

Planning Grants for Stormwater, Wastewater, and Community Resilience

Application
FY 2022

Doc Type: Grant Application

Instructions: Read the complete *Request for Proposal (RFP)* and other associated documents before submitting this application.

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

Applications are due no later than 4:00 p.m. Central Standard Time (CST) on Tuesday, December 21, 2021.

Submit application, workplan 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: City of Northfield

Organization address: 801 Washington Street

City: Northfield

State: MN

Zip code: 55057

County: Rice

Contact name: Cole Johnson

Title: Water Quality Technician

Phone: 507-645-3071

Email address: Cole.Johnson@ci.northfield.mn.us

Organization type: ☐ Tribal government

☐ Local/Regional government (plus select one below)

☒ City

☐ County

☐ Town/Township

☐ Soil and Water Conservation District

☐ Water Management Organization

☐ Water District

☐ Regional Development Commission

☐ Metropolitan Council of the Twin Cities

Region

Project focus area: ☒ Stormwater Resilience Planning ☐ Wastewater Resilience Planning

☐ Community Resilience Planning

Grant requested: \$ 90,000

+ Matching funds: \$ 10,000

= Total project cost: \$ 100,000

Yes No

1. Is applicant the sole source of matching funds for this project?

☒ ☐

If **no**, is supporting documentation of commitment for cash or in-kind matching funds from outside

☐ ☐

organizations involved in the project attached?

If **no**, explain:

2. Is applicant in compliance with Minnesota's tax and environmental regulatory requirements?

☒ ☐

If **no**, explain:

Project Title: Lincoln Waterway Box Culvert Improvement.

2. Project Details

1. What is the purpose of this project and with whom will you share the results: The purpose of this project is to design an infrastructure improvement project that will provide flood mitigation and increased resilience to neighbors along the Lincoln Waterway. The Lincoln Waterway is an open channel ditch that collects stormwater from a 1050 acre watershed area on the north side of town and conveys it down to the Cannon River. Once this project is completed, it will provide the most relief to a nearby apartment complex that supplies affordable housing for income restricted residents of Northfield. Through the City's 2020 Surface Water Model update, it was identified that the apartment building has negative freeboard for the 100-Yr storm event. This situation is caused by a bottleneck in the system at the railroad track where the stormwater goes into a small box culvert to continue on its path to the Cannon River. Over 96% of the watershed area drains through the existing box culvert. By installing a 6'x8' box culvert to replace the existing 2'x3' box culvert, the high water level (HWL) of the Lincoln Waterway would be reduced by nearly 11 feet providing over 8 feet of freeboard for the adjacent apartment building. This project also has the potential to reduce surcharging in storm networks that are hydraulically connected to the Lincoln Waterway.

The money that the City is requesting from this Grant will be used to hire a qualified consultant to provide detailed design plans and specifications that will allow us to implement the proposed improvement described above.

Through our design process, we would plan to host a neighborhood meeting for all directly affected residents to provide input or ask questions about the project. This typically occurs around the 50% plans stage. This is a standard practice that we include in all of our design processes. The project information would also be hosted on the City of Northfield Webpage for any resident to view.

2. What is the need for this project, and how will the planning that is proposed make a meaningful difference to the community in preparing for climate change including human health impacts: As stated in the above paragraph this project would serve to protect multiple families and property from being affected by the 100-Yr storm event. There is also a greater need for this project since it is not in a regulated FEMA floodplain so the residents/property owners are not required to have flood insurance. This project has the ability to mitigate flooding for families that do not have the financial ability to recover from such a flood event since this property serves income restricted residents A secondary benefit to the project is it will further protect Greenvale Park Community School and the Northfield Community Education Center from a flood event. Both of these properties are upstream and adjacent to the Lincoln Waterway and they also serve people of color and low income populations.
3. How will information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project in the future be incorporated into the methodology of this planning project: While there is not great data currently available to project the severity of future rainfall events, the City used the Surface Water Model to see if our proposed mitigation project would protect the adjacent apartment complex and properties up and downstream of the improvement. To complete this task we used the 100-Yr *Plus* rainfall event as a modeled storm in our surface water model. The 100-Yr *Plus* rain event is the upper limit of the 90% confidence interval for the Atlas -14 100-Yr rainfall event. For Northfield, that is equal to 9.61" of rainfall in a 24-hr period (the normal Atlas-14

