



# BWSR FY2016 Clean Water Fund Grant: Root River Field to Stream Partnership Phase II Implementation

<b>Fillmore Soil and Water Conservation District</b>	
<b>BWSR Grant Awarded</b> \$ 804,385	
<b>Grant Period (incl. extensions)</b> From: March 21, 2016 To: December 31, 2020	
<b>Funds Returned to State</b> Type \$0 Date Fund Returned: N/A	

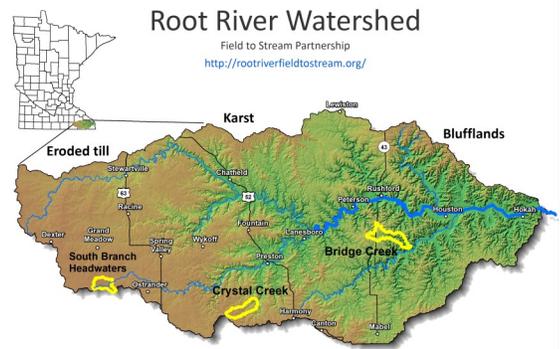


The Root River Field to Stream Partnership (FSP) is a cooperative project between state and local government, farmers, and agricultural and environmental groups. The goals are to evaluate losses from agricultural fields and measure the effectiveness of conservation practices at both the field and watershed scale. The FSP represents one of the most comprehensive and intensive studies of its kind in the upper Midwest.

Three sub-watersheds were selected for this study in 2009. The watersheds are less than 5,000 acres and located within the three main geomorphic regions of Southeast Minnesota. Six years of baseline monitoring has been collected at various scales including edge-of-field, springshed and in-stream. Flow weighted mean concentrations and yields have been computed for sediment, nutrients and pesticides. These data along with other complimentary watershed studies and farm practice surveys will provide a benchmark in which to detect water quality changes after additional practices are installed. Sediment, nutrients, pesticides and bacteria are the primary nonpoint pollution concerns.

The goals are to restore and protect the water resources in the project subwatersheds and downstream areas to make progress toward meeting both local and state water quality goals for aquatic life, drinking water, and aquatic recreation and help restore those waters that are closest to meeting state water quality standards.

FSP fills a critical gap in our understanding of how pollutants transported at the field scale translate into downstream water quality. The intensive baseline monitoring and extensive planning to prioritize the placement of conservation practices provides a comprehensive framework for evaluating practices to guide future



<b>Expenditures by Category</b>	
<b>As of 12/31/2019</b>	
<b>Contour Buffer Incentive</b>	\$ 13,200.00
<b>Grassed Waterway Installation</b>	\$ 78,278.33
<b>Karst Sinkhole Treatment</b>	\$ 0
<b>Manure Storage Practices</b>	\$ 192,974.75
<b>Milkhouse Waste System</b>	\$ 14,794.84
<b>Non-structural Management Practices</b>	\$ 4,634.70
<b>Saturated Buffer Practice</b>	\$ 0
<b>Technical and Engineering</b>	\$ 259,558.48
<b>Water Storage Structures</b>	\$ 63,676.48
<b>Critical Area Planting</b>	\$ 6,055.29
<b>Administration/Coordination</b>	\$ 19,835.00
<b>Total Expenditures</b>	\$ 653,007.87

**PROJECT CONTACT**  
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### Outputs and Outcomes

Outputs:

2016: Completed 11 grassed waterway projects (20,247'); two water and sediment control basins; one ag waste facility cover; 53 acres of cover crops. Funds encumbered for three waterway projects; five grade stabilization structures; one milkhouse waste system. See next pages for 2016 (cont'd), 2017, 2018 and 2019 outputs.

Outcomes (cumulative):

- Water pollution reduction estimates for projects completed:
- Estimated Soil Savings = 17,314.05 Tons/year
- Estimated Phosphorus reduction = 7,051.77 lbs./year
- Estimated Sediment (TSS) reduction = 17,029.21 Tons/year
- BOD5 reduction = 4,840 lbs./year
- COD reduction = 6,594 lbs./year
- Nitrogen reduction = 2,003 lbs./year
- Fecal Coliform reduction = 444,000,000,000,000 CFU/year
- Phosphorus Feedlot reduction = 121 lbs./year



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**2016:** Grassed waterways: 11 grassed waterway projects completed for a total of 20,272 feet (4 projects utilized EQIP funds-one not mapped due to lack of consent from landowner). One project completed for 2390'; payment of state funds pending until EQIP payment is made. Fillmore SWCD has encumbered state funds for 3 more projects, and two EQIP applications were received in August for which plans and designs are being completed. TAA: Rick Grooters, Doug Keene, Gary Larson.

Manure storage practices: Bridge Creek ag waste facility cover completed; paid in January 2017 (RRSWCD). Plans and design and CNMP completed for another Bridge Creek ag waste storage and roof structure for FY17 EQIP application (RRSWCD). TSA engineer developed four additional preliminary site plans for potential feedlot projects in both Crystal and Bridge watersheds. Meetings were held with the Houston County and Fillmore County Feedlot Officers to ensure compliance with feedlot rules. TAA: Pete Fryer, TSA Engineer, Jason Rochester, TSA Engineering Tech.

