



**BOARD OF COUNTY COMMISSIONERS**  
**WARREN COUNTY, OHIO**  
406 Justice Drive, Lebanon, Ohio 45036  
www.co.warren.oh.us  
commissioners@co.warren.oh.us

Telephone (513) 695-1250  
Facsimile (513) 695-2054

**SHANNON JONES**  
**DAVID G. YOUNG**  
**TOM GROSSMANN**

24-0081

January 16, 2024

AUTHORIZING THE WATER AND SEWER DEPARTMENT TO ENTER INTO NEGOTIATIONS WITH AECOM TECHNICAL SERVICES, INC. FOR THE DESIGN OF THE ION EXCHANGE TREATMENT AT THE RICHARD A. RENNEKER WATER TREATMENT PLANT

WHEREAS, pursuant to Resolution #23-1502, adopted November 7, 2023, this Board issued a Request for Qualifications for the procurement of professional engineering services for the design of ion exchange treatment at the Richard A. Renneker Water Treatment Plant; and

WHEREAS, on or before December 7, 2023, the Water and Sewer Department received five sealed qualification submittals; and

WHEREAS, a committee comprised of individuals from the Water and Sewer Department reviewed and evaluated the submittals with a summary of the evaluations included below; and

<b>ENGINEERING FIRM</b>	<b>TOTAL</b>	<b>RANK</b>
AECOM	262	1
Shoaf Consulting	248	2
Fishbeck	216	3

WHEREAS, the Water and Sewer Department requests authorization to begin contract negotiations with the top ranked engineering firm.

NOW THEREFORE BE IT RESOLVED, to authorize the Water and Sewer Department to initiate negotiations with AECOM Technical Services, Inc. for the proposed improvements.

Mrs. Jones moved for adoption of the foregoing resolution being seconded by Mr. Grossmann. Upon call of the roll, the following vote resulted:

Mr. Young – absent  
Mr. Grossmann – yea  
Mrs. Jones – yea

Resolution adopted this 16<sup>th</sup> day of January 2024.

BOARD OF COUNTY COMMISSIONERS

\_\_\_\_\_  
Krystal Powell, Clerk



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BOARD OF COUNTY COMMISSIONERS

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Krystal Powell, Clerk

# **PUBLIC ANNOUNCEMENT**

## **WARREN COUNTY WATER & SEWER Request for Qualifications - Engineering Design Services**

### **ION EXCHANGE TREATMENT AT THE RICHARD RENNEKER WATER TREATMENT PLANT**

November 8, 2023

Sealed statement of qualifications for professional engineering services for the design of ion exchange treatment at the Richard Renneker Water Treatment Plant will be received by the Warren County Water and Sewer Department, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio, 45036, until 4:30 p.m., Thursday, December 7, 2023. The project includes the design of 3.7 million gallon per day single-use anion exchange resin treatment to remove per- and polyfluoroalkyl substances from the nanofiltration bypass at the treatment plant softening facility.

Details regarding the proposed project may be obtained by contacting Warren County Water and Sewer Department, 406 Justice Drive, Lebanon, Ohio 45036 at (513) 695-1377. Questions regarding the project should be directed to Chris Wojnicz, at (513) 695-1646 or email at [christopher.wojnicz@co.warren.oh.us](mailto:christopher.wojnicz@co.warren.oh.us).

Project information may also be obtained on the Warren County website at <http://www.co.warren.oh.us/commissioners/Resources/Bids/Default.aspx>. Please contact the Warren County Board of County Commissioners at 513-695-1397 if you have trouble or need assistance accessing project information on our website.

By order of the Board of County Commissioners, Warren County, Ohio.

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**PUBLIC ANNOUNCEMENT**  
**REQUEST FOR QUALIFICATIONS – CONSULTANT ENGINEERING SERVICES**

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**ION EXCHANGE TREATMENT AT THE  
RICHARD RENNEKER WATER TREATMENT PLANT**

November 8, 2023

Sealed statement of qualifications for professional engineering services for the design of ion exchange treatment at the Richard Renneker Water Treatment Plant (RRWTP) will be received by the Warren County Water and Sewer Department, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio, 45036, until 4:30 p.m., Thursday, December 7, 2023. The project includes the design of 3.7 million gallon per day single-use anion exchange resin treatment to remove per- and polyfluoroalkyl substances from the nanofiltration bypass at the treatment plant softening facility. The proposed improvements will enable the County to meet the USEPA proposed national drinking water standard for per- and polyfluoroalkyl substances (PFAS). The total anticipated design and construction improvements are budgeted at \$5.0 million.

