



Green Solutions for Separate Infrastructure and Sewer Separation Funding Agreement

Riverside Pump Station Project

M03076P07

This Agreement is made between the Milwaukee Metropolitan Sewerage District (District) with its principal place of business at 260 West Seeboth Street, Milwaukee, Wisconsin 53204-1446 and the City of Milwaukee, Department of Public Works (Milwaukee), 841 North Broadway, Milwaukee, Wisconsin 53202.

WHEREAS, Wisconsin law authorizes any municipality to establish an intergovernmental cooperation agreement with another municipality for the furnishing of services (Wis. Stat. sec. 66.0301); and

WHEREAS, the District is responsible for collecting and treating wastewater from locally-owned sewerage systems in the District's service area; and

WHEREAS, during wet weather, stormwater enters the sewerage system, increasing the volume of wastewater the District must collect and treat; and

WHEREAS, during wet weather, stormwater directly enters surface water, increasing pollution levels in those waterways and increasing the risk of flooding; and

WHEREAS, green infrastructure, such as constructed wetlands, rain gardens, green roofs, bioswales, and porous pavement, reduces the volume of stormwater in the sewerage system and the amount of pollutants discharged to surface waters; and

WHEREAS, the District's wastewater discharge permit requires one million gallons per year of new green infrastructure retention capacity; and

WHEREAS, the District wants to expedite the amount of green infrastructure installed in its service area; and

WHEREAS, Milwaukee plans to install green infrastructure that supports the District's green infrastructure goals;

Now, therefore, for the consideration of the mutual promises made by the parties to this Agreement, the parties agree as follows.

1. Date of Agreement

This Agreement becomes effective immediately upon signature by both parties and ends when Milwaukee receives final payment from the District or when the parties terminate this Agreement according to sec. 9 of this Agreement.

2. District Funding

The District will reimburse Milwaukee for the cost of the project described in the attached project description (Project), up to \$415,000. The District will provide funding in response to the submission of the Baseline Report.

3. Location of the Project

The Project is located within the City of Milwaukee, where East Chambers Street ends on the west bank of the Milwaukee River.

4. Procedure for Payment

Milwaukee will submit an invoice to the District for the amount to be reimbursed. The invoice will document all costs to be reimbursed. Invoices from consultants will provide the hourly billing rates, if applicable; the hours worked, by individual; and a summary of the tasks accomplished.

Milwaukee will send the Baseline Report and the invoice to:

Thomas Chapman, P.E.
Section Manager - Watercourse
Milwaukee Metropolitan Sewerage District
260 West Seeboth Street
Milwaukee, WI 53204 – 1446

The District will not provide reimbursement until the Project is complete and the District has received all required deliverables.

5. Changes in the Project and Modifications to the Agreement

Any changes to the Project must be approved by the District in writing in advance. The District will not reimburse for work that is not described in the original project description unless Milwaukee obtains prior written approval from the District.

Any modifications to this Agreement will be in writing and signed by both parties.

6. Permits, Certificates, and Licenses

Milwaukee is solely responsible for ensuring compliance with all federal, state, and local laws and any permits, certificates, or licenses required to complete the Project.

7. Public Bidding

Milwaukee must select professional service providers according to Milwaukee's ordinances and policies. Milwaukee must procure all non-professional services, such as construction, sewer inspection, and post-construction restoration, according to State of Wisconsin statutes and regulations and Milwaukee's ordinances and policies. Whenever work valued over \$25,000 is procured without the use of a public sealed bidding process, the District may request and Milwaukee must provide an opinion from a licensed attorney representing Milwaukee explaining why the procurement complies with State of Wisconsin law and Milwaukee's ordinances.

8. Responsibility for Work, Insurance, and Indemnification

Milwaukee is solely responsible for planning, design, construction and maintenance of the Project, including the selection of and payment for consultants, contractors, and materials.