Water storage practices: 2 water and sediment control basins installed in Bridge Creek. TAA: Rick Grooters, Jason Rochester.

Non-structural management practices: Four cost share contracts were signed in Bridge Creek watershed, two in Fillmore County and two in Houston County. Of the 113 acres seeded, 60 acres were not seeded at the correct rate due to the co-op dropping the seeding rate without prior approval; therefore, the seeding did not meet the NRCS standard and the contracts were cancelled and not paid. TAA: Dean Thomas, Area Soil Health Tech.

Milkhouse waste system: Funds encumbered in Contract CC 16-10. Additional 319 grant funds encumbered from SE MN Water Resources Board in the amount of \$6500. Construction planned for 2017.

Technical assistance: Fillmore and Root River SWCD technicians completed 11 grassed waterway projects totaling 21,712' and one project with 2 water and sediment control basins. They worked with four cooperators on seeding cover crops on 113 acres. The Fillmore SWCD contractor completed farm walkovers with 15 cooperators in the Headwaters watershed (100%) and assisted with planning projects in all three study watersheds. Root River SWCD technicians completed plans for five grade stabilization structures for construction in 2017 in cooperation with the NRCS DC. They also completed one ag waste facility cover. They assisted the TSA Engineer with completing plans for a large ag waste facility and roof structure for an EQIP application in cooperation with the NRCS DC. An agreement was signed with Anez Consulting for the nutrient management portion of the Comprehensive Nutrient Management Plan completed by the TSA Engineer in December to meet this requirement for the project's EQIP application. Technicians are communicating with 15-20 additional cooperators regarding potential projects.

RG: 289.5 hrs @\$43.83; DK: 378 hrs @\$42.82; RM: 499.7 hrs @\$35; RRSWCD: 468.5 hrs @\$38.60 avg

Administration/Coordination: Contracts executed with Root River SWCD and SWCD contractor Ron Meiners and Anez Consulting for CNMP. Google Docs spreadsheet and grant fund spreadsheets developed and updated periodically to track progress and grant expenditures. Processed invoices and payments for projects and contractors. Coordinated several meetings and prepared information for meetings with technical staff (including NRC S) regarding progress on projects and use of MRBI funds. Several meetings held regarding feedlot projects, feedlot cost share policy and prioritization with SWCD staff, County Feedlot Officers and NRCS staff. Cover crop contract was developed with staff; processed and paid producer payments. Elink budget and work plan revision completed. 82.5 hrs @ \$55.62.

**2017:** One ag waste storage and roof structure (367) completed in Bridge Creek with state and MRBI-EQIP funds. One milkhouse waste system installed in Bridge Creek with final payment made in January 2018. One milkhouse waste system installed in Crystal Creek, JAA:Pete Fryer, TSA Engineer, Jason Rochester, TSA Engineering Tech with assistance from Root River and Houston County NRCS technical staff.

Two state-funded waterway contracts completed in Bridge Creek totaling 11,045 feet, 90% cost share (Rick Grooters JAA); 2 MRBI-EQIP funded waterway contracts completed in Crystal Creek totaling 11,805 feet (Doug Keene JAA).

Four contracts approved by the Fillmore SWCD Board, and three approved for payment for a total of 75 acres; one contract for 30 acres not completed; JAA: Dean Thomas, Area Soil Health Technician

Technical Assistance/Engineering: Final payment made to Anez Consulting for Dahl CNMP. Dahl soil borings completed by Chosen Valley Testing for ag waste storage. FCSWCD technical staff completed 4 grassed waterways (22,850'); one in progress; E-3 structure sediment clean out and seeding/mulching completed. JAA: Rick Grooters, Doug Keene, Pete Fryer. RSWCD technical staff completed 4 grade stabilization structures, 2.5 acres of critical area planting, and assisted with Dahl ag waste system, roof structure and milkhouse waste system. JAA-DWalter, JMeyer, DWermager; BScanlan. Ron Meiners, Walkover Technician, continued one-on-one contacts with farmers and coordination with local staff. He assisted with surveying and checking out practices, presented information at local meetings; assisted with BWSR and MDA outreach materials, and with E-3 cleanout and brush removal.

