City of Ramsey, Minnesota

REQUEST FOR PROPOSALS

Analyze Source Water, Develop Water Model, and Prepare Preliminary Design Report for Centralized Water Treatment Facility

August 8, 2019

Scope of Services

The City of Ramsey is requesting proposals from qualified consultants for providing the following professional services.

1. ***Analyze Source Water.*** Analyze and report on the overall accessibility, capacity, chemistry and limitations of the Tunnel City/Wonewoc (TCW) aquifer, the existing source water for the City of Ramsey's municipal groundwater supply system, and on the long-term viability of continuing to use the TCW aquifer as the sole source of water for the municipal water supply system. This will allow the selected consultant to adequately prepare a preliminary design report by understanding the chemistry of the municipal groundwater supply system and therefore which primary, secondary and/or emerging contaminants will need to be treated over the anticipated life of the facility. This work will also allow the selected consultant to provide recommendations on the need for and use of alternative sources of water.
2. ***Develop Water Model.*** Develop a model of the City of Ramsey's municipal water supply system using an industry standard software program. This model will allow the selected consultant to adequately prepare a preliminary design report, and will allow the City to evaluate future operations throughout the system by considering variable flow regimes when water is drawn from different wells and storage tanks at different times, variable water usage patterns by municipal water consumers, and proposed system expansions.
3. ***Prepare Preliminary Design Report.*** Prepare a preliminary design report exploring available options and recommending preferred processes for treating known and emerging contaminants that will potentially need to be treated over the anticipated life of a centralized water treatment facility in the City of Ramsey. The report must examine available treatment process options for identified contaminants potentially needing treatment, recommend a preferred treatment process for each identified contaminant, identify required space needs for preferred treatment processes, identify anticipated expansion needs, provide a recommendation as to the required size and preferred location for the facility, and provide cost estimates for constructing and operating the facility over its anticipated life.

Background

The existing water supply source for the City of Ramsey's water supply system is the Tunnel City/Wonewoc (TCW) aquifer, formerly known as the Franconia-Ironton-Galesville (FIG) aquifer. Water is drawn from the TCW aquifer through eight (8) groundwater wells, seven (7) of which are currently being utilized to provide potable water. The maximum capacity of the combined municipal wells is 10.9 million gallons per day (MGD). Two additional wells are currently proposed to be constructed in the years 2023 and 2028 to provide adequate capacity to the year 2040 based on projected City growth.

The City's groundwater supply wells have historically provided groundwater of good quality and in adequate quantity. However, in 2019 the Minnesota Department of Health informed the City that several of its groundwater supply wells are producing concentrations of manganese that exceed the recommended Secondary Drinking Water Standards. The City does not currently treat its municipal water supply for manganese so as a short-term solution the City immediately started pumping water only from wells with the lowest concentrations of manganese to maintain manganese concentrations below the recommended Secondary Drinking Water Standards. Unfortunately, these wells also produce the highest concentrations of iron, which has resulted in increased complaints of rust-colored water.

To properly plan for long-term solutions to reduce manganese and iron concentrations in the municipal water supply system, the City is requesting proposals from qualified consultants for providing professional services as generally identified under the ***Scope of Services*** section above, and as further identified under the ***Specific Requirements*** section below.

Final design work for the centralized water treatment facility, including any pilot testing of preferred treatment processes, will be completed under separate contract following public review of and input on the preliminary design report.

Questions regarding this request for proposals shall be directed to City Engineer Bruce Westby at 763-433-9825 or bwestby@cityoframsey.com.

Special Considerations

I. ***Neighboring Property Impacts.*** The preliminary design report shall explore potential impacts of the facility on neighboring properties due to noise, odors, operating hours, traffic, and any other identified sources of impact, and recommend a process for mitigating any identified impacts during the future final design process.

2. ***Budget.*** The preliminary design report shall explore future budget impacts based on estimated construction and operating costs, and shall explore and recommend future water rate revisions as needed to offset estimated budget impacts.

