REQUEST FOR QUALIFICATIONS

FOR

PROFESSIONAL ENGINEERING SERVICES RELATING TO CONTAMINANTS OF EMERGING CONTAMINANTS IN DRINKING WATER

Water Resources
CITY OF BURLINGTON

RFQ2023-0809

CITY OF BURLINGTON, NORTH CAROLINA

JULY 10, 2023

REQUEST FOR QUALIFICATIONS
FOR
CITY OF BURLINGTON, ENGINEERING DEPARTMENT

PROFESSIONAL ENGINEERING SERVICES RELATING TO CONTAMINANTS OF EMERGING CONTAMINANTS IN DRINKING WATER

July 10, 2023

The City of Burlington Water Resources Department, is releasing this Request for Qualifications (RFQ) seeking responses from qualified consultants with proven experience and expertise, to provide professional engineering, environmental, and related services related to the investigation and treatment of contaminants of emerging contaminants such as Per- and Polyfluoroalkyl substances (aka PFAS) and 1,4-dioxane, at its drinking water treatment facilities.

Consulting firms submitting proposals shall be in good standing and licensed with the North Carolina Board of Examiners for Engineers & Surveyors. Additionally, firms shall be experienced in all aspects of the fields of water treatment and distribution, wastewater collection and treatment, solids treatment and handling, and the operation and maintenance of water and wastewater facilities.

DEFINITIONS

As used in this RFQ, the following terms shall have the meanings set forth below:

City:	The City of Burlington, North Carolina.
Contract or Agreement:	the contract(s) executed by the City and Consultant(s) for the services covered by this RFQ.
Evaluation Committee:	the team of City staff that will make a recommendation for Contract(s) award to their governing board.
RFQ:	this Request for Qualifications for professional services for Professional Engineering Services
RPR:	Resident Project Representative
Services:	the services described in this RFQ (Outline of Work Required).
Service Provider:	each firm that submits a Qualifications Package for consideration by the City of Burlington in compliance with the requirements stated in this RFQ.
SOQ:	the Service Provider's official response to this RFQ.

PROJECT DESCRIPTION

The City of Burlington intends to contract with a professional engineering firm or firms to provide services for the study and development of a comprehensive plan to address PFAS found in the City's source water to meet pending drinking water regulations promulgated by the US EPA under the Safe Drinking Water Act. Firms responding to this

RFQ shall provide documentation of their experience, expertise, and knowledge in conducting PFAS studies in drinking water systems, and the design and construction administration of water plant improvements intended to provide treatment for PFAS and/or other contaminants of emerging concern. This contract will be developed as a collaborative effort between the City and the selected Professional Engineering firm(s).

CITY OF BURLINGTON AND UTILITY INFORMATION

The City of Burlington is located on the I-40-85 corridor between the Piedmont Triad and the Triangle and has a population of approximately 59,000 residents. The population of Alamance County is approximately 176,000 residents. Burlington provides utility service to many of the surrounding communities in addition to approximately 24,000 direct customers within its corporate and extraterritorial boundaries: the Village of Alamance (water and sewer); the Towns of Elon (water and sewer), Gibsonville (water and sewer), Whitsett (water), Ossipee (water), Haw River (water and sewer), Green Level (sewer), and Swepsonville (sewer); and the Cities of Greensboro (water) and Graham (sewer). Additionally, the City provides an emergency water interconnection to the City of Graham, and the City of Greensboro treats wastewater from some Burlington customers in Guilford County.

The city operates two water treatment plants and two wastewater treatment plants with over 447 miles of water distribution piping and 442 miles of sewer collection piping. Finished water storage is provided by 10.4 million gallons (MG) of ground storage and 4.5 MG of elevated storage in three separate elevated storage tanks. The City of Burlington also owns and operates three surface impoundments that hold over 11 billion gallons of water for treatment and sales to citizens and several other local communities and a certified water and wastewater analytical laboratory. The City of Burlington administers an Industrial Pretreatment Program for its industrial users. Also, included in management of the sanitary sewer system is a Fats, Oils, and Greases (FOG) Program to prevent and limit FOG from entering the sanitary sewer system. The City of Burlington also owns and operates a composting facility; however, the primary means of solids disposal is through contracted liquid land application of biosolids. The City also operates as a NPDES Phase II stormwater community and has its own Stormwater Management Division as a part of the Water Resources Department.

