

OAK CREEK WATER AND SEWER UTILITY



REQUEST FOR PROPOSAL

Sanitary System Master Plan

Proposals due July 26, 2019 @ 3:00pm

Mail or hand deliver to:

**Brian Johnston, Utility Engineer
Oak Creek Water and Sewer Utility
170 West Drexel Avenue
Oak Creek, Wisconsin 53154
(414)570-8210**

June 25, 2019

**OAK CREEK WATER AND SEWER UTILITY
REQUEST FOR PROPOSALS
SANITARY SEWER MASTER PLAN
Proposals Due by 3:00 pm,
Friday, July 26, 2019**

The Oak Creek Water and Sewer Utility (Utility) is issuing a Request for Proposals (RFP) from qualified consultants to submit proposals for professional engineering services to prepare a comprehensive Sanitary Sewer Master Plan. Consultants who submit proposals for this project must be licensed Professional Engineers in the State of Wisconsin and with demonstrated experience in preparing Sanitary Master Plans. To be considered, interested parties must submit their Proposals in accordance with the requirements set forth in the RFP.

Generally, the Consultant will provide to the Utility a future picture of its sanitary transmission needs, required infrastructure to meet those needs, and a plan to achieve those needs over a 20-year planning horizon. The plan will be flexible to allow for various development and land use options. This will require the review of the existing sanitary sewer and a conceptual understanding of land use and potential development patterns. Also, coordination with MMSD and SEWRPC on their future forecast and flow allocation requirements. The Consultant will use the existing sanitary demand analysis, review sanitary requirements, develop planning analysis criteria, analyze the sanitary system, and develop a capital improvement program.

The RFP can be downloaded from the Oak Creek Water & Sewer Utility website, www.water.oak-creek.wi.us, or a printed copy can be obtained at the address listed below. For questions or clarifications regarding this RFP, contact Brian Johnston at bjohnston@water.oak-creek.wi.us or 414-570-8200 ext. 24.

Three (3) copies of the proposal shall be submitted in sealed envelopes and received at the Utility no later than 3:00 pm, Friday, July 26, 2019, addressed to the attention of Brian Johnston, 170 W Drexel Avenue, Oak Creek, WI 53154. The outside of the envelope shall plainly identify the Project: Sanitary Sewer Master Plan along with the name and address of the Consultant. Faxed or electronic (email) responses will not be accepted. Responses received after the designated closing date and time will not be opened or reviewed.

The Utility may reject any response not in compliance with all prescribed solicitation procedures and requirements and other applicable law, and may reject any or all responses in whole or in part when the cancellation or rejection is in the best interest of the Utility.

Background

Founded in 1955, the City of Oak Creek, Wisconsin is located along the western shore of Lake Michigan in southeastern Wisconsin and adjacent to the City of Milwaukee. Oak Creek's population is 34,500 and encompasses 28.4 square miles. The Oak Creek Water and Sewer Utility (Utility) was formed in 1960 to support the needs of a growing community. The Utility is owned by the City of Oak Creek and is overseen by a 5-member Water and Sewer Utility Commission. There are 30 full-time employees within the Utility that manage, operate, and maintain all aspects of the water treatment, water distribution, and sanitary sewer collection systems including customer service, billing and financial management.

The Utility maintains 163 miles of sanitary sewer and 3 lift stations with 5,475 feet of force main. The Utility does not treat the wastewater but has an agreement with MMSD for treatment. The system conveys the sewage to the MMSD main interceptor sewers throughout the City. MMSD has 25 sanitary basins within the City.

Sanitary Sewer Size per Material							
Gravity Main (mi.)							
Size/Material	ABS	AC	CONC	DIP	PVC	VCP	TOTAL
4"					0.003		0.003
6"			0.01			0.001	0.01
8"	0.93	8.29	8.06	0.07	69.47	17.35	104.17
10"	0.04	0.85	1.65		6.31	2.52	11.38
12"	0.20	1.40	0.98	0.15	8.59	3.61	14.92
15"		1.09	5.11		2.54	2.75	11.50
16"				0.01			0.01
18"		0.44	4.46	0.01	0.08	3.33	8.32
20"					0.41		0.41
21"			3.53			0.70	4.23
24"		0.09	4.51			0.34	4.94
27"			0.95			0.92	1.87
30"			1.37			0.06	1.44
TOTAL	1.17	12.16	30.62	0.24	87.42	31.58	163.19
Pressure Main (ft.)							
Size/Material	DIP	PVC					TOTAL
1-1/2"		429.20					429.20
2"		2,066.10					2,066.10
4"	475.70	1,342.20					1,817.90
6"	1,161.50						1,161.50
TOTAL	1,637.20	3,837.50					5,474.70

The last sanitary sewer master plan was completed by R.A. Smith and Associates (now raSmith) in May 2001. This master plan focused on creating a digital system plan and sub basin mapping.

