

DAVID C. BOWEN, PE

Engineering Manager

CURRENT POSITION: **Engineering Manager**
Narragansett Bay Commission

Education

B.S., Civil Engineering,
University of New
Hampshire

Professional Registration

Massachusetts
Rhode Island

Experience

34 Years

Joined NBC

2018

Certificates / Licenses

Massachusetts Class A -
Field Concrete Testing
License

Professional Affiliations

American Council of
Engineering Companies of
Rhode Island (ACEC-RI)

American Society of Civil
Engineers (ASCE)

American Water Works
Association (AWWA).

New England Water Works
Association National

Society of Professional
Engineers

RI Society of Professional
Engineers
(President 1996-97)

Providence Engineering
Society (President
2002-03)

Water Environment
Federation

EXPERIENCE SUMMARY

Mr. Bowen is the Engineering Manager for the Narragansett Bay Commission (NBC), responsible for overseeing all of the agency's engineering projects. He is also responsible for managing the NBC's engineering staff and outside consultants, providing efficient facility and maintenance technical support services and project engineering solutions for a variety of wastewater assignments. He has a broad engineering background, having worked on various civil and environmental engineering projects. His experience encompasses all project phases including evaluations, facility planning, design, regulatory coordination, construction administration, resident inspection, start-up, training and operations assistance of various wastewater collection and water distribution systems, and numerous pumping stations and treatment facilities.

Within the established guidelines of the NBC, Mr. Bowen develops and implements operating policies, performance standards/ goals, budgetary objectives, determines the need for external engineering services, procures qualified professional services and ensures compliance with applicable federal, state and local regulations. As Engineering Manager he works in close liaison with the public and regulatory agencies on engineering matters and related projects effecting the NBC and advocates for ratepayers best interests.

RELEVANT PROJECT EXPERIENCE**Wastewater Treatment**

- Combined Sewer Overflow (CSO) Control Facilities - Phase III Program, Narragansett Bay Commission, Bucklin Point Service Area, Central Falls, Pawtucket and East Providence, RI

Engineering Manager involved in the evaluation, design and management of the third and final phase of the NBC's long-term \$740M CSO control plan in accordance with the requirements of the 1992 Rhode Island Department of Environmental Management (RIDEM) Consent Agreement. The Phase III A improvements include the design and construction of an approximate 13,000 feet long deep rock storage tunnel, a pumping station, multiple drop shafts, consolidation conduits and miscellaneous improvements to the 46 mgd (116 mgd wet weather) Bucklin Point Advanced Wastewater Treatment Facility in East Providence. Additionally, this project includes several relief sewers, sewer separation, green stormwater infrastructure and regulator modification project

**experience from previous employer*

Publications

Bowen, D.C., Grotta, A,
"Implementation of
Nutrient Removal
Upgrades in Cranston, RI,
*A Phased-Approach to
Achieving Effluent Limits
Entering the Pawtuxet
River Helps Control Capital
Improvement Costs*",
NEWEA Conference,
January 2018

Bowen, D.C., "Tertiary
Treatment Upgrade using
Ballasted Flocculation for
Zinc and Phosphorus
Removal in Smithfield, RI -
a first in Rhode Island,
pilot and full-scale
operation", NEWEA
Conference, January 2015

- Contract IIIA Secondary Clarifier and Influent Flow Splitter Improvements and IIIA-14 Polymer System, Bucklin Point WWTF, East Providence, RI