Milwaukee is solely responsible for ensuring compliance with Wisconsin prevailing wage law.

The District will not provide any insurance coverage of any kind for the Project or Milwaukee.

Milwaukee will defend, indemnify, and hold harmless the District and its Commissioners, employees, and agents against any and all damages, costs, liability, and expenses, including attorney's fees and related disbursements arising from or connected with the planning, design, construction, operation, or maintenance of the Project.

9. Terminating this Agreement

The District may terminate this Agreement at any time prior to the commencement of construction. After the commencement of construction, the District may terminate this Agreement only for good cause, such as, but not limited to, breach of this Agreement by Milwaukee. Milwaukee may terminate the Agreement at any time, but will not receive any payment from the District if Milwaukee does not complete the Project.

10. Conservation Easement

After the completion of construction, the District must receive a Conservation Easement from the landowner. The extent of the Conservation Easement will be limited to the Project. The duration of the Conservation Easement will be ten years. The District will draft and record the Conservation Easement. Milwaukee will facilitate the preparation of the Conservation Easement.

11. Exclusive Agreement

This Agreement is the entire agreement between Milwaukee and the District.

12. Severability

If a court holds any part of this Agreement unenforceable, then the remainder of the Agreement will continue in effect.

13. Applicable Law

The laws of the State of Wisconsin apply to this Agreement.

14. Resolving Disputes

If a dispute arises under this Agreement, then the parties will try to resolve the dispute with the help of a mutually agreed-upon mediator in Milwaukee County. The parties will equally share the costs and fees associated with the mediation, other than attorney's fees. If the dispute is not resolved within 30 days after it is referred to the mediator, then either party may take the matter to court.

15. Notices

All notices and other communications in connection with this Agreement will be in writing and will be considered given as follows:

- when delivered personally to the recipient's address as stated on this Agreement; or

- three days after being deposited in the United States mail, with postage prepaid to the recipient's address as stated on this Agreement.

16. Independence of the Parties

This Agreement does not create a partnership. Milwaukee does not have authority to make promises binding upon the District or otherwise have authority to enter into contracts on the District's behalf.

17. Assignment

Milwaukee may not assign any rights or obligations under this Agreement without the District's prior written approval.

18. Public Records

Milwaukee will produce any records in the possession of the Milwaukee that are subject to disclosure by the District pursuant to the State of Wisconsin's Open Records Law, Wis. Stats. secs. 19.31 to 19.39. Milwaukee agrees to indemnify the District against any and all claims, demands, or causes of action resulting from the Milwaukee's failure to comply with this requirement.

**MILWAUKEE METROPOLITAN
SEWERAGE DISTRICT**

**CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS**

By: _____

Kevin L. Shafer, P.E.
Executive Director

By: _____

Ghassan Korban, P.E.
Commissioner

Date: _____

Date: _____

Approved as to Form

By: _____

Attorney for the District

Green Solutions for Separate Infrastructure and Sewer Separation
Funding Agreement

Milwaukee Lake Wetland Restoration Phase 2 Project

M03076P07

Project Description

Introduction and Background

The Milwaukee Water Works (MWW) has undertaken a stormwater project at the Riverside Pump Station to minimize the risk of flooding at the station. The project involves the replacement and re-grading of the north-most service road at the facility. The intent of the re-grading is to allow larger storm flows that could enter the MWW property from the west to bypass the pumping facilities and discharge to the Milwaukee River to the east. The project would entail the removal and replacement of the portion of the service road, the removal of two inlet structures that currently discharge to a Milwaukee Metropolitan Sewerage District (District) combined sewer, security fence and gate modifications, and the installation of a rip rap lined overflow channel from the road to the Milwaukee River across MMSD property. The original storm water project was a recommended alternative generated in the Riverside Pumping Station Flood Mitigation Study, prepared by AECOM and dated December, 2012.

