
STATEMENT OF QUALIFICATIONS

Water storage tank, recycling system and wastewater treatment at a corporate business park

Genesee Gateway Local Development Corp. | October 21, 2026



October 21, 2026

Genesee Gateway Local Development Corporation
99 MedTech Drive, Suite 106
Batavia, New York 14020

SUBMITTED VIA EMAIL

RE: Statement of Qualifications (SOQ) for Water storage tank, recycling system and wastewater treatment at a corporate business park

Dear Selection Committee:

GGLDC's vision for expanding and strengthening the Genesee Gateway Corporate Business Park depends on reliable infrastructure that can support both current operations and future economic growth. The proposed water storage tank, recycling system, and wastewater treatment improvements will help create capacity, resiliency, and environmental stewardship necessary to support continued investment in the park. AECOM is excited to partner with GGLDC on this initiative, bringing the local expertise, proven project delivery experience, and regulatory coordination capabilities needed to successfully advance this project from planning and permitting through construction.



Local Expertise - AECOM has maintained a strong presence across Western and Upstate New York for decades, providing planning, design, permitting, and construction-phase services for municipal and industrial water and wastewater infrastructure. Our local team understands the unique regulatory, environmental, and economic development landscape of the region and has developed long-standing relationships with utilities, public agencies, and stakeholders throughout New York State. This local knowledge allows us to rapidly identify project opportunities, anticipate potential challenges, and develop practical solutions that are responsive to the goals of both the GGLDC and the businesses served by the corporate park.



Proven Project Performance Record - The proposed project requires experience in wastewater treatment, water reuse, storage facilities, utility coordination, grant-funded infrastructure, and economic development initiatives. These are areas where AECOM has successfully delivered projects throughout New York and across North America. Our team has planned, designed, and implemented complex water recycling systems, wastewater treatment facilities, industrial process water improvements, and critical water storage infrastructure for both public and private-sector clients. Equally important, we understand how to maintain aggressive schedules and deliver projects efficiently while meeting the expectations of owners, funding agencies, regulators, and contractors.



Agency Coordination That Accelerates Project Success - AECOM's longstanding relationships and proven track record coordinating with the New York State Department of Environmental Conservation (NYSDEC), the New York State Office of Parks, Recreation and Historic Preservation (NYS Parks), and the U.S. Army Corps of Engineers (USACE) sets us apart in delivering complex infrastructure projects across New York State. Our team understands not only the technical and regulatory requirements of these agencies, but also the importance of proactive engagement, transparent communication, and thorough documentation to keep projects moving forward. By anticipating permitting and stakeholder challenges early, we help clients avoid delays, reduce risk, and secure timely approvals. This experience translates into smoother project delivery, greater regulatory confidence, and a clear path from planning through construction.

AECOM understands that this project represents more than infrastructure improvements. It is an investment in the long-term sustainability, economic growth, and competitiveness of the corporate business park and the surrounding community. We are excited about the opportunity to partner with the GGLDC and bring the full strength of our local team, technical specialists, and project delivery professionals to this important initiative.

Thank you for your consideration. We appreciate the opportunity to submit our qualifications and look forward to discussing how AECOM can help successfully deliver this project. If you have any questions or need additional information, please contact Matt Czora at 585-469-8105, or matt.czora@aecom.com. Thank you for your consideration.

Sincerely,
AECOM USA, Inc.



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Table of Contents

1.

Company Information and Experience

1

1.1.

About AECOM

1

1.2.

Local Office

1

1.3.

Wastewater Experience

2

1.3.1.

Treatment Facilities

2

1.3.2.

Indirect and Direct Potable Reuse

2

1.3.3.

Food and Beverage

3

1.4.

Experience with NYSDEC, Parks, and USACE

5

2.

Past Projects

6

3.

Project Team

22

3.1.

Org Chart

22

3.2.

Project Management

23

3.3.

Subconsultants

24

4.

Contractor Friendly Approach

25

5.

Why AECOM

26

Appendix A: Resumes

A-1

Appendix B: Required Forms

B-1

1. Company Information and Experience

1.1. About AECOM

We are the world's trusted infrastructure consulting firm — planners, designers, engineers, program and construction managers driven by a common purpose to deliver a better world. As a Fortune 500 firm, AECOM is a leader in all of the key markets that it serves, including water, wastewater, transportation, facilities, environmental, energy, oil and gas, high-rise buildings and government.

AECOM's wastewater practice is the culmination of more than 120 years of experience and technical leadership. Its legacy company, Metcalf & Eddy, published several wastewater textbooks that became industry standards, used by regulatory agencies, infrastructure owners, and universities worldwide.

AECOM has significant national and local experience providing planning, design, construction and permitting services to a variety of clients facing environmental, regulatory, and financial challenges associated with wastewater management. Our experience with similar assignments will be invaluable in assisting GGLDC with meeting the Order of Consent deadlines.

1.2. Local Office

In the Buffalo area, AECOM includes the former URS Corporation, which has been performing engineering work for local municipal clients since the 1980s. AECOM's experience represents an unprecedented legacy of successful projects.

AECOM has the resources and full-service capabilities to execute this design contract. We offer a team of qualified, multi-disciplinary staff with proven successes working throughout the region.

While we have the regional water expertise with over 1,000 water professionals in the region, AECOM can also offer the GGLDC access to the over 4,000 other professionals through the Northeast region and 20,000 employees in North America. Our large staff of engineers, designers, planners, and scientists serve clients in over 150 countries around the world, providing the GGLDC a blend of local knowledge, global reach, innovation, and technical excellence in delivering customized and creative solutions for this design. The firm is familiar with state and federal requirements and has extensive experience with the layout and design of wastewater treatment facilities in New York.

#ENR2026

TOP 500 WATER

- 1 Dams and Reservoirs
- 1 Water Supply
- 1 Water Transmission Lines and Aqueducts
- 2 Wastewater Treatment
- 3 Water Treatment, Desalination Plants
- 7 Sewer and Waste



72

Employees in Buffalo

120+

Years in New York

1,000+

Water Professionals

1.3. Wastewater Experience

Demand continues to grow for expanded wastewater system capacity, better treatment levels and efficiencies with more creative ways to turn treated wastewater and solids into reusable resources. Poised to fulfill these needs, our water professionals partner with clients to deliver systems that meet today's environmental requirements while improving people's lives by sustaining our water systems.

We determine the right approach to processing wastewater by applying our global best practices, connected experience and delivery excellence to solve all levels of complexity, from simple to the most intricate systems, including:

- Treatment facilities
- Indirect and direct potable reuse
- Biosolids management and energy recovery
- Nutrient and resource recovery
- Energy optimization
- Facility master planning
- Collection and distribution systems
- Wet weather systems
- Odor and air management
- Innovative research and development

AECOM offers project lifecycle services—from initial planning studies to detailed design, program/construction management, operations and maintenance services—through traditional and alternative total project delivery options of design-build, public-private partnerships and financing.

1.3.1. Treatment Facilities

Working under the most challenging conditions throughout the world, we are committed to developing treatment facilities that exceed our clients' needs. Our professionals use the most modern tools to develop detailed material balances for treatment processes of all internal streams, providing cost-effective strategies. In New York City, for example, our advanced nutrient removal pilot program saved the city more than \$18 billion in capital and operational costs.

On every assignment, we blend science with innovation to help our clients achieve sustainable water resources. Whether clients need a new treatment facility, capacity expansion or biological nutrient removal technology, we offer local teams and global resources on projects large and small. This includes secondary- or tertiary-treatment facilities that allow effluent to be used for agricultural or urban irrigation and even indirect and direct potable reuse.

1.3.2. Indirect and Direct Potable Reuse

With increased population growth, strict discharge limits and depleting traditional supplies, water reclamation and reuse are becoming important strategies to meet water needs. Our clients rely on our expertise to create unique reuse solutions like we are doing in California, where we are working on the City of Oxnard's New Advanced Water Purification Facility.

Our experts provide a broad range of services, including comprehensive evaluations that study the use of potential reclaimed water, and match those uses to treatment and storage requirements. We develop user agreements, ordinances and the rates required to deliver efficient and cost-effective water reuse solutions to clients.

Oxnard Advanced Water Purification Facility
Construction Management Services
Oxnard, CA



1.3.3. Food and Beverage

In this dynamic market, businesses are constantly searching for partners that can keep up with complex demands at a global scale. Making the global food supply chain more sustainable and more resilient is exactly the type of complex challenge AECOM was built to solve. We find comprehensive solutions across the food supply chain in the following markets:

- Baked Goods
- Brewing
- Beverages
- Cereal
- Cheese & Dairy
- Confectionary
- Distilling
- Fresh Produce
- Frozen Foods
- Food Additives
- Grain Processing
- Meat Processing
- Personal Care Products
- Poultry Processing
- Snack Foods

We have extensive capabilities and experience in designing and constructing facilities for essentially all segments of the food, beverage, and consumer products industry. In addition to our traditional services, we provide unique expertise in waste-to-energy and water reuse optimization solutions for this sector.



From left:
Wastewater Sources and
Alternatives Evaluation
ConAgra Foods, Archibold, OH

Brewing Wastewater Pre-
Treatment and Reuse System
Confidential Client, CA

Food Processing Wastewater
Pretreatment System
Unilever, Milwaukee, WI

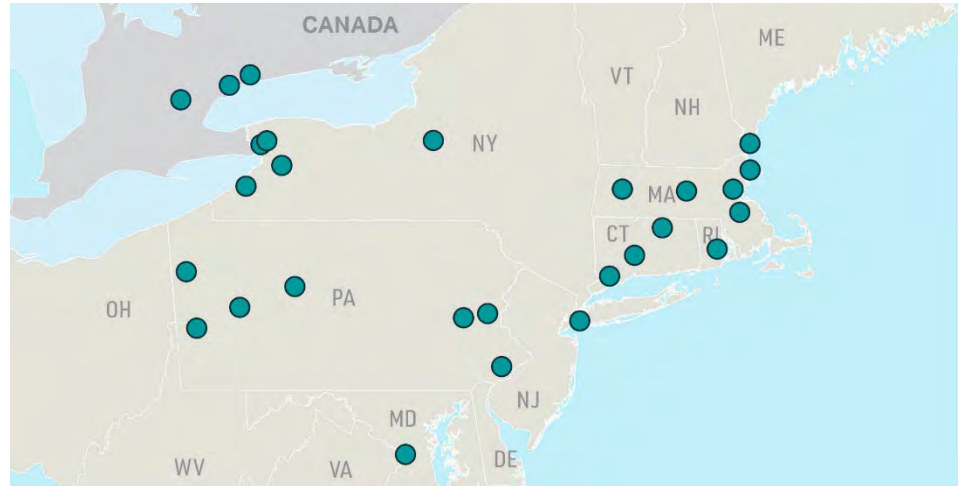


Added Benefit

In addition to local staff, AECOM provides the benefit of our Northeast Design Center. From conceptual design through construction and startup, we can provide a full range of design services. AECOM's Northeast Design Center, located in Chelmsford, MA, is nationally recognized as center of excellence that focuses on the design of large, complex, multi-discipline, high-profile water and wastewater treatment and pumping facilities projects throughout the U.S. The Design Center is comprised of approximately 80 staff and includes a full complement of disciplines including geotechnical, civil, architectural, structural, HVAC, plumbing/fire protection, process mechanical, electrical, instrumentation & controls (I&C). CAD/Revit specialists, and cost estimating.

The Design Center staff are fully integrated into the design team and remain an integral part of that team from the early planning phase, through design development and construction as well as into start up and commissioning. They are typically the engineer of record for their respective discipline and perform periodic observations during construction so they can sign off on certifications that are sometimes required by local building inspectors.

AECOM has a wealth of wastewater project experience in the northeastern United States and southern Ontario at facilities; we know how to successfully deliver a project of this size for GGLDC. This project matrix overview is provided to summarize this experience and highlight key features of each project.



Project Name, Client, Location	Average Capacity (mgd or mld)	Study (S) / Design (D)	Capital Cost	Biological Treatment & Pilot Testing	Wastewater Hydraulics	Maintenance of Plant Operations	Odor Treatment Process	Treatment Evaluation, Design, & Implementation	Funding & Regulatory Agency & Consent Order	Sludge Handling
Biological Treatability & Chlorine Dioxide Pilot Study; NFWB-Niagara Falls, NY	25 mgd	S	N/A	●	●	●	●	●	●	●
Niagara Falls Water Board (NFWB) – Capital Improvements Projects	25 mgd	D	~ \$ 100 M		●	●		●	●	
Bird Island Secondary System Rehabilitation & Upgrades Phase II, BSA- Buffalo, NY	120 mgd	D	\$ 60 M	●	●	●		●	●	●
Bird Island Secondary System Rehabilitation and Upgrades Phase III, BSA- Buffalo, NY	120 mgd	D	\$ 175 M	●	●	●	●	●	●	●
UV System Evaluation & Concept Upgrades- Onondaga County DWEP- Onondaga, NY	84 mgd	S	N/A		●	●		●		
East Aurora WWRP S & Filter Replacement Evaluation-Erie County DEP, Erie County, NY	3 mgd	S	N/A		●	●		●		
Highland Creek WWTP RAS/Aeration/P-Removal; City of Toronto - Toronto, Ontario, CAN	219 mgd	D	\$ 41 M (CAD)	●	●	●	●	●	●	
Clarkson WRRF Phase I & II Expansion; Peel Region, Toronto, Ontario, Canada	350 mgd	D	\$ 250 M (CAD)	●	●	●		●	●	
Kitchener WRRP Phase II Upgrades - Nitrified Effluent; Kitchener, Ontario, Canada	123 mgd	D	\$169 M (CAD)	●	●	●		●	●	
WWTF Facility Plan and Design Upgrades - City of Pittsfield, MA	12.5 mgd	D	\$ 51.6 M	●	●	●	●	●		●
Peirce Island WWTF Upgrade - City of Portsmouth, NH	6.1 mgd	S, D	\$ 75.6 M	●	●	●	●	●	●	●
Comprehensive WWTF Upgrade & Management Plan - City of Westborough, MA	8.8 mgd	S, D	\$45 M	●	●	●	●	●		●
Multiple Projects - South Essex Sewer District - Salem, MA	29.7 mgd	S, D	\$ 28.6 M		●	●	●	●	●	●
WWTF Capital Improvements - Lynn Water & Sewer Commission - Lynn, MA	25.8 mgd	D	\$ 54 M			●	●	●		●
Deer Island WWTF Upgrades - MWRA, Boston, MA	480 mgd	S, D	\$250 M		●	●	●	●	●	●
WWTP Design/Build/Operate - City of Springfield, MA	67 mgd	S, D	\$ 28 M	●	●	●		●		●
WPCP Nutrient Upgrade Project; City of Cheshire, CT	4 mgd	S, D	\$ 28.6 M	●	●	●		●	●	
Wastewater Facilities Upgrade - Ridgefield, CT	1.2 mgd	S, D	\$ 37 M	●	●	●	●	●	●	●
Hunts Point WW Resource Recovery Facility Upgrade - NYDEP New York, NY	200 mgd	D	\$ 600 M	●	●	●	●			●
Blue Plains WWTP - DC Water, District of Columbia	384 mgd	D	\$ 1.12 B	●	●	●		●	●	●
WWTP Master Plan - City of Bethlehem, PA	20 mgd	S, D	\$1.5M	●	●	●		●	●	●
Klines Island WWTP Upgrade Evaluation - Lehigh County Authority, Allentown, PA	40	S	N/A	●	●	●		●	●	●
Wastewater Master Planning - PWD – 3 WPCPs, Philadelphia, PA	112-210 mgd	S	N/A	●	●	●		●	●	●
WWTP Capacity Improvements - DELCORA, Chester, PA	75 mgd	D	N/A	●		●		●		
WWTP Facility & Wet Weather Upgrade – PA American Water, Clarion, PA	1.5 mgd	D	\$ 19.8 M	●		●		●	●	●
Industrial Pretreatment Plant, Lehigh County Authority, Allentown, PA	5.5 mgd	S, D	\$50M	●	●	●	●	●	●	●
Upper Montgomery Joint Authority Solids Improvements, Upper Hanover Township, PA	2 mgd	S	N/A			●		●	●	●
Nutrient Removal Upgrades, Capital Region Water, Harrisburg, PA	37.7 mgd	D	\$38 M	●		●		●	●	

1.4. Experience with NYSDEC, Parks, and USACE

Successful delivery of the Genesee Gateway Local Development Corporation's project will require efficient coordination with regulatory and permitting agencies to maintain schedule, minimize risk, and advance the project toward construction. AECOM brings extensive experience working with the New York State Department of Environmental Conservation (NYSDEC), New York State Office of Parks, Recreation and Historic Preservation (NYS Parks), and the U.S. Army Corps of Engineers (USACE) on complex water, wastewater, environmental, and infrastructure projects throughout New York.



Figure 1 Bird Island WWTF

AECOM's NYSDEC coordination experience includes leading major consent-order and regulatory compliance projects for the Niagara Falls Water Board, where we have served as their trusted advisor since 2017. Our work has included approximately \$100 million in capital improvements, including the Wastewater Treatment Plant Effluent Disinfection System Upgrades, which was designed and implemented on an accelerated schedule to satisfy a NYSDEC Order on Consent, as well as biological treatment improvements driven by regulatory compliance requirements. AECOM also worked closely with NYSDEC on the Buffalo Sewer Authority Bird Island WWTF Secondary System Program, supporting over \$240 million in improvements while helping secure nearly \$30 million in grant funding and advancing projects associated with BSA's Long-Term Control Plan.

AECOM also maintains extensive experience coordinating with NYS Parks on infrastructure projects in environmentally sensitive and publicly accessible settings. Through our statewide engineering services contract with NYS Parks, AECOM completed dam safety evaluations, rehabilitation designs, hydraulic analyses, and regulatory studies for more than 20 dams statewide. Notable assignments included improvements at Lake Tiorati Dam, rehabilitation of the historic dam at the Olana Historic Site, and engineering services for the Tillson Lake Dam removal project. These projects required careful coordination among park staff, regulators, and stakeholders while balancing environmental stewardship, public safety, and operational needs.

AECOM's experience with USACE further strengthens our ability to navigate federal review and permitting requirements. Through the USACE Dam and Levee Safety Modification Mandatory Center of Expertise (DSMMCX) program, AECOM has supported major federal infrastructure projects including flood studies, dam safety evaluations, hydraulic modeling, and risk assessments for projects such as Mohawk Dam, Bolivar Dam, Dover Dam, and Bluestone Dam. These assignments required direct collaboration with USACE technical and regulatory staff to expedite reviews and ensure compliance with federal requirements.

For GGLDC, AECOM's established history of successful coordination with NYSDEC, NYS Parks, and USACE provides a significant advantage. Our team understands agency expectations, permitting pathways, and review processes, allowing us to proactively address regulatory requirements, quickly resolve agency comments, and maintain project momentum. This experience reduces permitting uncertainty, minimizes schedule risk, and helps position the project for timely approvals and successful implementation.

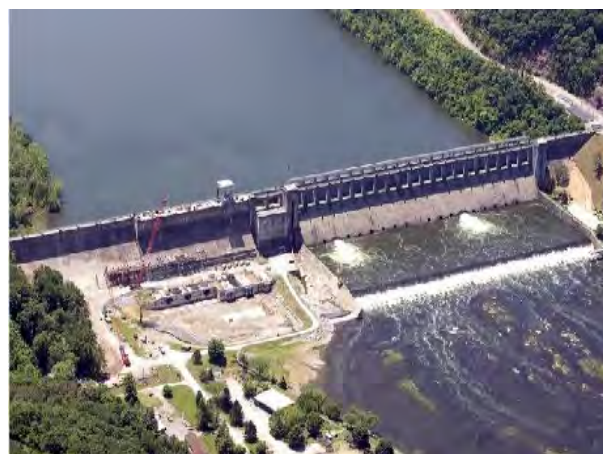


Figure 2 Bluestone Dam in Hinton, WV

2. Past Projects

Listed below are ten infrastructure projects that align with the proposed project that AECOM has completed in western New York as the prime consultant. Detailed project descriptions for each are included on the following pages.

Past Projects

Master Plan and Environmental Impact Statement for the ILDC Lands at the former Bethlehem Steel Site
Lackawanna, New York

ESDC, Buffalo Bills Stadium Feasibility Study
Buffalo, NY

BSA, Bird Island WWTF Secondary System Rehabilitation and Expansion, Phases 1 and 3
Buffalo, NY

NFWB, Capital Improvement Projects and Onsite Monitoring
Niagara Falls, NY

NFWB, WWTP Effluent Disinfection System Upgrades
Niagara Falls, NY

NFWB, Biological Treatability Pilot Study and Preliminary Design Evaluation
Niagara Falls, NY

NFWB, Sedimentation Basin and Scum Removal System Improvements
Niagara Falls, NY

ECDEP, Lackawanna WRRF Digester and Solids Handling Upgrades
Buffalo, NY

ECDEP, Rush Creek Pumping Station & Force Main Upgrades
Buffalo, NY

Town of Amherst, WPCF Upgrades
Amherst, NY

New York State Parks: Engineering Assessments
Various Sites in NY State

USACE: Engineering, Design, and Related Services
Various Sites

Infrastructure Master Plan and Generic Environmental Impact Statement for the ILDC Lands at the former Bethlehem Steel Site

Location

Lackawanna, New York

Overall value

\$307,000

Client / Contact

Buffalo and Erie County
Industrial Land Development
Corporation

Completion date

2021

AECOM helped the ILDC transform a complex brownfield redevelopment opportunity into a shovel-ready industrial development program by providing the planning, environmental documentation, and implementation strategy needed to attract investment and accelerate site development.

In 2018, the Buffalo and Erie County Industrial Land Development Corporation (ILDC), a subsidiary of the Erie County Industrial Development Agency selected AECOM to conduct planning, design and environmental services for a portion of the former Bethlehem Steel property in Lackawanna, New York. AECOM is preparing an Infrastructure Master Plan, Generic Environmental Impact Statement (GEIS) and application for Shovel Ready Certification.



The Infrastructure Master Plan and Generic EIS are focusing on approximately 240 acres which the ILDC has purchased or is in the process of purchasing. The study will consider redevelopment of the site for private industrial and manufacturing uses on individual parcels in an industrial park setting. The plan defines shared access points, utility corridors and utility service lines.

The plan and implementation strategy will establish a strategic approach and methodology to guide the development of the site as it has been remediated through the Brownfield Cleanup Program. Preparation of the Infrastructure Master Plan is a key implementation initiative for the redevelopment of the BSRA and will include:

- A site plan, with road, utility and infrastructure plans for the entire site including stormwater management.
- A conceptual parcel and site plan suitable for approval from the City of Lackawanna for consistency with local plans and zoning.
- A phased development plan.
- Real Estate Market Analysis to identify potential markets and best uses.
- A Phase I Archeological Survey
- A Traffic Impact Study
- Completion of New York State Environmental Quality Review Act (SEQRA) requirements for a Generic EIS.
- A Shovel-Ready Application for Empire State Development

Buffalo Bills Stadium Feasibility, Financial Economic Analysis, & Infrastructure Advisory Services

Location
Buffalo, NY

Overall value
\$163,000

Client / Contact
Empire State Development
(ESD)

Completion date
2022

AECOM was twice retained by Empire State Development Corporation on behalf of the State of New York to provide an analysis for stadium sites and potential ancillary development in Western New York for the Buffalo Bills. The purposes of this analysis were to (i) identify potential locations that could support an NFL stadium and game experience worthy of the Buffalo Bills fans and Western New York, including the current stadium site, (ii) evaluate each potential location and choose four new locations for in-depth analysis that appear potentially viable for a first-class NFL facility, (iii) provide an in-depth analysis of the potential of the existing site, (iv) provide case studies of certain existing NFL stadiums, (v) develop a generic stadium cost and revenue model for the Buffalo market, (vi) provide input on the long term viability of Ralph Wilson Stadium as an NFL venue and (vii) discuss, in comparative terms, the potential ancillary development programming and economic impacts at stadium sites.



