

Volume III

Proposal – Appendix Volume

Submitted to:



City of Nashua
New Hampshire

RFP1305-061505

Operation and Maintenance of the Water Utility

July 14, 2005

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David W. Ford, P.E.

Senior Project Manager/Engineering Services Manager



Education:

BS, Civil Engineering, Worcester Polytechnic Institute, 1979

Registrations/Certifications:

Registered Professional Engineer, New Hampshire, 1987

Wastewater Treatment Operator, New Hampshire (currently inactive)

Water Distribution System Operator, New Hampshire (currently inactive)

Professional Memberships/Activities:

Water Environment Federation

American Water Works Association

American Public Works Association

Background:

Mr. Ford is a Senior Project Manager and Engineering Services Manager with the Capital Program Management group (CPM) of Veolia Water North America – Northeast, LLC (Veolia Water). In this role he is responsible for managing and supporting design/build, design/build/operate (DBO) and capital project work at contract operations, maintenance and management (O&M) projects sites in the State of New Hampshire, as well as in the other areas served by Veolia Water's Northeast Business Center.

Mr. Ford is experienced in directing and supporting all manner of design and construction projects for municipal water and wastewater facilities. This experience includes directing labor resources and managing operations, maintenance, budgeting, permit compliance, design and construction of water and wastewater systems, plus other public infrastructure. Mr. Ford has been responsible for developing capital improvement and operating budgets, engineering contract and construction contract administration, and for projects that were accomplished using the DBO approach.

Prior to joining Veolia Water, Mr. Ford was Director of Public Works for the City of Rochester, New Hampshire. In that role he was responsible for operation, maintenance and new construction associated with City's water and wastewater systems, roadways and drainage systems. His duties also included communicating with state and federal regulating agencies and making presentations to clients, planning boards, various elected officials and the public.

Mr. Ford has also served as a Quality Assurance Engineer, with responsibility for implementing and coordinating design activities associated with the Quality Assurance Program at a nuclear power station. Among his quality assurance duties were multidisciplinary audits of design calculations, drawings and specifications, and development and presentation of training classes on design quality control procedures. In addition, he has prepared construction drawings and specifications, cost estimates and permit applications for various civil and environmental engineering projects for private, municipal and institutional clients.

Experience:

- **2000-Present:** Serves as Senior Project Manager with Veolia Water's Capital Program Management group (CPM), with responsibility for supporting O&M projects in the State of New Hampshire and the other areas served by the Northeast Business Center. Prior to this, served as the Northeast Regional Service Center Manager for Veolia Water's engineering and construction group. Both roles have involved responsibility for providing engineering and construction oversight and support for capital improvement and related projects in New England and New York, and for providing engineering and construction support for water and wastewater treatment plants being contract operated and managed by Veolia Water in that service area. Key experience includes:
 - Oversight and management of facility improvements completed using a DBO approach for the City of Cranston, Rhode Island's 23-MGD secondary wastewater treatment plant. Plant is being upgraded to a tertiary wastewater treatment facility. Direct responsibility for the management of \$1.5 million in improvement projects, providing oversight of engineering and construction contractors.
 - Managing the final phases of upgrades for the City of Lynn, Massachusetts' wastewater facilities, and providing support for the combined sewer overflow design/build project for the City.
 - Member of the startup and transition team, and will provide project management support for a 20-year DBO contract to provide Total Asset Management for regional merchant biosolids operations for the Borough of Naugatuck, Connecticut. This agreement involves providing O&M for the Borough's 10-MGD secondary wastewater treatment plant and sludge incineration facilities. Veolia Water is also providing oversight of a \$19 million capital improvement program, which includes upgrade of the biological nutrient removal treatment units, as well as the installation of a new 70-wet-ton-per-day fluidized bed incinerator and sludge dewatering equipment.
- **1997-2000:** Served as the Public Works Director for the City of Rochester, New Hampshire, with direct responsibility for:
 - Directing the design of upgrades for a 5-MGD advanced wastewater treatment plant. (Design and Construction Cost: \$20 million).
 - Directing the design of 4.5-MGD water treatment plant and activated carbon filter replacement project.
 - Directing engineering and construction for multiple sewage pumping station upgrades.
 - Directing a water treatment plant SCADA system upgrade project implemented using the design/build approach. (Construction Cost: \$150,000).
- **1992-1997:** Served as the Superintendent of Public Works for the City of Wolfeboro, New Hampshire's Public Works Department. Had direct responsibility managing the design of \$500,000 in improvements as part of the upgrade of a secondary wastewater treatment plant.
- **1990-1992:** Served as a Project Manager with Provan & Lorber, Inc., Contoocook, New Hampshire.
- **1986-1990:** Served as a Project Engineer with Phillips Engineering, Ossipee, New Hampshire.
- **1981-1986:** Worked as an Engineer with Stone & Webster Engineering, Boston, Massachusetts.
- **1981:** Worked as an Engineer with Tibbets Engineering Corporation, New Bedford, Massachusetts.
- **1979-1980:** Worked as an Engineer with Bernard Johnson, Inc., Washington, D.C.

Philip G. Ashcroft

President - Veolia Water North America – Northeast LLC



Education:

London Executive Program, London Business School
BSc, Geology, Physics, Chemistry, Durham University

Professional Affiliations:

Institute of Directors
Institute of Water Officers, Eastern Region President

Background:

Mr. Ashcroft is the President of Veolia Water North America – Northeast, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). In this role he is responsible for managing a business operations group that provides operations, maintenance and management (O&M), design/build/operations (DBO) and related services to municipal, other government and industrial clients in the State of New Hampshire, the other New England states and New York. This includes over 40 current projects, employing over 550 operations, administrative and management staff.

Mr. Ashcroft has more than 34 years of business and corporate management experience, which has included work experience in the process and manufacturing industries. Prior to joining the Veolia Water operations group in North America, he managed the operations of Three Valleys Water, a water supply system that serves 2.4 million people in communities north of London, England; a utility operations group that is a subsidiary of Veolia Water.

Mr. Ashcroft's work has involved the management of organizational changes, both direct and line-functional responsibilities, bringing to bear his ability to restructure major business environments by reviewing business performance, implementing new working practices and improving labor utilization to radically improve efficiency and profit performance. This has included the successful merger of North Surrey Water and Three Valleys Water in England.

Experience:

- **2005-Present:** Serves as the President of Veolia Water's Northeast regional operations group, which is responsible for the delivery of O&M, DBO and related services to municipal/governmental and industrial clients in the Northeast business center's service area. Serves as the Project Principal for O&M and other projects undertaken by the Northeast Business Center in the State of New Hampshire and other parts of the region.
- **2001-2004:** Served as Senior Vice President of Major Utility Operations for Veolia Water North America, with responsibility for transitioning major utility operations in North America to the management systems and operating and administrative standards of Veolia Water Canada and Veolia Water. Participated in strategic planning and the development of the corporate-wide asset management program.
- **2001-2002:** Served as Operations Director of Three Valleys Water, directing the merger of Three Valleys Water with North Surrey Water. Three Valleys (a subsidiary of Veolia Water, S.A.) is responsible for the entire water system serving an area north of London, England (population of 2.4 million). O&M responsibilities included the maintenance of the surface water and groundwater treatment plants; supervision and maintenance of the distribution system, including meter reading and connections; and billing, collections, connections and customer information requests. Two major water treatment plants are a part of this system, including the Iwer Treatment Works (a 63-MGD water facility, which uses physical treatment, advanced chemicals, polishing and disinfection with ozone and granular activated

carbon adsorption), and the Clay Lane Treatment Works (a 42-MGD plant that uses physical treatment, advanced chemicals, polishing and disinfection treatment plant with granular activated carbon adsorption).

- **2000:** Served as Managing Director, North Surrey Water, and Head of Operations, Three Valleys Water Plc./Veolia Water. Managed the merger of North Surrey Water with Three Valleys Water to achieve greater synergies and operational efficiencies while driving a major change program in both companies.
- **1998-2000:** Served as Operations Director, Three Valleys Water Plc/Vivendi, the largest of the Veolia Water UK Water Operations companies. This system served approximately 1 million customers and a population base of more than 3 million. Key accomplishments included reducing operating expenditures by £3 million in the first year, for a system with annual revenues of over £145 million. Developed and introduced processes to fundamentally review business performance and then to radically improve efficiency.
- **1993-1998:** Served as Divisional General Manager and Divisional Director, South West Water Services, Ltd., England. Held profit and loss responsibility within a geographical area of 2,500 sq km for all clean and wastewater products and services. Developed a company-wide integrated distribution networks strategy and HR strategy.
- **1990-1993:** Served as Director and General Manager, Armitage Shanks Integrated Systems, a manufacturer and distributor of washroom systems. Restructured the company, introduced Total Quality Management to achieve ISO 9000. Re-equipped the manufacturing facility with leading edge technology and introduced systems to achieve computer integrated manufacturing.
- **1988-1989:** Served as Vice President and General Manager, Williams Brothers, a subsidiary of Blue Circle, Inc., Atlanta, Georgia. Responsible for three businesses, two ready-mix concrete and one aggregates.
- **1986-1988:** Served as Human Resources Manager, Blue Circle Cement in England. Introduced radical improvements in labor utilization and a new package of terms and conditions at all of this company's cement producing plants.
- **1982-1986:** Served as Operations Manager, Blue Circle Cement, Dunbar Cement Plant, England. Responsible for operations at a multi-kiln plant with one million tones per year output. Increased productivity by 100% while maintaining plant output through the introduction of new working practices and the rebuilding of the plant with new technology and processes.
- **1980-1982:** Served as Industrial Relations Manager, Blue Circle Cement, Corporate Office, England. Advised line managers across the spectrum of Industrial Relations issues within an aggressive multi-union environment.
- **1970-1980:** Worked as a Graduate Trainee, Plant Operations Manager, then Deputy General Manager, Blue Circle Cement. Held various line management roles in Production and Distribution at the Northfleet plant in Kent and the Maison plant in Suffolk.

J. Joseph Burgess

President - Veolia Water North America



General Background:

Mr. Burgess is the President of Veolia Water North America Operating Services, LLC. In this role, he manages the company's operations and project performance, with responsibility for customer satisfaction, service delivery and overall performance for industrial and governmental clients.

Mr. Burgess joined Veolia Water in 2002 as the Vice President and General Manager of the Northeast Business Center of Veolia Water North America Operating Services, LLC (Veolia Water), and in that role, he managed a business operation that provides contract operations, maintenance and management (O&M), design/build/operations (DBO) and related services to municipal, other government and industrial clients in the six New England states and New York.

Mr. Burgess then served as the Senior Vice President and Chief Operating Officer for Veolia Water, directing the delivery of O&M, DBO and related services throughout North America.

Mr. Burgess has a strong base of experience with strategic planning, operations management and leadership. He was a founding member of the Water Partnership Council, a water industry group dedicated to helping communities and companies in the U.S. meet their water and wastewater needs in the safest, most environmentally sound and cost effective manner possible. This group is formed of Veolia Water, together with other leading providers of operational services for water and wastewater treatment facilities, and was established in 2001 to advance the cause of sustainable water quality.

Mr. Burgess joined Veolia Water from Covanta Water Systems, where he was the Executive Vice President for that company's water systems operations. While with that company, he was responsible for the startup of this firm's water business, currently a \$70 million a year division, and was instrumental in establishing the company as a design/build and DBO services provider.

Experience:

- **1/2005-Present:** Serves as the President of Veolia Water North America Operating Services, LLC, the parent company for the regional entities of Veolia Water which are involved in the delivery of O&M, DBO and related services to municipal/governmental and industrial clients throughout North America. Provides oversight and management support for the operations of Veolia Water North America – Northeast, LLC, which is responsible for the delivery of services to clients in the State of New Hampshire and other parts of the Northeast.
- **2003-Present:** Served as Senior Vice President and Chief Operating Officer for Veolia Water, with responsibility for directing the performance and ensuring the quality of contract O&M, DBO and related services for municipal and industrial clients throughout North America.
- **2002:** Served as General Manager for the Veolia Water Northeast Business Center, which provides O&M, DBO and related services to government and municipal clients in New England and New York. Responsible for regional management and direction of multiple projects to ensure client satisfaction, contract compliance and budget control. This included providing oversight and management support for Veolia Water's O&M projects in the State of Rhode Island, including our current contract with the Narragansett Bay Commission for the O&M of the Bucklin Point Wastewater Treatment Facility.

- **1997-2002:** Served as the Executive Vice President for Covanta Water Systems, Fairfield, New Jersey. Responsible for startup of Covanta's water business, a provider of DBO services for water, wastewater, stormwater and desalination treatment facilities; a business unit with over \$70 million in revenue.
 - Directed and provided oversight of over \$200 million of construction activity with Covanta acting as prime contractor. Coordinated design/estimating activities on all bids. Responsible for final pricing decisions, project execution and performance.
 - Acquired the DualSand™ technology patent in 2000; this business unit achieved \$15 million in revenue in the first year of commercial operations of this technology.
 - Established the company as a leading competitor in the DBO, filtration and desalination markets.
- **1989-1996:** Served as Vice President of Business Operations for Covanta Energy, Fairfax, Virginia.
 - Held profit and loss (P&L) responsibility, and served as the primary client contact for the region with 10 operating waste-to-energy facilities and revenues exceeding \$225 million. Generated income/cash growth of over 10% annually through maximizing waste deliveries, special waste programs and cost control.
 - Created a regional management structure that improved service delivery for financial analysis, cash flow, budgeting, planned maintenance, environmental compliance and safety services.
 - Re-permitted the Alexandria, Virginia, and Lake County, Florida, facilities to allow for medical waste processing, increasing income at those facilities by more than 20%.

Prior to this he served as the Regional Business Manager for Covanta Energy in Fairfax, Virginia, the largest waste-to-energy facility in North America.

 - Renegotiated facility service agreements to allow for outside jurisdiction waste streams and special waste streams to be processed at facility, which increased the facility's revenues by over \$10 million annually.
 - Renegotiated the Fairfax facility's power purchase agreements to reduce costs by over \$2 million annually.
 - Managed change order requests for the Fairfax facility construction effort within 3% tolerance budget.
 - Petitioned the State of Virginia for sales tax exemptions on all environmental equipment, including odor control equipment, successfully and saved the project \$2 million.
 - Established a steering committee to develop an initial safety program for Covanta waste-to-energy facilities. Sat on initial corporate safety committee and established the company's safety reporting and audit programs.
- **1981-1985:** Worked in various positions with Monsanto Company in Houston, Texas.
 - Joint Venture accountant for Monsanto/Cononco petrochemical JV. Served on the JV divestiture team, with responsibility for developing methodologies for setting sales price and ongoing cost sharing for over \$600 million of shared site utility and services infrastructure. Developed and assisted with negotiating pricing for sale of phenolic resin business. Served as Cost Control Supervisor for construction and startup of \$110 million Alimet™ manufacturing facility.

Education:

BA, Accounting and Finance, University of Florida, Gainesville, Florida, 1981

Professional Affiliation:

Water Partnership Council – Founding Member

C. Jill Beresford

Business Manager/Financial Partner – Northeast Business Center



Education:

University of Guelph, (English) Canada
M.B.A., Boston University, 1991

Background:

Ms. Beresford is the Business Manager and Financial Partner for Veolia Water North America – Northeast, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). In this role she is responsible for coordinating the delivery of support resources for Veolia Water O&M teams at various facilities in the New England and New York service area. Ms. Beresford draws from the regional resource team of Veolia Water, which provides experts in management, technical and operations areas.

Ms. Beresford's background and experience includes more than 27 years of finance and business management experience in the U.S. and internationally.

Experience:

- **2005-Present:** Serving as the Business Manager and Financial Partner for Veolia Water in the Northeast Business Center.
- **2003-2005:** Served as the Vice President of Business Operations with Adelphia Media Services. Hired to implement the turn-around, bankruptcy emergence/sales process plans and infrastructure building for one of Adelphia's three regions. Adelphia is the third largest bankruptcy in U.S. history and the largest surviving Chapter 11. Job responsibilities included working with bankruptcy team for legal review of over 10,000 contracts for the region; re-statement of financials for S.E.C. purposes back to 1999; documenting, writing and implementing Sarbanes-Oxley processes; building infrastructure of \$100 million region with 200 employees.
- **1988-1999:** Worked in a variety of roles with BPI Packaging Technologies, Inc., a company that converted plastic resins into film for industrial applications and retail carry-out bags for the grocery, convenience store and food packaging markets. The Company conducted an IPO in 1990 to fund an aggressive expansion, following a successful turn-around from near bankruptcy in 1989. The Company grew from \$6 million to \$30 million annual sales by 1997. A strategic decision by the CEO mid-1997 resulted in a reduction of sales to \$10 million within six months and a return to near-bankruptcy conditions. In June 1998, the Board of Directors replaced the CEO and Chairman of the Board, resulting in a promotion to the interim CEO, Chairman of the Board position. The balance sheet was restructured in early 1999 through a combination of debt and equity financing funded by a private investor and resulted in a change of control.
 - Interim Chairman of the Board/CEO/CFO (1998 – Jan 1999) - Promoted by Board of Directors to Interim Chairman/CEO/CFO position following the termination of former Chairman/CEO.
 - President and Chief Operating Officer (1996 – 1998) - Responsible for all performance improvement in day-to-day activities of 24/7/363 manufacturing facility with primary focus on developing strategy to increase sales of patented and proprietary high margin products.
 - Chief Operating Officer (1993 – 1996) - Responsible for all day-to-day activities of the Company with primary focus on start-up of a new facility and requisite infrastructure.

C.J. Beresford (continued)

- Vice President of Marketing (1988 – 1993) - Responsible for niche-marketing the Company in a commodities industry.
- **1978-1986:** Served as Vice President and Account Director with Grey Advertising in Canada. Responsible for management of Procter & Gamble (six brands), General Foods (two brands) and Beecham Products (five brands).

William (Benn) B. Bullock, II

Environmental, Health, Safety and Security (EHS&S) Manager



Education/Training:

AS, Management, Johnson and Wales University, Providence, Rhode Island, 1978
BS, Management, Johnson and Wales University, Providence, Rhode Island, 1980
Supervisory Training Program - USFilter and General Dynamics
Veolia Water EH&S Train the Trainer Courses
HAZWOPER – Spill Response Training
Process Safety Management Training
Hazardous Waste Management/SARA Title III Training
Fleet Safety/DOT Training

Background:

Mr. Bullock is an Environmental, Health, Safety and Security (EHS&S) Manager for Veolia Water North America – Northeast, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). He provides oversight, management and enforcement for the EHS&S programs at contract operations, maintenance and management (O&M), design/build, and design/build/operate (DBO) projects sites throughout New York and New England. In addition, he manages environmental compliance and health and safety for process water and related business units for other affiliated company facilities and operations.

Mr. Bullock is skilled in developing and implementing site-specific health and safety plans and emergency response plans and performing injury and accident investigations. He also has over 33 years of experience in project management, health and safety management and industrial operations.

Experience:

- **2000-Present:** Serves as the Veolia Water EHS&S Northeast Regional Manager, with responsibility for health and safety and environmental compliance for operations, facilities and projects in the Northeast Region and Eastern Canada. This includes oversight for more than 180 facilities in the states of Massachusetts, New Hampshire, Connecticut, Washington, D.C., Delaware, Maryland, Maine, New Jersey, New York, Pennsylvania, Rhode Island and Vermont, as well as Eastern Canada.
- **1996-2000:** Served as Plant Manager with Veolia Water for a Regeneration Plant in South Windsor, Connecticut. Was instrumental in bringing this Process Water facility and into HS&E compliance.
- **1969-1996:** Worked in progressively responsible positions with General Dynamics Corporation's Electric Boat Division in Groton, Connecticut, ending career at this firm as a Facilities Manager. Spent 25 years involved in the submarine construction business. Responsibilities at General Dynamics included supervision of the management and trade's personnel in charge of maintenance, testing and certification of the facilities 365 cranes. Had direct involvement with the facility EH&S department, the Navy, OSHA, NRC (nuclear regulatory commission), Connecticut State and Federal agencies.
- **1966-1969:** Served in the U.S. Navy stationed in New London, Connecticut.

Robert R. Burton

Director of Special Projects



Certifications:

Grade IV water Plant Operator, Iowa
Grade III Wastewater Plant Operator, Indiana

Professional Memberships/Activities:

American Water Works Association

Background:

Mr. Burton is a Director of Special Projects with Veolia Water North America – Central, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). He is assigned to Veolia Water Indianapolis, and is responsible for the development and implementation of the Operations Division's annual Business Plan, including process improvements and benchmarking, and budget management for the \$39 million annual budget.

Mr. Burton has more than 12 years of experience in the operations and environmental management of water and wastewater treatment facilities, water distribution systems, sewer collection systems, public works departments, including client relations, budget renewals, new project development, compliance monitoring, budget preparation and reporting, and monthly and annual reports.

Experience:

- **2003-Present:** Serves as the Director of Special Projects with Veolia Water Indianapolis LLC, which operates and manages Veolia Water's 20-year, \$1.5 billion contract with the City of Indianapolis, Indiana, which includes all operations, maintenance and management (O&M), capital project work and customer service facets of the City's waterworks system, a system that currently serves 1.1 million people. Responsible for budget management for the Operations Division's \$39 million annual budget. Developed a forecasting and variance reporting system for the Division. Led process improvement activities for all aspects of the Division; field services, distribution, production, procurement, fleet and warehousing. Led the development of the Operations Division's 2005 operating budget. Currently leading a team to develop an IT disaster recovery/emergency response plan for the Indianapolis project.
 - Served as the Director of Field Services (2003-2004), responsible for the Distribution, Field Services and CCS areas of the company. Assisted with the transition of the newly formed department, reorganization of the department personnel, work flow process improvements, budget development and development of the interdependencies and synergies between Field Services and other departments as well as outside agencies and contractors.
- **2000-2003:** Served as Project Manager for Veolia Water's O&M project with the City of Boonville, Indiana. Managed the daily operations of a 1.44-MGD wastewater treatment plant, 2.1-MGD water treatment plant, distribution and collection systems, combined sewer overflows, 12 lift stations, and meter reading. Assisted the City with plans and oversight for the construction and startup of a new 5-MGD wastewater treatment facility.
- **1998-2000:** Served as Project Manager for Veolia Water's O&M project with the City of Storm Lake, Iowa. Responsibilities included oversight of daily operations and maintenance activities of the 4.65-MGD water treatment plant, 10 water wells, 5-MGD wastewater treatment plant and 17 lift stations. Ensured effective facility performance, budget management and permit compliance.
- **1997-1998:** Served as Operations Manager for Professional Services Group's (predecessor company) O&M project with the City of Boonville, Indiana. Managed the operations of the 2.1-MGD groundwater treatment facility and 1.7-MGD activated sludge wastewater treatment plant. Responsibilities included

laboratory supervision, QA/QC program implementation, telemetry operation, regulatory reporting, training and computer operation. Supervised the construction of a 500,000-gallon elevated storage tank, prepared monthly operations and financial reports to the City.

- **1993-1996:** Served as Water Treatment Plant Operator for the City of Henderson, Kentucky. Responsible for the operation of a 12-MGD surface water treatment facility. As Wastewater Plant Maintenance Operator (1992-1993), provided maintenance to the 7-MGD activated sludge wastewater treatment plant.

Scott A. Edwards

Vice President - Marketing Communications



Education:

BA, Psychology, Louisiana State University

Background:

Mr. Edwards is Vice President of Marketing Communications for Veolia Water North America Operating Services, LLC (Veolia Water). He provides strategic direction to the company's marketing and communications activities.

At Veolia Water, Mr. Edwards is responsible for marketing communications and community relations functions related to the company's operations in the U.S. and Canada, playing a leadership role in the development of the company's public relations, public affairs, community relations, strategic business development and industry relations nationwide.

He has more than 15 years of experience in the marketing communications field and eight years of experience in environmental services. He has received a number of communications industry awards for his clients. Mr. Edwards also plays an active role in Veolia Water's corporate communications program.

He actively travels throughout the country understanding how water impacts our nation's communities and businesses. Given his experience and expertise, he understands that Veolia Water must continue to serve as a good corporate steward and citizen.

Experience:

- **1997-Present:** Responsible for integrated marketing and communications programs for the water and wastewater outsourcing/privatization market leader. Responsible for all facets of marketing communications including national and local communications, advertising (print and broadcast), media relations, trade shows, community relations, advertising, direct marketing, sales literature, newsletters/magazines, speech writing, videos, editorials, event and trade show management, market research and related functions.
- **1994-1997:** Responsible for market information, sales support and all communications for a publicly traded environmental services and recycling company.
- **1989-1994:** Managed business-to-business and issues accounts for various governmental affairs, industrial, energy and real estate clients at a leading Houston advertising and public relations firm.
- **1986-1989:** Began career and received strong public relations experience in a variety of settings for consumer, professional services and industrial clients.

Donald G. Ellis

Vice President and Human Resources Manager



Education/Training:

BS, Business Administration, University of Dayton

Training Seminars: Hiring, FMLA, ADA, Workers Compensation and DER compliance

Professional Membership:

Pittsburgh Human Resources Association

Background:

Mr. Ellis is Vice President and Human Resources and Labor Relations Manager with Veolia Water North America Operating Services, LLC (Veolia Water). He is responsible for managing human resources support for Veolia Water Canada, Inc. project sites, as well as those of Veolia Water at other sites across North America. Mr. Ellis is responsible for working with local management teams to transfer staff and to hire any other local staff required for operations and related projects.

Mr. Ellis has more than 25 years of experience and has been involved in developing human resources policies and procedures and worked with managers to administer benefits and other personnel programs. He has a strong base of experience in supporting the human resource needs of contract operations, maintenance and management (O&M) project sites.

Experience:

- **2000-Present:** Serves as the Human Resources and Labor Relations Manager for VWCanada and Veolia Water, and supports startup and transition activities nationally. Provides human resource management for the general administration of Veolia Water's Human Resources department.
- **1996-1999:** Served as Human Resource Supervisor for Cutler-Hammer/Eaton Corporation, Beaver, Pennsylvania. Duties included performing all human resource functional activities in support of a plant employing 680 people with two unions and sales of \$150 million. Administered all personnel policies, AA Plans, ADA/FMLA guidelines, and other routine plant activities; coordinated and developed training programs; obtained labor agreements; recruited and staffed hourly and salaried personnel.
- **1988-1996:** Served as Human Resource Manager for WHEMCO, West Homestead, Pennsylvania. Primary human resource focal point for four plants spread throughout three states, employing 500 people in both union and non-union settings. Developed employee handbook, implemented self-funded medical and workers compensation programs, negotiated labor agreements, established job requirements and training programs in support of ISO 9001 and improved training process.
- **1984-1988:** Served as Personnel Superintendent for Wheeling Pittsburgh Steel Corporation, Steubenville, Ohio. Served as a labor contract administrator responsible for the administration of personnel policies, employee benefit programs, labor contracts, grievance resolution, expediting arbitration and recruiting involving 3,500 employees. Initiated meetings with state representatives.
- **1973-1984:** Worked with United States Steel (USX), Mon Valley Works, Pittsburgh, Pennsylvania. Held various positions throughout the Works including Labor Contract Administrator, Safety Engineer, Industrial Engineer and Laborer.

William J. Fahey

Project Manager



Education:

MBA, University of Massachusetts, 2000
BS, Marine Engineering, Massachusetts Maritime Academy, 1987

Registration/Licenses:

Grade 5-C Wastewater Treatment Plant Operator
United States Coast Guard License – Third Assistant Engineer of unlimited horsepower, steam or diesel

Professional Affiliations:

American Water Resources Association
American Society of Civil Engineers

Background:

Mr. Fahey is a Project Manager with Veolia Water North America – Northeast, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). He has more than 18 years of engineering, construction and operations and maintenance and management (O&M) experience related to wastewater collection and treatment systems.

Mr. Fahey is involved in supporting projects in the State of New Hampshire, as well as other parts of the region. Prior to this, he served as the Asset Manager for Maintenance at the Massachusetts Water Resources Authority's (MWRA's) Deer Island Wastewater Treatment Plant. In this role, Mr. Fahey directed a group of engineering and operations staff, consultants and others in providing maintenance services for this facility, which is the second largest secondary treatment plant in the U.S.

Mr. Fahey is experienced in managing staff, budgets, asset management programs, and capital replacement plans. His background also includes process engineering and project management in industrial wastewater, industrial pretreatment as well as all aspects of preventive, predictive and corrective maintenance.

Experience:

- **1999-Present:** Serves as Project Manager with Veolia Water in the Northeast business center, providing support to engineering and O&M projects in the region.
 - Served as the Asset Manager, Maintenance, for Veolia Water Systems (the engineering and construction arm of Veolia Water), assigned to the MWRA, Boston, Massachusetts. Responsible for developing long-term strategic maintenance plan for the \$3.4 billion Deer Island Wastewater Treatment Plant. This plan includes a balance of preventive, predictive, corrective and reliability centered maintenance. Other responsibilities include managing a staff of 13 and a budget of \$1.5 million; developing and maintaining the capital replacement plan; and implementing and managing the Facility Asset Management Program. Mr. Fahey also develops the model for all plant maintenance and asset management; ensuring optimization of the plant's

Computerized Maintenance Management System and plans and schedules all maintenance work and inventory resource allocation.

- Served as owner representative on a comprehensive maintenance optimization strategy implementation on a Primary Clarifier Battery, which resulted in substantial savings for the Authority. It is anticipated that this program will reduce maintenance costs by 40% to 60%.
- **1996-1999:** Served as Program Manager, Construction Coordination, with Veolia Water Systems, assigned to the MWRA. Responsible for the management of \$13 million in warranty claims for the Deer Island plant. Responsibilities included coordinating activities of the maintenance staff and contractors to ensure timely completion of warranty items; managing daily activity of the Construction Coordination Department; and serving as technical liaison to the Authority's legal division on all warranty claims.
- **1994-1996:** Served as Project Manager, Process Engineering, for Veolia Water Systems, assigned to the MWRA. Managed all process engineering activities for the operation of the wastewater systems from initial check out and startup, through integration and then final operation. Responsible for coordinating and completing operability surveys of assigned construction packages. Worked with multidisciplinary design teams and construction personnel to resolve and correct defective design and construction. Worked with process control and operations staff to troubleshoot problem systems. Represented Deer Island O&M departments at startup meetings.
- **1988-1994:** Held various engineering and project management positions with Veolia Water Systems, assigned to the MWRA. Responsibilities included conducting inspections of industrial wastewater discharges in the MWRA district to ensure compliance with federal, state and local laws; inspecting various industrial process and wastewater treatment systems; providing technical support to MWRA legal staff in regard to wastewater compliance issues; reviewing proposed industrial treatment plant designs to ensure that systems adhered to proper engineering design practices; and conducting inspections of new and existing gas/oil separators, ensuring that new construction complied with applicable regulations.
- **1987-1988:** Served as Diesel Power Plant Operator for E&C, assigned to the MWRA. Responsible for O&M of diesel and electric pumps; and monitoring water flow, chlorine residual, and reservoir levels.

John H. Fritsch

Project Manager



Education:

AA, Applied Science, North Shore Community College 1971
New England Regional Wastewater Institute
Coursework in Wastewater Treatment and Laboratory, Lowell University
Coursework in Power Plant Operations, The Peterson School of Steam Engineering

Certifications/Licenses:

Grade I Water Operator Certification, New Hampshire, #2169
Grade 4 Wastewater Operator Certification, New Hampshire, #608
Grade 4 Wastewater Operator Certification, ABC, #S487226R5
Grade 7 Wastewater Operator Certification, Massachusetts, #0767
CPR/First Aid Certification
40-Hour Hazardous Waste Site Operations Health and Safety Training
8-Hour Hazardous Waste Site Supervisor Health and Safety Training
24-Hour Hazardous Material Technician Certification

Professional Memberships:

New England Water Pollution Control Association
New Hampshire Wastewater Treatment Plant Operators Association
New Hampshire Water Pollution Control Association; Education Committee

Background:

Mr. Fritsch is a Project Manager with Veolia Water North America – Northeast, LLC, and is based in New Hampshire. He has over 28 years of experience operating treatment facilities, with an emphasis on managing groundwater remediation facilities.

Mr. Fritsch has been involved in nearly every phase of facility operation, from managing startup activities, to daily facility operation and through to site closure procedures.

Experience:

- **1991–Present:** Serving as Project Manager for Veolia Water's contracts with the New Hampshire Department of Environmental services for remediation activities at the OK Tools Site and Gilson Road Superfund Site in Nashua, New Hampshire. Administered the contract O&M of a 0.43-MGD groundwater treatment facility. Responsibilities included contract negotiation, client relations, and management of the annual budget. Oversaw daily standby maintenance activities, including sludge landfill closure, supervised a staff of 14, forecasted and monitored budget, and performed process troubleshooting. Currently managing the dismantling of the treatment system and post-closure activities for this site.

- **1991:** Served as Startup Manager for Metcalf & Eddy Services, Inc. (a Veolia Water predecessor company). Responsible for startup activities at a groundwater treatment facility in Garden City, New York. Treatment involved groundwater extraction, air stripping and liquid- and vapor-phase carbon with on-site regeneration.
- **1986-1991:** Served as Chief of Operations for Metcalf & Eddy Services, Inc. Managed operations of a groundwater treatment facility in Nashua, New Hampshire. Operations included contaminated groundwater pumping, metal removal, multi-media sand filtration, high-temperature air stripping, vapor incineration, extended aeration, wastewater treatment, a 180-kW steam turbine and generator and soil gas extraction system.
- **1977-1986:** Worked as a Senior Operator for the Greater Lawrence Sanitary District of North Andover, Massachusetts. Responsible for the operation of a 52-MGD activated sludge wastewater treatment plant with primary sedimentation, cyclonic grit removal, activated sludge, chlorination, dissolved air flotation, vacuum filtration, belt filter presses and multiple hearth incineration systems.
- **1973-1977:** Worked as an Operator for the Boston Metropolitan District Commission in Deer Island, Massachusetts. Participated in the operation of the 400-MGD Deer Island primary wastewater treatment plant with sludge thickening, anaerobic sludge digestion and chlorination.

James P. Galipeau

Senior Area Manager - Northeast Business Center



Education:

Coursework in Business, University of Massachusetts (Dartmouth)
Business Studies, American Management Association
Wastewater Treatment, California State University, Sacramento
Multiple Hearth Incineration Process, Jones & Henry
Wastewater Technology Collection Systems, NEIETC
Hazardous Waste Operations/Emergency Response, Operations Level
Hazardous Waste Operations/Emergency Response, Technician Level

Certifications/Licenses:

Grade 7C Wastewater Treatment Plant Operator, Massachusetts
Grade 2 Collection System, New England Water Pollution Control Authority
Grade IV Wastewater Treatment Plant Operator, Association of Boards of Certification

Professional Memberships:

Water Environment Federation
New England Water Pollution Control Association

Background:

Mr. Galipeau is a Senior Area Manager with Veolia Water North America - Northeast, LLC (Veolia Water), an autonomous business unit of Veolia Water North America Operating Services, LLC. He has more than 16 years of experience in the operation and maintenance (O&M) of industrial and municipal wastewater treatment facilities. Mr. Galipeau has additional experience in safety, hazardous waste labeling, handling and storage and in compliance and reporting responsibilities with OSHA, DEP and the U.S. Environmental Protection Agency.

Experience:

- **1998-Present:** Serving as an Area Manager with Veolia Water, with responsibility for providing oversight, management and support for O&M and design/build/operate (DBO) projects in New Hampshire, Massachusetts and Rhode Island, as well as other parts of the region. Responsibilities include contract, financial and technical oversight and support to facility project managers, as well as client support and customer service for projects including:
 - Total asset management of the City of Taunton, Massachusetts' wastewater treatment facility and Pollution Prevention (P2) program. The City is funding \$11 million in capital improvements at its 8.4-MGD wastewater plant. In addition to traditional operation and maintenance, Veolia Water assumed complete responsibility for all facility maintenance and repair expenses as well as capital repair or replacement items. Project work is being implemented using a design/build/operate approach.
 - Contract O&M for the Town of Smithfield, Rhode Island's wastewater facilities.
 - Contract O&M for the Narraganset Bay Commission's 31-MGD Bucklin Point, Rhode Island, wastewater treatment facility. Upon assuming responsibility for the wastewater treatment plant, Veolia Water immediately funded and implemented numerous capital improvements to improve facility performance that included installation of Stamford baffles in the final clarifier; electrical soft starts on

the four 25-MGD tidal effluent pumps; a dissolved air flotation pump; return sludge variable frequency drives; and dissolved oxygen monitors. These enhancements improved performance while reducing electrical costs.

- Contract O&M for water and wastewater facilities for the cities of Brockton, Cohasset, New Bedford, Lynn, and Fall River, Massachusetts.
- **1994-1998:** Served as Project Manager for the contract O&M for the City of New Bedford, Massachusetts' 30-MGD wastewater treatment facility. Responsibilities included management of the technical operation, physical maintenance and analytical programs; development of maintenance, clerical, technical and subordinate supervisory staff positions; administration of contract and assisting with pre-startup activities related to the City's new secondary treatment facility.
- **1993-1994:** Served as Operations Manager for the contract O&M of the City of New Bedford, Massachusetts' water pollution control facility. Responsible for ensuring effective plant performance and compliance with permit standards. Planned, organized, directed and controlled the operation of the City of New Bedford's water pollution control facility on all shifts.
- **May 1993-September 1993:** Served as Regional Safety Supervisor for contract O&M projects in the Northeastern U.S. Developed comprehensive safety, risk management and hazard communication programs at 12 privately contracted water and wastewater plants in New Jersey, New York, Rhode Island, Massachusetts and Ontario, Canada.
- **1990-1993:** Served as Chief Operator for contract O&M of the maintenance of the City of New Bedford's 30-MGD wastewater treatment plant, Massachusetts. Responsible for technical operation and physical maintenance of the City's wastewater treatment plant during scheduled shifts. Duties included operation of a multiple-hearth incinerator, daily laboratory analysis and liquid stream process control.
- **1987-1990:** Worked as an Environmental Technician for Olin-Aegis, Inc., New Bedford, Massachusetts. Responsible for the operation and maintenance of a privately owned wastewater treatment plant and fluorocarbon solvent recovery system. Duties included liquid stream process control, solids handling and effluent analysis using an atomic absorption photo spectrometer.

Lora L. McCormick

Project Director/Customer Service Specialist



Education:

Master of Business Administration, University of Indianapolis, 1997
Bachelor's Degree, Franklin College, Franklin, Indiana, 1989

Professional Memberships:

American Water Works Association, QualServe Peer Reviewer
President, Greater Indianapolis YWCA, 2004-2005
Board Secretary, Alumni Association of University of Indianapolis, 1999-2005
Executive Women's Leadership Program, United of Central Indiana, 1999 Graduate
Chairman, Metropolitan Board of Zoning Appeals, Indianapolis, 1996-1999

Background:

Ms. McCormick is a Project Director with Veolia Water North America – Central, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). In this role, she is primarily involved with the provision of customer services and client relations for Veolia Water's water system operations and management contract with the City of Indianapolis, Indiana. Ms. McCormick also supports other operations, maintenance and management (O&M) contracts for the other areas served by the Central business center.

Ms. McCormick's experience includes directing customer services provided to utility clients, including meter reading, call center, payment processing, and management reporting. She has more than 20 years of experience in water and wastewater and other industries in customer service and client relations management, including contract administration, performance measurement development, project management and transition planning.

Experience:

- **2003-Present:** Serves as Project Director with Veolia Water in Indianapolis. Oversees provision of customer services to utility clients including the Indianapolis Department of Public Works, Elkhart Water and Wastewater Utilities, and the Town of Speedway. Led development of definitions, measurements and auditing processes for 40 performance incentives established in Veolia Water's contract with the City of Indianapolis, Department of Waterworks. Incentives valued at approximately \$8 million per year. Additionally, supports other Veolia Water contracts and development projects in the Central business center, as well as other efforts nationally.
- **1997-2003:** Served as Director of Strategic Planning and Performance Management for Indianapolis Water, prior to transitioning to the Veolia Water Indianapolis LLC team at the start of the new operations and management contract. Involved with the management and implementation of initiatives in customer service, water purification, operational improvements, and improved employee communications and customer growth. Co-authored State law to make public water service available to low income residents with contaminated private wells; this resulted in providing water service to 1,000 low income households in 2000. Developed financing program and executed marketing plan to extend water mains to residents in existing residential areas that were on private wells; during a three-year span, over 1,600 residents participated in program to obtain public water service.

- **1991-1997:** Served as Analyst in Finance and Accounting Department of Indianapolis Water, the private company that managed the City of Indianapolis, Indiana's water system prior to the current contract with Veolia Water. Responsible for forecasting cash flow and managing banking relationships and \$20 million credit lines.

Daniel C. Moran, P.E.

Process Engineer



Education:

MS, Civil Engineering, University of Texas at Austin, 1992
BS, Mechanical Engineering, University of Notre Dame, Indiana, 1985

Registrations/Licenses:

Professional Engineer, Indiana
Grade WT-5 and WT-3 Water Treatment Plant Operator Certification, Indiana
Class A-SO Wastewater Treatment Plant Operator Certification, Indiana

Professional Memberships/Activities:

American Water Works Association (AWWA)
AWWA Academic Awards Committee (1999-2002)
AWWA Taste and Odor Committee (2000-2003)

Background:

Mr. Moran is a Process Engineer with Veolia Water North America – Central, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). He is assigned to Veolia Water Indianapolis, and is responsible for process and water quality issues for the drinking water production facilities.

Mr. Moran has more than 20 years of engineering experience, including evaluation and implementation of process modifications to optimize water treatment plant performance; oversight of capital improvement upgrades to water treatment facilities; and negotiation with regulatory agencies on compliance issues. Process evaluations include design of pilot and/or bench scale testing programs aimed at meeting increasingly stringent water quality goals. Previous experience includes planning, design and implementation of environmental engineering projects for commercial and industrial clients.

