City of Ramsey, Minnesota

REQUEST FOR PROPOSALS

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

September 10, 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 proposed to be constructed in the years 2023 and 2028, which is intended to supply water to all municipal water system users 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 the three 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, and will damage system components over time.

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

Final design work for the centralized water treatment facility, including any pilot testing of preferred treatment processes, will be completed under separate contract using information from 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 water treatment facility on neighboring properties due to noise, odors, operating hours, traffic, and other identified sources of impact, and recommend a process for mitigating any identified impacts during the final design process.

2. ***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 a water treatment 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.

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

4. ***Public Education/Engagement Plan.*** The preliminary design report shall include a public education/engagement plan designed to clearly and concisely convey the preliminary design report results to the public, and to allow for public feedback. Public feedback will help the City to understand potential concerns related to the recommended facility, including the recommended site and/or treatment processes, which can then be addressed during final design of the facility.

General Requirements

Qualified consultants shall submit eight (8) sealed copies of their proposal by **4:00 p.m.** on **Friday, September 20, 2019**. Address sealed proposals to Bruce Westby, City Engineer, 7550 Sunwood Drive NW, Ramsey, MN 55303. Clearly label envelopes "Centralized Water Treatment Proposal".

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 lump sum fee proposals for each of the three (3) service areas (source water analysis, water system model, and preliminary design report), plus a lump sum fee proposal for preparing a public input plan to weigh community support for softening municipal water. Compensation shall not exceed the proposed fees without prior City Council authorization.
6. If a consultant recommends or requires tasks that fall outside the scope of this RFP, such tasks must be clearly identified in the proposal with the associated costs.

Special Requirements

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

1. Analyze Source Water

Analyze source water before preparing the preliminary design report. This 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, dynamic, GIS-based 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 public feedback on the design report.

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.

Other Requirements

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. ***Proposed Fees.*** The proposal shall contain four (4) separate lump sum fee proposals including separate fee proposals for each of the three (3) service areas, plus one (1) fee proposal for preparing a public engagement plan for the purpose of gathering public input to weigh community support for adding processes to the centralized water treatment facility for softening the municipal water supply.

7. ***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.

8. ***Addendum No. 1.*** The proposal shall include a statement that addendum No. 1 was received and understood, and that all requirements are addressed within the proposal.

9. ***Additional Addenda.*** Addenda will not be issued after 3:00 p.m. on September 16, 2019. Questions received after this time will not be answered, regardless of format.

Proposal Selection Process

The selection committee will consist of four City staff members including the City Administrator, City Engineer, Public Works Superintendent, and Utilities Superintendent. This committee 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 conducted with up to three of the top-ranked consultants between 9:00 and 11:00 a.m on October 2, 2019. Interviews with each short-listed consultant team will be limited to 20 minutes. The selection committee will independently score and rank each consultant based on interviews, then a composite ranking will be developed indicating the collective ranking of the interviewed consultant teams using 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, composite interview rankings, and their 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	August 16 & 23, 2019
Proposals available/posted on QuestCDN	August 20, 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
Issue Notice to Proceed	October 25, 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

Enclosures:

Proposal Evaluation Form

Addendum No. 1

Proposal Evaluation Form

City of Ramsey Centralized Water Treatment Facility RFP

Firm Name: _____

Proposal Scoring Guidelines

Excellent to Outstanding	**75% to 100% of Maximum Points**
Acceptable to Excellent	**50% to 74% of Maximum Points**
Marginal to Acceptable	**25% to 49% of Maximum Points**
Incomplete to Marginal	**0% to 24% of Maximum Points**

	Maximum Points	Score
Understanding of Services Required: Firm indicates a clear understanding of the services required for the project and clearly identifies all project requirements in their proposal and schedule.	25	
Personnel Experience and Qualifications: Based upon resumes of key personnel assigned to the project, personnel appear to have applicable experience analyzing source water, developing water models and preparing design reports for water supply systems.	25	
Firm Experience and Qualifications: Firm appears to have applicable experience analyzing source water, developing water models and preparing design reports for water supply systems.	25	
Performance and References: Firm appears to be able to perform the project in a timely and cost effective manner. The proposal includes references to be contacted.	20	
Proposal Responsiveness: Information provided in the proposal is complete, organized and presented in a professional manner.	5	
Technical Proposal Total Points:	100	
Technical Proposal Ranking:		

Ranked by:_____ Date:_____

ADDENDUM No. 1

Request for Proposals

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

September 10, 2019

TO ALL BIDDERS: The Request for Proposals (RFP) to Analyze Source Water, Develop Water Model, and Prepare Preliminary Design Report for Centralized Water Treatment Facility was modified September 10, 2019 to address questions received to date. Bullets summarizing the modifications are listed below.

- The modified RFP is dated September 10, 2019.
- Bidders must acknowledge receipt of Addendum No. 1. See item 8 of the Other Requirements section in the RFP.
- Addenda will not be issued after 3:00 p.m. on September 16, 2019. Questions received after this time will not be answered, regardless of format. See item 9 of the Other Requirements section in the RFP.
- Bidders are not required to explore surface water supply options. The City is currently studying the feasibility of implementing a regional surface water supply system in the Northwest Metropolitan area. This study is anticipated to be complete in early 2020.
- A WaterCAD municipal water distribution model was developed by Bolton & Menk in 2013. The model was last updated in 2016, is approximately 95% complete but includes all towers and wells, and was not set up to be dynamic. The model will need to be reviewed, updated and calibrated using field test results. The model will be available to the selected consultant, upon request.
- The delivered municipal water distribution model must be complete, calibrated, dynamic, and GIS based. See item 2.a of the Special Requirements section in the RFP.
- The City has fire hydrant flow rate records for approximately one-percent of hydrants.
- The City has one 10-inch water supply inter-connect with the City of Anoka. No other inter-connects are planned at this time.
- The City maintains water quality data records from all municipal wells. The Minnesota Department of Health also maintains copies of these records. These records will be available to the selected consultant, upon request. Additional water quality sampling and testing is NOT a requirement of this RFP.

- GIS data for the existing water distribution system will be available to the selected consultant, upon request. If needed, PDF copies of construction and record plans will also be available, upon request.
- The City's current Wellhead Protection Plan Part 1 dated September 2007, and Part 2 dated May 2009, can be accessed using the following Dropbox link; *https://www.dropbox.com/sh/g2fw76zye0z02vd/AADmmoDEXDo05_hGbNMECfTia?dl=0*
- The City is in the process of amending its Wellhead Protection Plan. Amended Part I dated January 2019 can be accessed using the following Dropbox link; *https://www.dropbox.com/sh/g2fw76zye0z02vd/AADmmoDEXDo05_hGbNMECfTia?dl=0*
- The City's current Comprehensive Water Supply Plan dated June 2012, and companion update dated September 2017, can be accessed using the following Dropbox link; *https://www.dropbox.com/sh/g2fw76zye0z02vd/AADmmoDEXDo05_hGbNMECfTia?dl=0*
- Each proposal must define proposed hours and rates for all identified personnel assigned to the project, as well as a total for all identified labor costs.
- The project schedule, including due date for RFP responses, was NOT modified.