

Implementation Grants for Stormwater Resilience

Application
FY 2025

Doc Type: Grant Application

Instructions: Read the complete *Request for Proposal (RFP)* and other associated documents before submitting this application. Section 1, "Project information" affects project eligibility. Unanswered questions may result in disqualification. For application questions in Section 2, "Project details" describe the location of supporting information within attached documents, as applicable, in the table (Table 1.) provided on page 5. If an answer is not referenced in a supporting document, write "N/A". Do not attach documents that are unrelated to proposed project.

Check the [SWIFT Supplier Portal](#) and the Minnesota Pollution Control Agency (MPCA) [Implementation Grants for Stormwater Resilience](#) webpage for the most recent updates.

Applications are due no later than 4:00 p.m. Central Standard Time (CST) on Thursday, February 27, 2025.

Submit application and budget (as Microsoft Word and Excel documents) per the instructions listed in Section 7 and 8 of the RFP.

1. Project information

Organization name: The City of Northfield

Organization address: 801 Washington Street

City: Northfield

State: MN

Zip code: 55057

County: Rice

Contact name: James McDermott

Title: Water Quality Technician

Phone: 507-645-3071

Email address: James.McDermott@northfieldmn.gov

Organization type: Tribal government

Local/Regional government (plus select one below)

- City
- County
- Town/Township
- Soil and Water Conservation District
- Water Management Organization
- Watershed District
- Regional Development Commission
- Metropolitan Planning Organization

Grant requested: **\$858,378.00**

+ Matching funds: **\$ 95,376.00**

= Total project cost: **\$ 953,754.00**

Project Title: Neighborhood Flooding Issues – Infrastructure Improvements

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		Yes	No
1.	Is applicant the sole source of matching funds for this project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If no , explain:		
		Yes	No
2.	Is applicant in compliance with Minnesota's tax and environmental regulatory requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If no , explain:		
3.	Does the proposed project consist of new or upgraded green and/or gray infrastructure intended to address water quantity issues, reduce the risk of localized flooding, and increase resilience to the impacts of Minnesota's changing climate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	Does the project demonstrate predicted flood reduction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.	Will project follow all applicable local, state, and federal rules and obtain all necessary permits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	List permits or other approvals necessary for this project, including wetland permits as applicable, and note whether they have been secured or are anticipated: A no-loss decision has been approved for this project by the Rice County Soil and Water Conservation District under the Minnesota Wetland Conservation Act. An MPCA Construction Stormwater Permit will be acquired prior to construction.		
6.	Is the applicant the current landowner?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If no, attach a letter that includes permission, interest, and commitment from the property owner for the work being completed on the property. A signature from the individual who has the power to grant permission for the proposed activities is required on the letter. Ultimate project ownership (check one of the following): <input checked="" type="checkbox"/> On public land within applicant boundaries <input checked="" type="checkbox"/> On private property within applicant boundaries <input type="checkbox"/> Other (explain):		
7.	Will an organization involved in the project be responsible for long-term annual operation and maintenance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If yes, what organization/department: The City of Northfield, Public Works Department If no , explain:		
8.	Has the applicant attached:	Yes	No
	a. plans and specifications including:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Site plans <input checked="" type="checkbox"/> Technical drawings/cross sections <input checked="" type="checkbox"/> Soil borings and/or soil infiltration testing results (if applicable) <input checked="" type="checkbox"/> Stormwater management calculations and/or model outputs		
	b. budget (including engineer's estimate of cost and non-construction costs)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c. climate vulnerability assessments (or equivalent planning document) identifying the need for proposed project, and if applicable, feasibility study for proposed project	<input checked="" type="checkbox"/>	<input type="checkbox"/>

d. land use permission letter (if applicable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. map(s) showing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Drainage area (acres) <input checked="" type="checkbox"/> Parcel map <input checked="" type="checkbox"/> Boundaries of area directly affected by the project (with GIS coordinates or visible street names) <input checked="" type="checkbox"/> Existing stormwater conveyance system, including green infrastructure <input checked="" type="checkbox"/> Not required for eligibility, but to receive points in relevant categories, provide map(s) showing the following: <ul style="list-style-type: none"> • Environmental Justice (EJ) areas, including project area and the areas directly benefiting from the project (if applicable) • Structures/infrastructure protected • Emergency services/evacuation routes protected 		