24hr 100-Yr storm is 7.31" for the Northfield area). We feel that this approach builds resiliency into our proposed improvement through a scientific approach, recognized by FEMA and the MnDNR, for something that is largely unknown or difficult to quantify exactly how much water storm events will be precipitating in years to come.

When increasing the rate of which water flows, there is always a chance for downstream impacts to occur. The City also used the model to create inundation mapping downstream of the box culvert improvement to verify if properties downstream would be impacted or not. According to the model and the inundation maps, downstream properties and structures will not be impacted by this improvement. The existing landscape downstream of the improvement has high slopes and elevated roadways where the Lincoln Waterway intercepts them. Most of the land downstream of the box culvert improvement is densely vegetated hardwood natural landscape.

4. Will the geographic area specifically addressed by the proposed planning project include one or more MPCA identified environmental justice (EJ) areas of concern, or an environmental justice area? ☒ Yes ☐ No

[To make this determination, look at the [MPCA's criteria and interactive mapping tool](#) on the MPCA website; or alternatively determine with independent research using the following criteria: environmental justice area means one or more census blocks (1) in which, based on the most recent data published by the U.S. Census Bureau: (i) 40 percent or more of the population is nonwhite; (ii) 35 percent or more of the households have an income at or below 200 percent of the federal poverty level; or (iii) 40 percent or more of the population over the age of five have limited English proficiency; or (2) within Indian country, as defined in U.S. Code, title 18, section 1151.]

If yes:

- a. Identify/describe the area(s) and provide the specific information and source(s) used to determine the area(s) that meet the criteria: The Lincoln Waterway runs through the heart of the MPCA's Environmental Justice (EJ) Area. The waterway spans the entire EJ area from East to West allowing for potential benefits to several properties within this delineated area.
- b. Will the planning to be undertaken by this project yield benefits for communities within these EJ areas of concern/environmental justice areas which have higher concentrations of low-income residents and/or people of color including tribal communities? ☒ Yes ☐ No
 - i. If yes, describe these communities and how they will benefit: As described in the paragraphs above, the greatest place for improvement is directly adjacent to the proposed improvement. This is the North and South Oak Apartments Building. This property serves income restricted residents of Northfield and accepts Section 8 Vouchers. The residents on the first floor currently have negative freeboard for the 100-Yr Storm event which places many of their belongings and livelihood at risk. It would likely be much more of a hardship for these residents if a flood event impacted the building and ruined many of their belongings.
 - ii. If yes, describe how the planning completed for this project will address concerns about equitable resilience for these communities compared with others within the geographic area covered by the project: Once plan design is complete, this project will utilize a large portion of the City's Stormwater Budget for the year of construction to complete the implementation of the project. Focusing money from the City's Stormwater Fund in this area provides an equitable outcome towards resilience for all community members affected in this area.
- c. Will these communities be provided the opportunity to have a voice in decision-making through substantive engagement as part of the planning completed for this project? ☒ Yes ☐ No
If yes, describe specifically how this will be done; if no, explain why not: Residents and property owners will be notified during the plan design phase around the 50% timeline that a neighborhood meeting is going to occur. At this neighborhood meeting, residents and property owners will be given a presentation of the proposed improvement outlining key outcomes and be allowed to ask questions or provide input on the

project based on things they have observed in the area. The same type of meeting will be held before construction to explain the process and potential impacts to their living area from the construction process. This information will be taken into account and incorporated into the construction plans where deemed necessary.

