



## REQUEST FOR PROPOSALS

*For*

### ***Water System Operations and Sustainability Study***

***Submittal Date and Location***

**August 10, 2020, 2:00 P.M.**

Village of Burr Ridge

7660 S. County Line Road

Burr Ridge, Illinois 60527

***Direct all Questions and Inquiries***

**until July 29, 2020, 2:00 P.M. to**

David Preissig, P.E.

Director of Public Works & Village Engineer

[dpreissig@burr-ridge.gov](mailto:dpreissig@burr-ridge.gov)

(630) 654-8181 x.6000



## **REQUEST FOR PROPOSALS**

### **Water System Operations and Sustainability Study**

#### **A. SUMMARY**

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The Village of Burr Ridge is requesting proposals from qualified engineering consultants to perform a comprehensive study of the Village's water distribution system with respect to its operations, capital improvements, funding, and hazard vulnerability. The study will include hydraulic modeling of the distribution system, risk assessment completed in accordance with the American Water Infrastructure Act of 2018, development of a 10-year capital plan, and a water rate study.

Proposals will only be accepted at the Village Hall, 7660 S. County Line Road, Burr Ridge, IL 60527. There will be two (2) concurrent submittals as described herein.

A Village committee of elected officials and staff will evaluate the proposals. The Village reserves the right to accept or reject any or all Proposals or to waive technicalities, or to accept any single or combination of items from any proposal. Any agreement awarded as a result of this Proposal will be authorized by the Village Board for subsequent execution by the Village Administrator.

#### **B. BACKGROUND**

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The Village of Burr Ridge supplies approximately 650 million gallons of treated water to 4010 residential accounts and 243 commercial accounts. Average daily demand over the past 10 years has varied from a low of 1.17 MGD (November 2011) to a high of 3.78 MGD (July 2012). Average daily demand in 2019 was 1.58 MGD.

The Water Fund of the Village budget accounts for all financial activities associated with the municipal water service. Billing from consumption of water and tap-on fees from building activities are its primary sources of revenue. Revenues then purchase water and maintain the distribution system. The Water Fund is a self-contained fund wherein all expenses are paid for by revenues generated by this fund (i.e. enterprise fund).

The Water & Wastewater Division of the Public Works Department is responsible for the pumping, storage and distribution system, which provides water from Lake Michigan to the residents and businesses of Burr Ridge. The Village purchases water from the Village of Bedford Park, and Bedford Park purchases water from the City of Chicago). The Village's water system includes a pumping station, a 3-million-gallon underground reservoir, 2 million gallon and 300,000 gallon elevated storage tanks, three (3) standby wells, and approximately 90 miles of water main ranging from 6 inches to 20 inches. A 36-inch transmission main traverses over 4 miles from Bedford Park to the Village's pumping station, before reducing to 24-inches on German Church Road and then as a 16-inch main into the pump station. The pumping station re-chlorinates the Lake Michigan water before distributing. Emergency interconnections exist with the Justice-Willow Springs Water Commission and Village of Willowbrook. The Village can supply a part of the Village of Indian Head Park, but Indian Head Park cannot supply Burr Ridge.



Please refer to Burr Ridge Village Code, Chapter 58 “Water Works System”, for water distribution regulations of the Village, including Water Rates and Charges.

### **C. PROJECT SCOPE**

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The Village invites Consultants with appropriate expertise to submit a proposal that details how the firm would provide the methodology, analyses, reports and recommendations for the following categories in the Water System Operations and Sustainability Study:

