

Request for Proposals  
To Furnish Licensed Operator in Direct  
Responsible Charge/Operations Manager  
& Backup Licensed Operators – Water  
Distribution & Treatment Plant System



SEPTEMBER 20, 2022

ATLANTIC CITY MUNICIPAL UTILITIES  
AUTHORITY

401 N. Virginia Avenue  
Atlantic City, New Jersey 08401

Proposals Due: 11:00 AM OCTOBER 13, 2022

# **ATLANTIC CITY MUNICIPAL UTILITY AUTHORITY REQUEST FOR PROPOSAL**

## **LICENSED OPERATOR IN DIRECT RESPONSIBLE CHARGE/OPERATIONS MANAGER – WATER DISTRIBUTION OPERATION & WATER TREATMENT PLANT SYSTEM**

Atlantic City MUA is soliciting proposals for independent contractors to fill positions of **LICENSED OPERATOR IN DIRECT RESPONSIBLE CHARGE/OPERATIONS MANAGER AND BACKUP SERVICES, WATER DISTRIBUTION OPERATION & WATER TREATMENT PLANT SYSTEM AND LICENSED OPERATORS** to provide professional services to the ACMUA on all services related to the operations of the ACMUA Water Distribution Operation and Water Treatment Plant System. The Executive Director will select a firm (herein "Contractor") for the provision of these services based upon a fair and open process, pursuant to N.J.S.A. 19:44A-20.4, et. In order to have a proposal considered by the Executive Director, a Contractor must provide evidence that they can satisfy the minimum requirements as set forth in this document.

### **SECTION I Appointment of Licensed Operator(s) in Direct Responsible Charge/Operations Manager(s).**

A Contractor shall be appointed by the Executive Director to serve as the Licensed Operator in Direct Responsible Charge (herein "LODR") and to perform services for the Atlantic City MUA including but not limited to those services as described in Section II of this document on an as needed basis.

The Executive Director may select, at its sole discretion, several firms for this position, so long as those firms meet or exceed the minimum requirements set forth in Section II. Once an appointment is made, no substitution of personnel may be made without the express written consent of the Executive Director, which consent may be withheld in the Executive Director's sole discretion. The Executive Director reserves the right to appoint another Contractor as LODR as the need may arise without penalty or additional compensation to the Contractor.

The Contractor is responsible for continuous coverage by a LODR for the duration of the contract as required by law. Any changes in personnel assignment by Contractor must satisfy NJDEP requirements for licensure and general operation.

Any benefits provided to the Contractor's employees are at the Contractor's expense. The Contractor's employees are not eligible for enrollment in any publicly funded pension system established by the State of New Jersey under the terms of this contract. The Contractor is not responsible for the supply of chemicals, ordinary equipment purchases or ordinary repair costs for the plant or distribution system; however, Contractor is bound by the Atlantic City MUA budget constraints and policies when authorizing such equipment purchases and repairs. Existing ACMUA facilities are to be utilized for the duration of the contract.

Atlantic City MUA reserves the right to reject all proposals or to award a contract to any qualified RFP if it is determined to be in the best interest of Atlantic City MUA.

## **SECTION II – Scope of Services**

### **Minimum Qualifications and Requirements of Operator in Direct Responsible Charge**

1. The firm or individual(s) of the firm must possess a minimum the following licenses issued by the New Jersey Department of Environmental Protection:
  - a) T-4 Potable Water Treatment
  - b) W-4 Potable Water Distribution System
2. A firm with a full time licensed New Jersey Professional Engineer with experience in direct design or design oversight as part of their management staff is preferred but not required.
3. The LODR must have at least 15 years direct experience in the oversight and management of water treatment and distribution facilities and associated personnel.
4. The LODR must have 20 years of experience operating and maintaining an advanced treatment process with the following functional areas:
  - a. Preliminary Treatment
  - b. Primary Treatment
  - c. Aeration
  - d. Final Clarification
  - e. Iron Removal
  - f. Flocculation
  - g. Sedimentation
  - h. Disinfection
  - i. Corrosion Control
  - j. Filter Backwash
  - k. Potable Water Residue

5. The LODR staff must be on location full-time (35 hours per week minimum) as required by New Jersey Department of Environmental Protection regulations under the Water and Water Licensing Act N.J.A.C. 7:10A. If the LODR does not hold all required licenses, the Contractor will be required to supply both a W-3 operator and a T-4 operator on location full-time (35 hours per week minimum). When the LODR is not available, a Subordinate or Back- Up Licensed Operator with no less than one (1) grade lower shall be assigned on-duty by the Contractor in accordance with NJDEP regulations. The backup operator must be approved by the ACMUA prior to the individual providing operational services.