Engineering Manager responsible for overseeing and managing engineering services associated with the evaluation, design and construction of secondary clarification system upgrades at the Narraganset Bay Commission's 46 mgd (116 mgd wet weather) Bucklin Point Advanced Wastewater Treatment Facility (BPWWTF).
- Aluminum Sulfate (Alum)/ Ferric Chloride Coagulant Conversion Study, Warwick Wastewater Treatment Facility, Warwick, RI*
- WPCF Nutrient Removal Upgrades - Facility Plan Amendment, Design, Permitting and Construction Administration, Cranston, RI*
- WWTF Tertiary Treatment Upgrades – Pilot Testing Program, Facility Plan Amendment, Design, Permitting, and Construction Administration, Smithfield, RI*
- Design-Build-Operate WWTF Improvements – draft Facility Plan Amendment and Conceptual Design Improvements, Woonsocket, RI*
- CSO Treatment Facilities Improvements, Lowell, MA*
- Cove Street CSO Treatment Facility and Pumping Station, Evaluations and Preliminary Design Improvements, Fall River, MA*
- Advanced Wastewater Treatment Improvements, Falmouth, MA*
- Design-Build, Advanced Wastewater Treatment Facility, Preliminary Design, Rockland County, NY*
- Design-Build, Miscellaneous WPCF Improvements, Cranston, RI*
- Design-Build-Operate, Advanced WWTF Improvements, Smithfield, RI*
- Design-Build-Operate, Advanced WWTF Improvements, Woonsocket, RI*
- Influent Screening System Modifications, Westborough, MA*
- Odor Control and Ventilation System Improvements, Westborough, MA*
- Felix C. Davis Wastewater Treatment Facility Expansion Project, Charleston, South Carolina*
- Felix C. Davis Wastewater Treatment Facility Fine Bubble Aeration System, Charleston, SC*
- Fish and Food Processing Pretreatment System, Evaluation Study and Consultation, Quonset Development Corporation, North Kingstown, RI*
- Secondary Clarifier Structural Evaluations and Condition Assessment, Quonset Development Corporation, North Kingstown, RI*
- WWTF Upgrade, Construction Phase Services, Quonset Point-Davisville Industrial Park, North Kingstown, RI*

- Design Build Contract 302.14-OC - Tunnel Odor Control Design-Build Services for Odor Facility, Narragansett Bay Commission, Combined Sewer Overflow (CSO) Abatement Program, Providence, RI*
- Various Contracts, Field's Point WWTF, Providence, RI*
 - Contract I, Field's Point WWTF Improvements
 - Contract IIA, Ernest Street Pumping Station Improvements
 - Contract IIB, Fields Point Wastewater Treatment Plant Grit Facilities
 - Contract IIC, Field's Point Wastewater Treatment Facility Wet Weather (CSO) Primary Clarifier Facilities and other Miscellaneous Improvements
 - Contract 94:101C, Field's Point Wastewater Treatment Facility Final Clarifier Upgrades and Control System Upgrade
 - Sub-Project C - Grease/Scum Handling System Improvements Study
 - Combined Sewer Overflow (CSO) Tunnel Pumping Station Conceptual Design, Field's Point and Bucklin Point WWTFs

Collection Systems

- Globe Street Combined Sewer and Utility Improvements, Fall River, MA*
- CSO System Controls, Combined Sewer Separation and Treatment Facilities Improvements, Lowell, MA*
- East Lynn CSO Abatement and Sewer Separation Project, Design/ Build, Lynn, MA*
- Orchard Street Combined Sewer Separation, Cambridge, MA*
- Combined Sewer Separation, Floatable Controls and Other Miscellaneous Improvement Projects, Cambridge, MA*
- Draft Stormwater Management Report, Cambridge, MA*
- Common Manhole Separation, Cambridge, MA*
- Relief Sewer Evaluation, Bergen County, NJ*
- Louis E. Brown Development, St. Croix, U.S. Virgin Islands*
- Lateral Sewer and Sewer Separation Projects, Leominster, MA*
- Lateral Sewer and CSO Separation Projects, Worcester, MA*
- Lateral Sewer and Pumping Station Projects, Bristol, RI*
- Lateral Sewers and Pumping Stations Projects, Burrillville, RI*
- I/I Investigations, Cambridge, MA*
- I/I Investigations and Improvement Projects, Lynn, MA*
- I/I Investigations and Improvement Projects, Lynn, MA*
- I/I Investigations and Improvement Projects, Bristol, RI*

