



## Request for Statement of Qualifications for Professional Services

Hildale City is requesting Statements of Qualifications (SOQ's) from qualified individuals, firms, or teams of consultants to provide engineering services for preparation of a feasibility study regarding radium treatment and/or source development options for our municipal water system.

## Hildale-Colorado City Water System Background

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Hildale-Colorado City Water System (the System) is sourced from three sources of varying sizes and quality of effluent. The first source is the Alluvial Aquifer with a depth of 40 to 60 feet, which provides water high in iron and manganese. The second source is the Shinarump Aquifer with a depth from 280 feet to 420 feet and provides roughly 60% of the System's capacity and is contaminated with radium-228 and -226. The third and final source is the Navajo Sandstone Aquifer accessed through gravity fed horizontal wells in canyon walls to the north of the system, where there is no known contamination nor any treatment need. See attached Water Master Plan for more detailed information on sources of water.

The Power Plant Well, a Shinarump Aquifer well, had begun to test high for Radium in 2014 and was placed under increased monitoring. As of its most recent test we have observed 11 pCi/L of combined radium levels. Over the last few years, the well has continued to be intermittently used to supply the System. In 2016 another Shinarump Aquifer well, the Academy Avenue well was constructed and as of 2018 was denied its operating license by the Arizona Department of Environmental Quality due to high Radium levels. In testing the Academy Ave well in relation to the Power Plant well we discovered the wells are hydrologically linked due to output rate changes when both are in operation. Additionally, the radium levels in the water have only increased with greater usage and flushing of the wells. A community to the south of the System has been experiencing radium contamination in their groundwater for an even longer period of time. See the attached diagram of uranium deposits to the south of our system.

## Scope of Work

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This Request is being conducted as part of a professional design services procurement process. In the next stage of this process, the City will negotiate directly with qualified respondents to enter into a contract based upon the following scope of work. The purpose of the feasibility study is to research and evaluate different methods of removing radium contamination from the Hildale-Colorado City Water System. The Scope of Services presented herein describes the objectives of the feasibility study that will need to meet in order to inform the City's Administration on solutions.

- I. **Efficacy of Available Treatment and Source Development Options.** The study must review the known treatment options that will bring the levels of radium contamination below the Maximum Contaminant Level (MCL). Each treatment option shall have an analysis which evaluates how the System would be affected if the radium from the source were to increase (i.e. if the treatment option would be effective at any amount of radium or if additional treatment would be required if source radium increased). The study shall include potential source development utilizing new sources of water in the



- Navajo Sandstone Aquifer in the Canyons adjacent to the city. This process shall include hydrological surveying and modeling.
- II. **Initial Capital Costs of Treatment and Source Development Options.** The study should detail the initial projected capital costs of the installation of each treatment option.
  - III. **Ongoing Operation and Maintenance (O&M) and Associated Costs.** The study should detail any projected ongoing O&M required to maintain the specific treatment or source replacement infrastructure and any associated costs. Any information on public or operator health impacts or concerns with any treatment waste should also be included.
  - IV. **Assessment of Radionuclide Conditions that Affect the System.** The study should have information on the cause of the radium contamination, and its effects on the System. Additionally, the study should contain any known tertiary effects of radionuclide presence in the ground water i.e. higher radon levels that affect air quality.
  - V. **Regulatory Assessment.** The study should also explore the regulatory authorities and processes required by each option and assess the ability to satisfy any of the requirements.
  - VI. **Financial Assessment of Proposed Treatment and Source Development Options.** The study should outline the financial wherewithal of the Cities, available financing and grants to determine which treatment options are the most feasible. Emphasis should be placed on balancing the long-term health of community's water that leverages the Cities' financial situation.
  - VII. **Graphic Analysis and Treatment/ Source Development Recommendation.** The study should include graphic analysis of all options that compare the treatment methods along the above criteria. Additionally, this section should have a professional assessment and recommendation of which treatment option would be the most advisable and include a 20-year life cycle cost analysis as well.

## Statement Requirements

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SOQ's shall include but are not limited to the following requirements:

- A. **Organization Overview.** The section should include the organization's history, and its current structure and size, as well as contact information for the person responsible for answering questions concerning submissions.
- B. **Project Team.** Provide a list of the project team members, with contact information, who you propose to use and identify the responsibility of each team member. List any subconsultants that will support your firm. Provide a brief resume for each person listing specific experience, education and licensure/certifications.
- C. **Approach and Scope of Work.** This section should include your organization's approach to the Scope of Work by identifying your process to complete each section.
  - a. This section should also include the organization's process for gathering information in the field and how they establish communication channels with the client.



- D. Water Treatment and Source Development Capabilities and Past Experience. This section should detail institutional knowledge and capabilities of the organization's water treatment and source development projects as well as a summary of relevant water projects completed in the past.
- E. Professional References. This section should have the names and contact information of professional references and include a brief description of work completed for each one.
- F. Proposed Schedule. Include an estimated time to complete the feasibility study.
- G. Bid Statement. The proposal shall include a statement on whether or not your organization plans to bid as the primary contractor to install any of the treatment methods or new source developments. If your organization plans to bid as the primary contractor, you must include a statement on how your organization will segregate objectives and ensure that the feasibility study's integrity is maintained.

## Evaluation Criteria

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- A. Professional Presentation: \_\_\_/5
- B. Proposed Schedule: \_\_\_/5
- C. Professional References: \_\_\_/10
- D. Defined and Competent Approach to the Scope of Work: \_\_\_/40
- E. Water Treatment and Development Capabilities and Past Experience: \_\_\_/40

## SELECTION PROCESS

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SOQ's are required to be submitted by email to Harrison Johnson, Utilities Director (harrisonj@hildalecity.com), with carbon copy to Christian Kesselring, City Manager (manager@hildalecity.com), no later than 5:00pm on May 3, 2019. At that time, an evaluation committee will analyze and evaluate each SOQ according to the evaluation criteria specified herein and rank the respondents in order of evaluation scores. An informal meeting may then be held with the three highest-ranked respondents. Thereafter, the purchasing official will select a final respondent and request a contract for review and execution. Further refinement of terms, scope and price may be done as part of the contract review and approval process. If an acceptable contract cannot be negotiated with the final respondent, the purchasing official may continue down in rank order.

### Selection Committee

- **Harrison Johnson, procurement officer**
- **Christian Kesselring**
- **Zach Renstrom**
- **Haven Barlow**

## Attachments

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- A. Water Master Plan 2016
- B. Grand Canyon Trust Map
- C. Radium Test Samples