ORIGINAL

H2M architects + engineers

MORRIS COUNTY
MUNICIPAL UTILITIES AUTHORITY

PROPOSAL FOR

Engineering Services – Water Division

H2M architects + engineers

MORRIS COUNTY MUA MUNICIPAL UTILITIES AUTHORITY

Proposal for

Engineering Services – Water Division

01.28.2025

Contact

Patrick K. Cole, P.E., CME, CPWM
Vice President, Deputy Market Director of Water/Wastewater

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Parsippany, NJ 07054

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pcole@h2m.com

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ARCHITECTURE NJ #21AC00040200
ENGINEERING NJ #24GA2802550

January 28, 2025

Mr. Larry Gindoff, Executive Director
Morris County Municipal Utilities Authority
370 Richard Mine Road
Wharton, NJ 07885

RE: Proposal for Engineering Services – Water Division

Dear Mr. Gindoff:

H2M Architects & Engineers, Inc. (H2M) is pleased to submit a proposal to the Morris County Municipal Utilities Authority (MCMUA) to provide engineering services to sustain its water supply infrastructure. H2M is currently working with the MCMUA for the replacement of approximately 32,300 square feet of standing seam structural metal roofing for the Main Transfer Station Building at the Parsippany-Troy Hills Transfer Station. As a full-service firm, we specialize in water, wastewater, structural, mechanical, electrical, plumbing, and civil engineering, and architecture, and thus have the expertise needed to produce engineering design, prepare permits, and oversee the construction of water infrastructure projects. With this well-rounded skillset and our Parsippany office being just 10 miles from MCMUA, we are well-suited to be your consultant for this work.

Over more than 90 years, we have honed our water and wastewater engineering expertise in areas such as supply well design; drinking water treatment systems; distribution design systems; water distribution system analysis; storage tank design, construction, rehabilitation, inspection, and coating/painting; instrumentation and SCADA designs; automated mapping/facilities mapping; construction inspection, administration, and management; and operation and maintenance (O&M) programs; aquifer mapping, determination, computation, and management plans. Additionally, H2M's wastewater treatment design experience includes facilities with flows from less than 5,000 gallons per day to over 100 million gallons per day. The firm also has extensive design experience in upgrading existing sewage treatment facilities from secondary to advanced treatment for nutrient removal.

We propose Alec J. Mittiga, P.E., to lead this work as Project Manager. He has more than 15 years of experience in designing, permitting, and overseeing the construction of water and wastewater pump, treatment, distribution, and collection systems. In addition, I will make sure your expectations are met for all projects associated with this appointment and oversee and support the work of Mr. Mittiga as the Principal-in-Charge. I lead H2M's wastewater and water infrastructure practice in the State of New Jersey and have more than 20 years of experience in this field.

We appreciate your consideration for this important work. Please reach me by phone at (862) 207-5900 ext. 2104 or at pcole@h2m.com with any questions or requests for additional information. Thank you for your consideration.

Sincerely,
H2M Architects & Engineers, Inc.

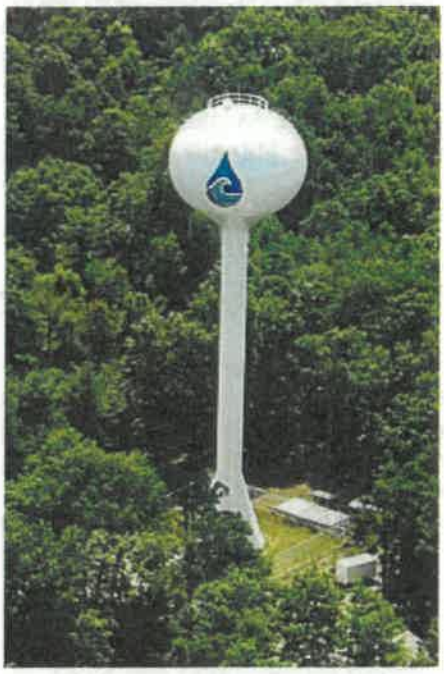
Patrick K. Cole, P.E., CME, CPWM
Vice President
Deputy Market Director of Water/Wastewater

Executive Summary

Our Project Manager

Alec J. Mittiga, P.E.
Assistant Vice President,
Department Manager – Water Resources
amittig@h2m.com

H2M Architects & Engineers, Inc.
119 Cherry Hill Road, Suite 110
Parsippany, NJ 07054



Introduction

The Morris County Municipal Utilities Authority (MCMUA) is seeking an experienced consultant to provide engineering services for its water infrastructure projects during the year 2025. MCMUA provides a safe and clean supply of drinking water to customers throughout Morris County.

Our client references in Tab 2 can attest to the value and professionalism we brought to their water infrastructure projects. As will be further detailed in our submission, we offer a deep bench of experienced staff and a wealth of engineering design experience for New Jersey municipalities that will be leveraged to make the MCMUA's projects successful.

If desired by the MCMUA, we welcome the opportunity to present our qualifications in person, to answer your questions, and provide additional information regarding our firm and its capabilities.

Our Understanding

H2M will provide engineering services, as directed by the MCMUA, under the direction of a professional engineer licensed in the State of New Jersey. This work is anticipated to include mandatory attendance at the MCMUA's monthly public meeting and engineering review meeting, and any other meetings as

directed. The engineer will be responsible for performing reviews and observation work, which is to be billed at the hourly rate schedule included in our submission. Additionally, H2M may be subsequently tasked with design and construction management services and other work for capital projects as authorized by the MCMUA leadership. H2M anticipates preparation of an annual report, which highlights the MCMUA's operation and construction related activities over the past year.

Our Staff

H2M's engineers, architects, scientists, and planners focus on developing solutions that fit not only budget and schedule, but also the character of the town or city where they are located. Our full-service firm includes more than 580 technical and support professionals based in New Jersey, New York, Connecticut, Pennsylvania, and Florida. The **MCMUA** will benefit from our office location in Parsippany, NJ, allowing us the ability to mobilize for assignments quickly. In addition to our close proximity, H2M has staff in all the support areas that the **MCMUA** may require. As a multidisciplinary firm, we do not need to subcontract experts, we have them in-house. Our firm comprises engineers (water supply, sanitary, civil, structural, environmental, mechanical, electrical, chemical, and traffic); architects; geologists; hydrogeologists; environmental scientists; chemists; biologists; toxicologists; industrial hygienists; and construction inspectors. Each team selected for work under this contract will be specifically chosen for their depth of expertise in the applicable field. As your one-stop-shop, we will strive to provide a high level of service to the **MCMUA** in a well-coordinated and timely manner, and provide sound, practical design/technical solutions. Additional qualifications of our staff can be found in Tab 3 of our proposal.

"Having successfully provided professional services to towns and cities in both New Jersey and New York, we have earned a reputation for our practical approach and creative solutions."

Water Supply Engineering Experience

As a regional leader, H2M's water resource engineers provide personal service and focused, cost-effective solutions to meet the demands of any planning, design, and construction project for any one of our municipal, governmental, industrial, or private clients. With multi-discipline and fully functional in-house professional staff, H2M strives to meet and exceed client goals and expectations to successfully complete projects, with the knowledge of and sensitivity to community and environmental concerns. The areas of our expertise in the field of public water supply include:

- Water resource development, design, and management
- Water system master, long range, and capital improvement planning
- VOC removal treatment systems
- Supply well construction and rehabilitation
- Water treatment systems
- Pump station/electrical system rehabilitation
- Water storage tanks new and rehabilitation
- Water storage tank AMPP inspection/cellular installation oversight
- Distribution system/backflow prevention design and analysis
- Instrumentation, control, and SCADA systems
- Groundwater and system/hydraulic modeling
- Chemical treatment/chemical compliance systems

H2M was organized in 1933 and founded on the principles of professional excellence, hard work, and integrity.

Practical Approach. Creative Results.

H2M is a multi-disciplined professional consulting, and design firm, proud of our long history of client service and consistent ability to meet tough architectural, engineering, and environmental challenges head-on. Since 1933, H2M has helped plan, design, and build many of our local communities: from water treatment facilities to firehouses, schools to road reconstruction, and Environmental Site Assessments (ESAs) to groundwater remediation. Since our early roots, our focus has remained steadfast: to provide quality service with sound judgment and serve our clients as an honest and professional resource. We offer a practical approach with creative results.

Our Staff

H2M prides itself on the breadth of its comprehensive in-house service capabilities. With a diverse staff of more than 580 engineers, architects, surveyors, scientists, planners, landscape architects, inspectors, and technical support specialists, we offer our clients the benefit of a full "under one roof" consulting network.

- 72 Registered Architects
- 123 Professional Engineers
- 03 Registered Landscape Architects
- 05 Certified Interior Designers
- 07 Professional Geologists
- 03 Professional Planners
- 03 Professional Land Surveyors
- 05 Licensed Site Remediation Professionals
- 39 LEED Accredited Professionals
- 10 LEED Green Associates

OPERATING PHILOSOPHY

MISSION

Our People
We commit to developing our people and rewarding hard work with growth opportunities in an inclusive professional environment.

Our Clients
We commit to being trusted advisors for our clients and delivering problem solving value and quality on every project.

Our Communities
We commit to creating thriving and healthy communities by giving of ourselves and developing sustainable solutions that benefit everyone.

VISION

We exist to improve the quality of life for everyone in our reach by empowering our diverse talent to sustainably solve the challenges of the built environment.

VALUES

We Stand as One H2M
Inclusive. Supportive. Collaborative. No matter where you are.

We Challenge One Another
We show up curious and push boundaries.

We Do the Right Thing
Our character is built on doing what is right and ethical.

We Work Safely
We care for the lives of our people and their families.

We Own it
We hold ourselves accountable for team success and personal achievement.

We Embrace Diversity
We acknowledge and honor the fundamental value and dignity of all individuals.

Architecture

- Architectural design
- Comprehensive grant programs
- LEED design processes
- Interior design
- Removal of barriers to the handicapped
- Master plans and revisions
- Needs assessments
- Planning studies
- Building conditions surveys
- Restoration of historic structures
- Restaurant and kitchen design
- Zoning ordinance review
- Educational facilities design
- Assisted living facilities design

Civil/Site & Structural Engineering

- Roadway reconstruction and resurfacing
- Site plan design
- Street lighting
- Flood control and drainage
- Irrigation systems
- Sidewalks and curbs
- Storm drainage systems
- Water mains
- Local roadway study and design
- Subdivision design
- Streetscape design and improvements
- Parks, playgrounds, athletic fields
- Parking fields
- Highway planning studies
- Intersection design and improvements
- Visual impact analyses
- Resident engineering inspections
- Geographic Information Systems (GIS)
- Green infrastructure design
- Structural conditions assessments
- Structural building design
- Structural renovations/alterations
- Cause and origin investigations
- Retaining walls, bulkhead, and culvert design
- Storm hardening/resiliency
- Expert testimony

Construction Phase Services

- Construction inspection
- Shop drawing review
- Scheduling
- Construction administration
- Site safety plans
- Grant administration
- MWBE/SDVOB compliance
- Startup
- Commissioning
- Drone progress photos and video
- O&M manuals
- Utility coordination
- Response to RFIs
- Job progress meetings
- Prepare punch list
- Project closeout
- Record drawings

Environmental Services

- Air and water pollution control
- Hazardous waste management
- Hazardous materials storage design
- Waste minimization
- Environmental Impact Statements (EISs)
- Wetland delineation
- Environmental Site Assessments (ESAs)
- Environmental compliance audits
- Environmental permitting
- Site investigations
- Brownfield assessments
- Remedial investigations/feasibility studies
- Risk assessments
- Above and underground tank management
- Soil and groundwater remediation
- Soil vapor intrusion studies
- Regulatory compliance programs
- Industrial hygiene
- Indoor air quality
- CM/LBP/mold inspections and abatement
- Computer modeling
- Asbestos investigation and removal
- Geographic Information Systems (GIS)

Land Surveying

- Boundary and title surveys
- Topographical surveys
- Horizontal and vertical control surveys
- Hydrographic surveys
- Route surveys
- Subdivision planning
- Sanitary and drainage study maps
- Legal descriptions
- Construction layout services
- As-built surveys
- Architectural surveys
- Structural surveys
- Under-construction inspection surveys
- Easement survey and description

Landscape Architecture

- Tree inventory and assessment
- Tree mitigation
- Landscape design and restoration
- Conceptual site design
- Landscape planning
- Illustrative renderings
- Landscape architectural detailing
- Streetscape and urban design
- Parks and playgrounds design
- Campus landscape design
- Private estate and residential design
- Planting design
- Wetlands mitigation
- Green infrastructure

MEP Services

- Electrical systems design
- Feasibility and implementation studies
- Power supply
- Exterior and interior building services
- Closed-circuit television security systems
- Emergency power generation
- Site/systems and load evaluations
- Energy studies
- Site lighting design
- Fire and security systems
- SCADA systems
- Utility company rebates and incentives
- HVAC systems design
- Heat and cooling load analysis
- Steam systems
- Hydronics
- Heat recovery systems
- Chillers and cooling towers
- Laboratory ventilation systems
- Site/systems evaluations
- Feasibility/implementation studies
- Energy conservation
- Cost/benefit analysis
- Commissioning/testing

Planning

- Comprehensive Master Planning
- Parks, Open Space and Recreation Planning
- Environmental and Natural Resource Planning
- SEQRA and EIS Documentation and Process Support
- Community Visioning
- Zoning Ordinances and Analysis
- Redevelopment Studies and Plans
- Geographic Information Systems (GIS)
- Urban Design
- Design Guidelines
- Renderings
- Feasibility Studies and Conceptual Plans
- Downtown Revitalization
- Expert Private Testimony
- Municipal Board Representation

Wastewater Engineering

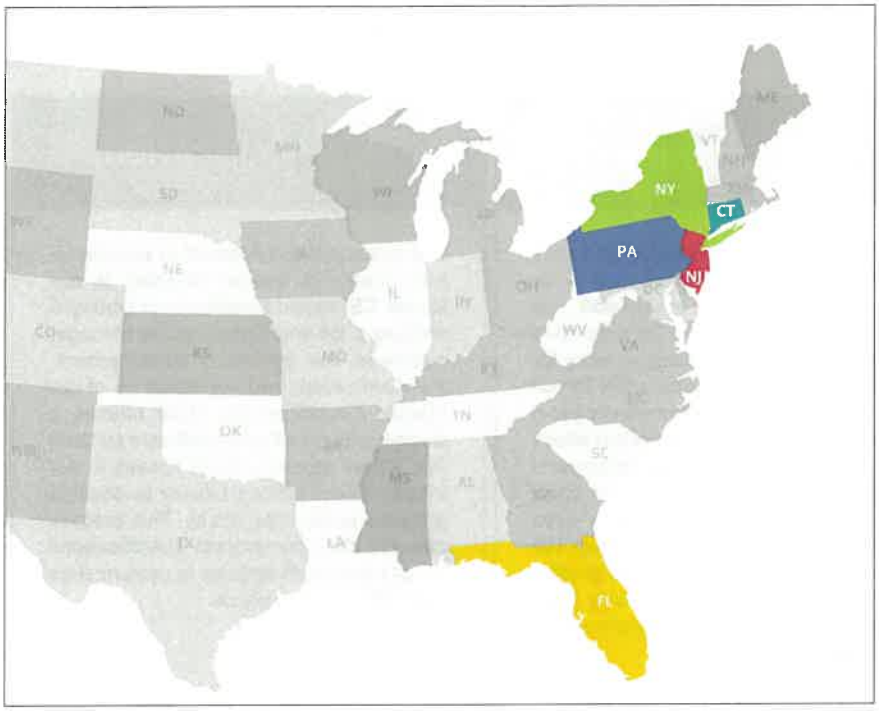
- Characterization/quantification of waste
- Treatment facility evaluation
- Scavenger waste facility design
- Outfalls and leaching systems design
- Chemical feed systems design
- Monitoring and control systems
- Nutrient removal treatment systems design
- Facility planning studies
- Wastewater treatment studies
- Wastewater treatment plant design
- Wastewater reuse design
- Standby power systems
- Sludge thickening, dewatering
- Sludge treatment, disposal
- Odor control
- UV and chemical disinfection systems
- Sewer system extension planning
- User cost analysis
- Sanitary sewer design
- Sewer rehabilitation studies and design
- Infiltration/Inflow evaluation
- Pump station evaluations and design
- Sewer flow modeling
- Security systems
- Geographic Information Systems (GIS)
- Discharge monitoring reports
- Plant performance monitoring
- Preparation of O&M manuals
- Facility start-up and operations
- Groundwater/effluent monitoring programs
- Operator training
- Industrial pretreatment programs
- Prepare/revise sewer use ordinance

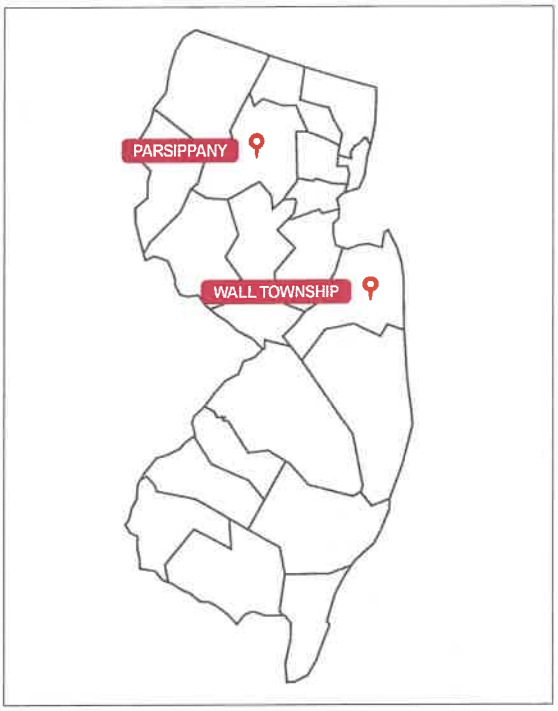
Water Engineering

- Supply well design
- Plant rehabilitation design
- Water treatment systems
- Water filtration systems design
- VOC removal treatment systems design
- Distribution system analysis and design
- Distribution hydraulic modeling
- Automated mapping/facilities mapping
- Storage tank rehabilitation/repainting
- Storage tank design
- Tank and coatings inspection
- Instrumentation and computer control designs
- Comprehensive groundwater modeling
- Geographic Information Systems (GIS)
- Aquatics and park design
- Public swimming pool design
- O&M programs
- Training programs
- Asset management

Distance from our Parsippany office to the MCMUA

H2M Office Locations | New Jersey Offices





538 Broad Hollow Road, 4th Floor East
Melville, NY 11747

230 West 38th Street, 14th Floor
New York, NY 10018

737 Roanoke Avenue
Riverhead, NY 11701

2 Executive Boulevard, Suite 401
Suffern, NY 10901

1133 Westchester Avenue, Suite N-210
White Plains, NY 10605

433 River Street, Suite 8002
Troy, NY 12180

119 Cherry Hill Road, Suite 110
Parsippany, NJ 07054

4810 Belmar Boulevard
Wall Township, NJ 07753

360 Bloomfield Avenue, Suite 406
Windsor, CT 06095

951 Yamato Road, Suite 202
Boca Raton, FL 33431

2054 Vista Parkway, Suite 421
West Palm Beach, FL 33411

100 S. Ashley Drive
Tampa, FL 33602

333 SE 2nd Avenue
Miami, FL 33131

301 Grant Street, Suite 270
Pittsburgh, PA 15219

The Core of Excellence is an H2M exclusive initiative that sets us apart from the competition with a focus on excellence and quality as a core element of our services. It's a firm-wide commitment to deliver excellence through innovative and best-in-class service to our clients, colleagues, and ourselves. H2M's Core of Excellence is comprised of five key components:

QA/QC

We demonstrate our commitment to ensuring quality at the corporate level through our appointment of a full-time Director of Corporate QA/QC to lead the development, implementation, and oversight of H2M's Quality Management System (QMS). This commitment is further reinforced by established quality assurance team members who, independent of the project design team, assure that H2M's components of quality are incorporated. H2M's QMS is comprised of a combination of processes, tools and resources available to all H2M staff. These include Quality Control Checklists, established QA/QC communication channels, and templates all made accessible thorough H2M's comprehensive Project Management Framework.

SCHEDULING

We recognize the importance of timely project delivery and take great pride in our ability to quickly mobilize, assign staff, and complete projects on time. H2M developed a custom scheduling interface allowing for consistent data inputs from the entire firm on a bi-weekly basis. This is transitioning to a centralized scheduling database that allows real-time total team scheduling updates and awareness, allowing H2M to actively adapt our resources to meet the needs of even the most demanding project schedules. We can share detailed, easy to read graphic schedules with our clients, allowing them to always have their finger on the pulse of their project's timeline.

SPECIFICATIONS

Our focus and commitment to excellence and quality is further reflected in our Master CSI-based Specifications Library. A dedicated, full-time Specifications Manager oversees the continual development, standardization, and maintenance of our Master Specifications. H2M utilizes a cloud-based specification software platform that allows all users direct access to our Master Specifications Library to develop project-specific spec books. This process ensures that our project specifications include the latest updates in product data and reference standards.

BIM/CAD

Building Information Modeling (BIM) has revolutionized the A/E/C industry. By using intelligent 3-D digital models to generate our designs, H2M can achieve a higher level of quality, consistency, and efficiency in our production process, minimizing the potential for change orders during construction. We employ a full-time, dedicated, and independent team comprised of design professionals and BIM-CAD specialists whose primary responsibilities are to create, deploy, and maintain company-wide standards, templates, procedures, and workflows. Our adoption of BIM has been the single most important change in how we design and manage our projects.

SAFETY

Safety is essential at H2M. We employ a dedicated corporate health and safety manager within the Core of Excellence. H2M has established mandatory safety training and is actively implementing the Plan-Do-Check-Act methodology. By incorporating safety into our overall quality management systems, we ensure that all of our staff can get home safely each day and that we proactively respond to our clients' health and safety requirements.

CLIENT BENEFITS

- Well-coordinated construction documents that reduce project change orders and minimize cost overruns
- Consistent quality and proven performance
- Optimized resource allocation to meet project demands
- Increased compliance with the latest industry and regulatory standards
- Enhanced project visualization via 3D modeling
- Improved collaboration among all project stakeholders

Water Supply Engineering Clients

Jackson Township Municipal Utilities Authority (JTMUA)

New PRM Well 18 & Transmission Main: Design, permitting, and construction phase assistance for a new 1,400 gpm potable production well to supplement firm source capacity in the Township of Jackson.

