



1/27/2024

City of Red Wing Wastewater Facility Planning

Request for Qualifications



CITY OF RED WING, MINNESOTA

Table of Contents

Supplemental Information.....	2
0. Introduction	2
1. Project Planning Area.....	2
1.1. Description.....	2
2. Municipal Wastewater Collection Conveyance and Treatment	3
3. Facility Planning Scope of Work.....	4
3.1. Wastewater Treatment.....	4
3.2. Sanitary Sewer Collection and Conveyance.....	5
4. Expected Consultant Expertise	6
5. Proposed Schedule for Consultant Selection and Facility Plan Preparation.....	6
5.1. Proposed Project Schedule	6
6. Project Deliverables	6
7. Estimated Project Budget	7
8. SOQ Format and Content.....	7
9. SOQ Submittal and Contact Person	9
10. SOQ Review and Selection	9
12. Public Information	9
13. Proposal Preparation and Contract Negotiation Costs.....	10
14. Terms and Conditions of Subsequent Agreement.....	10
15. Compliance with Federal, State and Local Laws, Resolutions, Ordinances, Rules, Regulations, and Executive Orders	10

Supplemental Information

- A. Red Wing Wastewater Treatment Facility, Feasibility Study, January 2023
- B. 2023 Trickling filter Structural Analysis
- C. 1999 Wastewater Treatment Facility Plan
- D. NPDES Permit MN0024571
- E. Master Services Agreement and Work Order

<https://www.red-wing.org/1149/Wastewater-Facility-Planning>

0. Introduction

The City of Red Wing's (city) Public Works Department (Utilities Division) is requesting qualification statements from professional engineering consultants with expertise in wastewater treatment facility, sanitary sewer collection and conveyance master planning. The City desires to plan for adequate wastewater treatment and sanitary sewer collection and conveyance to meet current and future needs.

The major drivers for improvements at Red Wing are aging infrastructure and future effluent limits as well as the desire to provide additional treatment capacity, collection, and conveyance for future development of the community. The plan will describe and evaluate the overall state of the sanitary sewer systems/facilities and integrate previous facility and sanitary sewer plans, studies, maintenance logs, reports, operating conditions, treatment data, and completed sewer projects.

1. Project Planning Area

1.1. Description

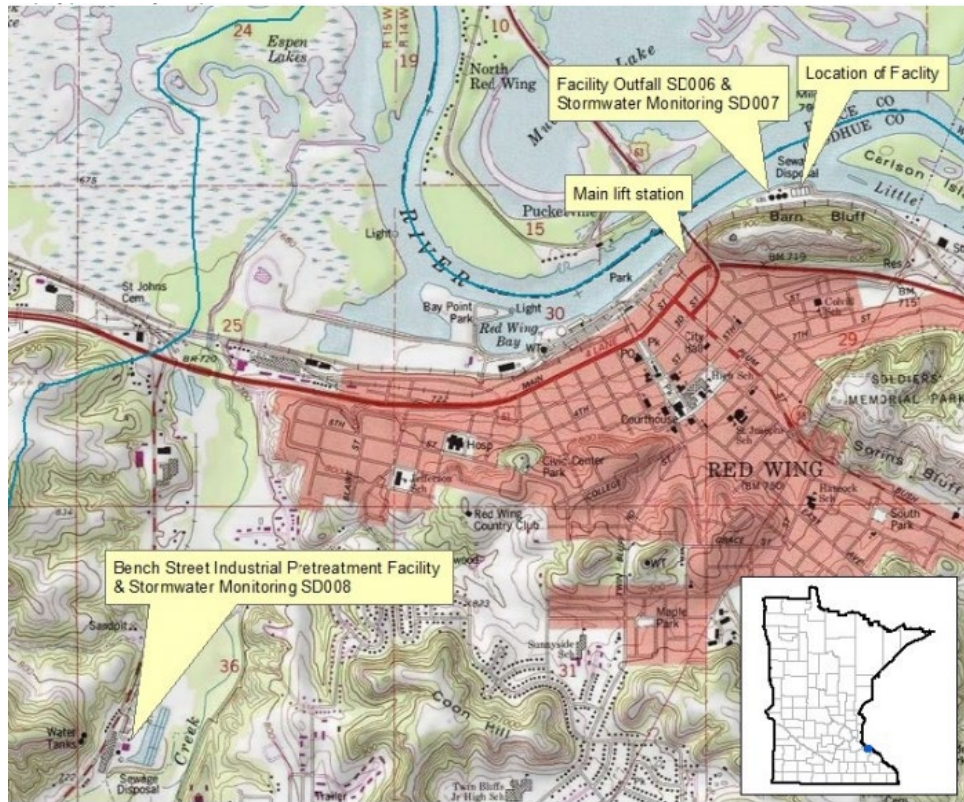
Figure 1 illustrates Red Wing's municipal boundary and location of major wastewater treatment facilities. The Red Wing WWTF provide sanitary sewer treatment service to the community of Red Wing. The City of Red Wing owns and operates an industrial wastewater pretreatment facility that treats wastewater exclusively from the SB Foot Tanning Company before discharging into the sanitary collection and conveyance system.

