

## Environment Committee

Meeting date: June 26, 2018

For the Metropolitan Council meeting of July 11, 2018

**Subject:** Inflow and Infiltration Demonstration Project Grant

**District(s), Member(s):** All

**Policy/Legal Reference:** Thrive MSP 2040 Water Resources Policy Plan

**Staff Prepared/Presented:** Marcus Bush, 651-602-1166; Kyle Colvin, 651-602-1151

**Division/Department:** MCES Tech Services c/o Leisa Thompson, 651-602-8101

### Proposed Action

That the Metropolitan Council authorize the Regional Administrator to approve the guidelines for an inflow and infiltration demonstration project grant, as described in Attachment A, for up to \$500,000.

### Background

Clear water from inflow and infiltration (I&I) that enters the sanitary sewer systems has a significant impact on wastewater conveyance and treatment systems. The 2016 I&I Task Force of community officials recommended that MCES complete a demonstration project that provides additional measurement of the impact of I&I mitigation in the local systems. The Metropolitan Council accepted the report and authorized MCES staff to implement the recommendations of the report in Business Item 2016-221. This recommendation is to “design and implement a private property I&I mitigation demonstration project that would provide additional opportunity for measurement of impact on wastewater base and peak flows.”

Communities will be invited to present proposals for a demonstration project within their community. The project should present a strategy that other communities could apply to their own wastewater system and offer a better understanding in implementing their own I&I mitigation plan.

### Rationale

This grant is to support funding of a project that demonstrates a reproducible approach to address inflow and infiltration from private infrastructure and adds to the current knowledge base of technically effective and cost-effective I&I flow reduction strategies. At least 50 percent of the project cost must be contributed by the community.

### Thrive Lens Analysis

This action advances the Thrive outcomes of Sustainability and Stewardship. A sustainable and reliable regional wastewater system can be achieved with investments to local sewer systems to reduce excessive flows from I&I. By investing in this grant, the information and knowledge gained can be shared with many communities, making this a strategic investment that supports stewardship.

### Funding

Funding is included in MCES 2018 Operating Budget, sourced from the Council’s Regional Administration Levy Fund.

### Known Support / Opposition

There is no known opposition.

**METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES  
INFLOW AND INFILTRATION DEMONSTRATION PROJECT GRANT  
REQUEST FOR PROPOSALS**

**Project Summary**

Clear water from inflow and infiltration (I&I) that enters the sanitary sewer systems has a significant impact on wastewater conveyance, treatment and storage facilities. In 2016, a task force of community officials recommended that MCES complete a demonstration project that provides additional measurement of the impact of I&I mitigation in the local systems. The report and recommendations from the 2016 I&I Task Force are available at [www.metrocouncil.org/iandi](http://www.metrocouncil.org/iandi). The demonstration project (Project) should present a strategy that other communities could apply to their own wastewater system and offer a better understanding in implementing their own I&I mitigation plan.

Numerous previous flow studies and demonstration projects have been done throughout the country, which indicate that reduction of flows generated from I&I sources is a cost-effective approach to increasing wastewater service reliability and sustainability. This Project should demonstrate the effectiveness of I&I rehabilitation techniques that focus on reduction of I&I from private infrastructure, namely sewer service laterals that connect homes and businesses to the municipal sewer systems and improperly connected sump pumps. Pre-rehabilitation and post-rehabilitation monitoring is an expected component of the Project to quantify and document the achieved flow reduction. Proposals that integrate sub-metershed monitoring to discover and isolate sources of I&I and non-destructive rehabilitation techniques that reduce costs are encouraged.

This grant is to support funding of a Project that adds to the current knowledge base of technically effective and cost-effective I&I flow reduction strategies. At least 50 percent of the Project cost must be contributed by the community. A successful proposal will highlight the ability to:

- Demonstrate effective techniques for I&I mitigation of private infrastructure
- Utilize sub-metershed flow metering – also known as micro-metering – to locate sources of I&I within the proposed project area
- Provide measurement of impact of I&I mitigation on base and peak wastewater flows
- Detail the cost-effectiveness of the mitigation strategy

To support the implementation of a Project that demonstrates a reproducible approach to address inflow and infiltration from private infrastructure, **the Metropolitan Council (Council) will implement a grant for and I&I demonstration project with eligible expenses from 2019 to 2021.**

All projects proposals, including flow monitoring, should be planned for completion by December 2021. A proposed schedule for the Project is given below. MCES will consider projects that extend beyond the proposed schedule final report date, if an explanation of the extended schedule is included.

Date	Action
July 2018	Distribute RFP
<b>August 2018</b>	<b>Proposals Due to the Council</b>
September 2018	Selection by Committee
<b>December 2018</b>	<b>Commission Award and Notice to Proceed</b>
October 2019	1st Annual Report
October 2020	2nd Annual Report
October 2021	3rd Annual Report
<b>December 2021</b>	<b>Final Report</b>

Grants will be awarded on a competitive basis to metropolitan area communities. The Council requires the grantee to provide at least 100% match to the dollars requested. It is expected that only one (1) project will be awarded the grant of \$500,000.

If a project is awarded this grant, the proposer will be required to enter into either an interagency agreement or contractual arrangement with MCES. This agreement will contain provisions relative to responsibilities as outlined in this Request for Proposal (RFP).