Scope of Services

The Consultant shall furnish all services as required in order to prepare a comprehensive Sanitary Sewer Master Plan (SMP). The Consultant shall research and collect all relevant City of Oak Creek's data necessary to complete the SMP. The Consultant is encouraged to propose modifications to the individual tasks listed below or the entire scope of services if the Consultant can demonstrate innovative, advanced and well-thought-out methodologies that the City may not have specifically identified in the task. These proposed additional modifications shall be identified as optional items and priced out separately.

The SMP, at a minimum, will include flow monitoring, creating a hydraulic model, identify sewer main capacity constraints and system deficiencies, prioritize sanitary sewer capital improvement rehabilitation needs, develop a 5-year and 20-year capital improvement program to address these needs, and update the system plan and sub-basin maps

The Consultant shall carefully control costs and resources, and complete assigned work on schedule. The Consultant shall assign a project manager who will act as the City's primary contact and will be entirely responsible for the Consultant's work and sub-Consultant work, if applicable. To ensure the project remains on track, the consultant shall provide a monthly progress report which shall include a brief status of completed work anticipated to be completed in the next reporting period, problems/obstacles identified during the reporting period and any issues.

The scope of services shall generally include the following:

1. Document Review and Data Collection

- a. Review scope of services with Utility staff and review relevant documents.
- b. Review City's sanitary sewer records to identify recent improvements constructed
- c. Coordinate with MMSD to obtain basin and flow data.
- d. Coordinate with Southeastern Regional Planning commission (SEWRPC) to obtain future development plans.
- e. Coordinate with City's Planning Department to obtain future development plans.
- f. Review City's sanitary sewer inspection videos, maintenance records, and meet with Utility staff to identify areas of concern regarding sewer mains (both gravity and force). This information is available in POSM software format.
- g. Review GIS database for the sanitary sewer system.
- h. Meet with Utility staff to review development plans and all relevant documents.

- i. Prepare a description and general inventory of the sanitary sewer system based on review of plans, reports, studies, and field inspections.

2. Field Investigations

- a. Set flow meters as appropriate to determine average flow rates and patterns throughout the City including in/out of all pump stations. Meters should be strategically located to assist in review/identification of average flow rates for residential (single and multi-family), commercial, hotel/motel, apartment land uses, industrial and manufacturing. Meter locations and methodology must be reviewed and approved by the City.

3. Sewer Model and Calibration

- a. Using flow data collected in Field Investigation, the Consultant shall create model simulations for design storm dry and wet weather flows for existing and future development scenarios.
- b. Identify locations in the wastewater system that have capacity constraints under peak wet weather flow.
- c. Identify areas in the City with high rates of Infiltration and Inflow (I&I)
- d. The Consultant shall provide the City with a hydraulic model that includes, but is not limited to, all of the following:
 1. Manhole and pipe segment identification numbers in accordance with Utility specified naming convention, manhole invert elevation for all pipes and rim elevations.
 2. Pipe size and material.
 3. Pipe flow estimates for peak dry and wet weather flows, resulting D/d ratios, and available capacity based on City specified D/d ratios.
 4. Consultant to recommend design peaking factors based on flow data and peak flow use.
 5. Links to any available meter data collected as part of Field Investigations.
- e. Update the basin flow allocations with MMSD input.

4. Sanitary Sewer Capital Improvement Program (CIP)

Using data collected during Field Investigations, the Consultant shall develop a Sanitary Sewer Capital Improvement program recommending a short-term (5-year) and a long-term (20-year) improvements necessary to meet all requirements as described to maintain a desired level of service for the City's sanitary sewer collection system.

- a. Condition Assessment
 1. The City has started a rehabilitation program based on the POSM rating system. We will provide a summary table for conditions of the City's Sanitary sewer assets. POSM videos are available to review as needed.