Experience:

- **2003-Present:** Serves as Process Engineer for Veolia Water Indianapolis, LLC, which manages and operates Veolia Water's 20-year, \$1.5 billion contract with the City of Indianapolis, Indiana, which includes all O&M, capital project work and customer service facets of the City's waterworks system, a system that currently serves 1.1 million people. Responsible for process and water quality issues for the drinking water production facilities, which consist of 12 water treatment plants with a combined capacity of 212 MGD. Also responsible for process control, operational troubleshooting, capital integration and research and development. Manages algaecide application program to mitigate problematic algal blooms in three water supply reservoirs. Coordinates research partnership with Indiana University-Purdue University at Indianapolis on watershed and reservoir management aimed at understanding and improving quality of Indianapolis water supplies, particularly related to problematic algae blooms. Coordinates Indianapolis Water involvement with various outside groups, including universities, consultants, and governmental agencies, on other treatment and water quality research and development activities.
- **2002-2003:** Served as Production Director, Veolia Water Indianapolis, during one-year transitional period, with responsibility for management of a \$14 million budget and 86 personnel. Department responsible for operation, maintenance and water quality of 12 water treatment plants and control of 22 pumping stations.
- **1998-2002:** Served as Process Engineer for Indianapolis Water Company. Professional responsibilities consisted of evaluation and implementation of process modifications to optimize water treatment plant performance; oversight of capital improvement upgrades to water treatment facilities; and negotiation with regulatory agencies on compliance issues. Process evaluations included design of pilot and/or

bench scale testing programs aimed at meeting increasingly stringent water quality goals. Specific projects included development of operations protocol for disinfectant application at a 16-MGD water treatment plant, which resulted in reducing disinfection by-product concentrations while directly saving over \$1,500,000 in planned facility upgrades; design review and construction oversight for the conversion of gaseous and solid water treatment chemicals to equivalent liquid chemicals at four water treatment plants with a combined capacity of 172 MGD; disinfection benchmark evaluations calculations used as the basis for design of three chlorine contact basins with over 11 MG of combined capacity; operation of conventional treatment, ozone disinfection and UV pilot plants.

- **1995-1998:** Served as Senior Project Engineer, EarthTech, Indianapolis, Indiana. Provided consulting engineering services to commercial, industrial and governmental clients related to environmental regulations. Projects included groundwater remediation, hazardous waste treatment and management, and industrial permitting.
- **1992-1995:** Served as Engineer, Hargis and Associates, Inc., La Jolla, California. Provided consulting engineering services primarily related to groundwater contamination and remediation. Worked extensively with large aerospace manufacturing clients on chlorinated solvent contamination issues.
- **1990-1992:** Served as Graduate Research Assistant, Department of Civil Engineering, University of Texas at Austin, Texas. Conducted laboratory experiments to evaluate the effect of particle size and operating parameters on deep-bed water filtration. Operated a pilot-scale filter column and monitored for head loss, turbidity, and particle counts. Experiments were conducted at various flow rates and using various sized media on softened water from the Davis Water Treatment Plant in Austin, Texas. Developed laboratory procedures for accurate particle size measurements
- **1985-1990:** Served as Design Engineer, LTV Aerospace & Defense, Dallas, Texas. Designed mechanical and hydraulic systems for advanced aircraft. Provided oversight and evaluation of full-scale system tests for first flight qualification of mechanical and hydraulic systems. Developed installation specifications to ensure proper operation of systems prior to flight.

Publications:

- Moran, D.C., A. Brassart, and J.M. Jeter. 2001. Variable Source Water Quality and Enhanced Coagulation Step 2 Testing: A Potential Compliance Nightmare. Proc. of the 2001 AWWA Annual Conference. Washington, D.C.: AWWA.
- Malley, Jr., J.P., B.A. Petri, G.V. Hunter, D. Moran and M. Nadeau. 2001. Full-Scale Implementation of Ultraviolet Disinfection in Groundwater Treatment Systems. Denver, Colorado. AwwaRF and AWWA.
- Petri, B.M., G. Fang, J.P. Malley, Jr., D.C. Moran, and H. Wright. 2000. Groundwater UV Disinfection: Challenges and Solutions. Proc. of the 2000 AWWA Water Quality Technology Conference. Salt Lake City, UT: AWWA.
- Moran, D.C., M.C. Moran, R.S. Cushing, and D.F. Lawler, 1993. Particle Behavior in Deep-Bed Filtration: Part 1 – Ripening and Breakthrough. JAWWA 85(12) 69.
- Moran, M.C., D.C. Moran, R.S. Cushing, and D.F. Lawler, 1993. Particle Behavior in Deep-Bed Filtration: Part 2 – Particle Detachment. JAWWA 85(12) 82.
- Moran, D.C., M.C. Seib, R.S. Cushing, and D.F. Lawler, 1992. Particle Size in Filtration: Dynamics of Ripening, Breakthrough and Breakoff. Proc. of the 1992 AWWA Annual Conference. Vancouver, B.C.: AWWA.

Chandra Mysore, PhD, PE, DEE

Director for Drinking Water Programs



Education:

Ph.D., Environmental Engineering, University of Colorado
MS, Water Resources and Environmental Engineering, University of Hawaii
MS, Irrigation Engineering, University of Hawaii
BE, Civil Engineering, National Institute of Engineering, India

Registrations:

Professional Engineer: Georgia and Louisiana
Diplomate in Environmental Engineering, with expertise in Water and Wastewater Treatment

Professional Memberships/Activities:

American Academy of Environmental Engineers
American Water Works Association
International Ozone Association
International UV Association

Background:

Dr. Mysore is the Director for Drinking Water Programs with the Central Technical Support (CTS) group of Veolia Water North America Operating Services, LLC (Veolia Water). The role of this group is to provide technical support services to facilities owned, operated and managed by Veolia Water companies throughout North America.

Dr. Mysore has more than 20 years of experience in water, wastewater, soil and groundwater treatment systems employing advanced oxidation processes (Ozone/UV/H₂O₂), membranes, and biological filtration while working for local, federal, private and academic institutions.

Dr. Mysore has participated in numerous bench-scale, pilot and full-scale studies and has extensive experience in the design, construction, startup and commissioning of water and wastewater treatment systems. He was a part of the Veolia Water team for the design of Tampa Bay Water's new 66-MGD surface water treatment plant. This included managing and directing a bench-scale study aimed at characterizing the NOM (DOC=12-40 mg/L) and conducting enhanced coagulation studies (simulating the ACTIFLO® process) to determine coagulant dosages. Recommended static mixer with side stream for ozonation and participated in the preparation of the proposal, equipment selection, reviewing computations, plans, and specifications, design, permitting of the ozonation process. This static mixer design resulted in tremendous savings in capital, operation and maintenance costs with a small footprint for the ozonation process. He supported process studies at pilot-scale and studied bromate formation. Dr. Mysore also participated in partnership meetings and startup for Tampa Bay Water's new surface water plant.

Dr. Mysore has performed considerable research work in the area of membrane treatment, dealing with many of the issues and challenges that face your current desalination plant. He is currently managing the development of a low-pressure membrane knowledge base, which is focused on developing a comprehensive source of knowledge related to MF/UF membrane system planning, permitting, startup, and operations and maintenance. For this project, Dr. Mysore is overseeing the data garnering effort from Veolia Water utilities around the globe.

Experience:

- **1998–Present:** Serves as the Director for Drinking Water Programs with the CTS group of Veolia Water. The role of this group is to provide technical support services to facilities owned, operated and managed by Veolia Water companies throughout North America. Prior to this work as a part of the research and development team for Veolia Water's North American Technology Center in Atlanta. Involved in managing projects related to water and wastewater, submission of proposals to the USEPA, writing reports, presenting papers at national and international conferences, publishing in peer-reviewed journals and assisting in privatization efforts (operations, maintenance and management, O&M, and design/build/operate, DBO, projects) and troubleshooting at water plants. Also supervises several engineers, scientists and technicians.
 - Served as part of the Veolia Water due diligence, startup and support teams for the 20-year, \$1.5 billion contract with the City of Indianapolis, Indiana. This project includes all O&M and customer service facets of the City's waterworks system, which serves more than 1.1 million people. This system is being managed and operated by Veolia Water under a long-term privatization agreement, and includes four surface water treatment plants, ranging in size from 16 to 96 MGD, and eight groundwater treatment plants, ranging in size from 0.86 to 12 MGD. Identified ozone-BAF process as the most suitable process to control taste and odor problems, reduce DBPs, algal toxins and inactivate microorganisms such as Cryptosporidium.
 - Provided technical support for the Wilsonville, Oregon project (15-MGD) design/build/operate project for a new water treatment plant. Reviewed water quality data and recommended static mixer with side stream for ozonation over the conventional fine bubble diffusion process with a technical report. The technical report compared the two process on a qualitatively and quantitative basis. Provided sections in the preparation of the proposal. Veolia Water was awarded the contract to operate the plant. Assisted in troubleshooting problems at the plant.

Current and completed research work includes:

- "Micro- and Ultrafiltration Performance Specifications Based on Microbial Removal Efficiency" - This project was awarded is focused on developing a systematic performance testing protocol and specification for microfiltration (MF) and ultrafiltration (UF) membranes with respect to removal of viral and submicron bacterial pathogens thru bench-scale and pilot-scale studies. Dr. Mysore oversaw the pilot studies in the U.S. at various water utilities.
- "Natural Organic Matter Fouling of Low Pressure Membranes " - This project focuses on improving the understanding of fouling of low pressure membranes by NOM through bench- and pilot-scale studies. Dr. Mysore will be overseeing the piloting effort in the U.S.
- "Integration of Membrane Filtration into Water Treatment Systems" – This project will provide performance and operating data including a look at how effective membranes address water quality and public health issues. The review will also address the rationale of why membranes were added to the treatment train. Various configurations of membrane integration will be outlined (from RO to MF). Non-technical data, such as public perception of quality, will be included. Dr. Mysore oversaw gathering of the information at the various Veolia Water utilities that have integrated membranes into their processes.
- "Optimization of Membrane Treatment for Direct and Clarified Water Filtration" - This project focuses on conceptual assessment, bench-scale investigations and field-scale evaluations to provide a comprehensive database from which the drinking water community can best decide when and how to integrate MF/UF technologies into their treatment plants particularly for integration of membranes into direct or clarified water filtration plants. Dr. Mysore is overseeing the pilot-study effort at the Atlanta/Fulton County water treatment in Georgia, a facility that is contract operated by Veolia Water.

- **1996-1998:** Served as Principal Engineer with Gwinnett County, Georgia. Performed hydraulic modeling of the water distribution system for Gwinnett County. System serves 500,000 residents, includes three pressure zones, 2,300 miles of water mains, 12 pump stations and 13 storage tanks. Reviewed existing storage and determined any additional storage that may be required to help meet peak demands and fire flow requirements, predicted future water requirements, impact of new lines and pump stations on the distribution system and evaluated low pressure conditions in several areas around the country. Participated in the upgrading and expansion of the water treatment plant (100 MGD to 150 MGD) and provided technical support in the installation of an ozone disinfection system at the Lanier water treatment plant in Georgia. Ozone is transferred to water by a side-stream venturi injection-downflow tube system, which achieves high ozone transfer efficiency.

Keavin L. Nelson, P.E.

Operations Manager and Vice President/Engineering Services Manager



Education:

BS, Civil Structural Design/Construction Management, Pennsylvania State University, 1977
MBA studies in progress, Pennsylvania State University

Registrations/Certifications:

Registered Professional Engineer: Pennsylvania, Maryland and the District of Columbia
Grade AO STP Wastewater Treatment Certification, Pennsylvania

Background:

Mr. Nelson is the Operations Manager for Veolia Water North America – Northeast, LLC, and has dual responsibility as the Vice President and Engineering Services Manager with the Capital Programs Management (CPM) group of Veolia Water North America Operating Services, LLC (Veolia Water) in the Northeast. In this role, he is responsible for directing and supporting design/build, design/build/operate (DBO) and capital project work at contract operations, maintenance and management (O&M) projects sites in the State of New Hampshire, as well as in the other areas served by Veolia Water's Northeast Business Center.

Mr. Nelson has over 28 years of progressive experience in the water and wastewater service industry, including 15 years of senior level management with responsibilities for multi-site operations, profit and loss, strategic planning, process re-engineering, design/build project team development, management and execution, business development and client and labor relations. With Veolia Water, Mr. Nelson has served in a variety of roles, ranging from Development Manager on major procurements to Vice President of Operations for projects in the U.S. and Canada.

Experience:

- **2005-Present:** Serves Operations Manager for Veolia Water's O&M and related projects in the Northeast Business Center, and also as the regional Engineering Services Manager with Veolia Water's CPM group. In this dual role, focuses on managing and growing Veolia Water's existing O&M business, and also on seeking new DBO and capital project opportunities with existing and new clients in the Northeast.
- **2003–2005:** Served as a Technical Manager with Veolia Water, with responsibility as a national project resource, and as the Team Leader on major project development efforts. Most recently worked on addressing the O&M and capital project issues at the Wilmington, Delaware, wastewater O&M project.
- **2001-2003:** Served as Regional Vice President of Municipal Business Development in Veolia Water's Mid-Atlantic Service Center. Responsible for the development and execution of municipal infrastructure and utility system privatization opportunities in a six-state region.
- **2000-2001:** Served as General Manager, North Region, of ADS Environmental, Inc. Managed all metering and assessment contracts, including profit and loss, marketing, and resource management. Services included sewer flow surveys, sanitary sewer evaluation surveys, metering equipment sales and installation, with regional gross revenue of \$12 million. Managed marketing and operations staff for a 15-state territory.

- **1997-2000:** Served as Vice President of Engineering for U.S. Water, LLC. Directed the engineering and technical approach in the development of privatization project proposals, including assembling design/build teams in joint venture partnerships and managing project development. Activity included the direction and management of project teams to formulate the operational and technical strategic approach and design/build capital projects execution and transition to private operations. Operations responsibility included management of privatization transition, labor contract negotiations, process and operations optimization and environmental compliance.
- **1994-1997:** Served as Vice President and Project Manager for Wheelabrator EOS, Inc., a Veolia Water predecessor company. Developed privatization project strategies in the U.S. and Canada including development and management of project teams to formulate the technical approach, develop the required design/build teams and projects from conceptualization to execution. Joined the company in 1994 as the Vice President of Operations, responsible for the execution of all contracts for operation and ownership of water and wastewater facilities in the U.S. and Canada; also managed contract negotiations and labor agreements.
- **1977-1994:** Served in increasingly responsible positions for Buehler-Horn, Inc., an engineering and architectural firm specializing in water and wastewater projects. As Vice President/Regional Manager (1989-1994), was responsible for regional profit and loss, sales and client relations. As Assistant Vice President/Director of the Construction Management Division (1984-1989), managed the 55-person division, which executed all construction management and design/build services throughout the Mid-Atlantic region. Held full profit and loss responsibility for the Division. Joined the company as a Staff Engineer and served in this position for seven years.

Paul F. Noran, P.E.

Technical Manager



Education:

MS, Civil Engineering, University of Southern California
BS, Civil Engineering, San Jose State University

Registrations:

Professional Engineer:

Maine, New Hampshire, New Jersey, North Carolina, Pennsylvania, New York, Ohio, Illinois and California

Professional Memberships/Activities:

Chairman of the Engineering and Construction Division of the American Water Works Association (AWWA) – 1995-1999

Chair of Strategic Planning Committee for the Technical and Educational Council of the AWWA

Member of American Society of Civil Engineers

Background:

Mr. Noran is the Collection and Distribution Systems Technical Services Manager with Veolia Water North America Operating Services, LLC's (Veolia Water's) Central Technical Support (CTS) group. The role of this group is to provide technical support services to facilities owned, operated and managed by Veolia Water companies throughout North America.

In this role, Mr. Noran provides leadership for maintenance and asset management for Veolia Water and Veolia Water Canada Inc. contract operations, maintenance and management (O&M), design/build/operate (DBO) and related projects. He is also involved in recommending changes to improve operations, performance and customer satisfaction and in performing due diligence on systems being considered for operating contracts.

Mr. Noran has more than 32 of years of progressively responsible experience in the management of water supply systems, and in solving problems related to engineering, construction, operation, water supply, and wastewater collection and treatment facilities. He has specialized expertise in implementing best management practices for operating and managing water utilities.

Nationally, Mr. Noran was a participant in the U.S. Environmental Protection Agency's (EPA's) Blue Ribbon Committee to review treatment technologies and costs for small systems compliance. He has also been active in the AWWA and served as Chairman of the Engineering and Construction Division from 1995 to 1999.

Experience:

- **2002-Present:** Serves as the Collection and Distribution Systems Specialist with the CTS group of Veolia Water. Involved with project support, technical assistance and research and development activities related to solving problems in engineering, construction, operation, water supply, and wastewater collection and treatment facilities.
- **2000-2002:** Served as a Technical Manager with Veolia Water, involved in developing products that will enable our firm to gain the advantage in competing for new operating contracts and in recommending process changes to improve operations, performance and customer satisfaction.
 - Worked as part of the due diligence, technical, transition and startup teams for the 20-year, \$1.5 billion contract with the City of Indianapolis, Indiana. This project includes all O&M and customer

service facets of the City's waterworks system, which serves more than 1.1 million people. This system is being managed and operated by Veolia Water under a long-term privatization agreement, and includes four surface water treatment plants, ranging in size from 16 to 96 MGD, and eight groundwater treatment plants, ranging in size from 0.86 to 12 MGD.

- **1979-1999:** Served as Vice President of Consumers Water Company, a publicly traded company with \$100 million of annual revenues, with responsibility for water supply systems serving 750,000 people in a five-state area. Provided overall leadership and quality assurance for the multi-state utility, including all aspects of utility engineering and operations, with emphasis on major capital projects including infrastructure renewal and replacement. Overall responsibilities included working with operating companies to identify and implement process improvements and managing capital investments of \$30 million of new investment each year. Led company's initiatives in the areas of environmental compliance, risk management and protection of shareholders investments. Directed engineering and construction for all major projects. Developed recommendations for capital investment to deliver shareholder earnings, improve customer satisfaction, improve the existing infrastructure and grow the business. Identified and developed strategic alliances to enhance growth.
- **1973-1979:** Served as Assistant Director of Hialeah Water and Sewer Department, Hialeah, Florida, a major utility serving 100,000 people. Responsible for planning and managing water and wastewater operations, including a staff of 115. Provided mission and direction to employees, and developed successful customer quality service.

David L. Peterson

Laboratory Supervisor



Education:

Bachelors Degree in Chemistry and Biology
Masters Degree in Biochemistry
Doctorate in Biochemistry

Registrations:

Grade WT3, Water Treatment Plant Operator, Indiana Department of Environmental Management
Grade WT5, Water Treatment Plant Operator, Indiana Department of Environmental Management
Grade DSL, Water Distribution System Operator, Department of Environmental Management
Class A-SO, Wastewater Treatment Plant Operator, Indiana Department of Environmental Management
American Chemical Society Member
American Society for Quality Member
American Water Works Association Member

Background:

Dr. Peterson is a Laboratory Supervisor with Veolia Water North America – Central, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). He is assigned to Veolia Water Indianapolis, is responsible for supervising a unique, state-of-the-art laboratory in instrumentation and methodology. Taste and Odor Compounds are quantified down to the parts per trillion level using Solid Phase Microextraction (SPME) methodology. Besides performing compliance and incentive monitoring, the laboratory has piloted process optimization using both traditional and new approaches. Using both his laboratory and plant operations experience, he provides sound direction to the team concerning treatment chemicals and techniques.

Experience:

- **1994-Present:** Serves as the Laboratory Supervisor for Veolia Water Indianapolis, LLC, which operates and manages Veolia Water's 20-year, \$1.5 billion contract with the City of Indianapolis, Indiana, which includes all O&M, capital project work and customer service facets of the City's waterworks system, a system that currently serves 1.1 million people. Responsible for the operation and supervision of the purification laboratory. Performs TOX analysis on special basis and serves as alternate for all other analyses during absences. Supervises compliance, incentive and process testing and reporting. Prepares capital budget and plan for laboratory needs.
- **1985-1994:** Served as Corporate Quality Assurance Officer for Heritage Laboratories, Inc. Responsible for certifying all reports to clients and assuring compliance to EPA methods. Managed numerous large projects. Audited other laboratories and maintained and administered State, federal and private certifications.
- **1982-1985:** Served as Corporate Environmental Laboratory Supervisor for Cummins Engine Company. Operated and maintained Hewlett Packard GC/MS. Performed study on raw rubber vulcanization off gases. Analyzed samples per OSHA/EPA/SM methodology. Calibrated and maintained sampling equipment. Served as Corporate authority on methods and chemistry. Supervised union laboratory technicians. Set up and maintained all laboratory instruments.
- **1976-1982:** Served as OSHA/RCRA Laboratory Supervisor for the Indiana State Board of Health. Supervised analytical chemists performing analyses, Served as Department of Labor laboratory expert. Calibrated and maintained all laboratory instrumentation. Performed special projects and special monitoring. Performed XRD analysis of bulk asbestos samples for schools.

Michael Schnack

Manager of Human Resources - Northeast



Education:

MBA, Management, University of Rhode Island
BA, Liberal Arts, Providence College

Professional Memberships/Activities:

Society for Human Resource Management
Planning Commissioner, Town of Jamestown, Rhode Island

Background:

Mr. Schnack is the Manager of Human Resources for Veolia Water North America – Northeast, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). He has over 10 years of human resources experience, and has managed all areas of Human Resources, including employment, employee relations, wage and benefit administration, labor relations, regulatory compliance and training.

Experience:

- **2001-Present:** As Manager of Human Resources for Veolia Water in the Northeast, responsible for human resource activities and employee and labor relations in the service area that includes projects in the State of New Hampshire. Involved in coordinating benefits, human resources support and transition support for Veolia Water contract O&M projects in New England and New York.
- **1998-2001:** Directed all human resource activities, including benefits administration, compensation, compliance, recruiting and payroll administration for United Methodist Elder Care, East Providence, Rhode Island. Experienced with labor and employee relations, training, and developing personnel policies and procedures. Served as a labor contract administrator responsible for the administration of personnel policies, labor contract, grievance resolution and arbitration.
- **1997-1998:** Managed branch business and employment activities for Arbor Associates, a temporary staffing firm with offices in Boston, Worcester and Providence. Responsible for job development, customer and employee relations, compliance and training.
- **1992-1997:** Managed employment programs in the mental health field, providing employment training and counseling, job development, job analysis, career planning, job and skills training, and program marketing. Also experienced in employee relations, recruiting, screening and interviewing job candidates and supervision of personnel.

M. Scott Schrang

Assistant General Counsel



Education:

JD, University of Arkansas School of Law
BA, Business Administration and Economics, Austin College

Professional Memberships:

State Bar of Texas
American Bar Association

Background:

Mr. Schrang is the Assistant General Counsel for Veolia Water North America Operating Services, LLC (Veolia Water) and the Legal Counsel for Veolia Water North America – West, LLC, an autonomous business unit of Veolia Water. He has more than 15 years of experience in corporate law, specializing in litigation management, municipal law and environmental matters.

Experience:

- **1997-Present:** As Assistant General Counsel for Veolia Water, responsible for litigation management, employment and labor matters, contract drafting, municipal law, environmental and general corporate legal matters.
- **1993-1997:** Served as Counsel for a large industrial and residential overhead door company and its subsidiaries. Responsibilities included contract drafting, litigation management, patent and trademark administration, antitrust matters, acquisitions, product liability, labor relations, real estate and all distributor matters concerning the firm and its subsidiaries.
- **1990-1993:** Served as Staff Attorney for a large consumer electronics company. Responsible for all legal matters for the firm and subsidiaries, emphasizing contract drafting, litigation, patent and trademark administration, licensing agreements, antitrust, product liability and personnel matters.
- **1988-1990:** Served as Assistant City Attorney for the City of Fort Worth. Drafted and revised City ordinances and handled zoning and litigation matters.
- **1987-1988:** Served as an Associate for a private law firm. Handled commercial litigation and bankruptcy.

Joey J. Tolbert

Financial Analyst, Municipal Business Development



Education:

MS, Management Information Systems, Southern Illinois University at Edwardsville
AS, Accountancy, Southern Illinois University at Edwardsville
AAS, Accounting, Lewis & Clark Community College

Certification:

Certified Illinois Municipal Treasurer

Professional Memberships/Activities:

Southern Illinois University at Edwardsville Accounting Club
Phi Theta Kappa Honorary Fraternity
Phi Kappa Phi Honor Society
Beta Gamma Sigma
Rotary International (Past President, Wood River Rotary Club)
Loyal Order of the Moose, Lodge 1349
Southwestern Illinois Manager's Association
Government Finance Officers Association
Downstate Illinois Government Finance Officers Association
Illinois Municipal Treasurer's Association
River Bend Growth Association
Wood River Jaycees (Past President)
Southern Illinois University at Edwardsville Alumni Association Board of Directors
International City Management Association

Background:

Mr. Tolbert is the Financial Analyst, Municipal Business Development, for Veolia Water North America Operating Services, LLC (Veolia Water). He provides a financial and management support for operations, maintenance and management (O&M), design/build/operate (DBO) and related project and new business efforts in the U.S. and Canada.

Mr. Tolbert has more than 25 years of experience in finance, with an emphasis in the area of municipal finance. He has specialized experience in the areas of: personnel management, governmental administration and compliance; collection and disbursement of municipal funds; management of pension funds; preparation of budgets and financial statements; and oversight of all municipal financial obligations.

Experience:

- **1999–Present:** Serves as the Financial Analyst, Municipal Business Development, for Veolia Water, with involvement in supporting ongoing projects and new business efforts.
- **1998–1999:** Served as Financial Marketing Manager for Professional Services Group (PSG), a Veolia Water predecessor company. Provided financial analysis and marketing support to senior business development staff. Assisted client cities in developing alternative, innovative approaches to achieving

funding for capital improvements. Provided support to senior management and business development staff to aid their understanding of municipal finance.

- **1994-1998:** Served as City Manager and City Chief Administrative Officer for City of Wood River, Illinois. Responsible for the overall operations and functions of the City, including personnel and administrative issues and governmental compliance.
- **1987-1998:** Served as City Treasurer for City of Wood River, Illinois. Responsible for the collection and distribution of all City funds; had fiduciary responsibility for pension funds.
- **1995-1987:** Served as Director of Finance for City of Wood River, Illinois. Had oversight of all City accounting functions, including general ledger, payroll, accounts payable and receivable, utility billing, investments, budget preparation, annual tax levy and timely preparation of City financial statements.
- **1991-1994:** Served as part-time instructor for Lewis and Clark Community College, Godfrey, Illinois. Taught Accounting I and II and Governmental and Fund Accounting.
- **1989:** Served as Acting City Manager for City of Wood River, Illinois. In a temporary capacity, was the City's Chief Administrative Officer, with responsibility for the overall operations and functions of the City, including personnel and administrative issues and governmental compliance.
- **1987-1998:** Served as City Treasurer for City of Wood River, Illinois. Responsible for the collection and distribution of all City funds; had fiduciary responsibility for pension funds.
- **1984:** Served as Office Manager for Missouri Mills, Inc., St. Louis, Missouri. Responsible for oversight of all functions of operations and provided support services for the trade floor of Merchants Exchange.
- **1979-1984:** Served as Grain Accountant for Peavey Company, Alton, Illinois. Responsible for the daily position of the firm in relation to the Chicago Board of Trade. Assisted grain traders in local, national and international grain trades.

Joe Tomashosky, CPA

Vice President of Finance



Education:

BA, Business Economics with Accounting Concentration, University of Pittsburgh, 1979

Certification:

Certified Public Accountant, Pennsylvania, 1981

Background:

Mr. Tomashosky is a Vice President of Finance for Veolia Water North America Operating Services, LLC. (Veolia Water). He is responsible for the financial aspects for business development of long-term contracts, and project financing analysis and risk assessment.

Since joining Veolia Water in 1994, Mr. Tomashosky has held positions of increasing responsibility, including Vice President of Finance and Group Controller for the Industrial Equipment Group of Veolia Water; Vice President, Assistant Treasurer, Assistant Secretary and Officer of Veolia Water North America.

Mr. Tomashosky has more than 25 years of experience in finance with emphasis on business growth through acquisition and long-term contract development.

Experience:

- **1994-Present:** Serves as a Vice President of Finance for Veolia Water, with responsibility for project finance analysis, risk assessment and support for new business initiatives.
- **1991-1994:** Served as Chief Financial Officer for Koppel Steel Corporation, Koppel, Pennsylvania, the largest wholly owned subsidiary of the publicly traded NS Group.
- **1987-1991:** Served as Vice President of Finance and Chief Financial Officer for Genesis Packaging Systems, Pittsburgh, Pennsylvania, formerly a Greenfield startup of ALCOA and CMB.
- **1985-1987:** Self-employed CPA, Baltimore, Maryland.
- **1983-1985:** Served as CPA for Arthur Andersen, Baltimore, Maryland.
- **1981-1983:** Served as Chief Financial Officer for Key Oil Company, Weston, West Virginia, and Titusville, Pennsylvania.
- **1981-1991:** Adjunct Instructor of Accounting, University of Pittsburgh, Titusville, Pennsylvania; University of Charleston, West Virginia; and York College, York, Pennsylvania.
- **1978-1981:** Served as CPA for Donald Sarp & Company, Greensburg, Pennsylvania.

Debbie Willis

Director - Customer Relations



Education:

University of Indianapolis – Supervisor Certificate
Dwyer School of Business – Data Entry Certificate

Professional Memberships:

American Water Works Association (AWWA)
Society of Consumer Affairs Professionals (SOCAP)

Background:

Ms. Willis is a Customer Relations Director with Veolia Water North America – Central, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). In this role, she is primarily involved with the provision of customer services and client relations for Veolia Water's water system operations and management contract with the City of Indianapolis, Indiana.

Ms. Willis has over 25 years of experience in the utility service business, with 10 of those years in Business Supervision. She coordinated the transition and training for her area when the sewer billing process for the City of Indianapolis was combined with the billing and customer relations operations of the Indianapolis Water Company.

Over the past year, Ms. Willis has been instrumental in contractual incentives for call answer and abandoned rates for Veolia Water's contract with the City of Indianapolis. She also worked closely with the Information Technology staff to implement technology and program enhancements as well as working with other Veolia resources. Additionally, Ms. Willis has assisted in directing a customer relations team that provides billing, cash application, collections and contact center services to some 18 municipal clients.

Experience:

- **2003-Present:** Serves as Director for Customer Relations with Veolia Water in Indianapolis. Responsible for a customer service staff of approximately 60 which includes call center operations, customer complaint resolutions, collections and cash applications, remittance processing and billing services quality assurance.
- **2000-2003:** Served as the Manager of Customer Contact for Indianapolis Water, prior to transitioning to Veolia Water. Managed team leaders for call center operations, and successfully implemented Interactive Voice Response (IVR) and recording system technology.
- **1998-2000:** Worked as an Accounts Payable Clerk for Grand Strand Water & Sewer, Myrtle Beach, South Carolina.
- **1993-1995:** Served as the Supervisor Customer Accounts for Indianapolis Water. Responsible for coordinating and prioritizing the work load for 10 accounting clerks, initiating new customer accounts, auditing accounts for billing accuracy, and approving billing adjustments and refunds. Duties also included supervising reconciling payments to deposits and cash collected to daily receipts and reconciling bank statements. Also responsible for supervising wire transfers in excess of \$100,000 daily and approving agent invoices for payment.

- **1988-1993:** Worked as the Supervisor of Customer Accounts for Indianapolis Water. Supervised and trained data entry clerks, billing adjustment clerks and relief clerks, coordinated and scheduled relief for three departments and interviewed and hired new employees. Also served as backup for the customer contact supervisor and administered progress reports and annual reviews.
- **1985-1988:** Worked as a Customer Service Trainer Representative with Indianapolis Water. Was responsible for training new employees, preparing training and reference manuals and assisting with supervision. Also served as relief in all positions.
- **1977-1985:** Worked as a Customer Service Representative with Indianapolis Water. Performed all customer contact functions in the water industry, including orders to restore service, discontinue service, high bill complaints, billing adjustments, payment arrangements, water quality and cold weather problems.
- **1972-1977:** Worked as a Data Entry Operator with Indianapolis Water.

James Washburn

Director of Network and Infrastructure



Education/Training:

Technical courses for MCSE
CCDA Course for Cisco Certification

Certifications:

Cisco Certified Design Associate
3.12, 4.11 and 5.1 CNE

Background:

Mr. Washburn is the Director of Network and Infrastructure for Veolia Water North America Operating Services, LLC. He was responsible for building the network and infrastructure for Veolia Water's 20-year water system management and operations contract with the City of Indianapolis, Indiana.

Mr. Washburn currently manages Veolia Water's corporate data center, which is located in Indianapolis, as well as the company-wide network for Veolia Water.

Mr. Washburn has over 24 years of experience, which includes project management, help desk management, hardware and software support and local and wide area network installations and support.

Experience:

- **2000-Present:** Serves as the Director of Network and Infrastructure for Veolia Water. Manages IT policies, procedures and service level agreements; the IT departmental budget and process improvements. Review, analyzes, recommend and implements network hardware, software, topologies, architecture and tools. Technical responsibilities include server management, network monitoring, telephony management, data security, virus/security protection, server/data availability and remote accesses. Project lead for the corporate data center relocation to Veolia Water's Indianapolis facility. Facilitated migration of corporate help desk support to Veolia Water in Indianapolis. Project lead for 300 user Office 97 to Office CP migration.
- **1999-2000:** Served as Senior Systems Engineer for Microage, Indianapolis, Indiana. Managed 300-user help desk. Provided technical support for Local and Wide Area network products. Installed and managed Novell 4.11 server and NT 4.0 server. Consultant for various clients on Lan/Wan server, and desktop issues.
- **1998-1999:** Served as Systems Engineer for Vanstar, Indianapolis, Indiana. Managed a 3,270 terminal replacement with IBM PC for Indianapolis Water. Developed and implemented corporate Indianapolis Water LAN/WAN.
- **1985-1998:** Served as Systems Network Engineer for Memorex Telex Computer Products. Provided PC hardware and software support, and local and wide area network installation and support.
- **1981-1985:** Served as Avionic Sensor Systems Specialist for the U.S. Air Force. Maintained computerized infrared and laser target designation systems.

Roy P. Wood, Jr.

Area Manager



Education/Training:

AS, Dundalk Community College, Baltimore, Maryland

Other Training:

- Zenger Miller Effective Supervision
- Water Fluoridation Operating Training Certificate of Competency
- Lead and Copper Rule
- Well Rehabilitation and Maintenance
- Road Safety for Water Utilities

Certifications:

Grade VI Wastewater Plant Operator, Massachusetts

Grade IV Water Distribution Operator, Massachusetts

Grade IV Water Treatment Operator, Massachusetts

Professional Memberships:

American Water Works Association

Massachusetts Water Pollution Control Association

New England Water Pollution Control Federation

Water Environment Federation

Background:

Mr. Wood is an Area Manager with Veolia Water North America – Northeast, LLC, an autonomous business unit of Veolia Water North America Operating Services, LLC (Veolia Water). He has more than 20 years of experience in the management of water and wastewater treatment facilities.

Mr. Wood's specialized expertise includes water treatment and distribution operation and maintenance, advanced wastewater treatment and collection system operation and maintenance, technical evaluations, proposal preparation, community and customer relations, and facility economics.

Experience:

- **1997-Present:** Serves as Area Manager for Veolia Water, providing oversight, management and support for operations, maintenance and management (O&M) and related services in the State of New Hampshire, and other parts of the region. Provides direct supervision and oversight for water and wastewater treatment facilities in this services area. Manages a staff of project managers in the operation and maintenance of these facilities and ensures contract obligations are met. Also assists with financial management, personnel selection, client interfacing and technical troubleshooting. Provides support to the sales group and is routinely engaged in due diligence efforts.
- **1996-1997:** Served as Plant Manager for Veolia Water's contract operations for the Town of Westborough, Massachusetts' water treatment plant and 11 remote water stations. Responsibilities

included process control, maintenance management, budgeting, staffing, training, scheduling, accounting, client and public relations, and all other activities associated with plant operations.

- **1989-1996:** Served as Plant Manager for Veolia Water's contract operations for the Town of Sturbridge, Massachusetts' wastewater treatment plant and collection system and water treatment plant and distribution system. Responsibilities included process control, maintenance management, budgeting, staffing, training, scheduling, accounting, client and public relations, and all other activities associated with operating the plant consistent with the terms of the contract.
- **1987-1989:** Served as Assistant Plant Manager for Veolia Water's contract operations at Leominster, Massachusetts. Coordinated operations and maintenance activities at the wastewater treatment plant, including scheduling personnel, purchasing, and providing input relative to process control.
- **1986-1987:** Served as Operations Coordinator for Veolia Water at the Blue Plains Wastewater Treatment Facility, Washington, D.C.
- **1985-1986:** Served as Lead Operator for Veolia Water at the wastewater treatment facility at the Calvert Cliffs Nuclear Power Plant in Maryland.
- **1984-1985:** Served as Plant Operator for the Howard County Department of Public Works at the Little Patuxent Wastewater Treatment Facility, Howard County, Maryland.

William J. Wolf, CPA

Controller



Education:

BS, Business/Accounting, Indiana University School of Business

Professional Memberships:

Indiana State Board of Public Accountancy

Background:

Mr. Wolf is a Controller with Veolia Water North America – Central LLC, an autonomous business unit of Veolia Water North America Operating Services LLC (Veolia Water). In this role, he is responsible for oversight of all financial reporting and audits as well as developing and implementing business plans.

Experience:

- **2004-Present:** Serves as Controller for Veolia Water in the Central U.S. and with Veolia Water Indianapolis LLC, which operates and manages Veolia Water's 20-year, \$1.5 billion contract with the City of Indianapolis, Indiana. Oversees financial closing, reporting and reconciliation. Coordinates annual independent audits and compiles annual reports. Supervises and reviews recording of utility plan and operation and maintenance expense accounting records maintained under regulatory accounting.
- **2000-2004:** Served as Comptroller for American Water Works Service Company, Indiana. Oversaw preparation of annual strategic business plan including market plan, business development plan, regulatory/rate plan, detailed five-year financial plan and balanced scorecard. Monitored and investigated actual-plan variances, initiated cost control initiatives, reviewed financial position and profitability, and coordinated with operations in execution of business plan. Implemented and oversaw ongoing application of International Accounting Standards for consolidation of data with parent company. Devised and executed action plans to integrate acquired companies, including information systems and procedures, with goal to maximize accretion to EPS. Provided financial counsel and advice to all functions for strategic and operational decision-making. Administered information technology services function for three-state region including oversight of five-member professional staff. Coordinated annual independent audit; compiled annual report; analyzed effect of new and proposed tax law, GAASP and IAS; and prepared Form 1120.
- **1999-2000:** Served as Director, Accounting and Assistant Treasurer for Indiana-American Water Company, Inc., Indiana. Automated the tax provision and return process by integrating directly from general ledger to Insource CS tax system. Analyzed tax effects of proposed transactions; analyzed and forecasted effective tax rates; identified tax savings opportunities.
- **1993-1999:** Served as Assistant Director, Accounting and Assistant Treasurer, Indiana-American Water Company, Inc., Indiana. Implemented JD Edwards ERP system, including job cost, inventory, fixed assets, PO, payroll and GL. Maximized integration of all modules and trained end users. Prepared income, property and other tax returns and calculated current and deferred income tax provisions. Oversaw financial closing, consolidation, reporting and reconciliation.

- **1992-1993:** Served as Comptroller and Assistant Treasurer for Consolidated Water Services, Inc., Indiana. Administered loan agreements and cash position. Coordinated banking services and issuance of long-term securities with institutional investors through private placement, including issuance of tax exempt financing under state program. Responsible for administration of accounting, reporting, budgeting and financing for nine subsidiaries in five states.
- **1990-1992:** Served as Assistant Director of Accounting and Assistant Treasurer, Consolidated Water Services, Inc., Indiana. Prepared accounting, financial, regulatory and tax reports. Performed financial closing and reporting for five entities with over 25 operating locations. Coordinated year-end audit and preparation of schedules and documentation for independent accountants. Implemented automated property and customer billing mainframe computer systems.
- **1985-1990:** Served as Supervising Senior Accountant for KPMG Peat Marwick, Indiana. Simultaneously managed several client audit engagements while meeting strict reporting deadlines. Supervised staff testing and performance, coordinated audits directly with client senior management from planning state to completion. Reviewed accounting systems and controls in various industries including manufacturing, financial institutions, transportation, agribusiness and utilities. Analyzed financial statements for compliance with GAAP, SEC and IRS reporting requirements. Coordinated specialized engagements including acquisition auditing, compilation and review and tax services. Assessed client risk and designed appropriate audit procedures and reviewed and performed analytical and detail substantive audit testing. Prepared tax returns.

Appendix B
Part One
Veolia Water –
Supplemental Experience Information



Savage Wells/OK Tools Superfund Site, Milford, NH

Groundwater Remediation Project



Veolia Water North America – Northeast, LLC (Veolia Water), under a contract that began in 2002, is providing remediation management services for the State of New Hampshire Department of Environmental Services (NHDES). Our firm provides remediation services at the OK Tools portion of the Savage Wells Superfund site. The 0.345- MGD system provides groundwater treatment and source reduction through DNAPL (dense non-aqueous phase liquid) collection and management of migration.

Veolia Water currently operates the on-site remediation systems at the OK Tool portion of the Savage Wells Superfund site.

The cleanup of the OK Tools portion of the Savage Wells Superfund Site began in 1993 when, under supervision of the U.S. Environmental Protection Agency (EPA), the State of New Hampshire began the design of the groundwater remediation system that was put into operation in March 1999. Subsequent modifications of the Record of Decision (ROD) for this site's recommended remedy (including the use of a passive barrier to contain contaminant migration as well as the use of air stripping, air sparging and soil vapor extraction and in-situ chemical oxidation) led the EPA and NHDES to jointly issue an Explanation of Significant Differences (December 1996). This revised remediation approach provides for treating groundwater contaminated with volatile organics, specifically tetrachloroethene (PCE) and trichloroethene, 1-1-1 trichloroethane (TCE), resulting from past industrial operations at the site. The Milford-Souhegan aquifer is classified as a Class IIB aquifer, a potential drinking water source.

The importance of this Aquifer has been highlighted by the pressures of population and industrial growth on water resources in the southern New Hampshire area. The Savage Wells had formerly supplied up to 45% of the Milford Township's potable water supply. When the contaminants were discovered in this supply source, emergency Federal funding was acquired to provide residents of a nearby trailer park with bottled water until a remedial treatment system could be constructed and the park connected to the municipal water supply.