Four grade stabilization structures installed in Bridge Creek. Planning and design for two structures in progress in Bridge Creek; funds encumbered. JAA: Gary Larson, NRCS District Conservationist



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### **2017 cont'd:**

2016 grant reporting completed in eLINK; interim expenditure report completed in eLINK in June; eLINK work plan revisions completed. Progress meetings with technical staff Feb 22, March 15 (headwaters), July 17, Dec 6 plus interim meetings re: individual projects; Crystal Creek feedlot project meeting Aug 15. Interviewed for Post Bulletin article and BWSR articles and video about the ag waste and E-3 structure cleanout. Processed invoices for project payments and TA expenses for Root River SWCD and farm walkover technician; Anez contract reconciliation with SWCD Bd; tracked grant expenditures and completion of projects; administered Fishers and Farmers grant for MDA activities; admin 99 hrs @\$55.31

**2018:** Three grassed waterways installed, two in Bridge Creek (#22BC 395', pd 8//18; #23BC 700', pd 6/14/18) - JAA Dave Walter, and one in Crystal Creek (CC18-01 800', pd 7/12/18) - JAA Doug Keene. One grassed waterway (2375') was installed utilizing EQIP funding. JAA-Doug Keene

Critical area planting completed for approximately 1.0 acre in Bridge Creek watershed. JAA: Gary Larson, NRCS  
The Nutrient Management Specialist sent letters to all producers in the study watersheds needing plans in June. Contract with CHS was developed and executed in July after a planning meeting in April. Plans were completed for five producers, and a second meeting with CHS was held in September to plan next steps for reviewing plans with producers. Due to maternity leave, meetings with producers are not being held until winter.

One contract for cover crops was paid in 2018 for 26.5 acres. JAA: Dean Thomas, Area Soil Health Technician  
Planning for use of the vegetative practice incentive has been ongoing with several producers, some of whom are waiting for the new CRP rules before making a decision. No practices signed up in 2018.

One grade stabilization structure installed in Bridge Creek (#17BC pd 8/9/18). One contract cancelled; project is being fully funded with EQIP. JAA: Dave Walter and Gary Larson, NRCS

Technical Assistance: (Jan 1-June 30): FCSWCD 97 staff hrs; RRSWCD 83.25 staff hrs. + 329 miles; RM 113.5 hrs. + 576 miles. TA and engineering for 2 grassed waterways and CAP plan in Bridge Creek and 2 grassed waterways in Crystal Creek-one funded through MRBI-EQIP. Consultations with contractor re: E-3 completion. (July – December): FCSWCD staff - In Crystal Creek, One waterway completed (800'). Designs and cost estimates completed for two grade stabilization structures, one in Crystal and one in Bridge. Feedlot evaluations conducted on two sites with assistance from JPB engineering staff. At least six sites investigated for needs and preliminary designs for waterways and structures. DK32.5 hrs@\$44.89, AK 39.5 hrs @\$60.06, WG 36.5 hrs@\$48.43, AM 233.75 hrs @ \$45.27, RM 346 hrs @\$35

RRSWCD - Two waterways completed (395' and 700') and one grade stabilization structure completed in Bridge Creek. Assisted with planning for ag waste system for completion of CAP 102 plan. DW 8 8 hrs @ \$53.40, JM 14.5 hrs @ \$31.75, BS 2 hrs @ \$49.88, JM 2 hrs @ \$40.99

Administration: (Jan 1-June 30): CY2017 grant reporting completed in eLINK; progress meetings with technical staff and BWSR: 1/9, 2/22 (Nutrient Mgmt), 3/16 (Root River), 3/28 (Mower), 4/5 (Fillmore), 4/17 (CHS mtg). Completed work plan revision in eLINK. Drafted contract with CHS for their review. Tracked contracts encumbered and paid. Attended MEI award event in May. DR: 53.5 hrs @\$60.14. (July – December): Interim progress report and request for payment completed in July. Requested grant extension and processed the grant amendment. Prepared MRBI reports and extension and funding request (\$350,000) for the Lower South Fork Root River in August. Administered Fishers and Farmers grant funds; developed employment contract and amendment for student worker to assist with data management and educational materials. Submitted 319 funding request for the study watersheds and participated in interviews; request was not funded. Progress meeting with Mower staff 11/28/18 to update new staff person. Other regular communications with technical staff on the progress of specific projects. DR 50.5 hrs @ \$60.14

**2019:** One contour buffer strip (4.4ac) installed in Bridge Creek payment is for \$300/ac/yr for 10 years JAA: A. Koliha  
Critical Area Planting of 2 areas totaling 1ac in size to heal erosion issues to establish grassed waterways (\$1,401.36)

JAA: Root River SWCD/NRCS staff

Three grassed waterways completed for about 5,200ft (1000' in Crystal & 4200' in Bridge) (\$14,535.90) JAA: D. Keene, W. Goll, A. Mathison, A. Koliha

One feedlot roof structure was completed in Bridge Creek (\$100,000) JAA: Private engineer

Administration completed by Fillmore SWCD 60 hrs (\$3,492.66) including E-link reporting, progress meeting, grant fund tracking.

Technical Assistance was completed by Fillmore SWCD for 173.67hr \$18,247.13 and Root River SWCD for 130.75hrs plus mileage \$7,547.32 working with landowners in the watersheds and a CAP plan completed and paid for C Olson manure storage project in Bridge Creek \$2,185.00 and Ron Meiners the FSP contracted walkover employee for 324.33hrs, 2,609 miles for total \$12,864.77 in which he continued follow ups with landowners on projects in the watersheds.