



## 2021 PPII Work Plan

This checklist / template serves as the standard form for submitting a Work Plan to MMSD as a request to commit funds from your Municipal Funding Allocation Account to a project proposed for reimbursement through the MMSD PPII Reduction-M Program. If approved, the Work Plan will be the basis for a Funding Agreement between the municipality and MMSD. Please complete all fields comprehensively and submit this electronically-fillable-form and supporting document attachments via email.

### **I. CONTACT INFORMATION**

<b>Municipality</b>	
Applicant Name: Jerrel Kruschke, P.E.	Municipality: City of Milwaukee
Mailing Address: 841 N. Broadway, Room 821   Milwaukee, WI 53202	
Phone #: 414-286-2400	Email: jkrusc@milwaukee.gov
Primary Contact: Robert Seleen, P.E.	Primary Contact email: rselee@milwaukee.gov
Primary contact phone #: 414-286-2465	
<b>Consultant (if applicable)</b>	
Firm:	Consultant's PM's Name:
Consultant Email:	Consultant Phone number:

## II. PROPOSED SCOPE OF WORK

1. What type of work will be included in this work plan application? Check all applicable.

- ☐ Planning    ☐ Investigative    ☐ Construction/Rehab    ☐ Post Project Evaluation    ☐ Training  
☐ Other

2. What is the total value of the request by the municipality for funding through the PPII program for work outlined in this work plan? \$ 566,000.00

3. Provide the scope of work that will be included in this work plan.

The City owned sanitary sewer mains within the project area will be cured-in-place pipe (CIP) lined as part of this work. After the CIPP work is completed the sanitary sewer laterals will be chemically grouted from their connection point to the sewer main for a length of up to 15 feet towards the home. Also included in this work plan is the televising of sanitary sewer laterals and light cleaning of sanitary sewer laterals.

4. What entity is responsible for each work scope item e.g. municipality staff, consultant, contractor, District, etc.

The City of Milwaukee will be generating its own contract, plans, and specifications for the main line CIPP and lateral grouting project. All copies of plans and specifications will be provided to MMSD prior to awarding a contract for their review and comments. The project will be inspected by City of Milwaukee public works inspectors which will be on site during construction documenting the progress and work completed. Daily construction reports and photos will be available for viewing of the work performed by the contractor. City of Milwaukee Environmental Engineering staff will also periodically inspect the site.

5. What is the total number of properties in the project area? 277

6. What is the assumed number of participating properties? 277

7. What is your justification for the assumed participation rate?

- ☐ Prioritization of properties based on investigative work    ☒ Assumed percent of total based on previous projects    ☐ Existing ROE agreements  
☐ Other (Fill in Blank):

### III. PROJECT AREA CHARACTERISTICS

1. What is the predominant age of the homes in the project area?			
<input type="checkbox"/> Pre 1940's	<input checked="" type="checkbox"/> 1940 – 1960	<input type="checkbox"/> 1961-1980	<input type="checkbox"/> 1981-Present
2. What is the average lot size within the project area?		0.18	<input type="checkbox"/> SF <input checked="" type="checkbox"/> Acres
3. In this area, is it typical that foundation drains are connected?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. What sewershed(s) or metershed(s) is this project located in?  Sewershed# MI5144			
5. Collection system characteristics in project areas:			
Approximate year sanitary sewer was installed:	Host Pipe Material(s):	Pipe Size(s):	Pipe Shape(s):
1954	<input checked="" type="checkbox"/> VCP <input type="checkbox"/> Cast-Iron <input type="checkbox"/> Asbestos	8"-21"	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Other
		<input type="checkbox"/> Ductile Iron <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> PVC	
6. Within the project area, is the mainline rehabilitated?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If "Yes," provide details on the year(s) the work was completed, the type and location of rehabilitation used, and if any rehabilitation of the sanitary sewer laterals within the ROW was completed.			

7. Will public infrastructure work be contracted or completed with the private property work?

☒ Yes ☐ No

If “Yes”, provide details of the public work.

As part of this project The City of Milwaukee will install Cured-In-Place Pipe (CIPP) in the sanitary sewer main. After the CIPP is completed the contractor will clean, televise and chemically grout the private sanitary laterals. The mainline rehabilitation portion of the project contains 8,419-feet of 8-inch CIPP, 460-feet of 12-inch CIPP, 838-feet of 15-inch CIPP, 395-feet of 18-inch CIPP, and 2360-feet of 21-inch CIPP.