Professional engineering firms are invited to submit their qualifications for consideration during our review and selection process. Details of the project and description of required services are as follows.

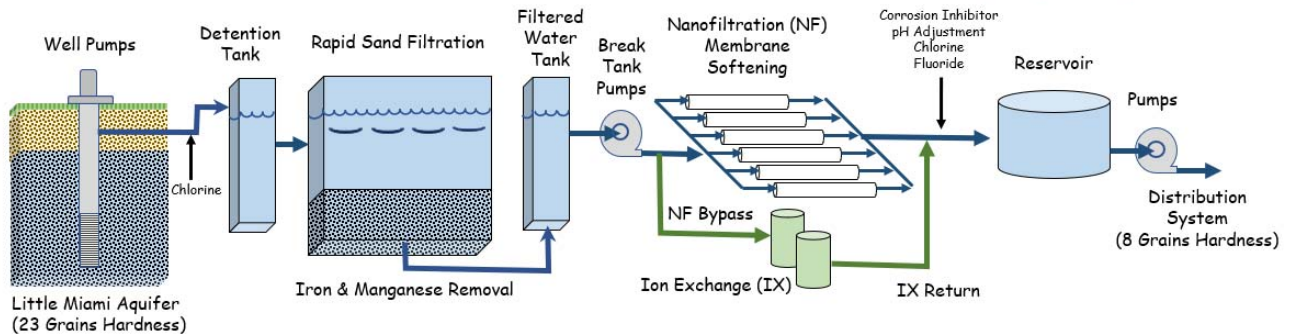
**PROJECT DETAILS**

Upon completion of the Middletown Junction wellfield, the safe yield capacity of the source water for RRWTP is estimated to be 11.4 million gallons per day (mgd). The majority of the flow entering the plant is processed through the nanofiltration (NF) membranes that remove small molecules and polyvalent ions including divalent calcium and magnesium ions, the ions that require removal for softened water. Approximately 32.5% of the influent plant flow bypasses the NF membranes providing the dissolved minerals necessary to achieve the finished water target hardness value of 140 mg/L as CaCO<sub>3</sub>.

The treatment plant is equipped with six skids utilizing a two-stage configuration. Each skid contains 24 vessels in the first stage, 12 in the second stage, and with each vessel comprising of 7 elements in series (24:12x7m). The facility is equipped with Filmtec NF90-400-34i elements by Dupont. Recent published studies using NF90 membranes for remove of PFAS has generally reported removal efficiencies of 90% and above.

To ensure the public health and safety of its customers, Warren County will install single-use anion exchange (IX) resin treatment to remove PFAS from the NF bypass. A simplistic diagram of the proposed treatment process at the RATWTP is shown below.

## Treatment Process at the Richard Renneker Treatment Plant (Proposed)



The IX vessels will be installed on the first floor level of the NF building at a location designated for two future NF membrane skids. The existing building has a 20-foot clearance and is equipped with two 12-foot wide coiling doors for access. The improvements will utilize the existing break tank pumps to push flow through 5-micron cartridge filters, the IX pressure vessels, and then return the IX-treated water to blend with the NF permeate. The design will include installation of one additional cartridge filter that is a final barrier of safety to protect the NF membranes and IX resin from debris and other suspended particles that may not be captured by the rapid sand filters.

Over the past several months, in preparation for these improvements, Warren County has gathered input from treatment vendors, consultants, USEPA Office of Research and Development Response, and the OEPA Southwest District Office. Through this process the County has identified a cost effective and efficient method for PFAS treatment which includes simple piping modifications to the existing NF building. Proposed piping concepts developed by the County are shown in **Appendix A**.