### **Plant Operations and General Duties**

- A. The LODR will run the water treatment plant and distribution system in the capacity of Licensed Operator in Direct Responsible Charge. The LODR will ensure proper function of the water treatment plant and distribution system in a manner that satisfies all legal and regulatory requirements.
- B. The LODR will run the water treatment plant and distribution system in the capacity of Licensed Operator in Direct Responsible Charge, and Operations Manager of the Water Department. The LODR will ensure proper function of the water treatment plant and distribution system in a manner that satisfies all legal and regulatory requirements.
- C. The LODR will supervise and direct all staff currently employed by Atlantic City MUA and serve as Department Head for ACMUA-related business. The LODR will become familiar with and be responsible for proper enforcement of all contracts current and future, for the life of this contract, including labor contracts, goods and services contracts and professional services contracts. LODR will also comply with all Federal and State employment laws when supervising staff as well as ACMUA personnel policies.
- D. The LODR will be directly responsible for the timely and accurate submission of all required reports and ensuring Atlantic City MUA staff properly document all repair and maintenance activities.
- E. The Contractor will also perform function of Lab Manager for testing per NJDEP regulations and must register as Lab Manager if required.
- F. The Contractor will also identify and prioritize capital equipment and repair needs in a five-year plan. The LODR will participate in annual budget development with the Executive Director and Chief Financial Officer, and will ensure that strict compliance with the adopted budget.

### **SECTION III – General Requirements**

#### **RFP Submission**

Interested parties wishing to provide a proposal in response to this solicitation shall provide the following minimum information in its proposal. Proposals will not be accepted after the time and date listed on the cover page of this RFP or in submission formats not explicitly noted. Proposal or due on Thursday, October 13, 2022 at 11:00 am or before the specified date.

The following shall be considered the minimum acceptable information to be supplied in the submitted Proposal:

1. Full name and business address of entity or person submitting the proposal, and the name and contact information for the key contact person.
2. A description of the business organization (i.e., corporation, partnership, joint venture, etc.) and its ownership and organizational structure.
3. Number of years the organization has been in business under the present name, and the number of years the business organization has been under the current management.
4. Organization chart showing no less than one licensed Professional Engineer, one Operator satisfying the W-4 and T-4 license requirements, and one backup operator (minimum W-3 or 2 and T-3 licenses, respectively).  
The Contractor should demonstrate that it has the ability to furnish additional backup licensed operators as needed by the Authority.
5. A resume for each individual to perform services under this contract containing the following:
  - a. Summary of post-secondary school education
  - b. Summary and copy of all professional licenses.
  - c. Projects, including dates, performed by the individual for municipal entities in the State of New Jersey.
6. A description of the services that will be provided to Atlantic City MUA, in addition to those set forth in Section II above. Include a timeline demonstrating the mobilization and implementation plan.
7. A copy of the professional liability and pollution liability insurance policy maintained for the calendar year.
8. A statement that applicant complies with the New Jersey Law Against Discrimination, N.J.S.A. 10:5-1, et. seq., and the Affirmative Action Law of the State of New Jersey, P.L. 1975 C. 127; N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 and of P.L. 1963, c. 150 (Prevailing Wage) and Americans with Disabilities Act of 1990 (42 U.S.C. 12101, et seq.); and N.J.S.A. 19:44A-20.4 et seq. (Pay to Play).
9. The name and addresses of at least three (3) references consisting of clients for which the applicant has provided services in the past five (5) years, which should include at least one (1) municipal entity client.
10. A list and description of all professional liability claims, if any, brought against the applicant during the past five (5) years.
11. A statement of any and all professional service fees to be performed by the Contractor in fulfillment of this RFP. This statement shall include, at a minimum:

- a. Licensed Operator in Direct Responsible Charge services, as a lump sum. This fee shall cover the normal 35 hours per week for all operator categories.
- b. Overtime rate as an hourly rate. This rate will cover emergency response, call-outs, or time spent over 35 hours per week on non-routine services.
- c. Delivery of a capital equipment and repair needs five-year plan, as a lump sum.