8. Include with your application, two maps; one of the limits of the sewershed(s) or metershed(s) the project is in, and one of the project limits. The maps shall meet the following requirements.

- Maps shall use a streets or aerial view as base map.
- Major street names shall be labeled and legible.
- Limits of the sewershed(s), metershed(s), and project limits shall be defined by a bold red line.
- Sanitary and storm system line work shall be shown at a scale appropriate to the scale of the drawing
- A north arrow and legend shall be included.
- Maps shall be between 5 and 40 scale and to a standard paper size i.e. 8.5”x11, 11”x17”, etc.
- Maps shall be submitted as PDF electronic files.

#### IV. PROJECT JUSTIFICATION

1. Has any planning and/or investigative work within the project area been completed to date? (i.e. Flow monitoring, interior home inspections, sewer CCTV, analysis of flooding/backup issues in the area, etc.) ☒ Yes ☐ No

If "Yes," was the work completed through a previous PPII funding agreement? ☐ Yes ☒ No

If the answer is "Yes" to both questions, describe the work completed and cite report names and funding agreement reference numbers the work was completed under.

If work was completed independent of the PPII program, included the report(s) with application in electronic format and list the name of the report in this section.

The City has CCTV examined the sanitary mains in this project location. The exams show the sanitary sewers have large calcium deposits and many sources of inflow and infiltration.

2. Describe how the project area and approach was chosen and prioritized.

A high percentage of the properties in this area have experienced sanitary sewer backups (backwaters) between 2012 through 2021. Rehabilitation and lining of the overall sanitary sewer system along with rehabilitating and grouting the private sanitary sewer laterals will reduce the amount of I/I entering the system, and reduce the risks for further backwater events.

3. What is the status of all project area sewershed(s)/metershed(s) as related to the District Chapter 3 rules for wet weather performance?

☐ Non-compliant ☒ Compliant ☐ Inconclusive ☒ Not Analyzed

If "Noncompliant," has PPII work been completed to date within the Project Area metershed(s)? If yes, provide details on the scope of work completed and location.

<p>4. Does the municipality have any permitted (or unpermitted) wet-weather bypass locations in the project area?</p> <p>If "Yes," provide approximate frequency and average volume per frequency for over the last ten years.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>5. Does the project area have a history of CSOs or SSOs?</p> <p>If "Yes," provide the frequency of occurrences over the last ten years.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>6. Does the municipality have recurring basement backup reports in the project area?</p> <p>If "Yes", please provide the average annual number of reports in the last ten years and the estimated storm recurrence interval that typically causes basement backups.</p> <p>Out of the 277 properties within this area, 12% (33 properties) experienced sewer backups between 2012 through August of 2022. The high number of reported backups indicates an excessive inflow and infiltration (I/I) problem.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>7. Do you have metering, lift station run time, bypass pumping, basement backup, or any other pre-project baseline data?</p>	<input checked="" type="checkbox"/> Yes – go to item 8 <input type="checkbox"/> No – go to item 9
<p>8. Describe and detail information on the pre-project baseline data you have collected including type, location, and date ranges. If a MMSD meter is used as a source for this data, provide meter name and location.</p> <p>The City has installed flow monitors recently in this basin and pre rehabilitation data will be available for review. Once the project is completed, the post lateral rehabilitation flow will be monitored and compared to the pre-rehabilitation flows. This information will be provided to the MMSD. The City also has call center data showing the reported basement backups in this area, though it is believed the vast number of backups now go unreported.</p>	

9. Do you plan on collecting pre-project baseline data as part of this project?

☒ Yes – go to item 10

☐ No – go to item 11

10. Describe the pre-project data that will be collected to provide a baseline for improvement? If you intend to use the MMSD portable meters, list the quantity, expected time frame installation and monitoring period.

Pre-construction flow monitoring data is being collected by the City within the project limits. This flow monitoring data can be sent to MMSD's consultanting engineers at their request prior to the start of construction.

11. How do you intend to report project performance results? (metrics and target objectives of the project)

Pre construction flow monitoring data will be compared to post construction flow monitoring data. Pre and post-construction surge level indicator data will also be compared. The City anticipates that the peak flow rate during rain events will decrease. This anticipated decrease in flow will ultimately lower the amount of I/I in the sanitary sewer, this should be reflected in surge level readings, therefore reducing the chance of basement backups.

## V. PROJECT GOALS

1. What are the municipality's goals and objectives for the completed project? Please provide qualitative and quantitative measurables for success as they relate to the goals and objectives.

The main objective for this project is to eliminate additional sources of I/I by lining the public main sanitary sewer mains and chemically grouting the sanitary sewer laterals up to 15-feet from the sewer mainline.