The Water System

General

The City utilizes two (2) surface water supply intakes served by three impoundments. Stoney Creek Reservoir (dam completed in 1928) contains approximately 400 million gallons and is supplemented by an upstream reservoir, Lake Cammack (1960). Stoney Creek Reservoir is located approximately four (4) miles northeast of the City. Lake Cammack covers approximately 760 acres in and around the Union Ridge community and contains approximately 3.2 billion gallons of water. Lake Cammack and the Stoney Creek Reservoir supply water to the Ed Thomas Plant located in the downtown area of the City. Lake Mackintosh (1993) is located in southwest Alamance County and southeast Guilford County. It supplies the JD Mackintosh Jr. Water Treatment Plant. Lake Mackintosh covers approximately 1,200 acres and impounds approximately 7.5 billion gallons of water. Collectively, these three impoundments capture water from approximately 234 square miles of watershed, contain approximately 11.1 billion gallons of water, and provide a 20-year safe yield of approximately 53 million gallons per day (MGD) and a 50-year safe yield of approximately 50 MGD. The 20-year and 50-year safe yields correspond to the demand that the combined reservoir storage could support under drought conditions that would occur on average once every 20 or 50 years, respectively, or have the chance of occurring in any single year of 1 in 20 or 1 in 50, respectively. Given an average finished water demand of 11.4 MGD over the past five years, significant capacity remains for growth in use of the water system. In the calendar year 2022, the City provided an average of 12.073 million gallons of water per day to its customers with a recorded peak daily demand of 17.329 MGD.

The City built its first surface water treatment plant in 1919, using water from Stoney Creek. The Ed Thomas Water Treatment Plant was originally constructed in 1949-1950 to replace a smaller facility at the same site. Subsequently,

it has been expanded to its current capacity of 16 MGD. The J.D. Mackintosh Water Treatment Plant was originally constructed in 1981 as a 9 MGD facility with a small coffer dam across the Big Alamance Creek to provide its water source. In February 1993, the Lake Mackintosh Reservoir was established with the completion of the Lake Mackintosh Dam, and at the same time the Mackintosh Plant expansion to its current capacity of 18 MGD was completed. The Mackintosh Plant is now the primary treatment facility for the City. However, both treatment plants are utilized throughout the year to meet demand and maintenance needs.

Both treatment facilities are evaluated annually for improvements to help meet increasingly stringent regulatory requirements and to improve performance, reliability, and service. During normal operations, either treatment plant is fully capable of providing all the water needed to meet the average daily demand of residents and other water customers. The operation of each plant is scheduled to meet regulatory compliance, allow for equipment maintenance, respond to raw water quality issues (taste, odor, manganese, iron, etc.) and meet water demand.

Process Arrangement – general description for both plants

1. Flash Mixing of chemicals
2. pH adjustment to facilitate TOC removal as-needed – Sulfuric Acid
3. Iron and manganese removal on an as-needed basis – Potassium Permanganate
4. Coagulation – Aluminum Sulfate
   a. Pre-alkali addition on an as-needed basis – Sodium Hydroxide (Caustic)
   b. Coagulation Aid on an as-needed basis (Polymer)
   c. Carbon addition for taste & odor and TOC removal on an as-needed basis – Activated Carbon
5. Sedimentation
6. Primary disinfection – Sodium hypochlorite (Bleach)
7. Filtration by rapid sand filters
8. Corrosion control by pH adjustment and corrosion inhibitor/sequestering agent addition
9. Fluoride adjustment – Hydrofluorosilicic Acid
10. Secondary disinfection – Sodium hypochlorite (Bleach)
11. pH adjustment – Sodium Hydroxide (Caustic)
12. Ammonia addition to finished water to control Disinfection By-Product formation (began in July, 2011)

CITY PFAS AND 1,4-DIOXANE DATA

The city has conducted periodic testing of its raw and finished drinking water for PFAS and 1,4-dioxane. The most recent data is posted on the City website at https://www.burlingtonnc.gov/2121/PFAS14-DIOXANE-INFORMATION (scroll to bottom of page for drinking water data).