Every site considered in the analysis had unique opportunities, benefits, challenges and constraints related to infrastructure, access, real estate acquisition and community influences among other considerations. This analysis included both graphic depictions and a written examination of those shortlisted sites which had the best potential for successfully implementing an NFL stadium. In addition, this analysis also provided background information as to the base program for a potential stadium, either as an open-air or domed multipurpose stadium, and a comparison of that base program to certain other NFL stadiums. Each stadium program was viewed as a specific solution to the market and particular business model of its host city. Again in 2021, AECOM was engaged to revisit the conclusions of our initial effort to create and define the financial position for the public body. Our scope included comprehensive market impact analysis and creation of multiple stadium delivery models for renovation of the existing stadium as compared to new build alternatives. For each of these the AECOM team provided detailed financial analysis and developed programs and associated cost plans to inform planning and development pathways for the city and state. Our analysis explored the larger regional economic impact potential of stadium investment beyond game day, including alternate sites and venue configurations.

Key Features and Innovations:

- Identified and assessed a range of potential stadium sites, considering real estate, infrastructure, accessibility, and community impact
- Included both graphic depictions and a written examination of those shortlisted sites that had the best potential for successfully implementing an NFL stadium
- Created cost and revenue models tailored to the Buffalo market
- Evaluated the larger economic impact potential of stadium investment beyond game day, including alternative sites and venue configurations



Bird Island WWTF Secondary System Rehabilitation and Expansion, Phases I and III

Location

Buffalo, NY

Overall value

Phase I: \$72M (Total const. cost)
Phase III: \$175M (Est. const. cost)

Client / Contact

Buffalo Sewer Authority
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Improvements
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Completion date

Ongoing

AECOM's Phase I and III rehabilitation and expansion design will result in renewed critical infrastructure assets to support the long-term growth and resurgence of the City of Buffalo.

The Buffalo Sewer Authority (the Authority) developed a Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) to increase the capacity of the sewer system as well as the Bird Island Wastewater Treatment Facility (BIWWTF) over a 20-year period. The improvements are being implemented in three phases:

- Phase I - Rehabilitating the biological system to improve treatment of current flows
- Phase II - Upgrading the physical treatment system to improve treatment of current flows and provide disinfection of discharges into the Niagara River during wet weather events
- Phase III – Expansion of the biological system to handle more flow through the WWTF during wet weather



The Authority contracted with AECOM to study, design, and provide construction phase services on the Phase I and III improvements and to assist in obtaining Federal and State funds through programs with NYSDEC and NYSEFC.

Phase I Improvements, which are currently in construction, include the following process upgrades:

- Upgrade the plant's aeration system by removing and disposing of the debris in the aeration tanks, installing new fine bubble diffused aeration systems in the sixteen Aeration Tanks, replacing and installing new coarse bubble diffusers in the Influent and Effluent Channels, installing ninety new slide gates at the influent and effluent pipes in the Aeration Tanks, and performing miscellaneous concrete repairs.
- Upgrade the Return Activated Sludge (RAS) System with new ductile iron pipe, butterfly valves and actuators, gate valves, and flow meters.

Maintenance of Plant Operations (MOPO) to remain compliant with the NPDES permit throughout construction is a major consideration for the Authority. AECOM has utilized a continuing MOPO evaluation throughout the Phase III project to assist in the decision-making process.

- Replace the influent wastewater butterfly valves, actuators and flowmeters and clean the influent and effluent wastewater pipes of all debris.
- Upgrade the Waste Activated Sludge (WAS) System with new butterfly valves and actuators.
- Install two new Aeration Tank Influent Channel stainless steel slide gates, install eight new Chlorine Contact Tank cast iron sluice gates, and install three new Settled Wastewater Wet Well cast iron sluice gates, providing new motor actuators and SCADA integration for all.
- Clean the Settled Wastewater Wet Well and Drainage Wet Well of all debris.
- Relocate and upgrade existing exhaust fans, sump pumps, and scum pots.

Phase III Improvements, which are currently in design by AECOM, include the following process upgrades:

- Rehabilitation of the sixteen Battery A and B Final Settling Tanks including the evaluation and replacement of gates, control valves, actuators, sludge blanket meters, and associated electrical and controls equipment in the Final Controls Building.
- Design of two new 22.5 MGD Final Settling Tanks to increase the capacity of Battery A and Battery B to achieve a total hydraulic throughput of 400 MGD through the secondary treatment process.
- Evaluation and design of a new 90 MGD Chlorine Contact Tank including modifications to the existing Chlorine Contact Tank influent and effluent channels to connect the existing tanks to the new CCT.
- Rehabilitation of the existing Battery A and B Final Control Buildings including full building envelope upgrades to doors, windows, and walls and replacement of the HVAC and electrical systems.
- Evaluate implementation of secondary screening upstream of the existing Aeration Tank Influent Channel to protect downstream assets.
- Upgrades to the influent and effluent scum beaches in the Battery A and B Final Settling Tanks.
- Upgrades to the Settled Wastewater Pump Station including retrofit of an existing constant speed pump with a new eddy current drive to match existing, as well as full replacement of medium voltage switchgear and associated electrical and control systems.
- Development of custom energy incentive packages to maximize rebate dollars for energy efficient improvements.

For the Phase I upgrades, AECOM assisted the Authority in securing close to \$30 Million in State and Federal grants through programs with NYSDEC and NYSEFC. As part of AECOM's Phase III design, coordination with funding agencies continues with the objective of securing additional grants and low interest loans to assist in funding the improvements.



Capital Improvement Projects and Onsite Monitoring

Location

Niagara Falls, NY

Overall value

~\$100M

Client / Contact

Niagara Falls Water Board
Richard R. Roll, PE, DEE, F. WEF
Director of Technical & Regulatory Services
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Completion date

Ongoing

By improving the effluent weir system in the primary clarifiers, the WWTP has clarifier weir lengths that comply with industry standards and has improved primary clarifier operations.

Since 2017, AECOM is and has been contracted to work with the Niagara Falls Water Board (NFWB) to provide professional engineering consulting services on a variety of critical engineering projects at the NFWB wastewater treatment plant (WWTP).

AECOM also provides NFWB with Onsite Environmental Monitoring at the WWTP to provide oversight, recommendations, and guidance for the NFWB WWTP's operations and maintenance, contributing to enhancements in various aspects of the treatment process.

A sample of the projects assigned and executed include:



Sedimentation Basin & Scum Removal System Improvements

AECOM provided design service to upgrade the WWTP sedimentation basins, including replacement of the traveling bridge scum collector, replacing mechanical drives, extending effluent weirs for compliance, modifying the chain and flight system, upgrading the submersible pumping system, and enhancing the Scum Building with new pumps, screens, heaters, piping, and controls. These improvements eliminated excessive maintenance, ensure compliance with standards, and enhance the overall operation of the NFWB WWTP.

Granular Activated Carbon (GAC) and Carbon Filter Gravel Replacement

AECOM developed an engineer's report, contract drawings and specifications, bid phase services, construction inspection, management, and record drawing preparation for NFWB to improve the plant's granular activated carbon system. The design and construction effort removed, disposal, and replaced spent GAC and filter support gravel, as well as inspecting and cleaning the carbon filter interior.

Biological Treatability & Chlorine Dioxide Pilot Study

In preparation for NFWB's consent decree, AECOM assisted on a biological treatability study which involved an 8-month pilot study to evaluate the effectiveness of two biological treatment technologies:

- An activated sludge process with a membrane biological reactor (MBR)
- An attached growth system using moving bed biological reactors (MBBR)

The study demonstrated the treatability of wastewater, assessed seasonal influent impacts, and provided NFWB with design parameters for potential future use of biological treatment processes at the NFWB WWTP.

The chlorine dioxide study involved assessing chlorine dioxide as an oxidizer injected to the NFWB carbon filter influent with the goal of reducing or preventing sulfide formation. Various testing parameters were collected to compare the effects of two oxidants, sodium hypochlorite and chlorine dioxide, on the carbon filter, with the goal of determining whether there is an improvement in meeting effluent chlorine demand requirements.

Effluent Disinfection System Upgrades

AECOM provided design and construction services to upgrade the WWTP effluent disinfection to address challenges due to elevated sulfide and reduced iron concentrations that were affecting the plant's effluent. The installed system which has been in operation since 2021, includes four chemical feed pumps with variable frequency drives, six TRC analyzers for process control, and a sophisticated automated control algorithm, resulting in improved effluent TRC values and a more favorable effluent color.

Gorge Pumping Station Evaluation

AECOM inspected the pumping station, interviewed operations and maintenance staff and evaluated the current capacity of the facility. The work included detailed evaluation of the condition of the pumps, hydraulic evaluation, vibration analysis, power analysis, VFD analysis and also considered structural deterioration at the station. Our findings were summarized in a report to the Water Board that included various rehabilitation options and their associated construction costs. The report was submitted to and approved by the NYSDEC to satisfy the Consent Order.

Sodium Hypochlorite Improvements

This project involved providing engineering design and construction phase services for NFWB WWTP improvements including the replacement of Sodium Hypochlorite Storage Tank 216 with provisions for secondary containment as per regulations. Additionally, the project includes the installation of two new sodium hypochlorite addition pumps for carbon filter backwash water and related improvements in the Odor Control Building to support these enhancements.



Wastewater Treatment Plant Effluent Disinfection System Upgrades

Location

Niagara Falls, NY

Overall value

\$3.2M

Client / Contact

Niagara Falls Water Board
Richard R. Roll, PE, DEE, F. WEF
Director of Technical & Regulatory Services
E: rroll@NFWB.org
T: (716) 299-7809

Completion date

2021

Fast-tracked design and implementation of an advanced disinfection control system that optimized chemical dosing and achieved consistent regulatory compliance under highly variable chlorine demand conditions.

AECOM provided planning, design, and construction-phase services for a fast-track effluent disinfection system upgrade completed within a one-year schedule to satisfy a New York State Department of Environmental Conservation (NYSDEC) Order on Consent. Construction was implemented through existing mechanical, electrical, and instrumentation term contracts, allowing critical improvements to be delivered while maintaining continuous plant operations.

The Niagara Falls Water Board (NFWB) Wastewater Treatment Plant presents a unique disinfection challenge due to its physical-chemical treatment process, which utilizes activated carbon adsorption rather than conventional biological secondary treatment. Elevated sulfide and reduced iron concentrations in the effluent create exceptionally high and rapidly fluctuating chlorine demand. Although the facility treats less than 30 MGD on average, sodium hypochlorite consumption routinely approaches 20,000 gallons per day of 12% to 15% solution, with demand varying by as much as 50% to 70% within minutes due to filter backwashing and changes in filter operation. The existing disinfection system consisted of a single manually operated hypochlorite feed pump and a compliance-point total residual chlorine (TRC) analyzer located approximately 1.5 hours downstream of the injection point. This significant hydraulic lag prevented effective process control and resulted in highly variable effluent TRC concentrations ranging from non-detect to greater than 5 mg/L.



AECOM developed an advanced automated disinfection control system incorporating four variable-frequency-drive chemical feed pumps, dual hypochlorite injection locations, inlet mixing enhancements, and six strategically located TRC analyzers distributed throughout the five-pass chlorine contact tank. Dedicated sample pumping systems allow all analyzers to be housed indoors, improving reliability and maintainability. TRC data are collected every 2.5 minutes and integrated into a sophisticated control algorithm that continuously adjusts dosing rates based on flow conditions, chlorine demand, and real-time residual measurements.

The upgraded system provides full redundancy and operational flexibility, allowing any feed pump to draw from either bulk storage tank and deliver chemical to either injection location. Since startup in 2021, the system has consistently maintained effluent TRC concentrations within the target range of 1 to 2 mg/L, compared to the previous operating range of 0 to greater than 5 mg/L. The project significantly improved process stability, regulatory compliance, operator control, and disinfection reliability while establishing a robust long-term solution for one of the most challenging wastewater effluent applications in New York State.

Biological Treatability Pilot Study and Preliminary Design Evaluation

Location

Niagara Falls, NY

Overall value

\$700,000

Client / Contact

Niagara Falls Water Board
Richard R. Roll, PE, DEE, F. WEF
Director of Technical & Regulatory Services
E: rroll@NFWB.org
T: (716) 299-7809

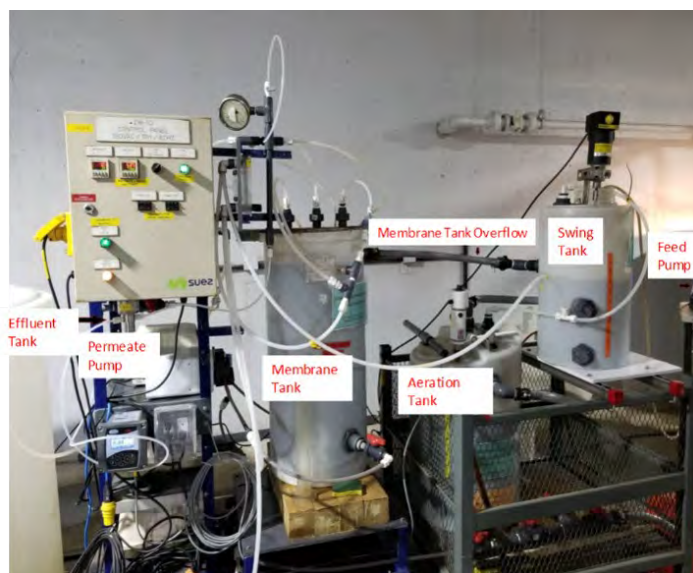
Completion date

2019

The project assessed advanced biological treatment alternatives through an eight-month pilot program, demonstrating the viability of both MBR and MBBR processes for achieving future regulatory compliance and treatment objectives.

AECOM assisted the Niagara Falls Water Board (NFWB) with developing, operating, and testing a pilot-scale system of two (2) biological treatment technologies to evaluate the efficacy of treating their wastewater using a biological-based process. The two (2) biological systems that were tested included an activated sludge process with a membrane biological reactor (MBR) and an attached growth system using moving bed biological reactors (MBBR). This evaluation was conducted as part of a Consent Order.

To investigate the biological treatability of this wastewater, flow-through biological pilots were constructed, started up, acclimated, and operated at steady state at the NFWB wastewater treatment plant (WWTP). AECOM conducted daily monitoring and sampling/analyses of the pilot systems to verify the degree of treatment that can be achieved with biological processes. The systems were continuous-flow units that required daily monitoring, testing, and maintenance.



The Membrane Bioreactor (MBR) pilot, coordinated by AECOM, confirmed the viability of an MBR as part of NFWB's consent decree process improvements.

The foremost goal of the pilot study was to demonstrate treatability and confirm the design parameters needed to achieve estimated effluent quality based on local permits for representative full-scale WWTPs using biological treatment processes. The two systems were tested over an 8-month period to evaluate seasonal impacts to the biological systems. Specifically, cold weather testing and the impacts on the processes' ability to nitrify were evaluated. In general, it was preferred to operate the pilot systems for a long enough time to see potential impacts that would be expected in full-scale operation such as diurnal and seasonal changes (i.e., temperature impacts and source water changes due to storms) and potential source water changes from industrial and municipal users. Multiple testing conditions were implemented to confirm the biological treatability of the wastewater and verify design conditions. This information was used to develop preliminary design alternatives and cost estimates for the client to make sound business decisions regarding the potential future use of biological treatment processes at their WWTP. The piloting determined the viability of both the MBR and the MBBR to meet future effluent limits at the NFWB WWTP. The twenty-year life cycle cost analysis determined the present worth cost of each alternative.

Treatment Plant Phase 1 – Sedimentation Basin and Scum Removal System Improvements

Location

Niagara Falls, NY

Overall value

\$ 11M

Client / Contact

Niagara Falls Water Board
Richard R. Roll, PE, DEE, F. WEF
Director of Technical & Regulatory Services
E: rroll@NFWB.org
T: (716) 299-7809

Completion date

2021

The Sedimentation Basin and Scum Removal Improvements Project modernized critical clarification and residuals handling infrastructure, reducing maintenance requirements while improving system efficiency and compliance with current design standards.

AECOM was contracted to perform study and design phase services to Niagara Falls Water Board to improve the Sedimentation Basins and Scum removal system.

The project includes the following scope:

- Replace the existing traveling bridge scum collector in Sedimentation Basins 2 – 5 with new chain and flight systems to eliminated excessive maintenance.
- Upgrade all Sedimentation Basin mechanical drives including the grit screws, sludge screws, and flocculation basin chain and flight sludge collectors.
- Extend the existing effluent weirs to provide effluent weir lengths that are compliant with Ten State Standards.
- Modify existing chain and flight system in Sedimentation Basin 1 to fit the new effluent weirs.
- Upgrade the existing submersible pumping system in Sedimentation Basin 5 to facilitate improved operation of the pumping system.
- Improve the Scum Building with new pumps, scum screens, heaters, piping and controls.



Erie County Sewer District (ECSD) No. 6, Lackawanna WRRF Digester & Solids Management Upgrades

Location

Erie County, NY

Completion date

Report Complete 08/2021

Design Complete: 05/2022

Construction Complete: 2024

Overall value

General/Mechanical Contract

Engineer's Estimate: \$5,052,410

Bid Price: \$5,220,625

Electrical Contract

Engineer's Estimate: \$405,000

Bid Price: \$304,000

Client / Contact

Erie County DEP

Mr. Joseph Fiegl, PE,

Deputy Commissioner

95 Franklin Street

Buffalo, New York 14202

(716) 856-7537

The Lackawanna WRRF Sludge Handling Improvements Project enhances long-term performance and system redundancy by upgrading critical biosolids infrastructure, including digesters, sludge conveyance systems, mixing equipment, and associated process facilities.

AECOM evaluated and prepared an Engineering Report for the existing sludge handling system at the Lackawanna Water Resource Recovery Facility (WRRF). Several site inspections, including confined space entry into the Step 2 digester, were completed to assess the system conditions. The evaluation included replacement options for the digester covers, including fixed, floating, gas holder and membrane covers for Step 2 and Step 3 digesters and additional equipment to give the facility redundancy. Cost estimates were created for all the options and recommended replacing Step 2 and 3 with floating gas holding covers.

After the completion of the design report, AECOM designed the replacement digester covers and sludge conveyance systems.

The project includes the following work:

- Removal of the 30-foot diameter intestinal wall in the Step 2 digester.
- Installation of a new 50-foot diameter gas holding floating cover for Step 2 and Step 3 digesters
- Installation of new pumped mixing systems to facilitate digester mixing.
- Replace all interior digester piping and supports.
- Install 6 hose pumps for thickener underflow, sludge conditioning tank feed, and waste activated sludge,
- Install new heat exchanger, condensate traps, and sedimentation traps.
- Replace existing 6-inch and 8-inch valves that are currently inoperable.
- Upgrades to existing MCC including new HVAC.

AECOM provided construction management and full-time Resident Engineer inspection services during the construction of the project. The project was funded with American Rescue Plan funds and completed in 2024.



Erie County Sewer District No. 3, Rush Creek Interceptor, Blasdell Milestrip Wet Weather Relief Pumping Station and Forecmain

Location

Blasdell, New York

Completion date

Design: 2014

Construction: 2017

Overall value

Engineering Estimate: \$6,630,000

Bid Price: \$6,642,525

Final Cost: \$6,017,025

Client / Contact

Erie County Department of Environment and Planning

Garry Pecak, PE, Project Manager

Phone: (716) 858-8390

Garry.Pecak@erie.gov

AECOM was contracted to perform design, bid and construction phase services for the Erie County Department of Environment and Planning with two major goals to:

- Eliminate occurrences of sewage overflows into nearby water ways
- Eliminate aging pump station and treatment facilities.

AECOM completed hydraulic modeling of the tributary watershed and determined the inline storage capacity of the existing sewer system. To address these issues, the “Rush Creek Interceptor,” a portable wet weather relief pumping station and force main was designed and constructed as part of this project. The interceptor sewer receives all of the wastewater flows that are tributary to the Blasdell Wastewater Treatment Plant, which also includes wastewater currently being pumped at two pump stations along the interceptor’s route. A wet weather relief diversion structure with portable sewage pumps is located at the existing Milestrip Pumping Station to divert flow out of the Rush Creek Interceptor and pump it into a new force main. The new force main was installed to the Southtowns Advanced Wastewater Treatment Facility and will be used to convey the pumped wet weather flow from the pumping station. Also, as part of the project, a 15-inch relief sewer will be constructed on LaBelle Avenue in Blasdell so that the LaBelle Avenue sanitary sewer overflow pump station can be decommissioned as well.



The project includes the following scope:

- Design and construction of 4,200 lineal feet of 18, 15, and 30-inch gravity sanitary sewer interceptor (Rush Creek Interceptor), which when put into service eliminates the Blasdell Wastewater Treatment Plant, four pump stations, and all permitted, active sanitary sewer overflows within the sewershed.
- Design and construction of 2,800 lineal feet of 24-inch sanitary sewer force main, which will have dual outlet capability; the first outlet will be at the headworks of the Erie County Southtowns Advanced Water Treatment Facility; the second outlet will be at the overflow retention facility of the Erie County Southtowns Advanced Water Treatment Facility. It will be standard operating procedure to outlet to the headworks first and the overflow retention facility second.
- Design and construction of a permanent diversion structure and support facilities for a series of portable pumps to divert sewage from the Rush Creek Interceptor to the force main during high flow events to eliminate surcharging of the Rush Creek Interceptor. Work includes installation of sluice gates and actuators, electrical work and controls, construction of new parking lot with pipe bollards, sidewalks, stairs, fencing, restoration, landscaping, and miscellaneous site work.
- Selected segments of the gravity sewer and forcemain shall be installed by boring or creek crossing, including crossing under four active railroad crossings, NYS Route 5 traffic circle, NYS Route 179, and Rush Creek.

Town of Amherst Water Pollution Control Facility Upgrades

Location

Amherst, NY

Completion date

2021

Total Cost Estimate

Filters: \$4.8M
Digesters: \$450,000
Building 3&40 Sludge: \$3.4M
Polymer: \$430,000
Scum System: \$447,000
Actuators: \$564,000
Dewatering Upgrades: \$2.36M
Clarifier/Grit Air System: 5.43M
Disinfection and Metering: 3.48M

Client / Contact

Town of Amherst
Engineering Department
455 Tonawanda Creek Rd.
Amherst, New York 14228
Mr. Jeff Angiel
Phone: (716) 691-4331

For more than a decade, AECOM has partnered with the Town of Amherst to successfully modernize nearly every major treatment process at the WPCF while maintaining uninterrupted operations and regulatory compliance.

Over more than a decade, AECOM (formerly URS) has served as a trusted engineering partner to the Town of Amherst, providing planning, regulatory coordination, design, bidding, construction administration, and resident engineering services for a series of major capital improvements at the Water Pollution Control Facility (WPCF). These projects have modernized critical treatment processes, replaced aging infrastructure, improved operational reliability, enhanced regulatory compliance, and extended the useful life of key treatment assets while maintaining continuous plant operations.

AECOM's work has spanned virtually every major process area within the facility. Improvements began with the replacement of six deteriorated traveling bridge sand filters with Aqua-Aerobics AquaDiamond cloth media filters, the first installation of its kind approved in New York State. AECOM successfully documented process performance, secured New York State Department of Environmental Conservation approval, and provided procurement and construction support. Additional solids handling and treatment upgrades included rehabilitation of two anaerobic digesters, replacement of digester heating infrastructure and boilers, conversion of four primary clarifiers from traveling bridge sludge collection systems to chain-and-flight collectors, modernization of scum collection and conveyance systems throughout the plant, installation of a new automated polymer feed and storage system, and replacement of obsolete dewatering equipment with a new high-capacity centrifuge and screw conveyor system to improve reliability and provide operational redundancy.



