MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

Attachment A
Planning Grants for Stormwater, Wastewater, and Community Resilience Workplan

SWIFT Contract No. 209703
AI: 250400
Activity ID: PRO20220008

Project title:

Duluth Stormwater Resiliency Plan

1. Project summary:

Organization: City of Duluth (the City)
Grantee's Authorized Representative (Grantee project manager): Tom Johnson
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Project information

Start date: 05/2022 **End date:** 06/30/2023

Total cost: $114,420.00 (Grant $100,000.00; In-Kind Match $14,420.00)

2. Statement of project details

The City understands and realizes that its many stormwater infrastructures are presently not meeting community needs and may pose a risk to residents, property, and other critical infrastructure as Minnesota and Duluth see increased climate-related stresses. The City will do an in-depth study of the 32nd Avenue West Creek watershed, which lies within economically disadvantaged portions of Duluth's Lincoln Park Neighborhood, in an attempt to identify specific areas of vulnerability through modeling, assessment of infrastructure and engagement of community residents and stakeholders. The Duluth Stormwater Resiliency Plan (the Plan) will also include an expanded assessment of the City, and work to identify similar vulnerabilities on a community-wide scale, in an effort to better prioritize which communities are presently at risk.

3. Goal statement, project deliverable(s), tasks, and subtasks

Goal statement:
The Plan will recognize areas of vulnerability in stormwater infrastructure and will identify project areas that will increase community resilience to climate related flood events, specifically in the 32nd Avenue West Creek watershed, which lies within the Lincoln Park Neighborhood of Duluth, an Environmental Justice Area of Concern. The Plan will also name communities that may pose similar risks as Duluth's climate changes, in an effort to best prioritize projects and funds in neighborhoods of need.

Project deliverables:
The Plan will produce a set of deliverables that will situate the City and community stakeholders in a position to best implement projects that will make a meaningful difference related to community stormwater resilience. The Plan will serve as an important resource for pursuit of future implementation funding.
This process will commence with a thorough vulnerability assessment based on the findings of hydraulic and hydrologic modeling in the 32nd Avenue West Creek Watershed utilizing XPSWMM and incorporating the wide range of intersectional characteristics which collectively define the watershed area. To incorporate a better understanding of how future climatic changes may impact the 32nd Avenue West Creek watershed, traditional Atlas-14 precipitation data will be compared to recently downscaled, county-specific projections from the Humphrey School of Public Affairs, University of Minnesota. Modeling efforts specific to the 32nd Avenue West Creek watershed, and will be followed by a geospatial analysis and characterization of the many other watersheds within the jurisdictional authority of the City of Duluth, providing a broad-scale identification of potential stormwater vulnerabilities. The summation of the project tasks specific to 32nd Avenue West Creek and those more outwardly focused will be compiled to the Plan, providing to the City a prioritized list of actionable solutions and improvements necessary to improving its relative extent of climate readiness. Project findings and recommended stormwater-related actions will be shared with residents in the 32nd Avenue West Creek watershed via facilitation of at least one Community Stormwater Resiliency Workshop, with public comments and concerns actively solicited and summarized for future reference by City staff. The project will conclude with the delivery to City staff the pertinent State and Federal funding opportunities aligned to the implementation of solutions intended to address identified areas of stormwater vulnerability.

Task 1 of 7: Issuance of RFP to Hire Consultants

Subtask 1a: Develop and Issue Request for Proposal (RFP)
Brief description of activities involved: Draft a RFP that incorporates the work plan for the project and includes required tasks and objectives. Issue RFP for consultants to respond to via the City webpage.

Subtask 1b: Review, Score, and Award RFP
Brief description of activities involved: Select city staff to review RFP responses and score them based on predetermined scoring system. Award project to successful consultant.

Subtask 1c: Complete Contracts with Consultant and Issue Notice to Proceed
Brief description of activities involved: Standard City contracts will be drafted and sent to consultant to complete. Contracts will be finalized at the City and Notice to Proceed will be issued.