## REQUIRED SERVICES

The County is seeking services from an engineering firm experienced in advanced water treatment to assist with the selection and procurement of IX resin, vessels, and equipment; pilot testing of the resin (if required by Ohio EPA); and the preparation of construction drawings and specifications for use by a qualified contractor.

Professional services will include the preparation of engineering design drawings, technical specifications, opinion of probable construction costs, and all other necessary services for a complete project in full conformance with Warren County Standards and with the Ohio Environmental Protection Agency permitting requirements. Permitting, bidding, and resident project representation services will be performed by the County. The County will seek limited support for construction services. Services to be provided are identified in the following tasks:

### TASK 1 – Ion Exchange Selection and Procurement

Consultant shall research and evaluate single-use anion exchange resins that are commercially available and review their effectiveness for removal of the PFAS compounds present in the RRWTP source water. As directed by the Owner, the Consultant shall obtain proposals from three resin

manufacturers for the procurement of resin, piping, valving, and pressure vessels capable of treating an average day flow of 1.8 mgd and a peak (7-day sustained) flow of 3.7 mgd. Resin volumes shall be of sufficient quantities for an effective life of 3-4 years before it is disposed of and replaced. The Consultant shall work with the Owner to evaluate, rank, pilot test (if necessary) and determine the manufacture and resin product that provides best value to Warren County. Results of the resin evaluation along with proposed equipment and piping configurations shall be documented in a brief preliminary design report.

To expedite the project, the Consultant shall assist the County with early procurement of the resin and equipment. The resin, vessels, and associated equipment shall be purchased by the County and provided to the Contractor for installation.

### **TASK 2 – Pilot Testing**

If required by Ohio EPA, Consultant shall design, coordinate, arrange, and orchestrate pilot testing of up to three commercially available resin products. Pilot testing shall occur at the RRWTP NF building and shall conform to all requirements established by Ohio EPA. Laboratory testing shall be completed by the Owner with the testing results compiled by the Consultant. The testing results shall be used to assist with the final selection of the resin product.

### **TASK 3 – Design and Contract Documents**

Upon obtaining equipment load and weight information from the manufacturer, the Consultant shall review the design of the existing building and identify and design all structural modifications or upgrades required to support the proposed equipment.

The Consultant shall prepare design drawings, specifications, and detailed opinion of probable construction costs for the IX treatment process. The treatment process shall include lead-lag vessels with all piping, valves, strainers, flow meters, flow control valves, check valves, sample ports, drain valves, pressure sensors, electrical, and instrumentation improvements necessary to provide the Owner with a complete and functional treatment process. The improvements shall include all piping and equipment necessary for the handling, conveyance, placement, and disposal of new and spent resin media.

### **TASK 4 – Construction Services**

The Consultant shall provide assistance to the County during the construction and startup of the treatment process. The Consultant shall review all shop drawings, respond to contractor questions, provide periodic inspections of work, attend progress meetings, coordinate with the IX resin manufacture, coordinate with Ohio EPA, and assist with process start-up.

### **Task 5 – Membrane Optimization**

After reviewing the nanofiltration operating data from start-up to present, interviewing operating staff, and conducting discussions with the membrane manufacture and chemical suppliers the Consultant shall provide technical guidance regarding the optimization of the softening facility. The results of the work shall be documented in a brief technical memorandum. The Consultant shall provide guidance on the following:

- Evaluate the existing membrane filtration operation and, based on the PFAS removal efficiencies provide guidance and recommendations on methods for increasing removal rates. In an effort to plan for more stringent emerging contaminate and PFAS regulations the Consultant shall work with membrane suppliers to determine the materials, equipment, supplies, and labor required to replace the existing NF membranes and ancillary equipment with reverse osmosis membranes. The results of the study may be used as the basis for

design to transition from nanofiltration to reverse osmosis when the existing membranes require replacement.

- Review membrane cleaning data and work with chemical suppliers to optimize the cleaning process to prolong the life of the units.
- Review the degasification and chemical feed process and recommend operational changes including changes to the chemical feed injection locations to reduce costs and ensure long term operation.

## **REQUIRED QUALIFICATIONS**

Professional engineering firms interested in submitting qualification must exhibit relevant experience and qualifications with advance water treatment for emerging contaminate including PFAS. Firms must show experience in the areas of reverse osmosis, nanofiltration, ion exchange, water chemistry, and chemical feed systems with clients located in southwest Ohio.