- 1) Hydraulic Water Model: The first objective of this project is to develop a hydraulic model of the water distribution system that guides decisions on operations, management, and capital improvements. In responding to this RFP, provide the actual steps, schedule and tasks necessary to complete this objective, which is anticipated to include the following:
  - a) Gather and Review Existing Data: Research, verify, compile, and review the existing pertinent data relating to the development of the computer hydraulic water model. Cloudpoint Geographics, Inc. maintains and retains for the Village all its geographic information system (GIS) data for the Village in ArcGIS Online. GIS shape files would be provided to the selected firm.
  - b) Develop and Finalize Water System Network: Update linework and database to incorporate infrastructure from new construction projects, correct any features to match existing GPS structures or actual network connectivity, and correct locations, attributes, or discrepancies in consultation with Village staff.
  - c) Import to Modeling Software: This is the first hydraulic model of the Village; therefore, recommend for approval by the Village to utilize either WaterGEMS or InfoWater that will meet the needs of the Public Works Department. With Village concurrence, proceed to develop the model using the selected platform.
  - d) Computer Hydraulic Water Model Development & Calibration: Create a plan for review by the Village, then with Village staff conduct the field tests and further calibration to correlate computerized hydraulic water model to actual conditions including, but not limited to, storage tanks, pumping stations, and transmission and distribution mains.
  - e) Water System Performance Evaluation: Analyze and evaluate the Village’s entire water distribution, pumping, and storage system design and performance, considering water aging, cycling, nitrification and residual concentrations in the system and tanks.
  - f) Computer Hydraulic Water Model Analysis: Upon model calibration the qualified firm shall conduct the following analyses:
    - i. Evaluate adequacy of the distribution system to the current connection(s) and additional connections that may occur in the future (ex. Justice-Willow Springs near I-294 Mile-Long Bridge, and Village of Hinsdale near 55<sup>th</sup> Street and Laurie Lane).



- ii. Identify any areas of concern with respect to flow, pressure, fire flow, and water aging.
  - iii. Determine the maximum daily flow that can be delivered to the current connections, or can be accepted from the current connections, as well as any additional interconnections that should be pursued for the future.
  - iv. Pair model results with water main break history to identify critical segments that should be a priority for replacement.
- g) Report with Recommendations: Prepare a final report with recommendations, and provide schematics showing the existing conditions. The report shall include a 5-year (short term) program for replacements, additions, or other enhancements that will improve water distribution in the Village.
- 2) Water Rate Study: The second objective of this project is to develop a rate structure that sustains the Water Fund to provide operational expenses and capital improvements as may be necessary. In responding to this RFP, provide the actual steps, schedule and tasks that may be necessary to complete this objective, which is anticipated to include the following:
- a) Ten-Year Financial Plan: Develop a 10-year forecast of net revenues to determine the adequacy of revenues provided by existing rates. This forecast should include projections of annual revenues under existing rates and the annual revenue requirement, including all operating expenses, capital requirements, debt service requirements, asset depreciation, and margins, by year for a forward 10-year period. The financial plan should identify the overall change in revenue required to provide for adequate funding of major capital improvement programs, to meet all recurring annual operating and capital expenditures, to cover all debt service requirements, asset depreciation and to maintain sufficient cash balances and capital reserves. Prior to finalization of the 10-year financial plan, the preliminary forecast results are to be provided to the Finance Department of the Village of Burr Ridge for assessment of estimated impacts on the cash flow of the Water Fund. Based on this internal analysis, appropriate revisions to the forecast assumptions will be discussed and incorporated by the consultant into the final 10-year financial plan.
  - b) Cost-of-Service Analysis: Identify the relative responsibility of each rate classification for the recovery of the costs of service. The cost-of-service analysis should include development of appropriate allocation factors based on best industry practices.
  - c) Rate and Rate Change Design: Design four (4) options for appropriate rate schedules that provide revenue recovery sufficient to cover the total system revenue requirement taking into consideration the revenue responsibility indicated by the cost-of-service analysis and the Village's rate design policies and objectives. The rate design should include any proposed revisions to existing rate structures and classifications, as well as to the specific rate located outside Village



- limits. Three (3) designs shall be included initially, with the fourth option reserved for a later analysis as may be suggested by Village officials.
- d) Comparison to Available Benchmark Information: Provide appropriate benchmarking information that compares Village rate structure, staffing, and fund uses to similar cities or Villages. This comparison would be used to verify that rates, fees, organizational structure, and capital improvement funding and schedules are in line with local conditions and industry standards.
  - e) Cost-of-Service Rate Study Report: Summarize the data, methodology, analysis, results and recommendations. Submit one (1) draft report for review by the Village prior to finalizing the report. The final report will incorporate discussion of any questions/comments the Village has in regard to the draft reports. A digital working copy of the rate model in Excel format shall also be provided as a final deliverable.
  - f) Preliminary and Final Presentations: Consultant will attend two (2) meetings of Village staff and the Water Committee to present the preliminary and final results of the Water Rate Study.
- 3) Risk and Resilience Assessment/Emergency Response Plan: The third objective of the project is to develop a Risk and Resilience Assessment (RRA) and corresponding Emergency Response Plan (ERP) in compliance with the American Water Infrastructure Act (AWIA) (S.3021, Law 115-270). Its purpose is to evaluate the vulnerabilities, threats (both natural and malevolent acts), as well as the consequences from potential hazards to the Village's water supply, and plan the necessary actions that mitigate these hazards.