#### **SECTION IV Basis of Award of Professional Services Contract**

Atlantic City MUA shall award all professional service agreements in accordance with and based upon qualifications, merit, cost competitiveness, references and experience with issues confronting Atlantic City MUA. The final determination will be based upon the most advantageous price and other factors to Atlantic City MUA. The specific basis of award will include:

1. Administrative Criteria (20 points):
  - a. Documented evidence that the Contractor fulfills all of the minimum qualifications as listed in Section II, and all of the information required including, but not limited to, insurance policy, Affirmative Action Compliance and professional service fees, are provided for review and consideration. Number your responses using the sequential order listed.
  - b. All eleven (11) submission elements from Part III of this RFP are specifically addressed.
2. Technical Criteria (30 points):
  - a. Does the proposal demonstrate a clear understanding of the scope of work and related objectives?
  - b. Does the proposal document knowledge of the issues and operations of the Atlantic City MUA, and how the proposed services will address these issues?
  - c. Is the proposal complete and responsive to the specific requirements?
  - d. Does successful past performance of the individual/firm and its principals been documented?
3. Management Criteria (30 points):
  - a. How well does the mobilization and implementation plan meet the ACMUAs needs?
  - b. Does the Contractor sufficiently document a record of reliability of timely delivery of deliverables?
  - c. Does the Contractor sufficiently document municipal/State experience?
  - d. Does the Contractor sufficiently document its availability to attend all scheduled/required public and special meetings?
  - e. Documentation of experience in performing similar work by employees?
  - f. Does the Contractor make use of business capabilities or initiatives that involve women, the disadvantaged, small and/or minority owned business establishments?
  - g. Does the Contractor demonstrate cultural diversity in hiring and training staff?

4. Cost Criteria (20 points):

- a. Relative Cost – How does the cost compare to other similarly scored proposals?
- b. Full Explanation – Is the price and its component charges, fees, etc., adequately explained and documented?
- c. Does the proposal include quality control and assurance programs?
- d. Does the individual/firm have the sufficient financial resources to meet its obligations?

All proposals are due for review

Bidder are required to submit three copies of their proposal.

Appendix A  
Atlantic City Municipal Utilities Authority  
Background & Existing Facility



# **ATLANTIC CITY MUNICIPAL UTILITIES AUTHORITY**

## **1.1 BACKGROUND**

The Atlantic City Municipal Utilities Authority (ACMUA) was formed by action of the Board of Commissioners of the City of Atlantic City on September 14, 1978. The Authority was created under the provisions of the New Jersey Municipal and County Utilities Law. On January 22, 1980 the ACMUA acquired the Atlantic City Water Utility and assumed operation and maintenance of the system.

ACMUA provides drinking water to Atlantic City which is located on Absecon Island in Atlantic County. In 2010 the United States Census Bureau identifies the size of Atlantic City as approximately 17.35 square miles, of which approximately 11.3 square miles is 'Land'. The City's official population dipped below 40,000 people in the 2010 census.

## **EXISTING FACILITIES**

### **2.1 INTRODUCTION**

ACMUA's source waters are from a combination of surface and groundwater sources. Surface water is supplied by Doughty Pond (lower reservoir) which is in turn fed from Kuehnle Pond (upper reservoir) and Absecon Creek. Groundwater is supplied from a series of wells that draw water from the Kirkwood-Cohansey aquifer system. The raw waters from both Doughty Pond and the groundwater wells are conveyed to the headworks and pass through pretreatment and filtration.

The coagulant used by the Authority is polyaluminum chloride. Sodium permanganate (oxidant) was added to allow a reduced rate application of sodium hypochlorite for a time, but the plant has discontinued use of that oxidant and resumed higher rates of sodium hypochlorite. Lime is added as part of preliminary and final chemical treatment for pH adjustment and to increase alkalinity.

The ACMUA's treatment system is comprised of screening, aeration, coagulation, flocculation, sedimentation, filtration, corrosion control, and disinfection processes. The solids produced during water treatment are thickened on site by gravity thickeners, and residuals are dewatered on newly re-covered sand drying beds and in open drying beds when needed. Dewatered solids are contracted out for off-site disposal.

### **2.2 GROUNDWATER**

The ACMUA currently utilizes 13 wells: 11 are located in the Kirkwood-Cohansey aquifer system and 2 wells are located in the Atlantic City 800-Foot Sand layer of the Kirkwood

Formation. The wells in the Kirkwood-Cohansey aquifer are known as the Cohansey Wells, those in the 800-Foot Sand layer as the Kirkwood Wells.

The water from all active wells is conveyed to the Flow Diversion Box at the headworks of ACMUA's Water Treatment Plant located in Pleasantville, New Jersey.