▶ David Harpell, Executive Director
(732) 928-2222

Borough of Spring Lake

Ocean Avenue Water Main Improvements: Two miles of new 12" water main in a County right-of-way. Design, permitting, construction management.

▶ Bryan W. Dempsey, Business Administrator
(732) 449-0800

Borough of Mt. Arlington

Water/Sewer Engineer of Record: Serving the Borough on all matters related to water supply and sewerage system planning, maintenance, and capital projects delivery.

▶ Carolyn Rinaldi, Business Administrator
(973) 398-6832

Monroe Township Utility Department

Well 16A Improvements: Overhaul of an 1,100 gpm potable water production well station on behalf of a major central NJ public utility, include design, permitting, and construction services. Process improvements, architectural renovation of the well house, and installation of all new electrical switchgear and emergency generator.

▶ Michael Barnes, P.E., Director
(732) 521-1700

City of Newark Water-Sewer Department

CTA Evaluation/Optimization of Pequannock WTP: Treatment process evaluation and optimization using prescriptive USEPA methodology for a 60 MGD surface water treatment plant.

▶ Kareem Adeem, Director
(973) 733-6400

Borough of Brielle

Water Supply Engineering: Rehabilitation of an existing steel ground storage at the Borough's Union Lane WTP, simplification and renewal of yard piping, and valving to provide better flow control. Construction of a new elevated steel storage tank at the Borough's Old Bridge Well site. This tank replaces a steel standpipe that structurally failed.

▶ Thomas Nolan, Business Administrator
(732) 528-6600

NJ American Water - Raritan Service Area

Chambers Brook Crossing: Design, permitting, and construction services for a utility crossing of a surface water body located at the border of Bedminster and Bridgewater Townships. Included significant regulated land use coordination with NJDEP.

▶ Robert Biehler, P.E., Project Manager
(908) 431-3230

Mountain Station Rehabilitation: Overhaul and rehabilitation of a well station in Somerset County, composed of three wells with a combined capacity of 1,100 gpm. Scope included well TV inspection, pump testing, interaction with Bureau of Water Allocation – followed by design and permitting for complete replacement of downhole and at-grade well componentry and complete rehabilitation of the treatment infrastructure associated with the station. Project included design and permitting for a new two-mile transmission main to re-route station discharge to a new point in the distribution system.

▶ Donald Shields, P.E., Director of Engineering
(856) 346-8200

NJ American Water - Coastal North Service Area

Swimming River Treatment Plant Improvements: Extensively scoped project covering multiple years of interaction with operations, equipment suppliers, and general contractors on behalf of NJ American Water. Overall intent of project was to provide supplemental capacity to the Coastal North Service Area through the implementation of MF/UF membrane filtration systems. H2M provided design, permitting, and construction management services for a system of modular membranes, booster pumping, treatment chemicals, and site/civil improvements resulting in 2,800 gpm (4 MGD) additional potable capacity at the Swimming River Treatment Plant. Additionally, provided technical support for the revision of regulatory permits for operation of the 1,400-gpm capacity Well 3 (located at the north bank of the Swimming River Reservoir).

▶ Donald Shields, P.E., Director of Engineering
(856) 346-8200

Borough of Sea Girt

Environmental Consultant & Water/Sewer Engineer of Record: Serving the Borough on all matters of water supply and sewerage system planning, maintenance, and capital projects delivery.

- Justin Macko, Business Administrator
  (732) 449-9433

Veolia Toms River

Indian Hill Tank Rehabilitation: Design, permitting, and construction management services for the overhaul of a 0.5MG-capacity steel water storage tank, located in the Township of Toms River.

- Frederick Austin, Project Manager
  (732) 557-7763

Village of Ridgewood

West End & Wortendyke Well Station Improvements: Overhaul of infrastructure at two well stations, including major treatment equipment replacement, at each of capacity 400 gpm, serving the public water system for the Village of Ridgewood. Scope included design, permitting, and construction management services.

- Richard Calbi Jr., P.E., P.P., Ridgewater Water Director
  (201) 670-5500 x271

Township of Mt. Olive

Flanders Well No. 3 Improvements: Design, permitting, and construction management services for the overhaul of a 300 gpm public water production well after the discovery of contamination with PCE. Replacement of well pumping assembly and design/ construction of new treatment infrastructure. Coordination with NJDEP Bureau of Water System Engineering and Bureau of Water Allocation.

- Michael Lata, Water Superintendent
  (862) 228-3563

Additional examples of project experience follow this page. ⟶

Water System Improvements

Morris County Municipal Utilities Authority

Mine Hill, NJ

Construction Cost: $1.4 million

SERVICES PROVIDED

- Water Storage Tank Design
- Transmission Water Main Design
- Permitting
- Construction Oversight

A three million gallon (MG) ground storage facility and approximately 3,200 linear feet of water transmission main and appurtenances were constructed to provide additional storage for the Morris County Municipal Utilities Authority (MCMUA) water system.

As the MCMUA expanded its system via interconnections with municipal systems that were distant from its source of supply, the MCMUA recognized the need for additional storage to meet peak demand and provide emergency supply. To meet that need, a new water storage facility was constructed in Mine Hill and a water transmission main was constructed to the tank.

The area selected for the tank site was located in close proximity to a planned development. Additionally, abandoned iron mines were located in the vicinity of the tank site. A geotechnical evaluation was performed to identify the sub-surface soils conditions and confirm the locations of the mines. The final tank location was based on maintaining a minimum setback distance of 125 feet from the abandoned iron mines, equalizing cut and fill, and minimizing impact to the proposed housing.

The 3 MG tank was designed to be steel with a rolled-knuckle roof and interior columns. The 113-foot diameter tank was supported on a reinforced concrete ringwall. The ringwall elevation was selected to minimize the overall diameter of the storage tank and reduce the potential impact on the surrounding planned housing.

To prevent excessive pressure buildup in the Mine Hill portion of the MCMUA system, a surge relief valve was incorporated in the valve vault to relieve pressure to the tank. To ensure adequate water circulation and maintain water quality in the tank, separate draw and fill lines were provided. The fill line was designed with an interior riser pipe of adequate height to prevent short-circuiting of the water, and the fill line was fitted with a removable silt stop. Baffling plates were not considered feasible for this tank due to its size and associated costs. Additionally, a cathodic protection system was installed to protect the steel from corrosion.

The 16-inch diameter water transmission main was sized to deliver a minimum fire flow of 5,000 gallons per minute (gpm). Main valves were selected to be butterfly-type to provide for ease of operation compared to a gate valve, which would have required the valve to be furnished with gearing and a bypass valve due to its size. The water transmission main included one crossing of Route 46, which was made by open-cut excavation. Three alternative routes for the proposed water main to the tank were considered. Length of pipe, number of easements required, and impact to housing were used to select the final water transmission main alignment.

A Design Memorandum was prepared for review by the MCMUA, and for selection of the final tank location and water transmission main alignment.

Emergency PFAS Treatment

Atlantic City Municipal Utilities Authority
Atlantic City, NJ

Construction Cost: $2.5 million

SERVICES PROVIDED

- Water Treatment
- PFC Removal
- Water Systems
- Hydrogeology
- Construction Administration
- Construction Observation
- Treatability Analysis

Due to firefighting drills held at the Atlantic City Airport, PFC levels are high in the systems ground water and surface water supplies. The ACMUA tasked H2M with designing a system to bring them into compliance with new PFC contaminant levels implemented in 2021. Rapid treatment on an urgent timeline was necessary to ensure compliance within the year.

AWARDS

- NJ Alliance for Action Distinguished Engineering Award
- ACEC-NY Engineering Excellence Awards Gold
- ACEC-NJ Received Honor Award for a Non-Transportation Project

To meet the strict deadline, H2M leveraged our previous experience in treating chemicals in this family, prior established relationships with manufacturer partners, and ACMUA's existing equipment. We guided the ACMUA on deploying GAC to three wells on the bank of a lake and advised on how to manage source water. Contractors and vessel manufacturer representatives were brought to the FAA-owned site ahead of time to give a better understanding of site conditions and constraints. The dirt access road to the well sites is relatively narrow and the area is highly wooded. An FAA escort was required for site access and no large equipment could be left behind overnight without permission.

H2M proposed installation of three sets of GAC vessels, with one vessel pair at each of the three different wells. Design specified placement of the vessels on road plates to avoid excessive soils disturbance and enable easy removal once a permanent solution was introduced. Vessels were procured by ACMUA prior to completion of the general contract design to ensure they could be manufactured in time. GAC media was also purchased by the ACMUA through an extension of the existing contract the authority had with Calgon.

To assist in mitigating GAC backwash challenges, the contractor and H2M developed a plan to install temporary bypass loops between the influent and effluent lines on the vessel tree. This let the vessels get backwashed with well water and then sent it to the head of the plant to go through the rest of the treatment plant. Oil found in the well columns from the oil-lubricated pumps was bailed out to prevent the oil from getting into the vessels. Water lubricated pumps were used to replace the existing oil-lubricated pumps.

The project went according to the design plan, schedule, and budget with a few exceptions. The road plates specified were replaced by concrete mats, resulting in a credit to ACMUA and an expedited process. Supply chain issues caused minor delays. The project brought ACMUA into compliance with the PFC MCL that was set for New Jersey. Further work will need to be done over the next year or two to create a permanent solution.

Emergency Design for Perfluorinated Compounds

U.S. Government/ American Water Military Services Group

Morris County, NJ

Construction Cost: $2 million

SERVICES PROVIDED

- Emergency Design
- Permitting
- O&M Assistance
- Treatment of PFOA and PFOS

H2M recently delivered emergency design and permitting services for the treatment of perfluorinated compounds (PFCs) at the United States Army Research Facility, the Picatinny Arsenal.

The Picatinny Arsenal's water system is operated and maintained by the American Water Military Services Group (AWMSG), through a long term service agreement. During AWMSG's routine water quality sampling, high levels of PFC's (PFOA and PFOS) were detected in two of the facility's active drinking water production wells. Given the status of PFC's as an emerging contaminant class, there were no existing treatment processes at the Picatinny Arsenal's water treatment plant which could remove these compounds from the drinking water. The Facility's personnel were put on bottled water until a new treatment process was installed.

AWMSG engaged the design-build team of Keystone Clearwater Solutions (a general contracting firm) and H2M architects + engineers to provide turnkey services for a new granular activated carbon (GAC) treatment process. H2M was responsible for the engineering design, accelerated permitting coordination with the NJDEP Division of Water Supply and Geoscience, and coordination for assembly and documentation of customized operation and maintenance (O&M) procedures during project startup. The new GAC filtration system was designed to be installed within the Arsenal's existing treatment system property footprint. This minimized the impact to existing plant operations and reduced project capital costs.

The new system was commissioned in May 2018 and permitted for a limited treatment capacity, based on the NJDEP's requirement for GAC systems. Subsequently, a waiver request was prepared by H2M and received approval from the NJDEP, to increase the new GAC system's treatment capacity up to 1 million gallons per day (MGD).

Annual Water Meter Replacement Program

Borough of Brielle
Brielle, NJ

Construction Cost: $100,000 per year

SERVICES PROVIDED

Study Document Preparation
Field Research and Analysis
Design Development
Construction Administration
and Observation

To ensure proper metering, economic water system operation, and help minimize unaccounted for water, H2M supports the Borough for its annual water meter replacement program.

The Borough of Brielle, NJ, operates a municipal public water system with several thousand retail metered connections. Regular replacement is required to ensure that accurate metering is provided in accordance with New Jersey State regulations and drinking water industry standards. To ensure proper metering, economic water system operation, and help minimize unaccounted for water, H2M supports the Borough for its annual water meter replacement program.

In H2M's role as Engineer of Record, we prepared the study documents necessary to support the Borough's response to Water Quality Accountability Act (WQAA) regulations, including ongoing upkeep of water infrastructure capital assets and equipment necessary to support the ongoing operation and revenue security of the Brielle Water Department. This effort includes the field research and analysis necessary to annually update the Borough's Water Supply Asset Management Plan (AMP), and – pursuant to AMP outputs – an annual update of its Capital Improvements Program (CIP).

As a component of the CIP, through detailed equipment research and vendor interaction, H2M has assisted the Borough in setting a replacement return horizon of 20 years on all retail meters, and has assisted the Borough in specifying new meter devices and Meter Transceiver Units (MXUs), and annually reviews meter read data, and re-validates the meter replacement line item in the CIP.

Pumping and Storage Improvements

Borough of Brielle

Brielle, NJ

Construction Cost: $5.5 million

SERVICES PROVIDED

- Alternatives Analysis
- Design
- Permitting
- Funding Coordination
- Bid Services
- Construction
- Administration
- Construction Inspection
- Commissioning/Startup
- Operations Coordination

H2M worked with the Borough to re-feed the High Service Zone from Low Service, via pumps re-driven using VFDs.

The Borough of Brielle operates a public water system composed of two pressure gradients – Low and High Service Zones. Each gradient is served by a steel water storage tank. In 2017, the High Service Zone storage tank exhibited a profound mechanical failure that precipitated a series of engineering and operational responses meant to stabilize system operations. H2M worked with the Borough to re-feed the High Service Zone from Low Service, via pumps re-driven using VFDs (for domestic service). Additionally, H2M designed and managed through construction a large-capacity interconnection to a neighboring PWS for emergency service (i.e. fire and main break response), including pressure sustaining valve. The interconnection crossed a state highway right-of-way and was constructed via horizontal directional drill. Next H2M managed selective demolition of the existing High Service tank on behalf of the Borough, and managed design, bid, and construction for rehabilitation of key infrastructure assets in the Low Service Zone, to stabilize operations. These improvements included rehabilitation of an existing 500,000 gallon steel ground storage tank, reconstruction of the transfer pumps feeding from the Low to High Zones, and reconstruction/simplification of the yard piping and control valve arrangement at the Low Zone groundwater treatment plant. Finally, H2M designed and managed the bid and funding process for replacement of the failed High Service elevated storage tank, and is currently active in construction management for that tank, with a capacity of 300,000 gallons. The project required detailed, multi-phase coordination of control set points, hydraulic analysis, and yard piping re-configurations for both zones, related to different stages of construction.

Water System Improvements

Borough of Brielle
Brielle, NJ

Construction Cost: $5 million

SERVICES PROVIDED

- Design Development
- Permitting
- Funding Acquisition
- Bidding
- Construction Administration and Observation

H2M was selected for the replacement of an elevated steel water tower, and optimization improvements to an existing groundwater treatment plant and pumping station.

The Borough of Brielle, NJ, operates an array of municipal drinking water infrastructure requiring a variety of upgrades. H2M was selected for the replacement of an elevated steel water tower, and optimization improvements to an existing groundwater treatment plant and pumping station.

H2M proposed to rehabilitate an existing steel ground storage tank, simplify and renew yard piping connecting wells, tanks, and pumping, provide better flow control via renewed valving constructed in a safely accessible vault, and replacement of an existing elevated water storage tank which had recently exhibited a profound mechanical failure.

We managed detailed design, permitting, funding acquisition via the NJEIT/NJ Infrastructure Bank, public bidding, construction administration, and construction observation. Additionally, interim emergency pumping improvements were coordinated by H2M, to address pressure maintenance requirements while the Borough's failed tank was reconstructed. All phases were addressed in a time-constrained manner, to allow the Borough to return to reliable water service after failure of its original elevated water storage tank.

The project is ongoing in the construction phase. The ultimate result will be safe, reliable drinking water for this suburban Jersey Shore municipality.

Hydraulic Evaluation

Borough of Caldwell

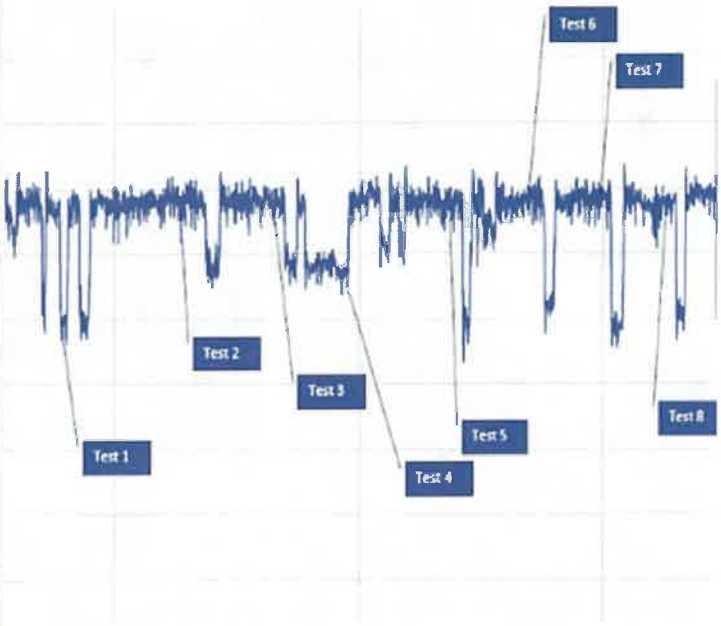
Caldwell, NJ

Construction Cost: N/A

SERVICES PROVIDED

Hydraulic Modeling

Hydraulic Evaluation



We evaluated the Borough's water distribution system to determine the existing hydraulic capacity for fire protection. Based on the results of the evaluation, our team recommended water distribution system improvements to obtain desired fire hydrant flows and pressures.

We were retained to evaluate the Borough's water system to determine whether there were areas whose fire protection capabilities would be benefitted substantially from water main replacements/upgrades. To compare different areas objectively, the Insurance Services Office (ISO) recommendations were chosen as a benchmark. The ISO is a private company that provides statistical insurance risk information that is used in underwriting to calculate insurance premiums. One of ISO's functions is rating communities for fire insurance purposes. The rating is based on receiving and handling fire alarms, the fire department, and the water system. For the water system component, ISO has established recommendations for available flow from fire hydrants for different areas, e.g. residential, commercial, etc. These recommendations were used to assess Caldwell's water system.

The Borough of Caldwell obtains all of its water from the Borough of Essex Fells. Caldwell's water system is divided into two hydraulic service zones. The high service zone is supplied by two interconnections with Essex Fells and the low service zone is supplied by four interconnections with Essex Fells and two wells.

A 12-inch diameter water main runs through Caldwell and carries the bulk of the water for fire protection. Water to the fire hydrants in adjacent areas is distributed through 4-, 6-, and 8-inch diameter water mains that connect to the 12-inch diameter water mains.

To evaluate the water system, flow tests were conducted at various locations throughout the Borough. Our team used the results of the flow testing to create a computer model of the water system. The model was then used to identify improvements that could be made to increase the hydraulic capacity throughout the Borough to meet ISO recommendations for fire protection.

Separate from the hydraulic evaluation, the Borough had a plan in place to replace undersized water mains in several locations. Through our analysis, we recommended several projects to assist in identifying priority improvements. These projects were established on the basis of cost and effectiveness. Our team met with the Fire Department and provided them with a copy of the findings, which they can use to assist in planning responses for the interim until the improvements are constructed.

Zone Water System Upgrade

Borough of Ringwood
Ringwood, NJ

Construction Cost: $86,000

SERVICES PROVIDED

Engineering
Radio Study
Construction Phase Services

The Borough of Ringwood needed to upgrade the Upper Ringwood Zone Water System. The Upper Ringwood Zone is located at the far end of the Ringwood system and depends upon supply from wells and a Passaic Valley Water Commission connection situated in the southern lower pressure zone.

The Upper Ringwood Zone provides storage in the zone and boosts the chlorine residual by sodium hypochlorite injection where water enters the zone. As a consequence of the rugged mountainous terrain, the supply to the zone is from a higher pressure gradient zone. Water flows through an aerial pipe section over a tributary to the Wanaque Reservoir and then to a pressure reducing valve chamber. Due to age and the high pressures upstream of the pressure reducing valve it was determined that new facilities with modern control and data acquisition was appropriate for a water system upgrade.

Work performed under this contract included communications studies to coordinate the transfer of information for control of operations in the zone, environmental permits from the New Jersey Highlands Council, and design documents for a Safety Panel Control Building. The building was designed to contain chemical mixing facilities, chemical feed pumps, chlorine residual continuous sampler and a SCADA PAK system for local control and monitoring. Radio equipment was provided to monitor tank levels. A chemical injection chamber located near the building was rehabilitated to include a closed loop flow modulating valve, a new flow meter, a high capacity pressure reducing/sustaining valve and control signals for the SCADA PAK system. The aerial pipeline was insulated, heat tape traced and fitted with temperature sensors with radio transmitters.

We incorporated a topographic map for the Municipal Building into a base map for the preparation of a Site Plan of Improvements. A radio study was also performed to establish antenna heights and directional orientation of radio equipment for communications between the proposed Safety Panel Control Building site, the aerial pipeline and the Upper Ringwood 500,000 gallon water storage tank. We submitted an application to the New Jersey Highlands Council for a waiver from planning requirements on the basis of existing water utility replacement exemption.

Construction documents were prepared by H2M for use by Ringwood to solicit bids for the construction of the project and bid phase assistance to procure the services of a qualified water system contractor. We also provided contract administration, construction inspection services, construction observation services and commissioning consultation during the project startup and during the two year maintenance period.