5. What are the potential barriers or challenges for this planning project, and how will they be addressed: The largest barrier that is foreseen for this project is coordination with the railroad. Since the existing box culvert crosses underneath an existing and active railroad, there will need to be significant coordination and permitting between the railroad authority and the City. This process may call out for different construction methods for successful completion of the project. The City has recently worked with the railroad authority to redevelop railroad crossings and anticipates a successful planning/permitting process.
6. How will this planning project result in assignment of responsibility for follow-up action(s) to increase local resilience: This area was one of several areas throughout the City identified as needing improvement through our 2020 Surface Water Model update. City Staff are already in discussion with City Council providing them updates and needs for existing stormwater infrastructure to protect isolated areas from flooding events. There will be an ongoing effort of capital planning to ensure that these areas are addressed and protected in the future.
7. How will this project position a tribal/local government to pursue funding as needed to undertake follow-up implementation of the resilience project(s) for which planning was conducted: Completion of the plan design will allow City staff to plan the implementation/construction project in the CIP.

3. Experience and qualifications

1. Describe applicant's experience and qualifications related to the applicant's role in the proposed planning project: Cole Johnson, Water Quality Technician for the City is the primary applicant for the grant. Cole is responsible for managing the City's MS4 program and stormwater infrastructure. He has been working with residents while employed with the City to create an inventory of properties that have had drainage issues. These properties were included in the 2020 Surface Water Model update to evaluate if there is a flooding risk to the structure. Several of these properties have capital improvements tied to them as a result of the 2020 Surface Water Model update, including the Lincoln Waterway.
City Staff in the Engineering Department including the City Engineer, Engineering Manager, and Water Quality Technician will review the plans to ensure a successful project from beginning to end.
2. Will anyone outside your organization be responsible for work performed? ☒ Yes ☐ No

If yes, provide name of organization(s) and contact information, experience, and qualifications related to the proposed project, and describe the role of the outside organization(s) in the project: City Staff intends to hire a qualified consultant to complete the plan design for the proposed improvements. The consultants that are solicited for proposals will be required to submit resumes and provide examples of projects they have worked on in the past of similar nature.
3. Provide detailed information about the qualifications and experience – including with similar projects – of the specific people who will work on this project, both within the applicant organization and from outside organization(s):

Cole Johnson – Completed 2017 Citywide Stormwater Pond Assessment to evaluate which ponds were in need of dredging and other maintenance activities. Member of the Technical Advisory Group for the Cannon River Watershed Management Plan. Responsible for identifying and overseeing several storm water infrastructure repairs. Created an inventory of structurally deficient stormwater infrastructure and prioritized projects to be planned for repair in 2023

as directed by the City's Strategic Plan. Provided oversight and managed the 2020 Surface Water Model update and the Neighborhood Flooding issues component of the update. Provided oversight and project management for the 2020 Stormwater Pond Dredging project. Currently providing oversight and project management for the plan design of the 2022 Stormwater Pond Dredging project.

Sean Simonson – City of Northfield Engineering Manager

- 22 years of Municipal Project Design/Management
- Successful completion the following Grants Programs:
 - MnDOT Local Road Improvement Program (LRIP)
 - MnDOT Local Partnership Program (LPP)
 - MnDOT Local Bridge Replacement Program
 - MN DNR Parks and Trails Legacy Grant

David Bennett – City of Northfield City Engineer/Public Works Director

- 20 Years of Municipal Infrastructure Project Oversight and Design
- Storm water infrastructure projects including
 - Drainage systems improvement modifications
 - Outlet/Inlet modification
 - Expansion Storage Expansion
 - Storm water diversion
 - BMP design

Consultant for Plan Design – Undetermined

The City has not selected a consultant to complete the plan design yet. The City plans to release a competitive Request for Proposals or direct select a qualified consulting firm. Whichever option the City decides to go with, the City will ensure the consultant has adequate experience and background information to ensure the project is completed effectively.