### **2.3 SURFACE WATER**

In addition to groundwater, the ACMUA utilizes surface water to supply approximately 20-24% of the raw water for the treatment plant. The surface water is withdrawn from the lower reservoir (Doughty's Pond) at the confluence of the North and South Branches of the Absecon Creek. This reservoir is ~12 feet deep and encompasses approximately 250 acres and has a storage capacity of 0.245 billion gallons of water. The water is diverted from Doughty's Pond via an intake and gravity fed to the ACMUA Water Treatment Plant.

The upper reservoir (Kuehnle's Pond) encompasses about 140 acres and provides storage capacity of approximately 0.250 billion gallons of water which is released into the lower reservoir.

### **2.4 SURFACE WATER RESERVOIR INTAKE AND TRANSMISSION**

Raw water is diverted from Doughty's Pond Reservoir via a submerged intake and includes an adjustable sluice gate located on the inlet-end of a submerged 48-inch pipe that stands about 2 feet above the bottom of the reservoir. Groundwater from Well Nos. 16 through 24 is pumped via a common 36-inch prestressed concrete transmission main into that 48-inch water main just downstream from Doughty Pond, and the combined flows are conveyed to the Water Treatment Plant through a 60-inch cast iron gravity transmission main.

### **2.5 FLOW DIVERSION BOX**

The 60-inch gravity influent pipe connects to the diversion box at the treatment plant headworks. Recycled water from solids treatment also flows into the diversion box through a 12-inch reinforced concrete pipe and blends with the raw water from the 60-inch transmission main then, the flow is directed through the Screening Chamber and to the low-lift pumps by a cast iron pipe. The flow into and out of diversion box can be isolated by sluice gates.

### **2.6 SCREENING CHAMBER**

The screening chamber (aka fish house) is the first treatment unit at the water treatment plant. All raw water conveyed into the treatment plant from the diversion box passes through the screening chamber which consists of uniformly sized openings used to retain debris found in the raw influent water.

## **2.7 AERATION: IRON REMOVAL**

The existing aeration facilities were designed for the oxidation of iron found in the groundwater and in the reservoir (surface) water; oxidized iron is subsequently removed by the Flocculation/Sedimentation basins and filters. Aeration is achieved through a forced-air cascading tower. Water from the screening chamber is pumped to an aeration tower by three low lift pumps.

The raw water enters the aeration tower from the top and cascades down over staggered PVC slats while an exhaust fan forces air up through the tower from the bottom.

## **2.8 CHEMICAL FEEDING: PRE- TREATMENT**

Sodium hypochlorite is added to the water after aeration as an oxidant to help control biological growth within the flocculation and sedimentation tanks.

Polyaluminum Chloride is added to aid the oxidized iron and other matter to agglomerate into floc for removal by sedimentation and filtration.

Lime is added to the meter pit in front of the low lift pump clearwell to adjust/raise pH.

## **2.9 FLOCCULATION**

Following aeration, staged, hydraulic flocculation occurs. The flocculation tanks operate in parallel. Each tank is 80 feet long, 21 feet wide and 21.5 feet deep, with an individual volume of 270,000 gallons. At the average daily flow of 12.0+ MGD, the hydraulic detention time is several hours, with both basins in service.

## **2.10 SEDIMENTATION**

The ACMUA utilizes high rate sedimentation to remove flocculated solids. Currently, each sedimentation tank is divided into an upper and lower pass by a concrete slab. Flocculated effluent enters the lower pass which runs the entire tank length. The concrete slab ends approximately seven feet from the end of the tank and the flow is redirected to the upper pass and is then sent through the upper pass in the reverse direction. The flow path is then directed through stalled, stainless steel plate settlers in the upper pass.

## **2.11 FILTRATION**

The existing Filter Building houses a total of six gravity multi-media filters, a pipe gallery for the associated piping and valves, backwash pumps, and instrumentation and control systems. Three filters each straddle the center gallery. Each filter has the dimensions of 30 feet by 18.5 feet. The filters have a Wheeler underdrain system.

## **2.12 DISINFECTION**

At the ACMUA's treatment plant, sodium hypochlorite is used for chemical disinfection. Sodium hypochlorite is added to the Sedimentation/Flocculation Basins; to the in-ground, covered, finished water storage basins; and then in the wetwell for the high lift pumps for final disinfection. The purpose of chlorination in this final point is to maintain residual disinfectant concentration in the distribution system as required by NJDEP regulations.

## **2.13 CHEMICAL FEED**

Fluoride is commonly added to water distribution systems as a means of preventing dental caries. The Fluoride concentration for the City system is maintained below the AWWA recommended maximum of 0.7 mg/L.

Currently, Lime is also added to the wetwell of the high service pumps for pH adjustment prior to being conveyed to storage and the distribution system.