Submittals should emphasize both the experience and capabilities of personnel who will manage and perform the Work. Submittals should indicate any subconsultants proposed to be utilized on the Project.

Professional engineering firms entering into contracts with Warren County must be fully licensed for the type of work to be performed in the State of Ohio at the time of qualification submittal. Firms that are not fully licensed and certified shall not be found qualified.

Prior to the commencement of any work, Consultant shall obtain and maintain in force at its sole cost and expense, Comprehensive General or professional liability and Automobile Liability Insurance (covering use of owned, non-owned, or hired vehicles) providing single limit coverage of One Million Dollars (\$1,000,000) per occurrence Two Million Dollars (\$2,000,000) aggregate, with no interruption of coverage during the entire term of the Agreement.

Consultant shall carry statutory worker's compensation insurance and statutory employer's liability insurance as required by law and shall provide County with certificates of insurance evidencing such coverage simultaneous with the execution of the Agreement.

## **SUBMITTAL INSTRUCTIONS**

1. **Receipt of Submittals:** Sealed submittals shall be received by the Warren County Water and Sewer Department, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio, 45036, until 4:30 p.m., Thursday, December 7, 2023. Envelopes containing the submittals must be sealed, addressed to Warren County Water and Sewer Department at 406 Justice Drive, Lebanon, Ohio 45036, and shall be clearly marked:

**ION EXCHANGE TREATMENT AT THE  
RICHARD RENNEKER WATER TREATMENT PLANT  
4:30 PM December 7, 2023**

Any submittal may be withdrawn prior to the above scheduled submittal time or authorized postponement thereof. Any submittal received after the time and date specified shall not be considered.

- 2. Addenda and Interpretations:** Questions regarding the information contained in this Request for Qualifications shall be submitted in writing and emailed to:

Warren County Water & Sewer Department  
ATTN: Chris Wojnicz, P.E.  
(513) 695-1646  
[christopher.wojnicz@co.warren.oh.us](mailto:christopher.wojnicz@co.warren.oh.us)

and to be given consideration must be received at least five days prior to the qualification submittal date. All such interpretations and any supplemental instructions will be in the form of written addenda to the Request for Qualifications, which if issued, will be posted on the Warren County Commissioner's website, no later than three days prior to the submittal date.

- 3. Requests for Additional Information:** The County may make such investigations as they deem necessary to determine the ability of the submitting firm to perform the work, and all submitting firms shall furnish to the County all necessary information and data for the purpose as the County may request.
- 4. Requests for Site Visit:** Interested firms may visit the treatment plant during a non-mandatory site visit scheduled at 9:00 AM, Monday, November 20, 2023 at the RARWTP, 6195 Striker Road, Mainville, Ohio. Additional visits to the project site may be arranged by contacting Chris Wojnicz at (513) 695-1646.
- 5. Discussions for Clarification Purposes:** Warren County may conduct discussions with firms who submit for the purpose of clarifications or corrections regarding a submittal to ensure full understanding of, and responsiveness to, the requirements specified in the request for qualifications.
- 6. Project Schedule:** The following is the planned schedule for the project. The County shall take all actions necessary to expedite the process enabling the improvements to be operational by November 2025. The ability to meet the strict project schedule will be considered as part of the review and ranking process.

County Issues Request for Qualifications	November 7, 2023
Qualifications Due to County	December 7, 2023
Select & Award Engineering Consultant	January 2, 2024
Notice to Proceed	January 30, 2024
Preliminary Design Report	May 27, 2024
Equipment Procurement Purchase Order	July 1, 2024
Issue Bid/Construction Contract	August 5, 2024
Construction	November 2024 – October 2025
Start-up/Substantial Completion	November 2025