The sanitary sewer collection and conveyance system directs all wastewater flow to a main lift station located near Levee Park where the wastewater goes through preliminary treatment, including screening and grit removal, before being pumped to the WWTF. The 2020 estimated population for Red Wing was 16,788 based on the [Red Wing 2040 Community Plan](#). The State demographer's office estimates the city's current population (2022) is 16,873 with an average of 2.27 persons per household. The city maintains a "2040 Community Plan Report Card" that incorporates updated demographic, economic, environmental, and other data. The report card can be accessed at [City of Red Wing Report Card](#)

The City of Red Wing WWTF serves six permitted industrial wastewater users: Food Service Specialties, Archer Daniels Midland, SB Foot Tanning, USG Interiors, Xcel Steam Plant, and Xcel

Energy Red Wing Ash Disposal Facility. These industries comprise approximately 25% of the total flow to the municipal wastewater treatment facility.

Figure 1 – Red Wing Wastewater Facilities



Source: MPCA National Pollutant Discharge Elimination System (NPDES) State Disposal System (SDS) Permit Program Fact Sheet.

2. Municipal Wastewater Collection Conveyance and Treatment

Wastewater Treatment –The city operates the main facility and an industrial pretreatment facility adjacent to the S. B. Foot Tannery.

The main wastewater treatment facility was originally constructed in 1960, with updates that occurred in 1978, digester improvements in 1990s, and additional rehab updates in the early 2000s that included ferric chloride addition for phosphorus removal. The current facility is designed to treat an average annual flow of 4 million gallons per day with average daily flows of 2 MGD. The facility is considered a Class A facility. The digested sludge is applied as Class B liquid biosolids to agricultural land owned and farmed by private individuals or trucked to nearby treatment facilities when the farm fields are not accessible. The City does not have sufficient biosolids storage at the wastewater treatment facility to meet the current volume of biosolids produced.

Wastewater Collection and Conveyance – The city maintains and operates a sanitary sewer collection and conveyance system, nine lift stations, and a main lift/pumping station that provides initial treatment with screening and grit removal. The sanitary sewer collection system includes approximately 100 miles of municipally owned gravity sewer ranging from eight-inches to 30-inches, nine submersible lift stations, and the associated force mains. The collection area is essentially limited to the city limit. All sanitary sewers are separate sewers. Those sewers that were formerly combined were separated during the years 1980 to 2000.

The city maintains an adequate I&I prevention plan that includes annual inspections and CIPP projects. At this time, I&I flows are not a significant issue for wastewater treatment.

3. Facility Planning Scope of Work

3.1. Wastewater Treatment

The Facility Plan will serve as a comprehensive planning document for capital improvement projects at a wastewater treatment facility for the next 20 years. The selected consultant will be asked to work with the City of Red Wing to complete planning or evaluations of the following areas:

Wastewater Treatment Plant Facilities Evaluation

The facility plan shall evaluate the current wastewater infrastructure in regards to projected remaining useful life and the ability to meet future NPDES permit limits. The plan shall compare options for constructing the modifications identified in the January 9, 2023, [wastewater treatment feasibility report](#), alternative treatment modifications at the existing site, and constructing full or partial treatment at a remote site. That feasibility report identified a phasing sequence that would convert the existing trickling filters/RBC plant to an activated sludge plant capable of nutrient removal. On-site sludge storage was also included. A remote site location has yet to be identified, but the city will present options that can be used for facility planning purposes. The options could include continuing to have some treatment capacity at the current site, but facility plan costs should include demolition of any unused facilities. The existing main lift station, which includes screening and grit removal, can also be included with each option if applicable.

The current site has very little space for additional facilities. The existing WWT facilities were largely constructed in 1960 and 1984. The facilities have been maintained and updated, but there are some concerns identified below that should be considered in the facility plan:

- Trickling filters have cast-in-place concrete domes that need extensive renovation or replacement. The rotating biological contactors need complete renovation of the drives and the media.
- The digester controls and sludge pumping room houses gas boilers and is not compliant with the NPFA 820 requirements.