Key Project Components:

- Tertiary Filter Replacement
- Anaerobic Digester Cleaning and Rehabilitation
- Buildings 3 and 40 Sludge Collection System Modifications
- Polymer System Replacement
- Scum System Replacement
- Building 1 Motor Actuator Replacement
- Centrifuge No. 6 Installation and Dewatering Process Improvements
- Clarifier, Pump Station, and Grit Air System Improvements
- Disinfection and Metering System Improvements



AECOM also completed critical process and hydraulic infrastructure improvements. Headworks upgrades included replacement of nine flood-prone electric gate actuators with hydraulic actuators and installation of new hydraulic power and control systems to maintain reliable operation during wet weather events. Clarifier and pump station improvements included installation of eight new clarifier collection systems, rehabilitation and recoating of deteriorated concrete and steel structures, conversion to spiral blade sludge collection technology, installation of sludge monitoring instrumentation, and SCADA upgrades. Grit removal improvements included new coarse-bubble aeration systems, centrifugal blowers, and air distribution piping to enhance grit collection efficiency. Additional hydraulic improvements included new flow metering facilities, replacement of large, actuated slide gates, and modernization of diversion and metering structures throughout the plant.

Most recently, AECOM designed and oversaw comprehensive upgrades to the facility's disinfection and chemical feed systems, including replacement of sodium hypochlorite and sodium bisulfite feed equipment, new chemical transfer systems, instrumentation, analyzers, PLC-based controls, phosphorus removal system improvements, ferric chloride feed system upgrades, and extensive SCADA integration. These projects also included rehabilitation of sluice gates, installation of new magnetic flow meters and level measurement devices, and replacement of aging buried process piping.

Collectively, these projects demonstrate AECOM's extensive familiarity with the Town of Amherst WPCF, proven ability to deliver complex wastewater treatment rehabilitation projects within active operating facilities, and commitment to improving treatment reliability, process performance, operational efficiency, and regulatory compliance through innovative and cost-effective engineering solutions.



New York State Parks: Engineering Assessments

Location Statewide, NY	Overall value \$ 2.7M	Client / Contact NYS Parks, Recreation and Historic Preservation Michael Tesik, PE 625 Broadway Albany NY 12207 T: 845.786.2701 ext. 228
Completion date Ongoing		

Delivering dam safety assessments, design, and emergency action planning for New York State Parks, supporting the management and improvement of multiple high- and intermediate-hazard dams across New York State.

New York State Parks, Recreation and Historic Preservation (NYS Parks) owns and operates a series of recreational and water supply reservoir/dams statewide, among which at least 18 dams are in the Palisades Region and two (2) dams in the Taconic Region. Eight dams have been identified as Class “C” high hazard, and eight (8) dams as Class “B” intermediate hazard structures where a dam failure can pose serious threat to human life or property.

AECOM conducted Engineering Assessments (EAs) for 14 dams involving documentation reviews, dam safety inspections, H&H assessments using the HEC-HMS and HEC-RAS models, and stability analysis. In addition, AECOM performed an underwater inspection of the spillway and low-level outlet conduit for each of the dams. An EA Report was prepared and submitted for each dam. The Emergency Action Plan (EAP) with inundation mapping was updated for Lake Kanawauke Dam.



Based on the results from the EA, AECOM conducted a detailed evaluation of the sluice gate at the 36-inch low level outlet conduit at Lake Welch Dam (Class “C”) due to severe leakage around the gate. An ultrasonic thickness testing and a structural evaluation were conducted to determine the structural integrity of the sluice gate disk and gate leaf.

Based on the above engineering assessment, AECOM provided design services for the replacement of sluice gates for five (5) dams located in Orange County and Rockland County including Lake Welch Dam and submitted both 50% and 100% designs. AECOM also provided engineering design service to repair the broken concrete of the sluice gate control platform at Lake Tiorati Dam. AECOM performed dam engineering services for the removal of Tillson Lake Dam in Ulster County, including conceptual 60% and 90% designs.

AECOM also performed design services for the rehabilitation of the drop-inlet spillway and low-level outlet structure at the Olana Historic Site Dam in Columbia County.

USACE: Engineering, Design, and Related Services

Location

Various Locations

Overall value

\$7.2M

Client / Contact

United States Army Corps of Engineers (USACE), USACE
Huntington District (Contract W91237-15-D-0002)
Kristin Blake, Contract Specialist
502 8th Street, Huntington, WV 25701
T: 304.399.5693

Completion date

2020

Under this IDIQ, AECOM supported USACE and their mission to plan, design, construct, modify, operate, and control civil works and flood control projects, including reservoirs and dams and navigation projects. Projects included studies, inflow design flood updates (including extensive H&H modeling), technical reviews, risk analysis, computational fluid dynamics (CFD) modeling, instrumentation database management. Example projects across the Reclamation areas and sub-disciplines are summarized below:

St. Mary's Falls, Soo Lock Complex, MI Center Dike and Cable Relocation Master Plan.

Completed an Alternative Development Report and Master Plan Report for proposed improvements to the Center Dike, including utility relocation; permanent vehicle and heavy equipment access bridging; vehicle and heavy equipment access road; improvement of center dike structures and embankments; and footbridge demolition.



Bolivar Dam, OH Seepage Barrier Joints Remediation and Recommended Improvement Review. Participated on the USACE Review Team to evaluate the seepage barrier. Provided experts to support review of the construction of partial cut-off seepage barrier at Bolivar Dam.

Dover Dam, OH Construction Support, Anchor Review and Foundation Report. Supported a comprehensive review of available architecture and engineering data associated with construction to prepare Foundation Reports to document construction.

Grenada Dam, MS Seismic Safety Study, Evaluation of Seismic Response and Dam Safety. Conducted a seismic safety study, evaluation of seismic response and dam safety, including data review, strength characterization, post-earthquake static equilibrium slope stability analysis, 3-dimensional finite element analysis, and report.

Bluestone Dam, WV. Completed a failure analysis of DYWIDAG anchor bars originally installed, including reviewing test data to determine if the data meet, exceed, or fail to meet requirements of ASTM A7222, testing of failed anchor bars. Set up and conducted CFD modeling of the spillway and energy dissipation structures, including evaluating dozens of different scenarios.

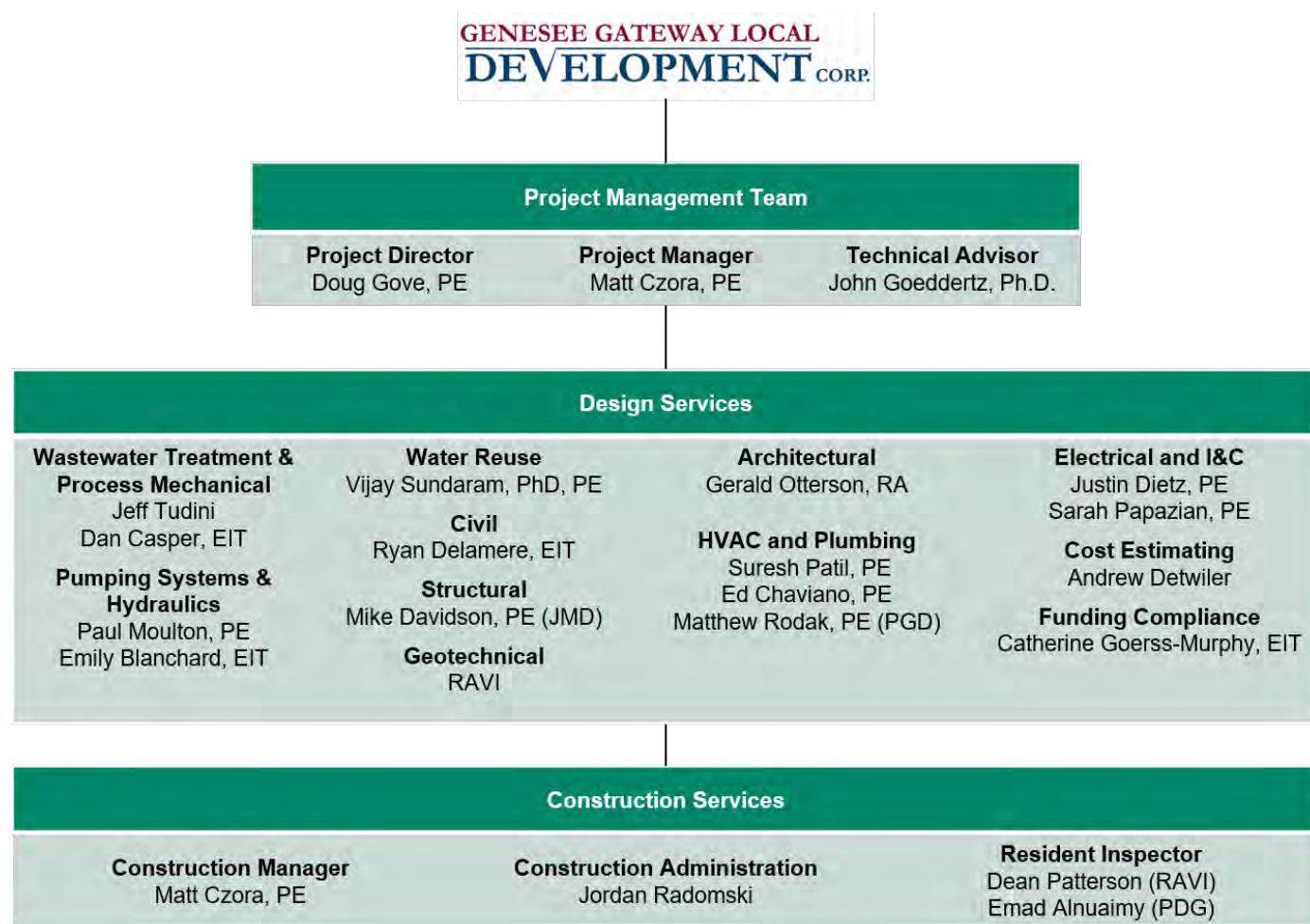
Cherry Creek Dam, CO Value Engineering Study and DSMS Constructability Review. Participated on the USACE review team and conducted a value engineering study as part of evaluating potential dam safety modifications and prepared and conducted a Dam Safety Modification Cost Engineering Workshop for staff.

Mosul Dam, Iraq Dam Safety Modification Study (DSMS) Quality Control and Consistency (QCC) Review. Conducted a QCC review (geotechnical and geology) review of Mosul Dam DSMS, including reviewing dam safety study, risk analysis, potential modification alternatives, and recommendations.

3. Project Team

3.1. Org Chart

AECOM has assembled a highly experienced, multidisciplinary team specifically tailored to meet the unique technical, regulatory, funding, and stakeholder coordination needs of the Genesee Gateway Local Development Corporation's proposed water storage, wastewater recycling, and treatment facilities project. As illustrated in the following organization chart, our team combines local leadership with specialized subject matter experts in process engineering, water reuse, storage tank design, permitting, funding compliance, and construction services. This integrated structure establishes clear accountability, efficient communication, and seamless collaboration through feasibility evaluation, alternative selection, design, permitting, bidding, and construction, making sure the project is delivered safely, efficiently, and on schedule.



3.2. Project Management

AECOM’s project management approach is founded on providing a single point of accountability, proactive communication, and seamless coordination across all technical, regulatory, and stakeholder interfaces. Successful delivery requires more than technical expertise alone for a project that will evaluate wastewater treatment, water reuse and recycling opportunities, water storage infrastructure, permitting requirements, funding strategies, and potential implementation pathways. It requires disciplined project leadership capable of aligning multiple priorities while maintaining momentum toward informed decision-making. Our approach combines structured project controls, regular stakeholder engagement, risk-based planning, and collaborative problem solving to make sure project objectives, schedule, budget, and quality expectations remain aligned throughout the assignment.

Leading this effort will be **Matthew J. Czora, PE**, who will serve as Project Manager and primary point of contact for GGLDC. Mr. Czora is known for building collaborative relationships with clients, regulators, facility operators, and project stakeholders while maintaining a strong focus on project execution and delivery. He will be responsible for overall project leadership, coordination of AECOM’s multidisciplinary team, management of project scope and schedule, facilitation of key decision points, and oversight of quality management activities. Through regular progress meetings, clear communication protocols, and transparent reporting, Mr. Czora will make sure GGLDC remains informed and engaged throughout every phase of the project.

Mr. Czora has extensive experience managing complex water and wastewater infrastructure programs throughout New York State, including planning, design, funding coordination, construction administration, and program management services. He previously served as Project Officer for Chemung County’s approximately \$275 million Wastewater Treatment Plant Consolidation Program, where he leads multidisciplinary teams responsible for major treatment process improvements, pumping systems, solids handling facilities, electrical infrastructure, and regulatory coordination. He also previously served as Program Manager for Monroe County’s \$73 million Frank E. Van Lare Water Resource Recovery Facility Capital Improvement Program, successfully guiding multiple concurrent projects from planning through construction while coordinating engineering, operations, and construction stakeholders.

This combination of large-program leadership and hands-on project delivery experience positions Mr. Czora to effectively manage the technical, financial, and stakeholder considerations associated with GGLDC’s initiative. Supported by AECOM’s deep bench of water, wastewater, permitting, funding, and construction specialists, he will provide the leadership necessary to evaluate alternatives, identify practical and implementable solutions, and establish a clear roadmap for future project development. By maintaining continuity of key personnel from project initiation through implementation, AECOM’s One Team approach makes sure recommendations developed during planning can be efficiently advanced into design, permitting, and construction, reducing risk and maximizing long-term value for GGLDC.

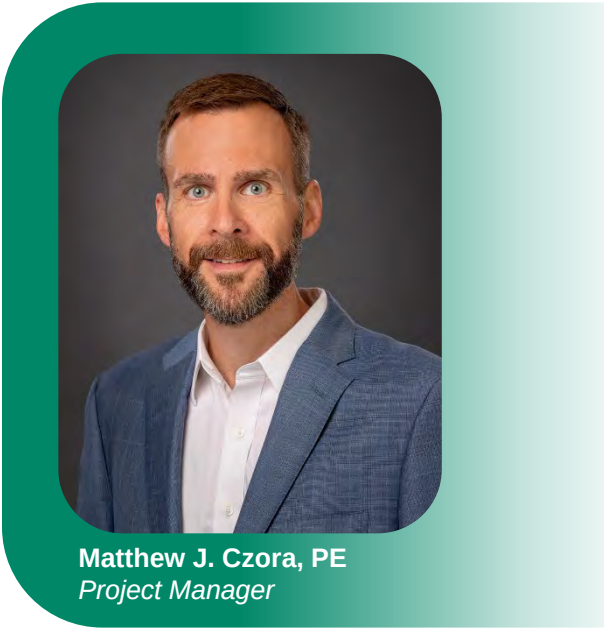


Figure 3. Project Life Cycle



3.3. Subconsultants

AECOM believes that exceptional project delivery is built on strong partnerships, and that philosophy extends to the trusted subconsultants we engage on our teams. Our approach to M/WBE participation goes beyond simply meeting contractual or funding requirements. We view these firms as valued project partners whose local knowledge, specialized expertise, and community connections strengthen the overall project team and contribute directly to successful outcomes for our clients. By intentionally creating meaningful opportunities for small, minority-, and women-owned businesses, we help support the long-term growth and sustainability of local firms while delivering broader economic benefits to the communities we serve.

Over many years, AECOM has cultivated lasting relationships with a diverse network of highly qualified M/WBE firms that share our commitment to quality, responsiveness, and client service. Rather than assembling teams solely to satisfy participation goals, we strategically partner with firms with whom we have successfully delivered projects and established a foundation of trust, collaboration, and mutual accountability. These long-standing relationships allow our teams to work seamlessly together, communicate efficiently, and provide a consistent level of service throughout project delivery. The result is a fully integrated team that functions as a unified organization, leveraging the strengths of each partner to provide the best value to the client.

AECOM is committed to providing our subconsultant partners with meaningful and impactful roles that align with their expertise and capabilities. We actively involve our teaming partners in project planning, design development, stakeholder engagement, and project delivery activities, ensuring that their contributions are fully integrated into the project's success. This collaborative approach not only supports participation goals but also creates a stronger project team, enhances innovation, and provides our clients with the benefits of both AECOM's global resources and the specialized knowledge and local presence of trusted small business partners. Through these enduring relationships, we deliver projects that advance client objectives while supporting the continued growth and success of the local business community.



JM Davidson Engineering, D.P.C. (JMD) is a Western New York-based, civil engineering consulting firm founded in 2015 that provides water and wastewater, structural, transportation, water resources, and railroad engineering services. Certified as both a Women Business Enterprise (WBE) and Disadvantaged Business Enterprise (DBE), JMD supports municipal, utility, and transportation clients with planning, design, and construction-phase services. ***JMD will be providing structural design services.***



Popli Design Group (PDG) is a certified Minority Owned Business (MBE) founded in 1982 that provides multidisciplinary architecture and engineering services on planning, design, surveying, and construction support services for transportation, municipal, water/wastewater, building, and infrastructure projects. With offices throughout New York and New Jersey, PDG serves public and private sector clients through an integrated team of architects, engineers, surveyors, and construction professionals. ***PDG will be providing HVAC, plumbing, and construction phase services.***



Ravi Engineering & Land Surveying, P.C. (RAVI) is a certified MBE consulting firm with a staff of 104 located in Rochester, Buffalo, Binghamton and Albany, New York, and Pittsburgh, Pennsylvania. RAVI specializes in providing state-of-the-art structural, environmental, and geotechnical engineering, in addition to construction inspection, code compliance and land surveying services. Established in 1995, the firm is committed to providing technically sound solutions to our clients that include state, municipal and private organizations. ***RAVI will be providing geotechnical and construction phase services.***

4. Contractor Friendly Approach

AECOM has built a reputation for developing contractor-friendly plans, specifications, and contract documents by integrating construction expertise throughout the project lifecycle. Rather than treating design and construction as separate phases, AECOM employs an integrated project delivery approach that brings together construction managers, resident engineers, field inspectors, startup specialists, and design professionals from project inception through completion. During design, our construction professionals participate in constructability reviews, risk assessments, sequencing evaluations, maintenance of operations planning, and cost analyses to help confirm projects can be constructed efficiently, safely, and cost-effectively. This collaborative process results in practical, buildable contract documents that minimize ambiguity, reduce contractor risk, and support competitive bidding.

AECOM's teams include professionals with extensive construction, commissioning, startup, and field engineering experience who understand the realities contractors face in the field. Their practical knowledge informs design decisions related to site access, equipment installation, bypass operations, temporary facilities, utility coordination, construction phasing, and maintenance of operations. By evaluating these considerations throughout design, AECOM develops solutions that meet owner objectives while supporting efficient construction and successful project delivery.

A key differentiator of AECOM's approach is the continuity of personnel between design and construction. The same design professionals who develop the plans and specifications remain actively involved throughout construction, providing direct knowledge of project objectives, assumptions, and constraints. This continuity allows RFIs, field conditions, shop drawing reviews, and design clarifications to be resolved efficiently, reducing the learning curve often associated with project transitions and providing both the owner and contractor with responsive technical support.

AECOM also recognizes contractors as valuable project partners. Throughout construction, our team maintains a collaborative working relationship with the owner and contractor, carefully considering field observations, contractor concerns, and value engineering recommendations. When opportunities arise to improve safety, constructability, schedule, or cost-effectiveness while maintaining project requirements, AECOM works with project stakeholders to evaluate and implement beneficial solutions.

AECOM's One Team Approach

Our designers and construction professionals function as a single integrated team from project planning through final completion. Construction expertise is embedded throughout design to enhance constructability and reduce risk, while key design staff remain actively involved during construction to provide continuity, rapid issue resolution, and seamless communication between the owner, contractor, and engineer.



5. Why AECOM

AECOM offers GGLDC far more than technical expertise. We bring the leadership, local presence, agency relationships, and dedicated resources necessary to deliver this project successfully and on schedule. AECOM is committing a core Western New York leadership team led by **Matt Czora, PE**, Project Manager, and **Jeff Tudini, PE**, Wastewater Treatment and Process Mechanical Lead. Together, they provide the ideal combination of local project leadership and nationally recognized wastewater expertise. Supported by AECOM's deep bench of civil, environmental, structural, electrical, process, permitting, and construction professionals, GGLDC can be confident that the right resources will be available when needed, providing responsiveness, continuity, and accountability throughout the project lifecycle.

Local Expertise

AECOM's Buffalo-based team has been delivering critical infrastructure projects throughout Western New York for decades. Led by Matt Czora, our team understands the unique challenges associated with industrial development, utility infrastructure, permitting, funding, and construction in the region. We have successfully partnered with organizations including the Niagara Falls Water Board, Buffalo Sewer Authority, Erie County Department of Environment and Planning to advance complex infrastructure programs from planning through construction. This local knowledge allows us to proactively address challenges, engage stakeholders effectively, and make informed decisions quickly, reducing risk and keeping projects moving forward.

Proven Project Performance Record

AECOM has successfully delivered some of the most significant wastewater infrastructure projects in the region, including major capital programs for the Niagara Falls Water Board, treatment and conveyance improvements at the Buffalo Sewer Authority's Bird Island Wastewater Treatment Plant, and experience with economic development agencies for key projects in Buffalo, NY. These projects required balancing technical complexity, regulatory requirements, operational considerations, stakeholder interests, and aggressive schedules. As the project's Wastewater Treatment and Process Mechanical Lead, Jeff Tudini brings decades of specialized experience in the planning, design, and implementation of wastewater treatment, water reuse, pumping, and process mechanical systems. His expertise makes sure that the proposed facilities will be designed for reliability, operational flexibility, maintainability, and long-term value.

Agency Coordination that Accelerates Project Success

AECOM's experience coordinating with the NYSDEC, the NYS Parks, and the USACE provides a distinct advantage for GGLDC. Our team understands the regulatory expectations, permitting pathways, environmental review requirements, and approval processes that often determine project success. Through decades of successful collaboration with these agencies on water, wastewater, environmental, and infrastructure projects throughout New York State, we have developed a proactive approach that identifies potential permitting challenges early, facilitates productive agency engagement, and streamlines reviews. Rather than allowing regulatory coordination to become a project risk, AECOM leverages its experience and relationships to help accelerate approvals and maintain project momentum.

The AECOM Advantage

The success of this project will depend on more than a strong technical solution. It will require a team with the experience to anticipate challenges, the agency relationships to navigate approvals efficiently, and the resources to ***maintain schedule commitments*** from project initiation through implementation.

AECOM is uniquely positioned to provide that level of support. With Matt Czora providing dedicated ***local leadership***, Jeff Tudini delivering ***industry-leading wastewater treatment expertise***, and a fully committed multidisciplinary team of Western New York and national specialists supporting them, GGLDC gains a trusted partner capable of delivering this project successfully.

Appendix A: Resumes



Matt Czora, PE

Project Manager

Years of experience 15	Years with AECOM < 1	Education BS, Civil Engineering, Rochester Institute of Technology, 2011
Registrations/Certifications Professional Engineer: NY, PA		

Selected to serve as Project Manager, Matt brings the local leadership and multidisciplinary project experience needed to keep GGLDC’s water storage, recycling, and wastewater treatment improvements aligned and moving forward. He has led complex New York water and wastewater programs from planning and design through construction, coordinating technical disciplines, facility operations, regulatory requirements, and multiple construction contracts. As GGLDC’s primary point of contact, Matt will provide clear accountability, timely communication, and practical decision-making to help maintain scope, schedule, quality, and project momentum.

Professional history

Matt is an Associate Vice President and the Upstate New York Water Area Business Lead with more than 15 years of engineering experience in the design and construction management for municipal capital improvement projects ranging in size to over \$270M, including project management, design of water and wastewater treatment facilities, electrical safety, and scheduling and administration of construction contracts with multiple prime contracts.