The Veolia Water O&M agreement includes:

- Monitoring of influent water quality and pumping of groundwater from the extraction wells to the treatment plant.

Facilities	• 0.345-MGD groundwater remediation facility
Scope of Services	• Operate/Maintain/Manage • Engineering Services
Start Date	2002
Client Reference	Mr. Tom Andrews, P.E. State of New Hampshire Department of Environmental Services 6 Hazen Drive Concord, NH 03303-6526 Telephone: 603.271.2910

- Monitoring soil vapor extraction/air sparging systems.
- Preparing O&M Manuals for the facility, including protocols and SOPs.
- Providing Value Management services to evaluate the operational and cost effectiveness of treatment alternatives.
- Evaluating shallow extraction well dewatering of the soil vapor extraction zone of the aquifer to determine if all pertinent data is being generated.
- Updating the groundwater model to provide a more accurate representation of the water flow and chemical transport within the barrier.
- Annually evaluating the effectiveness of the systems and updating data and information such as the database and maps.
- Supporting the State and EPA in the preparation of the Five-Year Review, which will evaluate the implementation and performance of the remedy to establish its effectiveness in protecting human health and the environment.

Site Remediation and Closure



Veolia Water North America – Northeast, LLC (Veolia Water), under a contract that began in 1986, provided remediation and site closure support services for the Gilson Road Superfund Site for the State of New Hampshire Department of Environmental Services (NHDES). This contract was the first U.S. Environmental Protection Agency (EPA) Superfund groundwater cleanup that was implemented using a contract operations, maintenance and management (O&M) agreement. The site was contaminated with volatile organic compounds, which were removed with high-temperature air stripping. The 0.43-MGD groundwater remediation system also included in-situ volatilization and combustion of the removed organic materials. In 1996 the remediation operations at this site were successfully completed, and Veolia Water completed dismantling of the remediation system at this site was completed in 2001.

Veolia Water provided full-service contract O&M for the Gilson Road Superfund groundwater facility in Nashua, New Hampshire. This contract was the first EPA Superfund groundwater cleanup using a contract operations agreement. Total operating responsibilities at this site included process control, preventive and corrective maintenance, on-site laboratory analysis, and ensuring permit and regulatory compliance.

This project began in January 1986 when a Veolia Water predecessor company first entered into a contract with the State for the startup and contract O&M for the newly constructed 0.43-MGD groundwater plant at the Gilson Road Superfund site. This was the first EPA Superfund groundwater cleanup project implemented under a contract O&M agreement; the agreement was later transitioned to the NHDES.

Under the original contract, Veolia Water provided startup services and O&M, maintained all service agreements, inventories and purchase authority and operated the facility's on-site laboratory.

The treatment facility treated groundwater that was contaminated by the illegal disposal of hazardous wastes to the treatment level required by the Record of Decision (ROD). The treatment system at this site consisted of precipitation, coagulation and isolation of heavy metals; temperature controlled air stripping to remove volatile organics, PACT-biological treatment for non-volatile organics, soil gas extraction, and the incineration of organics extracted from the contaminated groundwater and soil.

Overall removal efficiency for volatile organic compounds by the air stripper was 99.7 percent,

with removed compounds incinerated in a high-temperature vapor incinerator. Steam generated from the incinerator was used to produce electricity, heat the building and preheat the groundwater prior to air stripping.

The treated groundwater flowed at 300 gpm and contained 1 percent of input volatile organic solvents; 250 gpm were recirculated into the groundwater to pass through additional treatment cycles, while 50 gpm received biological treatment and was discharged to a local stream. Treatment residuals were stabilized and placed in a secure on-site landfill, which was closed and capped upon project completion.

The Veolia Water O&M team implemented several improvements and innovations at this site to provide for the most reliable, cost-effective operation. These enhancements enabled the facility to have maximum "uptime," and included:

- ◆ Placing all extraction well pumps on a biennial preventive maintenance program resulting in substantial cost savings. The pumps were pulled and inspected in house by plant personnel. Inspections included cleaning and the replacement of worn parts. (This work has previously been performed on a corrective need by an outside contractor.)
- ◆ Installing a bypass switch on the boiler interlock system to enable recirculation of flow through the recharge system during extended shutdowns to maintain homogeneous conditions. (The original interlock system prevented flow if the boiler was shut down.)
- ◆ Redirecting the soil gas extraction flow. When a soil gas extraction system was added to the facility in 1991, the original design was for the

Gilson Road Superfund Site, Nashua, New Hampshire

soil gas to be added directly to the boiler/vapor incinerator separate from the stripper airflow. This added system exceeded the boiler capacity, making it difficult to operate and reducing its efficiency. Utilizing a computerized stripping tower program, we determined that the soil gas could be directed to the stripping tower without reducing its efficiency, and eliminate the need for the stripper air blower. This reduced the total airflow volume to acceptable limits.

- ◆ Constructing a baffle system to the bio tanks to aid in floc settling.
- ◆ Installing a polymer feed line and header system to the bio system.
- ◆ Installing a kill switch in the control room to safely shut down the facility at a local point in case of an emergency.
- ◆ Installing a curtain system to direct metal sludge from the plate and frame press to the dump truck.
- ◆ Installing a lime slurry feed system in the bio-tanks for pH control.
- ◆ Designing a catwalk and door extension that eliminated a safety concern associated with access to the bio-tanks.
- ◆ Overseeing the closure of the on-site sludge landfill.

As a result of a Remedial Action Evaluation Study completed in 1995, it was concluded that remedial action accomplished at the Gilson Road site had achieved the cleanup goal set forth in the ROD and the Supplemental ROD.

During summer 1996, Veolia Water supervised the closing of the on-site landfill, including fill, grading, drainage net and capping. A security system was installed, and a security company was contracted by Veolia Water to maintain site security when personnel are not on site. We also obtained a contractor to install a new boiler and tie it into the existing steam line system for building heat during winter months. At this point, the facility was then put in a standby mode in accordance with the requirements of the EPA, NHDES and the Remedial Action Evaluation Study.

Following this, all equipment at the site was maintained by the Veolia Water O&M Team in a ready state (able to be reactivated within four weeks if required). During this period all of the equipment was routinely exercised by Veolia Water, and was maintained in line with manufacturers' recommendations, and clean water loops were run periodically to test the equipment.

The State has implemented a long-term (30-year) monitoring program, as recommended by the NHDES, to collect data to document continued

Facilities	0.43-MGD Groundwater Remediation Facility
Scope of Services	<ul style="list-style-type: none">• Operate/Maintain/Manage• Site Maintenance• Emergency Response• Closure Assistance
Start Date	1986
Client Reference	Mr. Ken Kettenring, P.E. State of New Hampshire Department of Environmental Services 6 Hazen Drive Concord, NH 03303-6526 Telephone: 603.271.4060

compliance with cleanup goals. As added protection for public health, a groundwater management zone was constructed to limit access to groundwater downgradient of the site

In the almost 10 years that this plant operated, from April 1986 to December 1995, over 1 billion gallons of contaminated groundwater was treated.

In 1999, after the second five-year review of the Gilson Road site, the EPA and the NHDES determined that the contaminate levels at the site were reduced to the level that the groundwater treatment plant would not be restarted. A risk assessment found that there was no current or future risk to human health posed by site contamination.

At that point, Veolia Water began work on the final phase of this O&M contract, which involved the decommissioning and dismantling of treatment units, a process that was completed in 2001.

Today, Veolia Water provides site maintenance and emergency response for the State, which is using the facility for storage.

Water Supply System Public-Private Partnership



Veolia Water North America - Central, LLC (Veolia Water), is managing the nation's largest water public-private partnership. This 20-year, \$1.5 billion contract with the City of Indianapolis includes all operations, maintenance and management (O&M) and customer service facets of the City's waterworks system, a system that currently serves 1.2 million people. This important project is expected to introduce a new level of performance in the water industry.

In April 2002, Veolia Water was awarded the nation's largest water public-partnership, with the City of Indianapolis. This 20-year, \$1.5 billion contract includes O&M and customer service facets of the City's waterworks system that currently serves 1.2 million people.

As part of Veolia Water's approach to managing and implementing this project, we have engaged the services numerous local and national firms as subcontractors and suppliers and implemented an aggressive program to include minority-owned (MBE) and women-owned (WBE) business enterprises and contractors for ongoing projects. In 2002, Veolia Water well surpassed our goal for providing subcontracts to local MBE and WBE firms. In addition, our commitment to the Indianapolis community since 2002 has resulted in over \$2 million to local non-profit organizations.

"The City of Indianapolis and Veolia Water have and continue to work closely together in a win-win partnership to realize economic and environmental benefits to our entire community, including a five-year rate freeze for our customers. We built this partnership with the interests of the citizens in mind and are pleased with the progress we've made in our first two years."
Mayor Bart Peterson

The Indianapolis water facilities include four water treatment plants, ranging in size from 16 MGD to 96 MGD; eight groundwater treatment plants, ranging in size from less than 1 MGD to 12 MGD; 4,000-mile distribution system; and numerous storage tanks. The Indianapolis system includes 19 water pump stations along the distribution system and 12 high-service pump stations at the water treatment plants.

Like most water distribution systems, the Indianapolis water supply system is dynamic

with several pressure zones. Fifteen districts and five sub-districts comprise the water system. A district and sub-district are part of the waterworks that is defined by the pressures within the area and is typically isolated from the remainder of the system by one or more pressure reducing valves (PRVs), bleeder valves or pump stations. The Harbour system is comprised of three districts while the Liberty, Darlington and IWC Morgan systems each contain only one district.

The new partnership was an integral part of Mayor Bart Peterson's plan to acquire the assets of the Indianapolis Water Company (IWC) from the regulated utility NiSource, which was required by federal law to divest all of its water utility assets due to a planned merger with Columbia Energy Group. The City first became interested in buying the water company's assets in late 2000, after it became clear that NiSource would have to sell the water company. On April 30, 2002, the City acquired the waterworks system from NiSource, and until the City's purchase of IWC, Indianapolis had been the largest city in the nation that did not own its own water utility.

Veolia Water assumed complete water system operation and management responsibility for the water system on May 1, 2002, and the transition process provided complete O&M responsibility to our firm.

This move by the nation's 12th-largest city marked the largest public-private partnership for water services in the U.S., and Veolia Water transitioned over 460 technical, professional and management level employees to our O&M and management teams.

Veolia Water was selected for this partnership because of our innovative transition plans, employee relations plans, technical approach,

CITY OF INDIANAPOLIS, INDIANA

experience, management fees, customer service and local commitment.

"Our partnership is summed up by two issues – local control and quality of life. Through our agreement with [Veolia Water], we are controlling our community's most precious resource, controlling the assets that treat and deliver the resource and stabilizing our water rates."
- Mayor Bart Peterson

In some cities, the sale of utilities has resulted in rate increases. However, due to the acquisition and Veolia Water partnership, water rates for the City of Indianapolis consumers will be frozen for the first five years. The City further contributes to lower operating costs because of favorable tax and interest rate structures.

Other critical factors in winning this project were our aggressive approach to resolving water taste and odor problems that have plagued the waterworks system for years, our commitment to invest in plant upgrades and our incentive-based compensation plan.

Under the incentive plan, a portion of our company's fees are paid only if we meet specified customer service, water quality, operations and other performance measures. By directly linking performance to compensation, this partnership is establishing a new model in the water outsourcing industry. In 2002, Veolia Water earned approximately 90% of the incentive-based compensation.

Water taste and odor problems have plagued some Indianapolis consumers for years. The City and Veolia Water have invested in plant upgrades and engaged Indiana University-Purdue University at Indianapolis in an aggressive research and development project to create a mode of excellence in drinking water quality and also address water taste and odor.

Though the Indianapolis waterworks system is in good condition, Veolia Water has committed to a higher level of performance to be achieved through incentives in customer service, water quality, capital improvements, operations and maintenance, and community involvement.

Veolia Water established a sophisticated customer service program that includes a 24/7 call center to manage customer concerns regarding their water service. The customer service organization is responsible for meter reading for some 325,000 connections. Veolia Water also provides billing and revenue collection for 600,000 accounts. In addition to billing for the waterworks, we provide sewer billing for Indianapolis, and we also supply utility billing for the nearby city of Elkhart.

A major portion of this project is devoted to capital improvement projects that are being managed by Veolia Water and implemented by

Facilities

- Four Surface Water Treatment Plants, ranging in size from 16 to 96 MGD
- Eight Groundwater Treatment Plants, ranging in size from 0.86 to 12 MGD
- 4,000-mile Distribution System
- 31 Pump Stations
- 8 Well Fields
- 6 Ground Storage Tanks
- 7 Underground Storage Tanks
- 6 Elevated Storage Tanks

Scope of Services

- Design/Build
- Operate/Maintain/Manage
- Asset Management
- Capital Improvements
- Customer Service
- Meter Reading (325,000 connections)
- Billing/Collection (600,000 accounts)
- Community Relations
- Site Security Assessment

Start Date 2002 – Ongoing through 2022

Population Served 1.2 Million

Client Reference Mr. Carlton Curry
Director of Operations and Contracts
City of Indianapolis
Department of Waterworks
1220 Waterway Boulevard
Indianapolis, IN 46205
Telephone: 317.264.7738

our firm's engineering and construction affiliate, in tandem with local contractors.

In the first two years of our contract, we implemented or completed some \$94 million in capital work improve the City's aging water infrastructure. The City anticipates commissioning an additional \$20-\$40 million in capital projects in each of the 20 years of our contract. Veolia Water's engineering affiliate is managing this work, which is being performed by Veolia Water's staff, along with specialty contractors. Throughout these vast and ongoing improvements, Veolia Water provides continuous, uninterrupted water services for 12 water treatment plants having a daily production capability of 200 million gallons.

Veolia Water is initiating a new standard for water utility excellence at Indianapolis. Our specialists are completing the rigorous program to achieve ISO 9001:2000 and 14001:2004 registrations for the City. This effort is anticipated to be completed by the end of 2005.

The Indianapolis-Veolia Water partnership was recognized in 2004 with the National Council for Public-Private Partnerships Service Award.

Contract O&M of Municipal Water and Wastewater Facilities



Veolia Water North America – Northeast, LLC (Veolia Water) began providing full-service contract operations, maintenance and management (O&M) services for the City of Brockton's 68,137-m³/d tertiary wastewater treatment plant and two water treatment plants (90,849 m³/d and 4,921 m³/d) in 1988. Water system operations also include two raw water pump stations (151,416-m³/d production capacity) and two water towers. Wastewater system operations include two wastewater pump stations, sludge incineration operations including ash disposal and sludge disposal, and management of an Industrial Pretreatment Program. At the start of this contract, the citizens of Brockton faced serious taste and odor problems in their potable water supply, the result of metabolites secreted by algae and actinomycetes in Silver Lake. Veolia Water worked with specialists from the Veolia Water, S.A. research center in Paris, France, to modify and supplement the existing treatment facilities. Brockton citizens now enjoy some of the finest tasting water in the country and realize operating cost savings of over \$500,000 annually. In 2000 our partnership was renewed for 20 years.

Veolia Water operates and manages the potable water and wastewater facilities serving Brockton. The first contract with the City was in 1988 and was innovative in that we provided the first year of O&M service for no cost because of our ability to achieve operational savings of more than \$500,000 per year. Over the years the partnership between the City and Veolia Water has been recognized with awards and commendations, and, most recently, was renewed a 20-year term—making Brockton one of the longest-running contracts in the O&M industry.

Over our more than 15-year history in Brockton, Veolia Water has made significant enhancements to the water (WTP) and wastewater (WWTP) treatment processes and facilities, including:

- Cleaning of the sludge lagoons at a fraction of the City's budgeted cost (WWTP).
- Designing and building a filter cloth cleaning system that reduced cleaning time from two days to four hours (WWTP).
- Implementing chemical precipitation of phosphorous with ferrous sulfate to reduce odors, save operational time and equipment use and cut costs (WWTP).
- Installing recording turbidimeters on each water filter and plant effluent (WTP).
- Building and installing fine bubble diffused aerators (WTP).
- Implementing a corrosion control program to reduce contaminant levels and drinking water and provide a protective coating for the distribution system (WTP).

- Turning this once garbage-filled 40-acre site into a showplace and bird sanctuary, replacing abandoned appliances, vehicles, oil barrels, etc., with a water garden, exotic fish (in an abandoned clarifier), trees and flowers.

Our fish giveaway is a popular event that ensures interaction between O&M staff and citizens while controlling overpopulation of the clarifiers.

"Brockton is an example of how the public and private sectors can substantially benefit both environmentally and financially from long-term arrangements. The partnership has helped decrease pollution in our community that might not have happened had we not chosen to work with the private sector." Mayor John T. Yunits, Jr.

Water O&M

Veolia Water began a 10-year contract to operate Brockton's 90,849-m³/d water treatment plant in 1988. In addition, under this contract, we operate the City's other water treatment facility, the 4,921-m³/d Avon water treatment plant, a direct filtration plant using a Microfloc® system, and two raw water pump stations (151,416-m³/d production capacity) and two water towers. These water plants receive surface water from local lakes. Historically high in turbidity and organics, conventional treatment methods—coagulation, flocculation, sedimentation and filtration—ensure high quality drinking water. Currently, the two plants combined are producing approximately 39,746 m³/d of finished water.

City of Brockton, Massachusetts

At the start of this contract, Veolia Water immediately implemented a detailed audit and performance evaluation at the City's water plants to determine what changes were necessary to optimize plant performance. Based on the findings of the plant evaluation, a report was compiled and submitted to the City listing the immediate needs of the facility. We then immediately initiated two critical programs—corrosion control and filter media replacement.

The corrosion control program entailed the addition of zinc polyphosphate to the system to coat the interior of the distribution mains. This procedure successfully inhibited corrosion of the City's system, which eliminated red water complaints (about 1,500 per year).

The filter media project involved replacing the media and spent anthracite coal with granular activated carbon. This corrected the taste and odor problems the City was experiencing with their water. The water treatment plant now operates well within the state's water quality standards. In addition, nearly every component of the treatment process and the entire interior of the plant were completely refurbished, and the 40-acre plant site has been completely cleaned. Veolia Water also conducted a pilot test of ozone treatment for the water plants. This included planning, design and construction management, and O&M for the ozonation pilot plant, studying ozone's effects on raw and pre-filtered water.

Wastewater O&M

Veolia Water operates the City of Brockton's 68,137 m³/d tertiary wastewater treatment plant, which is capable of managing peak flows of 62 m³/d and currently treats about 234,695 m³/d of municipal and industrial sewage. We also have responsibility for two pump stations, sludge incineration operations (including ash disposal) and sludge disposal (for 2,761 dry tons per year), as well as the City's Industrial Pretreatment Program.

This tertiary treatment plant uses biological and physical processes to reduce nitrogen and phosphorous in the final effluent. Sludge is incinerated and then the ash is landfilled. The facility is often subject to excessive flows and has one of the most stringent effluent discharge permit limits in the State. Despite this, we maintain compliance and have received numerous "Excellent" ratings from local environmental agencies.

A \$60-million capital upgrade to the wastewater treatment plant had been engineered and was in progress when a Veolia Water predecessor company assumed O&M responsibility, and they oversaw the process, thereby minimizing downtime during construction of improvements.

Major improvements to the wastewater plant operations under Veolia Water have included

Wastewater Facilities	<ul style="list-style-type: none">• 68,137 m³/d Tertiary Wastewater Treatment Plant• 2 Pump Stations
Water Facilities	<ul style="list-style-type: none">• 90,849-m³/d Surface Water Treatment Plant• 4,921-m³/d Surface Water Treatment Plant• 2 Raw Water Pump Stations (151,416 m³/d)• 2 Ground Storage Tanks (43,153 m³/d)• 1-MGD Water Well (inactive)
Scope of Services	<ul style="list-style-type: none">• Operate/Maintain/Manage• Industrial Pretreatment Program• Septage Receiving• Sludge Incineration with Ash Disposal On-site - 2,761 dry tons per year
Start Date	1988
Population Served	110,038
Client Reference	Mr Brian Creedon Water Systems Manager City of Brockton 39 Montauk Road Brockton, MA 02301 Telephone: 508.941.0265

switching from lime and ferric chloride to polymer for conditioning, which greatly increased the sludge processing capacity of the presses and incinerator while significantly reducing the cost of chemicals and energy. Implementing our computerized process control system resulted in a more efficient and cost-effective operation. Minor design changes allowed the plant to meet summer discharge limit requirements for the first time, further reducing operating costs. Single-stage nitrification saves many thousands of dollars in electrical, chemicals and manpower costs. An odor control system eliminated odors during the warm months.

Through the efforts of Veolia Water and subcontractors, and at savings estimated as high as \$250,000, Veolia Water achieved compliance with new U.S. Environmental Protection Agency (EPA) sewage sludge regulations (503s). Brockton was only the second U.S. facility to receive a 503 incinerator permit.

Veolia Water responded to the City of Brockton's financial crisis by providing the first year of services at no cost, allowing the City to apply its water and wastewater treatment budget to other critical areas. In subsequent years, Veolia Water rebated any unused maintenance and repair funds to the City and shared savings gleaned through efficiencies.

City of Brockton, Massachusetts

The Brockton wastewater facility has one of the most stringent effluent discharge permit limits in the State. During the past three years, our operation has had no major violations. In addition, the facility received numerous *Excellent* ratings from local environmental advocacy group *Save the Bay*.

The Brockton project has twice been awarded the *Group Safety Award* from the Massachusetts Safety Council and has been a finalist for the Public Water System Award issued by the EPA.

The Brockton water facility was the 1998 second-place recipient of Best Large Plant in the State for Water Quality from the Department of Environmental Protection and the Massachusetts Water Works Association.

Municipal Water and Wastewater Treatment Facilities



Veolia Water North America – Northeast, LLC (Veolia Water) has worked with the City of Lynn for nearly 20 years. Today our firm provides comprehensive operation, maintenance and management (O&M) services and design/build services to the City under two separate projects. This includes contract O&M for a 15.3-MGD water treatment plant under a contract that began in 1987, and for a 25.8-MGD wastewater treatment plant, under a contract that began in 1985.

Contract O&M of Raymond F. Reardon Memorial Water Treatment Plant

The companies that are now a part of Veolia Water have operated the Raymond F. Reardon Memorial Water Treatment Plant (pictured above) since the facility was completed in 1989. Our O&M Team was selected by the Lynn Water and Sewer Commission (LWSC) in 1987 to provide startup services for the new plant, and then to provide contract O&M services under succeeding agreements.

The Lynn water treatment plant is designed to treat flows of 15.3 MGD on average, although peak flows of 23 MGD can be provided to the distribution system, if required. On average, the plant produces about 10 MGD of drinking water. The direct filtration treatment facility employs rapid coagulation and multi-media filtration (granular activated carbon, sand and gravel) to remove taste, odor and color-causing constituents from the raw water source. The water system has grown to include multiple surface water sources, including the Saugus and Ipswich rivers and several impounded reservoirs. These ponds act as natural settling basins since it is estimated to take two years for water to travel through them to the low service pump station.

As a part of this contract, Veolia Water provides O&M for the City's 36.8-MGD raw water pump station that feeds this water plant.

Over the past 18 years, Veolia Water has been an active partner with the LWSC in lowering the costs of plant operations and improving the quality of water delivered to the customer. The Lynn water project has achieved 13 years of zero lost-time accidents—an exemplary safety record. The Department of Environmental Protection and the Massachusetts Water Works Association named the facility Best Large Plant in the State for

O&M – Water Treatment Facility

Facilities	<ul style="list-style-type: none">• 15.3-MGD Surface WTP• 3 Water Towers• Raw Water Pump Station (36.8-MGD)• 20-MG Low Service Reservoir (clear well)
Scope of Services	<ul style="list-style-type: none">• Operate/Maintain/Manage• Capital Improvements
Start Date	1987
Population Served	80,000
Client Reference	Mr. Richard Dawe Superintendent of Water Treatment, Lynn Water and Sewer Commission 400 Parkland Avenue, Lynn, MA 01905 Telephone: 781.595.5200

Water Quality in 1998. The project was in second place in 1997 and received an Honorable Mention in 1999.

Contract O&M of the Lynn Regional Wastewater Treatment Facility

In 1985, Veolia Water began a contract with the LWSC for the startup of the new \$65-million wastewater treatment facility. The City's selection was based on two major factors: our outstanding record of success in new plant startups and on our excellent working relationships with local regulatory agencies. The wastewater treatment plant receives flows from four communities: the City of Lynn and the Towns of Saugus, Nahant and Swampscott. The facility is a primary and secondary treatment plant, with a primary design to remove settleable and floatable material and a secondary design to remove biodegradable organic and suspended solids. The plant can handle average daily dry **weather** flows up to 26 million gallons. During **wet weather**, the plant can treat as much as 111 MGD of sewage and storm flow. **The plant uses** activated carbon scrubbers to reduce odors from the influent weir well, grit **chamber** area and sludge thickening complex. **The plant features** a 12.5-dry-ton-per-day fluidized bed incinerator (two units currently not in operation, pending **upgrade/replacement**). Ash is disposed at an on-site landfill.

In 1990, Veolia Water oversaw a \$53.8-million upgrade to secondary treatment at the wastewater plant. Between 1996 and 1998, we oversaw \$10 million in capital improvements at this facility, which included variable frequency drives for influent and effluent pumping, process **water** pumping modifications, and a new indirect **sludge** dryer. The LWSC used **State** Revolving Fund funds for the most recent upgrades.

Veolia Water is currently implementing \$14 million in **capital** improvements to the wastewater facility **under a** three-year program, using a **design/build** approach. These improvements include a larger fluidized-bed incinerator to replace the two existing incinerators; two high solids centrifuges; modernized SCADA controls; screening upgrades; and an odor control **program** that includes **covering** all preliminary and **primary** tankage and treating the odors from these tanks.

O&M – Wastewater Treatment Facility

Facilities	<ul style="list-style-type: none">• 25.8-MGD Pure Oxygen Activated Sludge WWTP• 2 Fluidized Bed Incinerators• 12 Pump Stations
Scope of Services	<ul style="list-style-type: none">• Operate/Maintain/Manage• Sludge Disposal (using an on-site landfill) - 4,938 dry tons per year• Industrial Pretreatment Program• Septage Receiving• Industrial Leachate• Capital Improvements
Start Date	1985
Population Served	123,880

Contract O&M of Municipal Water and Wastewater Facilities



In a contract operations, maintenance and management (O&M) project that began in 1983, Veolia Water North America – Northeast, LLC (Veolia Water) currently operates and manages the City of Leominster, Massachusetts' 9.3-MGD advanced wastewater treatment plant, a 4-MGD water treatment plant located at the Notown Reservoir, and a 1.2-MGD water treatment plant located at the Fallbrook Reservoir. The project has a 20-year record of no lost-time accidents and has won awards at the regional, state and national levels.

A Veolia Water predecessor company began O&M for Leominster's new wastewater facility in October 1983. Our outstanding record of success in new plant startups and O&M transitions contributed to the award of this contract. This operations project saved the City more than \$300,000 a year, savings that were used to fund other important City projects. Our company phased out the existing treatment facility, which was the second activated sludge plant built in the U.S., and our composting and related experience helped the City evaluate alternative sludge-disposal options. A subsequent scope expansion added industrial pretreatment administration to the O&M contract responsibilities.

Thirteen years of successful operation were rewarded in 1996 when the City signed a new and expanded 20-year agreement with Veolia Water. The City's two water treatment plants were added to our scope of responsibility along with \$4.5 million in design and construction for improvements to the water facilities. The City had estimated \$8 million for the cost of these improvements.

One of the oldest public-private partnerships in the country, Leominster is saving some \$300,000 per year in O&M fees and saved \$3.5 million in design-construction costs through its contract with Veolia Water

Veolia Water's current O&M contract with Leominster involves operations and management of facilities including the:

- 9.3-MGD advanced wastewater treatment plant and on-site laboratory, with major process equipment includes a comminutor, rapid-mix and flocculation chambers, settling tanks and aerators, contact tanks, reaerator, sludge storage tanks, vacuum filters and lime slakers.

Water Facilities

- 4-MGD Surface WTP
- 1.2-MGD Surface WTP
- Chlorination Station
- 2 Clear Wells (1 MG total capacity)

Wastewater Facilities

- 9.3-MGD Advanced Secondary Activated Sludge WWTP
- 9 Pump Stations

Scope of Services

- Operate/Maintain/Manage
- Design/Build
- Industrial Pretreatment Program Management
- Security Vulnerability Assessment
- Septage Receiving
- Sludge Hauling—1,590 dtpy

Start Date

1983

Population Served

36,000

Client Reference

Mr. Patrick LaPointe
Director of Public Works
City of Leominster
109 Graham Street
Leominster, MA 01453
Telephone: 978.534.7590

- 4-MGD water treatment plant located at the Notown Reservoir. This is a conventional treatment plant whose processes include pre-chlorination, chemical addition, coagulation, flocculation, two-step sedimentation, activated carbon filtration, pH adjustment and post-disinfection.
- 1.2-MGD water treatment plant located at the Fallbrook Reservoir. This plant treats water

Leominster, Massachusetts

through rapid mix chemical addition, flocculation, upflow pulsating clarification, activated carbon filtration and disinfection.

Together, the two water facilities produce about 3 MGD of finished drinking water. The wastewater plant, capable of handling peak flows of 24 MGD, treats about 6.1 MGD on average.

The Notown water treatment plant underwent a major rehabilitation project under the current contract, including the complete replacement of all mechanical and electrical systems and extensive architectural improvements, while the Fallbrook plant received instrumentation upgrades; all accomplished using a design/build approach. In addition, a fully automated, off-site contact tank facility was built to ensure consistent water quality throughout the distribution system.

In March 2004, Veolia Water marked 20 years of no lost-time accidents at Leominster, and our operations at these water and wastewater facilities have been recognized with a number of awards at the regional, state and national levels, including:

- O&M Excellence Award from U.S. Environmental Protection Agency (EPA), Region I, in 1999 and 1988
- George W. Burke Safety Award from the Water Environment Federation, Region I, in 1998
- O&M Excellence Award (honorable mention) from Massachusetts Water Pollution Control Association in 1989
- O&M Excellence Award from Massachusetts Department of Environmental Quality Engineering in 1987

In 2002, we conducted a Security Vulnerability Assessment and Emergency Response Plan for the City's water treatment facilities to identify areas of water security risk and to recommend mitigation measures. This assessment focused on identifying critical assets used in the production and delivery of clean, safe water to those served by this system. The Security Vulnerability Assessment report provided recommendations to make those assets more secure.

Veolia Water has also conducted hazardous materials and emergency response training for the City's water and wastewater facilities, and provides routine operations and maintenance training.

O&M of Surface Water Treatment Plant



Veolia Water North America - South, LLC (Veolia Water), in a joint venture with a minority-owned business, provides operation, maintenance and management (O&M) services for the 90-MGD Atlanta/Fulton County North Area Water Treatment Plant. This contract began with the startup of this new regional plant in 1990 and includes operations responsibility for a raw water pumping station (240 MGD capability), and dual 54-inch raw water mains. Over the term of this contract, Veolia Water has worked with the facility owner, the Atlanta/Fulton County Water Resources Commission (AFCWRC) to triple the capacity of this plant using a variety of process improvement and capital improvement approaches. This state-of-the-art facility has also been recognized with a number of awards over the past decade, most recently with the 2004 Gold Award for outstanding compliance from the Georgia Water and Pollution Control Association (GWPCA).

Veolia Water, in a 50-50 joint venture with a minority-owned business enterprise, began O&M for the North Area Water Treatment Plant that opened in November 1990. Major process equipment at the plant includes: raw water traveling screens, grit removers, pumps, chemical addition/feed systems, meters, rapid-mix and flocculation chambers, declining rate filters, clear well storage, and finished-water pumps.

Veolia Water has reduced AFCWRC's water costs nearly \$0.1 per thousand gallons over the past 13 years. Indeed, at the end of 2004, accumulated consumer savings in water rates alone totaled more than \$14.9 million!

The project includes O&M responsibility for a 240-MGD raw water pumping station, dual 54-inch raw water mains, a 350-million gallon surface reservoir, and the treatment plant which are owned by the AFCWRC, an agency that provides drinking water to consumers in the North Fulton County area of metropolitan Atlanta. The raw water pumping station, located on the Chattahoochee River, and raw water main connect it to the surface water treatment plant. The potable water distribution mains consist of dual 54-inch mains that serve North Fulton County and a 48-inch main that serves the City of Atlanta.

The state-of-the-art facility attracts many visitors each month, from local school children to water treatment experts from around the world. Veolia Water is responsible for providing site tours and offers internship opportunities for local college students.

As one of the U.S.' largest drinking water treatment plants, the AFC facility captures considerable recognition. This multi-award winning partnership is a model for successful public-private partnerships.

The scope of work for this project has involved all aspects of facility O&M, as well as working with the plant owner, the AFCWRC, for facility expansion and upgrade. Over the past decade of O&M at this water plant, Veolia Water implemented a pilot program to increase the plant's 30-MGD production capability to meet its rated flow capacity of 45 MGD (as rated by the Georgia Environmental Protection Division, GEPCD), with no capital expenditures.

Subsequent efforts further increased the plant's rated capacity to 56 MGD. The plant is designed for an ultimate treatment capacity of 135-MGD. The demand for potable water is so great that the Commission began Phase II earlier than planned to upgrade the plant to 90 MGD. The plant has been running at this new flow capacity since March 1998.

Veolia Water's O&M program has reduced the power, chemical, and overall operations costs for this facility. Cost savings are passed on 100 percent to the AFCWRC.

In addition, Veolia Water has had no change orders to the contract even though the plant capacity expanded to 90 MGD under our current contract.

The performance of Veolia Water, and our joint venture partner, has been recognized with a number of awards over the more than a decade

Atlanta/Fulton County, Georgia

that we have operated and managed this facility, including:

- 2004 – GWPCA Safety Award for the Surface Water Category
- 2003- The facility received its sixth award for the Outstanding Operation of a Water Treatment Plant in the Category of 15 MGD and Above from the GWPCA.
- 2005 & 2001 - The facility received Gold Excellence Awards for Safe Drinking Water Act compliance from both the USEPA, Region IV, and the Georgia Environmental Protection Division (GAEPD).
- 2000 – The facility received Outstanding Operation of a Water Treatment Plant greater than 15 MGD from the GWPCA and an Award of Excellence for Superior Safety Record from the American Water Works Association. Additionally, the project was the Southern region winner of Veolia Water Excellence in Operations (OPEX) Award.
- 1999 – The facility received three honors from the GWPCA: Outstanding Operation of a Water Treatment plant greater than 15 MGD; Public Education Award; Safety Awareness Award.
- 1998 – A staff member received the Operator of the Year for District Three award from the GWPCA.
- 1997 – The facility received two USEPA, Region IV awards: Safe Drinking Water Excellence Award and Water Taste Challenge Award; three GWPCA honors: Safety Awareness Award, Outstanding Operation of a Water Treatment Plant in the Category of 15-MGD and Above, and Operator of the Year for District III; and the GAEPD Excellence Award – Safe Drinking Water Act. It also received the Education Award from Spelman College.
- 1996 – The GWPCA bestowed three awards on the facility: Outstanding Operation of a

This O&M contract has been renewed three times.

In 2002, Veolia Water conducted a Security Vulnerability Assessment for the North Area Water Treatment Plant to identify areas of water security risk and recommend mitigation measures. This assessment focused on identifying critical assets used in the production and delivery of clean, safe water to those served by this system. This assessment was conducted in accordance with the requirements of the EPA and the Sandia National Laboratories Model protocols (which is the accepted standard for the industry).

Facilities	<ul style="list-style-type: none"> • 90-MGD Surface Water Filtration Plant • Raw Water Pump Station (Five pumps/240 MGD capability) • Clear Wells (Four 5.5 million gallon capacity units)
Scope of Services	<ul style="list-style-type: none"> • Operate/Maintain • Reservoir Maintenance (400 million gallon capacity) • Customer Service • Security Vulnerability Assessment
Start Date	1990
Population Served	350,000
Client Reference	Ms. Kathy Crews Interim General Manager A/F County Water Resources Commission 9750 Spruill Road Alpharetta, GA 30202 Telephone: 770.664.7455

Water Treatment Plant in the Category of 15-MGD and Above, Safety Awareness Award and Plant of the Year. The USEPA gave a Certificate of Appreciation for the Drinking Water Taste Challenge Test.

- 1995 – The facility earned the EPA's Best Tasting Water in Georgia award.
- 1994 – The facility received the Drinking Water Taste Challenge Test Award from the USEPA, Region IV.
- 1992 and 1991 – The facility received Outstanding Operation of a Water Treatment Plant in the Category of 15-MGD and Above from the GWPCA.

Township of Maple Shade, New Jersey

Contract O&M of Water and Wastewater Facilities



Veolia Water North America – Central, LLC (Veolia Water) assumed operation of the Maple Shade's water and wastewater facilities in August 1988 while the Township was under consent orders from the New Jersey Department of Environmental Protection as well as the U.S. Environmental Protection Agency (EPA). Within 10 weeks, we brought the wastewater facility into compliance.

Veolia Water provides comprehensive O&M services for Maple Shade's 2.4- and 2-MGD ion exchange water treatment facilities. We also serve the Town's wastewater facilities, which include a 3.4-MGD advanced wastewater treatment facility and six pump stations ranging in capacity from 1,000 gpd to 3,000 gpd. Veolia Water also maintains approximately 55 miles of wastewater collection and water distribution systems.

Veolia Water assumed operation of these facilities in August 1988 while the Township was under consent orders from the New Jersey Department of Environmental Protection as well as the EPA. Within 10 weeks, we brought the wastewater facility into compliance.

Veolia Water has maintained the operation of the Township's aging water treatment plants and distribution system without violations and without loss of service. Water is treated for iron using ion exchange. Chlorination and pH adjustment are also part of the treatment process for disinfection and stabilization.

The Township's water facilities, which date in part from 1925, have undergone continuing rehabilitation to guarantee consistent water quality. This has included the development and implementation of a capital improvement program and the replacement of distribution lines and other equipment that was no longer functioning properly because of age.

In 1990, Maple Shade's advanced extended aeration wastewater plant was brought on-line. Veolia Water operated the facilities through startup and managed the transition to the new facility. On startup, the plant was brought into compliance and has maintained this level of performance. Veolia Water has also developed and implemented an industrial pretreatment program that led to the Township imposing fines on several industries.

Maintenance of all systems is managed through our proprietary computer data management

Facilities	<ul style="list-style-type: none">• 3.4-MGD Envirex Tertiary WWTP• Collection System (53 miles)• 6 Pump Stations• Biosolids Disposal — 438 dtpy• 2.4-MGD Ground WTP• 2-MGD Ground WTP• 5 Wells (1.8 MG)• 1 Elevated Water Tower/1 Standpipe (1 MG)• Distribution System (55 miles)• Meter Replacement Program
Scope of Services	<ul style="list-style-type: none">• Operate/Maintain/Manage• Customer Service• Industrial Pretreatment Program• Security Vulnerability Assessment (Water Facilities)
Start Date	1988
Population Served	19,500
Client Reference	Mr. George Haeuber Township Manager Maple Shade Township Maple and Main Streets Maple Shade, NJ 08052 Telephone: 609.779.9610

system, which provides a proactive response to maintenance needs and record keeping for all maintenance activities. Veolia Water reimburses 100% of the unused repairs and maintenance budget each year. In addition, Veolia Water assists the Township with regulatory matters and has succeeded in defending the Township's position with DEP to raise the phosphate limits on its permit. The American Water Works Association awarded this project its President's Gold Performance Award two consecutive years.

Operations and Management of Public Works



Under a contract that began in 2000, Veolia Water North America –South, LLC (Veolia Water) and the Southern Water and Sewer District of Floyd County, Kentucky, joined forces to expand the District's water system and find solutions to water losses. Veolia Water designed, financed and built 24 miles of new distribution system, adding three pumps and three tanks, to bring 500 additional connections into the water and sewer district. We are also responsible for the contract operations, maintenance and management (O&M) for the water system under a long-term agreement. The water system includes a 2-MGD surface water treatment plant, 285 miles of water lines, 25 pump stations and 24 water storage tanks. Veolia Water also provides meter reading, meter replacement, billing and collection, as well as customer service.

Veolia Water and the Southern Water and Sewer District of Floyd County formed a public-private partnership in May 2000 to expand the District's water system and find solutions to water losses. Under this long-term, 20-year, contract, our firm has designed, financed and built 24 miles of new distribution system, adding three pumps and three tanks, to bring 500 additional connections into the water and sewer district. A second expansion project followed to bring additional customers onto the system. A third segment is underway that will bring the total of additional lines to approximately 100 miles and new connections to some 1,500.

Under this contract, Veolia Water operates, maintains and manages the District's 2-MGD drinking water plant and existing distribution system. This multi-media surface water plant processes water from the Levisa Fork of the Big Sandy River to drinking water standards. The plant treats river water through flash-mixing, chemical addition, coagulation, flocculation, clarification, filtration and disinfection. The distribution system currently consists of 285 miles of lines, 13 pump stations and 24 ground storage tanks.

Unaccounted for water losses, estimated to exceed 50 percent, presented a serious financial and environmental burden for the community. Veolia Water immediately initiated a program of distribution line repair and meter replacement to curtail losses. At the end of the first year of operations, losses had been reduced by 20 percent.

Additionally, Veolia Water has implemented a management program to help integrate the Beaver-Elkorn and Mud Creek water districts into the newly formed Southern Water and Sewer District. All existing District employees were

Facilities	<ul style="list-style-type: none">• 2-MGD Surface Water Treatment Plant• Distribution System (285 miles)• 25 Pump Stations• 24 Water Storage Tanks (2.8 MG)• 0.1-MGD Extended Aeration Wastewater Treatment Plant (startup 3/05)
Scope of Services	<ul style="list-style-type: none">• Operate/Maintain/Manage• Design/Build Services• Project Financing• Purchase 0.3 MGD• Meter Reading• Meter Replacement Program• Billing/Collection• Customer Service• Security Vulnerability Assessment• Capital Expansion Program
Start Date	2000 – Ongoing through 2020
Population Served	18,090
Client Reference	Mr. Brett Davis Deputy County Judge County Courthouse Martin County Prestonsburg, KY Telephone: 606.886.9193

offered employment with Veolia Water at equal wages and better benefits. They are receiving training in new technologies and in our stringent maintenance and safety programs.