**7. Selection Process:**

- a) The submittals will be evaluated by a committee appointed by the County Commissioners which will:
  - 1) determine whether each submittal is responsive to the requirements of this request for qualifications and the criteria described below.
  - 2) evaluate and select no fewer than the top three submittals based on criteria which shall include the firm and individual qualifications, proximity to Warren County, capacity to perform work, project approach, past performance with Warren County, and familiarity with project. The evaluation form used by the Committee during the review process "Review Sheet" is included at the end of this request. In the event three qualified firms or less deliver a submittal, then the Committee shall still evaluate such firms based on the selection criteria stated herein.
- b) The Committee may hold interviews or discussions with any or all of the selected firms to further explore the firms' statement of qualifications, the scope and nature of the services the firms would provide, and the various technical approaches the firms may take toward the project. Within a reasonable period of time after any and all discussions are complete, the Committee shall rank the firms by one collective Review Sheet in the order they determine to be the most qualified to perform the professional design services for the Project. The Committee shall present a resolution to the County Commissioners requesting authorization for the Water & Sewer Department to enter into negotiations with the most qualified firm as determined by the Committee and confirmed by the Commissioners.
- c) The Water and Sewer Department shall thereafter begin negotiations of a professional design services contract with the top ranked firm to perform the services at a compensation determined to be fair and reasonable to the County Commissioners. If a satisfactory contract cannot be entered into in a reasonable time, the County Commissioners, in its sole discretion, may terminate negotiations with the highest ranked firm and direct the Water and Sewer Department to begin contract negotiations with the next highest ranked firm.
- c) Warren County reserves the right to reject any and all submittals.

**8. Public Records Request of Qualifications:** In order to ensure fair and impartial evaluation, qualification submittals and any related documents of other records that would otherwise be available for public inspection and copying under section 149.43 of the Revised Code shall not be available until after the award of contract.

**9. Withdrawal of Submittal:** Any company may withdraw their submittal at any time prior to the selection of an engineering firm. The County may terminate negotiations with a firm at any time during the negotiation process if the company fails to provide the necessary information for negotiations in a timely manner or fails to negotiate in good faith. If the County terminates negotiations with a firm, the County shall negotiate with the company whose submittal is ranked the next most qualified to the County according to the selection criteria and direction from County Commissioners.

Please demonstrate your qualifications to perform the work and your experience with similar projects. Submittals shall be limited to ten (10) pages in length, excluding appendices, resumes, company brochures, and the like.

To be considered, submit three sets of Qualifications along with an electronic copy on a thumb drive in .pdf format to:

Warren County Water and Sewer Department  
P.O. Box 530  
406 Justice Drive  
Lebanon, Ohio 45036  
513-695-1377

## **SUBMISSION**

The firm's submission shall be in sufficient detail to provide Warren County with the following information:

1. Firm and Individual Qualifications.
  - A. Firm Background – Provide description and background of firm.
  - B. Project Team – Provide a description of the project team, the individuals that comprise the group, organizational chart, and list of subconsultants and their roles/responsibilities.
  - C. Team Member Qualifications - Provide qualifications and experience of key project team personnel.
  - D. Similar Project Qualifications - Provide descriptions of similar projects related to advanced water treatment completed in the southwest Ohio region within the last five years. Projects should involve reverse osmosis, nanofiltration, and/or ion exchange and should also involve complimentary work in water chemistry, pilot testing, and chemical feed systems. Indicate status of the projects (completed or ongoing), client references, and involvement of proposed project team staff.
2. Geographic Information - Location of office(s) where this project will be performed.
3. Ability to perform the work.
  - A. Describe the team's ability to perform within the stringent project deadlines identified in the request.
  - B. Provide a proposed project schedule.
  - C. Identify roadblocks, hurdles, concerns, and potential issues with the County's proposed deadlines and discuss ways to overcome these obstacles.
4. Insurance
  - A. Documentation of firm's Professional Liability Insurance Policy.

### SUBMITTAL REVIEW

Name of Design Firm \_\_\_\_\_

Name of Reviewer \_\_\_\_\_

CRITERIA	RATING*	X	WEIGHT	=	RATING
1. Firm & Individual Qualifications		X	4	=	
2. Proximity to Project Site		X	1	=	
3. Ability to Perform Work		X	4	=	
4. Errors & Omissions Insurance Experience		X	1	=	
<b>TOTAL RATING=</b>					

Rating as follows:  
1 = Poor                      10 = Excellent