3. ***Estimated Costs.*** The preliminary design report shall include estimated construction and operating costs for the groundwater treatment facility over the anticipated life of the facility. Estimated costs shall assume industry standard costs for such a facility, and shall include at least one laboratory/office space, one medium-sized conference room, and one two-bay garage with a storage mezzanine. The garage is anticipated to house a portable generator and miscellaneous utility equipment/vehicles, whose costs shall NOT be considered within the cost estimate.

4. ***Public Education/Engagement Plan.*** The preliminary design report shall include a public education/engagement plan, which will allow the City to convey the results of preliminary design report and to gather feedback from the public to allow the City to better understand whether some of the preferred treatment processes can/should be omitted from further consideration, such as softening.

General Requirements

Qualified consultants shall submit eight (8) sealed copies of their proposal by 4:00 p.m. on Friday, September 20, 2019. Sealed proposals shall be addressed to Bruce Westby, City Engineer, 7550 Sunwood Drive NW, Ramsey, MN 55303, and shall be clearly labeled "Water Treatment RFP".

Submitted proposals shall conform to the following requirements:

1. Proposals shall not exceed 20 pages in length, excluding exhibits, firm/personnel experience/qualification narratives, and personnel resumes, and shall not contain promotional materials not applicable to the project.
2. If proposing to partner with other consultants or individuals, the other consultants or individuals shall be clearly identified, along with their specific role(s) in the project.
3. Proposals shall include the names, titles, experiences and qualifications of all personnel proposed to be assigned to the project.
4. Proposals shall clearly identify proposed hours and hourly rates for all personnel proposed to be assigned to the project.
5. Proposals shall include individual fee proposals for each task including source water analysis, preliminary design report, and water system model. The proposal shall also include a total not-to-exceed fee for all tasks combined. Compensation to the selected consultant shall not exceed the total fee unless authorized by the City Council.
6. If consultant feels tasks outside the scope of this RFP are required or recommended, such tasks shall be identified in the proposal with associated costs.

Special Requirements

The selected consultant shall complete each service area in the order listed, including the following tasks within each service area.

1. Analyze Source Water

Analyze source water before preparing the preliminary design report. The analysis shall include, but not be limited to, the following elements:

a. Analyze aquifer accessibility
   - Identify approximate useable boundaries of TCW aquifer (not limited to City limits).
   - Identify areas where additional wells may be feasible.

b. Analyze aquifer capacity
   - Determine whether the TCW has sufficient capacity to serve the City's future needs.

c. Analyze source water chemistry
   - Identify/inventory known primary contaminants.
   - Identify/inventory known secondary contaminants.
   - Identify/inventory emerging contaminants (based on anticipated life of facility).

d. Analyze aquifer limitations
   - Determine overall ability of the TCW to serve the City's future water supply needs.
   - Analyze and provide recommendations on using alternative sources of water.

e. Summarize results

2. Develop Water Model

Develop a water model before preparing the preliminary design report.

a. Develop a calibrated water model for the entire municipal water supply system using an industry standard software program.

3. Prepare Preliminary Design Report

Prepare a preliminary design report to assist in future final design efforts for a centralized groundwater treatment facility. The design report shall include, but not be limited to, the following elements:

a. Select water source(s) based on future demand and source water analysis
    - Identify preferred water source to meet future needs.
    - Confirm whether the Mount Simon/Hinckley aquifer is available to the City.
    - Incorporate Northwest Metro Regional Surface Water Supply study results.
    - Research options for purchasing water from other communities.
    - Research interconnection options.
    - Research whether a clear well/reservoir will be required.

b. Develop treatment goals
    - Iron reduction
    - Manganese reduction
    - Lime softening
    - Others?

c. Explore available treatment options
    - Biological filters
    - Gravity filters
    - Pressure filters
    - Reverse Osmosis (membrane) softening
    - Softening (lime)
    - Others?