Southern Water and Sewer District, Kentucky

Veolia Water developed an innovative plan to reduce the financial impact of the improvements and expansion on the District and the residents.

Many customers along the distribution system were not connected and multiple homes were connected to a single meter. We offered customers the opportunity to connect to the system at a reduced connection fee with a deferred payment plan. Additionally, we provided the District with a first-year concession fee.

District revenues will increase drastically as water losses are further curtailed and the customer base increases. In addition to arranging long-term financing for the District, we immediately began applying for State grants and low-interest loans to help the District expand even further.

Veolia Water rapidly mobilized to address the immediate needs of this client. In the first few weeks of the project, new equipment was provided to ensure extensive repairs and line and facility maintenance were done efficiently and correctly. Work included repairing water line and fire hydrants, locating valves, and modifying the water treatment plant.

In 2005, the District's customer base of 6,030 is nearly the twice the original 3,800 served prior to Veolia Water's O&M.

Operation and Management of Public Works



This public-private partnership, which began in 1987 with a contract for the operations, maintenance and management (O&M) of the City's wastewater system, now involves the operation and management of the public works and utility systems (water, wastewater, natural gas, and sanitation), systems that serve a population of more than 7,000. Over the years, Veolia Water North America - South, LLC (Veolia Water) has worked with the City to achieve cost savings, implement system improvements, and to lower the overall cost of service to the citizens of Pikeville. Over the course of the contract, Veolia Water has also saved the City over \$1 million in capital costs and more than \$200,000 in O&M costs, all while improving utility services to the citizens dramatically. This record of accomplishment has been recognized with a number of awards for this project, including the Governor's Environmental Award for Best Operated Water Treatment Facilities, and recognition as one of the top five small plants in the State of Kentucky, by the American Waterworks Association and the Kentucky/Tennessee Water Environment Association.

Under a contract that has been renewed or extended seven times, Veolia Water provides O&M for the City of Pikeville's utility systems, including water, wastewater, natural gas, and sanitation.

Our first contract with the City was in 1987, and involved providing complete O&M services for the City's existing trickling filter wastewater treatment plant, as well as their 4.8-MGD water treatment facility.

When Veolia Water assumed O&M responsibility, it was recognized that the existing wastewater treatment plant was overloaded, and was suffering from hydraulic and organic loadings (as high as three to four times the original design load) problems.

To address this problem, we assisted the City in building the new 2-MGD extended aeration wastewater plant. Using a DBO approach, Veolia Water worked the City's engineers to design and build this facility under a fixed, not-to-exceed price with a long-term warranty covering the plant and equipment. Veolia Water also assisted the City with the 201 Planning Process and obtained a new loan under the State Revolving Loan Fund. Construction of this new facility began in 1989, and it began treating flows in 1991 with first phase completion; the second and final phase of construction was completed in 1992.

This contract also involved providing startup and management services for a new regional water treatment plant. The City's new 6-MGD surface water plant utilizes processes that include chemical coagulation, flocculation, sedimentation, filtration, disinfection and fluoridation, and the system includes storage and high-service pumps. The raw water pumping for this plant station is

equipped with a combination of in-stream filters and mechanical screens.

Veolia Water's contract was expanded in 1989 to include the operation of the Public Works Department, which encompasses water distribution, customer service, sewer collection, gas distribution, garbage collection and street maintenance.

One of the challenges of the Public Works function is the maintenance of the City's drainage system, which was constructed as part of a large-scale civil engineering project—where the Levisa Fork of the Big Sandy River was relocated out of downtown Pikeville along with a railroad line and road through a cut-through in a mountain. The resulting drainage system involves redirecting streams into a manmade lake, which acts as an equalization basin in heavy rain. A flood gate and pump are used on the creek to pump water out during high water events. The system consists of pipes and culverts of metal, PVC and concrete ranging in diameter from 6 to 48 inches. The pipes and catchbasins are cleaned on a periodic basis. The streams within the City are also cleaned periodically to remove debris and buildup of sediment and rock. In addition, Veolia Water operates a street sweeper daily to help keep coal dust generated from extensive truck traffic from clogging the stormwater system.

Over the course of this contract Veolia Water has handled several disaster flood events. In 1997, as a result of stream flooding, roads were washed out, a mudslide claimed two houses, culverts were blocked, and flood pumps were put into operation. This event occurred while utility O&M resources were severely strained, mobilizing to handle the multiple problems simultaneously. The successful management of these events

City of Pikeville, Kentucky

involved coordinating the assistance from outside contractors and the Kentucky Department of Environmental Services.

In late 1999, our contract was extended for an additional term. We provided \$.5 million to match State and Federal funds for upgrades to the water treatment system. Improvements to the raw water intake station included a new grit cyclone and overall rehabilitation. At the treatment plant we added a fifth multi-media final filter, additional telemetry and converted from chlorine gas to sodium hypochlorite for disinfection. In the distribution system, we added a new 0.5 million gallon ground storage tank for finished water, a new pump station and more fire hydrants. These improvements resulted in a reduction in the City's ISO rating from six to four, which means lower insurance premiums and even more savings.

In 2003, we replaced all the collection, distribution and natural gas lines in historic downtown Pikeville.

The City of Pikeville again demonstrated its confidence in Veolia Water in 2004. Yet another scope expansion turned over responsibility for the City's landscaping and parks department. Veolia Water will provide regular mowing for the parks and cemeteries, landscape park entrances and maintain the ballfields and pool. Further, we are charged with event scheduling for public and sports teams' use of the parks and ballfields.

Veolia Water has also maintained a strong commitment to the Pikeville community over the years, working to improve the overall quality of life by providing donations and assistance to meet community needs. Among the community-related activities that we have sponsored and been a part of are:

- Hillbilly Days - Cooking and providing barbecue for the Annual City of Pikeville's Employee Picnic.
- Youth Sports - Sponsoring and assisting in coaching children's baseball and softball teams.
- Education - Donating to and sponsoring classes at Pikeville College, and teaching special courses on water treatment at Pike County Schools.
- Community Beautification - Working with the Chamber of Commerce and Downtown Association on beautification efforts.
- Community Betterment - Cooking and providing barbecue for the "Hammering in the Hills" Habitat for Humanity event, an event in which former President Jimmy Carter participated, where we provided meals to over 1,500 people.
- Tours and Open Houses - Sponsoring water plant tours, including one for students of

Wastewater Facilities

- 2-MGD Extended Aeration Wastewater Treatment Plant
- Sludge Disposal — 388 dtpy
- 14 Pump Stations
- Collection System (54 miles)

Water Facilities

- 6-MGD Surface WTP
- Raw Water Pump Station (4 MGD)
- 18 Water Towers
- 14 Water Pump Stations
- Distribution System (74 miles)

Scope of Services

- Operate/Maintain/Manage
- Full Public Works
- Customer Service
- Meter Reading and Meter Replacement Program (Water)
- Collection and Distribution System Rehabilitation
- Septage Receiving
- Natural gas distribution
- Sanitation (collection and transfer station)
- Industrial Leachate
- Customer Service
- Parks/Cemetery Maintenance & Landscaping
- Swimming Pool
- Ballfield Scheduling

Start Date 1987 - Ongoing

Population Served 7,000

Client Reference Mr. Donovan Blackburn
City Manager
City of Pikeville
118 College Street
Pikeville, Kentucky 41501
Telephone: 606/437-5100

Mud Creek Elementary School in Floyd County.

The public-private partnership between the City and Veolia Water has also been recognized with a number of awards. In 1999 and 2000, the Pikeville water plant was among the top five small plants in the state, according to the American Waterworks Association and the Kentucky/Tennessee Water Environment Association. In 1989, the City's water facility received the Governor's Environmental Award for Best Operated Water Treatment Facilities, and the Outstanding Community Water Management award from the Kentucky Natural Resources and Environmental Protection Cabinet.

The City of Pikeville is a dynamic community, which has faced many challenges during the course of the Veolia Water's contract, and we have worked with the City to address these challenges by providing a comprehensive

City of Pikeville, Kentucky

range of support services and resources. Veolia Water has saved the City over \$1 million in capital costs and \$200,000 in O&M costs. In another example, Veolia Water implemented a water and gas meter change-out program, which has produced over \$200,000 a year in additional revenue for the City, without raising water rates. In addition, Veolia Water provided \$500,000 in capital to the City to match State and Federal funds for the upgrade of their water plant, and we prepared and received a two percent low-interest loan for the City to purchase new solid waste truck.

Total Asset Management for Municipal Wastewater Facilities



In 1998, in a historic first-ever agreement, the City of Taunton entered into a 20-year public-private partnership with Veolia Water North America - Northeast, LLC (Veolia Water) for the Total Asset Management of its wastewater treatment facility and Pollution Prevention (P2) program. In addition to traditional operation, maintenance and management (O&M) responsibility, Veolia Water assumed complete responsibility for all facility maintenance and repair expenses as well as capital repair or replacement items.

Veolia Water provides Total Asset Management for the City of Taunton's wastewater collection and treatment facilities. This includes operating and managing facilities that include an 8.34-MGD wastewater treatment system, 27 lift stations and biosolids (sludge) disposal for 1,570 dry tons per year. The plant has peak flow capabilities of 22.4 MGD and treats average flows of about 7.2 MGD.

The City's wastewater facility provides advanced treatment of municipal and industrial waste. This treatment facility uses preliminary bar screens and comminutors, an activated sludge treatment process, secondary clarification, with chlorine disinfection and dechlorination. Solids from the treatment process are dewatered, using a centrifuge, and then disposed of by landfilling.

This advanced secondary treatment plant operates with seasonal limits on ammonia, and treats influent flows for metals from local industrial process. Compliance issues, odors and combined sewer overflows netted the City an Administrative Order from the U.S. Environmental Protection Agency (EPA). Veolia Water brought the facility into compliance with the Order while saving the City of Taunton millions of dollars in construction costs. Throughout construction, compliance was exceptionally good and odors were reduced. Veolia Water also assists the City with all permit issues and represents them to environmental regulators.

This contract, a historic and first-ever type of agreement, began in 1998. It is a 20-year Public-Private Partnership with Veolia Water responsible for providing Total Asset Management of the City's wastewater treatment facility and P2 program. A unique aspect of this agreement with the City of Taunton is a P2 community awareness program, where our staff are responsible for developing and presenting an educational program to local businesses, industries and

citizens, educating them as to how their day-to-day activities contribute to the abatement and prevention of pollution in Taunton. The City's Industrial Pretreatment Program (IPP) program calls for extremely low limits for silver, which is difficult for the 11 metals finishers industries to meet, and these educational efforts have aided these industries in striving to meet these requirements.

The City's IPP program involves monitoring and enforcement for 24 Significant Industrial Users (SIUs). This includes conducting site inspections and sampling events, preparing permits and enforcement actions, and submitting an annual report to U.S. Environmental Protection Agency (EPA). Veolia Water also hosts a City-wide annual household hazardous waste collection day, and prepares a quarterly pollution prevention news-letter for distribution to local industries and City officials. We also collaborate with the Taunton River Watershed Alliance on a monthly volunteer river monitoring program for 17 sites along the Taunton River.

"We have effectively cut the cost for... necessary capital improvements by more than half... The City will save more than \$62 million... while providing rate stabilization over the next 20 years."
- Mayor Robert G. Nunes

Under the Total Asset Management approach, Veolia Water has O&M responsibility, as well as complete responsibility for facility maintenance and repair expenses, and capital repair or replacement items.

The City has funded \$11 million in capital improvements using State Revolving Fund money from the Commonwealth of Massachusetts. As this capital improvement work proceeded, the primary challenges of this project included the

Taunton, Massachusetts

normal operation of the facility and maintaining compliance. As various segments of the treatment process were taken off-line for upgrade or rehabilitation (or were interrupted for other work), Veolia Water project staff employed innovative methods for ensuring the continued effective operation of the wastewater facility.

Odors historically had been an issue for the wastewater plant's neighbors, and Veolia Water implemented a stringent odor control plan immediately at startup. A primary component of this plan was the Good Neighbor Advisory Committee. Comprising facility neighbors and project management, the members of this Committee work together to identify sources of odors and other possible nuisances, such as noise or night-time lighting, and reduce or eliminate them as quickly as possible. Through pagers or a special hotline phone number, area residents can notify project management at the first sign of a possible problem. Other steps to address odors have included process modifications and facility housekeeping.

Veolia Water is an active member of the Taunton community. Among the ways we have demonstrated our corporate citizenship are:

- \$1000 annual scholarship to Taunton High School for students who pursue a career in environmental science.
- \$1000 annual donation to the Adopt-A-Park program to clean up and improve City parks.
- \$250 per year to Weir River Festival. The wastewater facility is located in the Weir section of Taunton along the banks of the Taunton River.
- \$500 per year to the Mayor's Worthy Cause, a summer-time parks program for youth.
- Donations to the Taunton Patrolman's Association for Child Identification Program.
- Participate in "Project Intern," a program that places high school students in the workplace for real-life experiences.
- Assist students with science fair projects.
- Judge at the high school science fair.
- Member of the Taunton Public School Science and Technology Community Advisory Council.

Facilities

- 8.4-MGD Advanced Secondary Wastewater Treatment Plant
- 30 Lift Stations

Scope of Services

- Total Asset Management
- Design/Build
- Operate/Maintain/Manage
- Industrial Pretreatment Program
- Septage Receiving
- Industrial Leachate
- Combined Sewer Overflow Management
- Biosolids Disposal - 2,184 dry tons per year

Start Date

1998

Population Served

26,500

Regional Water Facility – Design/Build/Operate Project



On October 11, 2002, Veolia Water North America - South, LLC (Veolia Water), dedicated a new water regional water treatment plant for Tampa Bay Water in Florida, completing a more than two-year design/build project. The project began in April 2000 when, following a year-long selection process among four competitive teams, Tampa Bay Water awarded a \$135-million, 15-year (with a 5-year option) contract to Veolia Water for the design, construction and operation, using the DBO delivery approach, of the agency's regional surface water treatment plant. In 2003, the facility received the prestigious *Infrastructure Award* from the National Council for Public-Private Partnerships (NCPPP).

To implement this project for Tampa Bay Water, Veolia Water brought together a management and O&M team from the resources of our firm, a design/build team from our Engineering & Construction group, including local engineering and construction partners, and process and technical experts from our parent company, Veolia Water, S.A., to support the implementation of the ACTIFLO® treatment process. This new water treatment plant is designed to meet the treatment requirements of Hillsborough County; the Southwest Florida Water Management District; Florida Department of Environmental Protection; as well as those of the U.S. Environmental Protection Agency (EPA).

"Eighty million dollars represents compelling savings," said Jerry Maxwell, the General Manager of Tampa Bay Water. "These savings translate into lower water rates for our residents. Forward-thinking utilities have to consider the benefits of working with a private-sector partner that provides access to the latest technology and operational economies of scale."

Water from the three supply sources is treated to levels that exceed current EPA Safe Drinking Water Act requirements. In addition, the plant was constructed in an environmentally sensitive area and required an innovative process and design approach. Tampa Bay Water, a consortium of six municipalities, is the largest wholesale supplier of water in Florida, providing water to its members who in turn supply it to nearly two million residents of the area. Consumers reside in the cities of New Port Richey, St. Petersburg and Tampa and the counties of Hillsborough, Pasco and Pinellas.

Facilities	<ul style="list-style-type: none">• 66-MGD ACTIFLO Surface Water Treatment Plant• 30-MGD Hydrogen Sulfide Removal Water Facility
Scope of Services	<ul style="list-style-type: none">• Design/Build• Operate/Maintain/Manage
Start Date	<ul style="list-style-type: none">• 2000 – Construction• 2002 – Operation and Maintenance
Population Served	1,500,000

The project began in April 2000 when, following a year-long selection process among four competitive teams, Tampa Bay Water awarded a \$135-million, 15-year (with a 5-year option) contract to Veolia Water for the design, construction and operation, using the DBO delivery approach, of the agency's regional surface water treatment plant.

In August 2000, the plant capacity was increased to 66-MGD, raising the overall contract value to \$144 million.

The project includes \$79 million in capital (construction) costs, and \$56 million in O&M fees, which are expected to generate a 21% savings, or about \$85 million, over the 20-year life of the project.

The public-private partnership is Veolia Water's largest in Florida, and the plant is among the most technologically sophisticated in the world. The project is expected to save the region millions over the 15-year term of our contract, and costs are a significant issue in the Tampa Bay region because the agency was required to cut groundwater

Tampa Bay Water, Florida

pumping at long-producing groundwater wells at the end of 2002, and the plant is the cornerstone in the first phase of its regional Master Water Plan. Because the new sources of water are more expensive to develop and supply than the area's traditional groundwater, the agency – and the region's water customers – are concerned with rising costs.

In 2003, the facility design was recognized with several prestigious awards, including:

- *Infrastructure Award* from the National Council for Public-Private Partnerships.
- *Build America Award* from the Associated General Contractors of America.
- *Grand Prize – Design* from the American Academy of Environmental Engineers.

The NCPPP awards process is arduous and designed to identify the best in public-private partnerships. Tampa Bay Water and [Veolia Water] should be proud to be one of the few selected for this prestigious award.”
- Richard Norment, Executive Director for the NCPPP

Other project awards include the 2003 *Facility Excellence Award* from Region IV, Florida Water & Pollution Control Operators Association and a *Safety Award* from Veolia Water North America for one year no lost-time accidents.

Under a separate contract with this same client, Veolia Water, in 2002, began providing contract O&M of the S.K. Keller Hydrogen Sulfide Treatment Facility. This is a 30-MGD system that addresses the needs of groundwater supplies.

Design/Build/Operate Project for Wastewater Facilities



Seeking facility enhancements and upgrades with no up-front costs, the City of Woonsocket entered into a 20-year agreement with Veolia Water North America - Northeast, LLC (Veolia Water) in 1999. Improvements being implemented under this agreement are plant-wide, touching virtually aspect of the treatment process at the City's 16-MGD secondary activated sludge wastewater treatment plant. Veolia Water assembled a team of multi-disciplined professionals to implement this project, and worked with the City to secure tax-exempt financing.

Veolia Water is currently involved in a long-term, 20-year, design/build/operate (DBO) contract with the City of Woonsocket. This contract began in 1999, when the City, seeking to upgrade its wastewater plant with no up-front costs, selected Veolia Water for this contract.

The first step of the process involved the implementation of a design/build effort focused on wide-ranging improvements for this regional wastewater treatment facility. The improvements being managed and implemented by Veolia Water are plant-wide, touching virtually aspect of the treatment process at the City's 16-MGD secondary activated sludge wastewater plant. Preliminary enhancements included replacing the bar screens with in-channel grinder pumps, revamping the grit removal system, and making improvements to the aeration system to increase oxygen transfer efficiencies and optimize conditions for achieving nitrification/denitrification. New Gravisand® filters are being installed as part of this effort to provide for the polishing of secondary clarifier effluent, and to enhance the quality of treated water being discharged to the Blackstone River. Other planned enhancements and additions for the wastewater plant include the construction of a new chemical feed building for chemically-enhanced primary treatment, and a cover for the gravity thickener to control odors, as well as conversion of the existing aeration tanks, and the addition of a filtrate pump station to transport water to the thickener.

This City's plant is a municipal wastewater facility processing domestic and industrial wastes. Major processes include preliminary screening and grit removal, primary sedimentation, secondary treatment through activated sludge, secondary clarification, chlorine disinfection, dechlorination with sulfur dioxide and year-round nitrogen/phosphorus removal. Sludge is gravity thickened,

then incinerated. Historically, NPDES permit compliance at the plant was poor, and the City was facing significant financial impacts resulting from regulatory consent orders. The City, and the other communities served by this plant, was also concerned about meeting new environmental needs resulting from more stringent discharge requirements being considered by the State of Rhode Island. Veolia Water assumed the risk of meeting these new discharge limits—now and for the next 20 years.

During the first six months of the contract O&M agreement, Veolia Water made great strides toward improving wastewater treatment and achieving total compliance with discharge limits. These accomplishments included:

- Complete rehabilitation of two aeration basins.
- Overhaul of a secondary clarifier, including the drive unit.
- Installation of a new SCADA system.
- Startup of the chlorination/dechlorination equipment.
- Chemical trials and conversion to a different polymer designed to enhance primary treatment through improved settling.

For the DBO project, Veolia Water assembled a team of multi-disciplined professionals, and worked with the City to secure tax-exempt financing for 20 years. In addition, a \$3.9 million concession fee was paid by Veolia Water to the City and three other communities (North Smithfield, Rhode Island; and Bellingham and Blackstone, Massachusetts), to reimburse them for improvements made prior to our O&M agreement.

Woonsocket, Rhode Island

Included in the agreement between the City and Veolia Water was the provision to design and construct the necessary capital improvements for the treatment facility. This effort included preparing and receiving Rhode Island Department of Environmental Management's approval for the Facility Plan Amendment.

This wastewater treatment plant is designed to treat an average daily flow of 16 million gallons and peak flows of 32 million gallons. Daily flows currently average 12 million gallons.

This contract is anticipated to save the City of Woonsocket **\$7 million**. The plant upgrades were completed ahead of schedule and for a fixed fee.

In the first two years of operation, this award-winning project has received five honors for operational excellence by the Narragansett Water and Pollution Control Association:

- 2003: Most Improved Treatment Plant Greater than 5 MGD and Most Efficient Treatment Plant Greater than 5 MGD
- 2002: Most Efficient Treatment Plant Greater than 5 MGD; New England Pump and Valve Award for Most Improved in Water Pollution Control--Large Plant Category; and Maguire Group Award for Outstanding Achievement in Water Pollution Control--Large Plant Category

Facilities	<ul style="list-style-type: none">• 16-MGD Tertiary Wastewater Treatment Plant• 7 Pump Stations• 2 Siphons
Scope of Services	<ul style="list-style-type: none">• Design/Build (Capital Improvements Program)• Operate/Maintain/Manage• Project Financing• Septage Receiving
Start Date	1999 (DB) 2001 (O&M)
Population Served	54,000

Even before all the upgrades were completed, the City's plant, once ranked worst in the State of Rhode Island, received top honors from the Narragansett Water Pollution Control Association, the Maguire Award for Most Improved in Water Pollution Control, and New England Pump and Valve Award for Outstanding Achievements in Water Pollution Control.

Design/Build/Operate Project for Municipal Wastewater Facility



Veolia Water North America - Northeast, LLC (Veolia Water) is leading a team that is responsible for implementing a 30-year lease transaction for the City's entire wastewater treatment system. This project involves financing, design/build of capital improvements, and contract operations, maintenance and management (O&M) of the wastewater system. The City's wastewater system includes a 23-MGD secondary wastewater treatment plant, 22 pump stations and a 190-mile collection system.

In the late 1980s, the City of Cranston was under three separate consent orders and faced serious maintenance and staff problems while preparing to upgrade its 23-MGD secondary wastewater treatment plant to a tertiary wastewater treatment facility.

As a result, in 1989 they selected Veolia Water to provide full-service O&M for this wastewater plant and 22 pump stations. The City's plant is a secondary and tertiary facility processing domestic and industrial wastes, providing for year-round nitrification. Veolia Water also has O&M responsibility for the City's 190-mile collection system, as well as management of the City's Industrial Pretreatment Program and the merchant biosolids incineration and disposal program.

In 1997 the scope of this contract was expanded when Veolia Water, as the leader of a design/build/operate (DBO) team, was selected to implement a 25-year lease transaction for the City's entire wastewater treatment system. This DBO project involves:

- Financing, whereby the City receives an up-front, prepaid lease payment
- Design/build services for making certain capital improvements, including an upgrade to advanced wastewater treatment
- Continued private contract O&M for the wastewater facilities

Recent scope expansions added new capital work and extended the term of this contract to 30 years.

This plant has two incinerators, 10- and 20-dry-ton-per-day multiple hearth furnaces to process over 3,000 dry tons per year of biosolids from the wastewater treatment plant and an

Facilities	<ul style="list-style-type: none">• 23-MGD Activated Sludge WWTP• Collection System (190 miles)• 22 Pump Stations
Scope of Services	<ul style="list-style-type: none">• Operate/Maintain/Manage• Design/Build• Project Financing• Industrial Pretreatment Program• Collection System Rehabilitation• Septage Receiving• Effluent Reuse• Meter Reading• Biosolids Disposal — 3,737 dry tons per year from WWTP and 4,766 from outside sources
Start Date	1989-1997 – Contract O&M 1997-2027 – DBO Contract
Population Served	140,000

additional 3,000 from other sources. Ash from the incinerators is disposed in a landfill.

"... [Veolia Water] was under the spotlight to achieve environmental compliance, but the company has proven itself and continues to be a fantastic water partner, operating and managing these municipal assets safely and responsibly while meeting and often exceeding strict permit requirements."

- Joseph LaPlante, NWPCA President

Cranston, Rhode Island

In recent years, the State of Rhode Island has substantially reduced the amount of wastewater residuals (sludges) that can be disposed in its landfill. To address this need, Veolia Water conducted a pilot study, the result of which showed that the City could generate a revenue stream by accepting and processing biosolids from neighboring communities. To make this merchant type of approach possible, we performed a comprehensive maintenance evaluation. This resulted in a program to improve the mechanical condition of the facility, with particular emphasis given to the incinerators to ensure that they were reliable in terms of processing biosolids from other sources.

Odors have remained a constant challenge at this facility, and Veolia Water has established a Community Odor Committee to aid in identifying times and sources of odors. This proactive alliance has made great strides toward controlling odors from the plant. Planned capital improvements include advanced processes and equipment that will have a significant impact on our ability to mitigate this problem.

As a part of our O&M services approach, Veolia Water has provided integrated personnel training and safety programs. O&M staff at this facility are cross-trained and given opportunities for planned career advancement. Veolia Water has also instituted a unique and innovative incentive bonus plan for the plant's union workers.

This project has been recognized with a number of awards, including:

- Most Improved Large Plant in the State from the State Operators Association.
- Commendation for O&M Excellence from the State Department of Environmental Management.
- Best Large Plant in the State by the State Operators Association.

The Veolia Water O&M approach for the City of Cranston's wastewater facilities has reduced annual operating expenses for the wastewater facilities by more than \$500,000, substantially defraying the costs associated with upgrading the plant.

Design/Build/Operate Project for Regional Wastewater Plant



Veolia Water North America – West, LLC (Veolia Water) provides operation and maintenance (O&M) services for the City of Richmond’s 16-MGD wastewater treatment facility. This is a design/build/operate (DBO) contract, with Veolia Water Systems (VWS) responsible for the design and construction of more than \$7 million in capital improvements to bring the system up to optimum operating performance standards. The 20-year partnership is projected to save this city nestled on San Francisco Bay approximately \$75 million dollars over contract term.

Veolia Water recently concluded a multi-million dollar rehabilitation of the City of Richmond, California’s wastewater treatment plant, upgrading systems plant-wide. Completed in just two years, this project focused on restoring environmental compliance and addressing historic odor problems.

The project began in 2002 when the City of Richmond awarded Veolia Water a \$60 million DBO contract to address the needs of its 16-MGD wastewater treatment plant. This 20-year contract involves long-term O&M of the wastewater facilities and included implementation of more than \$7 million in capital upgrades and improvements for the wastewater treatment plant. The capital improvements program focused on upgrading, modernizing and automating existing systems at the plant.

Capital improvements included a new automated bar screen; rehabilitated primary clarifiers, rebuilt digesters and new domes, and rebuilt and improved aerators using Envirex® systems; new computerized controls throughout the plant; new disinfection system and equipment and controls; and a new chemical containment facility to enhance worker safety and environmental protection and improve facility appearance.

Using the DBO approach, Veolia Water has projected a \$75 million saving for the City over the term of the agreement. These savings will be achieved through economies of scale, core competency focus and innovative technology and work practices.

In addition to the projected savings, the public-private partnership between Richmond and Veolia Water provides other benefits such as

Facilities

- 16-MGD Wastewater Treatment Plant
- Wastewater Collection System (185 miles)
- Stormwater Drainage System (94 miles)
- 13 Wastewater Lift Stations
- 7 Stormwater Lift Station

Scope of Services

- Operate/Maintain/Manage
- Design/Build
- Capital Improvement Program
- Sludge Disposal

Start Date 2002

Population Served 60,000

stabilized operations costs, better operating conditions and guaranteed environmental compliance and employment of facility personnel—all while leaving the facility ownership and rate-setting authority in the hands of the City of Richmond.

In a demonstration of its satisfaction with Veolia Water’s work, in 2004, the City expanded our scope to include a similar effort to the 240-mile collection system—adding \$17 million in capital to our O&M project scope. The scope of work includes a major rehabilitation of the City’s collection systems and lift stations, as well as asset management of the systems when capital improvements are complete.

Design/Build/Operate Project for Municipal Wastewater Facilities



Veolia Water North America -Northeast, LLC (Veolia Water) provided design/build/operate (DBO) services for the replacement of the Town's existing wastewater facilities. This long-term agreement involved the design and construction of a new, 3.1-MGD sequencing-batch reactor (SBR) wastewater treatment plant, which is now being operated by our firm. The O&M project also involves maintaining the collection system and providing sludge disposal. Under this DBO project with Veolia Water, the Town expects to realize over \$15 million in savings over the 20-year term of this agreement.

On June 28, 2002, Veolia Water started-up a new SBR treatment system for the Town of Plymouth, Massachusetts. This 20-year project is implemented using the DBO project approach and has involved the construction of a new 3.1-MGD treatment plant with three SBR tanks (providing a peak treatment capacity of 9 MGD).

Veolia Water is the DBO project manager and long-term operator for this facility, and our team for this project included: Veolia Water's engineering and construction affiliate (Veolia Water Systems), as the design/build engineer, and Veolia Water, S.A., as the project Guarantor.

Veolia Water worked with the Town to finance this project under U.S. Internal Revenue Service 97-13 rules, using funding from the Massachusetts State Revolving Fund for the \$23.3 million in capital costs. Under the terms of this 20-year contract, which began in 1999, the Town owns the plant, and Veolia Water has full risk and responsibility for facilities operations, capital improvements and regulatory compliance for the new plant.

The new wastewater plant is located five miles inland from the original facility, and, under the terms of this contract, Veolia Water bears full risk and responsibility for equipment replacement, capital improvements and regulatory compliance. O&M responsibility includes managing the Town's sludge disposal operations (700 dry tons per year, dtpy), as well as operating and maintaining the wastewater collection and conveyance system.

A key challenge of this DBO project involved keeping the Town's existing wastewater plant in operation during the construction of the new facilities. This plant, now decommissioned, was an aged 1.75-MGD wastewater treatment plant

Facilities

New Facilities:

- 3.1-MGD Sequencing Batch Reactor WWTP
- 8 Wastewater Pump Stations
- Septage Receiving Station
- Collection System (50 miles)

Existing Facilities Operated on an Interim Basis until Decommissioned:

- 1.75-MGD WWTP
- 8 Wastewater Pump Stations
- Collection System (50 miles)
- Sludge Disposal

Scope of Services

- Design/Build
- Asset Management (WWTP)
- Interim O&M (Original Facilities)
- Long-Term O&M (New Facilities and Collection System)
- Biosolids (Sludge) Disposal - 700 dry tons per year

Population Served

16,000

that routinely exceeded the State's discharge limits for Plymouth Harbor.

State legislation enacted in Massachusetts in 1987 limited the discharge of treated wastewater into Plymouth Harbor to no more than 1.75 MGD. The new treatment facility is designed to discharge 1.75 MGD to Plymouth Harbor and the remaining 1.25 MGD to infiltration basins located on the new treatment facility site where water will percolate down to recharge the groundwater table. An equalization tank, located at the chlorine contact chamber, is used to control and limit effluent flows to the allowable permit limits.

Town of Plymouth, Massachusetts

The SBR treatment process involves screening and degritting of wastewater influent, which then flows to the SBR units that operate using a batch process approach, with intermittent filling, aeration, settling and decanting. Effluent from the basins is disinfected in a chlorine contact tank prior to discharge.

Three SBR **units** are included as a part of the plant design. Under normal operating conditions, with all three units in operation, only **one unit** is filled or decanted at any given time. Decanting is intermittent, approximately 6,700 gpm, and the downstream units are sized accordingly.

The design of this new wastewater plant also includes odor control systems and a new pump station at the site of the **existing** wastewater plant.

In an unusual staffing approach, all of the Town's existing wastewater treatment **plant employees** are leased from the Town, thereby allowing staff to **continue in their** municipal pension plan.

OPERATION, MAINTENANCE and MANAGEMENT AGREEMENT

between

THE CITY OF NASHUA, NEW HAMPSHIRE

and

VEOLIA WATER NORTH AMERICA - NORTHEAST, LLC

dated

January __, 2006

THIS OPERATIONS, MAINTENANCE AND MANAGEMENT AGREEMENT
("Agreement") is entered into this _____ day of December 2005, by and between

City of Nashua, New Hampshire, with its mailing address at
_____ (hereinafter "OWNER" or "City")

and

Veolia Water North America - Northeast, LLC, with its principal
address at 200 Cordwainer Drive, Suite 202, Norwell, Massachusetts,
02061 (hereinafter "VWNA" or "Company").

WHEREAS Nashua has initiated proceedings before the New Hampshire Public Utilities Commission pursuant to NH RSA 38 to acquire by eminent domain the assets of Pennichuck Water Works, Inc. ("PWW") related to the treatment and distribution of water (hereafter, the "Managed Assets");

WHEREAS Nashua, in anticipation of successfully acquiring the Assets, issued a request for proposals on March 25, 2005 to provide for the operation and maintenance of a water utility;

WHEREAS, on July 14, 2005, the Company submitted a proposal in response to the request for proposals;

WHEREAS, based on evaluation of the proposals, the OWNER on September 7, 2005 selected the proposal submitted by the COMPANY, as revised, as the most advantageous proposal received in response to the request for proposals;

WHEREAS Nashua and the Company desire to enter into a comprehensive agreement for the operation, maintenance and management of the Managed Assets and such other services as described for fully herein;

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth, OWNER and VWNA agree as follows:

ARTICLE I

GENERAL PROVISIONS

1.1 STRUCTURE OF THIS AGREEMENT

A. Notice to Proceed Required. The Company shall not commence, and except as specifically provided by this Agreement, Nashua shall not incur any liability for, the Services set forth in this Agreement until the Company receives a duly authorized written Notice to Proceed issued by Nashua.

B. Intent of Notice to Proceed. It is the intent of the parties that the Service Commencement Date shall be at least 120 days after the Notice to Proceed. The period of time between the Notice to Proceed and the Service Commencement Date is intended to allow the Company an initial period of due diligence and to initiate transitional services, including but not limited to, hiring of employees.

C. Conditions Precedent. The following events shall be conditions precedent to the issuance of a Notice to Proceed:

1. Issuance of a final order of the NHPUC approving Nashua's Petition for Valuation pursuant to RSA 38 and the exhaustion of any and all appeals related to such a final order of the NHPUC;
2. Ratification by Nashua and issuance of bonds pursuant to RSA 38:13.

The parties agree that Nashua may waive the condition precedent of a final order of the NHPUC approving Nashua's Petition if, for example, Nashua has a good faith belief that it will succeed on the merits, or where appeals from the NHPUC's decision are limited to valuation and not the public interest. Nothing in this agreement shall limit in any way Nashua's discretion to waive any conditions precedent to this Agreement.

D. Satisfaction of Conditions Precedent. The OWNER and the COMPANY shall each exercise good faith and due diligence and use all reasonable efforts in taking such actions as may reasonably be under their control in order to satisfy the conditions precedent set forth above as soon as practicable.

E. Oversight Contractor. The parties acknowledge that Nashua shall designate an oversight contractor and such other consultants or persons to manage Nashua's responsibilities, rights or undertakings. Nashua shall provide written notice to the Company in accordance with this Agreement of any such oversight contractor(s) and the scope of their oversight responsibilities.

F. Audit and Inspection by Owner or Oversight Contractor(s). VWNA shall provide Owner and its duly authorized agents, representatives or Oversight Contractors with:

1. Access to inspect the Managed Assets at any time, with or without prior notice, to ensure all required work is being performed in compliance with this Agreement and applicable laws, rules and regulations. Owner shall notify the Company upon arrival in performing such inspections and shall comply with the Company's safety policies and procedures.
2. During normal business hours, access to review and inspect all records, information and management systems or any other documents related to the Company's OM&M undertakings pursuant to this Agreement. Upon request, the Company shall provide the Owner with copies of all such records, information and any other documents. The Company may charge Owner a reasonable fee for the costs related to copying, but not inspecting, such records, information and any other documents requested by the Owner. This provision does not entitle Owner or its designees access to review, inspect or copy confidential or proprietary information of the Company.

G. Designation of Services Provided by VWNA. It is the intent of the parties that VWNA's services under this Agreement shall fall into one of the following categories: Services Provided for the Annual Fee; RRR&M services; Transition Services; Capital Improvement Services and Supplemental Services. These services are generally described in their respective Appendices and as follows:

1. **Services Provided for the Annual Fee** include the OM&M Services set forth in Appendix D. OM&M Services correspond generally to those operations and maintenance items described in Appendix D having a useful life of less than one year. Services Provided for the Annual Fee also include such other services such as the preparation of plans, budgets and other documents as set forth in this Agreement.
2. **RRRM Services** include the RRRM Services set forth in Appendix H. RRRM Services correspond generally to those maintenance items described in Appendix H having a useful life of greater than one year. RRRM Services also include such other services as set forth in this Agreement. Unless otherwise specified within this Agreement, RRRM Services provided by VWNA are not included in the Annual Fee and shall be paid by the OWNER in accordance with this Agreement.
3. **Transition Services** include those services provided by VWNA as set forth in Appendix Q and the provisions of this Agreement. In consideration for VWNA's provision of the Transition Services, OWNER shall pay VWNA the Transition Payment specified in this Agreement.

4. **Capital Improvement Services** include those services set forth in Appendix G related to the completion of capital improvements as a result of a capital improvements plan approved by the OWNER, except as otherwise provided by this Agreement. It is the intent of the parties that the OWNER in its sole discretion, will negotiate for completion of capital improvement projects for compensation with VVNA or with third-party contractors.
5. **Supplemental Services** include the Supplemental Services set forth in Appendix E and the provisions of this Agreement. Unless otherwise specified within this Agreement, Supplemental Services are not included in the Annual Fee and shall be paid by the OWNER in accordance with this Agreement.

ARTICLE II

DEFINITIONS AND ADMINISTRATIVE PROVISIONS

2.1 DEFINITIONS AND ADMINISTRATIVE PROVISIONS

- A. **Definitions.** Definitions of words and phrases used in this Agreement and the attachments are contained in Appendix A.
- B. **Ownership of Managed Assets.** All Managed Assets including all land, permits, buildings, facilities, easements, licenses, rights-of-way, equipment and vehicles presently or hereinafter acquired or owned by OWNER shall remain the exclusive property of OWNER unless specifically provided for otherwise in this Agreement.
- C. **Choice of Law.** This Agreement shall be governed by and interpreted in accordance with the laws of the State of New Hampshire. The parties agree that any disputes related to this Agreement shall be brought solely in state or Federal courts in the State of New Hampshire or administrative agencies established by or for the State of New Hampshire.
- D. **Assignment.** This Agreement shall be binding upon the successors and assigns of each of the parties, but neither party shall assign this Agreement without the prior written consent of the other party. Consent shall not be unreasonably withheld.
- E. **Assignment to the Merrimack Valley Regional Water District.** Notwithstanding anything to the contrary, upon and subject to approval by the NHPUC, if such approval is required, Owner is expressly permitted to assign this Agreement to the Merrimack Valley Regional Water District but only if such assignment is legal and does not invalidate or otherwise reduce the term of this Agreement.

- F. Notice.** All notices required by this Agreement shall be in writing and transmitted to the party's address stated above. A copy of any notice given to OWNER or to VWNA shall also be provided to the Designated Representative of the party to receive such notice. All notices shall be deemed given when delivered, if delivered personally or by courier mail service, i.e., Federal Express or Airborne Express, delivered after such notice has been deposited in the United States mail postage prepaid, if mailed certified or registered U.S. mail, return receipt requested; or received by the party for which notice is intended if given in any other manner.
- G. Entire Agreement.** This Agreement, including the Appendices, represents the entire Agreement between the parties. This Agreement may be modified only by written agreement signed by both parties. Wherever used, the terms "VWNA" and "OWNER" shall include the duly authorized officers, agents, directors, elected or appointed officials and employees and, where appropriate, or subcontractors acting on behalf of VWNA or the OWNER.
- H. Severability.** If any term, provision, covenant or condition of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.
- I. Independent Contractor.** It is understood that the relationship of VWNA to the OWNER is that of independent contractor. The services provided under this Agreement are of a professional nature and shall be performed in accordance with good and accepted industry practices for contract operators similarly situated.
- J. Attorneys Fees.** Except as provided in Appendix K, if any litigation is necessary to enforce the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees which are directly attributed to such litigation in addition to any other relief to which it may be entitled.
- K. No Third-Party Beneficiaries.** Nothing in this Agreement shall be construed to create in any third party or in favor of any third party any right(s), license(s), power(s) or privilege(s).
- L. Designated Representative.** Prior to the commencement of work under this Agreement, each party shall designate in writing an employee or other representative of the designating party who shall have the responsibility to approve changes in the Scope of Work and compensation therefore, execute written Change Orders reflecting such changes, render decisions promptly, and furnish information expeditiously to the other party when necessary. The Owner's designated representative will also serve as the point of contact for the coordination of VWNA's activities with other OWNER organizations.

- M. Interpretation.** This Agreement shall be interpreted in accordance with its plain meaning and not strictly for or against either party hereto.
- N. Company Use of Managed Assets.** Except upon written approval from Nashua, the Company shall not use or permit the use of the Managed Assets for any purpose other than those uses related to this Agreement.