Hydraulic Evaluation and Water Main Replacement

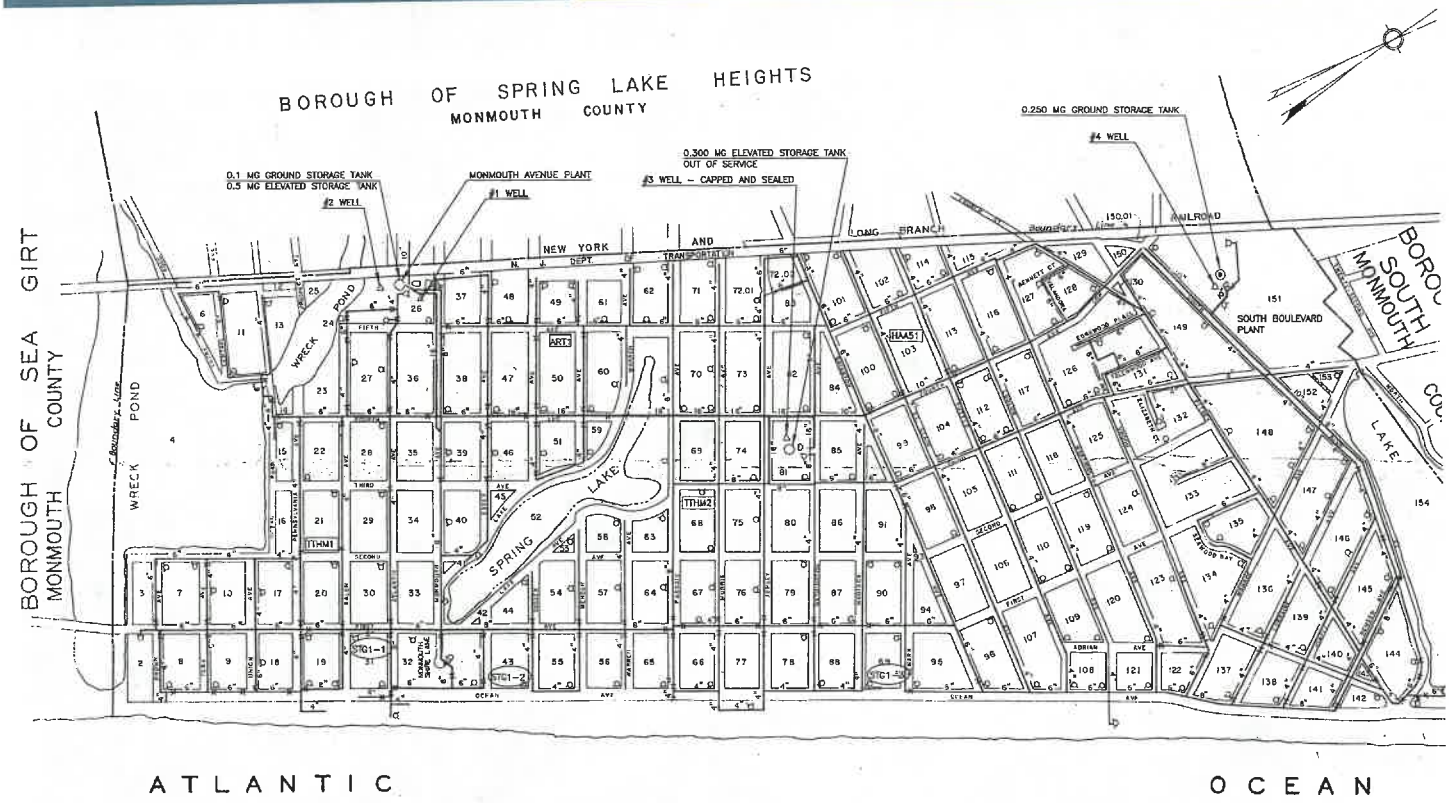
Borough of Spring Lake

Monmouth County, NJ

Construction Cost: $2 million

SERVICES PROVIDED

- Water Supply Evaluation and Assessment
- Design Permitting
- Bid Services
- Construction Administration
- Management
- Financial Review



The Borough of Spring Lake needed to have a system-wide analysis of their water distribution system performed.

We performed a system-wide analysis of Spring Lake's water distribution system alongside the Borough Engineer and delivered a hydraulic model characterized by more than a dozen hydrant flow tests. After outputting a capital improvement plan for the nearly 100-year-old distribution system, we led the design and permitting effort for the first-prioritized capital project: two miles of the new 12" distribution main in the right-of-way of CR18, locally known as Ocean Avenue.

The water main basis-of-design was AWWA C900 PVC pipe, including scope for the transfer of more than 100 residential services, and coordination with NJDEP and Monmouth County Highways Department.

FEMA Funding Due Diligence & Program Benefit-Cost Analyses

Camden County MUA
Camden, NJ

Construction Cost: N/A

SERVICES PROVIDED

- Wastewater Engineering
- Facility Evaluation
- Facility Planning
- Administration
- Collection System Capacity Analysis
- Cost Estimates & Opinions

H2M is performing a masterplan review and due diligence for FEMA funding for CCMUA projects.

H2M was retained by CCMUA to perform a review of their masterplan and compare it for eligibility against the criteria established by the Federal Emergency Management Agency (FEMA) for various funding programs. The Camden County MUA owns and operates a large regional sanitary sewage collections, transmission, and treatment system, including all types of wastewater infrastructure.

Currently, H2M is reviewing CCMUA's comprehensive asset management plan and related capital program to assist Authority leadership in understanding federal funding opportunities for their major projects. This includes evaluation of current facilities as well as consideration of future planning. A special focus of this FEMA funding assessment are efforts predicted for high risk and/or susceptibility to natural disaster-related damages.

PFAS Treatment

City of East Orange Water Commission
Short Hills, NJ

Construction Cost: TBD

SERVICES PROVIDED

Water Treatment Design

Construction Administration

The City of East Orange owns and operates a Public Water System, nominally the East Orange Water Commission (EOWC), regulated under PWSID No. NJ0705001. H2M is supporting the City by responding to water quality challenges related to per- and polyfluoroalkyl substances, or "PFAS".

EOWC owns and operates 18 active production wells, arrayed in the following groupings:

- Canoe Brook Well Field
- Slough Brook Well Field
- Dickinson Well Field
- Braidburn Well Field

The effluent from these wells manifolds together to a single potable water treatment plant, at which the current primary treatment process is the removal of volatile organics, followed by disinfection. Some of the production wells have begun to exhibit detectable concentrations of PFAS compounds, specifically perfluorooctane sulfonic acid (PFOS), and perfluorooctanoic acid (PFOA). Through review with EOWC leadership, it was determined that the most efficient, cost-effective format for removal of these PFAS compounds is through a single treatment unit process added to the existing water treatment plant. This is in contrast to the potential for small, individual treatment systems being implemented at each production well or well field. The centralized approach leverages economies of scale, lowering capital investment requirements, limiting City worker exposure to safety hazards during construction, and minimizing future operation and maintenance costs.

The objective for the proposed PFAS treatment system is a minimum capacity of 11 MGD. Potential treatment methods include granular activated carbon and anion exchange resin; H2M is reviewing water quality data, existing plant processes, site geometry, and regulatory requirements to evaluate appropriate vessel sizing and media to best suit the plant.

H2M is managing the civil/regulated land use due diligence, detailed multi-disciplined design, permitting, and construction of these reactor systems, to be housed in a new permanent structure, sited at EOWC's existing water treatment plant campus located at 300 Parsonage Hill Road in Short Hills, NJ. The structure will be designed for simplicity of operation and maintenance, and appointed with architectural brick exterior finishes that integrate with the historic structural design of EOWC's original treatment plant.

USEPA Composite Correction Program CTA Report

City of Newark
Newark, NJ

Construction Cost: N/A

SERVICES PROVIDED

- Capital Improvement Planning
- Water Systems
- Water Treatment
- SCADA System Design

H2M supported the City of Newark's involvement in the USEPA's Composite Correction Program (CCP) for Pequannock Water Treatment Plant by providing Comprehensive Technical Assistance (CTA).

The City of Newark owns and operates the Pequannock Water Treatment Plant, a facility serving not only Newark proper (the largest municipality in the State of New Jersey), but over a dozen neighboring municipalities. As a regional water supply facility, Pequannock is considered a critical piece of infrastructure. In that context, USEPA and NJDEP requested that the City undertake the EPA's Composite Correction Program (CCP), a rigorous system of steps intended to characterize and optimize the operation of individual surface water treatment facilities.

The CCP is composed of two major steps: first, the Comprehensive Performance Evaluation (CPE), which the City conducted previously to characterize existing conditions. H2M performed the second step, a Comprehensive Technical Assistance (CTA), and entails a transition from understanding existing conditions to recommending approaches to update the configuration of the plant (capital improvements) and its modes of staffing and operation (operational optimization).

The project evaluation scope included the Pequannock Water Treatment Plant campus, plus its intake at the Charlotteburg Reservoir, its raw water screening facilities, and its bulk chemical storage and feed unit processes (all located off-campus). H2M undertook a complete review of alternatives to raise Pequannock's operating standards and systems resilience to meet or exceed modern standards. The result was a comprehensive report, reviewing all plant resources and sub-systems, and a narrative of improvements characterized by capital cost, operating cost, and order of priority.

The City expanded H2M's scope to include a subject-matter deep-dive to review the causes of disinfectant byproduct formation and issue recommendations for mitigating and minimizing same. The project was one of the major milestones in the City's revitalization and reinvestment in its public water system. The effort was completed on schedule and within budget.

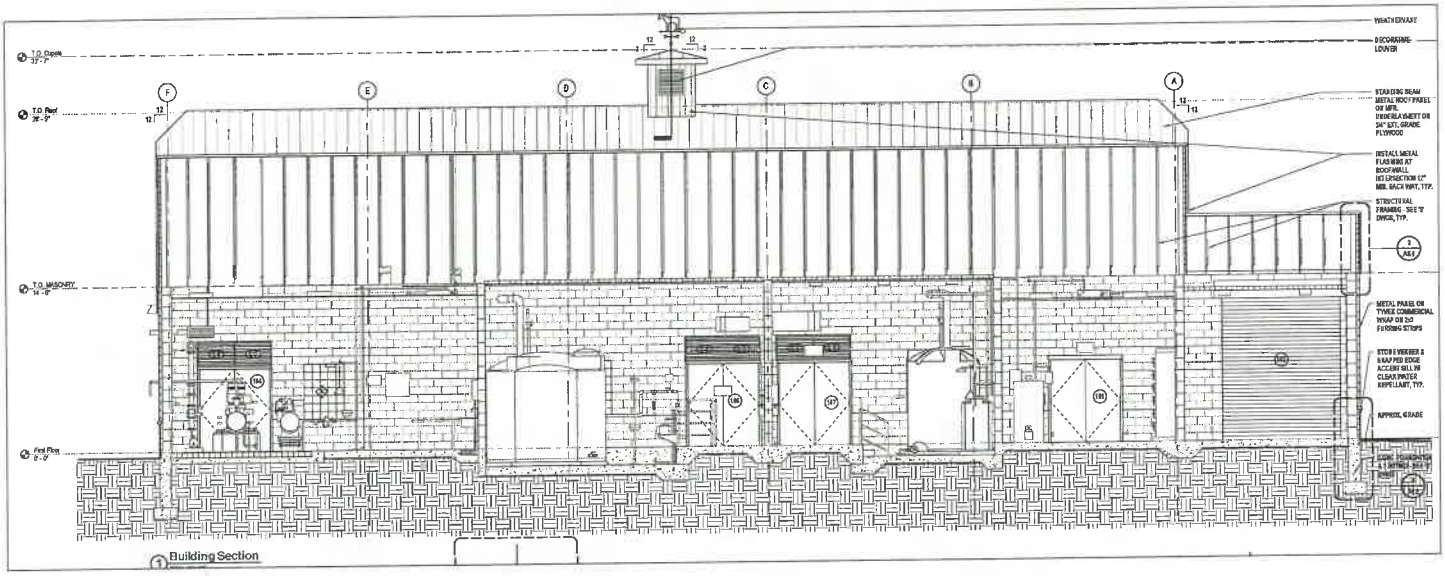
Iron Removal & Chemical Feed System Design

Monroe Township Utility Department
Middlesex County, NJ

Construction Cost: $8.3 million

SERVICES PROVIDED

- Design
- Permitting
- Bid Services
- Construction Administration
- Construction Observation



Due to an increasing system demand from recent population growth and a decreased reliance on bulk water purchases to meet its daily production targets, MTUD commissioned H2M to design a new groundwater public supply well facility.

After the construction of a test well, MTUD determined the well water contained elevated levels of iron and manganese. Iron is an aesthetic concern, but recently even low concentrations of manganese has been deemed to exhibit a health impact.

H2M specified the use of a filtration media coated with manganese dioxide to be used in pressure filtration vessels, which will reduce the iron and manganese levels below the finished water goal concentrations (MCLGs) of 0.3 mg/L and 0.05 mg/L for iron and manganese. Due to the high levels of iron, careful consideration was made to optimize the frequency of filter backwashes necessary to keep the filters in peak operating condition. H2M provided full civil, mechanical, architectural, HVAC, plumbing electrical, and controls design services; permitting coordination, bid phase services, and construction administration and observation services.

The new facility consists of a new 2.16 MGD well pump and motor, iron and manganese removal pressure filtration vessels, pre-filter oxidation and pH adjustment chemical feed systems, post-filter disinfection and pH adjustment chemical feed systems, a corrosion inhibitor chemical feed system, a chlorine contact chamber, and filter backwash water storage and recycling facilities. The site and treatment system were both designed to include provisions for the installation of a second well for a total treatment capacity of 3.6 MGD.

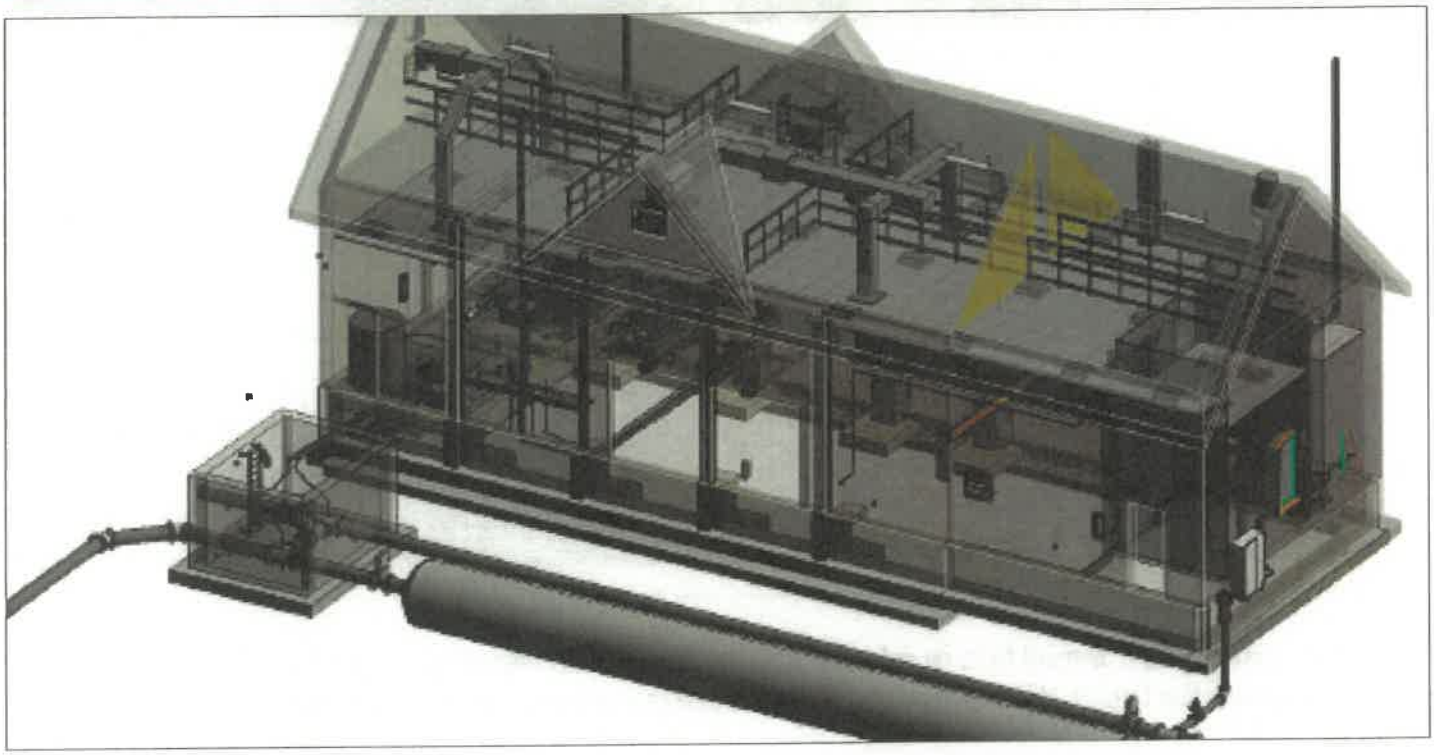
Groundwater Treatment Facility Rehabilitation

New Jersey American Water
Bound Brook, NJ

Construction Cost: $3.5 million

SERVICES PROVIDED

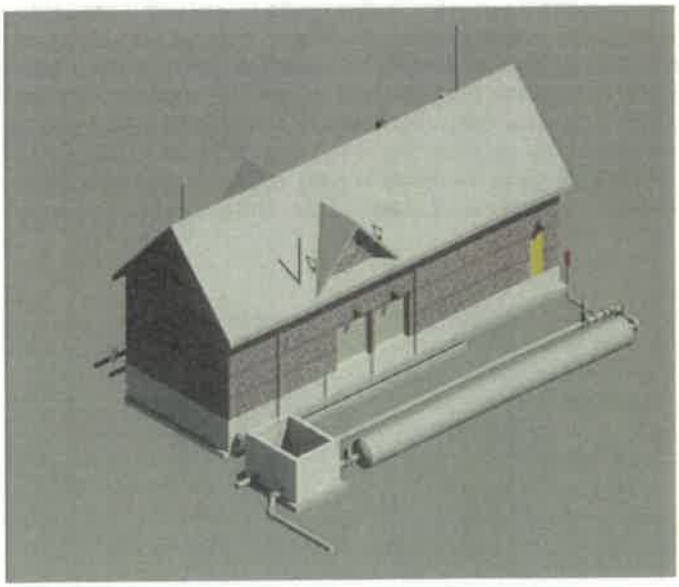
- Alternatives Analysis
- Design
- Permitting
- Bid Services
- Construction Administration
- Construction Observation



Previously Mountain Station's groundwater treatment facility used an ion exchange process to remove hardness, but due to the low production yield of the three wells on-site this method proved to be cost prohibitive.

H2M's design called for rehabilitation of the three wells and replacement of their pumps and motors; removal of all existing treatment plant process equipment; new yard piping; design of sodium hypochlorite and ammonium sulfate chemical storage and feed systems; design of a chlorine contact chamber, and approximately one mile of transmission main to blend the high-hardness plant effluent in a 42 inch diameter transmission main.

After the complete architectural, structural, and building systems rehabilitation of the early 20th century structure, new electrical and control systems, and the additional function as a transfer station between two pressure gradients; NJAW will save thousands of dollars annually with reduced operational costs.



Addition of Microfiltration Unit Process

New Jersey American Water
Colts Neck, NJ

Construction Cost: $6 million

SERVICES PROVIDED

- Planning
- Treatment Design
- Permitting
- Bidding
- Construction Administration
- Start-up and Operations

NJAW's Coastal North Service Area requested that H2M review a range of options for supplementing their 80 MGD firm capacity.

New Jersey American Water (NJAW)'s Coastal North Service Area requested that H2M review a range of options for supplementing their 80 MGD firm capacity (spread across three surface water plants and many wells), to assist in mitigating the risk of loss of system pressure during peak demand days in this busy Jersey Shore region with a spiking service population during the summer months. After evaluating the three surface water plant campuses for layout space, line power capacity, accessibility, and staff qualification for operations and maintenance, the Swimming River Treatment Plant (originally 36 MGD capacity) was selected as the best site for process capacity expansion. H2M then transitioned to treatment technologies review – after extensive evaluation recommending Microfiltration as best available technology.

H2M provided a detailed design, permit coordination, and assisted NJAW in bidding the work to a pre-qualified general contractor. We also assisted NJAW in construction administration, observation, and startup/commissioning.

Screening and Grit Facility Improvements

Township of Parsippany-Troy Hills
Parsippany, NJ

Construction Cost: $3.03 million

SERVICES PROVIDED

- Prepare Engineering Report
- Mechanical, Structural and Electrical Design
- Construction Administration
- Construction Inspection

We prepared an engineering report and bid documents for improvements to the screening and grit facilities at the Township of Parsippany-Troy Hills Wastewater Treatment Plant.

The engineering report described existing conditions, evaluated the existing screen and grit facilities based on the applicable design standards as indicated in the New Jersey Administrative Code Subchapter 23 (NJAC 7:14A-23.15 and .16), evaluated and made recommendations to improve the existing processes and presented a cost opinion. As part of the engineering report, screens from five manufacturers were evaluated. Due to the age of the Blower and Pump Building, the results of an XRF lead paint survey and a survey for asbestos containing materials was included in the report. The 16 million gallons per day WWTP currently operates a single mechanical screen on the first of the four active channels to the influent pump station wet well. A manually cleaned bar rack is utilized on the fourth channel. An out of service comminutor in the third channel needed to be removed. Two new mechanical screens were installed. The upper portion screens were located in a new room created at grade level in the headworks building. A washer/compactor was also installed to transport the screenings out of the room to a roll-off container.

Screened influent wastewater is conveyed to the two aerated grit chambers. The drive system for the grit conveyors in each chamber was not in service and there were operating issues with the existing pumps. The improvements to the grit chambers include installation of new baffles, grit conveyors and grit pumps. New grit classifying and washing equipment were installed in a new FRP building adjacent to the grit chambers. Compared to the former location, this reduced the distance in piping and the need to operate a grit conveyor.

During construction we provided construction administration and periodic construction inspection services.