Pumping Stations

- President Avenue Pumping Station Replacement – Evaluation, Design, Permitting and Construction Phase Services, Fall River, MA*
- Cove Street Pumping Station and CSO Treatment Facility, Evaluations and Preliminary Design Improvements, Fall River, MA*
- Amanda Street Pump Station Improvements, Cranston, RI*
- Rogers Farm Pumping Station, Standby Power System, Smithfield, RI*
- Pumping Station Evaluation, Paul Dever Center, Taunton, MA*
- Newington Power Facility Offsite Intake and Discharge System Design/Build Project, 6.5 MGD pumping and screening system, Newington, NH*
- Contract IIA, Ernest Street Pumping Station Improvements (180 mgd), Narragansett Bay Commission, Providence, RI*
- Pumping Station Improvements, Silver Creek, Bristol, RI*
- Influent Pumping Station and other Miscellaneous Pumping System Evaluations and Improvements, Woonsocket Regional Wastewater Treatment Facility (16 MGD), Woonsocket, RI*
- Combined Sewer Overflow (CSO) Tunnel Pumping Station Conceptual Design, Field's Point and Bucklin Point WWTF*
- Miscellaneous Pumping System Evaluations and Improvements, Field's Point WWTF, (65 MGD), NBC, Providence, RI*

Facility Plans and other related Wastewater Projects

- Facilities Plan Reaffirmation, Warwick, RI*
- Cranston Water Pollution Control Facility, Wastewater Facility Plan Amendment, Cranston, RI*
- Smithfield Wastewater Treatment Plant, Facility Plan Amendment, Smithfield, RI*
- Woonsocket Regional WWTF, Draft Facility Plan Amendment and Conceptual Design Improvements, Woonsocket, RI*
- Comprehensive Wastewater Facilities Plan, Lunenburg, MA*
- Evaluation of Sludge Management Options, WWTF, Fall River, MA*
- Siphon Inlet Chamber and Piping Evaluation, Cranston, RI*
- Fluidized Bed Incinerator Evaluation – Opinion of Probable Cost Estimates, Cranston, RI*
- Septage Receiving Evaluation and Preliminary Design, Veolia North America (VNA), Cranston, RI*
- Emergency Response Plan Review and Gaseous Chlorine Disinfection System Consultation Services, Lynn Wastewater Treatment Facility, Lynn, MA*
- Lincoln Septage Receiving and Transfer Facility, Lincoln, RI*
- East WWTF Dewatering Upgrade and RTO Bypass, Fitchburg, MA*
- Effluent Zinc Evaluation Study and Improvements, Smithfield, RI*
- Copper Evaluation Study, Gardner, MA*

Technically-Based Local Limits

- Technically-Based Local Limits Evaluation and Study, Cranston, RI*
- Technically-Based Local Limits, Quonset Development Corporation, North Kingstown, RI*
- Local Limits Evaluation (draft report), Woonsocket, RI*

Asset Management

- Asset management and Equipment Acquisition Program – Water, Wastewater and Stormwater Infrastructure Systems, Fall River, MA*
- Asset management and Condition Assessment, Water Treatment Plant Sodium Hypochlorite System, Fall River, MA*

Water and Wastewater

- Owners Project Management Services, North Attleborough, MA*
- Various On-call Engineering Assignments, Cranston, Smithfield and Warwick, RI*
- Various On-call Engineering Assignments, Veolia Water North America*
- Various On-call Engineering Services, Lunenburg, MA*
- Water System Organizational Effectiveness Study and WWTF Benchmarking Study, Fall River, MA*
- SCADA Master Plan for the Fall River Water System, Fall River, MA*
- Independent Peer Review, Blackstone-Millville Regional School District, Blackstone, MA*

Civil - Stormwater, Permitting and Site Development

- Flood Mitigation and Control Projects, Fall River, MA*
- Hyacinth Street North Drainage System Improvements, Fall River, MA*
- Hyacinth Street South Drainage System Evaluations, Fall River, MA*
- Crest Brook Drainage Basin Improvements, Fall River, MA*
- Stafford Square Stormwater and Sewer System Evaluations, Study and Conceptual Design Improvements, Fall River, MA*
- Stormwater Drainage System Evaluations and Engineering Support Services, Cranston, RI*
- Lodge and Abbot Street Drainage and Utility Improvements Evaluation and Design, Cranston RI*
- Garden Street Drainage Improvements, Cranston, RI*
- Hilldale-Highview Hydraulic Watershed Study, Smithfield, RI *

