. Work is continuing to make this data publicly accessible on the District website. The $24,690 in grant funds were matched by $24,690 of local funds.

Kittson Soil and Water Conservation District. The original purpose of this project was to stabilize a streambank to protect Greenwood Cemetery in Hallock, Minnesota. Adverse weather conditions did not allow completion of the project during the grant period. Grant funds were used to survey the project site, design the project, and relocate graves in preparation for the stabilization portion of the project. Grant funds of $17,798 were matched by $17,798 of local funds. Granted funds of $7,202 were returned due to the inability to complete the project in the grant period as stated above. A conifer revetment will be installed this fall at a cost of $26,560 that will be fully paid by local sources.

Lake of the Woods County. This project completed a topographic survey of the channelized portion of Bostic Creek and several tributary ditches. This survey was used to design the project and get County Board approval to stabilize a two mile segment of judicial ditch 28 (a tributary of Bostic Creek). The design of the stabilization was intended to allow for greater water storage under peak conditions, reduce flow speed, and allow the ditch to meander under low flow conditions. Water quality monitoring (transparency, water temperature, conductivity, dissolved oxygen, ph, turbidity, total phosphorus, and TSS) was conducted to gather baseline data and to determine if the Bostic Creek watershed is impaired. $11,553 in grant funds were matched by a like amount of local funds.

Le Sueur County. This project installed barley straw bales into a ditch that flowed into Lake Volney. The purpose was to reduce phosphorus inputs to help reduce algae blooms. Test results determined that phosphorus concentrations decreased downstream from the barley straw. Grant funds of $6,896 were matched by $6,896 of local funds.

Middle St. Croix Water Management Organization. In 2006, the Afton-Lakeland Gully Erosion Preliminary Engineering Report was completed. This report was implemented through this project by strategically placing 11 rock veins and 2 boulder drop structures. In addition erosion control blankets and live stakes were installed along with bio-logs where necessary. The installation of these grade stabilization structures will prevent sediment from being deposited into the St. Croix River. Grant funds of $75,000 were matched by $114,758 of local funds.

Mille Lacs Soil and Water Conservation District. This project demonstrated how restored shoreland can benefit fish habitat and water quality while being visually attractive. This project was completed using $2,005 of grant funds and $3,005 of local match. Funds totaling $1,995 were returned as the project was completed under budget.

Shingle Creek Watershed Management Commission. This project as proposed intended to utilize grant funds to install in stream habitat and aeration features and stabilize the banks of Shingle Creek in Brooklyn Park. However, the project did not complete survey and design and receive local government approvals prior to the end of the grant period. All grant funds were returned ($16,025).

Wadena Soil and Water Conservation District. This project reduced the discharge of stormwater from the City of Wadena by purchasing and installing 60 rain barrels and abating stormwater runoff from the parking lot of the West Central Telephone Association. This project utilized $21,265 of grant funds that was matched by $28,792 of local funds. $235 in grant funds were returned as the project was completed under budget.

Washington County. Two existing boreholes were drilled out to allow data and water quality samples to be collected from the Mt Simon Aquifer. Testing results detected nitrate-nitrogen as high as 11 milligrams per liter. Coliform bacteria was detected in one of the borings, and a PFC chemical was detected in both borings. The boreholes were sealed at the conclusion of the data gathering to prevent contamination. An additional 3 wells were sealed. $10,000 in grant funds were matched with a like amount of local funds.

## V. TOTAL TRUST FUND PROJECT BUDGET:

**Staff or Contract Services**: **$**0
**Equipment**: **$**0
**Development: $**0
**Restoration: $**0
**Acquisition, including easements: $**0*
**Other: $**350,000 (grants to local governments)

**TOTAL TRUST FUND PROJECT BUDGET: $**350,000

**Explanation of Capital Expenditures Greater Than $3,500:** None

## VI. OTHER FUNDS & PARTNERS:

### A. Project Partners:

1. Partners Receiving LCCMR Funds

Minnesota Counties

Minnesota Watershed Districts

Minnesota Watershed Management Organizations

Minnesota Soil and Water Conservation Districts

2. Project Cooperators

Mn Department of Agriculture

Mn Department of Natural Resources

**B. Other Funds Proposed to be Spent during the Project Period:** BWSR will spend additional state funds for in-kind services to manage the grant process and oversee the grants once the funding allocation has been approved by the Board.

**C. Past Spending:** BWSR received an appropriation from the Legislative Commission on Minnesota Resources of $1,000,000 for the 2006-2007 fiscal biennium. The one-to-one match requirement applied to these projects. The total match that recipients will be providing for their projects is $1,699,369.

**D. Time:** The appropriation provides authority to spend through June 30, 2010. Projects that receive grant funds will be expected to complete the project within two years with the ability for a one year extention, if necessary.

**VII. DISSEMINATION**: Detailed project work plans; budgets and reports will be maintained by BWSR for successful grant applicants. These materials are available for inspection upon request. Project summaries will be prepared after awarding of grants and will be broadly distributed through cooperating agencies, the LCMR, BWSR newsletters, and BWSR's web site. Final project results will be available in an electronic format through the required use of BWSR's local government reporting system (eLINK).

**VIII. REPORTING REQUIREMENTS:**
Periodic work program progress reports will be submitted not later than December 31, 2007, June 30, 2008, December 31, 2008, and June 30, 2009. A final work program report and associated products will be submitted between June 30 and August 1, 2009 as requested by the LCCMR.

**IX. RESEARCH PROJECTS:**

**Attachment A: Budget Detail for 2007 Projects - Summary and a Budget page for each partner (if applicable)**

**Project Title:** Local Water Management Matching Challenge Grants

**Project Manager Name:** David Weirens

**Trust Fund Appropriation: *$*** 350,000

| **2007 Trust Fund Budget** | **Result 1 Budget:** | **Amount Spent** June 30, 2010 | **Balance** June 30, 2010 | **TOTAL BALANCE** |
|---|---|---|---|---|
| | *Grants to Implement Local Water Management Activities* | | | |
| **BUDGET ITEM** | | | 0 | 0 |
| **Other (grants to local units of government)** | | 277,326 | 72,674 | 72,674 |
| **COLUMN TOTAL** | **$0** | **$277,326** | **$72,674** | **$72,674** |