d. Summarize advantages/disadvantages of each option
    - Ability to treat other contaminants
    - Disposal of waste products
    - Ease of operation
    - Flexibility of process to adjust to changing standards
    - Replacement parts availability
    - Staffing needs

e. Select preferred treatment process for each contaminant requiring treatment

f. Develop preliminary centralized treatment facility layout (set footprint)

g. Select preferred site

h. Calculate estimated construction and operational costs

i. Review existing fees/rates structure and recommend revisions as needed

j. Explore/identify alternative external funding sources

k. Develop public education/engagement plan to solicit feedback on design report results

l. Present completed preliminary design report to City Council for approval.

m. Attend up to eight (8) meetings with City staff, City Council, and the public.

Written Proposal

I. ***Project Approach.*** The proposal shall provide a clear understanding of the consultants approach to the project along with a complete detail of the project requirements, which shall include a description of each task necessary to accomplish the project.

2. ***Project Schedule.*** A detailed schedule of activities shall be provided and shall identify all necessary tasks with their respective completion dates.

3. ***Project Personnel.*** The proposal shall identify all personnel to be involved in the project and shall define their respective backgrounds along with their key responsibilities and descriptions of their role and duty on the project. It is expected that key personnel assigned to the project will remain available for the duration of the project.

4. ***Relative Experience and Qualifications.*** The proposal shall demonstrate the experience and qualifications of the firm and all assigned key personnel relative to their past experience with projects of similar scope and magnitude, and all related qualifications.

5. ***Performance.*** The proposal shall clearly demonstrate the ability of the firm and all assigned key personnel to perform the requested professional services in a timely and cost effective manner.

6. ***References.*** The proposal shall contain a minimum of three (3) references that may be contacted relative to the projects identified in the experience and performance areas of the proposal.

Proposal Selection Process

A selection committee composed of four City Staff and up to three City Council members will evaluate the proposals received. Members of the selection committee will independently review, score and rank each proposal using the attached Proposal Ranking Form, which considers the following criteria:

1. Understanding of project and services required.
2. Experience and qualifications of key personnel assigned to project.
3. Experience and qualifications of the firm applicable to project.
4. Performance and references regarding similar work performed.
5. Overall responsiveness to the RFP.

The selection committee will develop a composite ranking, which indicates the committee's collective ranking of proposals. Interviews will be scheduled with the three top ranked consultants.

An interview subcommittee, which will tentatively consist of four City Staff including the City Administrator, City Engineer, Public Works Superintendent, and Utilities Superintendent, will conduct interviews up to 20 minutes in length with each consultant team on October 2, 2019 between 2:00 and 4:00 p.m. Members of the interview subcommittee will independently score and rank each consultant, then a composite ranking will be developed indicating the subcommittee's collective ranking of the interviewed consultant teams based on the following criteria:

1. Ability to communicate a clear understanding of each service area.
2. Related experience and qualifications of key project personnel.
3. Related experience and qualifications of the firm.
4. Overall interview performance.

The selection committee will recommend that the City Council hire one firm to provide the professional services defined in the RFP based on the short-listed consultants responsiveness to the RFP, any additional required information, composite interview rankings, and proposed fees.

The City will endeavor to execute a contract with the selected firm. In the event that a mutually agreeable contract cannot be executed with said firm, the City will enter into contract negotiations with the next highest ranked firm, and so on until a mutually agreeable contract can be executed.

Project Schedule

City Council approves advertising Request for Proposals	August 12, 2019
Request for Proposals advertised / submitted to consultants	August 16, 2019
Proposals due to City	September 20, 2019
Interview up to three short-listed firms	October 2, 2019
City Council approves selected firm	October 8, 2019
Complete negotiations with selected firm	October 16, 2019
Issue Notice to Proceed	November 1, 2019
Complete Source Water Analysis	January 18, 2020
Complete Water Supply Model	January 31, 2020
Complete Preliminary Design Report	May 1, 2020
Conduct Public Workshop to Solicit Public Feedback	May 13, 2020
Conclude Project/Submit Deliverables	May 29, 2020