

Request for Qualifications & Proposal

For: Request for Qualifications
& Proposals Wastewater
Facility Master Plan

Posting Date:

6-17-2026

Response Deadline:

7-22-2026



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REQUEST FOR QUALIFICATIONS & PROPOSALS WASTEWATER FACILITY MASTER PLAN

KEY SUBMISSION INFORMATION

Date	Item
6-17-26	RFQ/P advertised by the Village of Antioch
7-1-26	Mandatory Pre-Bid meetings- onsite facility tour
7-6-26	Last Day to Submit Questions to Jason Treat (jtreat@antioch.il.gov)
7-22-26	RFQ/P packages due
8-12-26	Last Day for RFQ/P Review by Village of Antioch Staff
8-12-26	Firm Selection
8-26-26	Presentation of Firm and Fee Recommendation to the Village Board

SERVICES OVERVIEW

The Village of Antioch is requesting qualifications and proposals for the development of a Wastewater Master Plan to assess the existing wastewater treatment facility. The primary emphasis of the Master Plan shall focus on the Wastewater Treatment Facility (the “Facilities Master Plan” or “FMP”). However, it may also include key elements of the wastewater collection system. The Village seeks to contract with an engineering firm specializing in wastewater engineering, master planning, and hydraulic modeling to develop a comprehensive Facilities Master Plan.

All qualifications and proposals shall be delivered to the Village of Antioch Village Hall at 935 Skidmore Drive, Antioch, IL 60002, Wastewater Treatment Facility Master Plan, ATTN: Jason Treat, on or before **July 22, 2026**

The following pages provide further details on the project scope requested for the Facilities Master Plan.

For any additional questions, please email jtreat@antioch.il.gov. Any questions received will be answered via email.

The Facilities Master Plan (FMP) should include a comprehensive evaluation of the Treatment Facility through an Asset Management lens, focusing on both capacity and condition. It should also include a determination of design flows and loadings, as well as prioritized recommendations for improvements and life-cycle costs.

Communication with the Village of Antioch staff throughout the project is imperative. Progress meetings shall be held with the Village’s staff throughout the project, along with site visits and workshops as required. The selected firm should be readily available for consultation regarding this project.

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The findings and recommendations will be summarized in an FMP report and presented to the Village of Antioch in a workshop format. The draft report will be submitted to the Village for review and comment. The Consultant will address the Village's comments and submit a final version of the FMP. The process may include multiple sessions to ensure all plans are in the best interest of the Village of Antioch.

After completion of the FMP, the final improvements will be incorporated into the Village of Antioch's capital improvement program. Exploring recommendations for creating an interactive project tracking tool is advisable. Design and construction of the improvements will be completed over the subsequent years.

Besides costs, all qualifications/proposals shall be scored/ranked based on the following criteria, which are listed according to priority of importance:

- **Project Manager and Task Leads Experience/Credentials**-The RFQ/P shall demonstrate that the project team has relevant experience with this type of work.
- **Project Experience (Project Description) and References**-The RFQ/P shall provide at a minimum three (3) project descriptions demonstrating that the proposed team has completed work for clients of similar size and treatment process.
- **Available Capacity of Key Personnel (PM and Task Leads)**-The RFQ/P shall provide a breakdown of the capacity and how key project personnel will be used for this project.
- **Experience with the Village of Antioch Wastewater Treatment Facility and/or other local presence**-The RFQ/P shall identify the project team's experience with the Village of Antioch Treatment Facility and/or other local communities.
- **Overall proposal quality**-The RFQ/P should be prepared and presented in a clear and precise manner, easy to read and understand, demonstrate qualifications based on the scope of services, and address all the criteria listed above.

This RFQ/P is not an invitation to bid. Responses will be evaluated based on the relative merits of the qualifications. There will be no public opening or reading of the responses received by the Village in response to this request.

