2024 MN Watersheds Project & Program of the Year

Detailed Award Information Form

1) Award Category (check one)

Project *x* Program

2) MAWD Region (check one):

One *x* Two Three

3) Watershed District: *Buffalo-Red River Watershed District*

4) Project/program name: *Whiskey Creek Enhancement Project*

5) Nominator (if different from above watershed district)

6) Project/Program Summary (Limit 150 words) to be read at the awards program during the annual meeting banquet:

Whiskey Creek, a tributary to the Red River of the North in Wilkin County, had significant sediment build-up in the creek which resulted in frequent breakout flows leading to crop damage. Buffalo-Red River Watershed (BRRWD) partnered with Wilkin Soil and Water Conservation District, Board of Water and Soil Resource, Minnesota Department of Natural Resources (MN DNR), Minnesota Pollution Control Agency (MPCA), Natural Resources Conservation Service (NRCS), and US Fish and Wildlife Service (USFWS) to restore 14 miles of Whiskey Creek. The restoration removed excess sediment from the streambed and re-established the channel's natural gradeline, creating a natural stable channel. BRRWD also installed 89 side inlet structures to reduce nutrient and sediment loading to the stream. BRRWD acquired easements to restore 335 acres of riparian habitat along the stream corridor to promote wildlife habitat and protect the channel from erosion.

7) Define need:

Landowners along Whiskey Creek requested BRRWD Board of Managers identify solutions to reduce agricultural crop loss from breakout flows along Whiskey Creek. Prior to construction, Whiskey Creek had poor drainage and channel capacity, resulting in frequent breakout flows across agricultural fields. In addition, there was excessive erosion within the creek with slope instability along some of the tributaries. Whiskey Creek was identified by MPCA as impaired for macroinvertebrates, fecal coliform, dissolved oxygen, and turbidity.

8) Goal/purpose of the project/program:

The project goals were to improve water quality by reducing sediment and nutrient loadings to the creek, improve natural waterway drainage, improve habitat along the

stream corridor, reduce sediment loading downstream, and reduce the occurrence and magnitude of flood damages to agricultural fields and adjacent residential properties.

9) Describe project/program:

Planning for the Whiskey Creek Enhancement Project began several decades ago and accelerated once the subwatershed area was annexed into the BRRWD boundary in 2012. Over the past 12 years, the BRRWD has worked with landowners, along with local, state, and federal agencies, to complete the restoration of Whiskey Creek. Design features were determined through close collaboration with the MN DNR, using their E-Channel design principles to create a natural stable stream. To improve fish habitat within the stream, pools were constructed at each outside channel bend. An increased riparian habitat corridor was acquired along the stream to reduce direct runoff from adjacent agricultural lands and provide improved habitat to the region.

10) Describe public benefit:

Landowners along Whiskey Creek have been asking for the stream to be restored for several decades. Through the restoration of the stream, the occurrence and magnitude of flood damages to agricultural fields and residential properties has been dramatically reduced. Also, by reducing sediment loading to the channel, water quality has also improved which will provide greater fishing opportunities.

11) Watershed plan reference (where is the problem/solution identified in the watershed plan, does it address stated problems, objectives and goals):

BRRWD identified streambank/channel stability as a priority in the watershed plan. Whiskey Creek is listed as a priority capital improvement project in the plan as well.

12) Was project goal achieved? If so, how was the success measured?

Yes, project goals have been achieved. The project restored 14 miles of Whiskey Creek to a natural, stable stream, improving natural waterway drainage and reducing occurrence and magnitude of flood damages. The project also established 335 AC of expanded riparian buffers along the stream corridor, improving fish and wildlife habitat. In addition, 89 side inlet structures have been installed to manage runoff and reduce the sediment load into the stream from adjacent agricultural land. In total, the project has reduced sediment and phosphorus contribution to Whiskey Creek by 3,444 tons/year and 2,112 lb/year, respectively. Preliminary monitoring shows improvement in water quality within Whiskey Creek, potentially leading to the stream being delisted from the impaired waters list for turbidity.