ARTICLE III

GENERAL PROVISIONS CONCERNING SERVICE

3.1 GENERAL PROVISIONS CONCERNING SERVICE

- A. VWNA shall provide a sufficient number of certified and qualified personnel, including management, administrative, operational, technical, laboratory and clerical, who meet relevant State of New Hampshire requirements and certifications regarding water treatment operations, maintenance and management and are capable and demonstrate experience necessary to operate the Project covered by this Agreement. VWNA will provide a Project Manager whose services will be personal to this Agreement and whose replacement will be subject to OWNER's consent, such consent not to be unreasonably withheld.
- B. VWNA shall provide ongoing training and education for appropriate personnel in all necessary areas of modern water process control, maintenance, safety, and supervisory skills.
- C. VWNA shall utilize computerized programs for maintenance, process control, cost accounting, customer service, field operations and laboratory Quality Assurance/Quality Control.
- D. VWNA shall operate, maintain and/or monitor the Project and the Managed Assets on a 24-hour per day, seven day per week schedule, as described in Articles 3, 4, 5, 6 and 7 below.
- E. VWNA will implement and maintain an employee safety program in compliance with applicable laws, rules and regulations, including but not limited to RSA 281-A:64. A copy of the written safety program shall be submitted to the OWNER. VWNA shall conduct an annual review and update of the written safety program and provide a copy to the OWNER.
- F. As required by law or permit, VWNA will prepare necessary reports and submit them to OWNER for signature and transmittal to appropriate authorities.

- G. VWNA will provide laboratory testing and sampling required by applicable federal, state or local rules and regulations, statutes or ordinances, permit or license requirements.
- F. VWNA shall provide OWNER with a full accounting of all billings made to the Owner, by VWNA, at intervals and in sufficient detail as may be determined by OWNER, and agreed to by VWNA, and assist OWNER in the preparation of annual operating budgets.
- G. VWNA shall maintain all of the records generated by VWNA that are related to the Project. VWNA shall maintain the originals of all such records in the physical custody of VWNA. Where records are maintained electronically, records shall be backed up and maintained to ensure the integrity of Project documentation.
- H. VWNA shall incur all costs related to the provision of the Services, except those costs incurred by the OWNER, as specified in Article 8.

ARTICLE IV

TRANSITION SERVICES

4.1. SCOPE OF TRANSITION SERVICES

VWNA shall provide the Transition Services set forth in Appendix Q and in accordance with this Agreement, Applicable Laws and Prudent Industry Practice.

4.2. PAYMENT FOR TRANSITION SERVICES.

OWNER shall be responsible for making Transition Payments as set forth in this Agreement.

ARTICLE 5

OPERATION, MAINTENANCE AND MANAGEMENT OF THE MANAGED ASSETS

5.1. STANDARDS FOR OM&M OF THE MANAGED ASSETS

The Company shall provide uninterrupted operation, maintenance and management ("OM&M") of the Managed Assets in accordance with:

1. The provisions of this Agreement, including the Appendices, and, where applicable, plans generated in conformity with this Agreement, including the Appendices;
2. All Applicable State, Federal or local laws and regulations, including all applicable permits, authorizations, licenses or other requirements;
3. All applicable State and Federal water quality standards. Such water quality standards include but are not limited to the primary and secondary water quality standards established by the New Hampshire Department of Environmental Services (the "NHDES") and the United States Environmental Protection Agency (USEPA).
4. Prudent Industry Practice; and
5. Where appropriate and consistent with the above, manufacturer's instructions and warranty requirements related to the Managed Assets.

5.2 GENERAL PROVISIONS CONCERNING OM&M

- A. Commencement Date.** OM&M of the Managed Assets shall begin on the Service Commencement Date.
- B. Standards Applicable to Managed Assets.** In conformance with Appendix D, VWNA will operate and maintain the Managed Assets, as more particularly identified in Appendix B, including the water distribution system and appurtenances. VWNA's responsibility for OM&M of the water distribution system shall end at the customer's property line. However, VWNA shall provide OM&M Services for certain limited Managed Assets such as meters that are owned by the OWNER and normally located on the customer's property. VWNA shall not be responsible for providing connections to the utility plant for new customers including, but not limited to, service taps, meters, service lines or related appurtenances unless OWNER directs, and VWNA agrees, to provide such services as Supplemental Services or as provided for in Appendix H (RRRM).

C. Raw Water Specifications.

1. Within the capacity and capabilities of the treatment plant, and subject to the provision of Acceptable Raw Water, VWNA shall manage and operate the treatment plant so that finished water produced from the plant meets the primary and secondary finished water standards as defined by the New Hampshire Department of Environmental Services as of the Service Commencement Date. When Raw Water does not comply with the Raw Water Specifications of Appendix C, VWNA shall manage and operate the treatment plant on a reasonable efforts basis.
2. Within the capacity and capabilities of the satellite systems, and subject to the provision of Acceptable Raw Water, VWNA shall manage and operate the satellite systems so that finished water produced from the satellite systems meets the primary and secondary finished water standards as defined by the New Hampshire Department of Environmental Services as of the Service Commencement Date. When Raw Water does not comply with the Raw Water specifications of Appendix C, VWNA shall manage and operate the satellite systems on a reasonable efforts basis.

ARTICLE 6

RENEWAL, REPAIR AND REPLACEMENT MAINTENANCE

6.1 STANDARDS FOR RENEWAL, REPAIR AND REPLACEMENT MAINTENANCE.

VWNA shall provide Renewal, Repair and Replacement Maintenance (RRRM) Services set forth in Appendix H in accordance with:

- A. The provisions of this Agreement and, where applicable, plans generated in conformity with this Agreement;
- B. All applicable State, Federal or local laws and regulations, including all applicable permits, authorizations, licenses or other requirements;
- C. Prudent Industry Practice; and
- D. Where appropriate and consistent with the above, manufacturer's instructions and warranty requirements related to the Managed Assets.

6.2 PAYMENT FOR RRRM SERVICES.

- A. Monthly Statement.** VWNA shall provide OWNER with a monthly invoice statement of RRRM services during the prior month. The monthly statement shall include a detailed itemization of the RR&RM services showing the breakdown of fixed and variable costs.
- B. Payment for RR&RM Services.** Owner shall pay VWNA's monthly invoices in accordance with Section 10.3 and the provisions of this Agreement.
- C. Price for RR&RM Services.** In consideration for VWNA's provision of RRRM Services, Owner shall pay VWNA as set forth in this Agreement, including Section 10.3 and Appendix H. Except as otherwise specified by this Agreement including Section 6.3 or Appendix H, RRRM Services are not included in the Annual Fee.
- D. Dispute Resolution.** Any disputes concerning RR&RM services shall be referred to dispute resolution in accordance with Appendix K of this Agreement. In the event that the parties are unable to resolve any such disputes in accordance with procedures under Appendix K, such disputes shall be resolved pursuant to the terms of this Agreement as provided by applicable law.

6.3 RRRM SERVICES INCLUDED IN THE ANNUAL FEE

The following RRRM Services shall be provided by VWNA as part of the Annual Fee:

- A. Recording RRRM Services in the CMMS.** VWNA shall record in the CMMS system the performance of RRRM Services by work order or job order. The work order system shall show: the nature of each addition or retirement of Managed Assets, the billed price breakdown calculated in accordance with Prudent Industry Practice and capabilities of the CMMS system. Work orders covering jobs of short duration may be cleared monthly.
- B. Preparation of RRRM Budgets for OWNER Approval.** VWNA shall prepare periodic RRRM budgets for the OWNER as set forth in Appendix H.
- C. Documentation of RRRM Services.** VWNA shall provide the OWNER with documentation that Planned Maintenance is being performed on OWNER's owned equipment. Such a maintenance program must include documentation of all Planned Maintenance and a spare parts inventory.
- D. Maintaining Warranties.** VWNA shall be responsible for maintaining all manufacturers' warranties on new equipment purchased by OWNER and assist OWNER in enforcing existing equipment warranties and guarantees.

6.4 ADMINISTRATION

- A. VWNA shall notify the OWNER prior to commencing any RRRM Services VWNA reasonably believes will exceed Ten Thousand (10,000) Dollars. VWNA will not commence RRRM Services costing in excess of Ten Thousand (10,000) dollars without prior written approval from the OWNER.
- B. Notwithstanding anything to the contrary, in any emergency affecting the safety of persons or property, VWNA may act without prior written approval, amendment or change order, at VWNA's discretion, to prevent threatened damage, injury or loss. VWNA shall be compensated by OWNER for any such emergency work notwithstanding the lack of prior written approval.

ARTICLE VII

FIELD OPERATIONS

7. VWNA's Scope of Services – Field Operations

- 7.1 This Article shall apply to VWNA's field operations including distribution and customer service functions.
- 7.2 On a periodic basis, as set forth in Table 7.2 below, VWNA shall read the water meter for each customer of OWNER connected to the water system (hereinafter "Customer") and timely convey that information to OWNER. VWNA shall conduct all repeat meter reads and special readings for closing and opening of accounts.

Table 7.2

Meter Size/Description	Frequency of Meter Read
Meters larger than $\frac{3}{4}$ inch	Monthly
Meters equal or less than $\frac{3}{4}$ inch: commercial accounts	Monthly
Meters equal or less than $\frac{3}{4}$ inch: residential accounts where meters have been converted to radio readers	Monthly
Meters equal or less than $\frac{3}{4}$ inch: residential accounts where meters have not been converted to radio readers: residential accounts	Quarterly

- 7.3 VWNA shall respond to requests for service by OWNER such as turning on service for water, rechecking meter readings (up to once per customer per billing cycle) and physically disconnecting water service. OWNER shall make such requests by a work order system and will endeavor to ensure adequate accurate information is provided with request.

- 7.4 VWNA shall implement and maintain a backflow and cross-connection inspection program in accordance with the New Hampshire Environmental Services requirements.
- 7.5 VWNA shall provide a 24-hour access telephone number for the purpose of receiving customers inquires and emergency service calls related to the Project. VWNA shall forward all calls to the OWNER, which are not applicable to the Scope of Services outlined in this Agreement.

ARTICLE VIII

OWNER'S OBLIGATIONS

- 8.1 OWNER shall pay any amounts owed to VWNA by OWNER pursuant to this Agreement.
- 8.2 OWNER shall grant to VWNA the sole, exclusive and irrevocable right and discretion to perform the Services and to operate the Managed Assets.
- 8.3 OWNER shall grant VWNA access to the Managed Assets and cause the predecessor operator to relinquish and transfer possession of and operating responsibility for the System to the Company as of the Commencement Date, remove all of the predecessor operator's personal property from the Managed Assets and shall provide for an orderly transfer of responsibility to the Company.
- 8.4 OWNER will provide Acceptable Raw Water.
- 8.5 The OWNER shall fund all necessary Unplanned Maintenance. Any fines, loss, damage, or injury resulting from OWNER's failure to authorize Unplanned Maintenance costing in excess of Ten Thousand (10,000) Dollars or City Capital Projects when reasonably requested by VWNA shall be the sole responsibility of OWNER.
- 8.6 The OWNER shall keep in force all warranties, guarantees, easements and licenses that have been granted to OWNER and are not transferred to VWNA under this Agreement.
- 8.7 OWNER shall obtain, maintain and renew all Project related authorizations for which OWNER is or may become responsible, including, but not limited to Managed Assets, operational and building permits. VWNA shall identify and prepare applications for such Project related authorizations and OWNER and

VWNA shall assist each other to obtain, maintain or renew all such Project related authorizations for which OWNER or VWNA is or may become responsible.

- 8.8 The OWNER shall pay all sales, excise, *ad valorem*, property, franchise, occupational and disposal taxes, or other taxes associated with the Project other than taxes imposed upon VWNA's net income and/or payroll taxes for VWNA employees. In the event VWNA is required to pay any sales tax or use taxes on the value of the services provided by VWNA hereunder or the services provided by any subcontractor of VWNA, such payments shall be reimbursed by the OWNER unless the OWNER furnishes a valid and properly executed exemption certificate relieving the OWNER and VWNA of the obligation for such taxes. In the event the OWNER furnishes an exemption certificate which is invalid or not applicable to services by VWNA, the OWNER shall indemnify VWNA for any taxes, interest, penalties, and increment costs, expenses or fees which it may incur as a result of VWNA's reliance on such certificate.
- 8.9 The OWNER may provide VWNA, within a reasonable time after written request and on an "as available" basis, with the temporary use of OWNER's heavy equipment that is available so that VWNA may discharge its obligations under this Agreement in the most cost-effective manner. If the equipment is operated by VWNA, the operators must be approved by the OWNER and shall be subject to all of the training, licensing and certification requirements of the applicable OWNER's employees. All of VWNA's subcontractors are subject to the same requirements and criteria, in connection with this provision, as VWNA. If after written request OWNER declines to provide VWNA with temporary use of OWNER's heavy equipment within a reasonable time for performance RRRM or Capital Improvement Services then VWNA may include the costs related to the use of such equipment necessary for the performance of its RRRM or Capital Improvement Services in accordance with this Agreement.
- 8.10 OWNER shall provide all registrations and licenses for OWNER's vehicles used in connection with the Project.
- 8.11 OWNER shall provide VWNA exclusive use of all vehicles and equipment required to execute the Project. VWNA shall submit to OWNER copies of the driver records and licenses, including CDL's of all employees who will operate such vehicles and equipment. VWNA shall provide evidence of compliance with all Federal CDL requirements and a copy of its CDL testing program. Any subcontractor whose employees use such vehicles and equipment shall be subject to the same requirements, in connection with this provision, as VWNA.
- 8.12 OWNER shall provide the Project with appropriate security personnel and/or devices to protect against any losses resulting from the theft, damage, or

unauthorized use of property owned by OWNER and shall accept liability for such losses except to the extent such losses are directly caused by the negligent acts or omissions of VWNA.

- 8.13 OWNER shall provide to VWNA all information, documents and records relating or connected with the Managed Assets or the Services that OWNER has within its care, custody or control and which VWNA may require in order to meet its obligations under this Agreement.
- 8.14 OWNER shall provide and secure for the benefit of VWNA all rights of way and easements relating to the Managed Assets and access to the Managed Assets so that VWNA may perform its obligations under this Agreement.
- 8.15 OWNER shall be responsible for all non-rolling stock, Project-related fuel costs, including electricity, natural gas and fuel oil.
- 8.16 OWNER shall supply computers, related hardware, and computerized programs for maintenance, process control, cost accounting, customer services, field operations and laboratory Quality Assurance/Quality Control. OWNER will ensure that the computerized programs it provides are integrated with one another.
- 8.17 OWNER shall provide all administrative support required for handling customer inquiries, bill generation, payment processing and collection. OWNER shall also maintain the accounting systems and deposit, and developer and CIAC accounting, to track billing, payment and collection activities.
- 8.18 OWNER shall provide a contact center for purposes of receiving Customer inquiries, complaints and emergency service calls related to the Project. The OWNER shall forward work requests from these calls to VWNA as applicable to the services provided under the terms of the Contract.

ARTICLE IX

COMPENSATION

9.1 SERVICES PROVIDED FOR AN ANNUAL FEE

- A. **Scope of Services Provided for an Annual Fee.** VWNA shall provide the following services in consideration for the Annual Fee:
 - 1. Operation, Maintenance and Management of the Managed Assets as set forth in Appendix D;

2. Preparation of the Capital Improvements Plans set forth in Appendix G, but not the cost of such Capital Improvements;
3. Preparation and maintenance of the Renewal, Repair and Replacement Maintenance Plan and Budget as set forth in Appendix H, but not the cost of such Renewal, Repair and Replacement Maintenance; and
4. Other Services included in the Annual Fee as provided by this Agreement.

B. Calculation of the Annual Fee.

1. The Annual Fee shall be \$4,996,203. The Annual Fee will be tolled until the Service Commencement Date. The Annual Fee for the first year immediately following the Service Commencement Date will be reduced by deducting \$65 per customer from the Annual Fee for total year round customers less than 24,570 and more than 21,383. In no event will the Annual Fee for the first year be reduced by more than \$207,155. The reduction described herein is a one-time adjustment. Further, changes to the Annual Fee for any changes in the customer base subsequent to the first year following the Service Commencement Date will be governed by Section 11.1.
2. The Annual Fee shall be negotiated each year at least four (4) months prior to the anniversary of this Agreement's effective date. Should OWNER and VWNA fail to agree, the Annual Fee will be adjusted by multiplying the existing Annual Fee by the escalation formula below:

$$\text{Escalation Factor} = 1.0 \times \frac{\text{CPI}_N}{\text{CPI}_E}$$

Where:

CPI: General Inflation Factor - Consumer Price Index - All Urban Consumers Boston, Brockton, Nashua series ID # CUURA03SAO

Escalation Factor shall be calculated every year, on the 1st January of year N, when no agreement on Annual Fee has been reached between OWNER and VWNA.

E shall be the last year where the Annual Fee has been agreed between VWNA and OWNER.

CPI_N Last value of General Inflation Factor available on 1st January of year N

CPI_E Last value of General Inflation Factor available on 1st January of year E

Unless otherwise agreed by the parties at least four (4) months prior to the anniversary of this Agreement's effective date, Labor Rates set forth in Appendices E and H will be adjusted under the formula set forth above except that the parties shall substitute the "Employment Cost Index, Private Industry – Electric, Gas, and Sanitary Services series ID-ECU12542A" for CPI.

9.2 TRANSITION SERVICES AND PAYMENT

The Transition Payment shall be \$1,380,000. The Transition Payment shall be made in six quarterly payments of \$230,000 beginning on the Service Commencement Date and every three months thereafter.

9.3 SERVICE COMMENCEMENT DATE ADJUSTMENT

- A. The parties acknowledge that the interval between the Proposal Date and Service Commencement Date is outside the control of VWNA and could be relatively lengthy.
- B. The amounts set forth in Sections 9.1 and 9.2 and are stated relative to the Proposal Date and are subject to adjustment as forth in Section 9.1 and/or the respective Appendix.

9.4 DISASTER RELATED REIMBURSEABLE COSTS

The services being provided under this Agreement are based on reasonably expected overtime for normal breakdowns or services required after hours. Any additional expenses including straight or over-time wages caused by severe weather, a disaster or unplanned event that may be reasonably recovered through billing any third party including the State or Federal Government FEMA funds will be billed to the OWNER for reimbursement.

ARTICLE X

PAYMENT OF COMPENSATION

- 10.1 One-twelfth (1/12) of the Annual Fee for the current year shall be due and payable on the first of the month for each month that services are provided.
- 10.2 All other compensation to VWNA is due upon receipt of VWNA's invoice and payable within twenty (20) days.
- 10.3 OWNER shall pay interest at an annual rate equal to the prime rate published by the *Wall Street Journal*, as of the date payment is due, on payments not paid and received within twenty (20) calendar days of the due date, such interest being calculated from the due date of the payment. In the event the charges hereunder

might exceed any limitation provided by law, such charges shall be reduced to the highest rate or amount within such limitation.

ARTICLE XI

SCOPE CHANGES

- 11.1 A Change in Scope of services shall occur when and as VWNA's costs of providing services under this Agreement change as a result of:
- 11.1.1 A material difference between the Managed Assets and related conditions on the Service Commencement Date and the assumptions set forth in Appendix I;
 - 11.1.2 A material change in Managed Asset operations, maintenance, personnel qualifications or staffing or other costs which are the result of an Uncontrollable Circumstance;
 - 11.1.3 Increases or decreases of more than five hundred (500) customers, reported in the 2004 PUC report to be 24,570 year-round customers;
 - 11.1.4 Raw Water that does not meet the requirements set forth in Appendix C;
 - 11.1.5 Capital Project additions, deletions, replacements or modifications that impact the cost of OM&M of the Managed Assets including labor, chemicals, materials and equipment.
 - 11.1.6 OWNER's failure to authorize when reasonably and timely requested by VWNA, any of the following services to the extent necessary for the OM&M of the Managed Assets in accordance with this Agreement, Applicable Law, or Prudent Industry Practice:
 - a. RRRP expenditures in excess of Ten-Thousand (10,000) Dollars;
 - b. Capital Improvement Projects; or
 - c. Supplemental Services.
 - 11.1.7 Increases or decreases of more than five percent (5%) in total finished water produced, from the annual average of 5,146 MG per year. The annual average MG is to be calculated yearly, based on a two year annual calendar year average;
 - 11.1.8 Increases or decreases in rates or other related charges (including taxes) imposed upon VWNA by a taxing authority – excluding taxes based on VWNA's net income;

- 11.1.9 OWNER's request of VVNA and VVNA's consent to provide additional services, including but not limited to, Capital Projects and Engineering Services, extension of the Services to assets not listed in Schedule B or extension of the services to new areas not included in the Services Area as of the Contract Date; and/or
- 11.1.10 The period between the Notice to Proceed and the Service Commencement Date is greater than or less than 120 days due to any reason not a result of Company fault.
- 11.2 For Changes in Scope described in Sections 11.1.1 to 11.1.7 but not 11.1.6, the Annual Fee shall be increased (or decreased) by an amount equal to VVNA's additional (reduced) Cost associated with the Change in Scope plus ten percent (10%). For Changes in Scope described in Sections 11.1.8 and 11.1.9, the Annual Fee shall be increased (or decreased) by an amount equal to VVNA's additional (reduced) Cost associated with such Change in Scope.
- 11.3 For Changes in Scope described in Section 11.1.10, a one-time debit or credit shall be applied to the Annual Fee by an amount equal to the cost associated with the Change in Scope. For Changes in Scope described in Section 11.1.6, a debit or credit shall be applied to the Annual Fee on an on-going basis by an amount equal to the cost associated with the Change in Scope until the underlying cause is rectified, including OWNER's subsequent authorization of the specific services.
- 11.4 OWNER and VVNA shall negotiate an increase in VVNA's Annual Fee for Changes in Scope based on Section 11.1.9.
- 11.5 Either OWNER or VVNA may submit or request a Change in Scope as set forth in this article. Each request for a Change in Scope shall be in writing and shall include, without limitation, the following: (i) an explanation of the basis for the request for Change in Scope in detail sufficient to allow the party receiving the notice to evaluate and approve or disapprove the request, (ii) any time restrictions on the implementation of the requested Change in Scope, (iii) the reasons for the Change in Scope, and (iv) a statement of the sections of this Agreement that would be modified or otherwise affected by it. Following receipt of the written request the parties shall meet as soon as is reasonably possible and at such meeting shall discuss the nature of the Change in Scope and the reasons for it being requested. The purposes of the meeting shall be to increase the responsiveness of the parties to the situation or needs resulting in the request and, to the extent possible, to reach agreement on guidelines for how the change will best be effected.
- 11.6 Unless otherwise agreed to in writing, the party receiving notice of a requested Change in Scope shall accept or reject such request within 30 Business Days or such

request will be deemed rejected. Rejection of a requested Change in Scope is subject to the dispute resolution procedure as described in Section 14.3.

ARTICLE XII

INDEMNITY, LIABILITY AND INSURANCE

12. Indemnity, Liability and Insurance

- 12.1 VWNA hereby agrees to indemnify and hold OWNER harmless from any liability or damages for bodily injury, including death, property damages and pollution damages which may arise from VWNA's negligence or willful misconduct under this Agreement; provided, VWNA shall be liable only for that percentage of total damages that corresponds to its percentage of total negligence or fault.
- 12.2 OWNER agrees to indemnify and hold VWNA harmless from any liability or damage or bodily injury, including death, property damages and pollution damages which may arise from all causes of any kind other than VWNA's negligence or willful misconduct, including, but not limited to, breach of an OWNER Obligation under Article 8.
- 12.3 Unless covered by the indemnities contained in Sections 12.1 and 12.2 above and the insurance policies provided by the parties herein, neither VWNA nor the OWNER shall be liable to the other in any action or claim for consequential, incidental or special damages, loss of profits, loss of opportunity, loss of product or loss of use. Any protection against liability for losses or damages afforded any individual or entity by these terms shall apply whether the action in which recovery of damages is sought is based on contract, tort (including sole, concurrent or other negligence and strict liability of any protected individual or entity), statute or otherwise. To the extent permitted by law, any statutory remedies, which are inconsistent with these terms, are waived.
- 12.4 VWNA shall be liable for those fines or civil penalties imposed by a regulatory or enforcement agency for violations arising out of VWNA's negligent performance or failure to perform its obligations under this Agreement and shall indemnify and hold OWNER harmless from the payment of any such fines and/or penalties. OWNER will assist VWNA to contest any such fines in administrative proceedings and/or in court. VWNA shall pay the cost of any such contest.
- 12.5 OWNER shall be liable for those fines or civil penalties imposed by any regulatory or enforcement agency that are not a result of VWNA's negligence and shall indemnify and hold VWNA harmless from the payment of any such fines and/or

penalties. VWNA will assist OWNER to contest any such fines in administrative proceedings and/or in court. OWNER shall pay the cost of any such contest.

12.6 Notwithstanding anything contained within this Agreement, OWNER shall defend, indemnify and hold harmless VWNA from and against any Losses arising out of or related to:

(i) any Environmental Conditions on, in, under, across or at the Managed Assets;

(ii) any Release or threatened Release of Regulated Substances from the Managed Assets or any location used for the storage, treatment, disposal or beneficial use of influent, effluent, utilities, and wastes produced by the Managed Assets; or

(iii) any violations of Environmental Laws related to operation or maintenance of the Managed Assets, or the storage, treatment, generation, discharge, disposal or beneficial use or other wastes produced, generated or discharged by the Managed Assets,

except to the extent that such Environmental Conditions, Releases or violations of Environmental Laws are caused by the negligent or willful acts or omissions of VWNA in performing its obligations under this Agreement.

12.7 To the fullest extent permitted by law and notwithstanding any other provision of this Agreement, VWNA's liability for performance or non-performance of any obligation arising under the Agreement (whether arising under breach of contract, tort, strict liability, or any other theory of law or equity) including, but not limited to its indemnity obligations specified in Section 12.1 of the Agreement, shall not exceed \$10,000,000 cumulatively for the duration of the Agreement, provided that the foregoing limitation shall not apply to any losses resulting from the reckless and wanton conduct or willful misconduct of VWNA or VWNA's subcontractors, employees or agents in breach of VWNA's obligations under this Agreement.

12.8 Each party shall obtain and maintain insurance coverage of a type and in the amounts described in Appendix F. Each party shall provide the other party with satisfactory proof of insurance.

12.9 The provisions of Sections 12.1 through 12.7 above shall survive the termination of the Agreement.

ARTICLE XIII

TERM, TERMINATION AND DEFAULT

- 13.1 The initial term of the Services provided pursuant to this Agreement shall be six (6) years commencing on the Service Commencement Date ("Initial Term"). Thereafter, this Agreement shall be automatically renewed for three (3) successive terms of two (2) years each unless canceled in writing by either party no less than one hundred and twenty (120) days prior to the expiration of each subsequent two year term. Thereafter, the parties may extend this Agreement by mutual consent.
- 13.2 A party may terminate this Agreement for a material breach of the Agreement by the other party; only after giving written notice of breach; and, except in case of a breach by OWNER for non-payment of VWNA's invoices, in which case termination may be immediate by VWNA, only after allowing the other party thirty (30) days to cure or commence taking reasonable steps to cure the breach.
- 13.3 Upon notice of termination by VWNA or OWNER, VWNA shall assist OWNER in assuming operation of the Project. If additional Cost is incurred by VWNA at request of OWNER, OWNER shall pay VWNA such Cost within 15 days of invoice receipt.
- 13.4 Upon termination of this Agreement and all renewals and extensions of it, VWNA will return the Project to OWNER as it was upon the effective date of this Agreement, ordinary wear and tear excepted. Equipment and other personal property purchased by VWNA for use in the operation or maintenance of the Project shall remain the property of VWNA upon termination of this Agreement unless the property was directly paid for by OWNER or OWNER specifically reimbursed VWNA for the cost incurred to purchase the property or this Agreement provides to the contrary.
- 13.5 Notwithstanding anything to the contrary, the OWNER may, at its sole discretion, terminate this Agreement for convenience upon payment of the Termination for Convenience Fee set forth in Appendix L and, if subsequent to the Service Commencement Date, 90 days notice. For purposes of clarity, the Termination for Convenience Fee will be due and payable if the OWNER elects to terminate this Agreement for any reason, other than Company fault, prior to the Service Commencement Date. The OWNER will be excused from the Termination for Convenience Fee if, and only if, the Public Utilities Commission issues a ruling on the merits fully rejecting the City of Nashua's attempts to take the Assets by eminent domain or following the determination of a price for the Managed Assets by the Public Utilities Commission, the OWNER, acting through its Board of Aldermen, does not ratify the final determination of price and elects not to issue bonds for the

acquisition pursuant to New Hampshire RSA 38:13. The OWNER will not be excused from the Termination for Convenience Fee if the City of Nashua fails to diligently and in good faith prosecute its action against the Pennichuck Corporation. Any fees payable pursuant to this Section are in addition to the amounts set forth in Section 10.

ARTICLE XIV

LETTER OF CREDIT

- 14.1. Terms and Purpose. In the sole discretion of the OWNER, the OWNER may require that the COMPANY provide security for the performance of its obligations under this Agreement through an irrevocable direct pay letter of credit, in a form deemed mutually acceptable by both parties, issued by an United States bank whose long-term debt is rated "A" or better by either Moody's Investors Services, Inc., Standard & Poor's Rating Services or Fitch Ratings, or any of their respective successors and assigns, and which maintains a banking office in the State of New Hampshire. The Letter of Credit shall be in the stated amount of 25% of the Annual Fee as adjusted each Contract Year based on the adjustment formula set forth in Section 9.4, shall be for a term of one year, and shall be continuously renewed, extended or replaced so that it remains in effect until 90 days after the Termination Date. The stated amount of the Letter of Credit shall in no way limit the amount of damages to which the OWNER may be entitled under this Agreement.
- 14.2. Drawings for Bankruptcy. The Letter of Credit shall authorize the OWNER to draw the full stated amount thereof upon: (1) insolvency of the Company as determined under the Bankruptcy Code; (2) the filing of the Company of a petition of voluntary bankruptcy under the Bankruptcy Code; (3) the filing of the Company of a petition to reorganize the Company pursuant to the Bankruptcy Code; or (4) the issuance of an order of a court of competent jurisdiction appointing a receiver, liquidator, custodian or trustee of the Company, which order shall not have been discharged within 90 days after such issuance. The proceeds of any such drawing shall be held by the OWNER as cash collateral to secure the performance of the Service Agreement and, in the event of a material breach of this Service Agreement following any such drawing, may be retained by the OWNER as payment of damages resulting therefrom. Any amounts held will accrue interest at the rate specified in Section ___ of the Agreement.
- 14.3. Drawings for Material Breach. The Letter of Credit shall also authorize the OWNER to draw an amount representing the estimated damages suffered by the

OWNER in the event of a material unremedied breach of this Service Agreement by the Company. It shall be a condition to the right of the OWNER to draw on the Letter of Credit for a material breach that: (i) the OWNER has given the Company written notice of a material breach of this Service Agreement with an attached copy of its good faith assessment of the damages the OWNER has suffered as a result of such breach and (ii) the Company has not taken reasonable steps within thirty days of receipt of such letter to remedy the alleged material breach or the Company has initiated an action in a court of competent jurisdiction disputing the allegations of material breach.

- 14.4. Effect of Final Determination of Damages. In the event that subsequent to any drawing on the Letter of Credit it is determined by any court of competent jurisdiction in a final decision that such drawing to any extent was not permitted hereunder, the OWNER shall pay the amount wrongfully drawn to the Company together with interest thereon, at the rate defined in Section ____, calculated from the date of drawing to the date of payment to the Company.
- 14.5. Cost of Letter of Credit. The cost of obtaining the Letter of Credit will be borne in the first instance by the Company, but will be subject to full and complete reimbursement by the OWNER. The cost will be the stated dollar value of the Letter of Credit multiplied times 0.85% or 0.0085, on a per annum basis.

ARTICLE XV

DISPUTES AND FORCE MAJEURE

- 15.1 In the event activities by employee groups or unions cause a disruption in VWNA's ability to provide the Services, OWNER, with VWNA's assistance or VWNA at its own option, may seek appropriate injunctive court orders. During any such disruption, VWNA shall operate the Managed Assets on a reasonable efforts basis until any such disruptions cease.
- 15.2 Neither party shall be liable for its failure to perform its obligations under this Agreement if such failure is due to any Uncontrollable Circumstances beyond its reasonable control or Force Majeure. However, this Section may not be used by either party to avoid, delay or otherwise affect any payments due to the other party.
- 15.3 VWNA and the OWNER agree to facilitate timely and effective resolution of any controversy or dispute that may arise under this Agreement. Included in Appendix M is a detailed procedure for how disputes will be resolved.

ARTICLE XVI

SUPPLEMENTAL SERVICES AND CAPITAL IMPROVEMENT PROJECTS

SECTION 16.1 SUPPLEMENTAL SERVICES

- A. **Scope of Supplemental Services.** VWNA shall provide Supplemental Services set forth in Appendix E in accordance with:
1. The provisions of this Agreement, including the Appendices, and, where applicable, plans generated in conformity with this Agreement, including the Appendices;
 2. All applicable State, Federal or local laws and regulations, including all applicable permits, authorizations, licenses or other requirements;
 3. Prudent Industry Practice; and
 4. Where appropriate and consistent with the above, manufacturer's instructions and warranty requirements related to the Managed Assets.
- B. **Supplemental Services Payment.** OWNER shall pay VWNA for Supplemental Services provided in accordance with the Agreement and Appendix E.
- C. **Prior Authorization Required.** VWNA shall provide Supplemental Services only upon written authorization from the OWNER.

SECTION 16.2 CAPITAL IMPROVEMENT PROJECTS

- A. **Scope of Capital Improvement Projects.** VWNA shall complete Capital Improvement Projects set forth in Appendix G, such terms and conditions agreed upon by VWNA and the OWNER, and in accordance with:
1. The provisions of this Agreement, including the Appendices, and, where applicable, plans generated in conformity with this Agreement, including the Appendices;
 2. All applicable State, Federal or local laws and regulations, including all applicable permits, authorizations, licenses or other requirements;
 3. Prudent Industry Practice; and
 4. Where appropriate and consistent with the above, manufacturer's instructions and warranty requirements related to the Managed Assets.

B. Capital Improvement Projects Payment. Except as otherwise agreed upon in writing, OWNER shall pay VVNA for Capital Improvement Projects in accordance with the Agreement and Appendix G.

C. Prior Authorization Required. VVNA shall complete Capital Improvement Projects only upon written authorization from the OWNER.

Both parties indicate their approval of this Agreement by their signatures below, and each party warrants that all corporate or governmental action necessary to bind the parties to the terms of this Agreement has been and will be taken.

CITY OF NASHUA, NEW HAMPSHIRE

**VEOLIA WATER NORTH AMERICA -
NORTHEAST, LLC**

By: _____ (DRAFT)

By: _____ (DRAFT)

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

CERTIFICATE OF COUNSEL

The undersigned, as counsel for the City of Nashua, New Hampshire ("OWNER") in this transaction, hereby certifies that (s)he has examined the circumstances surrounding the selection of Veolia Water North America – Northeast, LLC ("VVNA") and the award and letting of the foregoing contract to VVNA by OWNER, and has found that said selection and award process comply with the procurement laws of the State of New Hampshire and the City of Nashua.

Counsel for OWNER

Date: _____

APPENDICES

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APPENDIX A

DEFINITIONS

- A.1. "Acceptable Raw Water" means Raw Water compliant with the Specifications of Schedule C.
- A.2. "Annual Fee" means a predetermined, fixed sum for VVNA's services. The Annual Fee includes Cost and profit.
- A.3. "Assets" shall mean those assets related to the treatment and distribution of water at issue in Public Utilities Commission Case No. DW 04-048.
- A.4. "Bid Submission Date" means July 14, 2005.
- A.5. "Capital Program Management" shall include engineering and technical services to oversee the City capital investment program including detailed capital planning, project evaluation and prioritization, value engineering, project engineering, project management and project startup.
- A.6. "Change in Law" means the enactment, adoption, promulgation, modification, repeal or change after the Bid Submission Date of any Applicable Law which (a) necessitates or makes advisable a Capital Project, (b) modifies the Company's guarantees under this Agreement, (c) increases the cost of the Services by establishing requirements with respect to the operation or maintenance of the Managed Assets, (d) otherwise impacts the Company's ability to perform its obligations under this Agreement, or (e) increases or decreases the rate of State gross retail tax or the rate of the use tax or any other tax and results in increased or decreased operation expenses to the Company, which, in the case of (a), (b), (c), or (d), are more burdensome than the most stringent requirements:
- (1) in effect on the Bid Submission Date;
 - (2) agreed to by the Owner as of the Bid Submission Date in any applications for official permits, licenses or approvals to or for the Managed Assets, other than any requirements set forth in said applications to comply with Applicable Laws;
- and which, in the case of (e), any changes on the operation expenses of the Company as a result of such increase or decrease in taxes must be: (i) approved by the Owner; (ii) minimized by the Company using its best efforts; and (iii) considered by the Parties to be a re-negotiation of this Agreement.
- A.7. "Capital Improvement Projects" generally consist of major planned projects to improve or enhance the performance of the Managed Assets. Capital improvement projects are differentiated from normal Operation, Maintenance and Management Services (OM&M) described and set forth in Appendix D, and

Renewal, Repair and Replacement Maintenance (RRRM) projects described and set forth in Appendix H.

- A.8. "Company" shall mean Veolia Water North America – Northeast, LLC.
- A.9. "Conservation Plan" shall mean a plan detailing measures that can be implemented by the OWNER to conserve water and water resources within the water utility.
- A.10. "Contract Date" means the date specified on the first page of this Agreement.
- A.11. "Contractor" means a company hired by VWNA to assist in the delivery of services under this agreement.
- A.12. "Cost" means the actual direct and indirect costs incurred for the direct benefit of the Services including, but not limited to, expenditures for project management and labor, employee benefits, chemicals, lab supplies, repairs, repair parts, maintenance parts, safety supplies, gasoline, oil, equipment rental, legal and professional services, quality assurance, travel, office supplies, other supplies, uniforms, telephone, postage, utilities, tools, memberships and training supplies.
- A.13. "Emergency Response Plan" has the same meaning set forth in 42 U.S.C. §300i-2(b) (the "Public Health Security and Bioterrorism Preparedness and Response Act of 2002"): "[t]he emergency response plan shall include, but not be limited to, plans, procedures, and identification of equipment that can be implemented or utilized in the event of a terrorist or other intentional attack on the public water system. The emergency response plan shall also include actions, procedures, and identification of equipment which can obviate or significantly lessen the impact of terrorist attacks or other intentional actions on the public health and the safety and supply of drinking water provided to communities and individuals."
- A.14. "Environmental Conditions" means the presence of any Regulated Substance on or at the Facilities Site, including but not limited to, the presence in containers, on the surface, or in surface water, groundwater, soils or subsurface strata, or the migration of such a Regulated Substance from the Facilities Site.
- A.15. "Environmental Laws" means any Applicable Law relating to (i) the protection of public health, safety, natural resources or the environment; (ii) the manufacturing, handling, generation, storage, treatment, processing, transportation, release, discharge, emission or disposal of Regulated Substances; (iii) Environmental Conditions; or (iv) the protection of human health and safety.
- A.16. "Managed Assets" means the water treatment and distribution system and appurtenances identified in more detail in Appendix B. "Managed Assets" means all property whether real or personal, tangible or intangible related to the production, treatment, transmission or distribution of water that is the subject of

this Agreement. Managed Assets shall also include modifications, additions and improvements made during the Term of this Agreement.

- A.17. "Force Majeure" means any act, event or condition that has a direct material adverse effect on the performance of a subcontractor's or supplier's obligations to the Company if such act, event or condition is beyond the reasonable control of the Company, subcontractor or supplier asserting a Force Majeure as justification for not performing its obligations; provided, however, such act, event or condition cannot be caused by the negligent or intentional action of the Company, subcontractor or supplier.
- A.18. "Losses" means any losses, claims, demands, charges, expenses, costs (including costs of defense, settlement and reasonable attorneys' fees), liabilities, obligations, fines and penalties.
- A.19. "Maintenance Plan" shall mean a plan which outlines VWNA's approach to identifying, executing and documenting the maintenance requirements and activities for the water utility assets.
- A.20. "Notice to Proceed Date" shall mean the date upon which the OWNER provides the notice specified in Section 2.
- A.21. "Owner" shall mean the City of Nashua, New Hampshire.
- A.22. "Planned Maintenance" means preventive and predictive maintenance.
- A.23. "Priority Upgrading Works Program" means projects required to rehabilitate, expand or modify the Managed Assets to comply with governmental regulations including but not limited to safety or for compliance with the Americans With Disability Act ("ADA").
- A.24. "Project" means all equipment, vehicles, grounds, rights of way, and the Managed Assets described in Appendix B and, where appropriate, the management, operations and maintenance of such.
- A.25. "Proposal Date" shall mean July 14, 2005.
- A.26. "Renewal, Repair, and Replacement Maintenance" is intended to include all maintenance activities related to the Managed Assets with a life expectancy greater than one year except where such maintenance activities have been defined by this Agreement as OM&M under Appendix D, or as Capital Improvement Projects under Appendix G. Examples of RRRM projects are set forth in Appendix H.
- A.27. "Revised Proposal Date" shall mean September 2, 2005.