**PROPOSALS MUST BE RECEIVED NO LATER THAN August 15, 2018.**

All questions should be directed to Marcus Bush by email at [i.i@metc.state.mn.us](mailto:i.i@metc.state.mn.us) or by phone at 651-602-1166.

**Proposal Process**

- Applicants must be communities located in the seven-county metropolitan area that discharge wastewater to the Metropolitan Disposal System (MDS) and pay a Municipal Wastewater Charge (MWC) to the Council.
- Applicants have six weeks to submit grant applications.
- Metropolitan Council will notify applicants of grant award on or before September 31, 2018.
- The successful applicant will be required to submit detailed project work plans and budgets which will be included as exhibits in the standard grant agreements.
- The Council encourages all successful applicants to solicit and include Metropolitan Council Underutilized Businesses (MCUB) firms in grant funded activities that MCUB firms can perform. The Council will require grantees to report on the results of these efforts. A list of MCUB firms is available on the Council's website.
- No project expenses incurred before agreement execution will be eligible for reimbursement by the Metropolitan Council.
- No payments will be made that would cause total compensation to exceed the total grant amount.

**Proposal Format**

All Proposals shall contain concise written material and illustrations, if needed. Legibility, clarity, and completeness are essential. All submittals must use 8-1/2" by 11" portrait format but may be supplemented using 8-1/2" by 11" landscape or 11" by 17" illustrations. Twelve-point font shall be used. All submittals must have the following tabbed headings and be limited to the length indicated:

- Proposal Transmittal Letter, including
  - Community name
  - Designated project representative
  - Contact information
  - Expected project cost
  - Requested grant amount
- Value of the Project (3-page maximum)
- Ability to Complete and Manage the Project (2-page maximum)
- Age of Housing (1-page maximum)
- Financial Need (1-page maximum)

## Proposal Evaluation Criteria

The following information must be included in each Proposal and will form the basis of the evaluation. Proposals will be reviewed and awarded eligibility points for each of the selection criteria below, with a maximum of one-hundred (100) points. For each criterion, the reviewers may award none, some, or all eligibility points.

### VALUE OF THE DEMONSTRATION PROJECT (65 points)

The proposed Project should include identification of proposed Project area and highlight the value of the project to provide information useful to regional communities. It is understood that the project area may change due to results of flow monitoring or project constraints. Previous I&I mitigation study projects have consisted mainly of public infrastructure rehabilitation. The intent of this Project is to expand knowledge of I&I rehabilitation techniques and strategies implemented to locate and mitigate sources of I&I in private infrastructure – such as micro-metering, source detection, and effectiveness of private sewer lateral rehabilitation.

Up to sixty-five (65) eligibility points will be awarded for complete responses to each of the items below. The Proposal should be developed in sufficient detail to allow MCES to assess the following:

- A. How the Project will provide a broader benefit to the region. This may include information on the strategy, technique, technology, or method selected that may be useful to other regional communities that discharge to the MDS. (10 points)
- B. A description of how the Proposer will monitor, report, and evaluate the wastewater flow and rainfall data; including:
  - Use of micro-metering technology to identify and locate sources of I&I within the community or proposed project area (10 points);
  - the proposed schedule, monitoring plan, and project milestones (10 points);
  - the data collection process, which should include a plan to collect and store flow and rainfall data continually to reduce the likelihood of loss of data during the Project (10 points);
  - how the data collected will be evaluated to determine the effectiveness of the I&I mitigation strategy (10 points); and
  - how the project will account for other variables that affect wastewater flow – such as water conservation, I&I from public infrastructure, or others (5 points).
- C. Conceptual physical characteristics of the proposed project area, including suitability for flow monitoring. (5 points)
- D. Historical information that is relevant to the reviewer in determining if the proposed Project area would benefit from I&I mitigation. This could include a narrative of how and why the proposed Project area would benefit from I&I mitigation, or flow history that indicates high rates of I&I. (5 points)

### ABILITY TO COMPLETE AND MANAGE THE PROJECT (15 points)

The Proposal should indicate how the project team is able to effectively implement and manage the Project. Up to three (3) eligibility points will be awarded for complete responses to each of the following:

- Include the name and qualifications of the project manager anticipated to lead this project. Include descriptions of other key staff included on the project team, including consultants or contractors.
- Describe assumptions used in design of the project and how these can be addressed or controlled during the implementation.
- Describe any local ordinances or project-specific approvals that are needed.
- Describe how this Project is part of the larger strategy by the community to reduce I&I.
- Describe the long-term monitoring plan to be implemented for the Project area.

### AGE OF HOUSING (10 points)

Increased rates of I&I are typically experienced in areas with older wastewater infrastructure, especially sewer service laterals constructed from clay pipe. Due to changes in the MN Plumbing Code and the history of building practices and materials, it is understood that clay tile pipe is more likely to exist for

sewer service laterals constructed prior to 1970. Up to ten (10) eligibility points will be awarded for age of housing in the proposed Project Area that was constructed prior to 1970, at a rate of one (1) point for every 5%. The proposed project area should include at least 100 properties, which may include a control group for comparison of results.

#### FINANCIAL NEED (10 points)

The Proposal should document the financial need of the Project Area within the community, based on median home values. Ten (10) eligibility points will be awarded for a proposed Project Area with median home value less than the community median home value. The proposal must include the source and values used for the community and proposed Project Area, but the individual home values do not need to be included.