- The chlorine gas/sulfur dioxide gas disinfection system at the existing plant can remain, but UV disinfection should be considered for any new facility.
- The city owns and operates an industrial pretreatment plant at a remote site. The industrial plant is not included in these facility planning efforts.
- Future flow projections from the city's most recent community plan were used in the feasibility report. These flow projections can be used in the facility plan.
- Any new facility should be capable of both phosphorus removal and future nitrogen removal and be modular and easily expandable to meet population growth more than that projected in the Comprehensive Plan. It should be capable of meeting any new NPDES permit limits in the foreseeable future.
- Current sludge treatment and storage consists of a primary and secondary anaerobic digester. The current solids handling process works well, but there is insufficient storage space. The city currently leases storage capacity from a nearby municipality. Additional storage, thickening, or dewatering should be factored into the analysis.
- The current NPDES permit expires on February 28, 2025. The new permit may include new requirements for nitrogen, sulfate, and PFAS management.

Project Phasing and Sequencing

Due to the site constraints and unknown future permit limits, improvement project phasing and sequencing will be particularly critical to continuing adequate and effective wastewater treatment. The facility plan shall include a project timeline of rehabilitation, replacement, and demolition of treatment processes.

3.2. Sanitary Sewer Collection and Conveyance

The scope of the facility plan shall include a brief evaluation of the sanitary sewer collection and conveyance system and will be further defined later. Consideration may be given to the following items:

- Population and flow projections for the city wastewater service area for the long term 20-year projection.
- Condition assessment of wastewater lift stations.
- A review of unsewered areas within the Eastern, Western and Southern Urban Growth Areas, including options for sewer construction to serve these areas, cost estimates, constructability concerns, and implementation challenges.
- A review of areas outside the current service area boundary that are most likely to require sewer service in the future to determine the best way to provide sewer service.

Capital Improvement Project Funding

The City of Red Wing is very interested and dependent upon leveraging all possible state and federal funding programs to keep utility rates affordable. The selected consultant will be asked to work with the city's financial planning team to create a plan for funding wastewater improvements over the next 20 years. Utility rates, industrial user rates, and high strength waste fees should also be evaluated.

4. Expected Consultant Expertise

The successful Respondent's team is expected to have expertise from the following disciplines or resource areas:

- municipal civil and wastewater engineering
- wastewater process modeling
- construction practices
- economic and social analysis
- community engagement
- state and federal regulations, rules, and requirements
- grant, loan, and other related funding or incentive programs

5. Proposed Schedule for Consultant Selection and Facility Plan Preparation

5.1. Proposed Project Schedule

- | | |
|--|------------|
| • RFQ Available for Viewing and Distribution to Interested Consultants | 01/27/2024 |
| • Statements of Qualifications (SOQs) Due | 02/26/2024 |
| • Review SOQs, Rank Respondents, Identify Most Qualified Consultant & Begin Negotiation with Most Qualified Consultant | 03/04/2024 |
| • Execute Services Contract Agreement | 04/08/2024 |
| • Complete Facility Plan | 10/14/2025 |

The city will require a draft of the document in the first quarter of 2025 (January 2025 – March 2025).

The city reserves the right to modify the timeline if necessary. The schedule for completion of the facility plan is flexible and should be addressed in the SOQ. Due to the uncertainty in the NPDES permit renewal timeline, the city does not have an expected initiation date for any construction project(s).

6. Project Deliverables

The selected Respondent will provide a wastewater master plan that meets timelines (or amended timelines) set forth by the city and all requirements of the MPCA and the requirements of the EPA, the PFA's SRF (CWRP) and Rural Development's Water & Waste

Disposal Grant and/or Loan requirements. The facility plan will document all data sources, past studies, computer models, forecast methodologies, and other elements used.

7. Estimated Project Budget

The city has budgeted \$100,000 in 2024 and \$100,000 in 2025 for the Master Plan. It is expected that the budget will fund the activities described. The actual cost for the Plan and a specific scope of work will be negotiated with the most qualified Respondent after the qualification-based evaluation process has been completed. If the cost negotiations are unsuccessful with the top ranked Respondent, negotiations will cease, and the city will initiate negotiations with the next most qualified Respondent.