Task 2 of 7: Neighborhood/Watershed-Scale Stormwater Vulnerability Assessment

Subtask 2a: Neighborhood Vulnerability Assessment
Brief description of activities involved: During this task, a stormwater vulnerability assessment will be completed for the 32nd Avenue West Creek sub watershed. The vulnerability assessment will be completed using a hydrologic/hydraulic model (XP-SWMM) to identify and prioritize areas of concern within the neighborhood that are most at risk (e.g. infrastructure, property flooding and damage, communities impacted). Modeling exercises will utilize precipitation data from NOAA Atlas-14 and will include comparative analysis to recently downscaled, county-specific projections from Humphrey School of Public Affairs, University of Minnesota – Twin Cities

During this assessment, project solutions to risk will be identified. This will include an identification of candidate project sites and prioritized capital improvement projects.

Subtask 2b: Evaluation of Candidate Projects
Brief description of activities involved: A concept level estimate of construction costs will be developed for the candidate project sites. Once project costs have been estimated, a cost effectiveness table will be developed comparing practice cost versus damage reduction. While the sites will be designed primarily for flood damage reduction, the sites will likely provide ancillary benefits, such as water quality and habitat. The water quality and habitat benefits will be estimated, and a cost-effectiveness table will be developed relating candidate practice cost to those benefits.

City staff will also evaluate and rank candidate projects identified during Subtask 2a based on the resiliency criteria established by the community in Subtask 2a. The City anticipates these criteria will also include acceptability, constructability, permits, and implementation time.

This task will deliver the cost-effectiveness of the identified projects for flood damage protection, water quality, and habitat in a manner that can be used for multiple stakeholders. Based on this task, the City will have a map and ranked list of projects for implementation, aimed at building resiliency in a vulnerable neighborhood.

Task 3 of 7: Broad-Scale Geospatial Analysis and Characterization of Duluth's Watersheds; Identification of Discernible Stormwater Vulnerabilities

Brief description of activities involved: The City will complete a broad-scale geospatial analysis by examining multiple areas of existing data, including topographical contours, land use characteristics, new FEMA floodplain mapping, DNR/MPCA water quality assessments, and environmental justice shapefiles. The outcome of this high level analysis and characterization will be series of observations and resultant recommendations reported to the City on where best to focus future neighborhood/watershed

stormwater resiliency efforts that would best seek to address social and environmental issues.

Task 4 of 7: Duluth Stormwater Resiliency Plan

Brief description of activities involved: The City and contractor will complete the Plan summarizing all previous Tasks. The Plan, to be developed in two distinct parts, will summarize a "Neighborhood Scale" portion from those outcomes developed in Task 2, and a "City Scale" portion to be developed from those outcomes identified in Task 3.

The "Neighborhood Scale" portion of the Plan, with its observations and resultant recommendations, will provide the City with a framework from which to pursue future targeted hydraulic and hydrologic modeling efforts meant to effectively plan for climate resiliency.

Task 5 of 7: Public Stormwater Resiliency Workshop (Workshop)

Brief description of activities involved: During this Task, project partners in collaboration with the City will facilitate at least one community Workshop for the purpose of sharing project findings and actively soliciting comments and concerns from residents of the 32nd Avenue West Creek watershed. To ensure that future tasks and iterative processes associated with this project reflect the community's values, the City will gather the list of previously ranked candidate projects (see subtask 2b) to be shared for community revision and consideration at the community Workshop.

Task 6 of 7: Connecting Projects to Funding

Brief description of activities involved: During this Task, project partners will develop and deliver to City staff a matrix of potential State and Federal grant and bonding programs that can be targeted for project implementation. The matrix will connect funding opportunities to each ranked candidate project.

Task 7 of 7: Final Report and Project Deliverables

Subtask 7a: Submit Grant Final Report

Brief description of activities involved: Will provide a final grant project report using the MPCA template approximately one month prior to the end of the grant agreement or at completion of the project, whichever occurs first. Will respond promptly to any requests by the state's authorized representative for additional information and/or corrections to the report. **Timeframe:** No later than June 2023

Subtask 7b: Submit Project Deliverables

Brief description of activities involved: Will provide a consultant's report detailing the modeling conducted, how future precipitation was incorporated into the model, and conclusions and recommendations.

Timeframe: No later than June 2023

4. Budget (see attached)