Qualifications and proposals must be enclosed in a sealed envelope: the submission must clearly display, "**REQUESTS FOR QUALIFICATIONS & PROPOSALS FACILITIES MASTER PLAN.**"

The contract may be awarded to the most responsible firm, on an overall basis, the most advantageous to the Village of Antioch. Qualifications, experience, performance, and cost factors will be considered as elements of a responsible proposal at the sole discretion of the Village of Antioch. The Village will rank all firms after the interview process and will open fee proposals only after the ranking is complete; cost alone will not be the determining factor. The Village's decision shall be final and not subject to recourse by any firm, person, or corporation. The Village of Antioch reserves the right to reject all proposals and/or waive non-substantive deficiencies.

The project is subject to the Village of Antioch's approval of budgets and funding. The Board may suspend or terminate any project at any stage up to and including receipt of bids.

The Village reserves the right to make clarifications, corrections, or changes in the RFQ/P at any time prior to the due date. The Village reserves the right to withdraw the RFQ/P at any time prior to the due date.

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The Village will issue addendums and/or responses to RFI's to known respondents to the RFQ/P. It is the respondent's responsibility to notify the Village of its intent to submit by contacting Jason Treat at jtreat@antioch.il.gov and requesting placement on the respondent list. Failure to receive an addendum/response is not a cause for delay in submission.

All information submitted to the Village in response to this RFQ/P will be a public record and will be subject to disclosure, subject to applicable exemptions, under the Illinois Freedom of Information Act, 5 ILCS 140, et. Seq. ("Act") after the potential award of a contract. Firms are advised that Section 7(1) (g) of that Act exempts the following information from disclosure: Trade secrets and commercial or financial information obtained from a person or business where the trade secrets or commercial or financial information are furnished under a claim that they are proprietary, privileged or confidential, and that disclosure of the trade secrets or business, and only insofar as the claim directly applies to the records requested. Firms that desire to have portions of their proposals considered for this exemption should identify those portions accordingly.

Questions submitted by firms regarding this RFQ/P, and the Village's responses to those questions, may be shared with all prospective respondents by addendum or other written posting. By submitting a question, a firm acknowledges that its question and the Village's response may become part of the public procurement record and may be subject to disclosure under the Illinois Freedom of Information Act, 5 ILCS 140, subject to any applicable exemption under law. (ilga.gov)

The selected engineering firm will be requested to attend Village Board meetings as necessary and provide presentations to Village Board members and other stakeholders.

DESCRIPTION OF THE VILLAGE

The Village of Antioch, Illinois, is nestled into the Chain O' Lakes waterway system. The Village is in the northern part of Lake County, bordering the Wisconsin state line. Antioch is located approximately halfway between the major cities of Chicago and Milwaukee.

As of the 2020 census, the population was 14, 622 and continues to grow. The Village is a non-home rule community governed by a Mayor-Trustee form of government. The Village of Antioch's 8.2+ square miles include over 5,033 housing units.

Since 1892, Antioch has provided a high quality of life for its residents and businesses. The Village is a full-service organization consisting of 75 full-time employees. The Village consists of six departments, including Administration/Village Clerk's Office, Community & Economic Development, Finance, Parks & Recreation, Police, and Public Works.

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DESCRIPTION OF THE TREATMENT FACILITY

The Antioch WWTF has a Design Average Flow (DAF) of 2.0 MGD and a Design Maximum Flow (DMF) of 9.2 MGD. The Antioch WWTF is a biological nutrient removal (BNR) facility. The BNR process is a single-stage nitrification system designed to remove phosphorus biologically, with chemical addition as a final polishing step. The chemical Alum is currently used.