8. SOQ Format and Content

The SOQ PDF submittal shall not exceed 50 pages (30MB) and shall include the following information:

SOQ Content & Format	SOQ Content & Format
<p>1. Executive Summary of Respondent’s Qualifications</p>	<ul style="list-style-type: none"> • Provide the company name and business address, including telephone number and email of the authorized negotiator. The negotiator shall be empowered to make binding commitments for the company. • Note the year the company was established (include former company names and year established, if applicable). • Describe the type of ownership and parent company, if any. • List the project manager’s name, mailing address, email and telephone number, if different from above, and project manager’s experience. • Highlight the major facts and features of the statement of qualifications, including any conclusions, assumptions, and recommendations the consultant desires to make.
<p>2. Project Understanding</p>	<ul style="list-style-type: none"> • State the Respondent’s understanding of the project scope of work, the project objectives, deliverables, timeframes, etc.

<p>3. Technical Process and Capabilities</p>	<ul style="list-style-type: none"> • Discuss and clearly explain the approach the Respondent proposes to use to satisfactorily achieve the required project services. • Identify unique expertise the Respondent's consulting team can contribute to analyzing key issues. • Identify aspects of technical analysis, advanced or innovative technology, and/or software that may be applied to the project. • Describe staff expertise as it relates to the project. Include a proposed organizational chart of the project team members and assignments/responsibilities. • Include one-page resumes of key staff that will be assigned to the project team. • Provide assurance of the Respondent's ability to provide high-quality deliverables in accordance with project timelines. • A detailed scope of work is not required or desired, but unique situations that may affect timely and satisfactory completion of this project should be identified.
<p>4. Qualifications and Experience</p>	<ul style="list-style-type: none"> • Provide information on similar types of projects successfully completed or currently under contract. • Provide references of three clients for whom similar work was completed (i.e., names, phone numbers, email addresses, project dates).
<p>5. Participation Level of the City</p>	<ul style="list-style-type: none"> • Identify the expected level of city participation in the project that the Respondent feels necessary, relative to the duties accepted by the Respondent.

9. SOQ Submittal and Contact Person

If there are any questions regarding the technical contents of this RFQ, the consultant should contact Jerry Plein. Questions received throughout the process that are relevant to the outcomes of the project will be compiled and answered on the city's website at www.red-wing.org/1149/Wastewater-Facility-Planning.

The SOQ shall be submitted in PDF copy format no later than 4:00 p.m. (CST) on February 26, 2024. For PDF format, submit by email to Mr. Plein.

Email the PDF file to: jerry.plein@ci.red-wing.mn.us.

City of Red Wing Public Works
Jerry Plein, Deputy Director of Utilities
229 Tyler Road North
Red Wing, Minnesota 55066
651.385.5112 (direct phone)
jerry.plein@ci.red-wing.mn.us

10. SOQ Review and Selection

The SOQs will be reviewed by a committee of city staff and may include, but is not limited to, Public Works, Engineering, and Administration. The selection process may include in-person or virtual meetings with the consultant on their submittal. The city's Deputy Director of Public Works – Utilities and the Environmental Services Superintendent will coordinate consulting activities and act as technical advisors to the successful Respondent. The successful Respondent will receive policy and project level direction from the Deputy Director of Public Works – Utilities.

12. Public Information

Information supplied by the Respondent to the city is subject to the Minnesota Government Data Practices Act. Such information shall become public unless it falls within one of the exceptions in the statute, such as security information, trade secret information, or labor relations information. If the Respondent believes any information that is not public will be supplied in response to this RFQ, the Respondent shall take reasonable steps to identify for the city what data, if any, it believes falls within the exceptions. If the Respondent's data is not marked in such a way as to identify non-public data, the city will treat the information as public and release it upon request. In addition, the city reserves the right to make the final determination of whether data identified by the Respondent as not public falls within the exceptions within the statute.

13. Proposal Preparation and Contract Negotiation Costs

The city shall not be liable for any expenses incurred by a Respondent prior to the signing of a contract including, but not limited to, the proposal preparation, attendance at interviews or meetings, or final contract negotiations.

14. Terms and Conditions of Subsequent Agreement

The selected Respondent will be required to execute a Master Services Agreement (MSA, www.red-wing.org/1149/Wastewater-Facility-Planning). The scope of work for each and any project phase will be negotiated and incorporated into a Task Order issued under the MSA. Multiple task orders may be executed.

15. Compliance with Federal, State and Local Laws, Resolutions, Ordinances, Rules, Regulations, and Executive Orders

The selected Respondent agrees to comply with all federal, state, and local laws, resolutions, ordinances, rules, regulations, and executive orders pertaining to unlawful discrimination on account of race, color, creed, religion, national origin, sex, marital status, status regarding public assistance, sexual preference, disability, or age. Respondents are encouraged to actively seek and make good faith efforts for the participation of qualified DBEs for sub-consultant tasks.

When required by law or requested by the city, the Respondent shall furnish a written affirmative action plan.