## **2.14 WATER TREATMENT PLANT STORAGE FACILITIES AND PUMPING STATIONS**

Water from Filtration Plant effluent is disinfected and stored in two basins - Basins B and C. Treated water is also stored in the 6 million gallon (MG) standpipe. The total storage capacity of the ACMUA Pleasantville Treatment Plant with all basins and tanks in service is 9 million gallons.

## **2.15 SOLIDS HANDLING**

There are two sources of solids at ACMUA's water treatment plant: settled solids from the sedimentation basins and waste backwash water from backwashing of filters. The solids from ACMUA's treatment plant are handled in a circular thickener with a 70 ft. diameter and/or a backup thickener of 40 ft. diameter before pumping to the sludge drying beds. The polymer ZetaLyte is a primary coagulant and is added to the first thickener in a two stage thickening process where waste wash water is combined with the residue which has been pumped from the sedimentation tanks. After a period of settling, the supernatant from the larger tank is decanted to the head of the plant. The smaller tank can be used in series where it can provide additional settling time, or in parallel to provide additional capacity or to handle a separate residue stream (such as from the sedimentation tanks). The supernatant from the old thickener is also decanted to the head of the plant. The settled solids from the second thickener are mixed with a polymer and then pumped to the sludge drying beds.

There are four covered drying beds, with each bed being 40 ft. by 40 ft., and one uncovered drying bed. Each bed is separated by a concrete wall. The dewatered solids are currently hauled off-site for disposal, or used as soil conditioner.

## **2.16 WATER TRANSMISSION**

The potable water produced by the water treatment plant is conveyed to the Absecon Island distribution system by two 48-inch transmission mains (Missouri Avenue Main and Albany Avenue Main). These two mains are the only means of transmitting drinking water to the Atlantic City drinking water distribution system. Both of the mains are cast iron, and are supported on concrete and aluminum pipe cradles, which are subsequently supported by timber piles, across the tidal marshlands from Pleasantville to Atlantic City.

The Missouri Avenue Main is 4.8 miles long and has been in service since 1916. The Albany Avenue Main is 4.4 miles long and has been in service since 1936. A number of the original transmission main cradles were rehabilitated in 1987 with aluminum supports.

Currently, there are two valve interconnection complexes serving the transmission main system. One interconnection is in the city limits of Atlantic City (behind the Convention Center) and the other interconnection is in Pleasantville (Meadows Valve Complex). These valve complexes allow the ACMUA to remove a section of 48-inch main from service during routine maintenance and emergency situations.

The Meadows Valve Complex is covered with a fiberglass enclosure. The valve complex is in a remote location through which the transmission main passes, approximately half-way along the pipeline between the water treatment plant and Atlantic City. The hardware needed for remote operation of the valves and actuators is in-place; and the control logic to support remote operation was added as part of the SCADA Upgrade Project that was completed in 2009.

The second valve complex is located behind the Convention Center in an underground vault. The hardware needed for remote operation of the valves and actuators is in-place, and the control logic was updated in the SCADA Upgrade Project to support this function.

## **2.17 WATER STORAGE TANKS**

The 1 million gallon (MG) Maryland Avenue storage tank is located at the intersection of North Virginia and Caspian Avenues. This tank is made of steel and has been in service since 1953 and is supported with tubular columns. The bottom elevation of the tank is 90.5 ft. and the overflow elevation is located at 125.5 ft. This tank has a common inlet/outlet pipe, which is 16 inches in diameter.

The 2 MG Absecon Boulevard storage tank is located at the intersection of Maryland Avenue and Absecon Boulevard. This tank has been in service since 1999. The tank is made of steel and is of a single pedestal configuration. The overflow is located at an elevation of 125.5 ft. The base elevation is 10.0 ft. This tank has a common inlet/outlet pipe, which has a 16-inch diameter.

The Six Million Gallon Standpipe is located at the treatment plant in Pleasantville, NJ

## **2.18 WATER DISTRIBUTION**

Almost the entire area of Atlantic City is served by the Authority's distribution system. The distribution system includes approximately 150 miles of distribution piping of various sizes and approximately 1,400 fire hydrants. Most of the distribution system was constructed prior to 1972, and is made of either cast iron or ductile iron pipe. Some of the old, 4-inch pipes have been replaced and upsized (to 8") and additional sections of 4-inch pipe are scheduled to be upsized to further improve fire flows. In 2014 there were about 8,127 services ranging in size from 1-inch to 12-inches in diameter.

There is an emergency interconnection (12") with the City of Ventnor's water distribution system to supply water in either direction if needed.