Raw influent flow enters the facility through a force main and into the Headworks Building, where it is measured with an area-velocity meter. Once the flow is measured, it is cleaned of rags and debris using a Lakeside Raptor fine screen. Flow leaves this building and, under gravity, flows directly to the three aeration basins that make up the BNR system. The following is a brief description of the BNR process:

The aeration basins consist of three zones: anaerobic, anoxic, and aerobic. The wastewater enters the anaerobic zone and is mixed with mixed liquor recycled from the anoxic zone. Here, influent wastewater and microorganisms are combined in the absence of oxygen, either in free or combined form. In the absence of oxygen, microorganisms release phosphorus as they consume and store food.

The second zone of the UCT process is the anoxic zone. Here, microorganisms are returned to the process from the final clarifiers as RAS. The anoxic zone is utilized to denitrify the RAS. The resulting mixed liquor is recycled to the anaerobic zone. This provides nitrate-free mixed liquor to the anaerobic zone. Recirculation is accomplished using variable-speed axial-flow submersible pumps.

The third zone of the UCT process is the aerobic zone. The microorganisms continue to consume food, nitrify ammonia into nitrates, and provide luxury uptake of phosphorous compounds.

Once the flow leaves the BNR process, it flows by gravity to the secondary clarifiers, where solids settle. These solids are either returned to the BNR system as Return Activated Sludge (RAS) or pumped to the aerobic digesters. Clear water flows over the weirs of the secondary clarifiers and continues onto the UV system. The UV system consists of a Trojan ultraviolet system that uses ultraviolet wavelengths to alter the DNA of fecal coliform bacteria, rendering them unable to reproduce. Once the flow passes through the UV system, it continues through the Parshall flume, where it is metered before flowing to the receiving stream.

Bio-solids are processed at the facility by the following methods. Approximately 30,000 to 40,000 gallons of waste-activated sludge are continuously pumped to the digesters. The sludge is then pumped to the Komline Belt Filter Press in the Dewatering Building. The Belt Filter Press squeezes water from the sludge, yielding an average cake solids content of 16-18%. The cake is then stored on site in the sludge barn and hauled off-site twice/year for application to farm fields.

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SUBMITTAL REQUIREMENTS

RFQ/P submittals shall address the following tasks and qualifications requests

BUSINESS ORGANIZATION

- Firm name, business address, and telephone.
- Name and title of contact person
- Number of years your organization has been in business under its present business name.
- What type of ownership: Partnership, Corporation, or Other.
- If a corporation, please provide the following:
 - Date of incorporation
 - State of incorporation
 - Principal officers
- If other than a corporation, describe the organization and name its principals.
- Have you ever failed to complete work awarded to you? If so, explain when, where, and why this occurred.
- Provide a statement of the company's financial condition and financial references.
- Provide information with respect to the firm's insurance coverage. Include General Liability insurance coverage limits, professional liability insurance coverage limits, errors and omissions insurance coverage limits, and claims/litigation history (including involvement with mediation and/or arbitration) for projects for the past seven (7) years.

Similar Project Construction Management Experience

- Provide at minimum three (3) project descriptions demonstrating that the proposed team has completed work for clients of a similar size and treatment process.

Capabilities and Services

- Please provide resumes for each key member of your team, clearly indicating their proposed role for this project and their relevant experience with projects of similar size and scope. Indicate on each resume the other projects/assignments that each proposed staff member will have during the timeline of this project. The Village is interested in as much information as possible regarding the personnel from your firm who will work on this project, should it be selected. Please do not submit resumes for firm management, marketing, or "liaison" personnel who will not have active, significant roles in the project.

Additional Information

- Please describe what distinguishes your firm from others in the field. Please identify what makes your firm a good candidate for this project.

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TASK 1-PROJECT MANAGEMENT AND ADMINISTRATION

TASK 1.1 - Kickoff Meeting

The consultant shall conduct and facilitate a kick-off meeting with the consultant's key project personnel and Village of Antioch staff to define lines of communication and protocol, discuss the project's goals and objectives, establish expectations for the treatment facility staff, and review the project's scope and schedule. The consultant shall prepare and supply the meeting agenda and meeting notes.