SCOPE OF CONSULTANT'S SERVICES

The Scope of Consultant's Services, as currently envisioned by the City, could include, but not be limited to, the following potential areas of work. Consultants are requested to highlight their expertise and experience in these and related areas pertaining to water and wastewater services. Professional services to be provided by the selected consulting firm(s) may generally be as follows:

1) Review and evaluation of watersheds of existing source water supplies to identify any potential sources of PFAS and 1,4-dioxane found in the raw water supplies.
2) Review and evaluation of current PFAS and 1,4-dioxane sampling data for raw and finished water for each reservoir and treatment plant.
3) Provide recommendations and coordinate any additional sampling programs that may be needed.
4) Provide evaluation and recommendations for each treatment plant to meet proposed MCLs for PFAs, including but not limited to treatment optimization, bench-scale and/or pilot scale testing, and/or treatment plant upgrades.

5) Review and evaluation of solids handling and disposal requirements of proposed upgraded facilities and incorporate into any proposed plant upgrades.
6) Provide engineering design, permitting, bidding and construction observation and management services relating to treatment plant upgrades.
7) Review potential for development and utilization of the City's laboratory facility to provide in-house PFAS testing capabilities for both water and wastewater needs, including design, permitting, bidding, and construction observation and management of any facility improvements.
8) Provide additional evaluation and recommendation relating to other contaminants of emerging concern as warranted.
9) Provide engineering and support services to help the City obtain federal and/or state funding for proposed treatment plant upgrades and coordination with the City's financial consultant if the City pursues additional revenue bond financing.

The City understands this RFQ may not fully describe the requested work. The preceding list identifies possible areas of investigation to be performed. This is not an all-inclusive list, nor does it represent any project that will be performed now or in the future. The city retains the right to modify the scope of the study and design effort as mutually agreed upon by the selected consultant(s) and the City. The City may also start, stop or cease any project at any time based on the needs of the city or current situational economic conditions.

PERIOD AND TERMS OF CONTRACTUAL AGREEMENT

The City is interested in obtaining the professional services of one or more consulting firms to provide support for the development of a plan to meet proposed MCLs and reduce levels of PFAS in its drinking water to the maximum extent practicable. The scope and time frame for the study, preparation, and presentation of the master planning effort will be negotiated with the selected firm or firms.

M/WBE Participation: The City of Burlington encourages participation of certified M/WBE firms in Professional Service Contracts. It is the intent of this program to widen opportunities for public participation, increase competition, and to ensure the proper and diligent use of public funds.

As with any project(s) awarded to the selected consultant(s) under this RFQ/Contract, the consultant(s) will conduct project activities in accordance with standard project management protocols such as PMI standards. The consultant will coordinate and manage all aspects of the project(s), being proactive in all duties so as to keep the project on schedule and within the stated budget – driving the project to its agreed upon completion date.

All activities awarded to the consultant will require full coordination of communications with city staff and the consultant will be responsive to any and all emails, telephone discussions of the project(s).

LIABILITY INSURANCE REQUIREMENTS

Any contract entered into as a result of this RFQ will require the Consultant(s) selected for the contract(s) to obtain and maintain certain minimum insurance coverage. Selected Consultant(s) shall furnish proof of this liability insurance for review and approval prior to execution of the written contract – proof of coverage does not need to be included as part of the response to this RFQ.

Current City of Burlington insurance requirements are listed below. These are periodically revised and may vary from project to project.

Selected Consultant(s) shall be responsible for obtaining and maintaining adequate liability insurance to completely and fully protect the City of Burlington against all claims and actions arising out of any and all property damages or personal injury or death as shown it table below.