- A.28. "Services" means the services to be provided by VWNA as detailed in the Agreement.
- A.29. "Services Area" means the perimeter served by former Pennichuck Water Works.
- A.30. "Service Commencement Date" shall mean that date one-hundred and twenty (120) days after the Notice to Proceed Date, unless mutually agreed by the parties to be some other date. If the parties so agree, the Service Commencement Date shall be:_____.
- A.31. "Supplemental Services" shall means those services set forth in Appendix E.
- A.32. "Transition Payment" means the payment made by the OWNER to VWNA as identified in Section 9.2.
- A.33. "Uncontrollable Circumstance(s)" means any act, event or condition that (a) prevents the Company from meeting or (b) materially increases the cost of performing (i.e., in excess of \$25,000), its obligations under this Agreement, if such act, event or condition is beyond the Company's reasonable control; provided, however, such act, event or condition is not the result of the Company's failure to operate and maintain the Project in accordance with the terms and conditions of this Agreement.
- i. Subject to the immediately preceding paragraph of this definition, the following acts, events or conditions (by way of inclusion not limitation) may qualify as an Uncontrollable Circumstance:
- (1) flood, drought, hurricane, tornado, epidemic, severe earthquake, catastrophic fire or explosion, act of a public enemy, terrorism, war, latent defect, unknown subsurface condition, blockade, insurrection, riot, general unrest, restraint of government and people, civil disturbance, sabotage or similar occurrence;
 - (2) the order, injunction or judgment of any federal, State or local court, administrative agency or governmental body or officer, including any exercise of the power of eminent domain, police power, condemnation or other taking by or on behalf of any public, quasi-public or private entity; provided, however, that such order, injunction or judgment did not arise in connection with or is not related to the negligent or wrongful action or inaction of the Company and that neither the contesting in good faith of any such order, injunction, or judgment nor the reasonable failure to so contest shall constitute or be construed as a wrongful or negligent action or inaction of the Company;

- (3) the suspension, termination, interruption, denial, failure to issue, modification or failure of renewal of any permit, license, consent, authorization or approval necessary to the operation, maintenance, repair and management of the Project, if such act or event did not arise in connection with, or is not related to, the negligent or willful action or inaction of the Company; provided, however, that neither the contesting in good faith of any such order nor the reasonable failure to so contest shall be construed as a negligent or willful action or inaction of the Company;
- (4) a Change in Law;
- (5) the failure of any subcontractor or supplier to furnish services, materials, chemicals or equipment on the dates agreed to; provided (A) such failure is the result of a Force Majeure, (B) such failure materially and adversely affects the Company's ability to perform its obligations and (C) the Company is not reasonably able to obtain substitute services, material, chemicals or equipment on the agreed upon dates; and
- (6) unavailability of Acceptable Raw Water.

ii. An Uncontrollable Circumstance shall not include:

- (1) any act, event or condition which is caused by the negligence or intentional action of the Company, its subcontractors, agents and employees;
- (2) any event, reasonably foreseeable on the Contract Date;
- (3) economic infeasibility;
- (4) any labor strike, work stoppage or slowdown on the part of the Company's employees;
- (5) subject to the definition of a Change in Law regarding sales taxes, any order, injunction or judgment of any federal, State or local court, administrative agency or governmental body interpreting federal, State, or local tax laws;
- (6) weather conditions in the geographic area of the Owner, other than those listed in (a)(1) of this definition; and

- (7) an adverse ruling by the Public Utilities Commission related to the City of Nashua's eminent domain proceeding.

A.34. "Vulnerability Assessment" shall have the same meaning set forth at 42 U.S.C. §300i-2(a) (the "Public Health Security and Bioterrorism Preparedness and Response Act of 2002"): "an assessment of the vulnerability of [the community water system] to a terrorist attack or other intentional acts intended to substantially disrupt the ability of the system to provide a safe and reliable supply of drinking water. The vulnerability assessment shall include, but not be limited to, a review of pipes and constructed conveyances, physical barriers, water collection, pretreatment, treatment, storage and distribution facilities, electronic, computer or other automated systems which are utilized by the public water system, the use storage, or handling of various chemicals, and the operation and maintenance of such system."

APPENDIX B

MANAGED ASSETS, TRANSFERRED PROPERTY AND SERVICE TERRITORY DESCRIPTION

Pennichuck Water Works, Inc. Assets

The assets of Pennichuck Water Works, Inc. (PWW) consist of, among other things, a water treatment plant, wells, interconnections and a water transmission and distribution system that services the City of Nashua and customers in neighboring communities. The system served by the water treatment plant is designated the “core” system. The systems not directly connected to the core system are designated the “satellite” systems that are identified by the following names:

System Name	Location
Amherst ¹	Amherst
Ashley Commons	Milford
Atherton Commons	Amherst
Autumn Woods	Salem
Badger Hill ²	Milford
Bedford Water Company	Bedford
Bon Terrain	Amherst
Cabot Preserve/Greenfield Farms	Bedford
Drew Woods/Bliss /Hubbard Hill/Birchfield	Derry
Dunlap Woods	Bedford
English Woods	Bedford
Glenn Ridge	Derry
Glennwoodlands	Epping
Great Bay	Newmarket
Great Brook	Milford
Hi-Lo Estates	Derry
Little Pond	Bedford
Maple Haven	Derry
Powder Hill	Bedford
Redfield Estates	Derry
Richardson	Derry
Sargent Woods	Newton
Soughegan Woods	Amherst
Sweet Hill	Plaistow
Twin Ridge/Rolling Hills	Plaistow
Valleyfield ³	Plaistow & Newton

The core system has over 400 miles of mains and five storage tanks as well as pumping stations and the water treatment plant.

¹ Former Amherst Village District

² NH PUC Docket No. DW 00-285

³ NH PUC Docket No. DW01-001

The assets sought to be acquired by the OWNER are:

Water Supply, Treatment, Transmission and Distribution Facilities

- All the land, land rights, buildings and any other real property of the Company.
- The water treatment plant with all of its associated supply ponds, equipment and transmission mains as part of the supply pond system and watersheds owned or otherwise controlled by the Company including the Merrimack River intake structure, intake pump station, and transmission line to Bowers Pond.
- All wells for the core and each and every satellite system and the well head protection areas owned or otherwise controlled by the Company.
- All pumps, pumping stations, pressure regulating devices, storage tanks, and treatment equipment.
- All water distribution system equipment, service supply mains, distribution mains, transmission mains, pipes, services, hydrants, valves of all types, meters and all appurtenances.

Records

- All operating manuals, specification sheets, manufacturer's instructions both in electronic and written form for every component of the water supply, treatment, transmission and distribution facilities at the system level and every sublevel.
- All continuing property records both in electronic and written form with all subsidiary records, ledgers, journals, and the like and supporting plans and specifications for every entry in the records.
- All work orders, completed and open.
- All repair and maintenance records.
- All records of purchases of services and materials.

- All hydrant, meter, service, valve and other similar records for all components of the facilities both in electronic and written form.
- All customer account information including billing history both in electronic and written form.
- All drawings, plans and specifications for every component of the water supply, treatment, transmission and distribution facilities.
- All logs, data sheets, recordings and other records of every test performed on every component of the water supply, treatment, transmission and distribution facilities.
- All engineering and/or design studies whether preliminary or final, complete or incomplete together with all supporting data, work papers, analyses, etc. related to every component of the water supply, treatment, transmission and distribution facilities.

Parts and Equipment

- All laboratory and testing equipment located within the water treatment plant and at any well site or pumping station.
- All meter reading devices with associated hardware and software.
- All tools, fixtures, equipment, materials and supplies used to operate or maintain any component of the water supply, treatment, transmission and distribution facilities, including, but not limited to, all equipment, devices, computers, programs and historical data for SCADA or similar systems.

Land and Buildings

- All land, land rights, buildings and other real property specifically excluding any leasehold interest in the 25 Manchester Street, Merrimack, building.

Figure B-1 provides a summary of the Service Territory for the Company.

The following Table summarizes the specific managed assets as currently understood.

All assets transferred, including upland watersheds and wellhead protection areas, whether included below in the list of Specific Assets or not, shall be considered part of the assets to be managed.

Description	Quantity
SOURCE OF SUPPLY	
Merrimack River intake and pump station	1 Each
Watershed:	
Holts Pond	1 each with a surface area of 23 acres
Bowers Pond	1 each with a surface area of 92 acres
Harris Pond	1 each with a surface area of 78 acres
Supply Pond	1 each with a surface area of 16 acres
Dams	6 Each
MAIN TREATMENT FACILITY	
Water Treatment Facility – Pennichuck Water Works Treatment Facility with up-flow clarifiers and rapid gravity filters. As was in place at the end of Dec 2004.	1 Each (Maximum Rated Capacity of 35 MGD)
Wells:	
Bon Terrain	1 Each
Amherst	1 Each
Souhegan Woods	2 Each
Booster Stations:	
Bon Terrain	1 Each
Amherst	1 Each
Nashua Main Plant #1, #2, #3, #4	4 Each
Amherst – Souhegan Woods	3 Each
SATELLITE SYSTEMS	
Well Fields:	
Salem - Autumn Woods	3 Each
Newington - Great Bay	3 each
Plaistow - Valleyfield	2 Each
Plaistow - Sweet Hill	1 Each
Plaistow - Twin Ridge	3 Each
Derry - Richardson Estates	1 Each
Derry - Hi-Lo Estates	2 Each

Description	Quantity
Derry - Drew Woods	7 Each
Derry - Redfield	2 Each
Derry - Hubbard	2 Each
Derry - Glenn Ridge	2 Each
Derry - Maple Haven	3 Each
Milford - Ashley Commons	1 Each
Epping - Glenwoodlands	2 Each
Well Fields:	
Derry - Maple Haven	3 Each
Milford - Ashley Commons	1 Each
Epping - Glenwoodlands	2 Each
Bedford - English Woods	2 Each
Bedford - Bedford	3 Each
Pump Stations	
Bedford – Powder Hill Marathon	3 Each
Bedford – Powder Hill Gould	2 Each
Bedford – Cabot Preserve	4 Each
Bedford – English Woods	2 Each
Bedford – Bedford Balder	2 Each
Salem – Autumn Woods	3 Each
Newington – Great Bay	2 Each
Derry – Richardson Balder	2 Each
Derry – Hi-Lo Balder	2 Each
Derry – Drew Woods Baldor	2 Each
Derry – Hubbard	2 Each
Derry – Birchfield	2 Each
Derry – Redfield	2 Each
Derry – Glenn Ridge Gravity Fed	2 Each
Derry – Maple Haven	2 Each
Milford – Ashley Commons Gould	2 Each
Plaistow – Sweet Hill	2 Each
Plaistow – Twin Ridge Balder	2 Each
Plaistow – Valleyfield	2 Each
Epping – Glennwoodlands Federal	2 Each
Epping – Glennwoodlands Jockey	1 Each
WATER DISTRIBUTION SYSTEM & APPURTENANCES	
Transmission and distribution pipes in sizes from 1” to 72”	425 miles
Tanks, standpipes and reservoirs (Concrete and steel)	10 Each with an aggregate capacity of approximately 14 MG
Shakespeare I & II, Kessler Farms, Bon Terrain, Amherst Tank, Coburn, Fifield I, Powder Hill Tank, Drew/Bliss/Hubbard, Fifield II	

Description	Quantity
Non-Fire Services	24,685 Each
Fire Services	759 Each
Meters	24,274 each including 22,574-5/8" meters
Hydrants	2,430 Each
Distribution Valves	2,500 Each (Estimated)
Number of Residential Customers	22,656 Each
Number of Commercial Customers	1,649 Each
Number of Industrial Customers	239 Each
Number of Municipal Customers	146 Each
Number of Year Round Customers	24,570 Each
Number of Seasonal Customers	120 Each

APPENDIX C

RAW WATER, FINISHED WATER AND PRODUCT WATER QUALITY

1.0 Source of Supply for the Main Production Facility

- (a) The source of supply consists of about 350 acres of water in a series of ponds that include the Supply Pond, Harris Pond, Bowers Pond, Holts Pond, Stump Pond, Pennichuck Pond, and many smaller ponds. The total watershed is approximately 18,000 acres and supplies water to the ponds. Additional flow is received from the Merrimack River through an intake, which delivers water into the pond system by way of Bowers Pond. Water is supplied to the Main Production Facility by gravity from Harris Pond and by pump from the Supply Pond.
- (b) The combination of the Pond System and the Merrimack River intake currently provide up to 35MGD to meet system peak demands.
- (c) The pond system does not require chemical treatment within the watershed.

2.0 Main Production Facility

- (a) The plant is an Infilco Degremont treatment plant with up-flow clarification and mixed media filtration consisting of sand and carbon. The facility provides for both physical and chemical treatment for removal of solids and contaminants.
- (b) The facility currently meets all primary and secondary drinking water standards up to the rated capacity of 35MGD.
- (c) The facility has a daily average flow of 14.1MGD and can treat a peak of 35MGD.
- (d) The Raw Water has the following General Characteristics in the table below:

Parameter	Minimum	Maximum
pH	4	8
Alkalinity as CaCO ₃ , mg/l	6.5	40
Turbidity, NTU	0.1	15
Temperature, C°	0.3	30.0
Apparent Color, SCU	5	140
True Color, SCU	2	70
Total Organic Carbon, mg/l	0	15
UV ₂₅₄ (l/m)	0.05	0.30
SUVA (L/mg.m)*	2.0	5.5
Total Iron, mg/l	0.01	2.0
Dissolved Iron, mg/l	0	1.7
Total Manganese, mg/l	0	1.0
Dissolved Manganese, mg/l	0	0.7

- (e) Values for raw water parameters listed below shall be established based on historical records obtained from Pennichuck Water Works and/or New Hampshire DES. Historical values shall be used to establish minimum and maximum values during the Transition Period:

	<u>Minimum</u>	<u>Maximum</u>
Total Dissolved Solids (TDS)	mg/L	mg/L
Hardness as CaCO ₃	mg/L	mg/L
Odor	TON	TON
Total Phosphorus	mg/L	mg/L
Ammonia	mg/L	mg/L
Nitrate	mg/L	mg/L
Microbiological		
Total Coliforms		
Fecal Coliforms		
Cryptosporidium		
Giardia lamblia		
Algae		

3.0 Source of Supply for the Satellite Water Systems

- (a) The satellite water systems consist of 26 community water systems and remote booster stations.
- (b) Each individual Satellite System's source of supply is sufficient to meet both the average and peak demands of that system.

4.0 Satellite Water Systems Raw Water

The raw water supplies of the satellite water systems are generally considered as acceptable and the currently installed facilities are adequate to meet all primary and secondary drinking water standards up to the peak demands of that system.

Minimum and maximum values for raw water parameters shall be established based on historical records obtained from Pennichuck Water Works and/or New Hampshire DES for each Satellite System. Historical values shall be used to establish minimum and maximum values during the Transition Period.

5.0 Finished Water and Product Water Standards

Provided that the Raw Water quality of the Managed Assets sources of supply remains within the conditions and parameters historically recorded, and provided that the Managed Asset in question has been able to historically meet or treat to all primary and secondary water standards, VVNA shall operate the Managed Assets to treat the Raw Water to produce a Finished Water and Product Water that meets all requirements of the primary and secondary standards of the USEPA Safe Drinking Water Regulations and primary and secondary standards established by the NHDES.

Should any conditions arise that are outside of the historical range for any parameter or contaminants in the Raw Water, VVNA will use reasonable efforts to operate the Managed Assets to treat the Raw Water to produce a Finished Water and Product Water that meets the requirements of the primary and secondary USEPA Safe Drinking Water Regulations and the requirements of the NHDES drinking water regulations.

APPENDIX D

OPERATION, MAINTENANCE AND MANAGEMENT OF THE MANAGED ASSETS

1.0 GENERAL OM&M SERVICES

VWNA shall perform the following General Services:

- (a) Provide all water treatment chemicals including corrosion inhibitors used in the supply and treatment of Raw Water to Product Water in accordance with the American Water Works Association standards and shall be approved by the National Science Foundation for potable water treatment.
- (b) Subject to the provisions of the Agreement, and specifically Appendices E, G, H, I and O, keep all equipment in good operating condition. VWNA shall operate, manage and maintain all Managed Assets as not to void applicable, new and non-expired warranties.
- (c) Maintain the grounds and facilities of the Managed Assets at a level adequate for the efficient, long-term reliability and preservation of the OWNER's investment. All Managed Assets shall be kept neat, clean and litter-free at all times, per Prudent Industry Practice.

All Managed Assets structures and buildings shall be kept clean, neat, free of graffiti, and orderly in accordance with Prudent Industry Practices. VWNA shall provide for regular and timely routine maintenance and repair of all landscaping and roadways associated with the Managed Assets.

VWNA shall perform the following activities relevant to the buildings and grounds at the Site:

- Maintain the buildings, signage, grounds, and landscaping
 - Regularly mow the grass,
 - Wash all windows on an as-needed basis,
 - Repair all minor roof leaks within five (5) days of discovery,
 - Implement pest control measures,
 - Repair all plumbing leaks immediately,
 - Apply touch-up paint and protective coatings as Preventive Maintenance as necessary to all Managed Assets painted surfaces, including piping, to minimize corrosion and cracking paint, as appropriate.
 - Maintain clean offices and restrooms
- (d) Provide emergency service and critical service needs, 24-hours-a-day, seven-days-a-week operation and maintenance of the Managed Assets in accordance with Applicable Law, Prudent Industry Practice, OM&M manuals, and the provisions of this Agreement. There will be 24/7 operation of the Central Control System located at the primary Water Treatment Plant.
 - (e) Perform high priority repairs or maintenance items as identified in writing by the OWNER as a result of any OWNER inspection that reveals a lack of repairs or

necessary maintenance to the Managed Assets as described by the OM&M manual in effect. Disagreements arising from actions taken in this item shall be subject to the dispute resolution procedure in this Agreement.

- (f) Timely notify the OWNER, if, during the course of excavation work necessary to make repairs and/or improvements to the Managed Assets, faulty or leaking underground storage tanks or hazardous or toxic waste or materials (as defined in applicable Federal and/or State laws and regulations) are identified by VWNA, and timely notify such other governmental agencies as may be required by law.
- (g) Support the OWNER, as may be required, in providing for and renewing and maintaining Federal, State and local permits and other legal requirements that are necessary to operate and maintain the Managed Assets.
- (h) Remove and deliver to an OWNER designated location unused, obsolete and replaced equipment.
- (i) VWNA shall maintain the existing stationary standby power equipment for the Managed Assets including regularly running under load according to manufacturer's recommendations, or as provided for by Applicable Law. Portable emergency power equipment shall be maintained in accordance with manufacturer's recommendations and exercised on a regular basis.
- (j) Use reasonable efforts to respond within 30 minutes (but in no event longer than 45 minutes) to any emergency events after notice at any time or any day of the week), rectify conditions resulting from the emergency, abate any inconvenience to the public relating to the Managed Assets and maintain at all times during the Term of this Agreement. A local toll-free, twenty-four (24) hour telephone number with person-to-person service where emergencies can be reported. In accordance with the EPRP, VWNA shall immediately notify the OWNER and other required agencies in the case of any emergency, including hazardous material spills from or into the Managed Assets. Respond to emergency events relating to water supply and take appropriate actions to maintain service and protect the quality and quantity of water to the OWNER's service customers.

2.0 SOURCE OF SUPPLY (SOS)

- (a) Make visits to each of the well fields on a scheduled basis in accordance with the OWNER approved Company OM&M Plan. Inspect the equipment, make necessary adjustments, provide routine lubrication, check existing cathodic protection, inspect controls and instrumentation, change record charts and perform other appropriate routine tasks. Any significant OM&M issue discovered by VWNA during these inspections shall be reported to the OWNER.
- (b) Perform flow testing, drawdown measurements, specific capacity measurements, water quality testing, and planned maintenance on all wells and well equipment in accordance with VWNA's maintenance.
- (c) Perform preventive and predictive maintenance on all Supply Sources equipment.

3.0 WATER TREATMENT PLANT (WTP)

- (a) Operate and staff the Central Control System on a 24-hour per day, seven day per week basis to meet system demands.
- (b) Operate and maintain valves and related appurtenances.
- (c) Operate and maintain chemical feed equipment.
- (d) Operate and maintain electrical facilities.
- (e) Perform Preventive and Predictive Maintenance of all water treatment equipment. This includes all equipment for the collection of, treatment of and distribution of water at the WTP. Any significant OM&M issue discovered by VWNA during these services shall be reported to the OWNER.
- (f) Operation of the unit processing including coagulation, clarification, sedimentation and filtration and disinfection/corrosion control.

4.0 TRANSMISSION & DISTRIBUTION - PUMP STATIONS

- (a) Make visits to each of the transmission and distribution system booster pumping stations as required to assure quality customer service. Inspect the equipment, make necessary adjustments, provide routine lubrication, provide corrosion control, inspect controls and instrumentation, change record charts and perform other appropriate routine tasks. Any significant OM&M issue discovered by VWNA during these inspections shall be reported to the OWNER.
- (b) Monitor and control booster pump stations from the central control system located at the Primary Water Treatment Facility (SCADA system). Critical alarms will be monitored to ensure the reliability of the pump stations. The critical equipment at the pump stations will be part of a planned maintenance program.
- (c) Conduct an annual pump efficiency check for each booster-pumping unit greater than 25 HP and make recommendations to the OWNER for maintenance, repair or replacement required to maintain pumping capacity at optimum efficiency levels.

5.0 TRANSMISSION & DISTRIBUTION – PIPES AND APPURTENANCES

- (a) Inspect and exercise all system valves 12" diameter and larger annually and all system valves smaller than 12" in diameter on a five (5) year frequency. Valves will be located, boxes cleaned out, raised or lowered if required and the valve will be turned to ensure proper operation.
- (b) Inspect and operate all OWNER-owned fire hydrants at least once each year. Locate and inspect each hydrant to ensure proper operation, apply touch-up paint or repaint as

required and make sure each hydrant barrel is properly drained. Hydrant records will be updated and verified. Fire hydrants will not be used for any purpose other than extinguishing fires. Hydrant meters will be used for taking water from hydrants as authorized by the OWNER. Read such hydrant meters and submit readings to the OWNER for its billing.

- (c) Prepare a Flushing Program Protocol and execute an annual flushing program, to flush sediment and corrosion particles from the distribution mains. Provide the OWNER with advance notice of the planned flushing dates, advertise the program in a newspaper having general circulation in the service area to alert customers and conduct the program at a time of minimal disruption to customers. Several areas within the water distribution system may be identified as initial "trouble spots" and shall be flushed more frequently than the rest of the Distribution System. The trouble spots shall be addressed in the CIP or the RRRMP.
- (d) Locate and mark water mains and water services in the right of way when requested by the OWNER, contractors or by Dig-Safe. Upon receipt of notices of planned construction in OWNER service areas, timely respond to meet regulatory requirements and to locate and mark the street where the system is located. VWNA shall depend on the data and information provided by the OWNER and updated and maintained by VWNA to locate underground water utilities. VWNA shall use Prudent Industry Practice for the location of water utilities.
- (e) To the extent that is physically feasible with the Managed Assets, VWNA shall optimize the Managed Assets for pressures and fire flows. Any significant deficiencies in Managed Assets pressure and fire flows will be identified by VWNA and addressed in the CIP or the RRRMP.
- (f) VWNA shall use reasonable efforts to respond within 30 minutes (but in no event longer than 45 minutes) to all Distribution System pipe breaks and pressure problems. The response shall be as follows:
 - i. If the cause is identified as a problem (i.e. broken pipe, blockage) on the customer's service line, VWNA's on-site representative will notify the homeowner of the problem and the homeowner shall be responsible for clearing the blockage or repairing the pipe.
 - ii. If the cause is identified as a broken pipe or blockage on the OWNER's service line, VWNA shall effect repairs or clear the blockage in a timely manner, including clean up of the immediate area.
 - iii. If the cause is identified as a broken pipe or a blockage anywhere in the Managed Assets, VWNA shall effect repairs or clear the blockage in a timely manner, including clean up of the immediate area.
 - iv. If the cause is a failure at a pumping station or well, VWNA will take immediate action to remedy the situation.

VWNA shall map, track and keep a log of all pipe breaks, regardless of cause, in order to monitor the overall integrity of the Managed Assets and possible problem areas and pressure problems and provide a summary in its monthly and annual reports.

- (g) Administer the back-flow prevention and cross connection control programs.
- (h) Monitor the water distribution system for any unapproved or illegal acts, take actions to prevent or remove illegal connections and notify the OWNER and police as required.
- (i) Respond to requests for termination of water service including final meter reading.
- (j) Collect all data gathered in the course of the OM&M services associated with the Distribution System and provide the information in a database format.
- (k) Raise or lower valve box covers on an as needed basis.
- (l) Evaluate pipe samples, determine causes of failure and remaining service life and prepare a pipe break report in accordance with Prudent Industry Practices.
- (m) Incorporate in its OM&M Plan actions to minimize unaccounted for water. At least once each year, summarize and compare water production records with total system consumption as measured through customer meters. Unaccounted for water shall be calculated and tracked quarterly based on a 12 month running average.
- (n) Data concerning date, location and other information concerning performance and maintenance activities on system operations shall be entered in the CMMS database programs provided to VWNA by the OWNER.

6.0 TRANSMISSION & DISTRIBUTION – RESERVOIRS AND TANKS

- (a) Perform preventive maintenance on all cathodic equipment associated with the storage tanks.
- (b) The operating levels of the water storage tanks will be monitored and controlled from the SCADA system.
- (c) VWNA will have a program to ensure that Product Water quality is not deteriorating in the storage tanks by using operating data and information to determine daily turnover by controlling tank levels and incoming Product Water flow. VWNA shall optimize daily turnover in the storage volume of each storage tank to ensure fresh water is available in the storage tanks.
- (d) VWNA shall wash down the interior of each water storage tank with high-pressure water spray every five years. Following the tank wash down, VWNA will advise the OWNER of the need for a joint inspection. The integrity of the paint and the tanks' condition will be evaluated by VWNA. VWNA shall submit a report to the OWNER detailing the condition of the painting system and noting needed repairs and

recommend when painting of the tank will be required. Tank repairs and painting will be part of the CIP or RRRMP. This information will be used in the CIP or RRRMP.

- (e) VWNA shall not be responsible for the physical removal and disposal of sludge and sediment resulting from extraordinary sludge and sediment build up existing as of the Commencement Date. Such extraordinary sludge and sediment shall be removed as an element of the CIP or the RRRMP. VWNA shall be responsible for any physical removal of sludge and sediment in reservoirs and storage tanks if not extraordinary and/or at a point in time after the initial extraordinary sludge and sediment has been removed.
- (f) Provide maintenance of storage tank sites, including maintaining landscaping, mowing, clearing brush, and minor repair of fencing, and litter control.

7.0 CUSTOMER SERVICE

- (a) Use reading devices provided by the OWNER, read meters of system customers and meters for non-system sewer customers in accordance with the Table Below.

Meter Size/Description	Frequency of Meter Read
Meters larger than ¾ inch	Monthly
Meters equal or less than ¾ inch: commercial accounts	Monthly
Meters equal or less than ¾ inch: residential accounts where meters have been converted to radio readers	Monthly
Meters equal or less than ¾ inch: residential accounts where meters have not been converted to radio readers: residential accounts	Quarterly

Readings will be electronically transferred to the designated agent in the OWNER when the routes are completed. The OWNER will provide Veolia Water with pre-programmed devices with routes preloaded and ready to read.

- (b) Perform service disconnects (shutoffs) and reconnects (turnons) for enforcement of payment and for other utility requirements of accounts or for other violations of the OWNER's rules pertaining to water service. The OWNER will prepare a list of services to be shutoff for non-payment or other reasons and forward to VWNA. The shutoffs and reconnects shall be scheduled and conducted during normal business hours, Monday through Friday, excluding holidays.
- (c) Test meters in accordance with Public Utilities Commission (NHPUC), NHPUC Rule 605. Meters that do not comply with the accuracy standards of Rule 605 will be removed and replaced with an accurate meter from stock or from the new-meter inventory. Meters to be scrapped will not require testing. All replaced meters will be sealed to prevent tampering. Meters that fail the test will be repaired and/or replaced. For meters that are impractical to repair, the meter will be scrapped. Veolia Water

will update a meter record if available for the OWNER, or establish a meter record maintenance system. Meters that have been damaged due to abuse tampering or neglect will be repaired or replaced at the OWNER's expense.

- (d) Provide planned customer service requirements during normal working hours and the emergency customer service on a 24-hour a day, 7 days per week basis.
- (e) Maintain safe conditions at all water meter sites. Repair and replace broken covers and lids per the RRRMP. Clean dirt and debris from boxes and trim foliage around boxes to allow unimpeded meter reading.
- (f) Maintain portable water meters for use as necessary.
- (g) The service line is the pipe from the water main to the curb stop or the service line at the property line within the public right-of-way. Service line owned by the OWNER shall be maintained by VVNA as part of the RRRMP. Service lines will be part of the regular leak detection program.
- (h) Inform and update customers during service outages.
- (i) VVNA will provide a customer contact to answer all water quality-related customer inquiries. Typically, customers may have questions about water pressure, taste, odor or aesthetic issues. VVNA will respond to customer inquiries on these and other water quality issues in a timely fashion with accurate, helpful answers. Customer inquiries and the type of inquiry made will be tracked on an on-going basis so that VVNA and the OWNER may track any trends or concerns.
- (j) When feasible, VVNA will work with the OWNER to resolve any customer inquiries that could be alleviated by consumer education programs. VVNA will also establish a Water System Web Site for communication with the OWNER's customers. The Web Site will provide for transfer of information to the OWNER's customers.
- (k) VVNA will schedule customer appointments as required to perform field work.
- (l) VVNA will manage customer inquiries concerning tap fees. Records will be maintained of customer inquiries and VVNA's response to customers.

8.0 INSTRUMENTATION & CONTROLS

- (a) The OWNER shall be provided the capability to monitor executive-level SCADA report data and Agreement status reports. All Managed Asset OM&M records and data (with the exception of personnel records) will remain the property of the OWNER.

9.0 COMPUTERIZED OPERATION, MAINTENANCE & MANAGEMENT

- (a) The OWNER shall provide the existing investor owned utility's computerized (CMMS) maintenance management system to VVNA. VVNA expects that the CMMS is capable of: providing records of Preventive and Predictive Maintenance activities; providing a record of repair for each piece of equipment in the Managed Assets; scheduling and control of Preventive, Predictive and Corrective Maintenance;

monitoring of Predictive, Preventive and Corrective Maintenance programs and associated costs; issuing work orders; maintaining a spare parts inventory; and issuing equipment status and repair reports. The CMMS shall have a comprehensive Asset Registry. Any deficiencies in the CMMS shall be identified by VWNA in the transition period.

- (b) The CMMS shall be capable of providing data to the OWNER at the level of detail necessary for the OWNER to use its accounting system for fixed asset accounting, management, and for user-charge development and with the ability to maintain the Managed Assets records of accounts in accordance with NHPUC's guidelines for Class A Water Utilities (as currently promulgated or revised in the future). If desired by the OWNER, the accounting services to convert data and information from VWNA's work orders to NHPUC accounting requirements shall be performed by VWNA as supplemental services.
- (c) As an integral part of the computerized maintenance management system, VWNA shall establish an inventory control system to: account for the existing materials and parts; optimize the stocking of materials and parts; calculate the costs of materials and parts used for work orders; and control the ordering of materials and parts. The inventory control system shall be capable of tracking specific equipment, budgets and project costs.
- (d) VWNA shall also establish a Predictive Maintenance Program with a specific testing schedule and conducted in accordance with the approved RRRMP for the Managed Assets components. VWNA's initial Conditions Assessment Study shall provide input to the process VWNA will use to establish its Predictive Maintenance Program.
- (e) Computerized work orders shall be established and responded to in terms of a prioritized ranking system. Rankings shall be established for equipment based on importance to process operation and impact on permit requirements.
- (f) VWNA shall include maintenance activities in the CMMS. Areas that are to be covered by these standards are:
 - Buildings/structures
 - Grounds
 - Vehicles/equipment
 - Personal appearance
- (g) VWNA's OM&M computer software shall have the capability of retaining historical data and information for at least five years. Historical data and information shall not be discarded without OWNER approval. Information to be retained after five years shall be given to and archived by the OWNER.
- (h) Typical of VWNA's recorded data shall be the following:
 - Laboratory results and associated information
 - Operation parameters

- Maintenance performed
- Maintenance ordered
- Inventory on hand
- Purchases made
- Budget and cost information

10.0 ELECTRICAL

- (a) The OWNER shall provide all electrical facilities from the Investor Owned Utility necessary for the operation of the utility.
- (b) VWNA will provide operation and maintenance for all electrical facilities. Planned Maintenance will be performed in accordance with the OM&M Plan. All other electrical facility maintenance will be performed in accordance with the RRRMP.
- (c) VWNA shall operate the pumping facilities so as to maximize electrical efficiencies, while not sacrificing water quality or system integrity; shall identify and implement changes to reduce commodity charges; and shall evaluate the use of variable frequency drives to reduce demand charges.

11.0 SAFETY & SECURITY

- (a) Provide safety and security for the Managed Assets in compliance with applicable health and safety regulations and security guidance, including EPA and any Federal, State or local guidance regarding guarding against terrorist and security threats. Fences shall be maintained in neat order and with proper structural integrity.
- (b) Provide safety and security repairs and replacements as part of the CIP and RRRMP to protect the Managed Assets. This work shall be coordinated with the OWNER's risk manager. As a matter of routine OM&M services, VWNA shall keep the Managed Assets a safe environment for both employees and the public.
- (c) VWNA shall adhere to the requirements of Federal and State OSHA and ADA in performance of its obligations under this Agreement. During its initial year of operation, maintenance and management, VWNA shall review the Managed Assets for compliance with OSHA and ADA. VWNA shall note any deficiencies, suggest how compliance can be achieved, develop a preliminary cost estimate for compliance and submit this data for the Owner to include in its CIP or RRRMP.

12.0 VEHICLES, HEAVY EQUIPMENT, ROLLING STOCK, TOOLS

- (a) VWNA will implement a comprehensive maintenance program for the vehicles and heavy equipment that will include preventive and predictive maintenance.

13.0 COMPANY DELIVERABLES

OM&M Plan

Within the first 12 months of the Service Commencement Date, the existing OM&M Plan will be updated for the treatment facilities and other water system assets. The updated OM&M Plan will be used in conjunction with a detailed set of SOPs and unit process management strategies that will be prepared and coordinated with the operations and computerized maintenance software. The SOPs would include plant and source of supply operations, safety, maintenance, vehicles and heavy equipment and employees.

OM&M Plan will be updated annually, as required. Any new or replacement equipment will be included in OM&M Plan updates and automatically placed into the CMMS. All equipment manuals, as well as new or updated written manufacturers' materials, will be cataloged for future reference.

The updated OM&M Plan, to which Company SOP's are added, shall incorporate the existing Managed Assets. Thereafter the OM&M Plan shall be revised as necessary, for any changes to operations and maintenance practices, for any additions or revisions to standard operating procedures and for any Managed Assets modifications. The OM&M Plan shall incorporate practices as currently provided for in the existing OM&M Manuals, as required by applicable regulations, or in accordance with Prudent Industry Practice.

The OM&M Plan shall also address proper handling, loading, transportation, and use of all chemicals.

VWNA shall provide a draft OM&M plan to the OWNER for the OWNER to review compliance with this Agreement. Once the OWNER has approved the OM&M plan, VWNA shall provide two (2) sets of the approved OM&M plan to the OWNER. One approved set will be located with the OWNER's Oversight Contractor and the other approved set will be located at the water treatment facility.

The OM&M Plan shall address the following:

- Operations
- Maintenance
- Water Quality
- Emergency Response
- Risk Management
- Residuals Handling and Disposal
- Safety and Security
- Backflow Prevention and Cross Connection Control
- Regulatory Compliance
- Customer Service
- Quality Control and Quality Assurance
- O&M Manuals

The OM&M Plan shall include operating protocols which include, without limitation, VWNA's procedures for:

- Monitoring Raw Water quality and temperature;
- Identification of Raw Water conditions indicating the approach or threat of Unacceptable Raw Water Events;

- Notification by VWNA to the OWNER, of observation of Non-Compliance Event;
- Monitoring Finished Water and Product Water quantity and quality;
- Notification by VWNA to the OWNER and response actions if Finished Water or Product Water Quality Standards or Applicable Law standards are not being met;
- Notification by VWNA to the OWNER and response actions if permit violations are observed; and
- Notification by VWNA to appropriate federal, state and local agencies and to the OWNER in the event of security breaches or other emergencies at the Managed Assets.

(a) Operations

The objective of the operations portion of the OM&M Plan is to assure that the Managed Assets are operated in an efficient, safe manner consistent with this Agreement, Applicable Law, Prudent Industry Practices and equipment warranty provisions that reliably meets Finished Water Quality and Product Water Quality Standards and Product Water Demand. Consequently, the operations plan shall detail the procedures for normal, emergency and standby (if applicable) Managed Assets operations; specify equipment and process surveillance and operational data logging activities; and provide an operations quality control/quality assurance plan to assure that VWNA meets all of its obligations under this Agreement.

The operations plan shall: (i) contain copies of all permits, licenses, certifications, and other regulatory documents for VWNA's service; and (ii) specify the duties and responsibilities of all Company personnel at the Managed Assets and all tests to be conducted for the performance of this Agreement, including all sampling and analyses procedures and related quality control/quality assurance reports.

The quality control and quality assurance plan shall detail the operation and maintenance activity review program used by VWNA to monitor the quality and effectiveness of the OM&M Services under this Agreement and to correct any deficiencies.

(b) Maintenance

The objective of the maintenance portion of the OM&M Plan is to maintain the Managed Assets operability, durability, and reliability throughout its projected functional life. Consequently, the maintenance plan shall describe how VWNA shall:

- Plan and perform corrective, predictive and preventive maintenance on all Managed Assets in accordance with the recommendations of the manufacturer, Prudent Industry Practices and this Agreement;
- Detail the process used by VWNA to generate and track work orders that are specific to the item of equipment. These work orders shall outline the required maintenance, describing the work to be undertaken. The resultant maintenance work shall be logged as to when the work order was issued, when completed, by whom, duration of work, and listing of consumables used in providing the required work. This information shall be maintained for all equipment and presented on a monthly basis to the OWNER to confirm that the work is being undertaken as required so as to protect the investment in the infrastructure. All equipment usage, equipment maintenance and the status of all

maintenance work orders shall be logged through the CMMS system to provide the necessary input to the computerized maintenance management plan.

(c) Water Quality

VWNA shall evaluate and update existing Water Quality Plans.

VWNA shall implement Process Control Management Plans (PCMPs) and SOPs in accordance with the Regulatory Compliance Plan. VWNA will implement a site specific Laboratory Quality Control / Quality Assurance (QA/QC) Manual to include the following:

- i. Outline laboratory sampling and testing procedures
- ii. Outline all laboratory QA/QC procedures for both the in house lab and any outside contract labs.
- iii. Identify all raw water quality parameters, process control parameters, and finished/product water parameters to be tested with accompanying control limits as part of the PCMPs.

VWNA will develop and implement an employee training program to include the site specific Laboratory QA/QC Manual, the latest treatment techniques, best practices, and VWNA's PCMPs and SOPs for Water Production.

(d) Emergency Preparedness and Response Plan (EPRP)

VWNA shall maintain and update as applicable, the Emergency Preparedness and Response Plan (EPRP) in accordance with Federal and State regulations governing Emergency Action and Fire Prevention Plans and in co-operation with Federal, State and local officials and public safety departments. The EPRP shall describe VWNA actions during the occurrence of potential emergency situations (such as those that may result from natural disasters hurricanes, wind storms, floods, and earthquakes, terrorist activities, power failures, chemical and hazardous substances spills, sudden process failures, sudden critical equipment failures) and identify specific actions to minimize the chance of an emergency. The plan shall include a regulatory matrix that identifies applicable Federal, State and local laws or regulations and the associated element of the EPRP.

(e) Risk Management Plan (RMP)

VWNA shall be responsible for reviewing and updating the existing Risk Management Plan (RMP) document as necessary.

VWNA will work with the OWNER's risk manager in describing the approach to the technical elements of the RMP.

(f) Residuals Handling and Disposal Plan

VWNA shall prepare and/or update the existing residuals handling and disposal plan describing the residuals handling, storage and disposal methods and related permitting and transportation requirements. The residuals handling and disposal plan shall indicate the

location of the final disposal site(s) and shall contain a copy of the most recent permits related to the Managed Assets residuals handling and disposal. VWNA shall store residuals generated on site, transport and dispose of these residuals in accordance with all Applicable Law.

(g) Safety and Security Plan

VWNA shall provide for, and maintain, security and safety of the Managed Assets. VWNA shall develop and submit a safety and security plan as an integral part of the OM&M Plan. In the safety and security plan, VWNA shall describe how all safety, security and health laws, rules, regulations, and/or procedures shall be enforced. The safety and security plan shall also describe VWNA's in-house safety program, including, operations, maintenance, equipment isolation, safety, laboratory, chemical handling, confined space entry, emergency response, and safety equipment use. The safety and security plan shall comply with all aspects of the Managed Assets.

(h) Field Operations

The Field Operations activities has been previously described under Transmission and Distribution, paragraphs 4, 5 and 6 above and Customer Service, paragraph 7 above.

(i) Backflow Prevention and Cross Connection Control

VWNA will implement a backflow prevention and cross-connection program in accordance with the NHDES requirements. The cross-connection backflow prevention program shall be approved by the NHDES. The backflow prevention devices will be owned and maintained by the customers. VWNA will perform the other activities for the cross-connection program, including the following:

- Ensure customers have the backflow devices tested in accordance with NHDES requirements and provide the results to VWNA. High-hazard applications must be tested at a six-month frequency and all other at a 12 month frequency.
- Maintain a list of high-hazard locations as required by the NHDES.
- Maintain a list of low-hazard locations as required by the NHDES.
- Maintain a list of inspection frequency and inspection results as required by the NHDES.
- Provide an annual summary inspection form to the NHDES by February 1 of each year for the inspections that have occurred in the prior calendar year.

(j) Regulatory Compliance

VWNA's management team will develop and maintain positive relationships with all regulatory agencies having control over the Managed Assets.

Through the utilization of plant-specific Process Control Management Plans (PCMPs), SOPs, and the computerized process monitoring database (OPS 32), VWNA will ensure that the water works meets all regulatory requirements.

VWNA shall develop a Regulatory Compliance Plan that will:

- Develop and implement Managed Assets-specific PCMPs. These plans shall monitor daily operational parameters and alert both operators and management to situations that are either outside set operational limits or are trending in that direction.
- Develop and implement Standard Operating Procedures (SOPs).
- Implement a computerized plant process monitoring database (e.g., OPS 32).
- Maintain a comprehensive scheduling matrix of all regulatory compliance monitoring and reporting requirements.
- Develop action plans and recommend improvements for the Owner's CIP to improve the existing water treatment facilities to meet existing and future EPA, NHDES and other regulatory regulations.
- Implement regulatory update tools (e.g., www.cyberregs.com) to stay current about pending regulations that could impact operations.
- VVNA will monitor regulatory agencies for proposed and/or pending regulatory compliance rules and rules changes

14.0 RECORDS AND REPORTS

VVNA shall prepare required reports related to the OM&M of the Managed Assets pursuant to this Agreement and required by Applicable Law, as well as provide monthly and annual reports to the OWNER as described herein. VVNA shall meet at least once per month with OWNER representatives to review VVNA's performance. VVNA shall meet with the OWNER representatives on an annual basis to present and assist in the review of the annual data submitted. The OWNER and its designated representative(s) shall have full access to reports and data at all times.

All data generated by VVNA as part of the OM&M of the Managed Assets shall be the property of the OWNER (with the exception of confidential business information and personnel data). The data, records, reports are produced by VVNA on behalf of the OWNER.