TASK 1.2 - Data Review

The consultant shall review existing reports, including, but not limited to, the following data sources.

- The Village of Antioch GIS Data
- SCADA Assessment Report by Concentric Integration dated September 2023
- Wastewater Treatment Facility Solids Track Report by Trotter & Associates dated February 2020
- Sanitary Sewer Analysis East of Antioch WTP by HR Green dated August 2020
- Sanitary Sewer Analysis West of Antioch WTP by HR Green dated August 2017
- Wastewater Treatment Plant Operation and Maintenance Manual by Applied Technologies, dated March 2010
- Wastewater Treatment Plant Improvements Project Manual by Applied Technologies, dated March 2008
- Antioch Wastewater Treatment Plant Capacity Evaluation by Applied Technologies, dated September 2025

TASK 1.3 - Establish Target Service Levels

The Consultant shall lead the development of a Level of Service (LOS) Statement. The Level of Service Statement defines how the Village of Antioch staff, managers, and operators envision the system performing over the long term. Levels of service will be established in every performance area of the facility, including Pumping, Preliminary Treatment, Liquid Stream, Solid Stream, Electrical, I&C, Odor Control, and support systems.

The Consultant shall conduct a workshop to draft the Level of Service Statement for review and comment by the Village of Antioch. In addition, the Consultant shall conduct a workshop to discuss the draft Level of Service Statement and the Villages' comments.

TASK 1.4 - Facility Site Visit

As part of this task, the Consultant shall include a site visit to prepare an inventory list and capture initial thoughts from the Village's staff. The site visits aim to brief the engineering firm team on site issues faced by the Treatment Facility staff and familiarize the FMP team with the facility layout and treatment processes.

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TASK 1.5 - Facilities Master Plan Goals and Objectives

The Consultant shall develop functional requirements and planning criteria for the FMP against which the alternatives and scenarios will be measured. References to specific criteria should be annotated, as well as assumptions used for anticipated future regulations. The Consultant shall prepare a technical memorandum summarizing the developed functional requirements and anticipated future regulations and present it to the Village of Antioch for review and comment. This document is expected to include:

- Project background and introduction
- Facility function description
- Flow and load projections
- Project scope, objectives, and operational philosophy
- Technical criteria (with justifications)
- Human factors criteria (workspaces/working conditions)
- Special criteria (if any)
- Regulatory requirements
- Financial constraints

The Consultant shall revise and submit the final technical memorandum once all comments from the Village of Antioch have been addressed. The Consultant shall prepare and supply the meeting agenda and meeting notes.

TASK 2-UPDATE SITE AS-BUILT

The Consultant shall update the baseline survey, which will serve as the basis for future projects and all geometries. This includes:

- Reviewing existing construction as-builts and record drawings for site utilities and buildings
- Assimilating the overall facility site as-builts in Auto CAD format, coordinating with the Village of Antioch, to determine the number of printed and electronic copies that need to be made available
- Locating and verifying critical elevations and establishing a reference benchmark circuit for all construction
- Locating and verifying existing utilities, yard piping, surface improvements, structure corners, and pertinent property corners
- Field locating and identifying topographic details within an agreed-upon boundary for the project site.
- Varying levels of Subsurface Utility Engineering may be employed to accomplish these tasks.

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TASK 3-MODELING

TASK 3.1-Develop Plant Hydraulic Model

The Consultant shall collect data and develop a calibrated hydraulic model of the facility. The model shall include hydraulic profiles at various flow conditions. Hydraulic restrictions shall be identified, and solutions considered as part of the FMP. The hydraulic model will be delivered to the Village of Antioch upon project completion. A dynamic model shall be used to develop the Facility Hydraulic Model. The Village of Antioch may request Additional Computational Fluid Dynamics (CFD) modeling on specific unit processes where potential mixing issues or dead zones are a concern.