According to District Rules, storm water discharges from a site that is riparian to the waters of the state to a combined sewer are not allowed. In addition, the City of Milwaukee requires that treatment be provided for any new storm water discharges prior to release to a waterway. To adhere to these requirements, the MWW will now need to remove all of the storm water connections for the facility from the combined sewer system, and provide treatment of that storm water before it is released to the Milwaukee River.

Approach

The approach to facilitating the separation of the storm sewers from the combined sewer system will entail the review of available utility records for the facility. This review was based on system maps and historical drawings the MWW provided. These system maps and drawings indicate that the roof drains for the pumping building and the majority of the area south and west of the building including the primary service road are directly tributary to the river, and not the combined sewer. The inlets immediately west of the building, immediately south of the building, and north and east of the building are tributary to the combined sewer system. Records also indicate two sanitary sewer laterals on both the north and south side of the pumping station enter the combined sewer. The approach to capturing the flows tributary to the combined sewer would be to construct a new storm sewer east of the pumping building that would flow from the south to the north and discharge to the river in the same proximity of the rip rap overflow planned as part of the access road replacement. A new storm sewer will also be needed on the south side of the building to take storm flows around the sanitary lateral connections. The laterals

on the south side of the building will remain connected to the combined sewer system. A new sanitary sewer, ultimately connected to one of the existing combined sewers, will be routed along the north side of the pumping station to intercept the sanitary laterals in the area. The new storm sewer line will be designed to intercept the flows from the five of the six existing sewers directly tributary to the MMSD's combined sewer.

Specific details for the new storm sewer will be addressed during final design. These details will be subject to a detailed site topographic survey that will verify surface elevations as well as sewer inverts. In addition to the detailed topographic survey, the location of the facilities sanitary sewer lateral will need to be verified as their location was estimated based on original construction drawings for the facility. Also, the AECOM report indicated a cross-connection between the combined sewer system and the storm sewer system west of the northwest corner of the pumping station. The existence of this crossconnection will need to be verified and if it does exist, removed. A schematic of the new storm sewer system is indicated on **Exhibit 1**.

The approach to providing treatment or Total Suspended Solids (TSS) removal for the portions of the project that will be disconnected from the combined sewer system is through the use of bio-retention areas, installation of catch basins, and the installation of permeable asphalt pavement for a portion of the re-graded access roadway. City of Milwaukee Code of Ordinances, Part 120-7-6 discusses TSS removal goals. According to the ordinance for a redevelopment project, by design, reduce to the maximum extent practicable, the total suspended solids load by 40%, based on an average annual rainfall, as opposed to no runoff management controls. The final depth and engineered soil thickness, as well as the final permeable pavement details, will be determined as part of the final design based on results of the detailed topographic survey.

Analysis

A detailed design of the storm sewer system has not been completed as part of this conceptual study. Specific details of the system along with pipe sizes, structure locations and sizes, and pipe inverts will be addressed as part of final design and will be subject to the information contained in the detailed topographic survey.

The TSS removal includes treatment of storm water through the use of bio-retention areas, three new catch basins, and permeable asphalt pavement. Conceptually, the proposed bio-retention areas will include an 18-inch layer of engineered soils (70% sand & 30% compost) over an 18-inch layer of crushed stone enveloping a perforated drain tile with a geotextile sock. The underdrain system will drain by gravity to the adjacent new or existing storm sewer. It is noted that sample details of bio-retention areas used on recent roadway projects were provided to Mead & Hunt by the City of Milwaukee. The proposed treatment device preliminary locations (bio-retention areas, catch basins, and permeable pavement) along with the drainage boundaries for each sub-area are indicated on **Exhibit 2**.

The BMPs (bio-retention and catch basins) were modeled for TSS removal using the Windows Source Loading and Management Model (WinSLAMM) software version 10.0. The TSS removal efficiency of the permeable pavement was estimated based on the WDNR's Technical Standard 1008, Permeable Pavement, assuming a 3:1 run-on ratio. The following table includes

basin designations, type or treatment facility for each basin, sediment load before and after treatment, individual basin sediment load reduction, and an overall, project-wide sediment load reduction.