Prior to any rehabilitation work that will take place the City will send flow monitoring data to MMSD consultants to be analyzed prior to the start of construction. That data will be compared to post construction flow monitoring data. The City anticipates that the peak flowrates during rain events will decrease. This anticipated decrease in flow will ultimately lower the amount of I/I in the sanitary sewer, therefore reducing the chance of basement backups.

The City's EES will prepare the project plans and specifications for work on private property.

## VI. SCHEDULE

Include a schedule of the work with all major tasks and milestone dates for completion including District and municipal administrative approvals, local board/council approvals, work task start and finish, public outreach, deliverables, and reimbursements. The schedule needs to be realistic and achievable based on District approval timelines, local approval timelines, bidding process timelines, work production rates, and weather-related considerations. Identify and highlight any milestone dates by which the municipality is requesting the District to meet to keep your schedule (e.g. local council or board agenda deadlines).

Provide the schedule in PDF format.



## VII. FINANCIALS

1. Include a comprehensive cost estimate broke down to the task level which includes costs for: all internal municipal staff time which is being requested to be reimbursed, professional services including hours estimates and rates, construction costs by estimated units and estimated unit costs, inspection services, public outreach, and staff training. Attach an Excel version of the estimate to the application when submitting.

2. Are other funding sources, besides MMSD PPII funds, contributing to the total project ☒ Yes ☐ No  
cost? i.e. municipal funds, grant funding, property owner cost share, etc.

If "Yes," list all addition funding sources, the specific work which will be covered by an additional funding sources, and the value.

Any additional funds that are not covered by MMSD will be paid for by City of Milwaukee funds. All additional cost, including public outreach and engineering will be paid by the City.

3. Describe your anticipated frequency of reimbursement requests to the District. (The funding agreement terms may dictate this frequency depending on the type of work).

The City anticipates to submit reimbursement requests for materials every three weeks.

4. What department/individual/entity will be submitting and processing the reimbursement requests?  
Please include the name and contact information.

City of Milwaukee/ DPW -Infrastructure Services Division/ Administration department

Name:Yuliang Cao

Email: ycao@milwaukee.gov

5. MMSD requires all invoicing to be submitted via e-Builder. Will e-Builder training be necessary for the department/individual/entity that will be submitting and processing the reimbursement requests? ☐ Yes ☒ No

6. Describe the municipal process(es) for procurement of all professional and non-professional (field work and construction) components of work and the basis for each.

The City of Milwaukee will be generating its own contract, plans, and specifications for the combined public sewer lining and lateral grouting project. All copies of plans and specifications will be provided to MMSD prior to bidding for their review and comments. Once the bid results are received they will be delivered to MMSD.

7. Explain the means and methods for segregating the costs (MMSD reimbursable costs and public work costs).

The City of Milwaukee will be generating its own contract, plans, and specifications for the project. The intention is to have no overlapping bid items in the contract to make segregating pay items easy for City of Milwaukee construction inspection staff. All copies of plans and specifications will be provided to MMSD prior to bidding for their review and comments. Once the bid results are received they will be delivered to MMSD.

8. Provide the names and position titles of all municipal staff that will be required to sign the funding agreement. (i.e. mayor, city/village administrator, city/village clerk, city attorney, etc.)

Name: Jerrel Kruschke, P.E.

Position Title: Int. Comm. of Public Works

Name:

Position Title:

Name:

Position Title:

Name:

Position Title:

Name:

Position Title:

Name:

Position Title:

## VIII. PUBLIC OUTREACH

1. Describe in detail your public outreach approach and what entity/individuals/departments will be responsible for the public outreach. Describe the venues and platforms that will be used. Describe the timing and anticipated level of effort that is anticipated to be necessary for the public outreach effort. Describe any public outreach work that has already been completed or is in progress. If a specific person or entity is responsible for public outreach, include the name and contact information. (Examples of public outreach include, but are not limited to; mailings, websites, social media, canvassing, public meetings, etc.)

Notices will be sent to the property owners informing them about the City's goals to reduce the amount of clearwater that enters the sanitary system and inform them about how this project works to meet those goals. We will also provide the property owners with contract information to have their home not be included in our project.

Mr. Robert Seleen of the City of Milwaukee Environmental Engineering Section (EES) will be available to answer any questions, concerns, and complaints regarding the schedule and results of the inspection project.

Before the project is bid, the City will assess the number of participants and evaluate the need to use additional informational tools to gain further project participation.