Selected project experience

Erie County, Southtowns AWTF Phase 2 Expansion, Erie County, Blasdell, NY. Erie County Department of Environment and Planning undertook a two-phase upgrade to the existing Southtowns AWTF to increase treatment capacity to between 39 and 46.3 MGD average monthly flow and 55 MGD peak flow. Serving as Clarifier Design Leader, managed and performed QA/QC of the detailed design for four new 145-foot diameter circular spiral scraper secondary clarifiers that replaced the facility’s existing square clarifiers. Responsibilities included design oversight, coordination with equipment manufacturers, interdisciplinary design integration, and technical review. *(prior to AECOM)*

Onondaga County, Metro 78 Annex Phase 1 - Clarifier and Gallery Asset Renewal Project, Syracuse, NY. Serving as Clarifier Design Technical Advisor, provided specialized support for rehabilitation of eight 135-foot primary clarifiers and four 170-foot secondary clarifiers at the Metro WWTP. Improvements included structural rehabilitation, clarifier equipment replacement, launder modifications, odor control cover replacement, effluent weir replacement, and scum collection system upgrades. Responsibilities included technical review, clarifier equipment evaluation, constructability input, and coordination with the design team. *(prior to AECOM)*

Chemung County, WWTP Consolidation Program, Emira, NY. Serving as Project Officer for Chemung County’s Wastewater Treatment Plant Consolidation Program for the delivery of a transformative \$275 million wastewater infrastructure project that consolidated two aging treatment facilities into a new regional wastewater treatment plant capable of treating 28.2 MGD average daily flow and 46 MGD peak flow. The program included new conveyance and pumping infrastructure, MBBR advanced nutrient removal processes, upgraded headworks, clarifiers, electrical infrastructure improvements, and solids handling facilities. Responsibilities included overall project leadership, coordination of multidisciplinary teams, coordination of construction services, and client management. *(prior to AECOM)*

Monroe County, Capital Improvement Program – FEV WRRF, Rochester, NY. Monroe County initiated a \$73M capital improvement program for the Frank E. Van Lare (FEV) WRRF which has a permitted flow of 135 MGD and was experiencing significant performance challenges while under a Consent Order from NYSDEC. The program included concurrent upgrades to the aeration system, secondary clarifiers, and electrical infrastructure. Serving as Program Manager, guided projects from initial concept development through design and construction while coordinating technical teams during design, capital planning efforts, procurement activities, maintenance of plant operations, and construction-phase services. *(prior to AECOM)*

Monroe County, Secondary Clarifier Improvements - FEV WRRF, Rochester, NY. Served as Project Manager, Design Leader, and Construction Manager for an innovative full-scale clarifier optimization project utilizing computational fluid dynamics modeling and field performance testing. The project evaluated hydraulic short-circuiting, solids carryover, and clarifier performance issues before implementing improvements

to six existing 145-foot diameter secondary clarifiers including replacement of the clarifier mechanism, sludge draft tubes, feed well, energy dissipating inlet, cylindrical baffle, Stamford baffle, and effluent weirs. Responsibilities included managing evaluations, pilot testing, final design, optimization studies, construction oversight, and performance testing. *(prior to AECOM)*

Monroe County, Wastewater Engineering Term Service, Rochester, NY. Serving as Project Manager and Design Engineer for Monroe County's Wastewater Engineering Term Services Contract, providing ongoing engineering support for wastewater treatment facilities throughout the County. Tasks include facility planning, process evaluations, asset management, preliminary and final design, preparation of construction documents, bidding services, construction administration, and operational support. Managed multidisciplinary teams delivering improvements to treatment processes, solids handling facilities, pumping systems, force mains, and collection system infrastructure. The contract supports planning and implementation of Monroe County's capital improvement program and provides rapid-response engineering assistance for emerging facility needs. Responsibilities include project management, technical leadership, client coordination, engineering studies, design oversight, construction support, and quality management across a wide range of wastewater infrastructure projects. *(prior to AECOM)*

Monroe County, FEV WRRF Electrical Substation Improvements Project, Rochester, NY. The FEV WRRF Electrical Substation Improvements Project included complete replacement of aging 34.5-kV outdoor switchyard equipment, 7,500-kVA transformers, 5-kV switchgear, and medium-voltage distribution cabling. A new electrical substation building was constructed to locate the new electrical equipment indoors along with a dedicated control room for staff to safely operate the equipment. In addition, the new building also contained three 2.5 MW diesel fueled generators to provide standby power for the entire facility. The project was constructed under a Project Labor Agreement, and separate procurement contracts for the 5-kV switchgear and diesel generators. Construction of the improvements was completed by following a detailed maintenance of plant operations plan that resulted in installation and startup of all equipment with zero interruption to the facility's process treatment trains. The project significantly improved system reliability, safety, and long-term operational resilience for this critical regional wastewater infrastructure. Responsibilities included project

management, procurement contract coordination, construction management, and maintenance of plant operations. *(prior to AECOM)*

Monroe County, FEV WRRF Centrate and Recycle Improvements Project, Rochester, NY. As part of an Engineering Planning Grant from the NYSEFC, the project included the design, operation, and analysis of pilot-scale testing that was used for the basis of developing an Engineering Report for high-level evaluation of treatment alternatives to improve the Solids Handling Process. Alternatives focused on preventing the formation of VFAs and COD in the facility's sludge holding tanks to reduce the organic and solids loading from the recycled flow and its impact on the secondary treatment system. Recommendations included improving the existing sludge holding tanks with the addition of mixing and aerating the existing tanks. Responsibilities included project management and technical advisor. *(prior to AECOM)*

Monroe County, FEV WRRF Recycle Pump Station Evaluation, Rochester, NY. Conducted an evaluation for MCDES at the Recirculation Pump Station (PS) at Frank E. Van Lare Water Resource Recovery Facility (FEV WRRF) for the pumps, piping, electrical, and building condition, and presented recommendations for rehabilitation or replacement of Recirc PS components and the installation of additional surge valves to improve system performance and mitigate damage from hydraulic transients. Provided a summary of the condition assessment in a detailed Engineering Report including a prioritized list of potential improvement options for the Recirc PS. Including both near-term and long-term improvements. Detailed cost estimates were prepared for each improvement option for MCDES to incorporate into a future Capital Improvement Plan. Responsibilities included project management, process piping assessment, cost estimating, and QA/QC.

Monroe County, Northwest Quadrant WRRF Secondary Clarifier Improvements, Rochester, NY. Provided construction management and resident project representative services for a \$9 million expansion project that included a new 125-foot diameter secondary clarifier, new secondary sludge pump station, and a new flow distribution structure. Responsibilities included construction management, RFI response, change orders, pay applications, and field inspection. The project was completed ahead of schedule and resulted in over \$380,000 in savings for the Owner. *(prior to AECOM)*

Doug Gove, PE

Project Director

Years of experience 30	Years with AECOM 30	Education MS, Environmental Engineering, Worcester Polytechnic Institute, 2001 BS, Civil Engineering, Worcester Polytechnic Institute, 1996
Registrations/Certifications Professional Engineer: MA-Civil, NH, RI, ME		

Doug brings senior-level perspective across the full range of infrastructure central to this assignment, including water storage, treatment, pumping, distribution, wastewater, and construction support. As Project Director, he will help guide critical decisions, provide added technical and delivery oversight, and make sure GGLDC has access to the appropriate expertise as the project advances.

Professional history

Doug is a Vice President and Northeast Region Water Business Line Leader with diverse experience in all aspects of water projects, including supply, treatment, distribution, and providing engineering services during construction. He also has diverse water resources experience including dam rehabilitation, hydropower implementation, flood protection evaluations and upgrades, and resilience.

Selected project experience

City of Pittsfield, On-Call Water System Services, Pittsfield, MA. Project manager for a task order contract (132 task orders over 18 years) for the water system serving about 50,000 residents and consisting of six surface water reservoirs, two water treatment plants, six pressure zones, four water storage tanks, six booster pump stations, two flow control stations, two large transmission mains, and approximately 250 miles of distribution piping. Projects included construction of two new pre-stressed, wire wound concrete storage tanks (1.8 MG and 2 MG); recoating and security upgrades to three existing water storage tanks (0.9 MG, 1.7 MG, and 5 MG); upgrades to the City’s water booster pump stations; preparation of a water master plan; development and continued updates to a water distribution system hydraulic model; upgrade to three high hazard dams and two diversion dams; an upgrade to one of their water treatment plants; and several water main replacement and transmission main project.

Wastewater Treatment Plant Nutrient Removal Upgrade, Pittsfield, MA. Project Director for the AECOM portion of the upgrade to the City of Pittsfield’s 12 mgd wastewater treatment plant to comply with stringent phosphorous and aluminum requirements. Work included design for complete upgrade of the sludge handling process/dewatering building and HVAC,

plumbing, electrical and instrument and control services for the new phosphorous removal process building, rehabilitation of the secondary clarifiers, and upgrade to the aeration basins. Also providing engineering services during construction, including shop drawing review, review of potential change orders, and response to contractor RFIs.

Massachusetts Water Resources Authority, Deer Island Ancillary Modifications 1, Boston, MA. Project engineer for Ancillary Modifications 1 design at the Deer Island treatment plant. Evaluated alternatives and developed conceptual and detailed designs for nine project elements associated with the Phase I of the Boston Harbor project. Coordinated the design of a new screening and conveying system for the Winthrop Terminal facility, modifications to the digester gas system, replacement of the sump pumps at North Main pump station, and rehabilitation of the primary scum screen room. Served as project manager for engineering services during construction and oversaw the review of shop drawings, answered contractor requests for information, attended progress meetings with the contractors, and coordinated the resident engineer and inspectors.

Town of Amesbury, Wastewater Treatment Facility Upgrade, Amesbury, MA. Project engineer for the design of improvements to the 2.4-mgd wastewater treatment facility. Coordinated and developed contract specifications for the project and developed the hydraulic profile for the modified wastewater treatment process. Designed a new stormwater collection and treatment system for the site, which consisted of a vortex sediment removal system. Assisted with preparation of the notice of intent to the conservation commission.

Massachusetts Water Resources Authority, Deer Island Performance Certification, Boston, MA. Assisted in the evaluation of HVAC systems for the primary odor control and

grit facilities at the Deer Island treatment plant as part of performance certification activities.

Massachusetts Water Resources Authority, Deer Island Boston Harbor Lead Design Engineering, Boston, MA.

Participated in a pretreatment demonstration program to reduce hydrogen sulfide levels in wastewater prior to treatment at the Deer Island wastewater plant. Coordinated vendor procurement, chemical storage and pumping equipment set-up and testing, daily and recurrent testing, and process monitoring and reporting. Conducted right-to-know and safety training.

Massachusetts Water Resources Authority, Deer Island Secondary Designs (DP-40), Boston, MA. Assisted in the concept design of the hydrogen peroxide pretreatment facilities and enhancement of the prechlorination system at the Deer Island wastewater facility. Participated in evaluating and applying odor control data from pretreatment field demonstration program.

MassDCR, Facility Inundation Vulnerability Assessment for the Amelia Earhart and New Charles River Dams, Somerville and Boston, MA. Managed a flood inundation vulnerability assessment of the Amelia Earhart Dam and New Charles River Dam for the MassDCR. Work included conducting inspections of the two facilities to identify areas vulnerable to flooding during flood or storm surge events, evaluating the risk of flooding (likelihood and consequences) at five flood elevations, and developing conceptual plans and costs for protecting the facilities up to the selected flood elevation.

MassDCR, Amelia Earhart Dam Facility Hardening Upgrade, Somerville, MA. Served as project manager for design services to harden Amelia Earhart Dam against potential inundation up to four feet above the lock facility deck level including replacement of doors, hatches, and air intakes, and sealing of electrical conduits and construction joints. Also designed upgrades to facility infrastructure including the replacement of two emergency generators, installing submersible limit switches, upgrading sump pump systems, replacement of building roofs and storefronts, and removal and disposal of hazardous building materials including asbestos and PCBs. Serving as project director for engineering support during bidding and construction phases including change orders, technical memorandum, shop drawing review, running biweekly construction progress meetings, site visits to observe the progress of work, and monitoring of hazardous building material abatement.

Flood Protection System Improvements Design and Construction Services, Haverhill, MA. Managed the design of improvements to Haverhill's flood protection system to comply with FEMA Certification requirements and to stay active in Army

Corps levee system. Design included repairing deficiencies to the 2,200 linear flood wall, raising the flood wall to provide the required free board, repairing extensive deficiencies to the 2,000 linear foot Little River Conduit, construction of a new section of floodwall at the west end, and replacement of the flood gate at the east end of the floodwall. Work also included obtaining all the necessary environmental permits and getting approval from the US Army Corps of Engineers under 33 USC 408. Managed engineering services during construction of the flood protection system improvements including the review of shop drawings, answering contractor requests for information, attending progress meetings with the contractor, overseeing the resident project representative and inspector services, preparing the required FEMA Certification documents, and updating the flood protection system O&M Manual.

MassDCR Office of Dam Safety, Six Abandoned Dams Phase II Investigation and Alternatives Evaluation, Statewide, MA. Managed a project to evaluate alternatives to repair, breach, or remove six dams in Massachusetts that have been abandoned by their owners. The dams are classified as significant and high hazard structures and are in either poor or unsafe condition. The project included topographic survey, bathymetric survey, subsurface exploration, dive inspection, and sediment evaluation.

Work also included preparation of seepage and stability analyses, and development of hydraulic and hydrologic models for each dam to evaluate the spillway adequacy. An alternative for repairing each dam to bring it up to par with the dam safety standards was developed for each alternative along with an alternative to partially breach and fully remove each dam. The findings of the evaluations were summarized in a separate Phase II Investigation and Alternatives Evaluation report for each dam with an estimated construction cost for each alternative and a recommendation for how DCR should proceed.

City of Pittsfield, Ashley Lake Dam Upgrade Design and Construction Services, Pittsfield, MA. Project manager for the Phase II investigation, design and construction services for a major upgrade to the Ashley Lake Dam, which is classified as a high-hazard dam that was structurally deficient and in poor condition. Phase II investigation included borings, topographic survey, and stability analysis. Oversaw the permitting for the project, including the dam safety permit, local conservation commission approvals, and water quality permits from the Army Corps of Engineers and MassDEP. Developed plans and specifications for the design, including a temporary coffer dam and a dewatering plan, gatehouse rehabilitation, and upstream concrete face replacement.

John Goeddertz, PhD

Technical Advisor

Years of experience 39	Years with AECOM 23	Education Doctor of Philosophy (PhD), Civil Engineering, State University of New York, 1990 Master of Science (MSc), Civil Engineering, State University of New York, 1986 Bachelor of Science (BSc), Civil Engineering, State University of New York, 1984
Professional affiliations Water Environment Association		

Selected as Technical Advisor, John has more than three decades of specialized experience evaluating, permitting, designing, constructing, and troubleshooting municipal and industrial wastewater treatment systems. His knowledge in wastewater characterization, treatability and pilot testing, process selection, water reuse, and regulatory compliance will strengthen the team’s evaluation of GGLDC’s process wastewater treatment and recycling needs. John will provide focused technical guidance at key decision points, helping the team identify practical treatment solutions, address regulatory and operational considerations early, and advance a reliable, implementable approach.

Professional history

John provides technical depth in industrial and municipal wastewater treatment, including process evaluation, pilot testing, permitting, and implementation. He is experienced in evaluating, designing, permitting, constructing, operating, and troubleshooting stormwater and wastewater management and treatment facilities for both municipal and industrial clients. John has conducted extensive bench and pilot testing and developed numerous basis-of-design reports, which contributed to the detailed design and construction of biological and physical/chemical treatment facilities.

Selected project experience

Niagara Falls Water Board, Wastewater Treatment Plant Biological Treatment Evaluation, Niagara, New York. Project manager who developed and tested the pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor system and an attached growth moving bed biological reactor system. Pilot testing was conducted over 8 months to evaluate multiple test conditions and evaluate wastewater treatability using different biological systems. The testing provided the technical foundation for assessing biological treatment as a future conversion alternative.

Dekas Cranberries, Evaluation of Proposals for Design-Build-Operate Wastewater Treatment Plant at Cranberry Processing Facility, Carver, Massachusetts. Evaluated

competing design-build-operate proposals for treatment of a high-strength industrial wastewater stream. The selected process combined anaerobic treatment, an aerobic membrane bioreactor, and reverse osmosis, allowing the treated effluent to be reused as cooling water and reducing the facility’s reliance on treated well water.

Confidential Client, Evaluation of Combined Groundwater and OCPSPF Process Wastewater, Ringwood, Illinois. Evaluated biological oxidation, chemical oxidation, and air-stripping alternatives for combined groundwater and process wastewater. Directed treatability testing comparing suspended-growth and fixed-film nitrification systems under anticipated wastewater temperatures, contributing to the selection of membrane bioreactor technology based on technical and economic considerations.

Niagara Falls Water Board, Wastewater Treatment Plant Turbidity Evaluation, Niagara Falls, New York. Developed and executed a sampling and analysis program encompassing 13 treatment-process locations and three seasonal events. The process evaluation identified the source of effluent turbidity and established corrective alternatives and associated costs for submittal to NYSDEC and USEPA.

North Chautauqua Lake Sewer District, Phosphorous Reduction Engineering Evaluation, Mayville, New York. Evaluated and supported implementation of interim and long-term phosphorus removal strategies. The work included ferric chloride addition for interim treatment, evaluation of

technologies capable of meeting long-term discharge requirements, and preparation of NYSEFC funding applications.

Confidential Client, Water Use Reduction Evaluation, Owego, New York. valued five years of facility water-use data and associated costs to identify practical conservation and reuse measures. Recommendations included eliminating once-through cooling and reusing treated groundwater for utility applications.

Erie County Industrial Development Agency, Union Ship Canal Industrial Park Sewer System Design, Buffalo, New York. Task manager who prepared the detailed sanitary sewer collection system design at the Union Ship Canal redevelopment project.

GE Transportation Systems, Wastewater Treatment Plants Upgrades, Erie, Pennsylvania. Project manager who looked over URS and performed numerous assignments to assist the GE Erie facility in upgrading its physical/chemical wastewater treatment plant. The plant consists of equalization and chemical addition/precipitation followed by clarification. Sludge is filter-pressed and disposed of off-site. The principal constituent being removed is phosphorous. Upgrades consisted of five large above-ground wastewater tanks, interconnecting piping, new sludge storage and thickening facilities, and miscellaneous plant upgrades (sump pump replacement, effluent pump replacement, instrumentation and control upgrades, O&M Manual preparation. URS' novel approach to reusing existing facilities whenever possible resulted in savings approaching \$10M over a plan put forth by others.

Goldman Titanium, Wastewater Evaluation and Compliance Evaluation, Buffalo, New York. Project manager who evaluated process wastewater discharges from a titanium processing facility for compliance with the facility's discharge permit, local sewer use ordinance, and categorical discharge standards (metal finishing). As part of the evaluation process, URS collected several wastewater samples and analyzed them

for constituents of concern. Provided recommendations for achieving compliance. A revised discharge permit application was submitted, which resulted in favorable discharge limitations for titanium.

Buffalo Sewer Authority, Evaluation of Effects of Thiourea Discharges Wastewater Treatment Plant, Buffalo, New York. Project manager who led in obtaining an indirect discharge permit for the discharge of their industrial wastewater when a proposed industrial discharger that manufactures photovoltaic panels approached Buffalo Sewer Authority (BSA). Assigned with reviewing the facility's baseline monitoring report and identifying any substances of concern. Tasked to perform a detailed evaluation of the potential effects of thiourea on the BSA WWTP. A literature and regulatory review were performed, along with performing an extensive search to identify and evaluate all other direct or indirect discharge permits that include thiourea. Bench-scale laboratory testing was performed to determine the impact of thiourea on existing BSA WWTP operations, including bio uptake, nitrification, anaerobic digestion, and chlorination. Based on the literature review, discharge permit search, and laboratory results, recommendations for thiourea limitations were developed. The report was the most comprehensive compilation of information regarding the impact of thiourea discharges on a biological wastewater treatment plant.

City of Salamanca Board of Public Utilities, Treatment Plant Upgrades, Salamanca, New York. Technical lead who evaluated the effect of proposed casino facilities on the existing treatment plant and recommended upgrades to a treatment plant to enable the processing of casino flows and loadings. Designed and installed upgrades to aeration facilities (fine bubble diffused air with DO control) and solids handling facilities (thickening, dewatering, and pumping). Implemented a novel thickening process to thicken aerobic digester contents, so additional thickener volume was unnecessary.

Jeff Tudini

Wastewater Treatment and Process Mechanical

Years of experience	Years with AECOM	Education
12	8	MS, Civil/Environmental Engineering, New York State University (SUNY), - Buffalo, 2007 BS, Civil/Environmental Engineering, New York State University (SUNY), - Buffalo, 2005

Selected for his specialized wastewater treatment and process mechanical experience, Jeff brings practical knowledge evaluating, testing, designing, and commissioning treatment systems for complex municipal and industrial waste streams. His ability to connect process performance with equipment, controls, operability, and cost will help the team develop solutions that meet GGLDC’s current needs while providing flexibility to support future business park users.

Professional history

Jeff is an environmental engineer and project manager with the water/wastewater design group. The wide range of projects that he has assisted with and managed has given him a solid foundation for various consulting projects, including, but not limited to, system design and alternative evaluations, system startup/commissioning and operation, hazardous waste management, water resource analysis, laboratory testing, and groundwater engineering.

Selected project experience

Niagara Falls Water Board (NFWB), WWTP Effluent Disinfection Upgrades, Niagara Falls, NY. Process Engineer. Responsible for the design of the capital improvement project to upgrade the WWTP effluent disinfection system. The design was developed to improve the WWTP control and monitoring of the WWTP effluent disinfection process using sodium hypochlorite. This system presents multiple design considerations given the plants’ variability of chlorine demand from sulfide generation in their secondary treatment process. This system is designed with a robust control and monitoring system to allow for consistent effluent disinfection.

Niagara Falls Water Board (NFWB), WWTP Sedimentation Basin and Scum Removal Upgrades, Niagara Falls, NY. Process Engineer/Project Manager. Responsible for designing the capital improvement project to upgrade the WWTP primary treatment system and scum removal process. The design included multiple unit upgrades with major systems, including an increased basin weir length with the addition of effluent finger weir troughs, chain and flight sludge scrapper units, and

a full upgrade of the scum removal system, including the use of fine screen scum separation units.

Niagara Falls Water Board (NFWB), WWTP Optimization, Niagara Falls, NY. Lead Process Engineer. Responsible for developing physical/chemical treatment system alternative evaluations to improve the performance of the existing WWTP. Evaluations included improvements to the effluent disinfection process, physical/chemical treatment optimization (i.e., treatment chemicals), and chemical use (i.e., oxidant) at the GAC filters. Additional responsibilities included developing test plans and treatment systems to evaluate optimization conditions and providing engineering reports and recommendations for improved system operations.

Niagara Falls Water Board (NFWB), WWTP Biological Treatment Evaluation, Niagara Falls, NY. Lead Process Engineer. Responsible for developing and testing pilot-scale biological treatment systems to evaluate if a future conversion of the existing WWTP is an alternative. The technologies tested included a membrane biological reactor (MBR) system and an attached growth moving bed biological reactor (MBBR) system. Pilot testing was conducted over 8 months to evaluate multiple test conditions and evaluate wastewater treatability using different biological systems.

Erie County Department of Environment and Planning (ECDEP), Lackawanna WRRF, Buffalo, NY. Lead Process Engineer/Project Manager. Responsible for evaluating the Lackawanna WRRF solids handling systems, including the gravity thickener, digesters, and the dewatering process. This evaluation assessed the primary and secondary solid wasting processes, digester operation, including inspections, and

overall system conditions. Multiple alternatives were developed to improve the current solids handling process, including different digester covers (i.e., fixed, floating, gas holding, and membrane), digester sizes, digester mixing systems, and process monitoring and redundancy equipment. The system evaluation was advanced to a detailed design that includes rehabilitation of both digesters with new gas-holding floating covers, mixing systems, and redundancy equipment (i.e., conveyance pumping and heat exchangers).