Basin	Area (ac)	Treatment Facility	TSS Loading		Percent Reduction
			Before Treatment (pounds)	After Treatment (pounds)	
WQ-01	0.03	Bio-retention Area	21.6	1.4	93%
WQ-02	0.07	None	23.0	23.0	0%
WQ-03	0.30	Bio-retention Area	99.7	49.5	50%
WQ-04	0.76	Bio-retention Area	122.9	72.2	41%
WQ-05	0.07	None	9.3	9.3	0%
WQ-06	0.04	None	15.1	15.1	0%
WQ-07	0.20	Catch Basin	109.9	74.1	32%
WQ-08	0.05	None	8.6	8.6	0%
WQ-09	0.04	None	22.0	22.0	0%
WQ-10	0.18	Catch Basin	68.0	42.6	37%
WQ-11	0.27	Catch Basin	174.0	124.8	28%
WQ-12	0.34	Bio-retention Area	80.6	33.8	58%
WQ-13	0.22	Bio-retention Area	42.0	7.9	81%
WQ-14	0.12	None	24.8	24.8	0%
WQ-15	0.15	Bio-retention Area	25.9	3.8	85%
WQ-16	0.14	Bio-retention Area	18.7	1.5	92%
WQ-17	0.05	None	8.6	8.6	0%
WQ-18	0.15	Permeable Asphalt	108.1	48.6	55%
Total	12.64		982.8	571.6	42%

Conclusion

The analysis shows that our target TSS removal rate of 40% is attainable on a conceptual level. Also, pending the results of a detailed topographic survey, the removal of the storm sewer connections to the existing combined sewer system is possible.

The following table provides a conceptual level cost estimate to complete the construction of the disconnection of the storm sewer, and treatment of the runoff from the tributary area before releasing the flows to the Milwaukee River. The estimate also includes miscellaneous items requested for the roadway re-grading and reconstruction such as an entrance gate, fence relocations, and lighting relocations. This estimate does not include engineering design, City administration, MWW administration, easement acquisition from the District, or bidding and construction services.

<u>Description</u>	<u>Cost</u>
Roadway Reconstruction (Permeable Asphalt, Curb & Gutter, Base, and Underdrain)	\$240,000
Storm Sewer and Sanitary Sewer Improvements (Pipe, Structures, Abandonments, Restoration)	\$140,000
Bio-retention Areas (Engineered Soils, Underdrain, Clean-outs, and Restoration)	\$35,000
<u>Total</u>	<u>\$415,000</u>

Baseline Report

Milwaukee will provide a Baseline Report using forms provided or approved by the District. This report will include:

- (a) a site drawing, showing the completed green infrastructure;
- (b) design specifications for all green infrastructure, including rainwater capture capacity (maximum per storm) and other information regarding runoff rate reduction or pollutant capture;
- (c) a legal description of the property where the Project is located;
- (d) photographs of the completed Project;
- (e) a maintenance plan;
- (f) an outreach and education strategy, including a description of events or activities completed or planned;
- (g) an itemization of all construction costs, with supporting documentation;
- (h) a W-9 Tax Identification Number form;
- (i) a Small, Women, and Minority Business Enterprise Report; and
- (j) an Economic Impact Report, showing the total number of people and the estimated number of hours worked on design and construction of the Project by Milwaukee's employees, contractors, consultants, and volunteers.

Maintenance

Milwaukee will maintain the Project for at least ten years. If the Project fails to perform as anticipated or if maintaining the Project is not feasible, then Milwaukee will provide a report to the District explaining the failure of the Project or why maintenance is not feasible. Failure to maintain the Project will make Milwaukee ineligible for future District funding until Milwaukee corrects the maintenance problems.