2. Project details

1. Provide a brief narrative description of the project. Describe the identified need for this project. Include **project goal(s)** and **final deliverable(s)** [limit of 500 words total]:
 - a. Project narrative description and identified need: [The Neighborhood Flooding Issues Infrastructure Improvements project is based on the recommendations of the city's Surface Water Management Plan to eliminate flood risk for the 100-year 24-hour rainfall event at the following properties: 400, 404, & 412 Juniper Ave, 304 Greenvale Ave, 301 Highland Have, 518 First Street W, and Sibley Swale Park.](#)
 - b. Project goal: [The overall goal for the project is to provide flood mitigation and relief for affected properties within the City of Northfield for the 1% \(100-yr\) 24-hour rainfall event.](#)
 - c. Project final deliverables: [The project will provide flood mitigation and relief for the affected 400, 404, and 412 Juniper Avenue properties. Construction activities will involve clearing and grading, installation of new storm sewer, removal and replacement of bituminous road, concrete sidewalk, and riprap, abandoning existing storm sewer, and restoration. The property at 518 First Street West will receive flood mitigation and relief from the installation of a backflow preventer, flared end section, rip rap, and minor grading and restoration. The Spring Street site will provide flood mitigation and relief for properties at 304 Greenvale Avenue and 301 Highland Avenue. Construction activities will involve clearing and grading, removal of existing storm sewer, installation of new storm sewer and associated facilities, repaving bituminous road and concrete sidewalk, and restoration. The Sibley Swale Park site will provide flood mitigation and relief in the park area surrounding the Sibley Swale Park Wetland. This wetland has a history of flooding during seasonal highwater events which temporarily inundates portions of the paved trail on the south and west side of the wetland and the backyards of neighboring properties to the south and east. Construction activities will involve clearing and grading, bituminous path replacement, installation of new storm sewer and associated facilities and restoration. Installation of an Outlet Control Structure \(OSC\) and intake near the delineated boundary of the wetland will provide necessary flood mitigation and relief to the impacted areas.](#)
2. Identify the following. Reference supporting documentation in Table 1.:
 - a. Type of stormwater management practice: [Increased stormwater conveyance capacity with stormwater pipe and inlet installations accompanied by backflow prevention device installations.](#)
 - b. Proposed infrastructure lifespan: [80-100 years for concrete pipe.](#)
 - c. Expected resilience improvement(s) (include quantitative benefits such as storage volume added, inundation depth reduction, pipe capacity increase, rate control improvements etc): [Increasing stormwater pipes from 12", 15", and 18" RCP to 36" RCP at Juniper Ave project area results in an increased pipe capacity of approximately 40 CFS and reduces the HWL elevation from 944.92 to 942.91. Adding an overflow structure and stormwater](#)

conveyance pipe, as well as increasing existing stormwater pipes from 12" RCP to 48" RCP at Greenvale Ave and Highland Ave project area results in an increased pipe capacity of approximately 40-45 CFS and reduces the HWL elevation from 946.28 to 945.10. Adding a backflow preventor to the existing stormwater pipe at the 1st Street West project area results in a reduced HWL elevation, from 949.38 to 948.26. Adding an overflow structure and stormwater conveyance at Sibley Swale Park results in a reduced HWL elevation at the wetland, from 972.38 to 971.8.

- d. Acres in drainage area: The Juniper Ave project area drains approximately 7.5 acres. The Highland Ave and Greenvale Ave project drains approximately 33 acres. The Sibley Swale Park project area drains approximately 31 acres.
- e. Description (include age) of current stormwater conveyance system (if existent) in the project area, including relevant existing green infrastructure:

The current stormwater conveyance system at the Juniper Ave project location is 52 years old and consists of a concrete apron on the east end of the ditch system that is connected to concrete pipe that runs east across Linden street, and then north across Lincoln parkway.