The Consultant will establish and summarize wastewater flow and load projections for the 20-year planning horizon. The Consultant will provide build-out conditions for future population projections. The Consultant will provide an evaluation of the flow and loading capacities, including current and future forecasts.

TASK 4-DEVELOP ASSET MANAGEMENT PLAN

Task 4.1-Develop Asset Registry

The Consultant will be provided with the facility's asset list, and its accuracy and completeness should be assessed and addressed to ensure comprehensiveness. The Consultant shall collect and gather asset information required to complete an Asset Management Plan (AMP).

Task 4.2-Perform Condition Assessment

The objective of this task is to collect asset information and obtain a current assessment of both the physical and performance condition of assets through a combination of site visits and data review. Condition assessment shall support risk-based capital planning and provide long-term value for the Village of Antioch. Condition scores should be established for the assets based on their physical and performance conditions. Building assets, workspaces/working conditions, and facility I & C gear are to be included in the assessment (site work, structural, HVAC/plumbing, instrumentation) as well.

TASK 4.2.1-Develop Assessment Plan

Consultant shall propose assessment guidelines for approval by the Village of Antioch staff, and develop an assessment plan by asset class, including inspection requirements, testing to be conducted, scoring procedures, and forms. The condition scoring and life reduction factors shall be standardized across all asset categories in accordance with the established guidelines.

Consultant shall include a minimum of two (2) meetings with the Treatment Facility staff to develop, review, and finalize the assessment plan.

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Task 4.2.2-Condition Assessment of Facility Assets

The process and hydraulic capacity of the facility assets will be established through previous scope items. Each major process shall have identified failure modes (e.g., mortality, capacity, level of service, efficiency) and process and/or redundancy limitations. The asset information shall be collected using the method developed by the Consultant, with input from the Village of Antioch.

The Consultant shall prepare a separate technical memorandum and conduct meetings to review the process, mechanical, structural, and instrumentation assets upon completion of the entire task, focusing on results, potential process-related failure modes, and redundancy limitations.

Task 4.2.3-Determine Asset Residual Life

The Consultant shall establish an estimated remaining service life for each asset based on the installation date, the manufacturer's published literature (where available), industry standards and reference materials, engineering judgment, operator input and experience with the system, service history, and condition assessment.

Task 4.2.4-Summarize Findings

The Consultant shall provide a technical memorandum summarizing the findings of the condition assessment. The memorandum shall include analysis by asset class. Additionally, the Consultant shall identify the top priorities based on the findings and determine reassessment schedules for each asset class, taking risk scoring into account. The findings shall be presented and reviewed in a meeting. The Consultant shall include data collected by the Village of Antioch Treatment Facility staff.

Consultant shall provide a technical memo that captures all data updates, including follow-on data collection by Village of Antioch staff, and any revisions to the assessment methodology based on lessons learned. The results will provide a solid foundation for CIP development in future tasks.

Task 4.3-Operation and Maintenance Review

The Consultant shall review the current Treatment Facility's maintenance and operation plans in accordance with the proposed level of service and recommend any necessary modifications. In addition to reviewing O&M plans, job shadowing operations staff is recommended to gain a deeper understanding of the facility's nuances.

The Consultant shall present recommendations in a meeting and summarize them in a technical memorandum.

Task 4.4-Determine Life Cycle and Replacement Costs

Prepare an opinion of probable cost to repair or replace each asset. Cost views will be at the planning level. Using the "top down" approach, cost opinions will be developed for each asset block, including all work assumed to be required for the complete replacement of the asset.

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Task 4.5-Optimize Investments

The consultant shall develop a detailed plan and schedule for asset rehabilitation and replacement. The plan shall detail the capital and O&M requirements for each asset class by year. In addition, the Consultant shall develop a high-level strategy and schedule for asset rehabilitation and replacement, including an estimate of required funds in 5-year increments over the next 20 years. The plan shall detail capital and O&M requirements by asset class and year.