INSURANCE REQUIREMENTS
LIMITS OF LIABILITY

	EACH PERSON	EACH OCCURRENCE	AGGREGATE
GENERAL LIABILITY **Bodily Injury & Property Damage Combined Single Limit**		**$1,000,000**	**$3,000,000**
AUTOMOBILE LIABILITY **Bodily Injury & Property Damage Combined Single Limit**		**$1,000,000**	
OWNERS PROTECTIVE LIABILITY OR PROJECT SPECIFIC AGGREGATE **Bodily Injury & Property Damage Combined Single Limit**		**$1,000,000**	**$3,000,000**
EXCESS LIABILITY		**$5,000,000**	**$5,000,000**

****NOTE**** **THE CITY OF BURLINGTON MUST BE NAMED AS AN ADDITIONAL NAMED INSURED on POLICY. The address used for the City on the certificate of insurance shall be 425 S. Lexington Ave. Burlington, NC 27215**
A Blanket Waiver of Subrogation shall apply in favor of the City of Burlington and all additional insured's as required by contract for Workers Compensation and General Liability.

WORKERS COMPENSATION Statutory limits, as required by law.
$500,000 Employers Liability Limit

PROFESSIONAL LIABILITY Limit of no less than $1,000,000.00
(as required)

E-VERIFY REQUIREMENTS

As a condition for payment under this Contract, Company shall: (i) comply with the E-Verify requirements set forth in Article 2 of Chapter 64 of the North Carolina General Statutes (the "E-Verify Requirements"); and (ii) cause each subcontractor under this Contract to comply with such E-Verify Requirements as well. Company will indemnify and save harmless the City from all losses, damages, costs, expenses (including reasonable attorneys' fees), obligations, duties, fines, penalties, interest charges and other liabilities (including settlement amounts) incurred on account of any failure by Company or any subcontractor to comply with the E-Verify Requirements.

SUBMITTAL REQUIREMENTS

Please submit an electronic (PDF) version of the SOQ and five hard copies with all attachments in a sealed envelope or package, to be received by the City no later than **3:00 PM, Wednesday August 9, 2023** to the attention of:

Robert C. Patterson, Jr., PE, Director
Water Resources Department
City of Burlington

Via US Mail:
P.O. Box 1358
Burlington, NC 27216
Physical Address:
1302 Belmont Street
Burlington, NC 27215

Electronic Copy: Provide an accessible USB drive submitted with hard copies.

Each firm is solely responsible for the timely delivery of its SOQ. The City will not consider SOQs received after the required day or time.

SOQ Organization: To facilitate the City's objective review of the SOQs from different Consultants, the Consultants are requested to organize the main document using a standardized format. Each SOQ should contain the following:

I. A cover letter on company letterhead signed by a Principal or other member of the firm authorized to commit the firm to contract for professional services.

II. Table of Contents: Include page numbers.

III. Executive Summary: This should address the highlights of the SOQ, along with the strengths and special expertise of the firm and the associated team to successfully accomplish the objectives of the City. Please limit the Executive Summary to one page.

IV. Statement of Qualifications: Identify and describe the qualifications of the firm and professional services that may be provided by the consultant or consultant team in response to this Request. Also include information on any proposed sub-consultants. Please note which team members were involved in referenced projects. Also highlight any projects performed for the City of Burlington during the past 10 years.

V. Project Approach: This should include a proposed project schedule indicating project milestones (including, but not limited to, the initial meeting/project kickoff, periodic progress meetings, and project completion) and detailed approach to complete the project, familiarity with the project, identification of unique issues related to the project, potential funding grants or financial assistance sources, and the process for communication with and input from stakeholders.

VI. Project Team & Project Management: Please identify the proposed project team (including any subconsultants) and key personnel for the successful completion of projects in partnership with the City. Please include brief resumes of the project team members. Also, please identify the project manager or project managers and any other team leaders proposed, and briefly describe how projects will be successfully managed. It is expected that the team members proposed in the SOQ will be the ones that will actually work on projects for the City. Describe the planned and envisioned workload of the proposed team members for the timeframe of this contract and verify that proposed staff will be prepared for timely completion of the project. Also describe your quality control methods. Provide a listing of hourly rates by position classification.