Asset Management Planning

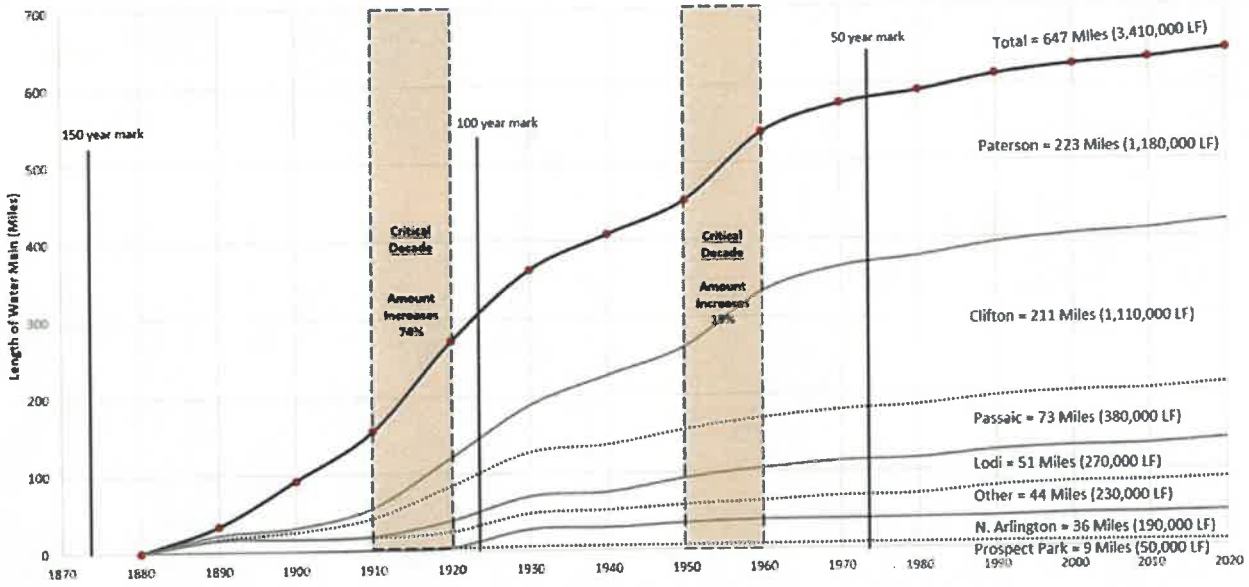
Passaic Valley Water Commission
Passaic County, NJ

Construction Cost: N/A

SERVICES PROVIDED

Asset Inventorying
Asset Management Planning
Cost Estimating
Data Analysis
GIS and GPS

Figure 1A - Cumulative Installed Water Main Length Over Time



H2M analyzed water main physical and operational parameters using algorithms developed in-house to determine risk factors and used system-wide objective criteria to develop a prioritized water main replacement program for 650 miles of pipe, forming the framework for an accelerated linear asset renewal program.

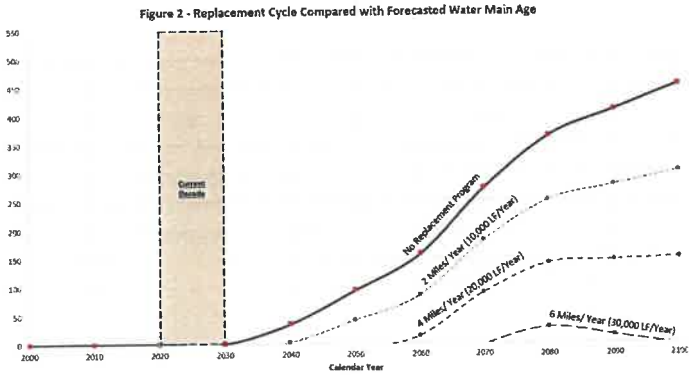
H2M developed a NJ Water Quality Accountability Act (WQAA)-compliant Asset Management Plan (AMP) for Passaic Valley Water Commission three water distribution systems in northern NJ. The AMP formed the framework for PVWC's accelerated linear asset renewal program.

Preparation of the AMP began by updating PVWC's GIS database to include water main physical and operational parameters and GPS field work to identify transmission main access and encroachment concerns as wells as distribution system pressure zone boundaries.

The AMP was prepared through a desktop study that used existing and new information stored in a GIS data sets that allowed for decision trees. The study included water main characteristics such as water main age, material, surrounding soil type, previous failure history, and use. These characteristics were used to assign a primary criticality score, Asset Risk Exposure Assessment (AREA) rating, to each GIS pipe record. A secondary criticality score unrelated to risk, Quality of Service Rating (QoSR), was developed from ancillary factors, including antiquated hydrants, lead water service line replacements, inoperable valves, water quality concerns, water age concerns, and customer complaints.

Pipe records in GIS were then grouped into replacement projects based on PVWC's typical project length, similarity of AREA ratings, and geographic location (e.g., proximity to similarly ranked pipelines). Each project was then ranked based on the highest AREA rating of any of the individual pipe segments to create a prioritized water main replacement program list and transmission main renewal/reinforcing program list. Project costs were then assigned for budgeting the linear asset program.

Figure 2 - Replacement Cycle Compared with Forecasted Water Main Age



Multi-System WQAA Evaluations & Reports

Southeast Monmouth MUA

Various Locations, NJ

Construction Cost: N/A

SERVICES PROVIDED

- Water Resource Development
- Water Resource Management
- Water Systems
- Capital Improvement Planning
- Distribution System

H2M performed multi-system WQAA evaluations and report documents maintenance for the Southeast Monmouth MUA.

As engineer-of-record for the Southeast Monmouth MUA, H2M was retained by four of the five member municipalities to compose the baseline asset management plan, infrastructure inventory, and related capital improvements plan, in accordance with the Water Quality Accountability Act (WQAA) guidelines promulgated by NJDEP.

H2M compiled a comprehensive inventory and conditional assessment for all of the potable water infrastructure assets for the Boroughs of Sea Girt, Spring Lake, Brielle, and the Township of Wall. These municipalities were required by law to then perform a risk analysis on the various operating assets supporting their respective public water systems, and submit documentation characterizing their priorities for capital improvements to meet or exceed the requirements of the law.

In addition, H2M supported these municipalities with GPS geolocation of point assets (valves, hydrant assemblies) in their distribution systems, and compiled GIS mapping to support the capital planning process.

H2M composed these reports and supported each municipality in its annual update of same documents, as part of the preparation process for annual re-certification of WQAA compliance.

Projects were completed on time and within budget. This effort resulted in three consecutive years of regulatory compliance for the municipalities in-question, and a greater understanding of both the composition and areas of risk associated with public water system management.

Storage Tank Rehabilitation

Township of Parsippany-Troy Hills

Construction Cost: $846,600

SERVICES PROVIDED

- Condition Assessment
- Tank Rehabilitation Design
- Regulatory Approvals
- Construction Administration
- Construction Inspection

The Township's tank was exhibiting signs of wear and required updates to extend its usable service life.

H2M performed a series of repairs to the Parsippany-Troy Hills Brooklawn Water Storage Tank — a 2.0-million-gallon steel-welded ground storage tank constructed in 1971 by Chicago Bridge & Iron Co. In addition to a tank overflow pipe without an air gap and antennae and grounding cables without conduits, H2M addressed steel corrosion on the chime, delamination of the exterior coating, exterior and interior painting needs, and various other metal tank components requiring repair and improvement. The tank is 75 feet in diameter, 65 feet in height, and has an ellipsoidal roof with an unbroken, curved transition from its shell wall.

H2M's scope of services included a Present Condition Evaluation (PCE), a comprehensive evaluation of the condition and estimated remaining service life of the interior and exterior coatings systems; a regulatory compliance check for configuration and composition of all mechanical accessories, process piping, and valving; and an AWWA/ANSI standards comparison to assess the composition and condition of the tank's structural components. Based on the results of these conditional assessments, H2M developed rehabilitative design improvements and managed the implementation of these improvements through the bidding and construction phases.

Ground Storage Tank Rehabilitation

Veolia
Owego, NY

Construction Cost: $463,000

SERVICES PROVIDED

- Contract Administration
- Construction Inspection
- Evaluation
- Design

At the request of Veolia, H2M performed a structural and coating systems evaluation of the 1.0 MG ground storage tank located 5 on Bodle Hill Road, adjacent to a Lockheed Martin Research and Testing Facility.

The existing interior and exterior coatings had reached the end of their expected service lives and were exhibiting characteristics consistent with an aged coating. Structural concerns were observed due to paint blisters and delamination, and rusting of structural steel components. The exterior primer coat was also found to contain lead, therefore any rehabilitation would have to be considered a lead abatement project.

Given the tank's condition, we recommended that all existing coatings be removed by abrasive blasting and recoated utilizing modern, high-performance coatings. In keeping with the Tioga County Health Department fugitive emission requirements, full containment and air monitoring was required for the exterior surface preparation and coating application. In order to take the tank out of service to perform the rehabilitation work, which provided critical system pressure and fire flow to the adjacent Lockheed Martin Facility, the owner installed a temporary booster pump facility to maintain the pressure and fire flow capabilities of the tank. The contractor utilized a conventional curtain containment type system in accordance with SSPC Class 2A. Throughout this project's construction, we provided contract administration and construction inspection services.

In conjunction with the project, we were required to coordinate all construction activities with the owner as well as Lockheed Martin, which were concerned that construction actions would adversely affect their facility.

Ground Storage Tank Rehabilitation

Veolia
Ridgefield, NJ

Construction Cost: $1 million

SERVICES PROVIDED

- Contract Administration
- Construction Inspection
- Evaluation
- Design

At the request of Veolia., H2M performed a structural and coating systems evaluation of two 5.0 MG ground storage tanks, located on Pleasant View Terrace West, adjacent to State Route 63.

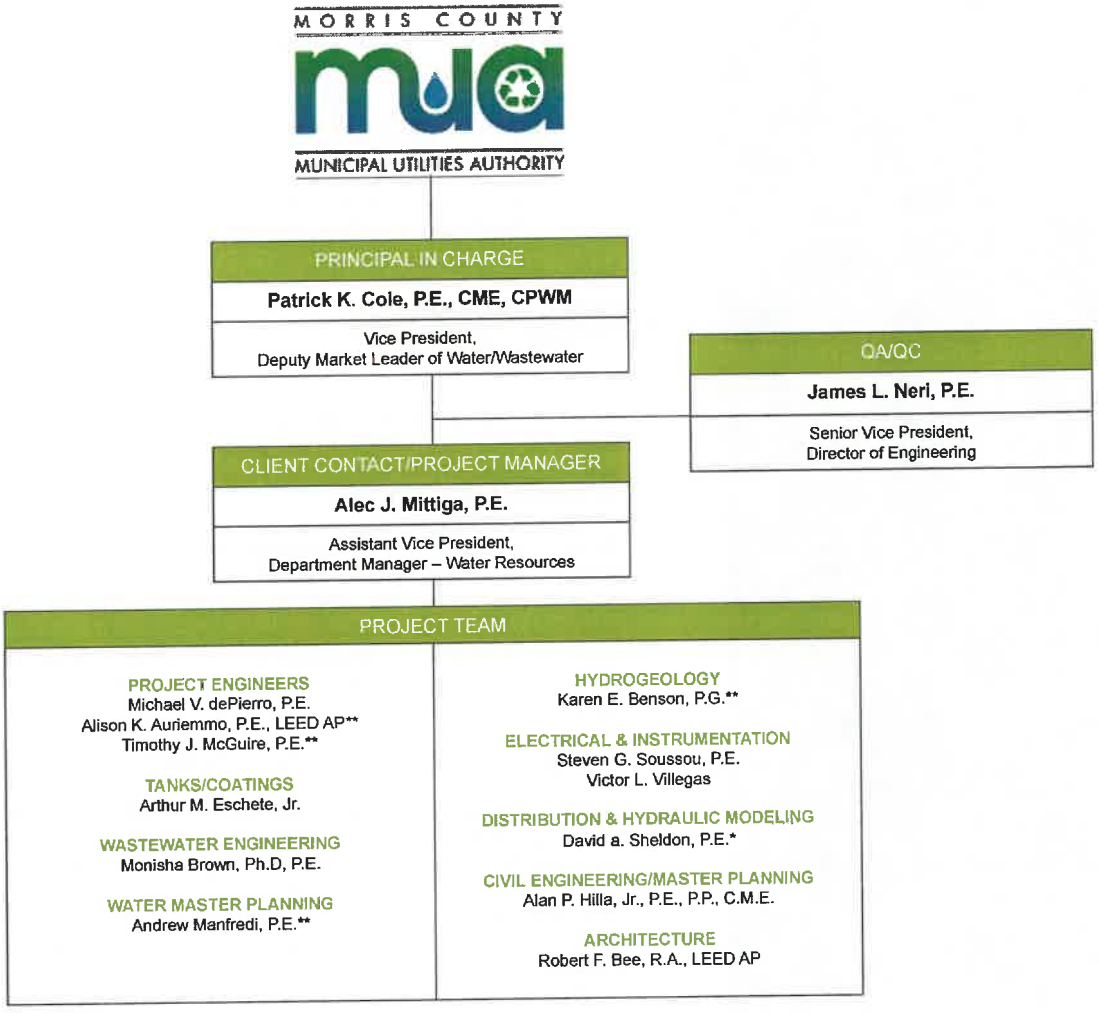
The existing interior and exterior coatings had reached the end of their expected service lives and were exhibiting characteristics consistent with an aged coating. Structural concerns were observed due to paint blisters and delamination, and rusting of structural steel components. The exterior primer coat was also found to contain lead, therefore any rehabilitation would have to be considered a lead abatement project.

We recommended that all existing interior coatings be removed by abrasive blasting and recoated utilizing modern, high-performance coatings. Considerable structural modifications were also required on the interior of the tanks due to severe corrosion, base metal loss, and failed structural members. The corrosion and base metal loss were so significant that some of the roof members had completely failed, while many of the remaining support roof rafters were no longer providing adequate support of the tank roofs.

Given the site constraints and location, the project was designed with three surface preparation options (conventional blasting, robot blasting, and ultra high water jetting). Ultimately robot blasting was selected due to its cost savings since a conventional containment system is not required. Throughout this project's construction, we provided contract administration and construction inspection services.

▶ Staffing Plan

The successful completion of a project requires a diverse pool of experienced personnel capable of performing tasks within their area of expertise. H2M's management and project managers are also aware that the success of any project is dependent upon the close cooperation required between the H2M staff and MCMUA personnel. The proposed organization of personnel and resources is intended to bring together a team of professionals that can focus on project objectives as well as respond to unanticipated circumstances or issues.



*** - Licensed in Other States**

Resumes for the above referenced key personnel are provided following this page.

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Patrick K. Cole P.E., CME, CPWM

Vice President, Deputy Market Director of Water/Wastewater

With more than 20 years of experience, Mr. Cole is an H2M Vice President and the firm's Deputy Market Director of Water/Wastewater. He leads H2M's efforts in the water and wastewater markets in New Jersey. Mr. Cole's areas of personal practice expertise lie in the optimization of treatment processes, distribution system hydraulic analysis, water quality troubleshooting and construction contract administration. He is a past Chair of the AWWA NJ Section, on the Board of Trustees, and a current contributor to the following AWWA Manual of Practice Workgroups: M31- Distribution System Requirements for Fire Protection; M64- Aeration and Air Stripping.

Additionally, Mr. Cole is a graduate of the Institute in Drinking Water Treatment certification program conducted by UMass Amherst. He typically acts as engineer of record and/or signatory engineer in responsible charge of all phases of project delivery. An example of Mr. Cole's work includes the 2013 Steel Tank Institute's Tank of the Year, a 1.5MG hydropillar delivered in a design-build project format.

Education

M.S., Civil/Environmental Engineering; Rutgers University

B.S., Mechanical Engineering; University of Delaware

Institute in Drinking Water Treatment; UMass Amherst

Licenses/Certifications

Professional Engineer: NJ, NY

Certified Municipal Engineer: NJ

Certified Public Works Manager

Offices Held

AWWA-NJ, Section Chair, 2022-2023

AWWA-NJ, Member, Board of Trustees, 2018-Present

AWWA National, Distribution and Plant Operations Division, Trustee 2012-2015

AWWA Manual of Practice M64, Co-Author

Memberships

American Water Works Association

Water Environment Federation

National Fire Protection Association

Honors

AWWA NJ Fresh Ideas Award, 2007

Next Generation Award, 2009

Steel Tank Institute: 2013 Tank of the Year (Signatory Engineer)

Selected project experience

- Township of Parsippany-Troy Hills Replacement of Well No. 20; Parsippany, NJ: Principal-in-Charge overseeing the team designing, and permitting a replacement well and water treatment plant of matching capacity to the existing Well 20, with effluent treated to the standards of the NJ State and Federal Safe Drinking Water Acts.

- Southeast Monmouth Municipal Utilities Authority (SMMUA) Northwest Wall Infrastructure Improvements; Wall, NJ: Principal-in-Charge for the design of a new pressure zone to support the SMMUA's surface water treatment plant. The project includes approximately 1,600 feet of new transmission main; installation of four pressure reducing valves, one check valve, and one flow meter vault throughout the Wall system; rehabilitating the existing Route 34 well facility's electrical gear, replacement of booster pumps and motors; and construction of a two million gallon ground storage tank and adjacent three-pump booster station.

- North Jersey District Water Supply Commission (NJDWSC) Lagoon Decant Tower Discharge Design-Build; Wanaque, NJ: As a subconsultant to Stone Hill Construction, served as Project Director for the design and construction of a new water treatment facility to house electrocoagulation process (EC), dissolved air flotation (DAF), and activated filter media (AFM) fitration systems, as well as a new decant tower. The NJDWSC has a 10 surface-acre Lagoon which it uses for Water Treatment Residual (WTR) storage. The Lagoon is the regulated unit for a New Jersey Pollutant Discharge Elimination System (NJPDES) Permit for Discharge to Surface Water (DSW). The current decant discharge from the Lagoon is discharged via a Decant Tower at the southern end of the Lagoon to the Wanaque Reservoir. Additionally, an overflow structure discharges to a tributary of the Post Brook. Part of the DSW permit condition requires the decant discharge from the Lagoon to comply with a Whole Effluent Toxicity (WET) test for Ceriodaphnia by March 2015. Regulated testing and special testing by WET methodologies currently do not meet the future WET NJPDES Permit level of 55% survival or reproduction, whichever is lower. To meet WET requirements, a pilot study was initiated to evaluate several technologies to identify the best process option.

- Brick Township Municipal Utilities Authority (BTMUA) GAC Improvements at William Miller Jr. Water Treatment Plant; Brick, NJ: Project Director responsible for the design, permitting, and bidding for new GAC vessels to treat PFOA at the William Miller Treatment Plant in Brick Township, NJ. The Metedeconk River, BTMUA's source water, exhibited the highest concentration of PFOA of any raw water source tested within the state in 2009 by the New Jersey Department of Environmental Protection (NJDEP).

- Monroe Township Utility Department (MTUD) Well No. 25 Iron Removal Plant Design; Monroe, NJ: Principal-in-Charge responsible for executive oversight of the design and permitting of a new groundwater public supply well facility, Well No. 25, North of Matchaponix Avenue, in Spotswood Manor. MTUD constructed Well No. 25, which was originally configured as a test well, and was converted into a potable production well.The site and treatment system were designed to include provisions for the installation of a second well.

Alec J. Mittiga P.E.

Assistant Vice President,
Department Manager - Water Resources

Mr. Mittiga has more than 15 years of experience in the areas of water, wastewater, and civil engineering. He has served in the capacity of project engineer and project manager responsible for the evaluation, design, regulatory permitting, and construction administration of potable water systems, including supply, treatment, and distribution; wastewater collection systems, including pumping stations, force mains, and gravity sewers; and stormwater detention, pumping, and drainage systems. Most notably, Mr. Mittiga was a project engineer for a water "blending" facility which creatively and uniquely resolved a hardness and sodium problem in the Pequannock Township water system. His specialties include hydraulic analysis of potable water, wastewater, and drainage systems, as well as Geographic Information Systems (GIS).

Education

B.S., Civil Engineering Technology;
Rochester Institute of Technology

Licenses/ Certifications

Professional Engineer: NJ, NY

Memberships

New Jersey Water Environment Association

New Jersey American Waterworks Association

North Jersey Water Conference

Selected project experience

- Various Clients Water System Improvements; Various Locations, NJ: Design water system improvements to expand water service in residential and commercial areas, to replace outdated and undersized infrastructure, to improve water quality, and to increase water supply and reliability, including approximately 70,000 linear feet of water distribution and transmission mains as well as supply, pumping, storage, and treatment facilities for various community public water systems. Representative projects include:
  - Township of Pequannock Mountain Avenue Water Storage Tank and Transmission Main
  - Township of Pequannock Water Quality System Improvements. Design included a potable water blending facility to balance hardness and sodium.
  - Township of Pequannock Village Area Water Main Replacement
  - Township of Wayne Parish Drive, Sherman Street, and Fayette Avenue Water Main Replacements
  - Township of Wayne Ledge Road and Canton Road Water Main Replacements
  - Borough of Caldwell Project A, B, and C Water Main Improvements
  - Borough of Caldwell 2018 Water Main Improvements
  - Borough of Caldwell Erwin Place and Elizabeth Street Water Main Replacement
  - Borough of Caldwell Gould, Cedars, Knollwood, Overlook Water Main Replacement
  - Borough of Caldwell Brookside Avenue Water Main Replacement
  - Borough of Caldwell Essex Fells Water Supply Interconnection Meter Facility
  - Borough of Caldwell Lane Avenue Water Main Replacement
  - Borough of Park Ridge Well 21 Pumping and Treatment Facility
  - Borough of Park Ridge Glen Road Water Main
  - Borough of Park Ridge Rehabilitation of Well No. 7 Pumping Facility
  - New Jersey Water Association Water Supply and Distribution System Replacement. Design included a new water supply well.
  - New Jersey Water Association Water System Improvements. Design included water supply and storage facility upgrades.
  - Borough of Oakland West Oakland Avenue and Lehigh Way Water Main Replacement
  - Borough of Oakland Algonquin Trail Water Main Replacement
  - Borough of Oakland Darlington Tank Painting
  - Borough of Oakland Stone Fence Road Water Main Replacement
  - Borough of Ramsey West Oak Street Tank and Airmount Reservoir Rehabilitation
- Various Clients Water System Studies; Various Locations, NJ: Perform evaluations of water systems for municipal and private clients to analyze water system capacity, water supply, water treatment, water storage, and water quality; evaluate treatment alternatives for regulatory compliance, including PFAS; prepare Asset Management Plans; WQAA compliance assistance. Studies and evaluations performed for the Township of Pequannock, Borough of Ramsey, Passaic Valley Water Commission, Borough of Park Ridge, Borough of Caldwell, Township of West Caldwell, and Borough of Sussex.
- Various Clients Wastewater Management; Various Locations, NJ and NY: Perform analysis of municipal and private sewer systems to locate major sources of inflow and infiltration, and determine condition of existing infrastructure to recommend remediation alternatives to clients; design sanitary sewer systems, pump stations, and force mains to expand sewer service in residential and commercial areas, and to replace outdated infrastructure (including approximately 30,000 linear feet of sanitary sewer and