Erie County Division of Sewerage Management (ECDSM), Southtowns Advanced Wastewater Treatment Facility and Effluent Disinfection Evaluation, Buffalo, NY. Process Engineer/Project Manager. Responsible for the evaluation and concept design for the Southtown advanced Wastewater Treatment Facility (AWTF) effluent disinfection process. This project included an alternative evaluation of chemical chlorination and dechlorination versus ultraviolet (UV) light technology. The facility was given a lower effluent total residual chlorine (TRC) limit, and these evaluations tested the facility's wastewater to verify compliance with both proposed technologies. Testing included collimated beam and ultraviolet transmittance (UVT) to verify the use of UV disinfection technology and bench testing with multiple dechlorination chemicals to verify the destruction of TRC via dechlorination chemicals. This evaluation provided the client with an alternative evaluation, including system design concepts, costs, and recommendations so that a sound decision for system upgrades can be made.

Buffalo Sewer Authority (BSA), WWTP Co-Digestion Alternatives Evaluation, Buffalo, NY. Responsible for the concept design for accepting high-strength waste (i.e., food waste) at the Buffalo Sewer Authority's Bird Island WWTP. Conducted a holistic evaluation for incremental acceptance ranging from 100,000 to 400,000 lbs. VSS/day of high-strength food waste for treatment and co-digestion at the WWTP. System evaluation included multiple alternatives, including traffic modifications to improve the hauled waste program, unit process upgrades for the receiving station, digestion process, dewatering process, and digestion gas facilities. Ultimately, this evaluation provides the basis for accepting high-strength food waste at the WWTP and the road map for capital improvements that align with the incremental acceptance of the high-strength waste stream.

Confidential Client, Wastewater Treatment System Alternatives Evaluation, GA. Project Manager/ Process Engineer. Responsible for the low-volume wastewater treatment system alternatives evaluation and treatment system design. Developed treatment system concept designs for

temporary and permanent systems with critical compliance deadlines. Successfully delivered project scope on time to maintain system compliance and meet future design demands.

Confidential Client, Antimony Treatment Evaluation Project, SC. Project Manager/ Process Engineer.

Responsible for an antimony treatment evaluation project. Performed an alternatives evaluation to review options to modify the facility's existing WWTP to improve treatment for antimony while reducing chemical costs and improving sludge management. Assisted the client with reviewing antimony treatment alternatives, provided conceptual designs and cost estimates for the alternatives, and worked with the client to conduct bench-scale testing and confirm the performance of the selected treatment process.

Columbus Water Works, South Columbus Water Reclamation Facility (SCWRF), Columbus, GA. Project Manager/ Process Engineer. Responsible for developing local limits for industrial discharges to the South Columbus Water Reclamation Facility (SCWRF). This evaluation was conducted using water quality analytical data and information provided by CWW. The overall objective is to define the maximum loads available for the current industrial users discharging to the SCWRF and serve as a basis to determine if/what limits need to be set on the industrial sources and/or what improvements or adjustments should be made to the SCWRF to maintain effluent compliance.

Confidential Client, Confidential Project, KY. Lead Process Engineer/Designer. Responsible for a demonstration-scale wastewater treatment system for a power client to evaluate treatment alternatives in advance of the Effluent Limit Guidelines (ELG) being finalized. Our team conducted onsite investigations, process water sample collection, and interviews to develop multiple treatment alternatives, including process flow diagrams, mass balances, and class 5 cost estimates that the client used for developing their financial planning. Served as the lead design/onsite engineer to construct, start-up/commission, and operate demonstration-scale wastewater treatment systems at two of the client's generation stations. The treatment system included primary solids removal, physical/chemical metals co-precipitation, MBBR/DAF for nitrate removal, and four proprietary selenium removal processes. Tasks included supervision of equipment installation, system start-up, operation, sample collection and laboratory analysis, system troubleshooting, and data analysis. Tasks in addition to field activities included coordination with client and selenium system vendors, conducting weekly meetings, evaluating the performance of selenium systems, and writing final reports.

Dan Casper, EIT

Wastewater Treatment and Process Mechanical

Years of experience	Years with AECOM	Education	Registrations/Certifications
4	4	BS, Environmental Engineering, SUNY at Buffalo, 2022	Engineer-in-Training

Selected for his local wastewater treatment and process mechanical experience, Dan will support the evaluation, design, and implementation of practical improvements for GGLDC. His work on treatment plant upgrades, hauled and industrial waste evaluations, local discharge limits, process equipment, controls, and construction administration will help the team connect wastewater characteristics and regulatory requirements with reliable, operable systems.

Professional history

Dan Casper is a project engineer with professional experience in municipal capital improvement project work. His experience includes municipal facilities, water supply/distribution, sewerage works, and wastewater solutions.

Selected project experience

Buffalo Sewer Authority, WWTP Secondary System Rehabilitations and Upgrades, Buffalo, NY. Project Engineer during construction. Engineering services during construction include the administration of five separate construction contracts to perform the rehabilitation and upgrades at the WWTP including sediment removal, installation of new fine bubble diffused aeration system, coarse bubble diffuser system, ninety new sluice gates and upgrades to the return activated sludge and waste activated sludge systems. This project is part of a multi-phase program to upgrade treatment capacity from 320 mgd to 400 mgd. Project responsibilities include PMIS implementation, meeting attendance and writeup, shop drawing and submittal review, fielding and responding to RFIs, change requests and field orders, construction scheduling, and ongoing coordination with the Client.

Buffalo Sewer Authority, Hauled Waste Evaluation, Buffalo, NY. Project engineer collected data, tabulated, and manipulated the characterization of the wastewater received from waste haulers at the client’s transfer station within the treatment facility. Organized data by waste type and loadings to help evaluate the plant’s TSS and BOD issues.

Town of Amherst, Water Pollution Control Facility Disinfection and Metering System Improvements, Amherst,

NY. Served as Staff Engineer for the design of upgrades to the plant’s metering and disinfection systems. The project includes replacing flowmeters, level sensors, valves, chemical feed pumps and piping, control panels, SCADA integration, and rehabilitation of sluice gates. Provided Construction Inspection/Administration services through substantial completion.

Town of Amherst, Gravity Thickener Improvements, Amherst, NY. Project engineer and CAD designer designed a chain-in-flight gravity thickener system as a retrofit of the current dissolved-air floatation system. Served as primary CAD designer to produce preliminary design drawings and review with the client to make necessary revisions. Also communicated with various vendors and product manufacturers.

Veolia North America, Westborough Technically Based Local Limits (TBLL) Reevaluation, Westborough, MA. Project engineer performed data tabulation and manipulation to assess pollutants of concern loadings on the treatment facility, and the capabilities therein to process such pollutants. Re-evaluated current technically based local limits in accordance with EPA’s Local Limits Development Guidance Document.

Niagara Falls Water Board, NFWB BHC Evaluation, Niagara Falls, NY. Project engineer performed data tabulation and manipulation to assess Hexachlorocyclohexane (BHC) loadings on the treatment facility and the capabilities therein to process such pollutants and associated isomers (Alpha, Beta, Gamma, Delta). Created new technically based local limits in accordance with EPA’s Local Limits Development Guidance Document and recommended the client on best implementation practices with significant industrial users.

Paul Moulton, PE

Pumping Systems and Hydraulics

Years of experience

50

Years with AECOM

44

Education

BS, Civil Engineering, Northeastern University, 1975

Registrations/Certifications

Professional Engineer: NH

Professional affiliations

Hydraulic Institute, member of several technical committees.
Member AWWA E110 committee

Paul provides discipline leadership for pumping systems and hydraulics, helping clients develop reliable and energy-conscious conveyance solutions. He specializes in designing and troubleshooting pumping and mechanical systems for water and wastewater facilities. His knowledge of pump selection, system hydraulics, piping, valves, and physical modeling will help GGLDC advance reliable systems that meet current operating needs while accommodating future demands.

Professional history

Paul is a vice president, senior technical leader, and technical design lead for the North American water practice. He has 50 years of experience in civil and sanitary engineering, specializing in the design of water and wastewater treatment plants, pumping stations, force mains, and chemical storage and feed systems. Paul has provided the design, layout, commissioning and troubleshooting of mechanical systems for numerous facilities worldwide. Paul participates on several committees of the Hydraulic Institute as a standards partner and AWWA E110 committee.

Selected project experience

Massachusetts Water Resources Authority, Norumbega Covered Tank Design-Build, Weston, MA. Developed the mechanical layout and design of the valve vaults, sluice gates, and dewatering system for the MWRA's 115-million-gallon water storage tank.

Wastewater Reclamation and Spray Irrigation Reuse System, New Castle County, DE. Lead mechanical process engineer for an alternatives evaluation and design of a new 1.6-mgd wastewater reclamation and beneficial reuse system.

City of Rocky River, Wastewater Treatment Plant Recycle Pump Replacement, Rocky River, OH. Technical advisor for replacement of trickling filter recycle pumps at the wastewater treatment plant with four new submersible pumps sized to pump a capacity of 22.5 mgd.

Washington Suburban Sanitary Commission - Western Branch, ENR Upgrade Evaluation and Design Services, Upper Marlboro, MD. Lead mechanical process engineer for a

30.6-mgd enhanced nutrient removal treatment facility for the wastewater treatment plant, including new traveling bridge grit chambers, three self-cleaning trench wet well pumping stations, and new high-speed turbo blowers.

New York City Department of Environmental Protection, Croton Water Treatment Plant, Pump Stations, and Residuals Facility Design, New York, NY. Designed sludge handling and raw and finished water pumping systems for the 290-mgd water treatment plant.

City of Stockton WWTP Design Building Phase 1, Stockton, CA. Lead Mechanical Process Engineer for a new 80 mgd Raw Wastewater pumping station using self-cleaning wet well technology and new 72 mgd final effluent pumping station and physical hydraulic modeling of the pumping stations.

City of Davis, Wastewater Treatment Plant Design Build, Davis, CA. Lead mechanical process engineer for the new influent pumping station utilizing self-cleaning wet well technology.

Massachusetts Water Resources Authority, John J. Carroll Water Treatment Plant Technical Assistance, Marlborough, MA. Provided inspection and evaluation for noise and vibration issues related to the plant water pumps at the MWRA's 405-mgd water treatment plant.

Massachusetts Water Resources Authority, John J. Carroll Water Treatment Plant Design Management Support, Marlborough, MA. Provided input to mechanical design for the addition of isolation valves and air break to connect the Wachusett Aqueduct extension pipeline to the finished water pipeline at the MWRA's 405-mgd water treatment plant.

Emily Blanchard, EIT

Pumping Systems and Hydraulics

Years of experience	Years with AECOM	Education
3	3	BS, Environmental Engineering, SUNY at Buffalo, 2021
Registrations/Certifications		MS, Environmental and Water Resources Engineering, SUNY at Buffalo, 2023
Engineer in Training		

As part of the Pumping Systems and Hydraulics team, Emily will support the evaluation and development of GGLDC’s pumping and related mechanical improvements through data analysis, design documentation, and construction-phase coordination. Her experience supporting major wastewater treatment upgrades in Buffalo will help the team maintain accurate technical information, coordinate equipment and design details, and carry decisions efficiently from evaluation into implementation.

Professional history

Ms. Blanchard is a civil/environmental engineer for the water/wastewater group in the Buffalo office. Her experience includes water resources and wastewater solutions. Her responsibilities in various projects include data analysis, shop drawing and submittal review, assisting in site visits, and CAD work.

Selected project experience

Buffalo Sewer Authority, WWTP Secondary System Rehabilitations and Upgrades, Buffalo, NY. Staff Engineer. Engineering services during construction include the administration of five separate construction contracts to perform the rehabilitation and upgrades at the WWTP including sediment removal, installation of new fine bubble diffused aeration system, coarse bubble diffuser system, ninety new sluice gates, and upgrades to the return activated sludge systems. This project is part of a multi-phase program to upgrade treatment capacity of the facility. Project responsibilities include meeting attendance and minutes, shop drawing and submittal review, fielding and responding to change requests, grant and loan services, and ongoing coordination with the client.

Buffalo Sewer Authority, Air Emissions Consulting Support, Buffalo, NY. Staff Engineer. The project involved sampling biosolids for the purpose of stack air emission testing. Responsibilities included collecting, handling, packing and labeling biosolid samples and coordination with the client.

Naval Facilities Engineering Systems Command, Shipyard Infrastructure Optimization Program, Portsmouth, NH. CAD

Support. Project responsibilities included using photographs and maps to develop butterfly diagrams in AutoCAD. Diagrams included routing of electrical and telecommunication cables within and between manholes.

Springfield Water and Sewer Commission, 42-Inch Raw Water Bypass Conveyance Pipeline Rehabilitation and Energy Dissipation Valve Chamber, Springfield, MA. Staff Engineer. The project involves the rehabilitation of 42-inch raw water bypass conveyance pipeline and the construction of an energy dissipation valve chamber. Engineering services during construction include shop drawing and submittal review, fielding and responding to change requests, reviewing and processing applications for payment, and ongoing coordination with the client and contractor.

Buffalo Sewer Authority, Sump Pump Optimization, Buffalo, NY. Staff Engineer. The project involved evaluating the existing inventory of sump pumps and making sizing recommendations for sump pumps throughout the wastewater treatment facility. Calculations were performed to determine sizing recommendations in the case of a large diameter process pipe break.

Greater New Haven Water Pollution Control Authority, Wind Resiliency, New Haven, CT. Staff Engineer. Project involved replacing windows and doors at the WWTF with hurricane-resistant glass. Engineering services during construction include shop drawing and submittal review for conformance with project documents, reviewing and processing applications for payment, fielding and responding to change requests, and ongoing coordination meetings with the client and contractor.

Vijay Sundaram, PhD, PE

Water Reuse

Years of experience	Years with AECOM	Education
22	6	PhD, Environmental Engineering, University of Nevada, 2019 MS, Environmental Engineering University of Cincinnati, 2004 BTech, Chemical Engineering, University of Madras, 2001
Registrations/Certifications	Professional affiliations	
Professional Engineer: CA, NV	Chair, WEF Water Reuse Roadmap Publication Advisory Committee Member, WEF Resource Recovery Metrics Development Technical Practice Committee Liaison, WEF Water Reuse Committee Past Chair, Engineering and Research Committee, California Water Environment Association Member, International Ozone Association Municipal Committee	

Selected to lead water reuse planning, Vijay brings extensive experience evaluating water-reuse opportunities and developing advanced treatment strategies for municipal and industrial applications. His background in reuse feasibility, treatment-process selection, water-quality requirements, regulatory planning, pilot testing, and life-cycle evaluation will help GGLDC identify practical uses for recycled water and develop a safe, reliable, and cost-conscious approach that supports current operations and future business park needs.

Professional history

Vijay is a recognized leader in water reuse and helps communities implement cost effective water reuse solutions as part of an integrated water resource management approach meeting the goals of the UN Sustainable Development Goals (SDGs) and U.S. Water Alliance "One Water Roadmap". His passion is water and its use and reuse as a sustainable resource by means of integrated planning, partnerships, conservation, treatment, and storage. He served as the Chair for the Water Environment Federation's Water Reuse Roadmap publication in 2017. He specializes in advanced treatment process design, predictive process modeling, triple bottom line (TBL) analysis, performance evaluation, and process optimization of treatment facilities. He most recently won the McKee Groundwater Protection, Restoration or Sustainable Use Award.

Selected project experience

Project Technical Lead, EPCOR, Gold Bar WWTP Water Reuse Feasibility Study, Edmonton, Alberta. This study evaluated the feasibility of an effluent reuse system at Gold Bar WWTP to reduce required potable water piping upgrades. Canadian and international reuse regulations were reviewed. Potential tertiary treatment technologies, including self-cleaning strainers, disk filters, granular media filters, ultrafiltration membranes, UV disinfection, and chlorine disinfection were evaluated based on cost, footprint, track record, and performance.

Principal Water Technologist, BioMarin Pharmaceuticals, Integrated Water Planning and Wastewater Treatment Plant Facility Planning, BioMarin Pharmaceuticals, Novato, CA. Quantified the nature and origins of salinity concerns at its water and wastewater treatment plants, and to develop an overall integrated water and wastewater use program to meet its corporate objectives regarding sustainability. Work included diagnostic analysis of effluent to determine its characteristics, evaluation of salinity reduction and compliance options, and alternative means to reduce use and dependence on the area's limited potable water supply via onsite treatment and reuse. Oversaw all design and evaluation elements.

QA/QC Reviewer, City of Provo, Feasibility Report: Alternatives for Water Use, Reuse, and Advanced Treatment Facilities, Provo, UT. Project included preparation feasibility evaluation and conceptual design for IPR, aquifer storage and recovery (ASR), and direct potable reuse (DPR) options for utilizing treated effluent and river water. A combination of RO and non-RO based advanced treatment methods were considered.

Sr. Reuse Specialist, City of Calgary, Preliminary Design of a Dual Pipe Water System, Calgary, Alberta. Evaluated treatment processes needed to treat effluent and stored stormwater to water quality standards adequate for use in all unrestricted outdoor irrigation situations (including residential front and back yards) and toilet and urinal flushing situations (including in private residences).

Project Manager, Washoe County CSD Groundwater Recharge Conceptual Planning, Reno, NV. Vijay's team developed a plan for diverting 1.4 MGD of secondary effluent for advanced purified water treatment meeting Category A+ standards, which potentially allows this effluent stream to be utilized for groundwater recharge.

Principal AWT Technologist, Client Account Name, OneWater Nevada Ozone-BAF based IPR Feasibility Study Engineering Assistance, Washoe County, Reno, NV.

Technical assistance to Truckee Meadows Water Authority (TMWA) on the OneWater Nevada Indirect Potable Reuse (IPR) Demonstration Project at Reno-Stead Water Reclamation Facility (RSWRF) with the preparation of engineering report, final report, field testing, and compliance evaluations. Led the planning and design of trailer-mounted UV/AOP and GAC polishing treatment units. A critical aspect of this work was pathogen log reduction demonstrations and analyses. AECOM is also providing consultation regarding critical control points and use of AWT process control data such as turbidity, UVT, TOC, specific ozone dose, BAC backwashing protocol, etc. Participates in OneWater Nevada IPR Demonstration Project meetings and independent advisory panel meetings. Our team of experts provide review of AWT process monitoring and control protocols, laboratory and field data, and project reports.

QA/QC Reviewer, City of Santa Monica, Santa Monica Sustainable Water Infrastructure Project, Santa Monica, CA. Conducted QA/QC review of Design-Build team submittals as part of the Owner's Representative team for SWIP implementation utilizing progressive design-build delivery approach. The project consists of stormwater harvesting and advanced recycled water treatment facilities.

Principal Water Sustainability Consultant, City of Benicia, Benicia Water and Wastewater Sustainability/ Resiliency Assessment, Benicia, CA. Led the sustainability and resiliency assessment of the water and wastewater systems for the City of Benicia. Using the triple bottom line (TBL) approach, he compared projects in four different categories based on social, environmental, and institutional impacts. Project options include water conservation, water reuse, energy and greenhouse gas emission improvements, and resiliency improvements. Based on the City's feedback to the TBL assessment, action plans for the identified projects were prepared.

Lead Technical Consultant, City of Roseville Groundwater Recharge Planning and Predesign Project, Roseville, CA.

Vijay serves as a Technical Advisor for City's Pure Water Roseville Project under the Roseville Future Water Initiative. Vijay provides technical review of the treatment approaches, regulatory permitting strategies, bench-scale testing plan, pilot study design criteria and 30% pilot system design drawings.

Water Sustainability Consultant, University of California, Merced, UC Merced Roadmap for Water Neutral Campus, Merced, CA. Developed a practicable phased approach to achieving complete water sustainability at the new UC Merced campus. His stepwise approach quantifies the most cost-effective means to improve campus water sustainability if/when appropriate.

Task Force Chair, Water Environment Federation, The Water Reuse Roadmap, Alexandria, VA. This publication is intended for water planners, regulators, practitioners, and non-profit agencies involved in water/wastewater management. The publication provides an overview on all types and aspects of water reuse and current trends. The Roadmap is a practical resource for holistically evaluating water reuse opportunities and implementing projects. Served as the Task Force Chair for this publication.

Ryan Delamere, EIT

Civil

Years of experience	Years with AECOM	Education
16	14	BS, Civil Engineering, State University of New York (SUNY) – Buffalo
Registrations/Certifications		
Engineer In Training (EIT): NY		

Supporting civil design, Ryan brings a strong background evaluating existing facilities and developing coordinated improvements for water and wastewater infrastructure across Western New York. His work in field investigations, site and process piping, equipment integration, design documentation, cost evaluation, and construction-phase support will help the team develop practical improvements that account for existing conditions and can be efficiently advanced from concept through construction.

Professional history

Ryan is an Engineer-In-Training (EIT) with 16 years of project engineering experience with municipal capital improvement project work including municipal facilities, water supply/distribution, and sewerage works. His responsibilities have included project engineering, resident project representation, testing certification, quantity measurement, and progress documentation.

Selected project experience

Erie County DEP/DSM District No.3, Elma Pump Station and Force Main Evaluation, Elma, NY. Project engineer for the evaluation, cost estimation, and preliminary design report for upsizing the existing pump station and force main. The project included a report with design alternatives for new pump station and routing of new 16” HDPE force main to increase capacity from 1 MGD to 2.12 MGD. The proposed seven-mile forcemain crosses several creeks, roads and an expressway.

Erie County DEP/DSM District No.6, Lackawanna WRRF Digester & Solids Management Upgrades, Lackawanna, NY. Project engineer for the design of replacement digester covers and new hose pumps. Performed site inspections to confirm existing piping layout. Prepared drawings and specifications for the project including removal of the 30’ diameter intestinal wall in Step 2 Digester, new 50’ diameter gas holding floating cover for Step 2 and Step 3 Digesters, new pumped mixing systems to facilitate digester mixing, replace all interior digester piping, install two (2) hose pumps for Thickener Underflow, Sludge Conditioning Tank Feed, and Waste Activated Sludge, install new heat exchanger, condensate traps, sedimentation traps,

replace existing 6” and 8” valves that are currently inoperable and upgrades to existing MCC including new HVAC. Full-time Construction Inspection including coordination between contractors and client, submittal review and pay application approvals.

Erie County DEP/DSM District No.6, Evaluation of Lackawanna Wastewater Treatment Plant Digestion Process Report, Lackawanna, NY. Project Engineer. Evaluated and prepared design report Project for existing sludge handling system at the Lackawanna WRRF. Several site inspections including confined space entry into Step 2 Digester were completed to assess the condition. The evaluation included replacement options for the digester covers including fixed, floating, gas holder and membrane cover for both Step 2 and Step 3 digesters and additional equipment to give the facility redundancy. Cost estimates were created for all the options and recommended replacement of the Step 2 and Step 3 covers with floating cover.

Erie County DEP/DSM District No.3, Southtowns AWTF Effluent Disinfection Evaluation, Blasdell, NY. Project engineer for the evaluation and concept design for the Southtowns advanced wastewater treatment facility (AWTF) effluent disinfection process. This project included an alternatives evaluation of chemical chlorination and dechlorination versus ultraviolet (UV) light technology. The facility was given a lower effluent total residual chlorine (TRC) limit, and these evaluations tested the facility’s wastewater to verify compliance with both proposed technologies. Testing included collimated beam and ultraviolet transmittance (UVT) to verify the use of UV disinfection technology and bench testing

with multiple dechlorination chemicals to verify the destruction of TRC via dechlorination chemical. This evaluation provided the client with a alternatives evaluation including system design concepts, costs, and recommendations so that a sound decision for system upgrades can be made.