Dams

- Georgiaville Pond Outlet Controls Improvements, Smithfield, RI*
- Wenscott Dam Low-Level Outlet Improvements, North Providence, RI*
- Miscellaneous Dam Investigations, Leominster, MA*

- Simonds Pond and Goodfellows Pond Reservoir System Modifications, Leominster, MA*

Water Treatment

- Fruit Hill Orthophosphate Pilot, Providence Water, North Providence, RI
- Phillip J. Holton Water Purification Plant's New Dechlorination System, Providence Water, Scituate RI*
- Ridge Road Storage Tank Drain, Providence Water, Smithfield, RI*
- Water Treatment Plant Conversion to Sodium Hypochlorite, Fall River, MA*
- CO2 System Evaluation and Improvement Recommendations, Water Treatment Plant, Fall River, MA*
- Water System Benchmarking Evaluation and Study, Fall River, MA*
- Water Treatment Plant SCADA Master Plan, Fall River, MA*
- Filtration System Rehabilitation and Improvements, \$60M, Providence Water's Philip J. Holton Water Purification Plant, Scituate, RI*
- Rehabilitation of the Influent Structure, Aeration Basin and Associated Influent Conduits, Philip J. Holton Water Purification Plant, Providence Water Supply Board, Scituate, RI*
- Philip J. Holton Purification Plant Lime and Fluoride Improvements, Providence Water Supply Board, Scituate, RI*
- Ridge Road Tank Drain, Design and Construction Administration Services, Providence Water, Smithfield, RI*
- Lead Service Replacement Program, Providence Water Supply Board, Providence, RI*
- Philip J. Holton Purification Plant Chlorine Contact Time Evaluation Study, Providence Water Supply Board, Scituate, RI*
- Water Treatment Facility Piloting, Philip J. Holton Purification Plant, Providence Water Supply Board (PWSB), Scituate, RI*
- Lawton Valley Water Treatment Plant Improvements, Portsmouth, RI*
- Facility and Miscellaneous Capital Improvements, Pawtucket, RI*
- New Source Approval and Water Treatment Study, City of Dover, NH*
- Hydraulic Model C-value Tests, Providence Water Supply Board, Providence, RI*
- Conob Park Water Distribution System, Richmond, RI*
- Orchard Street Water Main Replacements, Cambridge, MA*
- Louis E. Brown Development, Evaluation, Modeling and Design of Potable Water and Water Reuse Distribution System, St. Croix U.S. Virgin Island*

Water Storage Tanks

- Backwash Storage Tank Evaluations and Improvements, Phillip J. Holton Water Purification Plant, (144 MGD), Providence Water Supply Board, Scituate, RI*
- Neutaconkanut Reservoir Evaluations, PWSB, Providence, RI*
- Aqueduct Reservoir Evaluation, Providence Water Supply Board, Providence, RI*
- Finished Water Storage Tank, Lawton Valley WTP, Portsmouth, RI*
- Wastewater Equalization Tank, (elevated storage tank), Woonsocket, RI*

Planning & Long-Term Contingency Plans

- Evaluation of Sludge Management Options, WWTF, Fall River, MA*
- Emergency Response Plan Review and Gaseous Chlorine Disinfection System Consultation Services, Lynn Wastewater Treatment Facility, Lynn, MA*
- Water System Organizational Effectiveness Study and WWTF Benchmarking Study, Fall River, MA*
- Statewide Water Supply Feasibility Assessment Plan, Rhode Island Water Resources Board, Providence, RI*
- New Source Approval and Water Treatment Study, French Cross Road (FCR) Well, City of Dover, NH*

General Facility Improvements

- Fall River Water Treatment Facility, Fall River, MA*
- Nine Minimum Controls Report, Cambridge, MA*
- Commercial Street Roadway and Drainage System Improvements, MADOT, Weymouth, MA*
- Gooding Roadway Reconstruction, RIDOT, Bristol, RI*
- Miscellaneous Storm Drainage System Improvements, Randolph, MA*
- MADOT Footprint and Covered Bridge Replacement Project, Conway, MA*
- Sherman's Bridge Reconstruction Project, MADOT, Wayland/Sudbury, MA*
- Video Surveillance System Improvements, Field's Point WWTF, Narragansett Bay Commission, Providence, RI*