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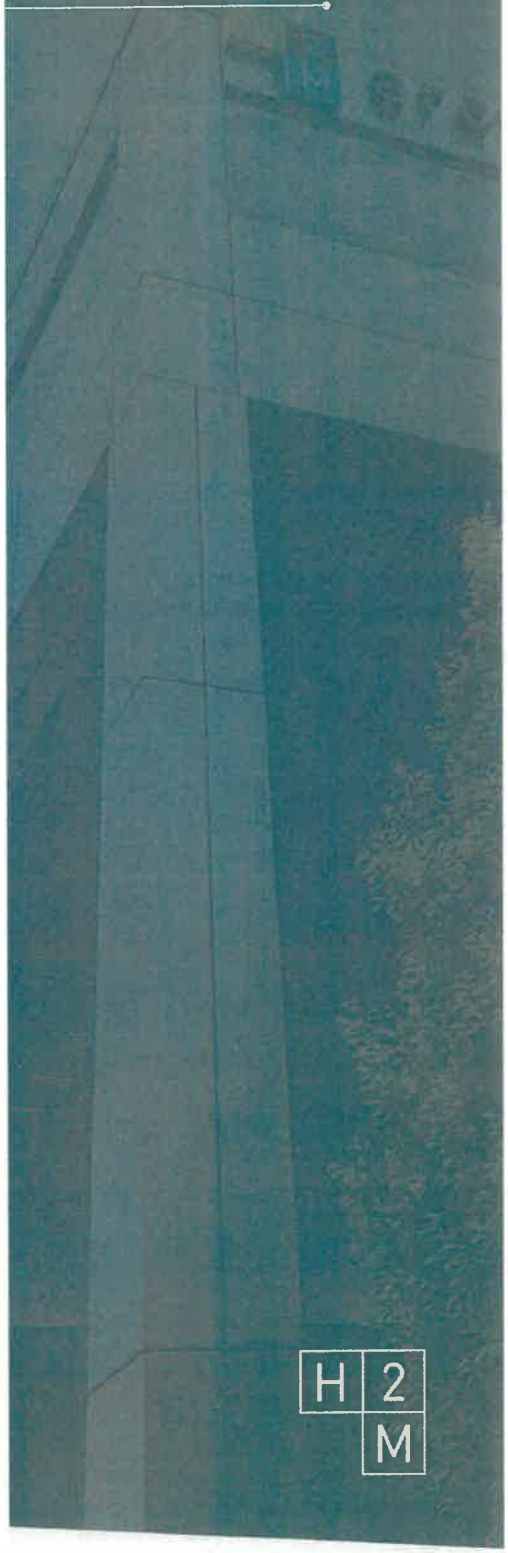

5,000 linear feet of force mains); and design wastewater treatment plant improvements to increase efficiency. Designs have accommodated sensitive populations and employed trenchless technology to limit disruption in commercial areas. Several projects were located in floodplains or flood hazard zones. Representative projects include:

- Township of Pequannock Route 23 Northbound and Southbound Sanitary Sewer Extension
- Township of Pequannock 2019 Sewer Master Plan Update
- Township of Pequannock Village Area Sewers and Pump Stations. Portions of project were located in floodplain; trenchless technology was employed to limit commercial disturbance; extensive dewatering.
- Township of Teaneck Glenwood Avenue Pump Station Rehabilitation
- Township of Teaneck Lozier Place Sewer Replacement
- Township of Teaneck Grant Terrace Sewer Replacement
- Township of Teaneck Winthrop Road Sewer Replacement. Design accommodated sensitive population.
- Borough of Ramsey, NJ
- Borough of Ramsey Sauna Road Sewer Pump Station Phase 2 Improvements
- Borough of Ramsey Brookfield Lane Sewage Pumping Station. Project was located in a flood hazard zone.
- Township of West Orange Wheeler Street Sanitary Sewer Replacement
- Township of Rockaway 2016 Sewer Station Upgrades
- Borough of Sussex 2009 I&I Project, Clove Brook Watershed Manhole Rehabilitation Project. Severely deteriorated sewer lines and manholes were evaluated and replacements designed.
- USPS Ejector Station Replacements
- Private Client Sanitary Sewer Pump Stations and Force Mains
- Private Client Sanitary Sewer Pump Station Replacement and Modification
- Private Client Sanitary Sewer Inspection and Manhole Rehabilitation
- Village of Newark, NY Wastewater Treatment Plant Improvements

- Various Clients Site Design and Stormwater Management; Various Locations, NJ and NY: Perform stormwater and drainage analysis; design of drainage improvements; design stormwater pumping stations; design roadway regrading and realignment; design ADA sidewalk and curb upgrades. Representative projects include:
  - Township of Pequannock Village Area Curb Replacement and Drainage Improvements
  - Township of Teaneck Downing Street Drainage Improvements
  - Private Clients Stormwater Pumping Facilities
  - Private Clients Parking Lot Designs and Site Plans
  - Township of West Orange 2016, 2017, 2018, 2020, and 2021 Street Improvements
  - Township of Fairfield Kaplan Drive Reconstruction
  - Township of Fairfield Lehigh Drive Section 2 Reconstruction
  - NYS Thruway Authority, NY Stormwater Management Design
  - Ontario County, NY Finger Lakes Community College Area Drainage Study and Stormwater Management Improvements
  - SUNY College at Purchase, NY Drainage System Modifications

- Various Clients Construction Administration and Infrastructure Observation; Various Locations, NJ and NY: Liaison between contractor, owner, and citizens; observe construction of water and sewer facilities for conformance with design intent; document materials installation and verify quantities for payment; shop drawing review; conduct meetings; review payment requests; and prepare project reports. Representative projects include those listed above and the Passaic Valley Water Commission Lead Service Line Replacement.

James L. Neri P.E., PMP

Senior Vice President, Director of Engineering

Mr. Neri serves as H2M's Director of Engineering, where he is responsible for leading the water, wastewater, and municipal structural disciplines with a primary focus on overseeing our overall water and wastewater discipline efforts. He has 30 years of experience as an environmental consultant, 23 of which he spent here at H2M, where he has been a respected leader. Most recently, Mr. Neri served as water resources discipline director and was responsible for the management, design, construction, and commissioning of water supply projects, including source development, wells, distribution systems, water treatment, and water storage facilities. He has also been the client manager for several of H2M's major water supply clients. As such, his duties include planning, engineering reports and studies, plans and specifications, and evaluating and designing new and/or modified water supply facilities, building systems, mechanical and pumping stations, control systems, and treatment systems.

Mr. Neri is responsible for being informed on emerging water quality and regulatory issues and has extensive experience in construction, groundwater and aquifer assessments, water quality, and regulatory requirements. Further, he has dedicated himself to H2M's overall Project Management Certification and Development program as an expert, instructor, and advisor to our project managers company wide.

Education

B.S., Environmental and Civil Engineering; Cornell University

Applied Groundwater & Contaminant Transport Modeling, Waterloo Hydrogeologic

Dynflow, Dyntrack, Dynplot Groundwater Modeling Codes

Licenses/ Certifications

Professional Engineer: NY, NJ, DE, PA, CT, FL, LA, HI

Project Management Professional (PMP), Project Management Institute (PMI)

AMPP C-2 Specifying and Managing Protective Coatings Projects-Advanced

Memberships

American Water Works Association

Long Island Water Conference

Selected project experience

- Garden City Park Water District Wellhead Treatment at Plant No. 8; Manhasset Hills, NY: Project Manager overseeing the design of an advanced oxidation process (AOP) and per- and polyfluoroalkyl substances (PFAS) treatment system at Plant No. 8 to address elevated contaminant levels, prompted by changes in New York State regulations on emergent contaminants.
- West Hempstead Water District 1,4-Dioxane Removal at Plant No. 7, West Hempstead, NY: Technical Director and Client Manager for pilot protocol preparation, pilot, and County and State approval of treatment systems. Design and permitting of VOC and emerging contaminant removal system for 4.0 MGD plant, including two low pressure UV reactors; 3,000 gallon hydrogen peroxide tanks; four granular activated carbon vessels; mechanical piping chemical treatment systems, instrumentation and control systems; and rehabilitation of well pumps.
- St. George's Golf and County Club Well Replacement; East Setauket, NY: Designing a deeper replacement well for the St. George's Golf and Country Club to improve irrigation water supply and eliminate elevated chloride levels. Prepared and submitted a permit application and engineering report for a deeper replacement well and an increase in withdrawal capacity from 800 to 1,300 gallons per minute.
- Brick Township Municipal Utilities Authority (BTMUA) Treatment and Pumping Improvements; Brick Township, NJ: As Technical Director, guided a team designing modifications to treatment and pumping processes at the BTMUA's drinking water treatment plant to address PFAS contamination and establish parameters for the addition of a small well system that had been impacted by PFAS.
- Dutchess County Water Authority Hyde Park Capacity Update; Hyde Park, NY: Technical Advisor for the preparation of an engineering report to update a system capacity analysis of Hyde Park's capabilities. The analysis was required to determine whether the system could handle additional demands. The report also included analysis of potential connections and three alternate routes for hydraulic and treatment capacity.
- Westchester Joint Water Works (WJWW) Rye Lake UV Treatment Facility; Harrison, NY: Technical Director and Client Manager for the development and submittal of design documents, engineering reports, bidding assistance, construction administration and inspection, as well as support for a 30 million gallon per day (MGD) UV treatment plant's start-up and commissioning at Rye Lake Pump Station in Harrison, NY.
- New York City Department of Environmental Protection (NYCDEP) Queens Groundwater System EIS; Queens, NY: Project Manager responsible for overseeing the preparation of an environmental assessment statement and a draft and final Environmental Impact Statement (EIS) to support the water supply permit renewal application process for 68 groundwater supply wells throughout Queens, NY.

Alison K. Auriemmo P.E., LEED AP

Assistant Vice President, Senior Discipline Engineer - Water Resources

Ms. Auriemmo is responsible for the internal quality assurance and quality control for all water projects conducted by H2M. Ms. Auriemmo is also responsible for design and construction administration tasks associated with the construction of water supply and treatment facilities. She is involved in the preparation of specifications and design plans, project bidding, shop drawing and payment request review, and project coordination with clients and contractors. Ms. Auriemmo has also prepared and assisted in the preparation of engineering reports which evaluate new well locations, existing distribution systems, and proposed VOC wellhead treatment systems.

Education

B.S., Biological and Environmental Engineering: Cornell University

Licenses/ Certifications

Professional Engineer: NY

LEED Accredited Professional, USGBC

Memberships

American Water Works Association

Selected project experience

- Water System Rehabilitations: Plainview Water District Plant No. 5; Borough of Ringwood; City of Yonkers Water Treatment Plant, Low Service Pump Station and Hillview Pump Station.
- Air Stripping Treatment Systems: Inc. Village of Garden City Well Nos. 8 and 12; Plainview Water District Well No. 5-3
- Iron Removal and Air Stripping Treatment System: South Farmingdale Water District Plant No. 1; South Farmingdale Water District Plant No. 3.
- Granular Activated Carbon Treatment Systems: Garden City Park Water District Well No. 11; South Farmingdale Water District Well No. 5-1; Garden City Park Water District Well No. 6.
- Steel Ground Storage Tank Rehabilitation: West Hempstead Water District Birch Street Plant.
- Water Distribution System Evaluation and Hydraulic Model: Garden City Park Water District.
- Well Pump Replacements: West Hempstead Water District Well No. 7-1 and the City of Long Beach Well No. 17.
- Tablet Chlorinator Installation: All plants for the Locust Valley Water District.
- Emergency Chlorination Testing: Beaver Dam Winter Sports Facility Distribution System.
- New Well Construction: West Hempstead Water District Well No. 7-2.
- New Well Site Study: Garden City Park Water District.
- Engineering Reports: Locust Valley Water District perchlorate removal at Well No. 8, Plainview Water District MTBE removal at Plant No. 1, Plainview Water District MTBE removal at Plant No. 5, West Hempstead Water District MTBE removal at Birch Street.
- Hurricane Sandy Response: City of Long Beach Water Department, provided quality sampling assistance to return potable water service to the community.

Timothy J. McGuire P.E.

Assistant Vice President,
Department Manager - Water Resources

Mr. McGuire is a water resources engineer responsible for quality assurance/quality control of all 1,4-dioxane projects at H2M. He makes sure projects are performed consistently and on track, holding weekly status meetings with the water department. Mr. McGuire's experience includes groundwater well construction, rehabilitation and permit applications; potable water treatment technologies including volatile organic chemical removal utilizing granular activated carbon and air stripping, nitrate removal utilizing ion exchange resins, disinfection and pH adjustment; water distribution; construction of bulk chemical tanks; water supply hydraulic design; preparation of construction documents; and construction administration on these projects.

Education

B.S., Chemical Engineering;
Clemson University

Licenses/ Certifications

Professional Engineer: NY

Project Management Training Program, H2M

Dale Carnegie Training Program

Memberships

American Water Works Association: New York Section

Long Island Water Conference

Honors

Consulting-Specifing Engineer, 40 under 40 Award, 2020

American Water Works Association, New York Section, Young Professionals Award, 2016

Selected project experience

- Water Authority of Western Nassau County: Wellhead Treatment for the Removal of VOC and Emerging Contaminations (1,4-dioxane and PFAS) at Station No. 57. Prepared pilot protocol, conducted pilot and obtained County and State approval of treatment systems. Design and permitting of VOC and emerging contaminant removal system for 4.0 MGD plant including; six low pressure UV reactors; two 3,000 gallon hydrogen peroxide tanks; four granular activated carbon vessels; 12 foot diameter stripping tower, transfer pumps and mechanical piping chemical treatment systems, instrumentation and control systems; and rehabilitation of well pumps.

- Town of Hempstead: Preparation of an engineering report and financial analysis relating to the existing and possible alternatives to supply water to the area known as the Mitchel Field Water Supply Area. The goal of the study was to provide a cost-benefit-analysis for comparison of the alternatives between retaining the MFWSA as a water supply area, extending the district lines of an existing district to include the MFWSA, and creating a new stand-alone water district encompassing the MFWSA. The results of the study, which included the impact to current and future water rates and tax rates, were provided to the Town of Hempstead in a comprehensive report. A recommendation to retain the MFWSA and increase the water rates within the water supply area was made and was subsequently implemented by the Town.

- Plainview Water District: Preparation of a Water Rate Study to evaluate the annual operating expenses and the actual water use of the customers under the current rate structure to determine the actual costs and revenues from supplying and delivering water to the residents of the District. The goal of the study was to establish a clear understanding of where the revenue, both tax and rate based, and the expenses, both fixed and variable, of the District are currently and whether or not the District is generating sufficient surplus to fund reserves from the existing rate structure. This Water Rate Study proposed a new rate structure that when fully implemented meets the long term financial objectives of the District and generates a surplus to fund reserves in average water sales years.

- Hicksville Water District: Wellhead Treatment for the Removal of Nitrates and VOC at Plant No. 6. Design of nitrate and VOC removal system for 4.0 MGD plant including; six filter anion exchange vessel system with recycle and waste systems; 11'-0" diameter stripping tower; transfer pumps and mechanical piping; chemical treatment systems, instrumentation and control systems; rehabilitation of well pumps; permit applications; administration of multi-trade project construction phases; coordination with client and vendors.

- Hicksville Water District: Wellhead Treatment for the Removal of VOC at Plant No. 5. Design of VOC removal system for 4.0 MGD plant including two 12'-0" diameter stripping towers with vertical air discharge hoods; transfer pumps and mechanical piping; chemical treatment systems, instrumentation and control systems; permit applications; administration of multi-trade project construction phases; coordination with client and vendors. The design of the vertical air discharge hoods on the air stripping towers was the first of its kind to be deemed compliant with Nassau County Department of Health Policy Statement on Control of Air Stripping Tower Emissions.

- South Huntington Water District: Wellhead Treatment for the Removal of VOC at Plant No. 20. Design of granular activated carbon for VOC removal at 2.0 MGD plant. Selection of pressure vessel capacity and arrangement; mechanical piping including distribution water main and chemical treatment.

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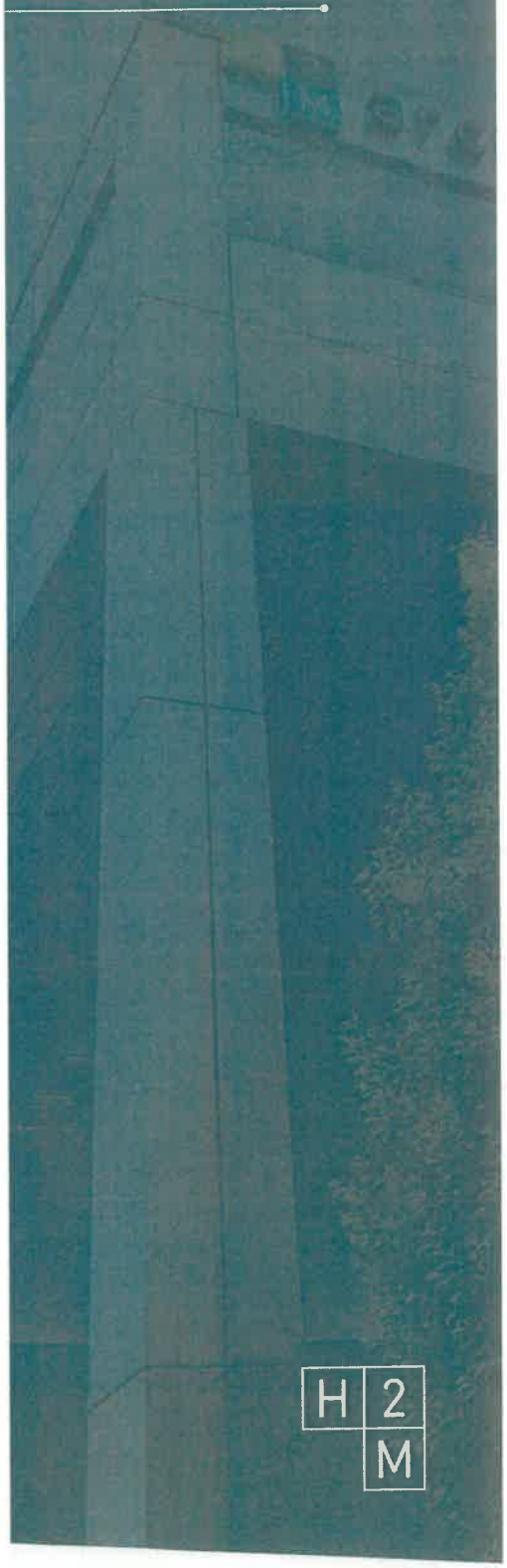
Timothy J. McGuire
P.E.

Assistant Vice President, Department Manager - Water Resources



- Bethpage Water District: Wellhead Treatment for the Removal of VOC at Plant No. 4. Preparation of engineering report evaluating treatment options; design of combined air stripping / granular activated carbon for VOC removal at 4.0 MGD plant, including a 12'-0" diameter stripping tower; transfer and booster pumps; mechanical piping and chemical treatment systems; instrumentation and control systems; permit applications.

- East Farmingdale Water District: Wellhead Treatment for the Removal of VOC at Plant No. 4. Administration and commissioning of multiple contract project involving the construction of an air stripping treatment plant for VOC removal at a 4.0 MGD plant, including a 12'-0" diameter stripping tower; transfer and booster pumps; mechanical piping and chemical treatment systems, instrumentation and control systems; permit applications.

- Manhasset-Lakeville Water District: Wellhead Treatment for the Removal of VOC at I.U. Willets Plant: Administration and commissioning of multiple contract project involving the construction of an air stripping treatment plant for VOC removal at a 2.0 MGD plant, including a 12'-0" diameter stripping tower; transfer and booster pumps; mechanical piping and chemical treatment systems, instrumentation and control systems; permit applications.

- Greenlawn Water District: Wellhead Treatment for the Removal of VOC at Plant No. 13: Administration, inspection and commissioning of multiple contract project involving the of granular activated carbon for VOC removal at 2.0 MGD plant., well pump rehabilitation, mechanical piping and chemical treatment systems, instrumentation and control systems; administration of multi-trade project construction phases; coordination with client and vendors.

Michael V. dePierro P.E.

Associate, Senior Project Engineer - Water Resources

Mr. dePierro is a Water Resources Engineer and Project Manager with 10 years of experience delivering design, evaluation, construction administration, and observation of water supply, treatment storage facilities, distribution, and planning projects. His experience covers both design and project management on a variety of water and wastewater projects, including water main design, water treatment facilities, well design and rehabilitation, storage tank design and rehabilitation, sewer main projects, wastewater collections, and lift station design. In addition, Mr. dePierro is also responsible for preliminary due diligence, data collection and analysis, desktop studies, pilot studies, bid phase services, and discipline management for project delivery.

Education

B.S., Civil Engineering;
Pennsylvania State University

Licenses/ Certifications

Professional Engineer: NJ

OSHA 10-hour Construction Safety & Health

Memberships

American Water Works Association, NJ Section

AWWA NJ Section, Student Affairs Committee

AWWA NJ Section, Young Professionals Committee

Honors/Awards

H2M Above and Beyond Award (2015)

H2M Above and Beyond Award (2017)

H2M Above and Beyond Award (2023)

Selected project experience

- Borough of Brielle 300,000 Gallon Elevated Water Storage Tower and System Improvements; Brielle, NJ: Prepared and managed detailed civil and mechanical designs and environmental infrastructure trust documents for a new 300,000-gallon elevated spheroid water tower to serve as the main storage facility and system pressure regulator for the high gradient of the Borough of Brielle's water system. System wide improvements included site piping and valving improvements for operator simplicity, a 500,000-gallon ground tank rehabilitation, the removal of a chlorine gas disinfection system for a calcium hypochlorite disinfection system, and a horizontal directional drill interconnection.

- Monroe Township Utility Department Well No. 25 Water Treatment Plant; Monroe, NJ: Project Engineer for complete process design and permitting coordination, and Project Manager for construction delivery for a new source well and groundwater treatment plant consisting of iron and manganese removal pressure vessels and chemical feed systems for oxidation/ disinfection, pH adjustment, and corrosion control. Plant designed with an initial rated capacity of 2.16 MGD with the capability to accommodate the flow of a second future well and expand to 3.6 MGD in treatment capacity.

- City of Pompano Beach Water Treatment Plant Emerging Contaminants Upgrades Planning Document; Pompano Beach, FL: As a subconsultant to McCafferty Brinson Consulting, conducting and managing piloting of ion exchange and GAC media to determine the best media option for the removal of PFAS at the City of Pompano Beach Water Treatment Plant (WTP). The project entails a comparative review of treatment technologies, potentially to be used in modifications to an existing 50 MGD potable WTP. The City's WTP, utilizing a combination of nanofiltration (NF) and conventional lime softening (LS), currently produces water in compliance with Florida and USEPA regulations for drinking water. However, PFAS (per- and polyfluoroalkyl substances) have been detected in the plant's process water stream. The City requires an evaluation to identify optimum treatment technologies, and further identify the preferred placement of such technologies within the existing plant's treatment train. Produced pilot study schematic design, sampling schedule and procedure, alternative analysis report, cost estimating, and plant improvement conceptual designs.