Buffalo Sewer Authority, Bird Island WWTP Phase III Secondary System Rehabilitations and Upgrades, Buffalo, NY. Project engineer assisting with the design of upgrades to the Secondary System especially the Final Effluent plant water system and course bubble system. The project consists of adding and/or rehabilitating secondary systems and its various components to deliver a thorough and effective solution to treat sustained peak flow up to 400 MGD in partial treatment mode.

Buffalo Sewer Authority, Bird Island WWTP Area Classification Study, Buffalo, NY. Deputy Project Manager assisting with coordinating the project. Project includes completing area classification assessment for majority of the buildings on site.

Buffalo Sewer Authority, Bird Island WWTP Sump Pump Assessment, Buffalo, NY. Deputy Project Manager and Project Engineer assisting with coordinating the project and assessments of the sump pumps. Project includes creating an inventory list of approximately 70 sump pumps on site, complete assessment of the existing pumps and create a standard design for future upgrading of the sump pumps.

Boston Valley Pump Station Improvements, Erie County DEP, Buffalo, NY. Resident Engineer and Construction Inspector for rehabilitation and flood proofing of an existing 5 MGD Boston Valley Pump Station in Boston, NY.

Erie County DEP District No.3, Rush Creek Interceptor, Blasdel Milestrip Wet Weather Relief Pumping Station and Forcemain, Hamburg and Blasdel NY (2015-2016): Resident Engineer and Construction Inspector for the project with the objective of eliminating sewerage overflows, multiple pumps stations and the Village of Blasdel WWTP. Project includes construction of a wet weather relief pump station, 24-inch sanitary sewer forcemain, gravity sanitary sewers, pavement rehabilitation, site work, installation of 24-inch and 27-inch

diameter sewer pipe by jacking and boring under railroad tracks and NYSDOT highways, and pipe crossings at Rush Creek.

Amherst WPCF Disinfection and Metering System Improvements, Town of Amherst, NY. Project engineer for improvements to chlorination and dechlorination feed system, new ferric chloride feed system, and upgrades to 12 sluice gates and various metering structures.

Amherst Water Pollution Control Facility 2012 Upgrades, Amherst, NY. Resident Inspection for the construction of the Building 4 polymer system, Building 1 gate actuator replacements, and scum system replacement.

Amherst Water Pollution Control Facility Building 3 and 40 Sludge Collection Modifications, Amherst, NY. Resident Inspection for the construction of equalization basin modifications.

Amherst Water Pollution Control Facility Building 4 Dewatering Process Improvements, Amherst, NY. Design of layout for an additional centrifuge. The project includes new feed pump control panels, new platform, replacement of back drive on existing centrifuge, new centrifuge, centrifuge control and six new screw conveyors.

Niagara Falls Water Board WWTP Sedimentation Basins and Scum Removal System Upgrades, Niagara Falls, NY. Project engineer for replacement of traveling bridge system with chain and flight system, upgrades to all sedimentation basin mechanical drives, installation of effluent finger weir troughs to increase basin weir length and upgrades to the scum removal system.

Mr. Davidson is experienced in bridge design, structural engineering, railroad design, and civil engineering. His design experience includes design of steel and concrete superstructures, substructure design, seismic analysis, fatigue evaluation, and inspection and load rating of structures. His experience also includes feasibility studies, design report preparation, contract document preparation, cost estimating, and construction support for various types of projects.

PROJECT EXPERIENCE

Monroe County Department of Environmental Services (MCDES), Northwest Quadrant (NWQ) WWTF Thickener Tanks Structural Inspection, Hilton, NY

As a subconsultant to Arcadis, performed structural inspection of two gravity thickener tanks and two sludge holding tanks at the Northwest Quadrant (NWQ) Wastewater Treatment Facility, operated by Monroe County Department of Environmental Services (MCDES). Project work included visual inspection of the internal (with confined space entry) and external components of the tanks including walls and floors, as well as the thickener building roof deck.

Erie County Department of Environment and Planning, Southtowns AWTF UNOX Reactor Inspections, Blasdell, NY

As a subconsultant to Arcadis, Structural Engineer for the inspection of four existing UNOX high-purity oxygen activated sludge reactors at the WRRF. Project work included the hands on structural concrete inspection of the internal (with confined space entry) and external components of the tanks including walls, floor and roofs.

Village of Leroy, Wastewater Treatment Plant Upgrades, Leroy, NY

Structural Engineer for a series of upgrades to the wastewater treatment plant. Responsible for design and detailing of several building repairs related to removal of large process tanks including new framing to infill concrete floors and framing to replace open steel grating floor penetrations; creating usable space for a future maintenance shop. Work included analysis of the existing floor systems to ensure adequate support of the additional dead and live loads; analysis of the roof structure for additional HVAC equipment and penetrations; and analysis of concrete floor slabs for weight and vibration of new equipment. Further, project included concrete repairs to the process building foundation and an adjacent aeration tank; design and detailing of a primary clarifier tank and two new multi-cell splitter boxes; design of a new grit removal system, including the concrete tanks and building foundations; and site grading and site improvements.

Livingston County Water & Sewer Authority, Lakeville Wastewater Treatment Plant UV Disinfection, Lakeville, NY

Structural Engineer for the design of a new UV disinfection system at the WWTP. Project work involved the design and detailing of a new reinforced concrete UV channel, weir, influent, and effluent structures. Project work also included the development of cost estimates and coordination with the UV equipment manufacturer. During construction was responsible for the review of all structural shop drawings related to the UV structure.

Niagara Falls Water Board, Wastewater Treatment Plant, Project 1 – Sedimentation Basin Upgrades, Niagara Falls, NY

Structural Engineer for a series of upgrades to the sedimentation basins at the wastewater treatment plant. The upgrades included the replacement of the existing traveling bridge skimmer system with new chain driven skimmer flights. The project work involves the installation of new longitudinal tank walls to divide 4 of the existing basins for use with the new skimmer system; concrete structural repairs to the existing tank walls and walking surfaces; installation of new access bridges across the basins, new platforms and grating around the various equipment motors; and repairs to the existing railing system.



LICENSES

Professional Engineer:

- Michigan
- New York
- Pennsylvania

EDUCATION

MS, 2000, Structural Engineering,
University at Buffalo, The State
University of New York

BS, 1999, Civil Engineering,
University at Buffalo, The State
University of New York

CERTIFICATES

NHI – 130056 – Safety Inspection
In-Service Bridges

FAA – Part 107: Remote Pilot
Certificate

AFFILIATIONS

Association of Bridge
Construction and Design,
Western New York Chapter
(President – 2020/21)

NYS County Highway
Superintendents Association

TRAINING

OSHA 10 Hour Course

Confined Space Entry

CFR 49 FRA 214 – Roadway
Worker On-Track Safety Program

EXPERIENCE

26 Years

Gerald (Jerry) Otterson, RA

Architectural

Years of experience 48	Years with AECOM 10	Education MBA, Business Administration, University of Illinois - Urbana-Champaign, 1982 MS, Architecture, University of Illinois - Urbana-Champaign, 1982 BA, Architecture, University of Illinois - Urbana-Champaign, 1980
Registrations/Certifications Registered Architect: CT, MA, RI, NH, ME, HI, BC	Professional affiliations NCARB Certificate LEED Accredited Professional	

Supporting the structural and facility design team, Jerry brings decades of architectural design, discipline management, and quality-control experience for water and wastewater facilities. His understanding of process buildings, facility modifications, equipment integration, and construction requirements will help the team develop coordinated, functional, and maintainable improvements that support GGLDC's operational needs.

Professional history

Jerry is a senior Architectural manager in the Chelmsford office. His areas of expertise include Architectural discipline management, design project management and quality control, and construction project management. Mr. Otterson's project experience includes industrial, water treatment and wastewater treatment facilities, and Department of Defense projects.

Selected project experience

Providence Water, Residuals and Backwash Recycle Upgrades for Philip J. Holton Water Purification Plant, Providence, RI. Serving as Architectural Discipline Lead to provide engineering services for the residuals and backwash recycle upgrades at the Philip J. Holton Water Purification Plant. Currently in design, this project addresses the separation of spent filter backwash waste from the existing drainage system; the construction of a new spent back-wash recycle system to manage spent filter backwash; Construction of new engineered residuals thickening lagoons; modification of existing drying beds to handle the thickened residuals; construction of a new decant pumping station to handle decant from the new engineered lagoons; and the removal of residuals from the South Sedimentation Basin and Lagoons 1A, 1B, and 2.

Springfield Water and Sewer Commission Master Plan, Springfield, MA. Architecture Manager for master plan for design of a new and renovated Water Treatment Facilities as a part of a design-build project for a new finished water clearwell and backwash pumping station.

Meriden WPCF and Remote Pump Station Upgrades, Meriden CT. Architecture Manager for design of new buildings and alterations at Wastewater Treatment facility.

City of Portsmouth, Wastewater Treatment Plant, Portsmouth, NH. Manager for Architectural effort for additions and alterations to multiple buildings at a wastewater treatment plant.

Wallingford Water Pollution Control Facility, Wallingford, CT. Architecture Manager for design of a new and renovated Water Treatment Facilities.

Water Treatment Plant Design, Tri-Town Commission, Braintree, MA. Architecture Manager for the design of a new, greenfield 12 MGD water treatment plant for the Tri-Town Commission.

Orleans Wastewater Treatment Facility, Orleans, MA. Architecture Manager and Architect of Record for design of a new Water Treatment Facility.

Worcester Road Pump Station, Framingham, MA. Architecture Manager for design of a new Water Treatment facility.

Pittsfield Wastewater Treatment Plant Nutrient Upgrade, Pittsfield, MA. Architecture Manager for design of a new and renovated Water Treatment Facilities.

Foxborough Chestnut Street Water Treatment facility, Foxborough MA. Architecture Manager for design of a new Water Treatment Facility.

Martha's Vineyard Airport Wastewater Treatment Facility, Martha's Vineyard, MA. Architecture Manager for design of alterations at Water Treatment.

Greenwich Department of Public Works, Old Greenwich, Chapel Lane, and Cos Cob Pump Stations, Greenwich, CT. Architecture Manager for Architectural design and construction administration services for a water treatment facility.

Mackenzie Water Treatment Plant Chemical Feed Improvements, Clinton, CT. Architecture Manager for design of an additions and alterations at Water Treatment facility.

Town of Tewksbury, Water Treatment Plant Construction Services, Tewksbury, MA. Architecture Manager for the design of a new facility and construction of the improvements to a 7 MGD Water Treatment Plant.

Town of New Milford, Rock Street and Welches Point Pump Stations, Milford, CT. Architecture Manager for Construction Administration Services for Water Treatment Facility.

Mattapoisett Chemical Treatment Facility, Mattapoisett MA. Architecture Manager for design of a new Water Treatment Facility Pump Stations.

Woonsocket Regional Wastewater Commission, Woonsocket Wastewater Treatment Plant, Woonsocket, RI. Manager for Architectural effort to develop construction documents for additions and alterations to wastewater treatment plant.

Washington Suburban Sanitary Commission, Patuxent Water Filtration Plant Design Services During Construction, Laurel, MD. Architecture Manager for Construction Administration Services.

New Castle Wastewater Treatment Plant Upgrade, New Castle, PA. Architecture Manager for design of a new and renovated Water Treatment Facilities.

City and County of Honolulu, City and County of - Department of Water, Sand Island Wastewater Treatment Plant Secondary Treatment Planning and Design, Sand Island, HI. Contributing Architect for existing condition survey for water treatment plant at Sand Island Hawaii.

Passaic Valley Sewerage Commission, Wastewater Treatment Plant Upgrade Program Management Services, Newark, NJ. Architecture Manager for Owner Project Management services for a Water Treatment Facility.

City of Davis, Davis Wastewater Treatment Plant Upgrade - Design-Build Services, Davis, CA. Architectural Manager for design-build wastewater treatment facility including administration building and laboratory.

McLoughlin Point Wastewater Treatment Plant, Vancouver Canada. Architecture Manager for design of a new Water Treatment Facility Process Building.

Stockton RWCF Modifications, Stockton, CA. Architecture Manager for design of a new and renovated Water Treatment Facilities.

Orleans Wastewater Treatment Facility, Orleans, MA. Architecture Manager for design of a new Water Treatment Facility.

Sandwich Water District Pumping Station No. 12, Sandwich MA. Architecture Manager for design of a new Water Treatment Facility.

Nichols and Trap Falls 490 Pump Station, Shelton, CT. Architecture Manager for design of a new pump station.

Armed Forces Reserve Center, Armed Forces Reserve Center, Farmingdale, NY. Senior project manager responsible for total project management for 250,000 square-foot, \$92 million, 4-story building and supporting facilities. The project was initially unsuccessfully bid as an 8A procurement. Assisted New York DOD to reconcile bid protests which led to a successful rebid of the project resulting in saving New York more than \$30 million.

Connecticut Air National Guard, CNAF Upgrade A-10 Engine Surf - Bradley International Airport, Windsor Locks, CT. Senior project manager responsible for total project management for 33,000-square-foot, \$6.7 million building and supporting facilities.

Connecticut Air National Guard, CNAF Beddown - Bradley International Airport, Windsor Locks, CT. Senior project manager responsible for total project management for 9,000-square-foot, \$9 million building and supporting facilities.

Delaware Armed Force, Reserve Center, New Castle, DE. Senior project manager responsible for total project management for 150,000 square-foot, \$38 million, 2-story building and supporting facilities. Provided research evidence and deposition support which lead to successful resolution of contract disputes which saved the government hundreds of thousands of dollars.

Suresh Patil, PE

HVAC and Plumbing

Years of experience	Years with AECOM	Education
32	3	MEng, Mechanical Engineering, Youngstown State University
Registrations/Certifications		MBA, Savitribai Phule Pune University
Professional Engineer: CT, MA, NH, TX, WA, UT, ME, CA, WY, NV, AZ, FL		BEng, Mechanical Engineering, Shivaji University

Drawing on his mechanical design work for water, wastewater, and pumping facilities, Suresh will help coordinate HVAC and ventilation systems with process equipment, piping, controls, and facility operations. This integrated approach will support safe working conditions, equipment reliability, and long-term maintainability for GGLDC.

Professional history

Suresh is a senior mechanical process engineer with more than 30 years of experience working in the water, mining, industrial, and power sectors. He has provided mechanical and controls leadership for the design of more than 100 water and wastewater pumping systems. He has supported and led a mechanical design team for various water and mining projects. His experience includes pre-feasibility, feasibility studies, detailed designs, design supervision, procurement, project management, construction oversight, and construction support on small and major pump stations and mineral processing plants.

Selected project experience

- Bird Island Secondary System, Buffalo, NY.** Lead mechanical process engineer for the design of the 400-mgd Wastewater Treatment Facility Improvement. Process design included final settling tank control system.
- Aquarion Water Company, Hemlocks Finished Water Pump Station, Fairfield, CT.** Lead mechanical process engineer for the two new pump stations having capacities of 19.2 and 8.72 MGD. The pump station includes finished water pumps, butterfly valves, check valves, piping, and cranes.
- Graham Hill Water Treatment Plant Facility Improvements, Santa Cruz, CA.** Lead mechanical process engineer for the design of the 20-mgd Water Treatment Facility Improvement. Process design included raw water pretreatment, flocculation, settling, Ozone treatment, filtration, thickening, dewatering, and chemical feed systems.
- Crooked Spring Water Treatment Plant Facility Improvements, Chelmsford, MA.** Lead mechanical process

- engineer completed design of a 3 MGD PFAS Treatment Facility comprising carbon adsorption with automated backwash, residuals management systems and chemical dosing systems.
- PBH Wellfield PFAS Treatment System, Brooklyn, CT.** Lead mechanical process engineer completed 60% design of a 3 MGD PFAS Treatment Facility comprising of carbon adsorption with automated backwash.
- Connecticut Water Company, Brooklyn Wellfield PFAS Treatment System, Killingly, CT.** Lead mechanical process engineer completed 60% design of a 1.2 MGD PFAS Treatment Facility comprising of carbon adsorption with automated backwash.
- Raw Water Pipeline, BHP, AZ.** Lead mechanical engineer for the design of 18-inch-high pressure water pipeline for the mine.
- Ward Street and Columbus Park Headworks Upgrade, Boston, MA.** Lead mechanical process engineer for the design of 90 and 60 mgd headworks. Process design included grit collection system.
- Jerome Smith Pump Station, Provincetown, MA.** Lead mechanical process engineer for 160 gpm wastewater lift station. The pump station included wet well, submersible pumps, odor control system, and piping.
- Capstone, PLS Pumping System, Miami, AZ.** Lead mechanical engineer who supervised the design of a 20,000 gpm PLS pumping system involving two-stage pumping of PLS from a pond to SX/EW plant. Also supervised a team of engineers and designers in completing general arrangements, P&IDs, piping and mechanical drawings prepared in Plant 3D.

Gold Standard Venture, Railroad Project – Prefeasibility, Carlin, NV. Mechanical engineer who designed a water management system involving well submersible and horizontal pumps for the Railroad project gold mine. Key responsibilities also involved providing preliminary drawings and cost estimates for performing a feasibility study for the project. Prepared preliminary site plans for the pre-feasibility level study in AutoCAD and performed a hydraulic analysis using AFT software. The client received approval to move forward with a feasibility study.

USACE Jacksonville District, Broward County, FL. Broward County Water Detention Facility, Ft. Lauderdale, FL. Mechanical lead supervised the mechanical design of 1,395 cfs pump station involving three 350 cfs inflow (1,200 hp engine driven) and three 115 cfs seepage pumps (400 hp motor driven), canal intake and impoundment siphon discharge for the pumps, 60,000-gal fuel storage facility and fuel system, 314,000 cfm pump station ventilation system, debris removal system and siphon system.

USACE St. Paul, Miter Gate Anchorages Design for Lock and Dams, St. Paul, MN. Lead mechanical engineer who supervised the design of 8-inch anchorage pins and anchorage pin keeper plates for miter gates at Lock and Dams 5A, 8, and 10.

USACE St. Louis District, NESP Lock 25 Existing Lock Wall Modifications, St. Louis, MO. Lead mechanical engineer who supervised the design of a floating mooring bitts for the Lock and Dam No. 25. The project involves preparing PS&E, cost estimate, and design documentation report for the construction of operational and functional modifications to the existing intermediate wall and river wall for the new 1,200-foot main lock at Lock 25.

Freeport McMoran, Safford Acid Storage Facility, Safford, AZ. Mechanical lead who designed sulfuric acid storage facility consisting of a 4500-ton acid storage tank, loading, and unloading facilities. Supervised preparation of general arrangements, P&IDs, and piping drawings in Revit. Performed hydraulic analysis in AFT software, issued deliverables for construction on time, and completed projects under budget.

Gulf Intracoastal Waterway, TX, Brazos River Floodgate – Colorado River Locks Project, Freeport, TX. Mechanical engineer completed an internal technical review of the 65% design drawings and calculations for 125-foot sector gate components; hinge anchor and embedment, hinge bearing, hinge casting, pintle and bushing, drive gear and adaptor, rack gear teeth, pintle support, generator, and sedimentation control system.

Broward County Water Detentions Facility, Fort Lauderdale, FL. Lead mechanical engineer for the design of 1,395 cfs pump station consisting of three 350 cfs inflow (1,200 hp engine driven), three 115 cfs seepage pumps (400 hp motor driven), 60,000-gal fuel storage, 314,000 cfm ventilation, debris removal, and siphon systems.

Midnite Mine, Newmont, WA. Lead mechanical engineer for the design of pump system transferring water collected in the various ponds across the mine site to the water treatment plant. The pump stations include pumps, piping, etc.

Mulatos Raw Water Pump System, Alamos Gold, Mexico. Lead mechanical engineer for the design of pump system transferring raw water from a river to the gold processing plant. The pump stations include pumps, piping, etc.

Almatti Irrigation System, India. Lead mechanical engineer for the design of 565 cfm pump station consists of four 141 cfs vertical turbine pumps, piping, crane, etc.

Mulwad Irrigation System, India. Lead mechanical engineer for the design of 3530 cfs pump station consists of twenty 176 cfs vertical turbine pumps, piping, crane, etc.

Nashik Water Supply System, India. Lead mechanical engineer for the design of 350 cfs pump station with five 70 cfs vertical turbine pumps, piping, crane, etc.

Hyderabad Water Supply System, India. Lead mechanical engineer for the design of 1000 cfs pump station consists of twenty 50 cfs vertical turbine pumps, piping, crane, etc.

Miter Gate Anchorages Design for Lock and Dams 5A, 8, and 10, USACE St. Paul District, MN. Lead mechanical engineer for the design of 8-inch anchorage pins, and anchorage pin keeper plates for miter gates at Lock and Dams 5A, 8, and 10.

NESP Lock 25 Existing Lock Wall Modifications, USACE St. Louis District, St. Louis, MO. Lead mechanical engineer for the design of a floating mooring bitts for the 1200-foot main Lock at the Lock and Dam No. 25. on Mississippi River.

Ed Chaviano, PE

HVAC and Plumbing

Years of experience 30	Years with AECOM 2	Education BES, Mechanical BESC, Mechanical Engineering, Instituto Superior Politécnico, Cuba Associate Diploma, Technology, Politecnico, Cuba
Registrations/Certifications Professional Engineer: CT, MA, NH, ME		

Selected to lead HVAC and plumbing design, Ed brings a strong background in developing mechanical systems for water and wastewater treatment plants, pump stations, and other process facilities. His capabilities in system design, equipment selection, quality control, cost estimating, and construction support will help GGLDC achieve safe, reliable, and maintainable facilities that are well coordinated with process operations.

Professional history

Ed is a mechanical engineer and HVAC/Plumbing Department manager. He has over 30 years of experience in Mechanical, HVAC, Plumbing/fire protection and Process systems design, installation, and commissioning.

Selected project experience

Massachusetts Water Resources Authority, Ward Street and Columbus Park Remote Headworks Upgrades, Boston, MA. Provided HVAC and plumbing engineering services for the upgrades to the Ward Street Remote Headworks and Columbus Park Headworks (peak capacity of 182 mgd).

City of Santa Cruz, Graham Will Water Treatment Plant Facility Improvements Project, Santa Cruz, CA. Provided lead HVAC and plumbing engineering design services, quality review, and project oversight for the \$100 million upgrade to an existing water treatment facility. Project provided new water treatment and related processes, new and upgraded buildings, and infrastructure and site improvements to reliably meet current and future regulations.

Millennium Challenge Corporate, Advanced Water Purification Plant, Ulaanbaatar, Mongolia. Provided HVAC and plumbing engineering construction services for the design of a 140,000 cubic meters per day drinking water purification facility in Ulaanbaatar.

Chelmsford Crooked Springs and Riverneck PFAS Facilities, Chelmsford, MA. Provided HVAC and plumbing engineering services for these two projects that are under design phase.

P-Town Central Vacuum System, MA. Provided HVAC and plumbing engineering services for the upgrades to the P-Town Central Vacuum Station.

Town of Epping, WWTF Upgrades, Epping, NH. Lead Mechanical (HVAC & Plumbing) Engineer. Provided lead HVAC and plumbing engineering design services, including system layout, equipment selection, code compliance, and coordination with process, electrical, structural, and architectural disciplines. Led building mechanical design efforts for the upgrade of the Town's 0.5 mgd membrane bioreactor wastewater treatment facility.

Town of Ipswich, Water Treatment Plant Replacement Project, Ipswich, MA. Lead Mechanical (HVAC/Plumbing/Fire Protection) Engineer. Provided lead HVAC, plumbing, and fire protection engineering design services, including system layout, equipment selection, code compliance, and coordination with process, electrical, structural, and architectural disciplines. Led building mechanical and fire protection design efforts for the Town of Ipswich's new 2.5 MGD water treatment plant, replacing aging infrastructure and increasing treatment capacity at the 274 High Street site. Developed and coordinated HVAC, Plumbing and fire protection systems, including fire suppression, detection, and alarm strategy; hazard analysis; and integration of fire/life safety requirements into new treatment, process, and support buildings.