Upon completion of the RRA and the ERP, the Village will submit self-certification to the U.S. Environmental Protection Agency (USEPA) showing compliance with each portion of the federal mandate. The Consultant is expected to follow EPA deadlines for certification (<50k population), other current regulations of the EPA, and guidance documents provided by the American Water Works Association.

The Village has one primary supply of Lake Michigan water from the City of Chicago through Bedford Park. This study would begin at that point, and consider sufficiency of other connections from Justice-Willow Springs, Willowbrook, and three standby wells if the primary supply point is compromised.

Critical customers of the Village water system include one medical center, medical facilities, four schools, four senior living facilities and a premier shopping district.

In addition, absent power from Commonwealth Edison, backup generators are installed at the pumping station, water towers, and Public Works building.

In responding to this RFP, provide the steps, schedule and tasks necessary to complete this objective, which are anticipated to include the following:



- a) Data Collection and Gap Analysis: Assess the Village's potential compliance with the AWIA requirements based on current documents, policies, plans, procedures, and assessments already in place. This should include a method to indicate to what degree those current concepts meet the AWIA compliance.
  - b) Risk and Resilience Assessment (RRA): Conduct a Village-wide risk and resilience assessment of water facility infrastructure, monitoring practices, billing systems, chemical storage and handling, operations and maintenance, and hazards from unintentional human-caused risks, such as hazardous chemical spills, incorrect system operation, critical component failure, etc. Evaluate capital and operational needs for risk and resilience management for the system. Identify how other strategies can be utilized or resources procured that will improve the resilience of the system, or aid in the detection of circumstances that threaten the security or resilience of the system.
  - c) Emergency Response Plan: Develop the Emergency Response Plan, which incorporates findings from the RRA, including but not limited to, the following:
    - i. Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of Village's system to deliver an adequate supply of safe drinking water.
    - ii. Actions, procedures, and equipment which can be obviated or significantly lessen the impact of a malevolent act or natural hazard to the public health and safety and supply of drinking water.
- 4) Preliminary Project Plan: The fourth objective of the project is to develop a preliminary report that could later be refined or amended, and which would satisfy requirements of a Project Plan in a future application to the Illinois Environmental Protection Agency (IEPA) Public Water Supply Loan Program. This report should generally follow guidelines and minimum requirements shown on the Drinking Water Project Planning Submittal Checklist and contain all pertinent information detailed in Ill. Adm. Code 35 Sections 662.320 and 662.330.

In responding to this RFP, provide the steps, schedule and tasks necessary to complete this objective, which are anticipated to include the following:

- a) With Village staff, set priorities and schedules to the anticipated projects that earlier objectives of this Study have identified.
- b) Categorize projects into the following:
  - 1) Elevated Tank Rehabilitations
  - 2) Pump Center Equipment and Reservoir Rehabilitations
  - 3) Emergency Wells and Well House Rehabilitations
  - 4) Water Main Replacements
- c) Calculate and detail the opinions of cost for all projects and provide an annual



anticipated budget using the schedules anticipated.

- 5) Optional Value-Added Work: The last objective of this study seeks to identify any additional work for which a Consultant has substantial expertise and could enhance this study or be of future benefit to the Village and the outcomes of this study.

The Village may be working with other consultants on related efforts during the project period, in particular, in the area of leak locating, valve exercising, water main replacement project(s), and the North Tower rehabilitation specifications.

#### **D. SUBMITTAL REQUIREMENTS**

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Proposal responses are due by Monday, August 10, at 2:00 p.m.

The Village requires two (2) concurrent Parts, as described herein, to comprise a complete Proposal. Submit two (2) separate and sealed envelopes, with each envelope containing six (6) printed copies of each Part.

The Proposal shall not include unnecessary promotional material.