Records

VVNA shall maintain records of historical data and information as described herein and as required by Applicable Law. The records shall be kept for each utility system as appropriate.

Reports to Regulatory Agencies

- VVNA shall submit required regulatory reports. The OWNER, if required to do so, agrees to sign such reports in a timely manner. Copies of all reports shall be sent to the OWNER and the appropriate regulatory agency by required deadlines. VVNA shall maintain records as required by the appropriate agency. Such records shall be accessible to the OWNER.

Reports to OWNER

VVNA shall provide the following reports to the OWNER:

- *Monthly Operations and Maintenance Report (MOR)* – VVNA shall prepare and provide to the OWNER and the applicable regulatory agency(ies) within 15 days of the end of each month, or sooner if required by Applicable Law, an operations and maintenance report for the Managed Assets which meets regulatory requirements.

At a minimum, VVNA shall identify any violations for the month and include a summary of Managed Assets performance testing results, including the performance with respect to permit parameters, status of maintenance, major expenditures, and other pertinent information of the Managed Assets.

The report shall: list the quantity and quality of the of the Raw Water, quantity of Finished Water, quantity of Product Water distributed, quality of Finished Water, quality of Product Water distributed, quantity of unaccounted water, booster pump station inspection results, documentation of any operations problems experienced; documentation of Residuals generated and transported for disposal; electricity, fuels and chemicals used; include maintenance monitoring reports; and include copies of any correspondence with regulatory agencies, including that associated with any violations.

The report shall also list all maintenance work performed, the maintenance plan for the next month, and record keeping activities, including work order status, spare parts inventories, etc. The report shall document accidents, injuries, damages to OWNER property, emergencies and alarm activation and the response actions taken by VVNA.

VVNA shall include executive and technical summaries of the data requested in the Monthly Operating Report and provide information regarding trends and developments.

VVNA shall provide monthly summary of all incidents and responses taken by VVNA to demonstrate the adequacy of and compliance with the EPRP.

VVNA shall include a monthly summary of the Managed Assets flushing activities in over the course of the month.

VVNA shall provide a monthly record of each main and service shut down that occurred during the month. The information includes location, duration, and number of customers affected.

Monthly Report of Unaccounted-for Water calculated in accordance with this paragraph 5 subparagraph (g) above.

A summary of complaints received and corrective actions taken by VVNA relating to its utility services.

- *Annual Operations and Maintenance Report* – Within 90 days after the end of each OWNER fiscal year, VVNA shall prepare a report presenting a summary of the past year's operation and maintenance activities for the utility systems based on the monthly reports and presenting planned activities for the present year. Operations and maintenance activities as well as Capital Maintenance and Capital Improvements performed an/or ongoing within the Managed

Assets shall be discussed. The report shall also document in sufficient detail for OWNER verification, monthly statements of VVNA, payments received by VVNA and any adjustments required in payments to the OWNER or to VVNA. After submission of the report, VVNA shall, at the OWNER's request, meet with the OWNER to review the report. VVNA's annual report will include an annual project status report summarizing project cost, process details, solids production, maintenance and repair, staffing, and other project-related information; and recommendations to improve operation, maintenance, and cost-effectiveness.

VVNA shall also provide an annual summary of all incidents and responses taken by VVNA to demonstrate the adequacy of and compliance with the EPRP.

- **Monthly Production Report** – This report provides a summary of the monthly production of Product Water. Included in these reports are hour run time summaries, flow readings, electric and gas meter readings, interconnect readings, well sounds, total water production by system and source, and daily production numbers.
- **Monthly Bacteria Monthly Monitoring Report** – This report required by the State of New Hampshire Department of Health Services, and Department of Environmental Services, provides a summary of all bacteria results, chlorine residuals, and water quality complaint activity, by each system. In addition, the report provides the results of all production source bacteria results.
- **Annual Consumer Confidence Report** – This annual report is a summary of all water quality results performed over the year. The report is sent to each customer prior to July 1 of each year for results received in the prior calendar year. A “camera ready” copy for the OWNER shall be completed by May 1 of the year due.

15.0 STAFFING

The Managed Assets shall be staffed in accordance with Applicable Legal Requirements and in a manner to ensure the Managed Assets is operated in the best and safest manner possible, consistent with Prudent Industry Practices. VVNA shall ensure that its Managed Assets operations work force is familiar with and complies with the safety requirements and conduct requirements contained in VVNA's employee handbook.

VVNA shall at all times maintain the number of qualified, certified and experienced employees, staff and third-party contractors to operate, maintain and manage the Managed Assets in accordance with this Agreement.

VVNA shall provide and maintain an organizational chart that lists job classification, the number of staff proposed for the transition phase and for the full-time operation. From time to time, VVNA shall notify the OWNER of any proposed revisions to the Staffing Plan.

16.0 LICENSES & CERTIFICATIONS

Management, supervisory, technical, laboratory, and operating personnel, shall be licensed and/or certified as required by the State of New Hampshire for operation, maintenance and management of the Managed Assets.

17.0 SUPPORT TO OWNER FOR COMMUNITY RELATIONS AND PUBLIC EDUCATION PROGRAMS

VWNA shall supply information and support the OWNER in development and implementation of its public partnership for education programs, including areas of water conservation and pollution prevention. VWNA shall: meet with and provide press releases; provide open houses and tours of the Managed Assets; participate in presentations to the public, elected officials and interested groups; participate in public events; and provide information and literature describing the Managed Assets.

VWNA shall provide the following as proposed:

- Conduct education and informational programs in the schools to increase awareness of the role of a water system plays in the community.
- Conduct water career opportunities workshop in the local colleges and high schools
- Establishing strong relationships with various community, civic, environmental and business groups
- Utilize the OWNER's Chamber of Commerce as an avenue for outreach to the OWNER businesses

18.0 LABORATORY SERVICES

VWNA shall perform all required sampling, testing and laboratory analyses for the Managed Assets, required by Applicable Law, whether for process control or otherwise, and prepare and file required reports on behalf of the OWNER. The laboratory must be certified for all analyses performed in accordance with Applicable Law. VWNA may perform these services itself or elect to utilize a contracted, State certified laboratory to perform any or all of the analytical testing required under this Agreement.

VWNA shall implement a laboratory quality assurance and quality control (QA/QC) program, per Prudent Industry Practices, to produce accurate, reliable and reproducible, and certifiable and legally defensible data. In addition, the (QA/QC) program shall include sampling, testing, and analysis and perform monitoring, compliance monitoring, sampling, testing, laboratory analyses, and reporting, all as necessary for process control and full compliance with Agreement Standards. All required testing necessary for compliance with permits and State and Federal programs shall be performed by a State certified laboratory.

APPENDIX E SUPPLEMENTAL SERVICES

Supplemental Services are work performed at the request/direction of the OWNER that are not otherwise provided for in the Agreement. Supplemental Services may be operational, construction, technical and/or managerial in nature.

Supplemental Engineering Services:

A. Description of Engineering Services

1. **Reviewing new construction.** VWNA will meet with developers and OWNER customers who request main extensions or new service installations. Review plans, establish appropriate sizing of facilities (may require additional services under item 6 below) and provide standards and specifications.
 - Item 1.a & 1.b: Review of an individual Residential service assumes a maximum of a two-hour effort, for Commercial or Industrial services assumes a maximum of four hours; any complications or extenuating circumstances that require additional time will be billed at the Project Engineer hourly rate.
 - Item 1.c: Main extension can vary significantly in terms of the complexity and time required to perform an adequate review and to meet with the customer's engineer; therefore, these services will be provided on an hourly rate basis for a Project Engineer. Customers will be given a Review Fee estimate based on the size and complexity of project prior to beginning review.
 - Item 1.d: Customers will be provided a hard copy of the Standard Water Main, Services and Appurtenances Specification upon request for a fixed fee.
2. **Inspecting new construction.** VWNA will provide on-site inspection of new installations to ensure compliance with City standards and specifications.
 - Item 2.a: This item does not include full-time inspection, but only the time required to make one inspection prior to backfilling a service, observe pressure testing, verifying that the as-built drawing provided by the customer are correct, and inputting the as-built record into the City system. Complications or extenuating circumstances that require significantly more time will be billed at the Project Engineer hourly rate.
 - Item 2.b: This item does not include full-time inspection, but only time required to make inspection during critical times prior to backfilling to verify compliance with stand specifications, observe pressure testing, verifying that the as-built drawing provided by the customer is correct, and observing disinfection of new facilities and appropriate follow-up bacteriological sampling before activation of lines. Complications or extenuating circumstances that require additional time will be billed at the Project Engineer hourly rate.
3. **Creating as-built records.** VWNA will create an as-built record of new

installations on an AutoCad file. Copies of all such files will be provided to the OWNER. For individual services, the customer will be responsible for supplying the as-built AutoCad file and VVNA will only enter the file into the OWNER's system per item 2.a above.

- Item 3.b: For Developer Projects, the customer will be responsible for supplying as-built records in an acceptable digital format and Veolia Water will enter this information into the OWNER's system on a rate per drawing.
 - Item 3.c: In cases where a Customer or the OWNER requires VVNA to create an as-built AutoCad file, the work will be performed on an hourly rate basis for an AutoCad Technician.
4. OWNER will provide a reasonably accurate GIS map of the water system; however, it may be necessary to provide updates on mains, hydrants and gate valve records. The updates to the OWNER's distribution mapping will be provided on an hourly rate basis for an AutoCad Technician. Any required field location or verification will be provided on an hourly basis by a Field Engineer.
 5. **Preparing hydraulic modeling and analysis.** OWNER will provide a working hydraulic model containing detailed computer files on the primary pipes, nodes, booster pumps (etc.) and storage of the distribution system.
 - Item 5.a: VVNA will become familiar with the hydraulic model and distribution system, and will be prepared to run specific queries for system improvements, fire flow determination or analysis of developer projects for a lump sum price.
 - Item 5.b: VVNA will provide system analysis to identify hydraulic bottlenecks, and low pressure areas, and also develop recommendations for additions and improvements on an hourly rate basis for a Senior Project Engineer and Staff Engineer.
 - Item 5.c: VVNA will assess the impact of future growth on the system for Developer projects; man-hours required to perform this analysis will be based on complexity of project, location within the system and number of iteration required. The cost will be based on hourly rates for a Senior Project Engineer and Staff Engineer, and an estimate will be provided to the Customer prior to commencement of work.
 6. **Preparing Fire Flow test and report.** VVNA will provide a Field Technician to perform fire hydrant flow tests, which includes operating the hydrant, the flow meter and the pressure gauge during hydrant test, taking readings and providing a summary report to the OWNER and the customer requesting the test.
 7. **Performing specialized watershed engineering studies.** VVNA will provide watershed management centered on the goals of protecting and improving the source water quality of the Water Works, developing water withdrawal protocols that ensure optimal source water quality and source water management, developing and implementing best management practices, and watershed water quality research and analysis to further understanding of the watershed and its long-term health. VVNA will work with OWNER and environmental groups

such as the Pennichuck Watershed Council to develop long-term strategies for the watershed. These services will be provided on an hourly rate basis for a Senior Project Engineer. Or, if the scope of services warrants, these services will be provided by a third-party under contract with VVNA and billed at cost plus Administrative Fee to the City. These services will be for watershed studies outside the scope of the initial study performed as described in the Agreement.

8. **Implementing Capital Planning for water system improvements.** VVNA will meet with the OWNER to review priorities and set goals for the overall Water System Capital Program. The planning function will be an ongoing activity that will provide a five-year plan with annual updates and recommended capital for the upcoming fiscal year. These services will be provided at no additional cost. Detailed plans, engineering and construction cost estimating will be provided as an additional services.
9. **Providing other engineering services, as required by the City.** VVNA will supply other engineering services for: detailed engineering studies; and GIS projects, on hourly rates based on the following rate schedule or will negotiate lump sum priced proposals on specific scopes of work as requested.

B. Supplemental Engineering Services Fee Schedule

The services described in Section A. above will be performed for the following fees.

The proposed service fees outlined in the following tables will be adjusted annually using the Escalator identified in Section 9.1(B)(2) of the Agreement.

Veolia Water – Proposed Service Fee – Supplemental Engineering Services		
Service		Price
1	New construction plan review	
	a. New services: Residential	\$200 per service
	b. New Service: Commercial or Industrial	\$400 per service
	c. Main extensions (varies with extent of each project)	\$106/hour
	c. Provide standard specifications	\$50 per set
2	Inspect new construction	
	a. Domestic services, including as-built	\$160 per service
	b. Mains and fire services	
	First 100 ft.	\$400
	Plus next 400 ft.	\$3 per foot
	Plus over 500 ft.	\$2.50 per foot
3	As-built records	
	a. Services –	See 2 a. above
	b. Mains – assumes all plans provided to	\$400 per sheet

Veolia Water – Proposed Service Fee – Supplemental Engineering Services		
Service		Price
	City in acceptable digital format	
	c. Create Digital as-built Records	\$62/hour (AutoCad Technician)
4	Updates to GIS mapping	
	a. Pipe records from as-built	\$62/hour (AutoCad Technician)
	b. Service records from as-built	\$62/hour (AutoCad Technician)
	c. Gate valve and hydrant records	\$62/hour (AutoCad Technician)
	d. Field location of service, valves or gates	\$75/hour (Field Engineer)
5	Unaccounted for water audit	Cost included in Base Fee
6	Hydraulic modeling and analysis	
	a. Base Modeling – assumes the City provides working model and data.	\$5,000/lump sum
	b. System improvement analysis	\$90/hour (Staff Eng.) & \$106/hr (Project Engineer) as required
	c. Model run for developers	\$90/hour (Staff Eng.) & \$106/hr (Project Engineer) as required
7	Pump efficiency tests – annual, all 4 stations	Cost included in Base Fee
	Assumes all pumps are metered, pressure taps are installed and pump curves are available	
8	Fire flow tests, includes report to City	\$300 per test
9	Watershed engineering studies	\$125/hour (Senior Project Engineer)
10	Capital planning	Cost included in Base Fee
11	Other services	See attached Rate Schedule
	Contractor will charge the City for Engineering Services on a time and materials basis. For each task to be performed, Contractor will submit an estimate to the City. At the completion of the project, Contractor will submit an invoice to the City for the work performed.	

Hourly Rate Billing Schedule		
Position	Tasks/Responsibilities	Billing Rate
1- Senior Project Manager	Client relationship, coordinates & oversees work	\$156/hr
2- Project Manager	Schedules, budgets, procurement, project coordination.	\$135/hr

Hourly Rate Billing Schedule		
Position	Tasks/Responsibilities	Billing Rate
3- Senior Project Engineer	Studies/planning/engineering	\$125/hr
4- Project Engineer	Plan review, GIS & hydraulic modeling	\$106/hr
5- Field Engineer	Construction observation, field measurements, data collection	\$78/hr
6- Staff Engineer	Support Studies/eng/modeling tasks	\$90/hr
7- AutoCad Technician	Preparation of drawings & as-builts, GIS updates	\$62/hr
8- Senior Resident Inspector	Inspects construction, field reports	\$95/hr
9- Resident Inspector	Inspects construction, field reports	\$84/hr
10- Administrative support	Administrative functions	\$60/hr

Supplemental Field and Treatment Plant Services

Supplemental services performed by on-site operations personnel shall be at the rates set forth in Exhibit E-1.

Other Supplemental Services:

1. Information technology and systems support, financial and accounting support, or other functional support such as customer service or billing and collection personnel: If requested or required any time after Notice to Proceed, to assist City with transition requirements, or for on-going requirements after Commencement Date, VWNA will provide assistance with IT, and/ or financial and accounting support and/or other functional support such as customer service or billing and collection personnel as assistance to City to provide the functional information systems to manage the Managed Assets and in support to City to establish systems they require for their accounting, customer service support, and for water billing and collection services including CIAC and deposit requirements, and work order systems. These services include assessment of system needs, license management support for City, implementation planning and budgeting support, procurement support, and project and budget management.

These supplemental services will be performed with both internal company resources and external professionals as required and will be billed to City. Billing for these internal VWNA services will be for fully

burdened costs, plus incidental costs and third-party costs plus 12% (twelve percent).

The Company will work with City to develop scope definitions and budgetary costs on a project by project basis.

2. Other Services: At the OWNER's direction, and upon VWNA's consent, VWNA shall, in addition to the Engineering services listed, provide other Supplemental Services when requested. Some examples would be: PUC support for rate making, administrative filings, or expert testimony; providing information necessary for the OWNER to perform the "modified approach" to GASB 34; or to provide additional customer service functions than those outlined in the scope of the Agreement.

The cost of supplying these Other Supplemental Services will be subject to negotiation and agreement between OWNER and VWNA.

Capital Program Management Services and Rates

If requested by OWNER, VWNA shall provide Capital Program Management (CPM) Services for the City funded capital improvements. The cost of CPM Services is not included in the Annual Fee set forth in this Agreement and is in addition to the annual listing of recommended capital improvements set forth in Section 6.11, which is included in the base fee. CPM shall include engineering and technical services to oversee the City capital investment program including detailed capital planning, project evaluation and prioritization, value engineering, project engineering, project management and project startup.

Implementation of capital projects by Veolia Water will be in accordance with one of the following execution alternatives.

Execution Alternative I:

The costs of the CPM Services shall be in accordance with the following rates. VWNA will charge the OWNER for Engineering and Technical Services on a time and materials basis. For each project to be performed, VWNA will submit an estimate to the OWNER for the major tasks. At the completion of the project, any invoices for services provided by Contractors for the project will be reviewed and approved by VWNA and presented to the OWNER for Payment.

The Proposed Service Fee's outlined in the following tables will be adjusted annually using the Escalator identified in Section 9.1(B)(2) of the Agreement.

Hourly Rate Billing Schedule		
Position	Tasks/Responsibilities	Billing Rate
1- Senior Project Manager	Client relationship, coordinates & oversees work	\$156/hr
2- Project Manager	Schedules, budgets, procurement, project coordination, project management	\$135/hr
3- Senior Project Engineer	Studies, planning, engineering, project management	\$125/hr
4- Project Engineer	Studies, planning, engineering, project management	\$106/hr
5- Field Engineer	Construction observation, field measurements, data collection	\$78/hr
6- Staff Engineer	Studies, planning, engineering, project management	\$90/hr
7- AutoCad Technician	Preparation of drawings & as-builts, GIS updates	\$62/hr
8. Senior Construction Manager	Oversees the construction of major capital projects	\$135/hr
9. Senior Construction Engineer	Oversees the construction of major capital projects	\$125/hr
-10- Senior Resident Inspector	Inspects construction, field reports	\$95/hr
11- Resident Inspector	Inspects construction, field reports	\$84/hr
12- Administrative support	Administrative functions	\$60/hr

Execution Alternative II:

VWNA will provide the preliminary project design, billed according to the rates above, and provide a total not to exceed project cost for all engineering and construction services for the project.

Construction Services for Third-Parties

If requested, VWNA will perform certain construction services for the benefit of parties other than the OWNER. Where such work is performed, it shall be authorized by the OWNER and VWNA shall bill the City according to the rates/prices in Exhibit E-1.

Exhibit E-1

FEE SCHEDULE FOR CONSTRUCTION PROJECTS

The Fee Schedule for construction projects performed by the Company shall be either fixed price or variable priced based on a schedule of rates. The fixed price and the variable rates shall be adjusted annually based on the Annual Fee adjustment in the Agreement.

1. Variable Rate Pricing for Construction Projects

Fee Schedule for Construction Projects Labor and Equipment Rates			
Labor Costs	Rates per Hour		
	Regular	Premium	Other
Plant Maintenance Foreman	\$51.21	\$76.81	--
Plant Maintenance Technician	\$43.33	\$65.00	--
CWS/WQ Systems Technician	\$38.95	\$58.43	--
I&C Technician	\$50.33	\$75.50	--
Chief Operator	\$46.03	\$69.04	
Plant Operator	\$38.95	\$58.42	
Production Engineer	\$60.98	\$91.47	
Plant/Lab Manager	\$60.98	\$91.47	
Water Quality Specialist	\$49.18	\$73.77	
T&D Working Foreman	\$45.96	\$68.94	--
T&D Field Ser. Tech 1	\$38.95	\$58.43	--
T&D Field Ser. Tech 2	\$43.33	\$65.00	--
Dispatcher	\$43.33	\$65.00	--
Planner	\$45.96	\$68.94	--
Equipment Costs			
Backhoe	--	--	\$27.00
Dump Truck	--	--	\$27.00
Compressor	--	--	\$14.00
Service Truck	--	--	\$17.00
Small Equipment (generator, trailer, etc.)	--	--	\$5.00

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Other Vehicles, heavy equipment and specialized tools			\$9.00
<ul style="list-style-type: none">• Regular hours are normal working hours, Monday through Friday, for non-holiday periods, and are fully burdened.• Premium Pay is the rate for time and one half paid for Saturday, Sunday and holiday periods, as well as for Monday through Friday after normal working hours, and are fully burdened.• Materials and Supplies -Materials and supplies used by Veolia Water will be invoiced as part of the charges for work performed by Veolia Water at a price equal to the actual cost plus 12%.• Outside Services/Contractors - The use of contractors by Veolia Water for Unplanned Maintenance will be invoiced as part of the charges for work performed by Veolia Water at a price equal to the actual cost plus 12%.• Annual Adjustment to Fee Schedule -The Labor and Equipment Costs shall be adjusted by the Escalator set forth in Section 9.1(B)(2) of the Agreement.			

2. Fixed Pricing for Construction Projects

Fixed pricing for construction projects is as outlined below.
Fixed pricing for Supplemental Services shall be negotiated.

Prices set forth below:

1. Do not include the cost of restoration work (i.e. select and flowable backfill, gravel and temporary asphalt);
2. Do not include fittings;
3. Assumes the use of copper for service lines less than or equal to 2";
4. Assumes the use of DI Pressure Class 52 pipe material;
5. Pipe units do not include pipe fittings, appurtenances, materials or installation;
6. Replace all in-place costs, including all labor, straight pipe, installation, equipment, software issues, and are inclusive of soft costs (e.g., engineering) unless otherwise noted.
7. Project prices may be singular or additive as appropriate for the units to be installed.

Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
Transmission and Distribution (T&D)	New water mains for Developer Projects (Engineering is under Supplemental Services)	2" and smaller	\$ per LF	TBD	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New water mains for Developer Projects (Engineering is under Supplemental Services)	3" or 4"	\$ per LF	TBD	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New water mains for Developer Projects (Engineering is under Supplemental Services)	6"	\$ per LF	TBD	1000 LF minimum per project. Under 1000 LF will be priced per job.

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	New water mains for Developer Projects (Engineering is under Supplemental Services)	8"	\$ per LF	TBD	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New water mains for Developer Projects (Engineering is under Supplemental Services)	10"	\$ per LF	TBD	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New water mains for Developer Projects (Engineering is under Supplemental Services)	12"	\$ per LF	TBD	1000 LF minimum per project. Under 1000 LF will be priced per job.
	Tapping water mains (Includes the valve)	4"	\$ per tap	TBD	
	Tapping water mains (Includes the valve)	6"	\$ per tap	TBD	
	Tapping water mains (Includes the valve)	8"	\$ per tap	TBD	
	New Valves for Developer Projects	2" and smaller	\$ per valve	TBD	
	New Valves for Developer Projects	3" and 4"	\$ per valve	TBD	
	New Valves for Developer Projects	6"	\$ per valve	TBD	
	New Valves for Developer Projects	8"	\$ per valve	TBD	
	New Valves for Developer Projects	10"	\$ per valve	TBD	
	New Valves for Developer Projects	12"	\$ per valve	TBD	

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	New hydrants (New development)		\$ per hydrant	TBD	Add the cost of the fittings, valve and pipe
Customer Service	New meters with the setter (Meter box to be an added cost)	5/8"	\$ per meter	TBD	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	3/4"	\$ per meter	TBD	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	1"	\$ per meter	TBD	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	1 1/2"	\$ per meter	TBD	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	2"	\$ per meter	TBD	Add the cost of the AMR or encoder.
	Curb box for meter	4'	\$ per box	TBD	
	Additional for AMR Remote		\$ per AMR	TBD	
	Additional for Encoder Remote		\$ per Encoder	TBD	
	New service lines including the curb stop (Developer projects with unpaved cover)	3/4"	\$ per Short Service	TBD	Less than 50 LF
	New service lines including the curb stop (Developer projects with unpaved cover)	1"	\$ per Short Service	TBD	Less than 50 LF
	New service lines including the curb stop (Developer projects with unpaved cover)	1 1/2"	\$ per Short Service	TBD	Less than 50 LF
	New service lines including the curb stop (Developer projects with unpaved cover)	2"	\$ per Short Service	TBD	Less than 50 LF

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	New service lines including the curb stop (Developer projects with unpaved cover)	3/4"	\$ per Long Service	TBD	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	New service lines including the curb stop (Developer projects with unpaved cover)	1"	\$ per Long Service	TBD	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	New service lines including the curb stop (Developer projects with unpaved cover)	1 1/2"	\$ per Long Service	TBD	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	New service lines including the curb stop (Developer projects with unpaved cover)	2"	\$ per Long Service	TBD	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	New service taps (Developer projects non-cover)	3/4"	\$ per Tap	TBD	
	New service taps (Developer projects non-cover)	1"	\$ per Tap	TBD	
	New service taps (Developer projects non-cover)	1 1/2"	\$ per Tap	TBD	
	New service taps (Developer projects non-cover)	2"	\$ per Tap	TBD	
	New or replacement service taps	3/4"	\$ per Tap	TBD	
	New service taps (Developer projects non-cover)	1"	\$ per Tap	TBD	
	New service taps (Developer projects non-cover)	1 1/2"	\$ per Tap	TBD	

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	New service taps (Developer projects non-cover)	2"	\$ per Tap	TBD	
	Fittings Based on a schedule.			Per Schedule	

APPENDIX G

CAPITAL IMPROVEMENTS PROJECTS

1. CAPITAL IMPROVEMENT PROJECTS GENERALLY

Capital improvements projects generally consist of major planned projects to improve or enhance the performance of the Managed Assets. Capital improvement projects are differentiated from normal Operation, Maintenance and Management Services (OM&M) described and set forth in Appendix D, and Renewal, Repair and Replacement Maintenance (RRRM) projects described and set forth in Appendix H.

It is the intent of the parties that the OWNER, in its sole discretion, will negotiate contracts for completion of Capital Improvement Projects for compensation with VWNA or with third-party contractors at OWNER's expense.

Third-party contractors shall be managed by Owner or Owner's representatives to ensure that:

- (a) Third-party contractors do not impede VWNA's OM&M of the Managed Assets, and that they follow security, health, safety and environmental policies of VWNA and OWNER;
- (b) CIPs performed by third-party contractors perform to all applicable specifications, Applicable Law and Prudent Industry Practice; and
- (c) Third-party contractors are responsible for any damage to Managed Assets and grounds or roads, including clean-up and disposal of any debris from performance of their CIP scope.

2. CAPITAL IMPROVEMENTS PLAN

- A. Initial Plan.** VWNA shall prepare an initial Capital Improvements Plan (CIP) as part of the Transition Services provided in accordance with the Agreement and Appendix Q, and the data produced in the Condition Study as detailed in Appendix O.
- B. Periodic Updates.** As part of the annual fee, VWNA will monitor Managed Assets in order to identify capital improvement projects necessary for the OM&M as the Managed Assets in accordance with this Agreement. Based on its monitoring of the Managed Assets, VWNA shall update the CIP annually on a schedule consist with OWNER's capital budget cycle to include capital improvement projects that are required for the OM&M of the Managed Assets in accordance with the provisions of this Agreement.
- C. Contents.** The CIP shall include the following:
 - i. VWNA will identify capital improvement projects necessary for the OM&M of the Managed Assets in accordance with this Agreement, or in order to meet prospective operating parameters, such as changes in regulatory standards.

- ii. Capital improvement projects identified in the CIP will be ranked as provided in the OWNER's capital improvements planning process but will include projects with a prospective cost in excess of \$10,000. Projects with a prospective cost in excess of \$50,000 will be submitted a format deemed mutually agreeable to the parties.
- iii. Capital improvement projects in the CIP shall include sufficient information to evaluate each project and a budgetary estimate of its probable cost.

D. Detailed CIP. As a Supplemental Service, upon written request from the OWNER, VWNA shall prepare detailed CIP for capital improvement projects to strengthen or improve performance of the Managed Assets, enhance the efficiency or for other purposes.

3. EXAMPLES OF CAPITAL IMPROVEMENT PROJECTS

The following are examples of typical capital improvement projects:

- Well and well pump rehabilitation.
- New or replacement wells and abandonment of old wells.
- Driveway and parking lot replacement or complete resurfacing.
- Major installation of new water main and appurtenances.
- Major replacement or rehabilitation of existing water mains, service lines and associated appurtenances.
- Major modifications, replacements and relocations to facilitate public works projects.
- New or replacement fencing identified as a result of security and safety audits.
- Expansion of safety and/or security systems.
- Construction of new pumping station.
- Storage tank installations or major repair.
- Chemical conversion projects.
- Construction of new electrical facilities.
- Telecommunications, computer and software systems; except for personal computers which will be replaced under the annual fee up to a rate of five (5) per year, after the first year of operations.
- Construction of new sludge lagoons.
- Installation of new water treatment equipment or technologies.
- New and replacement specialized tools, vehicles and heavy equipment.
- Complete repainting of facilities, equipment, tanks, etc.
- Dam and river intake repairs and rehabilitation.

APPENDIX F

INSURANCE COVERAGE

VWNA SHALL MAINTAIN:

1. Statutory workers compensation for all of VWNA's employees at the Project as required by the State of New Hampshire.
2. Comprehensive general liability insurance, insuring VWNA's negligence, in an amount not less than \$5,000,000 combined single limits for bodily injury and/or property damage.
3. Excess liability insurance above the required commercial general liability insurance above in aggregate amount of \$10,000,000.

OWNER SHALL MAINTAIN:

1. Statutory workers compensation for all of OWNER's employees associated with the Project as required by the State of New Hampshire.
2. Property damage insurance for all property including vehicles owned by OWNER and operated by VWNA under this Agreement. Any property, including vehicles, not properly or fully insured shall be the financial responsibility of the OWNER. The OWNER's property damage insurance shall contain a waiver of subrogation in favor of VWNA.
3. Automobile liability insurance for collision, comprehensive, and bodily injury. VWNA shall be responsible for liability arising from the operation of any vehicle by any employee of VWNA not authorized by the Owner.

Each party will cause the other party to be added as additional insured on the above insurance policies and will require its insurance carrier to provide the other party at least thirty (30) days notice of the cancellation or non-renewal of such policies. Each party shall be responsible for ensuring that all subcontractors retained by that party, which are working at or on the Managed Assets, secure and maintain all insurance coverages (including worker's compensation insurance) required by the New Hampshire law in connection with their presence and the performance of their duties at or concerning the Managed Assets. VWNA may self-insure reasonable deductible amounts under the policies it is required to

maintain to the extent permitted by law. Each policy shall provide a waiver of subrogation in favor of the other party.

All policies hereunder shall be written with an insurance carrier licensed to do business in New Hampshire and having a rating of no less than A-.

VWNA subcontractors shall be subject to the coverages herein or VWNA shall name them as additional insureds under its policies. In either case, VWNA shall provide Owner and Risk Manager with appropriate proof of coverage for such subcontractors.

APPENDIX H

RENEWAL, REPAIR AND REPLACEMENT MAINTENANCE (RRRM)

1. RRRM MAINTENANCE

- (a) As set forth in this Agreement, Renewal, Repair, and Replacement Maintenance (RRRM) is intended to include all maintenance activities related to the Managed Assets with a life expectancy greater than one year except where such maintenance activities have been defined by this Agreement as OM&M under Appendix D, or as Capital Improvement Projects under Appendix G. Examples of RRRM projects are outlined below.
- (b) VWNA shall provide all RRRM Services, including renewals, repairs and replacements considered to be maintenance items, to the machinery, equipment, facilities, pipes, valves, hydrants and structures constituting the Managed Assets that are in need of repair or fail during the Term of the Agreement.
- (c) Schedule H-1 set forth the rates and/or prices for performance of the RRRP work. The rates and/or prices shown in Exhibit H-1 shall be adjusted annually in accordance with the Service Fee Adjustment Factor for the Fixed Component of the Service Fee.
- (d) No later than 90 days prior to the OWNER's fiscal year VWNA will prepare a detailed breakdown and budget for expected RRRM Services to be provided based upon reasonable efforts and Prudent Industry Practice. The OWNER will review VWNA's proposed breakdown and budget and will approve final RRRM budget 60 days prior to the beginning of the fiscal year. The OWNER and VWNA will work together to monitor budget estimates against actual costs and make appropriate adjustments in order to perform RRRM Services in compliance with this Agreement, applicable laws and Prudent Industry Practice and, where consistent with the foregoing, within budgets approved by OWNER.
- (e) Except as necessary for unplanned or emergency conditions, RRRM Services above and beyond the approved RRRM budget will be carried out only with the approval of the OWNER. For such approval, VWNA shall submit project details and cost estimates for the additional funding requirement. As a minimum, the OWNER shall provide the required additional funding for VWNA to continue to provide customers quality water service and address emergency needs in excess of the amounts provided for budget purposes.
- (f) The lists of specific types of projects in this Appendix are for purposes of illustration and are not intended to be inclusive.

2. SOURCE OF SUPPLY (SOS)

RRRM Services shall include the following:

1. Physical inspection of wells and intake structures
2. Cleaning, repairing and rehabilitating wells, well equipment and related appurtenances
3. Abandoning wells, well equipment and related appurtenances
4. Replacement of wells, well equipment and related appurtenances
5. New Source of Supply, including all project costs, facilities, equipment, etc.
6. Repair and maintenance to dams and dam structures
7. Replacement of existing sources of supply facilities including dams and intake structures
8. Well Head Protection
9. Other projects related to Sources of Supply determined on a case by case basis.

3. WATER TREATMENT PLANT (WTP)

RRRM Services shall include the following:

1. Regulatory mandated Improvements
2. New plant and/or equipment and all related appurtenances
3. Repair or replace existing plant and/or equipment and all related appurtenances
4. Replacement or addition of filter media and all related appurtenances
5. The repair or the replacement of water treatment plant equipment
6. Other projects related to WTP determined on a case by case basis.

4 TRANSMISSION & DISTRIBUTION - PUMP STATIONS

RRRM Services shall include the following:

1. Repair or replacement of existing pumps, motors and related appurtenances
2. Repair or replacement of existing pumps, motors and related appurtenances with upgraded capacity
3. New Pump Stations and/or equipment and related appurtenances

4. Repair or replacement of Pump Stations and/or equipment and related appurtenances
5. Repair or replacement of Pump Station and/or equipment and related appurtenances with upgraded capacity.
6. Other projects related to Transmission & Distribution – pump stations determined on a case by case basis.

5. TRANSMISSION & DISTRIBUTION – PIPES AND APPURTENANCES

RRRM Services shall include the following:

1. Responding to and repairing emergency leaks on mains, valves, hydrants, services and meters.
2. Thawing and/or repairing frozen mains, services, hydrants and meters.
3. Replace existing water mains with larger size
4. Water main lining projects
5. Replace or rehab. existing water mains with like size
6. New water mains, valves, hydrants and other appurtenances for third parties
7. New valves
8. Valve Replacements
9. New or Replacement Flow and Pressure Control Valves
10. Hydrant Replacements
11. New hydrants
12. Other projects related to Transmission & Distribution – pipes and appurtenances determined on a case by case basis.

6. TRANSMISSION & DISTRIBUTION – RESERVOIRS AND TANKS

RRRM Services shall include the following:

1. Tank repairs and painting
2. Replacement reservoirs and tanks
3. New reservoirs and tanks
4. Rehabilitation of Tanks and Reservoirs to include, washdowns, dry inspections, dive inspections, and chemical treatments

7. CUSTOMER SERVICE

RRRM Services shall include the following:

1. New Meters
2. Replacement Meters with new meters
3. New Service Lines
4. Replacement Service Lines

8. INSTRUMENTATION & CONTROLS

RRRM Services shall include the following:

1. New instruments and appurtenances, including all setup costs
2. Repair or replacement instruments and appurtenances, including all setup costs
3. New controls and appurtenances, including all setup costs
4. Repair or replacement controls and appurtenances, including all setup costs
5. New Hardware and/or Software for the SCADA or PLC systems
6. Repair or replacement Hardware and/or Software for the SCADA and PLC systems
7. New communications and appurtenances, including all setup costs
8. Repair or replace communications and appurtenances, including all setup costs

9. ELECTRICAL

RRRM Services shall include the following:

1. New electrical facilities
2. Repair or replace existing electrical facilities
3. New wiring and appurtenances
4. Repair or replace wiring and appurtenances
5. New lighting and appurtenances
6. Repair or replace lighting and appurtenances
7. New and replacement auxiliary generators

10. CIVILWORKS

RRRM Services shall include the following:

1. Civil Works including buildings, parking lots, roads, grounds and related appurtenances
2. Rehabilitate buildings and grounds and all related appurtenances
3. Replace buildings and grounds and all related appurtenances
4. Replace roofs and all related appurtenances
5. Painting of buildings and all related appurtenances
6. Major Repairs to buildings and grounds and all related appurtenances

11. SAFETY & SECURITY

RRRM Services shall include the following:

1. Expand security
2. Expand safety
3. Expand technology applications
4. Repair or replace security items
5. Repair or replace safety items
6. Repair or replace existing technology
7. Repair or replace existing computers and software (Excludes PC's)(Includes SCADA computers, and servers)
8. New Computers and software

12. VEHICLES, HEAVY EQUIPMENT, ROLLING STOCK, TOOLS

1. RRRM Services shall include the following: Repairs to vehicles and Heavy Equipment, other rolling stock and specialized tools.
2. Replace existing vehicles, heavy equipment, other rolling stock and specialized tools
3. Expand fleet of vehicles, heavy equipment, other rolling stock and specialized tools.

13. PLANNING & ENGINEERING

RRRM Services shall include the following:

1. Engineering and construction management for RRRM projects
2. Engineering evaluations and studies for RRRM projects

14. MISCELLANEOUS

RRRM Services shall include the following:

1. Costs related to adding new customers including the meter, service line and tap
2. Dismantling and disposing of existing plant and equipment and related appurtenances
3. Relocation, replacement and/or modification of a Managed Asset due to public works projects, etc.
4. Repair structural problems and failures
5. Repair or replace a Managed Asset due to natural disaster, terrorism or other causes
6. Cleanout or repair sludge lagoons and other sludge storage facilities
7. Upgrade existing or construct new sludge lagoons
8. Priority Upgrading Works Program
9. All Property purchased or leased for the operation of the project
10. All Easements purchased or leased for the operation of the project

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Exhibit H-1

FEE SCHEDULE FOR RRRM MAINTENANCE PROJECTS

The Fee Schedule for RRRM projects performed by VVNA shall be either fixed price or variable priced based on a schedule of rates. OWNER shall determine at the beginning of each Contract Year whether to use fixed prices or variable prices going forward. The fixed price and the variable rates shall be adjusted annually based on the Annual Fee adjustment in the Agreement.

1. Variable Rate Pricing for RRRMP Projects

Fee Schedule for RRRMP Maintenance Labor and Equipment Rates for Unplanned Maintenance			
Labor Costs	Rates per Hour		
	Regular	Premium	Other
Plant Maintenance Foreman	\$51.21	\$76.81	--
Plant Maintenance Technician	\$43.33	\$65.00	--
CWS/WQ Systems Technician	\$38.95	\$58.43	--
I&C Technician	\$50.33	\$75.50	--
Chief Operator	\$46.03	\$69.04	
Plant Operator	\$38.95	\$58.42	
Production Engineer	\$60.98	\$91.47	
Plant/Lab Manager	\$60.98	\$91.47	
Water Quality Specialist	\$49.18	\$73.77	
T&D Working Foreman	\$45.96	\$68.94	--
T&D Field Ser. Tech 1	\$38.95	\$58.43	--
T&D Field Ser. Tech 2	\$43.33	\$65.00	--
Dispatcher	\$43.33	\$65.00	--
Planner	\$45.96	\$68.94	--
Equipment Costs			
Backhoe	--	--	\$27.00
Dump Truck	--	--	\$27.00
Compressor	--	--	\$14.00

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Service Truck	--	--	\$17.00
Small Equipment (generator, trailer, etc.)	--	--	\$5.00
Other Vehicles, heavy equipment and specialized tools			\$9.00
<ul style="list-style-type: none"> • Regular hours are normal working hours, Monday through Friday, for non-holiday periods, and are fully burdened. • Premium Pay is the rate for time and one half paid for Saturday, Sunday and holiday periods, as wells as for Monday through Friday after normal working hours, and are fully burdened. • Materials and Supplies -Materials and supplies used by Veolia Water will be invoiced as part of the charges for work performed by Veolia Water at a price equal to the actual cost plus 12%. • Outside Services/Contractors - The use of contractors by Veolia Water for Unplanned Maintenance will be invoiced as part of the charges for work performed by Veolia Water at a price equal to the actual cost plus 12%. • Annual Adjustment to Fee Schedule -The Labor and Equipment Costs shall be adjusted by the Escalator set forth in Section 9.1(B)(2) of the Agreement. 			

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2. Fixed Pricing for RRRMP Projects

Fixed pricing for the routine RRRM projects shall be negotiated. .

Prices set forth below:

1. Do not include the cost of restoration work (i.e. select and flowable backfill, gravel and temporary asphalt);
2. Do not include fittings;
3. Assumes the use of copper for service lines less than or equal to 2";
4. Assumes the use of DI Pressure Class 52 pipe material;
5. Pipe units do not include pipe fittings, appurtenances, materials or installation;
6. Replace all in-place costs, including all labor, straight pipe, installation, equipment, software issues, and are inclusive of soft costs (e.g., engineering) unless otherwise noted.
7. Project prices may be singular or additive as appropriate for the units to be installed.

Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
Source of Supply					
Treatment					
Pumping					
Transmission and Distribution (T&D)	Repair water main	2" and smaller	\$ per repair	TBD.	Over 5 LF of pipe will use the variable pricing from Appendix H.
	Repair water main	3" and 4"	\$ per repair	TBD.	Over 5 LF of pipe will use the variable pricing from Appendix H.
	Repair water main	6" and 8"	\$ per repair	TBD.	Over 5 LF of pipe will use the variable pricing from Appendix H.
	Repair water main	10" and 12"	\$ per repair	TBD.	Over 5 LF of pipe will use the variable pricing from Appendix H.