The current stormwater conveyance system at the Greenvale Ave and Highland Ave project location is 40 years old and consists of a drainage structure in the backyard of the 301 Highland Ave residence that connects to a concrete pipe running north and then east, crossing Spring St. N and outletting to the Lincoln Waterway to the east.

The current stormwater conveyance system at the 1st Street West project location is 15 years old. It consists of a concrete apron inlet in the backyard of 518 First Street that connects to concrete pipe running east beneath 1st Street W.

The current stormwater conveyance system at the Sibley Swale Park Project location is 52 years old and consists of a single drainage structure in the northwest corner of the park. The current grading of the park does not allow stormwater to flow easily to the drainage structure.

- 3. Is the project intended to address observed localized flooding? Describe location, severity, and inundation depth; attach maps and photos if applicable.

The project is intended to address localized flooding at four separate project locations in Northfield. The Juniper Ave location experiences ponding in a ditch along the south side of Lincoln Parkway that borders the backyards of three residential lots. The HWL elevation of this area is 943.62 and 944.92 for the 10-year and 100-year storm, respectively. The low opening elevations of the three residential buildings are 944.68, 944.56, and 944.32. The EOF elevation onto Lincoln Parkway is 944.8.

The Highland Ave and Greenvale Ave location experiences ponding in a low point shared by two residential lots. The HWL elevation of this area is 944.32 and 946.28 for the 10-year and 100-year storm events, respectively. The low opening elevations of the two residential buildings are 947.29 and 946.37. The EOF elevation is 946.5 on the east side of the north residential building.

The 1st Street West location has a low point in the backyard of one residential lot, with an outlet that connects to the existing storm sewer system. This pipe apron causes water to back flow from the main line storm sewer on 1st Street. The backyard experiences a HWL elevation of 947.90 and 949.38 for the 10-year and 100-year storm events, respectively. The low opening elevation of the residential building is 951.30.

The Sibley Swale Park location contains a landlocked wetland that submerges bordering pathways 1-2-feet, during rain events larger than the 50 -year event. North of the wetland is another low area adjacent to the backyard of a residential property. The 100-year HWL elevation in this area is 961.36, and the low opening of the home is 963.16.

- 4. List number and type of structures and infrastructure that will be protected (i.e., reduced flood risk) by the proposed project. In Table 1, identify attached documentation demonstrating project will reduce predicted frequency and/or depth of localized flooding for structures/infrastructure listed below. **Do not include all structures in the drainage area, only those that are directly impacted by proposed project:**