Salt Lake City Water Treatment and Reclamation Facility, Salt Lake City, UT. Provided lead HVAC and Plumbing engineering design services, quality review, and project oversight for the \$100mm upgrade to an existing water treatment facility. Project provided new water treatment and related processes, new and upgraded buildings, and infrastructure and site improvements to reliably meet current and future regulations.



MATTHEW RODAK, PE

ASSOCIATE DIRECTOR, MEP

Mr. Rodak has 20 years of experience in mechanical engineering, specializing in HVAC, plumbing, fire protection, energy, and facility infrastructure systems for public-sector clients throughout New York State, including state agencies, municipalities, colleges and universities, healthcare organizations, and transportation authorities. His experience includes facility assessments, master planning, feasibility studies, design, construction administration, commissioning, and rehabilitation of existing facilities. Mr. Rodak has managed and designed projects ranging from targeted infrastructure upgrades to large-scale capital improvement programs involving complex mechanical, plumbing, fire protection, and process support systems.

EDUCATION

BS, Mechanical Engineering
 University at Buffalo (2006)

LICENSES

Professional Engineer
 NY: 089732 (2011)

AFFILIATIONS

American Society of
 Heating, Refrigeration & Air
 Conditioning Engineers

OFFICE LOCATION

Syracuse, NY

RELEVANT PROJECT EXPERIENCE

Buffalo Sewer Authority, Bird Island Treatment Facility, Secondary System Rehab and Upgrades, Buffalo, NY

Rehabilitation and upgrades to the facility, including improvements to the secondary treatment system such as replacement of process piping, ventilation improvements, cleaning of the aeration tanks and influent/effluent channels, replacement of sluice gates and miscellaneous concrete repairs, replacement of the aeration system, and associated electrical work. Mr. Rodak performed field visits, submittal reviews, construction inspection, and start-up services for HVAC ventilation equipment.

Onondaga County Department of Water Environment Protection

Oak Orchard Service Area WWTP Expansion Program, Clay, NY

PDG assisted in production of a basis of design report documenting conceptual engineering completed for the OOWWTP Expansion Program. Mr. Rodak provided mechanical design services covering plumbing, fire protection, and HVAC systems for all major facilities in the expansion program, including preparation of design criteria for wet, dry, and pre-action systems as well as exhaust system configuration and hazardous area ventilation.

Metro Wastewater Treatment Plant, Digester Improvement Project, Syracuse, NY

Design for a hydronic system that transfers excess heat recovered from the new cogeneration system to the existing cogeneration system heat recovery loop. Mr. Rodak also provided designs for pipe modifications to the existing cogeneration system heat recovery loop to provide reverse/return flow to the heat exchangers, and controls programming for sequencing of heat recovery loop operation through the plant PLC system.

Monroe County Department of Environmental Services, Northwest Quadrant HVAC Tunnel Improvements, Greece, NY

Replacement of outdated electric duct heaters with high-efficiency natural gas-fired heating and ventilation units and extension of new natural gas piping from existing facility sources. Mr. Rodak served as the Project Manager and Engineer of Record, responsible for developing the design approach and engineering to address ventilation issues as well as drafting of specifications, quality assurance, and construction administration.

Monroe County Water Authority, Shoremont Water Treatment Plant, Rochester, NY

Upgrades to the contact basin area and improving means of egress throughout the facility. Mr. Rodak provided designs for ventilation modifications to improve crossflow of outside air across the contact basin for better moisture removal, and modifications to the HVAC and plumbing systems to coordinate with renovations to create fire rated egress areas within the existing building.

Justin Dietz, PE

Electrical and I&C

Years of experience	Years with AECOM	Education
9	9	MS, Electrical Engineering - Power Systems Engineering, Worcester Polytechnic Institute, 2017
Registrations/Certifications		
Professional Engineer, MA		

Justin brings a strong background in power distribution, standby power, process controls, and system studies for water and wastewater facilities. His ability to integrate electrical and I&C requirements with process, mechanical, civil, and structural systems will help GGLDC achieve a safe, reliable, and coordinated design that supports efficient operations and future facility needs.

Professional history

Justin is a licensed electrical engineer with a background in industrial power, control systems, and water and wastewater infrastructure. His work spans medium- and low-voltage distribution, standby power, instrumentation and controls, system studies, multidisciplinary coordination, and engineering support during construction.

Selected project experience

Springfield Bondi's Island. Lead electrical design engineer for design build project including replacement of the 13.8 kV main medium voltage main switchgear with a brand-new service rated 13.8k kV medium voltage switchgear with mimic panel. Includes replacement of the medium voltage distribution system to multiple MV to LV power centers distributed throughout the site. Led coordination of electric utility requirements for primary metering enclosures and underground ductbanks. Worked on plant upgrades to the secondary aeration tanks including low voltage VFDs and aeration tank mixers with associated wiring diagrams. Designed Power, Systems, and Site plans, Single Line and Riser Diagrams, and Schedules.

Springfield Bondi's Island WWTF Electrical Upgrades. Served as Lead Electrical Design Engineer for a design-build upgrade of the facility's electrical infrastructure. Led replacement of the existing 13.8-kV medium-voltage switchgear and distribution system, including new service-rated switchgear, medium-to-low-voltage power centers, utility metering infrastructure, and underground ductbanks. Supported secondary aeration-system improvements through power and controls design for VFDs and aeration tank mixers. Developed electrical plans, one-line diagrams, riser diagrams, and system schedules.

Greater Lawrence Sanitary District Riverside Pump Station Standby Power Improvements. Served as Lead Electrical Design Engineer for the addition of a 3-MW standby generator

and upgrades to the existing 4,160-V electrical system serving four medium-voltage pumps. Improved facility reliability through enhancements to the station's dual-utility-feed configuration. Developed electrical plans, one-line diagrams, riser diagrams, and associated power-distribution documentation.

Sand Island WWTP Secondary Treatment and Thickener Building Upgrades. Served as Lead Electrical Design Engineer for secondary-treatment and solids-handling improvements. Designed double-ended 11.5-kV medium-voltage switchgear, generator switchgear capable of supporting up to four standby generators, and facility-wide medium- and low-voltage power-distribution systems. Coordinated utility service requirements, transformer installations, motor control centers, switchboards, VFDs, and associated electrical infrastructure serving new and existing facilities.

Wallingford WWTP Phosphorus Removal Upgrades. Served as Lead Electrical Design Engineer for phosphorus-removal improvements. Designed a new 4,000-amp electrical service, medium-voltage-to-low-voltage transformer installation, and associated distribution upgrades. Integrated the new electrical infrastructure with the plant's existing power system and developed electrical plans, one-line diagrams, riser diagrams, and system schedules.

Meriden WWTP Phosphorus Removal Upgrades. Provided Instrumentation and Controls Design Services for phosphorus-removal improvements. Developed P&IDs and control strategies for new and existing treatment processes, including network architecture, primary clarifiers, chemical feed systems, pump stations, and secondary-treatment facilities.

Pease WWTP Electrical System Upgrades. Served as Lead Electrical Design Engineer for upgrades to the facility's primary service switchboard, low-voltage distribution system, and standby generation equipment. Developed electrical plans, one-line diagrams, riser diagrams, and supporting design documentation.

Sarah Papazian, PE

Electrical and I&C

Years of experience 17	Years with AECOM 17	Education BS, Mechanical Engineering, University of Massachusetts - Lowell, 2007
Registrations/Certifications Professional Engineer: MA		

Selected to support instrumentation and controls, Sarah Papazian, PE, brings a strong background in designing and integrating control systems for water and wastewater facilities, pump stations, and industrial systems. Her knowledge of PLCs, SCADA networks, remote communications, instrumentation, and process controls will help GGLDC achieve coordinated, reliable monitoring and control systems that support efficient operations and can adapt to future facility needs.

Professional history

Sarah is a Senior Instrumentation and Control Systems Engineer. She has designed control systems for water and wastewater treatment facilities varying in size from duplex pump stations to 120 MGD plants. Sarah has evaluated existing plants, designed control systems for new and existing plants, and has provided construction support for municipal water and wastewater plants, as well as industrial plants.

Selected project experience

MWRA, Gravity Thickener Rehabilitation, Deer Island Treatment Plant, Boston, MA. Controls System Engineer. Provided design for a \$14 million gravity thickener rehabilitation project at the Deer Island Treatment Plant. The design includes the replacement of the collection equipment, including drives and controls, for each of the six (6) existing gravity thickener tanks.

Newburyport Department of Public Services, Water Treatment Plant and Distribution System - Engineering Support During Construction, Newburyport, MA. Designed the instrumentation and control system for two phases of a plant upgrade. One phase consisted of adding a new clearwell and associated instrumentation and integration with existing plant SCADA. The second phase included a new equalization tank, capable of providing a specific range of recycle flow to the head of the plant and also quickly draining the tank to nearby lagoons using the same pumps; upgrading existing sedimentation tanks and filters, upgrading existing chemical systems, and integrating all new equipment with the existing.

City of Davis, Davis Wastewater Treatment Plant Upgrade - Design-Build Services, Davis, CA. Lead Instrumentation and Controls Engineer on a secondary and tertiary upgrade of an existing wastewater treatment plant through a design-build project delivery. The upgrade involved replacing all existing PLCs as well as integrating new PLCs (balance of plant and OEM) into the SCADA network.

City of Portsmouth, Peirce Island Wastewater Treatment Facility, Portsmouth, NH. Lead Instrumentation and Controls Engineer provided design for up-grade and expansion to the existing wastewater treatment facility. The project includes new headworks, Bio-logical Aerated Filtration (BAF), solids handling, odor control, and associated chemicals and other systems. The instrumentation and controls portion of the upgrade. The entire SCADA system was upgraded and consists of a centralized PLC with distributed remote IO (RIO) panels. MCCs and VFDs were networked via Ethernet.

City of East Providence, East Providence Wastewater System Expansion - Construction Oversight, Providence, RI. Provided design and construction support on a design-build contract to design and build an upgrade and expansion to the existing East Providence water reclamation facilities. The project includes expansion of the existing wastewater treatment plant, two new remote pump stations, and upgrades to several existing remote pumping stations. The instrumentation and controls portion of the upgrade included designing the instrumentation and control systems for the main portion of the plant as well as several remote pump stations. Systems included in the upgrade and expansion were the headworks area, dewatering press, aeration tanks, chlorine contact tanks, secondary clarifiers, odor control systems, and chemical additions.

Washington Suburban Sanitary Commission, Western Branch Wastewater Treatment Plant Enhanced Nutrient Removal Upgrade - Upper Marlboro, MD.

Provided engineering support during construction of an enhanced nutrient removal (ENR) upgrade at a 30-mgd wastewater treatment plant. The upgrade consisted of raw water pumps, raw water bypass pumps, HRAS bioreactors, NA bioreactors, NAS return pumps, DAF thickening, thickened sludge storage, and scrubber blow-down pumping. SCADA control included tying into existing RIO panels and providing the necessary new RIO panels.

The Metropolitan District, South Hartford Conveyance and Storage Tunnel - Final Design, Hartford, CT.

Provided instrumentation and control design for over 20,000-foot-diameter conveyance and storage tunnel to transport combined sewer and sanitary sewer waste from South Hartford locations to the Hartford water pollution control facility. Design includes level monitoring and sewer overflow points, gate control, and coordination with odor control systems. Oversaw communication study to evaluate best communication method for remote sites.

North Hudson Sewerage Authority, Adams Street Wastewater Treatment Plant Primary Clarifier #3 Upgrade - Design S, Hoboken, NJ.

Designed instrumentation and control system for upgrade of a chlorination/dechlorination chemical metering portion of the wastewater treatment plant upgrade. The upgrade consisted of flow pacing (with ORP biasing) two chemical systems and designing a local controller to adjust the pacing.

City and County of Honolulu, Honouliuli Wastewater Treatment Plant Facility Plan, Oahu, HI.

Provided support to the development of the concept design P&ID drawings.

Town of Newport, Wastewater Treatment Plant Phosphorus Removal Upgrade - Design, Bid and Construct, Newport, NH.

Designed instrumentation and control system for a phosphorus removal upgrade for an existing wastewater treatment plant. The process used mix tanks, chemical addition, and disc filters to meet the phosphorus discharge limits.

Washington Suburban Sanitary Commission, Patuxent Water Filtration Plant - Ultraviolet Disinfection and Expansion Study, Laurel, MD.

Designed the instrumentation and control systems for a plant expansion and ultraviolet (UV) addition for an existing 120-mgd water treatment plant in Patuxent, Maryland. Major aspects of the upgrade include adding two filter trains to an existing 10-train system, addition of UV disinfection systems to the discharge of all filter trains, and chemical metering of several chemicals. The upgrade also included the addition of a residuals handling system which included centrifuges, mixers, gravity thickeners, and sludge storage and discharge bins.

City of Newport, Lawton Valley Water Treatment Plant and Upgrade of Station No. 1 - Design-Build, Newport, RI.

Designed the instrumentation and control systems for a new 7-mgd water treatment plant designed to replace an existing plant (Lawton Valley), as well as upgrade an existing 9-mgd water treatment plant (Station One). The processes at each plant included dissolved air flotation (DAF) filters, granular activated carbon (GAC) gravity filters, post filter adsorber (PFA) system, several chemical metering systems, chlorine contact tank/clearwell, and finished water pumping and storage. SCADA system at each location was comprised of several distributed PLCs and remote I/O cabinets. Overall SCADA system design included VPN communication between the two sites, integration of an existing residuals pumping station via fiber optic cable, and radio communication to several other remote locations for monitoring and control.

Millipore Corporation, Manufacturing Facility Upgrades - General Consulting Services, Jaffrey, NH.

Evaluated the plant water system at an industrial medical filter company and provided a report outlining means of improving the system. Existing plant water system at the site included several wells, a main storage tank, several reverse osmosis (RO) systems with associated feed pumps, and several recycling lines to optimize use of plant water. Proposed changes included upgrading one of the RO skids and implementing instrumentation at some of the various storage tanks to monitor and control flow throughout the plant.

Andrew Detwiler

Cost Estimating

Years of experience 34	Years with AECOM 6	Education MBA, Master of Urban Planning BS, Mechanical Engineering
Registrations/Certifications OSHA 30-HR Certification		

Andrew will lead cost estimating and possesses a strong background in construction estimating, pre-construction planning, and cost management for water, wastewater, pumping, conveyance, and civil infrastructure projects. His ability to evaluate alternatives, assess constructability, and develop reliable project budgets will help GGLDC make informed decisions, understand cost implications early, and advance practical solutions that align with project objectives and available funding.

Professional history

Andrew is a construction professional with over 30 years of experience in construction estimating, operations, and management. His experience in construction is diverse and includes all aspects of a project lifecycle from concept to close-out. He has expertise in estimating and managing water, wastewater, civil infrastructure, industrial construction, mining, environmental remediation and power and gas projects with dollar values less than \$1M to over \$1.5B in an assortment of delivery methods. His background includes proficiency in estimating, operations, consulting, project management, regional management, and business development.

Selected project experience

Design Engineering MSA, Open End - Den Lane Pump Station Design, Greenwich, CT. Chief Estimator.

Coordination and review of cost estimate to rehabilitate an existing pump station and add a new electrical building.

Greater New Haven Water Pollution Control Authority, Wind Resiliency Updates, New Haven, CT. Chief Estimator.

Coordination and review of cost estimate cost estimate to provide a budget for updating existing buildings to bring doors, windows, and roofs into compliance for hurricane ratings.

Cos Cob Pump Station, Greenwich, CT. Chief Estimator.

Coordination and review of cost estimate to demolish and rebuild a pump station and storage area.

Wallingford Fine Screen Replacement, Wallingford, CT.

Chief Estimator. Coordination and review of updated cost estimate for an existing facility fine screen rehabilitation.

Philip J. Holton Water Purification Plant Residuals & Backwash Recycle Upgrades, Providence, RI. Chief Estimator. Coordination and review of cost estimate of four options at an existing wastewater treatment facility. Options included rehabilitation of 110 MGD facility and 144 MGD, New facility for 110MGD and 144MGD.

Project Burrowing Owl FEL 2, Confidential location, USA. Chief Estimator. Coordination and review of direct lithium extraction and direct air carbon capture facilities.

Wet Weather Collection System Storage Tanks, Baltimore, MD. Chief Estimator. Coordination and review of cost estimate of six options for wet weather stormwater storage ranging from 1MG to 5MG.

Hampton Roads Sanitation District, Sustainable Water Initiative for Tomorrow (SWIFT) Program, Hampton Roads, VA. Chief Estimator. Responsible for review and analysis of contractor estimates and programmatic cost for regional water treatment process and water reclamation.

DC Water, Blue Plains Wastewater Treatment Program Management, Washington, DC. Cost Estimator. Provided program and construction management cost estimates to comply with CSO and discharge requirements into ecologically sensitive Chesapeake Bay Watershed. Strategic process planning and program definition; site logistics planning; local economic development; contractor outreach; and collaborative delivery (design-build).

Orange County Sanitation District, Bay Bridge Pump Station Upgrade and Rehabilitation, Orange County, CA. Cost Estimator. Responsible for cost estimating services as a

subconsultant to the prime for replacing the existing Bay Bridge pump station to meet current building, electrical, and safety codes. The pump station's associated force mains will also be replaced.

Orange County Sanitation District, 3-64C-DS 2,3, Orange County, CA. Chief Estimator. Responsible for QC of estimates which included, conveyance lines, rehabilitation and installation of manholes and surface treatments.

City of Thornton, City of Thornton 42-inch-diameter Welded Steel Force Main, Thornton, CO. Lead Estimator, responsible for estimation and subcontractor solicitation, coordination for 42-inch-diameter welded steel waterline, microtunneling, site work and pumping stations.

City of Tampa Wastewater Department, Tampa Pump Station Rehabilitations, Tampa, FL. Chief Estimator, responsible for QC of estimates that included, conveyance lines, rehabilitation and installation of pump stations, and surface treatments.

City of Reno (City) and Truckee Meadows Water Authority (TMWA), OneWater Nevada Advanced Purified Water Facility (APWF) Preliminary Design Report (PDR) and 30 Percent Design Project, Reno, NV. Senior Cost Estimator, responsible for the development of estimates, establishing an appropriate WBS structure, generating the Engineers Estimate of Probable Construction Cost (EOPCC), provided constructability reviews, and perform value engineering to ensure design and construction integrity while assisting in facilitating the most feasible and economic remediation design and construction method is invoked. The team presents the base estimate, value engineering options and alternative estimates to the client to guide the client and team in deriving the selected approach. The project includes the development of the PDR and 30 percent design of the project facilities and systems. The 2 MGD APWF project is an indirect potable reuse/groundwater recharge initiative led by a regional partnership between the city, TMWA, and the OneWater Nevada team. The project includes the conveyance of Category A recycled water from Reno-Stead Water Reclamation Facility (RSWRF) to the APWF, and the conveyance of Biological Activated Carbon Filtration (BACF) effluent from APWF to the Advanced Purified Water (APW) Polishing Facility for treatment to meet the Nevada Category A+ standards. Addition of Dissolved Air Flotation (DAF) pretreatment upstream of dual-media filters and transfer pump station are the RSWRF improvements included in the project. The new APWF site will include ozonation, coagulation/flocculation, BACF, chemical storage, and feed systems, and an Export Pump Station. A transmission pipeline will transport BACF effluent from the

APWF to the American Flat site. The APW Polishing Facility at the American Flat site will include BACF effluent storage tanks, injection pumps, self-cleaning screen filters, granular activated carbon (GAC) vessels, novel adsorbent vessels (for future PFAS treatment), ultraviolet (UV) disinfection, and chemical storage and feed systems. Additionally, injection and extraction wells, and various storage basins will be located within the American Flat Site.

Southwestern Water Group, Archer Western Construction, Phoenix, AZ. Chief Estimator, responsibilities included the review and selection of pursuits, including water/wastewater facilities and conveyance systems related to both water and wastewater systems. Coordinated and executed all pre-construction efforts for the Southwestern region. Various project delivery methods included Bid-Build, D/B, CMAR, EPCM and Job Order Contracting. Role also included business development coordination, employee recruiting, management, compensation and annual budget.

Pre-Construction Project Manager, Sundt Construction, Inc., Tempe, AZ. Provided estimating and pre-construction project management for the Industrial Group in the Mining and Power Sectors. Responsible for the coordination and execution of the pre-construction efforts, including estimating, subcontractor solicitation, and client interaction during preparation of deliverables and coordination with design groups. The scopes of work included water and wastewater treatment facilities, new material processing facilities, rehabilitation of existing process facilities, design feasibility reviews and conceptual pricing. Various project delivery methods included Bid-Build, CMAR and EPCM.

Catherine Goerss-Murphy, EIT

Funding Compliance

Years of experience 4	Years with AECOM 1	Education BS, summa cum laude, 2021, Civil Engineering, University at Buffalo, State University of New York AS, 2019, Engineering Science, SUNY Erie Community College JD, cum laude, 2010, University of Pennsylvania Law School BA, summa cum laude, 2005, Cognitive Science, University at Buffalo, State University of New York
Registrations/Certifications Intern Engineer – NY OSHA 10 Construction NYSDEC 4-hr Erosion and Sediment Control Training	Professional affiliations American Society of Civil Engineers (ASCE), Buffalo Section	

Catherine combines civil engineering knowledge with a legal and technical-writing background and direct experience supporting New York water and wastewater funding applications to support funding compliance. Her familiarity with NYSEFC and NYSDEC documentation will help GGLDC identify funding opportunities, prepare responsive applications, and maintain the records and coordination needed to keep funding requirements aligned with project development.

Professional history

Catherine is a civil engineer with a wide range of experience including design of water and sewer lines, development of treatment plant process flow diagrams, AutoCAD Civil 3D drafting, GIS mapping, construction inspection and administration, and technical writing. Catherine is a May 2021 graduate of the University at Buffalo's Civil Engineering program. A non-traditional civil engineer, Catherine holds a law degree from the University of Pennsylvania and was a practicing attorney in the Commonwealth of Pennsylvania prior to obtaining her engineering degree.

Selected project experience

Buffalo Sewer Authority Bird Island Wastewater Treatment Facility, Primary Treatment Renovation, Buffalo, NY. Significant improvements to Bird Island WWTF's Primary treatment system have been designed as part of BSA's Long-Term Control Plan. These improvements include major renovations and upgrades to the primary sedimentation tanks and sludge pumping station as well as a new high-rate disinfection facility and associated pumping station to enable consistent primary treatment and disinfection when the WWTF is in Partial Treatment Mode. As Project Engineer, assisted with the forms and steps necessary for the project to be included in the NYSEFC Project Listing and Update Service (PLUS) and the completion of NYSEFC Smart Growth Assessment Forms. Drafted and submitted grant and loan applications for funding through NYSEFC's Clean Water State Revolving Fund (CWSRF) and Water Infrastructure Improvement Act (WIIA) as well as NYSDEC's Water Quality Improvement Program (WQIP). Also assisted with historical weather data acquisition

for correlation with influent flows at the treatment facility and with the determination of fees applicable to the permitting process. *(prior to AECOM)*

Buffalo Sewer Authority Scajaquada Creek and Black Rock Canal Smart Sewer Project, Buffalo, NY. Three real-time control (RTC) structures and one combined sewer weir repair were designed as part of Buffalo Sewer Authority's Long-Term Control Plan for avoiding Combined Sewer Overflows (CSOs). As Project Engineer, identified potential funding opportunities, listed project with NYSEFC Project Listing and Update Service (PLUS), completed NYSEFC Smart Growth Assessment Forms, and drafted application for funding from NYSEFC's Clean Water State Revolving Fund (CWSRF) through coordination with BSA, the prime consultant, and permitting subconsultant. *(prior to AECOM)*

Buffalo Sewer Authority Bird Island Wastewater Treatment Facility (WWTF) No Feasible Alternative (NFA) Phase III. Project engineer responsible for hydraulic modeling, improvements to mechanical equipment, performance and hydraulics of existing final clarifiers, drafting of basis of design report in accordance with NYSDEC/EFC outline, updates to EFC intended use plan, and general CAD/BIM coordination as part of secondary treatment system expansion to 400 MGD sustained peak capacity. Final clarifier design involves the use of using record data, GPS-X and CFD modeling (by others), empirical testing and observations, and calculations under dry, normal, and wet weather flows.