- Brick Township Municipal Utilities Authority GAC Improvements at the William Miller WTP; Brick, NJ: Project Engineer for the design and construction of new PFAS treatment GAC filtration system to treat 16 MGD, consisting of the design of two buildings to house 24 GAC vessels as well as pumping and piping improvements to integrate the new treatment into the existing plant process. Project Manager for construction services included management of public bid, award, and construction administration in an I-Bank funding environment.

- Veolia Elevated Tank Rehabilitations and System Improvements; Toms River, NJ: Prepared design and contract documents for site civil improvements and mechanical designs for a Veolia (formerly SUEZ Water) 500,000-gallon elevated water storage tank rehabilitation. Coordinated with cell carriers on the relocation of equipment during rehabilitation. The design for another elevated storage tank within the Toms River system was also produced as a result of this project. Performed preliminary due diligence, design, construction administration, and GIS tracking for multiple SUEZ Water distribution system improvement projects.

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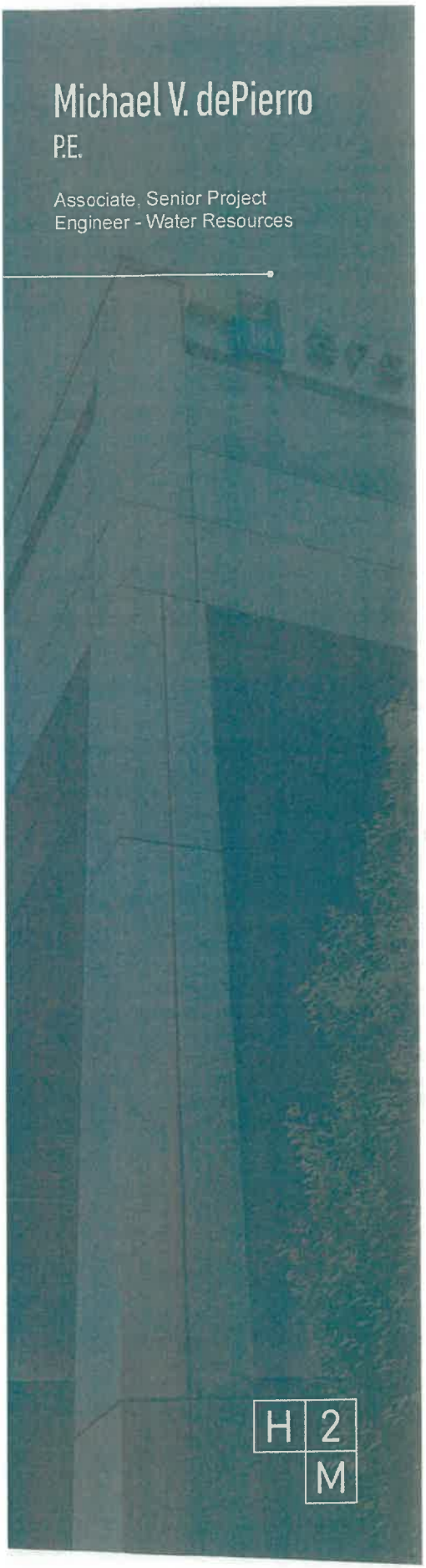
Michael V. dePierro

P.E.

Associate, Senior Project Engineer - Water Resources



- Borough of Spring Lake Infrastructure Improvements; Spring Lake, NJ: Performed preliminary due diligence and hydraulic model study, process improvement design, permitting, and construction administration and observation of several distribution projects in the Borough of Spring Lake, including a two mile long transmission main along Ocean Avenue with connections at each street to significantly increase the hydraulic capacity of the distribution system, as well as other specifically targeted main replacements to create a more efficient system-wide loop. The original study has been utilized to produce ongoing water main improvement projects on a yearly basis.

- New Jersey American Water Route 71 Water Main Replacement; Asbury Park, NJ: Performed a time sensitive design of a two mile long water main replacement on State Route 71 in Asbury Park to get ahead of NJDOT road improvements. Coordinated with multiple townships, cities, and county and state entities during the design and construction of the project. Performed overnight construction inspection and reporting.

- New Jersey American Water Mountain Station Rehabilitation; Bound Brook, NJ: Performed preliminary due diligence, process improvements design, permitting, and coordination for the rehabilitation and reconstruction of treatment plant processes for three wells exhibiting high hardness and approximately one mile of blending transmission main that includes a horizontal directional drill design and an anchored bridge attachment design.

- New Jersey American Water Route 202 Bridge Attachment Evaluation and Rehabilitation: Responsible for preliminary due diligence, pipe inspection, reporting, design, and coordination utilizing new technology for the rehabilitation of a transmission main alignment that featured aerial bridge attachments across three bridges. Employed a new method of water pipe lining and cure-in-place piping featuring ultra violet curing; the first of its kind for New Jersey American Water.

- Monroe Township Utility Department Well No. 16A pH Adjustment Conversion; Monroe Township, NJ: Performed due diligence and prepared preliminary reports on Monroe Township's well station pH adjustment chemicals, which led to designs and contract documents for the conversion of lime slurry pH adjustment to sodium hydroxide accompanied by overall well station improvements.

Arthur M. Eschete, Jr.

Senior Associate, Department Manager of Coatings Services

Mr. Eschete has more than 40 years of experience in the construction, corrosion control, coatings, and preservation industries. He is responsible for all aspects of coating inspection, specification and design development, surface preparation, tank condition and quality control assessment, coatings failure analysis, cellular antenna installation, and client communication as these processes take place. Over the course of his career thus far, Mr. Eschete has assessed more than 1,000 elevated water storage tanks, petroleum deep-sea superstructures, petroleum storage tanks, asphalt plant facilities, water/wastewater treatment facilities, and marine vessels. As a seasoned AMPP-certified Coatings Inspector and Protective Coatings Specialist, Mr. Eschete leads the training of H2M's coatings observers in the field and office, spanning such topics as rigging best practices, equipment use and maintenance, and regulatory and industry standards, safety standards, and best practices.

Selected project experience

- Applied Research Associates, Inc. Ohmsett Test Facility Naval Weapons Basin; Leonardo, NJ: Inspection Department Manager responsible for the assessment and rehabilitation of a 2.6 MG saltwater test tank.
- Suffolk County Water Authority Middleville Road Standpipe Rehabilitation; Northport, NY: Inspection Department Manager responsible for the assessment and renovation 2.2 MG tank renovation located on Middleville Road.
- South Farmingdale Water District Rehabilitation of Lourae Avenue Elevated Storage Tank, Plant No. 1; Farmingdale, NY: Inspection Department manager responsible for the rehabilitation of a 1.0 MG ground storage tank on Lourae Avenue.
- Borough of Brielle Development of a 0.3 MG Elevated Water Storage Tank; Brielle, NJ: Inspection Department Manager responsible for the development of a new 0.3 MG elevated storage tank on Old Bridge Road.
- Jericho Water District Elevated Water Storage Tank; Jericho, NY: Inspection Department Manager responsible for the construction of a new 1.5 MG water storage tank on Wheatley Road, 0.5 MG larger than the tank it replaced to account for increased population and water district needs.
- Village of Garden City Elevated Water Storage Tank; Garden City, NY: Inspection Department Manager responsible for the construction of a new, reliable, and cost-efficient 1.0 MG water storage tank on Old Country Road that directly replaced an antiquated riveted steel tank built in 1933. Manhasset-Lakeville Water District Rehabilitation of a 1.2 MG Elevated Water Storage Tank; Great Neck, NY: Coatings Inspector responsible for the evaluation of a rehabilitated 1.2 MG water storage tank, its structural components, coating systems, and compliance items twice annually.
- Hamlet of Greenlawn Rehabilitation of the 3.0 MG Cuba Hill Water Storage Tank, Plant No. 9; Greenlawn, NY: Coatings Inspector responsible for overseeing the rehabilitation of the 3.0 MG Cuba Hill water storage tank.
- Pointe Coupee Water District Development of 0.3 MG Elevated Water Storage Tower; Pointe Coupee Parish, LA: Coatings Inspector responsible for the performance of present conditions assessments of a 0.3 MG elevated water storage tower.
- Amerada Hess Block 43 Assessment of 6,500-ton Topside Oil Production Platform; Gulf of Mexico, LA: Coatings Inspector responsible for assessing a 6,500-ton topside oil production platform.
- Sewage/Water Board of New Orleans Development of Six 3.6 MG Water Storage Tanks; New Orleans, LA: Coatings Inspector responsible for overseeing the development of six 3.6 MG water storage tanks.
- Exxon/Mobil Sable Development of a 5,000-ton Topside Oil Production Platform; Gulf of Mexico, LA: Coatings Supervisor responsible for overseeing the development of a 5,000-ton topside oil production platform.

Licenses/ Certifications

AMPP Level 1, 2, 3 and Peer Review, Certified Coatings Inspector

AMPP Protective Coatings Specialist

AMPP C-2 Specifying and Managing Protective Coatings Projects-Advanced

AMPP C-1 Fundamentals of Protective Coatings for Industrial Structures-Basic

Effective Supervisory Management, Leadership Management International Incorporated

Confined Space

Hazard Communication

Lead Awareness

OSHA 10-Hour Construction Safety & Health

Respiratory Protection

Memberships

Vice Chair, Association for Materials Protection and Performance (AMPP), Southeast Louisiana Chapter

Long Island Water Conference

AMPP

AMPP, Steel Structures Painting Council

AMPP Metropolitan New York Board, Section Secretary

Honors/Awards

Melvin C. Miller Award, NACE- Metro New York Section, 2008

Monisha Brown Ph.D, P.E.

Project Engineer - Wastewater Engineering

Dr. Brown has more than 10 years of experience in municipal wastewater engineering. She has over three years of consulting experience in wastewater-related municipal projects in all phases, from master planning to process modeling to detailed design. She has knowledge on a variety of topics including but not limited to design, planning, and study of treatment and conveyance systems. Dr. Brown also has experience at a wastewater utility preparing regulatory compliance reports, managing recycled water projects and contracts, and coordinating between internal departments and outside agencies for regulatory compliance on groundwater recharge projects.

Education

Ph.D., Environmental Engineering; University of Michigan

M.S., Environmental Engineering; University of Michigan

B.S., Civil Engineering; University of California-Berkeley

Licenses/ Certifications

Professional Engineer: NY, NJ

Memberships

Water Environment Federation

New Jersey Water Environment Association

New York Water Environment Association

Selected project experience

- Town of Clarkstown Alpine Court, Barr More Hill, Jill Lane, and Mayfield Street Sewage Pump Station Upgrades; Clarkstown, NY: Project Engineer responsible for the mechanical design of two of four sewage pump station upgrades. Upgrades included replacing mechanical and electrical equipment that has reached the end of its useful service life. Also revised the engineering design report to comply with NYSEFC funding requirements.

- Town of East Greenbush Third Avenue and Barracks Road Pump Station Upgrade; East Greenbush, NY: Project Engineer responsible for the mechanical design of two sewage pump station upgrades. Upgrades included replacing mechanical (duplex pumps to triplex pumps) and electrical equipment that has reached the end of its useful service life, as well as adding new natural gas generators and control buildings with a comminutor (Barracks Road) and mechanical bar screen (Third Avenue). Performed pump sizing calculations, as well as wet well sizing calculations and sewer capacity evaluations. Also drafted the engineering design report for regulatory approval and coordinated work of support disciplines (Civil, Structural, HVAC, architecture, and electrical).

- City of Newburgh Crescent Avenue Pump Station Reconstruction; Newburgh, NY: Upgrade of a 250 gallon per minute sewage pump station that reached the end of its useful life along with a force main evaluation. Upgrades included replacing mechanical and electrical equipment and installing a new natural gas generator and control panel shelter. Drafted an engineering report that includes an extensive alternatives analysis evaluation of the components of the pump station and developed a flow estimate for the pump station based on the properties in the sewershed.

- DCWWA Mass Balance Update; Beekman, NY: Wastewater Engineer for the engineering letter drafted to update the Mass Balance at the Chelsea Cove Wastewater Treatment Plant. The letter was prepared and submitted to the New York State Department of Environmental Conservation (NYSDEC) to reflect a State Pollutant Discharge Elimination System (SPDES) permit change from carbonaceous biochemical oxygen demand (CBOD) to biochemical oxygen demand (BOD).

- Palmdale Water District Palmdale Regional Groundwater Recharge and Recovery Project (PRGRRP); Palmdale, CA: Lead Engineer responsible for Sanitation Districts' coordination with agencies (water agency and regulatory) and consultants. Palmdale Water District is the project sponsor the for PRGRRP which is a proposed surface spreading groundwater recharge project that would utilize recycled water produced at the Palmdale Water Reclamation Plant and surplus potable water from the California State Water Project. Analyzed and evaluated water quality data and coordinated special monitoring tasks with Sanitation Districts' laboratory staff. Also prepared N-nitrosodimethylamine (NDMA) evaluation study summarizing the Sanitation Districts' evaluation of ways to reduce NDMA in Palmdale Water Reclamation Plant effluent including full-scale polymer tests, source control investigation, and special monitoring of storage reservoirs.

- The Metropolitan District EHWPCF Blowers Aeration System Upgrades; Hartford, CT: Developed, calibrated, and validated a GPS-X model of the EHWPCF secondary treatment system. The model was used to evaluate current flows (6.1 mgd) and loads and develop future design flows and loads, evaluate secondary treatment performance under design conditions, and make recommendations on anoxic and swing zone sizing, internal recycle rates, and dissolved oxygen setpoints. The corresponding oxygen demands for use in sizing the new blower were also developed.

- Township of Jefferson, NJ: Project Engineer for infiltration/inflow of study of White Rock Wastewater Treatment Plant sewer system.

Next ⟶

Monisha Brown Ph.D., P.E.

Project Engineer -
Wastewater Engineering

- Lehigh County Authority Mass Balance for LCA Pretreatment Plant; Allentown, PA: Analyzed plant operating data and brewery discharge data. Developed plant mass balance based on annual averages. This information was used to determine the impact on the LCA Pretreatment Plant performance if the plant accepted additional flow and load from a brewery.

- City of Akron Water Reclamation Facility Final Settling Tank; Akron, OH: A process model of the WRF, in BioWin, was updated to evaluate the capacity expansion of the WRF from 170 mgd to 220 mgd as well as the addition of an anaerobic zone for TP removal. The size of the anaerobic zone was then optimized and a new aeration system was designed for the higher capacity of 220 mgd.

- City of Temple Terrace Reclaimed Water Master Plan; Temple Terrace, FL: Participated in the first phase of an interagency reclaimed water feasibility study to evaluate opportunities for a reclaimed water distribution network connecting the City of Temple Terrace, Hillsborough County (18 mgd reclaimed water), the City of Plant City (3.8 mgd reclaimed water), and the City of Tampa (57.8 mgd reclaimed water). Assisted in assimilating information and data from the participating utilities, drafting the report and preparing presentations.

- Pinellas County Utilities PS 016 Odor Control System Replacement; St. Petersburg, FL: Assisted in the evaluation of three vapor phase odor control technologies to treat odors collected at pump station. As part of the design, sampling was done within the wet well to determine the design parameters. The evaluation included chemical scrubbers with three different chemicals, bio-trickling filters, an ozone system, and a photoionization system. Each alternative was considered for two design conditions as well as a purchase or rental option. The evaluation included cost estimates and a recommendation.

- City of Tampa Howard F. Curren Water Reclamation Facility Permit Renewal; Tampa, FL: Prepared the Capacity Analysis Report (CAR) and the Operations and Maintenance Report (OMPR), which are key components of the permit renewal application for the Florida Department of Environmental Protection. Also conducted a field inspection of the Howard F. Curren WRF and completed the field inspection checklist. Used a GPS-X biological process model of the Howard F. Curren WRF to evaluate the treatment capacity of the plant (58 mgd average daily flow) for the CAR and OMPR.

- California Regional Water Quality Control Board, Lahontan Region – Palmdale Water Reclamation Plant Groundwater Cleanup Project; Palmdale, CA: Project Engineer responsible for reviewing and analyzing groundwater quality data for quarterly and annual reports to the Lahontan Regional Water Quality Control Board. Reviewed reports prepared by the project consultant. Coordinated a proof-of-concept stable isotope study to assist in the identification of source water impacting a groundwater monitoring well with suspicious chemistry.

- Reuse and Compliance Section Sanitation Districts' Source Control Program; Whittier, CA: The Sanitation Districts' are expanding the existing industrial pretreatment program into a source control program to comply with groundwater recharge regulations. Project engineer responsible for reviewing and editing Sanitation Districts' Source Control Program document in conjunction with staff in the Industrial Waste Section. Analyzed and reviewed monitoring data as part of special monitoring for the Source Control Program which includes semiannual influent and effluent monitoring of parameters with drinking water maximum contaminant levels, secondary maximum contaminant levels, action levels, and notification levels. Coordinated with Sanitation Districts' Laboratory Section for special monitoring at various Sanitation Districts' owned and operated water reclamation facilities in support of existing or proposed groundwater water recharge projects.

- Reuse and Compliance Section Sanitation Districts' Water Quality Compliance Reporting; Whittier, CA: The Sanitation Districts' own and operate eleven wastewater treatment facilities. Project engineer responsible for wastewater facility permit compliance reporting for three different facilities: Long Beach and Palmdale Water Reclamation Facilities as well as the Montebello Forebay Groundwater Recharge project. Compliance reports involve reviewing and analyzing data as well as writing cover letters for reports to explain permit exceedances and violations and ensuring that reports are submitted on time.

- Columbia County - Design of Ellisville WWTP, Lift Station and Force Main; Ellisville, FL: Wastewater process engineer assisting with plant data analysis, process design calculations, rapid infiltration design calculations, force main pipe sizing, drawing and datasheet reviews, and preparation of specifications for a 0.015-mgd packaged wastewater treatment plant with associated lift station and force main. Also prepared FDEP permits for the force main, wastewater permit renewal for the existing WWTP, and a wastewater permit modification for the new WWTP.

- Orange County Southwest Water Reclamation Facility Preliminary Design; Orlando, FL: Process Engineer assisting in headworks design (screening and grit removal) and the design of the sludge holding tanks as part of the preliminary design for a new WRF. The WRF consisted of preliminary treatment, five-stage Bardenpho, disk filters, sludge holding tanks, and dewatering centrifuges to treat an initial capacity of 5 mgd that could be expanded in phases to treat 10 mgd and 15 mgd. Drafted the headworks and sludge holding tank sections of the preliminary design report. Also assisted the design lead in compiling the various sections of the design for the preliminary design report.

Andrew M. Manfredi P.E.

Associate, Discipline Engineer - Water Resources

Mr. Manfredi's responsibilities include preparing engineering reports, specifications, and design plans for the purpose of regulatory approval and bidding public works projects. His experience encompasses the following: optimal corrosion control evaluation, advanced oxidation process, granular activated carbon, and packed tower aeration treatment technologies. Currently, his relevant project experience includes consumer outreach, sampling, notification, and service line identification with the Village of Garden City. Mr. Manfredi has also performed multiple pilot studies on various AOP treatment technologies as well as start-up full-scale UV/H2O2 AOP systems to confirm performance. He has also presented on various AOP subject matters at New York State AWWA, New Jersey AWWA, and national AWWA conferences. Other project experience includes rehabilitation and construction of existing and new elevated water storage tanks. Mr. Manfredi also specializes in BIM software and applications including 3D laser scanning and modeling.

Education

B.S., Chemical Engineering:
Manhattan College

Licenses/ Certifications

Professional Engineer: NY

Project Management Training Program, H2M

Selected project experience

- Bethpage Water District Interim AOP Treatment at Plant No. 6; Bethpage, NY: In-house design of a 2.0 MGD ground water supply station utilizing a low pressure UV/H2O2 AOP system, development of engineering report, research of best design practices with the new technology, accurate scanning of existing conditions, three dimensional modeling of new mechanical equipment systems within the existing building footprint, commissioning, start up, water quality sampling/review of the new system, and regulatory approval by the New York State Department of Health.

- Various Water Districts Low Pressure UV/H202 AOP Pilot Studies: In-house design of (40) 20 GPM small scale pilot studies utilizing low pressure UV/H202 AOP treatment as required by the New York State Department of Health for all new AOP treatment systems. Pilot study included the review of background water quality, creation of a sampling protocol and testing matrix for submission to the State and local departments of health, in-field analytical testing, and analysis of laboratory and field testing results for a final report to submit to the regulatory agencies with the engineering report. Water suppliers that were tested as part of this pilot program included: South Huntington, Water Authority of Western Nassau County, Water Authority of Great Neck North, Franklin Square, Bethpage, Plainview, Hicksville, Inc. Village of Garden City, Town of Hempstead, Manhasset-Lakeville, Garden City Park, South Farmingdale, and Roslyn.

- Inc. Village of Garden City Optimal Corrosion Control Treatment Report: In-house engineering report that reviewed regulatory requirements and water quality data (specifically, alkalinity, pH, dissolved inorganic carbon, hardness, buffer intensity, dissolved oxygen, oxidation-reduction potential, chloride, and sulfate) for evaluation of alternative corrosion control methods to control the release of lead and copper into drinking water for submission to local regulatory agency. Other areas of the project include: mass-sampling program for lead in specific areas of the Village, distribution system water quality testing, public notification to affected residents, service line identification record review, and consumer outreach.