- a. Number and type of residential structures (e.g., single family, small multifamily, large multifamily): [7 single family residential structures.](#)
 - b. Number and type of commercial structures (e.g., small commercial, manufacturing facility, warehouse, etc.): [None](#)
 - c. Number and type of public facilities (e.g., libraries, city hall, community centers, etc.): [None](#)
 - d. Number and type of critical infrastructure: (e.g., schools, hospitals, drinking water/wastewater infrastructure, roads/intersections, etc.): [None](#)
 - e. In what ways will the project improve public safety (e.g., access maintained to emergency services/evacuation routes, prevent emergency spills and/or contamination spreading, protect bridges from failure due to heavy rain events, pedestrian travel lanes kept usable, etc)? [The proposed project will reduce the risk of flooded residential properties and public roadways, including the intersection of Lincoln Parkway and Linden St. N.](#)
 - f. Is there potential for negative downstream impacts? How was this determined? Reference supporting documentation in Table 1. [The city has worked with the Rice County Soil and Water Conservation District during the planning and design phases of this project to identify and avoid downstream impacts.](#)
5. How was resilience to climate change accounted for in project design?
- a. Describe planning and/or modeling completed for proposed project. Reference supporting documentation in Table 1. [As a part of this project, existing and proposed condition hydrologic and hydraulic models were created for the city drainage system within the project area. These models incorporate the newer NRCS’s MSE 3, 24-hour rainfall distributions with current Atlas 14 rainfall depths as well as the end-of-century future predicted rainfall projections for Rice County. The project team used these models when determining the proposed system improvements to find the best solutions for flooding reduction and added climate resiliency.](#)
 - b. Climate projection methodology: [Increased Rainfall Predictions outlined in Rice County Future Conditions Rainfall Estimates from Equipping Municipalities with Climate Change Data to Inform Stormwater Management \(Noe et al. 2022\)](#)
 - c. Design storm: [10-year \(pipe sizing\), 100-year \(flood impacts\)](#)
 - d. Describe how project was sized to address future precipitation at end of estimated project life: [Data reflected in Minnesota’s climate resources, including the Minnesota Climate Explorer, and the UMN 2022 report for Rice County shows that annual rainfall is increasing in the Cannon River watershed, including in Northfield. These future predicted rainfall depths were taken into consideration during the planning and design phases of the project. These steps taken will ensure the stormwater infrastructure is designed with resilience to the changing climate.](#)
6. Using the [MPCA’s criteria and interactive mapping tool](#) (recently updated on the MPCA website), will the proposed project or the direct benefit from the project be located in one or more MPCA identified environmental justice (EJ) areas of concern? Yes No
- If yes:
- a. On a map, show the project location and the area directly benefitting from the project within an EJ area(s) Reference supporting documentation in Table 1.
 - b. Describe how the proposed project will specifically benefit EJ communities:
7. Describe how communities were meaningfully involved (see definition in “Part 6: Priorities” of the RFP) and engaged during the project development and how they will be kept informed during construction: [This project proposal was brought to the Northfield City Council on August 22nd 2023 for review and approval. City staff then held a community kick-off meeting on August 31, 2023 to present the approved infrastructure improvement project and receive feedback from affected residents. City staff also met with individual residents that live on properties within the project boundary to discuss the project, easement acquisitions, and to receive feedback. The City also maintains a page on our website dedicated to this project to provide regular updates to Northfield citizens.](#)

8. Describe any co-benefits of the project:
- Storage and reuse/drought protection: [Not applicable to this project.](#)
 - Infiltration/groundwater recharge: [Not applicable to this project.](#)
 - New community amenity related to stormwater function (e.g., an area that intentionally floods during storm events and serves as a pedestrian trail when not flooded, etc.): [As part of the project, the City will improve the trail system and provide flooding relief to the Sibley Swale Park project location. This will eliminate damage to vegetation in the park caused by overland storm water flow from the wetland, and allow for future park beautification and infrastructure projects without fear of flood damage.](#)
 - Pollutant treatment: [Not applicable to this project](#)
 - Impervious surface/heat island reduction: [Not applicable to this project](#)
 - Increased tree canopy: [Between the removals and plantings at each project area, the total tree cover added will be 33 deciduous trees for the entire project. This includes 14 trees planted at the Sibley Swale Park location in an area that regularly sees standing water during heavy rain events prior to the drainage improvements that are part of this project.](#)
 - Other:
9. Provide quantitative justification of how the project is cost-effective, as applicable:
- Are future savings anticipated to result from the proposed project (describe how, and how much)? [Residents at all four project locations experience stormwater pooling on their property, increasing the risk of flood damage to both structures and property. This project will reduce the risk of the city spending money on temporary flood mitigation efforts.](#)
 - Will funding be used for water quantity project costs (e.g., stormwater pipe upsizing) paired with concurrent stormwater/drinking water/ wastewater project(s) receiving State Revolving Fund funding where climate resiliency costs are ineligible? If applicable, describe: [Not applicable to this project.](#)
 - Will project be paired with concurrent Capital Improvement Project to include resilient stormwater improvements? If applicable, describe: [Not applicable to this project.](#)
 - Other:
10. Describe the estimated timeline for this project and what the applicant has done to ensure the project is viable (e.g., overall— how ready is the project for construction, how complete are the plans, what planning, or site investigation work has been completed already, what else is needed before construction can begin, how long are those things anticipated to take, how much time is needed for completion of construction, etc.). Attach feasibility study if applicable. Reference supporting documentation in Table 1.
[The project is currently in the easement acquisition phase and has received signatures from the property owners at 301 Highland Ave and 518 First Street W. The plans area 99% complete. The final plans and specifications are set to be presented to Northfield City Council on February 18th, 2025 for approval.](#)

For application questions 1-10 above, describe the location of supporting information within attached documents, as applicable, in the table (Table 1.) provided below. If an answer is not referenced in a supporting document, write “N/A”. Do not attach documents that are unrelated to proposed project.