VII. Reference Projects: Please provide the name, telephone number, and address of at least three references in organizations for whom your firm provided professional services within the last five (5) years on projects similar to this Request and whom the City of Burlington may contact regarding your firm's performance on their projects. For each project, provide the project name, location, and project budget.

If the Consultant wishes to submit additional information in support of or to strengthen the SOQ, such information may be submitted separately in Appendices. **SOQs must be limited to no more than 25 pages, excluding the cover page, cover letter, table of contents, resumes, and section dividers.** Type size should be no smaller than 11 points for narrative sections, but may be reduced for captions, footnotes, etc. as required while still maintaining legibility.

SELECTION OF CONSULTANT

General: This Request does not commit the City to enter into agreement, to pay any costs incurred in the preparation and submittal of a proposal in response to this request or in subsequent interviews and negotiations, or to procure a contract for the project. The City will require the selected Consultant(s), if any, to participate in negotiations of the fees for the project and to submit such scope, technical and/or other revisions to the proposals as may result from negotiations. The City reserves the right to perform all or some of the services described in this document with its own work force. The City also reserves the right to issue future RFQs and solicit responses from firms not selected as part of this process.

Qualifications-Based Selection Criteria: SOQs/Proposals are traditionally evaluated and ranked based upon objective Qualifications-Based criteria. The City reserves the right to request an interview with any potential Consultant during the selection process. If the City determines the need to interview potential Consultants, the potential Consultants will be notified as early as possible in the proposal review process. Evaluation criteria, in the order of significance, are as follows:

Category	Points
Responsiveness to the City's RFQ dated July 10, 2023	0 - 25
Proposed team member's experience on similar projects;	0 - 20
Qualifications, certifications, abilities, availability, and geographic location of key individuals identified in the Qualifications Package on similar projects. Location of key team members. Staff located in the Burlington area, or within reasonable proximity are preferred. Availability of team members and current workload.	0 - 15
Comments on Consultant's performance on previous projects by the References provided by the Consultant. Quality and timeliness of past similar projects; Relevant peer-reviewed publications.	0 - 15
Proposed utilization of M/WBE firms;	0 - 10
Track record in delivering quality professional services in a timely manner for the City of Burlington on past projects. Track record in delivering quality professional services in a timely manner for other water/sewer utilities in North Carolina. Familiarity with the standards and requirements of the City of Burlington for construction plans, specifications, and bidding.	0 - 15
Other items that may be considered:	
Information obtained through interviews with short-listed consultants, if applicable.	
Any special or unusual Terms and Conditions for the contract.	

SCHEDULE FOR THE SELECTION PROCESS:

The following is the anticipated schedule for the Consultant selection process:

Item	Date
City of Burlington issues RFQ	Monday, July 10, 2023
Completed SOQs due to City of Burlington, Water Resources Dept. 1302 Belmont Street.	Must be received by City Water Resources Department by 3:00 PM on Wednesday, August 9, 2023
City review of SOQs and Selection of Short List of Qualified Consultants, if applicable	August 9- August 16, 2023
Interviews with potential Qualified Consultants, if needed	August 28-September 1, 2023
City selects Most Qualified Consultant(s)	On or before September 15, 2023
Negotiation of Scope, preparation, and review of contract documents and insurance.	September 15, 2023- October 9, 2023
Submittal of complete and signed Contract documents by the selected Consultant to the City	On or before October 9, 2023
City final approval of Contract	November 7, 2023

Questions regarding this RFQ should be directed to Bob Patterson at bpatterson@burlingtonnc.gov by 6:00 PM on July 31, 2023. All questions received and answers will be compiled with response by City to be sent by 6:00 PM on August 4, 2023.

The City may shorten or extend this proposed schedule as staff determines is necessary.

The City of Burlington appreciates your interest in providing professional services for this complex issue.

Sincerely,

Robert C. Patterson, Jr., PE
Water Resources Director