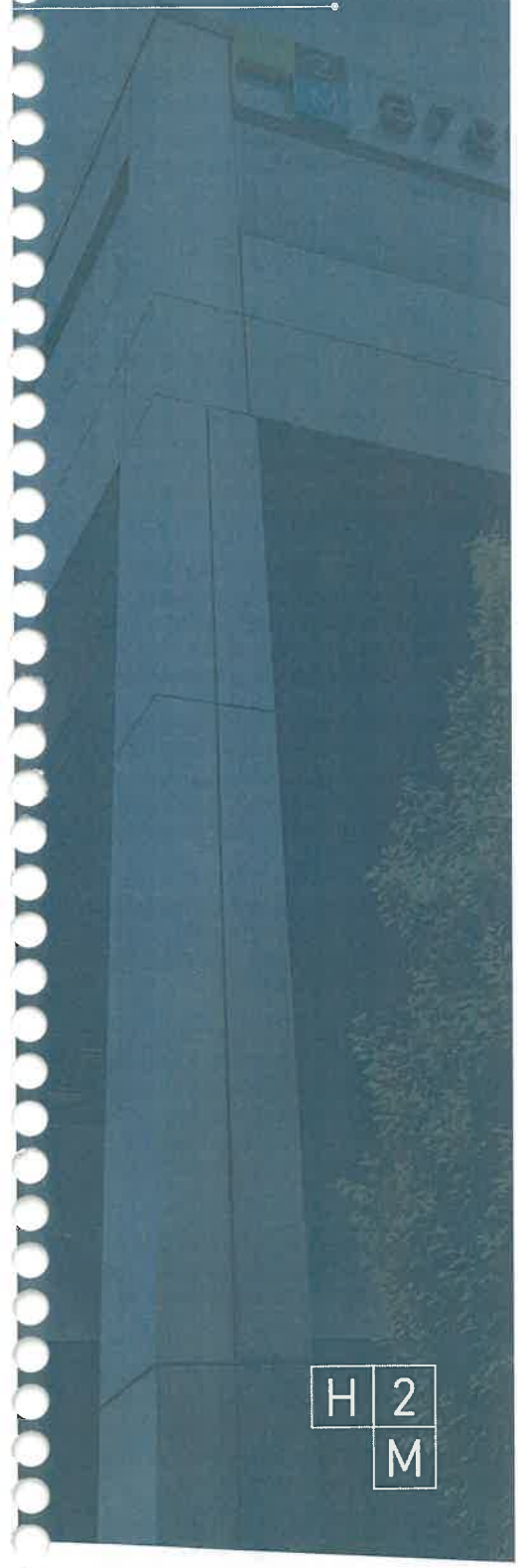
- Franklin Square Water District AOP/PTA Treatment at Theodora Street Plant: In-house design of permanent advanced oxidation process and packed tower aeration 4.0 MGD ground water supply station for the purpose of publicly bidding multiple Wick's Law compliant contracts. Work also included development of engineering report for review/approval by Nassau County Department of Health and 348 plan submission to NYSDOH and NCDH agencies for review/approval. Project included provisions to keep one well running to maintain water supply throughout the District and phased construction and start-up of individual systems to meet District's water pumping needs.

- Plainview Water District Medium Pressure UV/H202 AOP Pilot Study at Plant No. 3; Plainview, NY: In-house design of a 40 GPM pilot study utilizing medium-pressure UV/H2O2 and UV/CL2 AOP treatment. Pilot study included the review of background water quality, creation of a sampling protocol and testing matrix for evaluation of the treatment technology and feasibility for the Water District.

Next ⟶

Andrew M. Manfredi
P.E.

Associate, Discipline Engineer - Water Resources



- Bethpage Water District VOC Treatment Upgrades at Plant No. 6; Bethpage, NY: In-house design of a 4.0 MGD VOC treatment facility utilizing packed tower aeration (with vapor-phase carbon air discharge treatment system), a low-pressure UV/H2O2 AOP treatment system, and granular activated carbon for the treatment of 1,4-dioxane and other VOCs. Design included preparation of an engineering report, three-dimensional modeling of new building with requisite architectural, structural, treatment, mechanical, and electrical systems, model walk-throughs with design team and client for review prior to bidding and construction, submission for regulatory approval, project analysis and creation of design documents for the purpose of publicly bidding the project. This project is currently under construction.

- West Hempstead Water District Replacement of Birch Street Elevated Water Storage Tank; West Hempstead, NY: In-house design of a 1.0 MGD composite elevated storage tank for potable water. Design included preparation of an engineering report comparing traditional tank styles and life-cycle costs, creation of bidding design documents for public bidding, construction administration and inspection of the project during construction, start-up and commissioning of the new tank as well as regulatory approval.

Karen Benson P.G.

Associate, Practice Leader - Water Resources

Ms. Benson is a hydrogeologist with more than 25 years of experience working with a variety of water systems and assisting clients in responding to ongoing and ever-changing requirements. She offers significant experience working with New Jersey water purveyors for compliance with the Safe Drinking Water Act (SDWA). Ms. Benson also has experience conducting hydrogeologic investigations of aquifer and well yields for groundwater supply development. Her experience includes designing and implementing well rehabilitation programs; supervision and implementation of water production well design and installation; and planning, testing, and permitting of water allocation permits.

Education

B.A., Geology; Hartwick College

Licenses/ Certifications

Professional Geologist: PA

AWWA Utility Risk and Resilience Certified

OSHA 40-Hour HAZWOPER

Memberships

AWWA, New Jersey Sector

Selected project experience

- Park Ridge Water Hydrogeological Services; Park Ridge, NJ: Served as Project Manager for various hydrogeological services over a 10-year period that included completion and permitting of a replacement well; update of groundwater resource assessment for the service area; evaluation of water department regarding compliance with federal and state SDWA requirements; continuous review of water quality data to assist with operational and maintenance issues as well as to track any changing source quality issues; and assistance with preparation of sampling plans, permit renewals, and correspondence with the New Jersey Department of Environmental Protection (NJDEP) on a variety of issues.

- Ridgewood Water Hydrogeological Services; Ridgewood, NJ: Project Manager responsible for hydrogeological services for 10+ years. Repossessing well operational and well performance data for a system with over 50 wells. Designed and worked to implement a phased plan of well assessment and rehabilitation, assessment of inactive wells as part of ongoing plan to restore them to service. Reviewed water quality data to ensure compliance with the SDWA and assess changes in source water quality.

- Ho-Ho-Kus Water Hydrogeological Services; Ho-Ho-Kus, NJ: Project Manager for hydrogeological services. Evaluated Water Department regarding compliance with federal and state SDWA requirements; conducted a continuous review of water quality data to assist with operational and maintenance issues, as well as to track any changing source quality issues, including emerging PFAS contaminants; and assisted with preparation of sampling plans, permit renewals, water conservation plans, and correspondence with the NJDEP on a variety of issues.

- Parsippany-Troy Hills Water Hydrogeological Services; Parsippany, NJ: Served as Project Manager for a variety of hydrogeological services. Project scopes involved developing well rehabilitation plans, including development of technical bid specifications, contractor selection, and project oversight. Completed a well assessment program, including well testing, rehabilitation, and plans for well replacements.

- East Orange Water Hydrogeological Services; Essex County, NJ: Served as Project Manager for various hydrogeological services over a 10-year period, starting with a desktop wellfield assessment of 18 wells completed in buried glacial valley deposits and bedrock aquifers. Developed and managed a comprehensive testing, rehabilitation, and well replacement program to allow for maximizing the well capacities while minimizing water quality issues. Developed an interim well operational protocol for maintaining water quality prior to completion of system treatment, and assisted operations in tracking blending of water from active wells to meet drinking water standards.

- Monroe Township Utility Department Hydrogeological Services; Monroe Township, NJ: Project Manager responsible for hydrogeological services for 10+ years. Responsibilities included coordination and management of the siting, drilling, testing, and permitting of a two supply wells for incorporation into a public community water supply system as part of a water allocation transfer.

- Confidential Client Water Supply Development; Moncks Corner, SC: Project Manager that coordinated and managed the siting, drilling, and testing of a deep supply well used to develop an industrial water supply source. Aquifer testing of the supply well was completed and the results used to develop a locale specific numerical model. The results of the modeling were used in conjunction with the analyses of the testing data in support of a groundwater withdrawal permit for use of the supply well.

- Township of New Windsor Water Supply Development; New Windsor, NY: Coordinated and assisted with the design of a groundwater exploration program to expand the existing public community water supply sources. Availability for developing additional groundwater supplies locations within the Town were limited, so the initial exploration program focused on the use of angle drilling to explore potential deposits underlying the Hudson River. Assisted with management of the exploration, development, and testing of a five MGD groundwater supply within a local river valley using three supply wells.

Steven Soussou P.E.

Associate, Department Manager - Electrical Engineering

Mr. Soussou has more than 30 years of experience as an electrical engineer, client liaison, and project manager. He has worked on a wide variety of project types over the course of his career, including projects in the energy, residential, healthcare, K-12, higher education, corporate, commercial, retail, special amusement, photovoltaic, marine, transit, municipal, and insurance market sectors. Mr. Soussou's expertise includes energy audits, normal and emergency/standby power distribution systems, including medium voltage site infrastructure, building power distribution, emergency power generation systems, uninterruptible power supplies, and photovoltaic systems.

Education

B.S., Electrical Engineering;
Cooper Union

Licenses/ Certifications

Professional Engineer: NJ, NY, PA

MTA NYC Transit Track Safety

Selected project experience

- PSEG Engineered Solutions Program; Various Locations, NJ: Managing assignments for PSEG under the Engineered Solutions Program, part of PSEG's Clean Energy Future Program targeted to the MUSH market, with the goal of capturing energy efficiency opportunities. Components of MUSH include multifamily, universities, colleges, hospitals, government, and non-profit facilities, all of which are vital economic sectors that provide substantial contributions to New Jersey's economy through employment and purchases, and whose benefits ripple throughout the communities they serve. As part of this program, H2M performs level 3 energy audits for the respective facilities, develops energy efficiency measures for each project, designs and prepares bid and permit plans and specifications for the identified energy efficiency measures, performs all required energy savings and payback calculations in compliance with BPU protocols, sees projects through the DCA review process, provides bid and construction administration services through project completion, and prepares all required closeout documentation. As part of the program, H2M has prepared or is currently preparing level 3 energy audits for the following facilities: Capital Health Regional Medical Center, Capital Health Medical Center - Hopewell, Saint Joseph's University Medical Center, Saint Joseph's Wayne Hospital, Christian Health Care Center, Penn Medicine Princeton Medical Center, Princeton House Behavioral Health, Robert Wood Johnson University Hospital Somerset, St Michael's Medical Center, Saint Peter's University, Middlesex County College, 70 Greene Apartments, Portside Towers Apartments, Hudson Point Apartments, Madox Apartments, The Pier Apartments, 77 Park Avenue Apartments, The Landings at Port Imperial Apartments, The Highlands at South Plainfield Apartments, The Rivington Apartments, Rialto and Capitol Luxury Condominiums, and Passaic Valley Sewerage Commission. In addition, H2M has provided or is currently providing full MEP project design and construction administration services for the following facilities: Capital Health Regional Medical Center, Capital Health Medical Center – Hopewell, Saint Joseph's University Medical Center, and Saint Joseph's Wayne Hospital.

- PSEG Hospital Energy Efficiency Extension II Program; Various Locations, NJ: Managing assignments for PSEG under the EE17 program, to identify and develop energy efficiency measures for hospitals and healthcare facilities. As part of this program, H2M performs level 3 energy audits for respective facilities, develops energy efficiency measures for each project, designs and prepares bid and permit plans and specifications for the identified energy efficiency measures, performs all required energy savings and payback calculations in compliance with BPU protocols, sees projects through the DCA review process, provides bid and construction administration services through project completion, and prepares all required closeout documentation. As part of the program, H2M has prepared or is currently preparing level 3 energy audits for the following facilities: St Mary's General Hospital, Newark Beth Israel Medical Center, Carrier Clinic, Holy Name Medical Center, and Clara Maass Medical Center. H2M has provided or is currently providing full MEP project design and construction administration services for the following facilities: St Mary's General Hospital, Newark Beth Israel Medical Center, Holy Name Medical Center, and Mountainside Medical Center.

- New Jersey Natural Gas Energy Efficiency Engineered Solutions Program; Lakewood, NJ: Managing the design of numerous energy efficiency measures at Monmouth Medical Center's Southern Campus. These measures include replacement, retrofit and re-lamping of existing lighting with higher efficiency LED components; implementation of lighting controls; implementation of oxygen trim and parallel positioning controls on existing boilers; upgrades and refurbishment of seven existing air handlers; implementation of VFDs for modulation; heating and cooling coil replacements; modifications to control sequences for nighttime setback; replacement of failed steam traps; and insulation of steam and hot water piping and devices. As part of this program, H2M prepares all design bid and permit plans and specifications, performs all required energy savings and payback calculations in compliance with BPU protocols, sees the project through the DCA review process, and provides bid and construction administration services.

Victor L. Villegas

Senior Project Engineer – Electrical Engineering

Mr. Villegas' project experience includes power distribution, new services, service upgrades, motor control centers, emergency generators, PLC controls, lighting, site lighting, and fire alarm systems. He also has experience in shop drawing review and construction phase services.

Education

B.S., Electrical Engineering; New York Institute of Technology

Licenses/ Certifications

Project Management Training Program, H2M

Selected project experience

- Ocean County Utilities Authority Emergency Generators Replacement; Brick Township and Seaside Heights, NJ: As Electrical Project Engineer for the replacement of the design of emergency power generator replacements for the Operations and Maintenance (O&M) Building at the North Water Pollution Control Facility (NWPCF) and Seaside Park Pump Station (CPS-3).
- Brick MUA GAC Improvement at William Miller WTP; Brick NJ: Electrical Project Engineer for the design and preparation of plans and specifications for new lighting, electrical power distribution system, and Motor Control Center for motors associated with the two new GAC buildings. Review electrical construction submittals.
- New Jersey American Water Swimming River Membranes; Tinton Falls NJ: Electrical Project Engineer for new outdoor medium voltage switchgear, new outdoor pad mounted transformer, and outdoor low voltage switchgear and electrical power distribution system to power temporary portable filter membrane trailers.
- Monroe Township Utilities Department Well No. 25 Iron Removal Plant Design; Monroe NJ: Electrical Project Engineer for new electrical service, electrical power distribution system, new lighting, Motor Control Center (MCC), new PLC and instrumentation, and new natural gas generator associated with the Iron Removal Building.
- Borough of Spring Lake Heights Pump Station FEMA Flood Mitigation; Spring Lake NJ: Electrical Project Engineer for the design and preparation of plans and specifications for upgrade of two sewer pump stations. Design includes new service equipment, new lighting, new PLC control, and new backup natural gas generator.
- Borough of Brielle Old Bridge Tank Replacement and Water Improvement; Brielle NJ: Electrical Project Engineer for the electrical upgrade at the existing pump station and replacement of the elevated tank at the Old Bridge water pump station. Designed new service equipment, MCC, new lighting, new electrical distribution, and new instrumentation controls.
- New Jersey American Water Chambers Brook Crossing Improvements; Bridgewater NJ: Electrical Project Engineer for water interconnection vault power and control. Designed outdoor enclosure for the electrical distribution system, control panel, and radio equipment.
- New Jersey American Water Summit PRV Interconnect; Summit NJ: Electrical Project Engineer for the plans and specifications for water interconnection vault power and control. Designed outdoor enclosure for the electrical distribution system, control panel, and HVAC equipment starters.

David A. Sheldon P.E.

Project Engineer - Water Resources

Mr. Sheldon has 10 years of experience in hydraulic modeling and water resources engineering. His experience includes design, project management, and construction inspection on a variety of water and wastewater projects, such as hydraulic modeling of water systems, water tank rehabilitation projects, water main replacement design, groundwater well rehabilitation and reconstruction, and wastewater collection and conveyance.

Education

B.S., Civil Engineering; The College of New Jersey

Licenses/ Certifications

Professional Engineer: NJ

OSHA 30-hour General Industry Certification

OSHA 40-hour HAZWOPER

Memberships

Jersey Water Works

American Society of Civil Engineers

Selected project experience

- Wall Township Replacement Wells #10 and #11; Wall Township, NJ: Project Engineer for a project to replace two public water system wells in Wall Township, Monmouth County, NJ. The two existing wells were no longer performing at their rated capacity; new wells were drilled adjacent to the existing. H2M's role on this project was during bid, construction administration and construction inspection. Tasks performed include monitoring construction progress, receive and respond to submittals, applications for payment, and proposed change orders.

- Veolia Shorelands Chemical System Improvements; Holmdel and Hazlet, NJ: Project Engineer to replace the entirety of the chemical feed systems at two water treatment plants in Holmdel and Hazlet, Monmouth County, NJ. The existing systems (sodium hypochlorite, sodium hydroxide, citric acid, zinc orthophosphate, and polyaluminum chloride) did not meet the client's internal standards for chemical storage, containment, and feed. I managed the construction administration and construction inspection aspects of the project, receiving and responding to submittals, RFIs, applications for payment, and change order requests.

- Wall Township Route 34/Route 138 Water Main Extensions; Wall, NJ: Project Engineer for the construction administration / inspection of 13,500 feet of 12-inch water main. Responsible for contractor coordination, processing submittals, applications for payment, change orders, and RFIs, as well as coordination with the I-Bank and NJDEP.

- Veolia Coles Avenue Booster Station Replacement; Mountainside, NJ: Project Engineer for the design to replace an aging boost vault station in Mountainside, New Jersey. To date, the project has included coordinating survey, site and booster station design, coordination for Green Acres review, and civil improvements for the access driveway. The new station will be relocated and constructed above grade, and will include several hundred feet of new main both suction and discharge.

- Brick Township Municipal Utilities Authority Brick Reservoir FEMA Grant Application; Brick, NJ: The existing Brick Reservoir is a raw water reservoir used as backup to the BTMUA's intakes on the Metedeconk River, which can experience periods of turbidity great enough to shut the intakes. The grant proposal made under the Pre-Disaster Mitigation (PDM) fund sought to harden the easily erodible slopes of the reservoir, thereby making more of the volume usable for the water system. To date, the grant has made it through the first two rounds of agency review.

- Monroe Township Utilities Department Hydraulic Modeling; Monroe, NJ: Project Engineer responsible for the conversion of an existing model from Bentley WaterGEMS to Innovyze Infowater. Once converted, the model integrity was validated using flow test data. The model has since been utilized for various developer service applications as well as a tank siting study to replace a non-functional tank in a new location. As hydraulic modeler I was responsible for all hydraulic analyses, calibration, and report preparation. The Monroe system contains three pressure zones and nearly 300 miles of water main.

- Wall Township Hydraulic Modeling; Wall, NJ: As Hydraulic Model Technical Lead, built a brand new hydraulic model for the Township of Wall water system. The system includes two interconnections, five groundwater plants, three pressure zones, and roughly 180 miles of main. Was responsible for importing data from ArcGIS, validating connectivity of mains, assign elevation, demands, and diurnal curves, initialize all pumps, tanks, and interconnections, and establish controls to accurately simulate system performance. The calibrated model has since been used to study various capital improvements, including the creation of a new pressure zone with a new tank, booster station, and various distribution system improvements.

Alan P. Hilla Jr. P.E., P.P., CME

Vice President, Central Jersey Office Director

Mr. Hilla has over 30 years of experience in the state of New Jersey as a professional engineer and professional planner. As a licensed professional in these two areas, he has provided consulting services as an Engineer of Record, Zoning Officer, Land Use Engineer, and Municipal Planner for municipalities such as the Boroughs of Brielle, Lake Como, Spring Lake, Keyport, Manasquan, Bradley Beach, Eatontown, Keansburg, Tinton Falls, South Toms River, Pompton Lakes, Township of Wall, and the City of Long Branch.

Education

B.S., Civil Engineering; Rutgers University

Licenses/ Certifications

Professional Engineer: NJ, NY, PA

Professional Planner: NJ

Certified Municipal Engineer (CME)

Trainings

NJDEP Stormwater Management Design Review Course (2018 and 2023)

NJDEP Stormwater Management Rule Amendment Training (2023)

Memberships

New Jersey Society of Municipal Engineers

Selected project experience

- Borough of Brielle Borough Hall Addition and Renovations; Brielle, NJ: Client Manager for a major renovation and addition to the Brielle Borough Hall. The addition integrated a sally port and new elevator into the section of the building utilized by the Brielle Police Department. Additionally, the project involved making interior alterations, reallocating building space per the new addition, upgrading the building's mechanical and electrical systems, incorporating an emergency generator, and ADA accessibility enhancements.

- Long Branch Board of Education Catrambone School Overflow Parking Lot; Long Branch, NJ: Project Manager and Engineer responsible for the development of a new 70 car parking lot at a retired municipal landfill. Prior to the construction of the parking lot, oversaw the design of vapor cut off, stormwater management, and wireless lighting systems, as well as the landfill closure permitting process.

- Borough of Manasquan Main Street Beach Office and Addition and Improvements; Manasquan, NJ: Project Manager and Engineer responsible for all aspects of the enhancement and addition to a beachside office space on Main Street in Manasquan. This included mold remediation, structural evaluation, building remodeling, exterior recladding, and drainage improvements to extend the useful life of the essential oceanfront facility. Additional services performed prior to the building's re-opening for the 2021 summer season included evaluation, coordination, remediation, design, bidding, and construction administration/inspection, together valued at $750,000.

- Borough of Brielle ADA Accessibility Improvements at Borough Hall; Brielle, NJ; Engineer of Record responsible for overseeing the installation of ADA-related improvements at Borough Hall, including a ramp leading up the building entrance, vestibule lift from the building lobby to the first floor, and bathroom fixtures to achieve ADA compliance.

- Borough of Pompton Lakes Morris Canal Greenway Project; Pompton Lakes, NJ: Engineer of Record responsible for the final design, NJDEP permitting, and construction of nearly one mile of stabilized gravel trail paralleling the edge of the Ramapo River, complete with site furniture, native landscaping, playground modification, and interpretive/wayfinding signage. With project implementation costs totaling $300,000, the project earned the 2019 Distinguished Project award from the American Council of Engineer Companies.

- NJDOT Municipal Aid Improvements to Union Lane Phase I; Brielle, NJ: Engineer of Record for the design and construction of roadway improvements spanning from Old Bridge Road (CR 20) to State Highway Route 71, including curb and driveway apron replacement, drainage system improvements, and pavement sub-base repair prior to pavement renewal. This project fronts the local elementary school and was successfully constructed between the end of the school year in June and the beginning of school in September. The construction cost for this project was approximately $385,000. (2019)

- NJDOT Municipal Aid Improvements to Valley Road Phase II; Brielle, NJ: Engineer of Record tasked with the design and construction of roadway improvements spanning from Birch Drive to Riverview Drive (CR. 48), including curb and driveway apron replacement, drainage system improvements, and pavement sub-base repair prior to pavement renewal. The construction cost for this project was $280,000.