Table 1.

Question	Supporting document title(s)	Relevant page numbers, figures, maps, photos, etc.
1.	Surface Water Management Plan	Pages 32, 34, 38, and 45 and Figures NFA-2, NFA-4, NFA-9, NFA-16, and NFA-18

2.	NORTHFIELD FLOOD PREVENTION 3-2-24 99% PLANS UPDATED As-built Drawings	C0.01 – C0.04 and C5.01 – C5.04
3.	Surface Water Management Plan Drainage Report	Pages 32, 34, 38, and 45 and Figures NFA-2, NFA-4, NFA-9, NFA-16, and NFA-18
4.	Surface Water Management Plan	Pages 32, 34, 38, and 45 and Figures NFA-2, NFA-4, NFA-9, NFA-16, and NFA-18
5.	Drainage Report	
6.		
7.	08/22/23 Council Agenda Packet	Agenda Item 11
8.	NORTHFIELD FLOOD PREVENTION 3-2-24 99% PLANS UPDATED	L1.01 – L1.03
9.	Surface Water Management Plan	Pages 32, 34, 38, and 45 and Figures NFA-2, NFA-4, NFA-9, NFA-16, and NFA-18
10.	Project Process - Current	Page 1

3. Experience and qualifications

- List the individuals from your organization who will be involved in the proposed project, including their job titles and specific roles and qualifications:

James McDermott, Water Quality Technician– City of Northfield, MN

James will manage the grant coordination with the MPCA and coordinate with Bolton and Menk during construction to ensure regulatory compliance and track project process.

Sean Simonson, Engineering Manager – City of Northfield, MN

Sean will oversee and track project costs, will review contractor bids and make recommendations for contractor selection and project award by the Northfield City Council.

Dave Bennett, Public Works Director/City Engineer – City of Northfield, MN

Dave oversees the public works department to ensure streets and utility construction and maintenance scheduled and completed as needed.

- Will anyone outside your organization be responsible for work performed? Yes No

If yes, provide name of organization(s) and contact information, brief description of their relevant experience and qualifications related to the proposed project, and describe the role(s) of the outside organization(s) in the project:

Bolton & Menk

Bolton & Menk will be responsible for completing final plans and specifications, aiding in the public bid and contractor selection, construction staking, change orders, construction administration, grant administration as needed, and project close out.

Bolton & Menk, Inc.
12224 Nicollet Avenue
Burnsville, MN 55337
Phone: (952) 890-0509

Email: Burnsville@bolton-menk.com

Contact Person:

Brad Fisher P.E. – Bolton & Menk

Email: Bradfi@bolton-menk.com

Phone: [\(612\) 759-7240](tel:(612)759-7240)

Role: The firm's 75-year history is focused on developing safe and sustainable infrastructure solutions for client communities, large and small, across Minnesota. The firm specializes in design and construction oversight for many different municipal type projects including drainage infrastructure projects similar to the Neighborhood Flooding Issues - Infrastructure Improvements.

The following summarizes similar Bolton & Menk projects constructed recently:

- Stormwater pond assessment and cleaning, Northfield, 2017
- Surface water management planning, Northfield, 2020
- 2023 miscellaneous Storm Structure Repair project, Northfield, 2023
- Jefferson Parkway Mill & Overlay & Mill Towns Trail Improvements, Northfield, 2024
- MS4 Program Coverage, Northfield, 2024

Intertek PSI

Bolton & Menk has partnered with Intertek-PSI (654-46-1848) for construction materials testing services on this project. PSI specializes in construction materials testing, geotechnical investigations, environmental consulting and facilities engineering. PSI has been providing geotechnical engineering and construction testing services for over 100 years. PSI's Eagan operation will provide construction materials testing services. PSI Eagan maintains AASHTO Resource and CCRL accreditations. They employ technicians with ACI, MnDOT, ICC and PCI certifications.