#### **PART 1 - SERVICE PROPOSAL:**

Consultants must include the following information in the Service Proposal:

- Cover Letter: This section should contain the name of the consulting firm, the address of the proposing office(s), and the contact individuals authorized to answer technical, price, and/or contract questions together with their telephone numbers, email addresses and mailing addresses. The cover letter must also be signed by a person or persons authorized to bind the vendor.
- Table of Contents: The contents shall include an index of the proposal contents and attachments.
- Firm Background, Principal Officers, and Statement of Staff Experience: This section should state the full name and principal address of your firm(s). Describe the organization of the staff team that would service the project. Provide a listing of the key personnel and all members of the staff team, including name, title, and length of service with your firm, and experience in the industry.
- Proposed Scope of Services: Explain the firm's approach and methods to accomplishing each of the Project Scope categories identified in this RFP. Provide an estimate of the required personnel hours by task and job classification; not as a fee proposal, but only as an indication of the level of effort envisioned to complete the Project Scope item.
- Proposed Schedule of Implementation: Present a schedule for each Project Scope category.
- References: List the firm's contracts and projects in the past five (5) years with governmental organizations that provided services similarly as described herein. Provide a list of client references including phone numbers.
- Concluding Remarks: This section shall contain any final remarks or elaboration that



the Consultant believes is important to gain a clearer understanding of the proposed services and/or the firm's capabilities.

- Excerpts and Samples: Pertinent parts of previously completed studies, reports, recommendations or presentations may be included in an Appendix to Part 1.

## **PART 2 - FEE PROPOSAL**

The following items should be included in the second submittal:

- Categorized costs by Project Scope Item.
- Total Projected Cost for all services that will be necessary as requested herein.
- List the Optional Value-Added Work, but do not include costs for these items.

The Village contemplates a Cost Plus Fixed Fee proposal, with pricing for each section of the work plan and scope of required services. The cost proposal will include clearly identified deliverables.

The Part 2-Fee Proposal must be submitted in a separate envelope from the Part 1-Services Proposal to ensure that the Fee Proposal is not opened until the scoring has been finalized.

## **E. PROPOSAL EVALUATION AND INTERVIEW**

This Request for Proposal and any subsequent interview, if requested, are only a solicitation for information. The Village is not obligated to enter into a contract nor is it responsible for any costs associated with the preparation of a proposals and interview. Proposals received after the deadline will not be considered.

A team of Village staff from the Public Works, Finance, and Administration Departments and at least one Village Trustee who serves on the Water Committee, will evaluate and score the Part 1 proposals (Service Proposal) based on the following general criteria:

- Experience with moderate and complex governmental projects.
- Understanding of the project requirements and possession of the resources necessary to complete the project
- Project approach and schedule
- Qualifications and expertise of the Consultant and key personnel assigned to the project and their proven ability to efficiently complete similar projects
- Comments and opinions of references
- Clarity, conscientiousness, and organization of the proposal

Each Part 2 (Fee Proposal) will be opened after scoring has been finalized. Proposed costs divided by the Firm's overall qualifications score (expressed as a decimal) will yield a "value-adjusted ratio". The two (2) Consultants with the lowest value-adjusted ratios may be interviewed. Interviews, if needed, would be the final component of the evaluation process.

Village staff will discuss the actual scope of services, fees, schedule, and contract with the selected firm. If a fee can be negotiated that is deemed reasonable and within budget, a recommendation for contract award will be brought to the Village Board. Reviews,



evaluations, and information regarding a firm's status will be kept confidential until a decision is made for recommendation to the Village Board for approval.

## **F. SCHEDULE**

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July 20, 2020	RFP issued to Consultants
July 29, 2020	RFP questions received by 2:00 pm
August 10, 2020	Proposal (2 Parts) received by 2:00 pm
August 25-27	Interviews anticipated
September 14, 2020	Recommendation anticipated to the Village Board for consideration to award a contract
September 21, 2020	Kickoff meeting with selected consultant anticipated
January 18, 2021	Submit Preliminary Water Model Report and Recommendation(s); submit Preliminary Risk and Resilience Assessment
February 15, 2021	Present the preliminary Cost-of-Service Water Rate Study Report to the Water Committee
June 1, 2021	Submit Risk and Resilience Assessment certification to EPA
December 1, 2021	Emergency response plan certification to EPA
February 7, 2022	Submit Present the final Cost-of-Service Water Rate Study Report to the Water Committee
March 7, 2022	Final deliverables including all models, reports, and recommendations submitted

## **G. QUESTIONS**

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Consultants should familiarize themselves with site conditions and these minimum proposal requirements. Any questions must be submitted via email [todpreissig@burr-ridge.gov](mailto:todpreissig@burr-ridge.gov) by 2:00 p.m. on July 29, 2020. Village responses necessary for clarification of statements herein will be provided to known RFP recipients.