- Borough of Spring Lake Ocean Avenue Water Main Replacement; Spring Lakes, NJ: Project Manager responsible for oversight of site design and construction composed of over 10,000 linear feet of new water main and corresponding equipment on Ocean Avenue.

- Borough of Spring Lake Extraneous Flow Study; Spring Lake, NJ: Project Manager and Engineer tasked with overseeing a federally funded extraneous study of the Wreck Pond watershed, focusing specifically on measuring the impact the enterococcus bacteria has on water quality. After the study results were compiled, the surrounding infrastructure at Wreck Pond underwent improvement to better protect against future contamination.

Robert F. Bee R.A., LEED AP

Assistant Vice President,
Deputy Discipline Director - Architecture

Mr. Bee has more than 20 years of experience leading fire station, educational facility, municipal building, water treatment facility, library, public housing, and rehabilitation facility design projects. He is responsible for managing and facilitating all aspects of design projects, from the preliminary design stage through construction administration. Mr. Bee's responsibilities include developing project scope, plans, and design documents, as well as presenting to clients, developing budgets, overseeing the preparation of contract documents, preparing governmental and regulatory agency submissions, and providing construction administration services. As a LEED Accredited Professional, he is knowledgeable of sustainable building and system design.

Education

B.Arch; New York Institute of Technology

Licenses/ Certifications

Registered Architect: NY, NJ, CT, FL, PA, MA

LEED Accredited Professional, USGBC

NCARB Certified

Project Management Training Program, H2M

PSMJ Project Management Bootcamp

Memberships

American Institute of Architects, New York Chapter

Selected project experience

- Syosset School District New Fitness Center; Syosset, NY: Project Manager responsible for construction administration and overseeing the development of a 10,000-square-foot fitness center and corridor, which included an open layout weight room, offices for physical education instructors and coaches, new bathrooms, and comfort stations.
- Central Islip Fire District New Firehouse and District Upgrades; Central Islip, NY: Project and Client Manager for $12.5 million bond-funded projects for the development of a 11,500-square-foot fire substation, replacement of windows at the District's headquarters, replacement of the District's fire alarms, and redevelopment of the District's parking lots.
- Hicksville Fire District Various Projects; Hicksville, NY: Project Architect and Project and Client Manager responsible for overseeing the performance of various enhancement projects at facilities throughout the Hicksville Fire District, including a new 8,500-square-foot fire substation, roof replacements at headquarters, parking lot replacements at Stations 3, 4, and headquarters, car port at headquarters, interior renovations and masonry repair at Station 4, and truck room renovations and repairs at headquarters.
- Vails Gate Fire District New Firehouse and Storage Building; New Windsor, NY: Project and Client Manager responsible for overseeing design, bidding, and construction services in the development of a 21,500-square-foot firehouse and 6,500-square-foot storage building for the District.
- Borough of Brielle ADA Improvements at Borough Hall; Brielle, NJ: Project Manager responsible for overseeing the design and development of accessibility upgrades to the Brielle Borough Hall, including installation of an exterior ramp to the entrance of the building, an inclined platform lift at the stairs, a compliant restroom for the public, and an area of refuge for emergencies.
- Borough of Manasquan Main Street Beach Office Renovation; Manasquan, NJ: Project Architect for the renovation of a series of oceanfront buildings that house EMTs, beach patrol, and lifeguards, including making existing stairs ADA accessible, renovating building exteriors, and a 400-square-foot addition.
- Gabrielli Trucks Sales Addition and Renovation; Ridgefield Park, NJ: Project Manager responsible for the preliminary design and construction documents for the new 15,000-square-foot Ridgefield Park Gabrielli Trucks Parts Department warehouse on the banks of Overpeck Creek.
- Governor's Office of Storm Recovery/DASNY; Queens, Brooklyn, and Bronx, NY: Project Manager responsible for overseeing the integration of various storm hardening measures, roof replacements, and the installation of auxiliary generators for the Gerritsen Beach Volunteer Fire Department, West Hamilton Beach Volunteer Fire Department, and North Tower Volunteer Fire House at Edgewater Park.
- Ocean Grove Fire District Firehouse; Ocean Grove, NJ: Project Manager tasked with overseeing the performance of a feasibility study and the development of preliminary designs for an addition and renovation to this historic Neptune Township firehouse.
- NYCHA Queensbridge South Houses Elevator Rehabilitation; Long Island City, NY: Project Manager responsible for overseeing vertical transportation design services for the rehabilitation of existing elevators in 96 six-story buildings.
- Manasquan River Regional Sewerage Authority Facilities Assessment Report and Design; Howell, NJ: Project Manager responsible for overseeing the design, coordination, and administration for the replacement an 8,000-square-foot roof, HVAC system, ceiling, and interior lighting.

Rate Schedule

H2M will invoice for professional services based on the actual hours expended multiplied by the hourly labor rate of the individual that performs the service, except where H2M and the MCMUA have agreed to a lump sum fee or a monthly retainer for the services to be rendered. The firm's labor rates are provided below.

▶ Hourly Rate Schedule 2025

Job Title	Hourly Rate
Principal	$237.00
Practice Leader	$225.00
Senior Project Manager	$210.00
Project Manager (Senior Project Engineer 2)	$200.00
Senior Project Engineer	$190.00
Project Engineer 2	$165.00
Project Engineer 1	$145.00
Staff Engineer	$130.00
Engineering Technician	$110.00
Administrative Support Professional	$90.00

▶ Utilized Expenses

Expense	Cost
Mileage for personal or company-owned utility vehicle	.70 cents per mile or IRS min./mile
Subcontractors	Cost plus 10%
Reproduction Documents:	
8 1/2" x 11" Color	$0.50/page
11" x 17" Color	$1.00/page
24" x 36" Color	$2.50/page
Aerial Drone + Pilot	$2,500 per diem
ROV + Operator	$2,500 per diem

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MORRIS COUNTY MUA

Administrative Documents

A. Please submit the following documents with your response to the RFP

Owner's Checkmarks		Bidder's Initials
X	Statement of Ownership Disclosure	CAM
X	Non-Collusion Affidavit	CAM
X	Disclosure of Investment Activities In Iran	CAM
X	Certification of Non-Involvement in Prohibited Activities in Russia or Belarus	CAM
X	Affidavit of Non-Debarred Status	CAM
X	Affirmative Action Compliance Notice	CAM
X	Mandatory EEO Language	CAM
X	Americans with Disability Act of 1990 Form	CAM
X	Anti-Discrimination Requirements	CAM
X	Pay to Play Advisory Notice	CAM
X	Certificate of Employee Information Report/AA-302	CAM
X	W-9	CAM
X	New Jersey Business Registration Certificate	CAM
X	Proposal (document not provided)	CAM

MORRIS COUNTY MUA

Statement of Ownership Disclosure

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information with the bid is cause for automatic rejection of the bid or proposal.

Name of Organization: H2M Architects & Engineers, Inc.

Organization Address: 119 Cherry Hill Road, Suite 110, Parsippany, NJ 07054

Part I Check the box that represents the type of business organization:

☐ Sole Proprietorship (skip Parts II and III, execute certification in Part IV)

☐ Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)

☒ For-Profit Corporation (any type) ☐ Limited Liability Company (LLC)

☐ Partnership ☐ Limited Partnership ☐ Limited Liability Partnership (LLP)

☐ Other (be specific): _____

Part II

☒ The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. (**COMPLETE THE LIST BELOW IN THIS SECTION**)

OR

☐ No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. (**SKIP TO PART IV**)

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Address
Richard W. Humann, P.E. Joseph M. Mottola, AIA David J. Pacheco, AIA Charles Martello, P.E., LSRP	11 Garden Street, Nesconset, NY 11752 15 Cherry Street, Massapequa, NY 11758 1377 Dean Street, Niskayuna, NY 12309 56 Chicasaw Drive, Oakland, NJ 07436

MORRIS COUNTY MUA

Statement of Ownership Disclosure

Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II other than for any publicly traded parent entities referenced above. **The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Address

Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the ***Morris County Municipal Utilities Authority*** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with ***Morris County Municipal Utilities Authority*** to notify the ***Morris County Municipal Utilities Authority*** in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the ***Morris County Municipal Utilities Authority*** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):	Charles A. Martello, P.E., LSRP	Title:	Senior Vice President
Signature:		Date:	1/20/25

MORRIS COUNTY MUA

Non-Collusion Affidavit

STATE OF NEW JERSEY
MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY ss:

I certify that I am Charles A. Martello, P.E., LSRP, Senior Vice President

of the firm of H2M Architects & Engineers, Inc.

the Respondent making this Proposal for the bid or proposal for the above named project, that I executed the said proposal with full authority to do so; that said bidder has not, directly or indirectly entered into any agreement, participated in any collusion in connection with the above named project; and that all statements contained in said proposal and this affidavit are true, correct, and made with full knowledge that the Morris County Municipal Utilities Authority relies upon the truth of the statements contained in said Proposals and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies.

Signature of Representative: [signature]

Subscribed and sworn to before me this 20 day of January, 20 25

Print Name of Affiant: Charles A. Martello, P.E., LSRP, Senior Vice President

Notary Public of New Jersey

My commission expires 11/9/27

LISA M. HENDELMAN
Notary Public, State of New Jersey
Comm. # 2426894
My Commission Expires 11/9/2027

MORRIS COUNTY MUA

Disclosure of Investment Activities in Iran

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that the person or entity, or one of the person or entity's parents, subsidiaries, or affiliates, is not identified on a list created and maintained by the Department of the Treasury as a person or entity engaging in investment activities in Iran. If the Director finds a person or entity to be in violation of the principles which are the subject of this law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the person or entity.

I certify, pursuant to Public Law 2012, c. 25, that the person or entity listed for which I am authorized to bid/renew:

Bidder/Offeror: H2M Architects & Engineers, Inc.

☒ is not providing goods or services of $20,000,000 or more in the energy sector of Iran, including a person or entity that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; is not a financial institution that extends $20,000,000 or more in credit to another person or entity, for 45 days or more, if that person or entity will use the credit to provide goods or services in the energy sector in Iran.

In the event that a person or entity is unable to make the above certification because it or one of its parents, subsidiaries, or affiliates has engaged in the above-referenced activities, a detailed, accurate and precise description of the activities must be provided in part 2 below to the Division of Purchase under penalty of perjury. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN
You must provide, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

Name: _____ Relationship to Bidder/Offeror: _____

Description of Activities: _____

Duration of Engagement: _____ Anticipated Cessation Date: _____

Bidder/Offeror Contact Name: _____ Contact Phone Number: _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that Town/ Township/ Borough/Government Agency is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the MCMUA to notify the MCMUA in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with Morris County Municipal Utilities Authority, New Jersey and that the MCMUA at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Charles A. Martello, P.E., LSRP Signature: _____

Title: Senior Vice President Date: 1/20/25

MORRIS COUNTY MUA

Certification of Non-Involvement in Prohibited Activities in Russia or Belarus

Pursuant to N.J.S.A. 52:32-60.1, et seq. and N.J.S.A.40A:11-2.2 (L. 2022, c. 3) any person or entity (hereinafter "Vendor") that seeks to enter into or renew a contract with a local contracting unit subject to the Local Public Contracts Law for the provision of goods or services, or the purchase of bonds or other obligations, must complete the certification below indicating whether or not the Vendor is identified on the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, available here: https://sanctionssearch.ofac.treas.gov/. If the Department of the Treasury finds that a Vendor has made a certification in violation of the law, it shall take any action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

I, the undersigned, certify that I have read the definition of "Vendor" below, and have reviewed the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, and having done so certify

(Check the Appropriate Box)

(X) A. That the Vendor is not identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

( ) B. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

( ) C. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list. However, the Vendor is engaged in activity related to Russia and/or Belarus consistent with federal law, regulation, license or exemption. A detailed description of how the Vendor's activity related to Russia and/or Belarus is consistent with federal law is set forth below.

(Attach Additional Sheets If Necessary.)

Signature of Vendor's Authorized Representative	1/20/25 Date
Charles A. Martello, P.E., LSRP, Senior Vice President Print Name and Title of Vendor's Authorized Representative	20-0809570 Vendor's FEIN
H2M Architects & Engineers, Inc. Vendor's Name	(862) 270-5900 Vendor's Phone Number
119 Cherry Hill Road, Suite 110 Vendor's Address (Street Address)	(973) 334-0507 Vendor's Fax Number
Parsippany, NJ 07054 Vendor's Address (City/State/Zip Code)	pcole@h2m.com Vendor's Email Address

[i] Vendor means: (1) A natural person, corporation, company, limited partnership, limited liability partnership, limited liability company, business association, sole proprietorship, joint venture, partnership, society, trust, or any other nongovernmental entity, organization, or group; (2) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in Section 1701(c)(3) of the International Financial Institutions Act, 22 U.S.C. 262r(c)(3); or (3) Any parent, successor, subunit, direct or indirect subsidiary, or any entity under common ownership or control with, any entity described in paragraph (1) or (2).

MORRIS COUNTY MUA

Affidavit of Non-Debarred Status

AFFIDAVIT OF NON-DEBARRED STATUS

STATE OF NEW JERSEY)
) SS:
COUNTY OF Morris)

I, Charles A. Martello, P.E., LSRP of the City/Town of Oakland, in the County of Bergen and the State of New Jersey, of full age, being duly sworn according to law on my oath depose and say that:

I am Charles A. Martello, P.E., LSRP (*Name*), a Senior Vice President (*Title, Position, etc.*) of H2M Architects & Engineers, Inc. (*Name of Firm, Company or Corporation*), the Bidder making the Bid for the Morris County Municipal Utilities Authority and that I executed the said Bid with full authority so to do; that said Bidder at the time of making this Bid is not included on the State of New Jersey, State Treasurer's List of Debarred, Suspended and Disqualified Bidders; and all statements contained in said Bid and in this affidavit are true and correct and made with the full knowledge that the Morris County Municipal Utilities Authority relies upon the truth of the statements contained in said Bid and in the Statements contained in this affidavit in awarding Contract for said project.

The undersigned further warrants that should the name of the firm, company or corporation making this Bid appear on the State Treasurer's List of Debarred, Suspended and Disqualified Bidders at anytime prior to, and during the life of the Contract, including the Guarantee Period, that the Morris County Municipal Utilities Authority shall be immediately so notified by the signatory to this Eligibility Affidavit.

The undersigned understands that the firm, company or corporation making the Bid as a CONTRACTOR is subject to debarment, suspension and/or disqualification in contracting with the State of New Jersey and the Department of Environmental Protection if the CONTRACTOR, pursuant to NJAC 7:1-5.2, commits any of the acts listed therein, and as determined according to applicable law and regulation.

(Seal if Corporation)

(Signature of Bidder)

Charles A. Martello, P.E., LSRP, Senior Vice President
(Printed or Typed Name & Title of Bidder)

119 Cherry Hill Road, Suite 110, Parsippany, NJ 07054
(Address of Bidder)

MORRIS COUNTY MUA

Affirmative Action Compliance Notice

EXHIBIT A

GOODS, GENERAL SERVICES, AND PROFESSIONAL SERVICES CONTRACTS

This form is a summary of the successful vendor's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.JA.C. 17:27.

The successful respondent shall submit to the public agency, after notification of award but prior to execution of the contract, one of the following three documents as forms of evidence:

1. Letter of Federal Affirmative Action Plan Approval

2. Certificate of Employee Information Report

3. A photocopy of an Employee Information Report (AA302) provided by the Division and distributed to the public agency to be completed by the vendor in accordance with N.J.A.C. 17:27-4.

The successful vendor(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the vendor copy is retained by the vendor.

The undersigned vendor further understands that his/her proposal shall be rejected as non-responsive if said vendor fails to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

Business Name: H2M Architects & Engineers, Inc.

Representative's Name (print): Charles A. Martello, P.E., LSRP, Senior Vice President

Representative's Signature: 

Date: 1/20/25 **Phone:** (862) 270-5900

MORRIS COUNTY MUA

Mandatory EEO Language

EXHIBIT A

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

N.J.S.A. 10:5-31 et seq. (P.L.1975, c.127)

N.J.A.C. 17:27 et seq.

GOODS, GENERAL SERVICES, AND PROFESSIONAL SERVICES CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union of the contractor's commitments under this chapter and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to meet targeted county employment goals established in accordance with N.J.A.C. I7:27-5.2.

MORRIS COUNTY MUA

Mandatory EEO Language

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the targeted employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions. The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

Letter of Federal Affirmative Action Plan Approval;

Certificate of Employee Information Report; or

Employee Information Report Form AA-302 (electronically provided by the Division and distributed to the public agency through the Division's website at: http:// www.state.nj.us/treasury/contract_compliance.

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Purchase & Property, CCAU, EEO Monitoring Program as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Purchase & Property, CCAU, EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq

Business Name: H2M Architects & Engineers, Inc.

Representative's Name (print): Charles A. Martello, P.E., LSRP, Senior Vice President

Representative's Signature: 

Date: 1/20/25

MORRIS COUNTY MUA

Americans with Disabilities Act of 1990 Form

The CONTRACTOR and the OWNER do hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "ACT") (42 U.S.C. S12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this contract. In providing any act benefit, or service on behalf of the OWNER pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the Contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the CONTRACTOR shall defend the OWNER in any action or administrative proceeding commenced pursuant to this Act. The Contractor shall indemnify, protect, and save harmless the OWNER, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the OWNER grievance procedure, the CONTRACTOR agrees to abide by any decision of the OWNER which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the OWNER or if the OWNER must any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its OWN expense.

The OWNER shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with frill and complete particulars of the claim. if any action or administrative proceedings is brought against the OWNER or any of its agents, servants, and employees, the OWNER shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the OWNER or its representatives.

It is expressly agreed and understood that any approval by the OWNER of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the OWNER pursuant to this paragraph.

It is further agreed and understood that the OWNER assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the CONTRACTOR'S obligations assumed in this Agreement, nor shall they be construed to relieve the CONTRACTOR from any liability, nor preclude the OWNER from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

Business Name (Print): H2M Architects & Engineers, Inc.

Representative's Name (Print): Charles A. Martello, P.E., LSRP

Representative's Title: Senior Vice President

Representative's Signature:

Phone: (862) 270-5900 **Date:** 1/20/25

MORRIS COUNTY MUA

New Jersey Anti-Discrimination

Pursuant to N.J.S.A. 10:2-1:

a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;

b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;

c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of $ 50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and

d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

Business Name (Print): H2M Architects & Engineers, Inc.

Representative's Name (Print): Charles A. Martello, P.E., LSRP

Representative's Title: Senior Vice President

Representative's Signature: 

Phone: (862) 270-5900 **Date:** 1/20/25

MORRIS COUNTY MUA

Pay to Play Advisory

PAY TO PLAY ADVISORY
Disclosure Requirement
(N.J.S.A. 19:44A – 20.27)

Any business entity that has received $50,000 or more in contracts from government entities in a calendar year will be required to file an annual disclosure report with ELEC.

The report will include certain contributions and contract information for the current calendar year.

At a minimum, a list of all business entities that file an annual disclosure report will be listed on ELEC's website at www.elec.state.nj.us.

If you have any questions please contact ELEC at:
1-888-313-ELEC (toll free in NJ) or
609-292-8700

An analyst from ELEC's Special Programs Section will assist you.

Initials CAM

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

H2M Architects & Engineers, Inc

2 Business name/disregarded entity name, if different from above.

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☑ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . .

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

5 Address (number, street, and apt. or suite no.). See instructions.

538 Broad Hollow Road - 4th Floor East

6 City, state, and ZIP code

Melville, NY 11747

Requester's name and address (optional)

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

2	0	–	0	8	0	9	5	7	0

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** Charles A. Martello, P.E., LSRP, Senior Vice President **Date** 1/20/25

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	H2M ARCHITECTS & ENGINEERS, INC.
Trade Name:	
Address:	119 CHERRY HILL RD STE 110 PARSIPPANY, NJ 07054-1123
Certificate Number:	1208276
Effective Date:	May 28, 2002
Date of Issuance:	January 21, 2025

For Office Use Only:

20250121172614247

Return

Certification **3244**

CERTIFICATE OF EMPLOYEE INFORMATION REPORT **RENEWAL**

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of **15-May-2023** to **15-May-2026**

H2M ARCHITECTS AND ENGINEERS, INC
538 BROAD HOLLOW RD., 4TH FLR. EAST
MELVILLE NY 11747

ELIZABETH MAHER MUOIO
State Treasurer

THIS DOCUMENT IS PRINTED ON WATERMARKED PAPER, WITH A MULTI-COLORED BACKGROUND AND MULTIPLE SECURITY FEATURES. PLEASE VERIFY AUTHENTICITY.

State Of New Jersey
New Jersey Office of the Attorney General
Division of Consumer Affairs

THIS IS TO CERTIFY THAT THE
Board of Architects

HAS LICENSED

H2M ARCHITECTS & ENGINEERS INC
JOSEPH MICHAEL MOTTOLA
119 CHERRY HILL ROAD SUITE 200
Parsippany NJ 07054

FOR PRACTICE IN NEW JERSEY AS A(N): Certificate of Authorization

01/17/2024 TO 01/31/2026
VALID

21AC00040200
LICENSE/REGISTRATION/CERTIFICATION #

Signature of Licensee/Registrant/Certificate Holder

Cari Fais
ACTING DIRECTOR

THIS DOCUMENT IS PRINTED ON WATERMARKED PAPER, WITH A MULTI-COLORED BACKGROUND AND MULTIPLE SECURITY FEATURES. PLEASE VERIFY AUTHENTICITY.

State Of New Jersey
New Jersey Office of the Attorney General
Division of Consumer Affairs

THIS IS TO CERTIFY THAT THE

Board of Prof. Engineers & Land Surveyors

HAS LICENSED

H2M ARCHITECTS & ENGINEERS, INC.
CHARLES ANTHONY MARTELLO
119 CHERRY HILL RD., STE. 110
Parsippany NJ 07054

FOR PRACTICE IN NEW JERSEY AS A(N): Certificate of Authorization

Engineering

08/08/2024 TO 08/31/2026
VALID

24GA28025500
LICENSE/REGISTRATION/CERTIFICATION #

Signature of Licensee/Registrant/Certificate Holder

ACTING DIRECTOR

Contract Reservations

H2M reserves the right to negotiate reasonable insurance, liability, and claims provisions that are consistent with industry standards and the standard of professional care applicable by law.