TASK 5-IDENTIFY AND DEVELOP PROJECT ALTERNATIVES

Task 5.1-Analysis

The Consultant shall develop and conduct an analysis of alternatives for facility expansion and process improvements, based on flow and load projections and current and future regulatory requirements.

Task 5.2-Liquids Treatment Alternatives

The Consultant will identify and summarize candidate technologies for liquid treatment to meet anticipated regulatory, growth, asset management, and performance requirements. Liquid treatment alternatives must account for equalization, preliminary, secondary, and tertiary treatment processes, disinfection, effluent discharge, and other plant hydraulic/pumping processes and facilities. Consideration of future regulations, such as those related to PFAS, Nitrogen, and Phosphorus, should be included in the alternatives.

Task 5.3-Solids Treatment and Disposal Alternatives

The Consultant will identify and summarize candidate solids treatment technologies (thickening, stabilization, dewatering) and disposal alternatives to meet anticipated regulatory, growth, asset management, and performance requirements. This will include a review of the *Wastewater Treatment Facility Solids Track study (Trotter Associates 2020)*. Future PFAS regulations should be evaluated and included among the alternatives.

Task 5.4-Vulnerability Analysis

Assess vulnerabilities with the Village of Antioch Wastewater Treatment Facility and provide recommendations for improving the Village's resiliency and security. Vulnerabilities include site access and security, as well as potential impacts on the Treatment Facility and its operations from supply chain disruptions (e.g., chemicals, power, natural gas) and natural and man-made disasters.

Summarize current and potential future regional, state, and federal security requirements that may require modifying the Village of Antioch facility and operations. Provide order-of-magnitude cost estimates and the timing of the suggested improvements.

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Task 5.5-Identify and Evaluate Regulatory Scenarios

The Consultant will review the Village of Antioch's current operating permits. The Consultant will identify, describe, and summarize applicable new and emerging regulatory issues, and develop regulatory scenarios that bracket the range of potential future regulatory requirements for the development of master planning alternatives.

Task 5.6-Summarize Immediate and Future Needs.

Summarize the treatment facility's existing (immediate) and future needs by comparing current and projected wastewater flows and loadings with the capacity of the existing facility on a process-by-process basis. Consider other drivers, such as potential impacts from regulatory requirements, facility optimization, and the condition of existing assets.

Task 5.7-Evaluate Existing Electrical Distribution System

Review and identify recommended improvements, repairs, and replacement strategies for the Treatment Facility's electrical distribution system to enhance reliability, mitigate damage from power surges, and reduce maintenance costs.

Task 5.8-Evaluate Existing Instrumentation and Controls and SCADA System

Review and identify recommended improvements, repairs, and replacement strategies for the Treatment Facility instrumentation and controls system architecture and equipment. This will include a review of Concentric Integration's SCADA Assessment Report (*September 2023*).

TASK 6-FACILITIES MASTER PLAN

The Consultant shall prepare a written Facilities Master Plan (FMP) presenting the results of the above tasks. In addition to the above, the plan shall specify the frequency of condition assessments and the implementation schedule. At least one draft FMP shall be submitted for review. Due to the FMP's expansive nature, multiple drafts may be needed to reach a final iteration. Revise the FMP in response to all comments from all iterations and submit up to 3 (three) copies of the final plan. Electronic copies of the plan shall also be submitted in both Word (docx) and Adobe (PDF) formats.

The consultant will conduct at least two (2) meetings with the Treatment Facility staff to review the draft FMP and gather comments.

TASK 7-CAPITAL IMPROVEMENT PLANS (CIP)

The Consultant will use information from the asset condition assessment and the Facilities Master Plan results to establish CIPs for the immediate, 5-, 10-, 15-, and 20-year periods, along with corresponding schedules. The Consultant will develop a detailed plan and schedule for asset rehabilitation and replacement, including an estimate of capital requirements.

The consultant will conduct at least one (1) meeting with Treatment Facility staff to review the draft CIP and receive comments.