2. Identify the useful life and value of the existing sanitary sewer collection system assets. Pipe materials of existing sanitary sewer mains include vitrified clay (VCP), cured-in-placed liner, polyvinyl chloride (PVC), and reinforced concrete pipe (RCP).
 3. Establish the asset values and recommended year-to-year replacement costs of aging infrastructure. The remaining useful life of assets shall be assessed by the Consultant using projected-useful-life tables, decay curves, or recent condition assessment studies.
- b. Recommendation of Improvements
1. Identify improvements (or improvement programs such as regularly scheduled condition monitoring programs) necessary to meet the requirements of the Utility's desired level of service.
 2. Develop prioritization criteria to utilize when prioritizing recommended improvements. Criteria should account for:
 - j. Probability of failure based on condition of facility
 - ii. How critical the facility is to system operations (i.e., ramifications of failure)
 - iii. Potential I/I reduction
 - iv. Cost of facility failure (including social and environmental costs in addition to hard costs of repairs).
 3. Recommend a replacement and rehabilitation methodology for all recommended improvements. The methodology should take into account the material, condition, age of facility, and sensitive environmental areas (such as creeks and industrial areas)
 4. Prepare construction cost estimates associated with all recommended improvements or improvement programs.
 5. Create a prioritized list of recommended improvements and improvement programs through 2040 with a detailed focus on near term critical projects through 2025.

5. Update System Map

Review the system maps that were created by raSmith with the 2001 Master Plan and analyze the system sub-basin drainage areas. This will need to be coordinated with MMSD on the flow allocation analysis as well. The current linework standards to be reviewed for clarity of the sheets. The Consultant shall provide an updated system plan for future planning needs. The base of the mapping will be provided in GIS format.

Submission Requirements

All proposals shall include the following information, organized as separate sections of the proposal. The proposal should be concise and to the point.

1. Contractor Identification

Provide the name of the firm, the firm's principal place of business, the name and telephone number of the contact person.

2. Client References: (3-5 References is typical)

Provide a minimum of three (3) client references. References should be Wisconsin cities or other large public sector entities. Provide the designated person's name, title, organization, address telephone number, and the project(s) that were completed under that client's direction.

3. Fee Schedule

The City is interested in different cost-effective approaches to complete the final Sanitary Sewer master Plan. The final scope of services will be subject to negotiation. Consultant staff fee schedule should clearly indicate effective dates, applicable escalation clauses, and miscellaneous billable costs, in addition to hourly rates. A total project cost should not be submitted for the project.

As the City is committed to making the most efficient use of public fund available. The City reserves the right to select the best combination of qualifications.

4. Qualifications and Key Personnel

The proposal shall include a description of the qualifications of the firm and the key personnel to be assigned.

5. Project Specific Requirements

a. Project Team

In response to this RFP, the prime consultant should have at least a minimum of ten years' experience of developing of the sanitary sewer master plan and collection system hydraulic modeling. The team shall have all necessary state, and federal certification applicable to the project. List prime and sub-consultants with individual addresses, telephone numbers and areas of expertise. Briefly describe the project responsibility of each team member.

b. Description of Organization, Management and Team Members

A description of the team/consultant organization, and a work plan that identifies the personnel to be assigned to each task. The organization description should clearly identify who will be the project manager and the day-to-day contact person for the job. A description of the qualification of the professional personnel to be employed with a summary of similar work performed and a resume for each professional.

c. Scope of Work

The proposal should contain a description of each work task with an explanation of how the proposer plans to approach the tasks and the steps that will be taken to complete the task including analytical methods and tools. Proposer must demonstrate that they understand the magnitude and importance of each individual task. Tasks should be organized into phases constituting measurable deliverables.

d. Proposed Project Schedule

Time is of the essence for this agreement. The proposal shall include a schedule to undertake the work program.

Selection Criteria and Process

The following criteria will be considered, although not exclusively, in determining which firm is hired.

1. Consultant's understanding of the project – 30 points
2. Approach to work tasks – 30 points
3. Qualifications and related experience – 20 points
4. Schedule – 10 points
5. References – 10 points

The selection process will consist of a panel of City staff and possibly other experts reviewing the proposals according to the criteria discussed above, and the possibility of inviting one or more proposers for potential interviews, which may take place on or about three weeks after proposal is submitted. The selection committee will determine if it is necessary to develop a "short list" and continue the selection process with formal presentations.

The City of Oak Creek reserves the right to reject any and all proposals and to resubmit its request for proposals. The Utility Engineer will make a recommendation to the Utility Commission based on the outcome of the selection process. The preferred consultant is expected to be selected and authorized by the Utility Commission in September 2019.