City of Salamanca WWTP Facility Manual, Salamanca, NY. Project Engineer responsible for drafting a Facility Manual to

document WWTP's biosolids land application process, including supporting photographs, figures and requirements of the Part 360 Series regulations. In addition, prepared a formal request for a variance for the Drake field and coordinated with NYSDEC throughout the preparation of both documents. *(prior to AECOM)*

Town of Amherst Storm Drain System GIS Review Phase 1, Amherst, NY. The Town was awarded a Non-Agricultural Nonpoint Source Planning and MS4 Mapping Grant to map their stormwater conveyance system using GIS. The Town currently utilizes mapping prepared by the Western New York Stormwater Coalition; however, has found discrepancies in the data and is seeking to update the information. The current grant funding is for Phase 1, which includes the Eggertsville neighborhood. Responsible for reviewing existing Town storm drain mapping as compared to the GIS data, identifying areas for field investigation, assisting the Town with field verification, and editing GIS data based on field inspections. *(prior to AECOM)*

Buffalo Sewer Authority Wet Weather Operational Optimization and Real Time Control Coordination System Implementation, Buffalo, NY. Buffalo Sewer Authority's Long Term Control Plan was optimized by studying the amount and types of storage available in the collection system. As Project Engineer, contributed to cost curves and detailed planning-level construction and O&M cost estimates as needed for all project types under consideration, including offline storage tanks with and without associated pump stations, sewer separation projects, real-time control structures, and green infrastructure projects involving permeable pavement. *(prior to AECOM)*

Buffalo Sewer Authority Roosevelt Park Offline Storage Facility, Buffalo, NY. Project engineer assisting with design of 2.6 MGD offline storage tank to prevent combined sewer overflows under Buffalo's long-term control plan (LTCP). Responsible for investigating property and access considerations, coordinating with stakeholders and community group, obtaining record documents, and calculating depth of tank inlet piping.

Town of Amherst SWPPP Compliance Inspections, Amherst, NY. Conduct periodic SWPPP inspections on behalf of the Town at all construction sites with a documented SWPPP as part of their on-going MS4 program. Inspections focus on erosion and sediment controls as well as post-construction stormwater improvements. *(prior to AECOM)*

City of North Tonawanda, Stormwater Management Program Support, North Tonawanda, NY. Conduct periodic SWPPP inspections on behalf of the city at all construction

sites with a documented SWPPP as part of their on-going MS4 program. Inspections focus on erosion and sediment controls as well as post-construction stormwater improvements. *(prior to AECOM)*

Onondaga County Department of Water Environment Protection, Midland Avenue Regional Treatment Facility (RTF) Disinfection Study. As subconsultant, sorted and analyzed bacteriological data spanning from 1998 to 2021 to evaluate the effectiveness of seasonal disinfection at Midland Avenue RTF. Data from RTF influent and effluent were compared over time as well as data from more than twenty sampling locations in Onondaga Creek upstream and downstream of the RTF. Background research was conducted to determine the correct disinfection season and RTF operating plan, and the data was carefully separated to reflect the conditions accurately. *(prior to AECOM)*

Erie County Division of Sewerage Management (ECDSM) Transit Road Corridor Sanitary Sewer Service Evaluation Report, Amherst and Clarence, NY. Project Engineer for the evaluation of existing sanitary sewer capacity, downstream constraints, and potential improvements required to accommodate the redevelopment of the Eastern Hills Mall site and the urban growth objectives of the Town of Clarence. The project considerations included 1) ensuring that adequate sanitary sewer capacity exists within ECSD5 and Clarence Town Sewer Districts to receive the new flows expected from the ultimate buildout of the Eastern Hills Mall site, Spaulding Lake, Harris Hill, Clarence Hollow, and other areas of the Town; 2) ensuring that adequate sewer capacity exists within the Town of Amherst's collection system that receives flows from Town of Clarence and further conveys the flows to the Town of Amherst's Water Pollution Control Facility; 3) continuing to address the need for upgrades necessary to deal with aging septic systems within the Town of Clarence; and 4) balancing the potential need for new infrastructure with the operational and maintenance needs of Erie County and Town of Clarence staff. *(prior to AECOM)*

ECDSM ECSD No. 3 Rogers Road Pumping Station Rehabilitation/ Elimination Evaluation Report, Hamburg, NY. As a subconsultant, was responsible for analyzing options for re-routing the discharge from Mount Vernon Pumping Stations No. 1 and No. 2 to a location downstream of the Rogers Road Pumping Station, as well as the feasibility of each proposed route, relative advantages and disadvantages, and each option's associated life cycle costs. As project engineer, evaluated preliminary routing concepts and developed supporting maps for the report. *(prior to AECOM)*

Jordan Radomski

Construction Administration

Years of experience	Years with AECOM	Education
9	9	Bachelor of Science (BS), Civil Engineering, New York State University, 2017

Jordan’s strongest value is his combination of hands-on field and design experience with wastewater treatment facilities and sanitary sewer improvements across Western New York. His familiarity with construction inspection, submittal review, quantity verification, testing documentation, and contractor coordination will help GGLDC maintain clear communication, confirm conformance with the design documents, and address field issues as improvements move through construction.

Professional history

Jordan is a civil engineer reporting to the Buffalo office from AECOM's water business line. With over 7 years of experience, he has served as a field inspector for municipal projects, including sanitary sewer installations and wastewater treatment. He has also worked on mechanical studies, pilot studies, and the operation and maintenance of instruments. His responsibilities have encompassed resident project inspection and representation, testing certification, quantity measurement, progress documentation, instrument monitoring, and pilot study construction.

Selected project experience

Buffalo Sewer Authority, Digester 5 Rehabilitation, Buffalo, New York. Resident inspector who examined the installation and testing of a new digester floating cover and associated digester 5 piping, refurbishment of the digester 5 & 6 heat exchangers and several process upgrades to the plant including automation of the digester withdrawal function for digesters 5 & 6. Responsibilities also included quantity measurements for verification of pay apps, progress documentation for daily reports, resident project representation to facilitate communication between the contractor and the owner, testing certification, and the review of submittals.

Niagara Falls Water Board, LaSalle Sanitary Sewer Overflow Abatement Program, Niagara Falls, New York. Resident inspector who assessed the installation and testing of new sanitary sewer systems in various residential subdivision construction projects throughout the city of Niagara Falls in the LaSalle area. Responsibilities included quantity measurement for verification of pay apps, progress documentation for daily reports, resident project representation to facilitate communication between the contractor and the owner, testing certification, and the review of submittals.

Buffalo Sewer Authority, Bird Island Wastewater Treatment Plant Administration Building HVAC Study, Buffalo, New York. Project engineer who assisted with the study to determine why the Buffalo Sewer Authority would experience unpleasant odors in the administration building while the laboratory would be conducting specific tests. Project included assisting with report writing inspection and presentation to the owner.

Buffalo Sewer Authority, Septage and Sludge Transfer Station Piping Improvements, Buffalo, New York. Project engineer who designed, drew, and prepared documents for the project. The design included installing a new sanitary pipe connected to the existing sanitary pipe to increase the amount of material the plant can intake.

Niagara Falls Water Board, Project 4 - Granular Activated Carbon Replacement and Carbon Filter Support Gravel Replacement, Niagara Falls, New York. Project engineer who designed, drew, and prepared documents for the project. The design included the removal and replacement of granular activated carbon as well as removing and replacing the filter support gravel.

Buffalo Sewer Authority, Bird Island Wastewater Treatment Plant Secondary System Rehabilitation & Upgrades, Buffalo, New York. Project engineer who supported the design of upgrades to the secondary system. The project included sediment removal, installation of a new fine bubble diffuser aeration system, coarse bubble diffuser system, ninety new sluice gates, and upgrades to the return-activated sludge and waste-activated sludge systems.

Buffalo Sewer Authority, Anaerobic Digester Waste Stream Addition and Co-Digestion Facility Improvements, Buffalo, New York. Project engineer who was involved in a study conducted at the Buffalo Sewer Authority to investigate the plant's ability to accept high strength waste streams and food wastes into their anaerobic digester and optimize the management of all hauled waste materials including septic, oil and grease, leachate, and sludge.

Erie County Sewer District, No. 6 Lackawanna Water Resource Recovery Facility Digestion and Solids Management Upgrades, Erie County, New York. Project engineer who worked on designing, drawing, and preparing documents. The design included modifying the step 2 digester by removing the interstitial 30-foot diameter wall and converting the unit to the original 50-foot diameter configuration. Provided the digester with upgraded heating, mixing, floating gas holder cover, and interior concrete and piping. Was responsible for the rehabilitation of step 3 digester with new 50-foot diameter floating cover and rehabilitation of interior including concrete work and piping. Provided and reworked existing piping to fit new pumping systems including but not limited to gravity thickener underflow pumps, a new digester heat exchanger, digester discharge pumping, and all associated piping with these systems.

US Army Corps of Engineers Huntington, Automated Data Acquisition Systems 2018-2023 - Bluestone Dam Phase V System Upgrade, Hinton, West Virginia. Resident engineer who provided support for the operation and maintenance monitoring of 12-hour night shifts. Traveled from Buffalo to West Virginia for a total of 11 weeks while working on the project. Duties included monitoring the life and dam safety instrumentation, these included piezometers, inclinometers, tiltmeters, crack meters, survey prisms, and water level sensors. Assisted the head instrumentation technician with any labor-related work that might have been needed from the previous shift.

Niagara Falls Water Board, Evaluation of Adding Chlorine Dioxide to the Influent and Backwash Water of Carbon Filters, Niagara Falls, New York. Project engineer who assisted with pilot design and set up of the system. The system included several pumps, wastewater holding basins, chemical feed pumps and 5 separate activated carbon columns built to scale model of the currently utilized activated carbon filters the NFWB WWTP uses. Daily duties centered around running the system, backwashing, or cleaning the system, resolving daily system issues, and recording the necessary data required.

PROFESSIONAL CERTIFICATIONS

NICET Level IV Highway Construction #111846
ACI Field Testing Technician Grade 1 #0109449
NYSDEC Storm Water & Sediment Control SWT #060T-1032023-678
NYSDEC 4-hour Erosion & Sediment Control #060T-02/26/20262292
OSHA 10-hour course 12-006067296
NYS CDL Class B K license

Dean Patterson has 22 years of experience in construction inspection including projects for the NYS Department of Transportation and NYS Thruway Authority, along with a variety of projects for municipalities. His projects have ranged from bridge replacement and rehabilitation to full reconstruction of roadways and infrastructure.

RELEVANT PROJECT EXPERIENCE

Genesee County Department of Public Works, Water Main Upgrades Phase II, Batavia, NY – Resident Engineer - RAVI provided construction inspection services for this water main project which included pump station upgrades at four existing stations. Our scope of work included being onsite during all contractor working times and providing daily reports with photos. Mr. Patterson also tracked all work completed ensuring it was done in conformance with the plans and specifications. Materials testing was also part of this project. (2025 - Present).

ECWA NC- 33C Installation of Standby Pump Station Generators at Various Locations, NY – Chief Inspector - Mr. Patterson's duties were comprised of verifying of approved materials and methods; coordinating locations of new components; layout of parking lot extensions, fencing and generator pads; inspection of installation of conduit runs, boxout excavations, geotextile fabric, concrete placement & curing, verifying reinforcement spacing; as- built drawings. (6/2013-8/2013)

Town of Lewiston, Hamlet of Sanborn Sewer main Extensions – Chief Inspector - Mr. Patterson inspected the installation of 8" PVC gravity and 2" and 3" PVC forcemains including laterals and grinder pumps (including as-built drawings and acceptance testing); pavement boxout, stone compaction and restoration. (11/2012-5/2013)

NYSTA, Term Agreement Pavement Repairs (D214934, TAB 24-17, D214971), Various Locations in Buffalo Division - Project Engineer/ Chief Inspector – This \$8.2M On-demand Mill and Fill Contract covered from I-90 between MP 420.34 and MP 467.0 and on I-190 between MP N4.65 and MP N18.61 in Erie and Chautauqua Counties. Mr. Patterson was responsible for oversight of the field office, including assisting the office engineer with paperwork; creating work order cost estimates and final quantities; and coordinating with the Thruway, including WZTC issues and verifying QA testing. In the field, Mr. Patterson supervised and assisted the inspectors, approved the extent of repairs, including full-depth removals/replacement, implemented bridge clearance improvements, and kept track of force account records. (2024-Present)

NYSTA, Pavement Repairs at Various Locations in Buffalo Division (D214870) - Project Engineer/ Chief Inspector – This \$19.6M On-demand Mill and Fill Contract from I-90 MP 416.7 to MP 467.2 and I-190 from MP N 0.00 to MP N21.1 involved full depth pavement repairs, underdrain, mill and fill overlays, and traffic loop replacements. Mr. Patterson was responsible for oversight of the field office, including assisting the office engineer with paperwork; creating work order cost estimates and final quantities; and coordinating with the Thruway, including WZTC issues and verifying QA testing. In the field, he supervised and assisted the inspectors, approved the extent of repairs, including full-depth removals/replacement, implemented bridge clearance improvements and kept track of force account records. (2022-2023)

- D214786 TAB 21-7 Paving East of Westfield – (6/21/2021 – 11/15/2021)
- D214870 TAB 22-15, Pavement Repairs, Various locations (4/2023 – 8/2023)
- D214878 TAB 21-19 Structure Repairs, Interchange 60 Ramp Eastbound MP 485.00 (11/2022)
- D214893 TAB 23-11B Ransom Rd (7/25/2023 – 8/21/2023)

NYSTA, I-90 Pavement Rehabilitation MP 483-496 (D214822, TAB 21-7) - Project Engineer/ Chief Inspector - RAVI provided construction inspection services for this \$19.5M pavement rehabilitation project for the NYSTA which included: full depth pavement repairs; new drainage; shoulder widening; traffic crossovers; milling and HMA paving; and WZTC. This project also included coordination with PA DOT. Mr. Patterson's duties included the supervision of 5 inspection staff, field inspection of contractor's operations, completing daily inspection reports including calculating quantities, men and equipment used, assisting office engineer with paperwork, scheduling of testing labs, and WZTC scheduling. (6/2021 – 12/2023)

NYSDOT, Pavement Corrective Maintenance 20B (D264159) - Chief Inspector – Mr. Patterson served as Chief Inspector on this \$10.9M pavement rehabilitation, corrective maintenance and shoulder reconstruction project for the NYSDOT. The project included milling and resurfacing on 8 major NYSDOT Region 1 highways in Schenectady, Albany and Greene Counties. As Chief inspector, Mr. Patterson was responsible for oversight of milling and resurfacing operations, full and partial depth repairs, the project included cold in place recycling, and various pavement overlays. Additional assigned responsibilities included oversight of all nighttime operations including supervision of lower level staff and inspection of all project nighttime WZTC and lighting operations, highway pavement markings, and drainage structure adjustments. All contractor daily work operations and pay items were tracked and reported in the SiteManager reporting system. (2/2020-11/2020)

EDUCATION

BS, Building and
Construction Engineering
University of Technology
Baghdad, Iraq (1997)

AAS, Civil Engineering,
Institute of Technology
Baghdad, Iraq (1982)

CERTIFICATIONS/SPECIAL TRAINING

ACI Concrete Field Testing
Technician – Grade I

NETTCP Soils & Aggregate
Inspector

PROKON 2007

AutoCAD

3D Studio Max 9

Microsoft Project Scheduling

Management Software
(ProCore, CMIC)

EMAD ALNUAIMY

CONSTRUCTION INSPECTOR/ENGINEER I

Mr. Alnuaimy has over 20 years of professional, international experience as a Civil/Construction Engineer, working on large and small scale construction projects in both the private and public sectors. Mr. Alnuaimy is a member of the American Society of Civil Engineers, as well as the American Society of Certified Engineering Technicians.

RELEVANT PROJECT EXPERIENCE

Monroe County Water Authority, Shoremont West 1 Water Treatment Plans Phase 2 Improvements, Greece, NY; 10/2022-05/2023; \$6.8M

Mr. Alnuaimy served as the Resident Project Representative/Client Liaison for field operations, managing proper dissemination of information from the water authority's project engineer to job manager as needed. Maintained project correspondence, shop drawings and other work submittals. Kept custody of project diaries and log book of daily reports. Provided daily inspection reports of progress and documented compliance with project schedule. Received, reviewed and filed shop drawings and other submissions, operations and maintenance manuals, test reports and other data furnished by the contractor for compliance with contract requirements. Liaised with project engineers and field personnel for scheduling important project phase changes, required tests, shut-downs, and/or reductions in capacity. Complied non-conformance reports and verified tests results and other appropriate details relative to testing procedures. Assembled and provided monthly budget reports. Assisted in preparation of punch list items and verified that items were corrected prior to commencement of subsequent operations, equipment installation and made recommendations prior to final inspections and acceptance. Participated in final inspection, commissioning and testing. Prepared and submitted all red-line drawings and as-built drawings for project plans.

Rochester-Genesee Regional Transportation Authority, RTS Wyoming Bus Facility, Silver Springs, NY; 05/2023-11/2024; \$7.9M

Professional construction administration and commissioning services. This project included the demolition of existing buildings and construction of a pre-engineered metal building with bus storage, a wash bay, and office space. As Resident Engineer, Mr. Alnuaimy was on site full-time and his responsibilities included: daily reports, reviewing progress payments and change orders, coordinating and processing RFIs and construction bulletins, coordinating and processing submittals, coordinating and processing independent construction estimates, DBE monitoring, and performing site SWPPP inspection and reports.

Monroe County Jail Visitation Building, Plaza, Street & Basement Levels Interior Renovation, Rochester, NY; 05/2021-05/2022; \$4.8M

17,961 square feet of demolition and reconstruction, creating a new modernized layout. The project was multi-contracts where PDG provided construction administration and inspection services across all contracts. The General Construction/Detention Specialist contract includes new inmate contact and non-contact visitation rooms, line-up room, group cells, holding cell, searching rooms, arms storage. Also included are new public restrooms, staff restrooms, and a break room. Mr. Alnuaimy performed daily inspection of work in progress involving architectural, mechanical, plumbing, and electrical systems, including tracking and implementation of daily field change orders for all MEP Systems. Managed daily reports and submittals logs, updated as-built drawings and project schedule progress weekly, as well as observation and punch-lists for architectural, structural, and MEP disciplines.

Appendix B: Required Forms



*Please submit Proposals by 5pm on
October 21, 2026 to:
Genesee Gateway Local Development Corp. (GGLDC)
gcedc@gcedc.com*



September 23, 2026

Re: Request for Qualifications for water storage tank, recycling system and wastewater treatment at a corporate business park



Proof of Insurance

- General Liability: Not less than \$1,000,000 per accident or occurrence and \$2,000,000 General Aggregate.
- Umbrella Excess Liability: \$3,000,000 per accident (GL & UL must equal \$4M).
- Automobile Liability Insurance
- Workers Compensation: Statutory



Required Forms - These forms must be returned in order for your bid to be considered.

- Permissible Contacts Affirmation Policy - Please review the attached Summary of Permissible Contacts Policy. The designated contact for this solicitation is Penny Heimlich (gcedc@gcedc.com).
- Procurement Contract Award, Required Certification of Compliance
- Offerer Disclosure of Prior Non-Responsibility Determinations
- W-9

When submitting your bid, please include all documents as described above. If these forms are not included, your bid will not be accepted as complete.

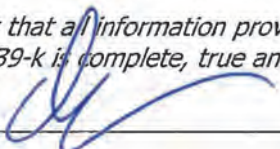
Thank you,
Penny Heimlich
Operations Manager

GENESEE GATEWAY LOCAL DEVELOPMENT CORPORATION

Procurement Contract Award Required Certification of Compliance

Offerer Certification:

I certify that all information provided to the Governmental Entity with respect to State Finance Law §139-k is complete, true and accurate.

By:  Date: 10/21/2026

Name: Doug Gove

Title: Senior Vice President

Contractor Name: AECOM USA, Inc.

Contractor Address: 50 Lakefront Boulevard Suite 111 Buffalo, NY 14202

GENESEE GATEWAY LOCAL DEVELOPMENT CORPORATION

Offeror Disclosure of Prior Non-Responsibility Determinations

Name of Individual or Entity Seeking to Enter into the Procurement Contract:

AECOM USA, Inc.

Address: 50 Lakefront Boulevard Suite 111 Buffalo, NY 14202

Name and Title of Person Submitting this Form: _____

Doug Gove, Senior Vice President

Name of Procurement: Water storage tank, recycling system and wastewater
treatment at a corporate business park 

Date: 10/21/2026

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter into the Procurement Contract in the previous four years? (Please circle):

No

Yes

If yes, please answer the next questions:

2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law §139-j (Please circle):

No

Yes

3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity? (Please circle):

No

Yes

4. If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below.

Governmental Entity: _____

Date of Finding of Non-responsibility: _____

Basis of Finding of Non-Responsibility: _____

(Add additional pages as necessary)

5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the above-named individual or entity due to the intentional provision of false or incomplete information? (Please circle):

No

Yes

6. If yes, please provide details below.

Governmental Entity: _____

Date of Termination or Withholding of Contract: _____

Basis of Termination or Withholding: _____

(Add additional pages as necessary)

Offerer certifies that all information provided to the Authority is complete, true and accurate.

By: _____ Date: 10/21/2026

Signature

Name: Doug Gove

Title: Senior Vice President

GENESEE GATEWAY LOCAL DEVELOPMENT CORPORATION

Summary of Permissible Contacts Policy

Pursuant to State Finance Law §§139-j and 139-k, this solicitation includes and imposes certain restrictions on communications between the Genesee Gateway Local Development Corporation (GGLDC) and an Offerer/bidder during the procurement process. An Offerer/bidder is restricted from making contacts during the Restrictive Period that are reasonably interpreted as an attempt to influence the procurement to any person at the GGLDC or another Governmental Entity other than the Designated Contact Persons of the GGLDC, unless it is a contact that is included among certain statutory exceptions set forth in State Finance Law §139-j(3)(a). The Restrictive Period commences with the earliest written notice of an intent to solicit offers, such as this "Request for Proposal", and terminates with the final award and approval of the procurement contract by the GGLDC. The Designated Contact Person(s) of the GGLDC, as of the date hereof, have been identified in this solicitation. In addition, GGLDC contacts are required to obtain certain information when contacted during the Restrictive Period where such contact is reasonably interpreted as an attempt to influence the procurement. Such information will be made part of the procurement record and used to make a determination of the responsibility of the Offerer/bidder. If the GGLDC determines that the Offerer/bidder knowingly and willfully made a contact during the Restrictive Period to any person other than the Designated Contact Person(s) of the GGLDC and such contact was reasonably interpreted as an attempt to influence the procurement, the GGLDC is required to make a finding of non-responsibility. In addition, the failure to timely disclose accurate or complete information or otherwise cooperate with the GGLDC shall be considered in the determination of responsibility of the Offerer/bidder. A finding of non-responsibility may result in rejection for contract award and in the event of two findings within a 4 year period, the Offerer/bidder may be rendered ineligible to submit a proposal on or be awarded any procurement contract by a Governmental Entity for a 4 year period from the date of the second final determination. Further information about these requirements can be found in Sections 139-j and 139-k of the State Finance Law. It is the Offerer's responsibility to adhere to the provisions therein.