13) Watershed or water body name to be protected or improved by project or program (if applicable)

Whiskey Creek

14) Watershed or water body information (e.g., size, watershed area, classification, description):

The Whiskey Creek subwatershed is 165 square miles, located in northern Wilkin County. Land use within the watershed is predominately agricultural, with two small cities (Rothsay and Kent) located within the boundary.

15) Project partners (financial or inkind support)

Agency or organization	% Participation
Wilkin Soil and Water Conservation District	*25 %*
Natural Resources Conservation Service (NRCS)	*25 %*
Minnesota Department of Natural Resources (MN DNR)	*20 %*
Board of Water and Soil Resources (BWSR)	*15 %*
Minnesota Pollution Control Agency (MPCA)	*10 %*
US Fish and Wildlife Service (US FWS)	*5 %*

16) Start date: April 2021

17) Project status:

On-going – *Phases 1, 2, and 3 are complete. Contractor is working on Phase 4 with construction scheduled to be completed in 2025.*

Completed: Completion date: *July 2025.*

18) Project cost (this can be provided as total cash cost or a breakdown can be provided to show the cost of various project elements and partners):

Overall project cost is approximately $*6,000,000. Below is a breakdown of project funding sources. Funding from several grants was utilized to minimize local contribution and maximize grant match requirements for federal and state funds.*

NRCS (National Water Quality Initiative Grant) = $2,000,000
MN DNR (Stream Habitat Program) = $1,608,000
BWSR (Clean Water Fund Grant) = $660,000
MPCA (Section 319 Grant) = $284,275
US FWS (Great Plains Fish Habitat Program) = $50,000
BRRWD Local Assessment = $400,000
Land Acquisition (BRRWD, CREP, and RIM) = $1,000,000

19) Letters of support:

Each application may have up to two letters of support. The letters can be from individuals, agencies, organizations, or local units of government. Letters from staff or managers of the sponsoring District will not be accepted. Attach letters to this application as a pdf document.

20) Photos:

As noted in the instructions, each nomination must be accompanied by **at least 4 (4) photos**, but no more than eight (8) of the project or program. The photos must be in a digital format.

DEPARTMENT OF NATURAL RESOURCES

Minnesota Department of Natural Resources
1509 1st Ave N
Fergus Falls, MN 56537

October 16, 2024

Kristine Goeden
Administrator
Buffalo-Red River Watershed District

Greetings Kristine,

I am writing in support of Buffalo-Red River Water District's project: Whiskey Creek Channel Restoration. The State of Minnesota has committed $1.6M to this project through the Lessard-Sams Outdoor Heritage Fund. As the Restoration Coordinator for the River Ecology Unit within the MN DNR Division of Ecological and Water Resources, I am the State's authorized representative and administer the grant funding. As such, I am acutely aware of the value of this project to the long-term ecological resilience of the Buffalo River watershed.

This reach of the river was channelized leading to habitat degradation of the river and its riparian corridor. The increased slope of the river has led to entrenchment, disconnected oxbows, high bank erosion, reduced access to floodplain and loss of critical habitat. Altered hydrology, increased turbidity and water temperature have led to reduced biodiversity and vulnerability to climate change. This project was targeted and prioritized scientifically and gained local partner buy-in.

This project resulted in the below overall watershed benefits:

- Restored 14 miles of stream
- Expanded riparian buffer by 335 acres
- Reduced TSS by 3444 tons/year
- Reduced phosphorus load by 2,112 lb/year

The Whiskey Creek Channel Restoration project is an exemplary project that has achieved significant gains in the ecosystem for both habitat and water quality. This project implemented currently accepted ecological restoration practices to restore degraded river habitat, increase resiliency of the river, strengthen biodiversity, restore overall watershed hydrology, and improve floodplain function.

Sincerely,

Amanda Hillman-Roberts

Digitally signed by Amanda Hillman-Roberts
Date: 2024.10.14 16:13:19 -05'00'

Amanda Hillman-Roberts
River Ecology Unit Restoration Coordinator

Equal Opportunity Employer

Before construction.

After construction.