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	New or replace existing water mains under cover (Engineering is under Supplemental Services)	2" and smaller	\$ per LF	TBD.	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New or replace existing water mains under cover (Engineering is under Supplemental Services)	3" or 4"	\$ per LF	TBD.	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New or replace existing water mains under cover (Engineering is under Supplemental Services)	6"	\$ per LF	TBD.	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New or replace existing water mains under cover (Engineering is under Supplemental Services)	8"	\$ per LF	TBD.	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New or replace existing water mains under cover (Engineering is under Supplemental Services)	10"	\$ per LF	TBD.	1000 LF minimum per project. Under 1000 LF will be priced per job.
	New or replace existing water mains under cover (Engineering is under Supplemental Services)	12"	\$ per LF	TBD.	1000 LF minimum per project. Under 1000 LF will be priced per job.

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	Tapping water mains (Includes the valve)	4"	\$ per tap	TBD.	
	Tapping water mains (Includes the valve)	6"	\$ per tap	TBD.	
	Tapping water mains (Includes the valve)	8"	\$ per tap	TBD.	
	Valve Replacements	2" and smaller	\$ per valve	TBD.	
	Valve Replacements	3" and 4"	\$ per valve	TBD.	
	Valve Replacements	6"	\$ per valve	TBD.	
	Valve Replacements	8"	\$ per valve	TBD.	
	Valve Replacements	10"	\$ per valve	TBD.	
	Valve Replacements	12"	\$ per valve	TBD.	
	Hydrant New or Replacements		\$ per hydrant	TBD.	Add the cost of the fittings, valve and pipe
Restoration and Other	Asphalt Pavement (Paving machine)		\$ per Ton	TBD.	
	Asphalt Pavement (Hand placed)		\$ per Ton	TBD.	
	Concrete Pavement		\$ per cu. yd.	TBD.	
	Asphalt Saw Cutting		\$ per LF	TBD.	
	Concrete Saw Cutting		\$ per LF	TBD.	
	Asphalt Curbing		\$ per LF	TBD.	
	Concrete Curbing		\$ per LF	TBD.	

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	Granite Curbing		\$ per LF	TBD.	
	Sidewalks		\$ per sq. yd.	TBD.	
	Seeding and mulching		\$ per sq. yd.	TBD.	
	Sod		\$ per sq. yd.	TBD.	
	Select backfill and aggregate		\$ per cu. yd.	TBD.	
	Flowable fill		\$ per cu. yd.	TBD.	
	Temporary asphalt		\$ per sq. yd.	TBD.	
	Rock removal		\$ per cu. Yd.	TBD.	
Customer Service	New meters with the setter (Meter box to be an added cost)	5/8"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	3/4"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	1"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	1 1/2"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	New meters with the setter (Meter box to be an added cost)	2"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	Curb box for meter	4'	\$ per box	TBD.	

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	Replacement meters (use the existing set and meter box would be an additional cost)	5/8"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	Replacement meters (use the existing set and meter box would be an additional cost)	3/4"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	Replacement meters (use the existing set and meter box would be an additional cost)	1"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	Replacement meters (use the existing set and meter box would be an additional cost)	1 1/2"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	Replacement meters (use the existing set and meter box would be an additional cost)	2"	\$ per meter	TBD.	Add the cost of the AMR or encoder.
	Additional for AMR Remote		\$ per AMR	TBD.	
	Additional for Encoder Remote		\$ per Encoder	TBD.	
	Replacement service lines including the curb stop	3/4"	\$ per Short Service	TBD.	Less than 50 LF
	Replacement service lines including the curb stop	1"	\$ per Short Service	TBD.	Less than 50 LF

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	Replacement service lines including the curb stop	1 1/2"	\$ per Short Service	TBD.	Less than 50 LF
	Replacement service lines including the curb stop	2"	\$ per Short Service	TBD.	Less than 50 LF
	Replacement service lines including the curb stop	3/4"	\$ per Long Service	TBD.	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	Replacement service lines including the curb stop	1"	\$ per Long Service	TBD.	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	Replacement service lines including the curb stop	1 1/2"	\$ per Long Service	TBD.	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	Replacement service lines including the curb stop	2"	\$ per Long Service	TBD.	Greater than 50 LF and less than 100 LF. Assumes non-directional boring is used.
	New or replacement service taps	3/4"	\$ per Tap	TBD.	
	New service taps (Developer projects non-cover)	1"	\$ per Tap	TBD.	
	New service taps (Developer projects non-cover)	1 1/2"	\$ per Tap	TBD.	
	New service taps (Developer projects non-cover)	2"	\$ per Tap	TBD.	

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Functional Area	Project	Unit	Unit Measurement	Unit Cost	Nashua Assumptions
	Fittings Based on a schedule.			Per Schedule	
	Traffic Officers per hour			TBD.	

APPENDIX I

Annual Fee – Assumptions	
Assumption	Assumption Detail
Production Flow	The water treatment facility has a rated maximum capacity of 35-MGD and an average daily production of 14.1-MGD.
SCADA	The water treatment and distribution system has a fully functional SCADA system.
Operating Costs	The Annual Fee is based upon the system as described by the 2004 PUC Report and in existence at the issuance of the RFP.
Laboratory Cost	VWNA's Annual Fee assumes all in-house testing and outside testing as required by current law. A listing of assumed tests follows this table.
Chemical Cost	The process chemicals provided for in the Annual Fee are based upon the treatment processes identified in engineering reports of public record and in the 2002 through 2004 PUC reports.
GIS and Hydraulic Model	VWNA assumes that the OWNER will provide a fully functional GIS system compatible with the computerized management systems and a fully functional calibrated hydraulic model.
Water Quality and Water Treatment Facilities	VWNA assumes that the Facilities are capable of reliably treating the raw water at the current average and peak demand while meeting current regulations. Further, VWNA assumes that all production equipment has been provided preventive and predictive maintenance and is in industry standard operating condition.
Water Meters	VWNA assumes that 20% of the meters have AMR.
Computers and IT Equipment	<p>VWNA assumes that sufficient personal computers (desktops and laptops including monitors), ready-to-use software packages, communications capabilities, information technology and telephone equipment will be provided by the OWNER at Service Commencement Date to manage the Project.</p> <p>Replacement of personal computers is included in the Annual Fee at a rate of up to five per year after the first full year of operation.</p> <p>VWNA assumes that the Managed Assets include a computerized maintenance management system that is functional and suitable for the Services set forth in the Agreement.</p>
Taste and Odor	No information on taste and odor problems was provided in the RFP. Therefore, VWNA assumes that taste and odor is not a chronic or acute problem and can adequately be controlled with currently proposed chemical quantities. Chemical treatments

Annual Fee – Assumptions	
Assumption	Assumption Detail
	within the watershed and pond system have not been included in our Annual Fee and are assumed to be a supplemental service.
Water Facilities Security System	Veolia Water understands that an electronic surveillance system is installed in the water facilities. We have assumed that the electronic system as well as other security considerations comply with Homeland Security recommendations and meet the requirements of the OWNER without the use of security guards.
Purchased Water	VWNA's Annual Fee does not include the cost of purchasing water for delivery to customers.
Sludge Disposal	VWNA assumes that sludge disposal from the WTP lagoons, or other major sludge storage facilities will be performed as a part of the RRRM.
Treatment Levels	VWNA's Annual Fee is based on treating an average daily flow of 14.1 MGD of raw water per day in accordance with the State and Federal Drinking Water Regulations in effect as of July 1, 2005.
Emergency Plan	VWNA assumes that the Managed Assets includes an Emergency Plan that meets regulatory requirements.
Vulnerability Assessment	VWNA assumes that the Managed Assets includes a Vulnerability Assessment that meets regulatory requirements.
Filter Backwash	VWNA assumes that it will have the ability to recycle the filter backwash water to the raw water at the primary WTP.

Detailed listing of testing the Company assumes will be required:

Test Type	Number of tests/year
Microbiology:	
Total coliform and E. coli (18-hr. incubation)	1040
Heterotrophic Plate Count only	1040
Cryptosporidium and Giardia	26
(sampling filter included with 1623)	
Biological Activity Reduction Tests	
Predominate Algae Identification	10
Triazine screen by immunoassay	26
VOCs:	
Regulated Volatile Organic Compounds	26
DBPs:	

Test Type	Number of tests/year
TTHMs only	20
HAA5	20
IOCs:	
Fluoride	15
Nitrate	15
Nitrite	15
Antimony	15
Arsenic	15
Barium	15
Beryllium	15
Cadmium	15
Chromium	15
Mercury	15
Selenium	15
Thallium	15
Sodium	15
Nickel	15
Lead	15
Copper	15
TOC	15
Method 525.2 Compounds	15
Pesticides by Method 505	15
Herbicides by Method 515.3	15
Carbamates by Method 531.1	15
EDB & DBCP by Method 504	15
Other:	
MIB & Geosmin by SPME	8
pH	2600
Chlorine (free and total by DPD)(plants)	2600
Chlorine (free and total by DPD)(Dist)	1560
Turbidity (plants)	4368
Turbidity (Dist)	1040
Alkalinity	2184
Total Hardness (as CaCO ₃)	728
Iron & Manganese	728
Other anions or cations each	364

APPENDIX J

Inventory Custody and Management

- (1) For the purposes of this Appendix, Inventory refers to those items that are accounted for as materials and supplies. Typically, these items are items utilized for the maintenance and repair of the utility plant and consumables that are purchased in bulk. Inventory includes fuel on hand and capital spares inventory. Capital spares inventory consists of items which are typically higher cost items and /or are required to ensure redundancy.
- (2) On the Service Commencement Date, the Company shall assume custody of the Inventory and complete a physical inventory of the items contained therein within 30 days. To the extent the City desires to oversee the inventory, it shall engage a consultant and bear the cost. Inventory shall be valued on an average cost basis. The initial Inventory shall be valued at the average price paid by PWW for such item, or the carrying value, whichever is made available to the Company.
- (3) The Company will identify deficiencies to inventories on hand at the Service Commencement Date to ensure compliance with Applicable Law and Prudent Industry Standards. The Company will also identify excess or obsolete inventory as soon as practical after the Service Commencement Date. The City shall fund inventory level deficiencies; this inventory funded by the City shall increase the value of the Commencement Date inventory. The City may sell any excess or obsolete inventories at its discretion. Any reduction in excess or obsolete inventory shall cause a reduction to the carrying value of the Commencement Date inventory.
- (4) Any modifications to the system which cause an increase to the required Inventory level to ensure compliance with Applicable Law and Prudent Industry Standards will be funded by the City. In such case, the Commencement Date inventory will be adjusted by the amount of Inventory funded by the City. Any modifications to the system that cause Inventory to become excess or obsolete, will cause a reduction in the carrying value of the Commencement Date inventory. Similarly, expired inventory that is rendered obsolete or unusable will cause a reduction in the carrying value of the Commencement Date inventory.
- (5) The Company shall bill Inventory used for RRRM projects to the City per Appendix H, and shall be responsible for replacing Inventory as required to appropriate inventory levels.
- (6) Capital spares inventory replacements shall be handled as a Capital Project, unless it is consumed as part of an RRRM project.
- (7) Annually, the Company shall inventory the Inventory and supply the OWNER with a value of the Inventory as of the last day of the fiscal year.

- (8) Upon termination of this Agreement and all renewals and extensions of it, the physical Inventory value on hand at the date of termination will be compared on a total cost basis to the adjusted physical Inventory value on hand at the Service Commencement Date, per adjustments noted above. Any decrease in value will be reimbursed to the Owner by VWNA, and any increase in value will be reimbursed to VWNA by Owner.

APPENDIX K

Dispute Resolution

Coordination Committee to be Created.

Time for Appointment, Term of Appointment and Replacement. To facilitate the timely and effective resolution of any controversy or dispute that may arise under this Agreement, each Party shall appoint three (3) representatives to serve on a joint OWNER/VWNA Coordination Committee, within the first thirty (30) days after the Commencement Date. Written notice of each appointment shall be delivered to the other Party. Each appointed representative shall serve until resignation, death or replacement in the absolute and unreviewable exercise of discretion of each appointing Party. The appointed representatives are subject to change and written notice of any such change shall be delivered to the other Party.

Purpose. The committee shall meet as often as the circumstances may deem necessary to resolve controversies and disputes.

Procedure. To the extent VWNA and OWNER cannot, after good faith attempts, resolve any controversy or dispute that may have arisen under this Agreement through the Coordination Committee, either VWNA or the OWNER may refer the matter to mediation, the cost of which shall be borne equally by the OWNER and VWNA. To the extent mediation is unsuccessful, either Party may seek resolution of any dispute or controversy in a court of competent jurisdiction in New Hampshire.

Covenant to Perform. VWNA and OWNER shall continue to perform their respective obligations under this Agreement, without interruption or slowdown, pending final resolution of any dispute(s), unless the matter at issue precludes such continued activity. In particular, OWNER shall pay any disputed invoices during the pendency of the dispute. If the dispute is resolved in the OWNER's favor, VWNA will refund the finally determined or agreed upon amount within fifteen (15) days of the determination or resolution.

Survival. This dispute resolution appendix shall survive termination or expiration of this Agreement.

APPENDIX L

Termination for Convenience Fee

If the OWNER terminates this Agreement pursuant to Section 13.5, the OWNER shall make the payment set forth below:

Termination Date	Payment Amount
After Contract Date, but prior to Notice to Proceed	\$800,000
On or after Notice to Proceed, but Prior to Service Commencement Date	\$900,000
On the Service Commencement Date or within the first calendar subsequent to the Service Commencement Date ("Month 1")	\$1,500,000
Month 2	\$1,478,873.24
Month 3	\$1,457,746.48
Month 4	\$1,436,619.72
Month 5	\$1,415,492.96
Month 6	\$1,394,366.20
Month 7	\$1,373,239.44
Month 8	\$1,352,112.68
Month 9	\$1,330,985.92
Month 10	\$1,309,859.16
Month 11	\$1,288,732.40
Month 12	\$1,267,605.64
Month 13	\$1,246,478.88
Month 14	\$1,225,352.12
Month 15	\$1,204,225.36
Month 16	\$1,183,098.60
Month 17	\$1,161,971.84
Month 18	\$1,140,845.08
Month 19	\$1,119,718.32
Month 20	\$1,098,591.56
Month 21	\$1,077,464.80
Month 22	\$1,056,338.04
Month 23	\$1,035,211.28
Month 24	\$1,014,084.52
Month 25	\$992,957.76
Month 26	\$971,831.00
Month 27	\$950,704.24
Month 28	\$929,577.48
Month 29	\$908,450.72
Month 30	\$887,323.96
Month 31	\$866,197.20
Month 32	\$845,070.44

Termination Date	Payment Amount
Month 33	\$823,943.68
Month 34	\$802,816.92
Month 35	\$781,690.16
Month 36	\$760,563.40
Month 37	\$739,436.64
Month 38	\$718,309.88
Month 39	\$697,183.12
Month 40	\$676,056.36
Month 41	\$654,929.60
Month 42	\$633,802.84
Month 43	\$612,676.08
Month 44	\$591,549.32
Month 45	\$570,422.56
Month 46	\$549,295.80
Month 47	\$528,169.04
Month 48	\$507,042.28
Month 49	\$485,915.52
Month 50	\$464,788.76
Month 51	\$443,662.00
Month 52	\$422,535.24
Month 53	\$401,408.48
Month 54	\$380,281.72
Month 55	\$359,154.96
Month 56	\$338,028.20
Month 57	\$316,901.44
Month 58	\$295,774.68
Month 59	\$274,647.92
Month 60	\$253,521.16
Month 61	\$232,394.40
Month 62	\$211,267.64
Month 63	\$190,140.88
Month 64	\$169,014.12
Month 65	\$147,887.36
Month 66	\$126,760.60
Month 67	\$105,633.84
Month 68	\$84,507.08
Month 69	\$63,380.32
Month 70	\$42,253.56
Month 71	\$21,126.80
Month 72 and after	\$0

APPENDIX M

(Reserved for future use.)

APPENDIX N

(Reserved for future use.)

APPENDIX O**CONDITIONS ASSESSMENT PROTOCOL****1.0 OVERVIEW**

The purpose of this Appendix is to present the protocol and procedures to be followed by the Company and the Owner, with the assistance of the Owner's designated representative, to provide a Managed Assets Conditions Assessment and Managed Asset inventory, to assess the existing condition of the Managed Assets for quantification of any changes in condition that may, from time to time, occur through the Term and to ensure that the Company's OM&M services, in combination with the Owner's Capital Improvement Program (CIP) and the Company's Renewal Repair and Replacement Maintenance Program (RRRM), are adequate to maintain the Managed Assets in a condition equal to or better than the condition of the Managed Assets as received at the Commencement Date, less reasonable wear and tear.

The Company will use the existing CMMS asset structure, as received from the Owner after it acquires the Managed Assets, as the Company's initial Asset Registry. The Company shall use the initial Asset Registry as the basis for the Company's Condition Assessment Report. The Company's Condition Assessment Report will be used by the Company, together with the existing CIP (received from the Owner during Managed Assets acquisition), to develop the Company's recommended CIP and RRRMP. The Company's recommended CIP and RRRMP shall be sufficient, when carried out through the Term, to properly maintain the Managed Assets as described above. The Owner will take the recommendations of the Company into account as it develops the Owner's CIP.

An evaluation of the Company's Asset Management Plan and its suggested CIP shall be made by the Owner every 2 years and at the end of Contract Year 6 of the Service Agreement or upon termination of the Service Agreement, whichever occurs first. The final evaluation shall be carried out at the termination of the Agreement. The Company shall be required to return the Managed Assets to a condition equal to or better than the condition of the Managed Assets as of the Commencement Date, less reasonable wear and tear, provided the Owner has reasonably funded the CIP and RRRMP over the Term.

If the final evaluation of the facilities carried out in Contract Year 6 of the Term, or earlier at termination of the Agreement, reveals that components included in the Registry have not been properly maintained and have degraded beyond that which would be expected by normal wear and tear, the Company shall make the necessary repairs.

The final evaluation shall be completed within 90 days of the beginning of the 6th Contract Year of the Term of this Agreement or 60 days after notice of the termination of this Agreement.

2.0 THE MANAGED ASSET INVENTORY

The Company shall conduct an inventory and inspection of the existing Managed Assets using the initial Asset Registry after the Contract Date, but no later than 180 days after the Service Commencement Date, to characterize the Managed Assets condition and components as of the Contract Date. It is assumed that the existing CMMS is functional and complete.

The Company shall document by photographs and by written report the condition of all inventoried items, equipment and facilities and the operational status of all equipment and facilities. The photographs shall be taken from multiple viewpoints and magnification to sufficiently document the Managed Assets' existing condition as they are received by the Company. The Owner's Oversight Contractor shall accompany the Company as the photographs are taken. A written report of said inventory, along with photographic documentation, shall be prepared by the Company, provided to the Owner for review and approval and made part of this Agreement.

3.0 CONDUCTING THE MANAGED ASSETS CONDITION ASSESSMENT

3.1 Step 1 - Quantify Managed Asset Condition

This condition assessment shall include a performance and utilization appraisal. The following information shall be collected for all assets that have a replacement cost >\$10,000 including installation.

- Appearance
- Functionality
- Description of the asset's current deficiencies (type and extent);
- Nameplate data (HP, RPM, design parameters, actual performance, etc.)
- Identification of repairs required to correct deficiencies
- Estimate of the cost to complete the identified repairs;
- Asset's importance and its criticality related to meeting the performance standards set forth in the Agreement and the protection of public health and safety.
- Company's reasonable estimate of the asset's remaining life; and
- Assignment of an overall condition rating.

This protocol shall be carried out for all equipment and structures that can be practically inspected, but shall NOT entail the disassembly of equipment or excavation of underground utilities or buried assets, nor will it require the draining of treatment tanks. In such cases, the Asset Condition Assessment shall be established using the best available information.

The Company shall report a reasonable estimate of the remaining useful life value (in years, rounded to the nearest whole number) of all the Managed Assets that have a replacement value equal to or greater than \$10,000, including installation, listed in the Asset Registry and are not obsolete or non-functional assets. The remaining useful life of an asset shall be based upon its reliability to perform its intended function, taking into consideration the following: ability to meet performance objectives and performance parameters, performance history, physical condition, availability, replacement costs and maintenance cost history (provided by the Owner if available at the time of Managed Assets acquisition).

To establish the Asset Condition of the Managed Assets, the Company shall conduct the following (provided that information is available):

- Perform a visual inspection of the Managed Assets; use human senses to evaluate (containment, sound, temperature, vibration, leaks of fluid, corrosion of parts, etc.)
- Review information concerning equipment design life, purchase and installation dates, run times and other records to determine actual useful life of the Managed Assets;
- Consult standard references concerning typical useful lives of water treatment equipment;
- Monitor related instrumentation to determine the assets' physical condition and operational characteristics;
- Review repair and replacement records, and consult with manufacturers and vendors that may have been involved in the maintenance of the Managed Assets;
- Inspect readily accessible parts and surfaces;

- Conduct Predictive testing as follows:
 - ◆ Conduct IR thermograph scan of the high voltage electrical systems, HV transformers, and MCCs
 - ◆ Conduct vibration signature curve for rotating equipment greater than 75 HP or stand alone or critical rotating equipment of 25 HP and greater,
 - ◆ Conduct motor windings testing and insulation integrity looking for short circuits,

The condition of all Managed Assets shall be graded. The Asset Condition shall be graded as follows:

GRADE	CONDITION	DESCRIPTION
5	Excellent overall condition	Asset fully functional as designed with no visible defects or wear
4	Good overall condition	Asset functions as needed for current operating conditions, visible signs of minor defects, and wear is less than expected
3	Fair	Overall condition: asset functions as needed for current operating conditions, visible sign of moderate defects and expected wear.
2	Poor overall condition	Asset operable, but does not function as needed for current operating conditions: visible signs of major defects, wear is more than expected and there may be personnel safety issues.
1	Inoperable	Asset is non-functional, requires major repair, rebuild or replacement to restore operation

These inspection activities shall be conducted while motor-driven equipment is in operation. Upon completion of these tasks, the Asset Condition Assessment of the Managed Assets Equipment shall be added to the Asset Registry.

Upon completion of the estimate of Remaining Useful Life, this information shall be presented to the Owner for review and approval. The Company shall provide supporting documentation used to assess specific pieces of equipment or to determine remaining useful life.

3.2 Step 2 – Evaluate Functional Condition of the Managed Assets

All items and equipment included in the Asset Registry with an assessed replacement cost in excess of \$10,000, including installation, shall be subject to a Functionality Evaluation as described herein. This evaluation shall be performed by the Company and recorded in the Asset Registry. The Company shall perform all necessary visual evaluations and investigations to determine if the assets operate properly and perform the function for which they were intended. All such determinations shall be made in consultation with the Owner or its representative.

All motorized and manually operated equipment, together with electrical equipment, shall be observed by the Company's representative and the Owner for proper operation. Pipes shall be checked for overall condition and visible leakage.

As part of the Functionality Evaluation of these systems and/or sub-systems, each applicable system and/or sub-system of the Managed Assets shall be placed into one of Four categories. These categories shall be as follows:

GRADE	FUNCTIONALITY	DESCRIPTION
1	Good to Excellent	Meets current needs and performance parameters. Shows minor wear that has minimal impact on performance. Asset expected to perform within performance parameters with routine maintenance.
2	Fair	Functionally sound, but showing wear and diminished performance. Moderate short-term failure risk. Potential for further deterioration and diminished performance
3	Poor, Very Poor	Asset runs, but not at the desired performance parameters. High risk of short-term failure or failure is imminent. Likely to have significant deterioration in performance within 0 to 2 years.
4	Not functional	

The results of the Functionality Evaluation shall be formatted as presented below.. For comparative purposes, a similar evaluation shall be made in year 3 and at the end of Contract Year 6 of this Service Agreement or upon termination of this Agreement, whichever occurs first.

The data shall be presented in the following format

Asset Number 03-B

Asset Description Breakers (PS Room)

Year Installed 1974

Cost N/A

Specified Performance

Output (gpm, cfm) N/A

Amp Draw (amps) N/A

Initial Condition and Performance Assessment

Date of Assessment June & July, 2003

Condition Ranking 3

Condition Description Fair overall condition; asset functions as needed for current operating conditions, visible signs of moderate defects and expected wear.

Output (gpm, cfm) N/A

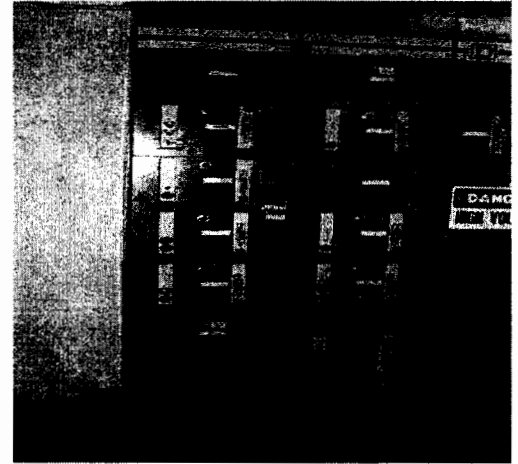
Amp Draw (amps) N/A

Vibration N/A

Thermal Imaging Refer to Baseline Thermal Imaging Report, USFilter Operating Services, July 2003

Oil Analysis N/A

Ultrasonic N/A



Year 3 of the Term Picture

Year 3 of Term Condition and Performance Assessment

Date of Assessment

Condition Ranking

Condition Description

Output (gpm, cfm)

Amp Draw (amps)

Vibration

Thermal Imaging

Oil Analysis

Ultrasonic

Year 6 of the Term Picture

Year 6 of Term Condition and Performance Assessment

Date of Assessment

Condition Ranking

Condition Description

Output (gpm, cfm)

Amp Draw (amps)

Vibration

Thermal Imaging

Oil Analysis

Ultrasonic

The Functionality Evaluation shall be subject to review and approval of the Owner.

3.3 Step 3 – Assess Structural Condition of Managed Assets

All structures that are part of the Managed Assets shall be subject to an initial Structural Assessment as described herein. A detailed structural analysis shall NOT be required. This evaluation shall be performed by the Company and recorded in a separate section of the Asset Registry. The Company shall perform the investigations to determine if the structure assets shall perform the function for which they were intended. All such determinations shall be made in consultation with the Owner or its Oversight Contractor.

The Company's Structural Assessment, as defined herein, shall include only a visual inspection using human senses to evaluate (integrity, loose connections, corroded material presenting safety hazards, evidence of leaks and animal infestation, rotted wood, spalling concrete, etc.) supported by photographic and video recording of all of the structures which comprise the systems and sub-systems of the Managed Assets, including, but not limited to:

- All accessible buildings and concrete structures, both above and visible structures below ground level, including doors, hatches, stairways, and windows;
- Walkways, roads and other paved areas;
- Structural components associated with Managed Assets Equipment (e.g. slabs, pits, supports etc.);
- Fencing, drainage structures and utility structures;
- Finish system – paint, sealants and other liquid applied finishes; and
- Floor, ceiling, roofs and wall systems – tiles, carpeting, raised floors and drop ceilings.

Structures and paved areas shall be checked for structural defects and damage, such as cracks and concrete deterioration, that could reduce their useful life. Finish systems shall be visually inspected to assure that they provide adequate coverage and afford the desired protection. Occurrence of flaking, corrosion, rot and inadequate coverage should be noted. Floor, ceiling, roofs and wall systems should be visually inspected for excess wear and damages.

As part of the Structural Evaluation of these structures, each structure shall be rated in 1 of 3 categories utilizing the following criteria:

1. Good to excellent overall condition: asset fully functional as designed with little or no visible defects or wear or structural defects.
2. Fair overall condition: asset functions as needed for current operating conditions, visible sign of moderate defects and expected wear.
3. Poor overall condition: asset operable, but does not function as needed for current operating conditions, or asset is inoperable or asset has visible signs of major defects or wear that is more than expected and there may be personnel safety issues.

The results of the Structural Evaluation shall be included in a separate section of the Asset Registry. The results of this evaluation shall be included in tabular form as depicted below.

Asset Number	Asset Description	Structural Defect(s)	Ranking
EX0010	Foundation Weir Street Building	None	Good
EX0015	Filter Room Exterior Walls	Minor Cracks, No Leaks	Good
EX00020	Stairs to Control Building	Severe Wear, Rebar Showing	Poor
EX00062	Coating Clearwell	Minor Peeling	Good
EX0078	Foundation Operations Building	Moderate Cracks	Fair

For comparative purposes, a similar evaluation shall be made every 2 years and at the end of year 6 of the Service Agreement or upon termination of the Service Agreement, whichever occurs first.

The Structural Evaluation shall be performed by the Company and shall be subject to review and approval of the Owner.

4.0 CAPITAL IMPROVEMENTS PLAN AND REPAIR, REBUILD AND REPLACEMENT MAINTENANCE PLAN

Based on the information gathered in Steps 2 and 3, the Company shall prepare a recommended CIP and RRRM plan for all Managed Assets.. The Owner and the Company acknowledge that the CIP and RRRMP are partly dependent on the Company's recommended capital improvements and maintenance practices and its ability to extend the service life of equipment and thus shall be updated at least annually. Both parties acknowledge that adequate funding and capital investment are needed to ensure that the assets continue to meet the desired performance and reliability.

As part of the Company's Asset Management Services, repair, rebuilding and replacement of the Managed Assets shall be required to restore an asset to the condition required to provide the expected level of service. Some of these activities shall be provided by the Company as routine maintenance while others shall be included in the Company's RRRMP and CIP. Once the asset inventory and assessment of impact of equipment non-performance data have been collected, the CIP and RRRMP shall define the required work to restore an asset to a condition that is equal or better than the condition that existed as of the Service Commencement Date. Repair, rebuild and replacement decisions shall depend on the asset's performance, condition of the asset, the economics of operating the asset, the probability of asset failure and the asset's risk of becoming obsolete.

The requirements for the Company's Capital Improvements Plan are presented in Appendix G. The requirements for the Company's Repair, Rebuild and Replacement Maintenance Plan are presented in Appendix H.

5.0 COMPANY CONDITION ASSESSMENT REPORT (CAR) DELIVERABLES

The Company's activities and deliverables are as follows:

- Conduct initial project kick-off meeting between the Company's evaluation team and Owner's Oversight Contractor personnel to discuss the approach;
- Evaluate and train the Company's local operations and maintenance staff as required to use the CMMS inventory management system and Data Collection Form;
- Target inspection teams with the requisite expertise, conduct site inspections and conduct initial condition assessments, including performance and utilization appraisals of equipment that have an estimated replacement value in excess of \$10,000 including installation ;
- Review existing historical records and data files including, at a minimum, engineering reports, financial records, original contract documents or maintenance records;
- Identify deficiencies in the system, and where it would be appropriate to improve inventory levels to meet Prudent Industry Practice; (include in CAR)
- The initial Asset Registry, as annotated during the conduct of the Conditions Assessment; (include in CAR)
- A written report of the current condition of all inventoried items, equipment and facilities, and the operational status of all equipment and facilities that contains the photographs taken during the Condition Assessment inspection; (include in CAR)
- A report of the market value of inventoried items not part of the Company's RRRP; (include in CAR)
- A listing of Asset deficiencies that will identify Assets that will need to be repaired or replaced to meet applicable regulatory requirements and industry standards;(include in CAR)
- Based on the Company's experience base, provide a "reasonable guess" as to the remaining useful life of a particular Managed Asset; (include in CAR)
- An equipment functionality audit as described within; (include in CAR)
- A structural condition audit as described within; (include in CAR) and
- A summary of potential risk of failure for Managed Assets. (include in CAR)

6.0 REPORTING AND UPDATES

The Company shall update the Registry once per Contract Year, at the end of the Owner's Fiscal Year. At any time during the Contract Year, all newly added assets shall be entered in the Registry together with their evaluation designators, installation date, and installed cost. All assets that are removed from the Managed Assets as the result of the Capital Improvements being brought on line shall be deleted from the Registry if they are removed from the site for disposal. Assets that are removed from service but left on site shall continue to be shown in the Registry as "obsolete". These assets shall be designated as not included in the evaluations. The Company shall provide the Owner a computer-readable form of all updated Registry listings along with a written summary of the changes made in the Registry since it was last updated.

APPENDIX Q

TRANSITION SERVICES

1.0 TRANSITION SERVICES: GENERAL

The transition services in this OM&M Agreement are to provide for the necessary one-time activities and costs related to the transfer of Pennichuck Water Works to the Owner. The intent of this work scope is to provide for a smooth, uninterrupted transition of service from Pennichuck to the City of Nashua, without disruption of the service, and the orderly transition of accounts, credit necessities, approvals, payments and withdrawals, and emergency services. Transition services are further designed to provide for an orderly transfer and disposition of data, facts, figures, information, plans, IT facilities, computer programs, records, historic information, materials, equipment, buildings, land, property, and any other things necessary to provide the OM&M of the Managed Assets, with supplemental services as required.

2.0 OBJECTIVES OF TRANSITION

The Company will create and appoint a transition team of Company managers and professionals including technical, environmental, health, safety and security, human resource, production, field service, community affairs, laboratory and quality assurance, asset management and capital project management experts to provide defined transition deliverables to the City and;

- Hire qualified and certified operators and other employees.
- Provide safe and reliable water to customers.
- Provide for the security of water assets.
- Respond to and monitor customer needs.
- Establish working relationships with City officials, vendors, regulatory agencies, community organizations and new customers.
- Identify current savings possibilities for the City and future potential savings opportunities from modifications.
- Inventory and assess asset condition.
- Provide recommendations for any improvements needed.
- Assist the City in identifying gaps in data, information, and IT systems being offered by Pennichuck.

3.0 TRANSITION SERVICES

3.1 Anticipated transition services, as part of the transition fee, are, in general, expected to be the following:

- A. Develop a transition organization.
- B. Prepare a detailed scope of services necessary for the transition organization to implement.

- C. Execute a detailed staffing plan, including positions, compensation, benefits, and a recruitment program.
- D. Identify IT gaps from Pennichuck.
- E. Execute the transition deliverables detailed in Section 4 below.

3.2 Anticipated transition services as part of supplemental services are expected to be the following:

- A. Develop detailed plans for addressing the gaps identified in the data, information, and IT systems identified by Pennichuck Water Works.
- B. Implement IT plans in A above.
- C. Prepare operational plans for the consolidation of all activities by Veolia to the treatment plant site or the Will Street building site, including IT requirements, telecommunication requirements, and SCADA requirements. Also, recommend any modifications to the Will Street facilities and building structures necessary to house and implement the transition and OM&M services for the Managed Assets.
- D. Improvements to the capital accounting systems of Pennichuck Water Works and/or assist in the orderly transition of these systems to the City of Nashua.
- E. Review the escrow accounts and the contribution in aid of construction accounts provided by Pennichuck Water Works and assist in the orderly transfer of these account systems to the City of Nashua.
- F. Prepare and implement transition dates for the discharge of duties of Pennichuck Water Works.

4.0 COMPANY TRANSITION DELIVERABLES

- 1. Within thirty (30) days after the Service Commencement Date, the Company shall submit a preliminary review of the Emergency Preparedness Response Plan previously maintained by the former operator of the Managed Assets.
- 2. Within one-hundred and eighty (180) days after the Service Commencement Date, the Company shall review and update the Vulnerability Assessment and the Emergency Preparedness Response Plan and report to the Owner on the completeness and appropriateness of these programs and any measures that were not implemented prior to the Service Commencement Date. The Company shall conduct its review of the

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Vulnerability Assessment and the Emergency Preparedness Response Plan for the Managed Assets in accordance with regulatory requirements. If documents and plans require significant modifications and additions, this work will be performed by the Company under supplemental services.

3. Within thirty (30) days after the Service Commencement Date, the Company will provide a physical inventory of the Owner's parts, tools, vehicles, and equipment in use at the Managed Assets and a general statement as to the condition of each vehicle or piece of equipment.
4. Within thirty (30) days after the Service Commencement Date, the Company will provide Owner with a physical inventory of chemicals and other consumables on hand at the Managed Assets. The Company will provide the Owner with the same quantity of chemicals or equivalent upon termination of this Agreement. The inventory will include the following:
 - The number, or as applicable, the quantity of such inventory.
 - Detailed description of the inventory.
 - The condition of the inventory.
 - The monetary value of the inventory on an aggregate basis.
5. As service requirements are developed, analysis of materials and parts necessary, not only for recurring service but for anticipated corrective service will be determined and compiled, which will permit a programmatic approach to developing an integrated set of spare parts and establishing an appropriate inventory.
6. Within ninety (90) days after the Service Commencement Date, the Company shall submit a report to the Owner describing available automatic meter reading ("AMR") systems, a cost benefit analysis of the alternatives and a recommendation.
7. Within one-hundred and eighty (180) days after the Service Commencement Date, the Company will provide a report as to the condition of the fixed assets of the Owner's Managed Assets. The Company will make recommendations to the Owner regarding the need, if any, for Owner to rehabilitate, expand, or modify the Managed Assets to comply with governmental safety regulations applicable to the Company's operations hereunder and federal regulations promulgated pursuant to the Americans with Disability Act ("ADA"). Owner will be responsible for including ADA and safety needs in the Owner CIP as recommended by the Company.
8. Within one-hundred and eighty (180) days after the Service Commencement Date, the Company shall provide Owner with a listing of recommended capital improvements that the Company believes will be required for the Managed Assets.

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9. Within eighteen (18) months after the Service Commencement Date, the Company shall submit a Conservation Plan to the Owner on measures that can be implemented to conserve water and water resources within the Managed Assets.
10. No less than thirty (30) days prior to the Service Commencement Date, the Company shall submit to the Owner a draft Maintenance Plan, incorporating the elements of this Agreement.
11. Within ninety (90) days after the Service Commencement Date, the Company shall submit to the Owner a final Maintenance Plan reflecting changes required by conditions not previously known to the Owner or the Company. The plan shall include the details of directional flushing to be performed.
12. During the transition phase, the Company Safety Program will focus on establishing a general understanding of all safety-related requirements. In the first six months after commencement, safety training will be delivered by the Company on-site EHS&S Coordinators and will focus on those areas identified by the Company "training needs assessment." This assessment will cover all areas of training needs, including operations, maintenance, and management.
13. The Company will conduct a thorough safety audit within one year of the Commencement Date. The Company will outline all required operational changes, safety equipment purchases, and Capital Improvements needed to meet the requirements of the safety audit. The Company will use this information as a basis for the Managed Assets specific safety program.
14. Within ninety (90) days after the Service Commencement Date, Veolia shall submit a report to the Owner assessing the immediate functionality and longer term viability of the existing Managed Assets computerized maintenance management system in accordance with Appendix D.
15. During the first twenty-four (24) months following the Service Commencement Date, Veolia shall perform and provide to the Owner a watershed evaluation. In performing the watershed evaluation, Veolia will coordinate with stakeholders and communities to identify and prioritize study needs. The final scope of the watershed evaluation will be determined after meeting with all the stakeholders. The watershed evaluation will include as a priority the performance of baseline water quality and flow testing of primary surface water supplies and their tributaries. The watershed evaluation shall also include recommendations for the improvement of raw water quality and supply.

Volume I

Technical Proposal

Submitted to:



City of Nashua
New Hampshire

RFP1305-061505

Operation and Maintenance of the Water Utility

July 14, 2005

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SECTION THREE

Project Management and Staffing

VEOLIA WATER'S COMMITMENT TO THE CITY OF NASHUA

Delivering the Best Value Through Innovative Approaches

Veolia Water North America – Northeast, LLC (Veolia Water), as discussed in our operations, maintenance and management (O&M) approach presented in Section One of this Proposal, has defined a plan and approach for the effective operations and management of the water system. It is our desire to enter into a performance-based contract between the City, and our company—an approach that transfers environmental compliance and water quality responsibility to us while local government owns the asset and controls the system.

The Veolia Water management and support team will commit to work with the City of Nashua and will draw from Veolia Water's base of resources to make the Water Works one of the best water utilities in the U.S. The team that we are proposing as part of this Project Management and Staffing Plan has been directly involved in this Proposal has direct relevant experience and will be part of the technical support team once the startup phase is complete.

No other firm will be able to offer such a strong and experienced team. Complementing our Nashua-specific team will be the resources of our parent and other affiliated world-wide companies.

The Proposed Contractual Relationship

The City of Nashua developed this Request for Proposals (RFP) to afford the private sector with the ability to be creative and flexible in developing a Proposal that will meet the individual water needs presently existing in the City and the surrounding communities. This model has been used by literally thousands of communities throughout the country to develop contracts to meet their individual needs while protecting their valuable assets.

Under this public-private contract model, the public partner, the City of Nashua, owns the assets, controls the management of those assets and establishes user rates. Employees are the local citizens (your neighbors) who have been doing the work for years, now supplemented with experts from Veolia Water in all fields of water operations, from computerization to microbiology, having the support of a research and development budget of \$80 million annually.

This partnership will meld the core competency of the company (possessing technological expertise and diverse backgrounds in various geologies and operating environments) with the specific system knowledge of the experienced existing employees.

We anticipate that this proposed contract will contain strict performance criteria for costs, quality, compliance and customer satisfaction. An oversight engineer will be engaged to monitor our activities to ensure that the asset is being protected. The City is soliciting this "checks and balances" firm in concert with this procurement. Constant monitoring and

evaluation of the asset is a paramount function of this contractual relationship, both for the public owner and Veolia Water.

This contract will reduce your operating costs by the performance standards that we will establish as a part of this contract in areas such as environmental compliance, improved water quality, rate stability, as well as a commitment to protecting the existing employees and to bringing the best water corporations to your community. At the heart of the commitment that we are making to the City of Nashua is one to be a water services contractor and a good corporate citizen, actively working to enhance the quality of life of all citizens and support the activities of the area in the environmental sciences and education.

Veolia Water is committed to forming a contractual relationship centered on:

- **Significant cost reductions**
- **Priority given to hiring existing employees**
- **Watershed protection recommendations**
- **A clear plan for communication and information distribution to the city and region**
- **Customer satisfaction expansion**
- **Performance-based fee for monitoring and improved service delivery**
- **Local Community Commitments**
- **Value engineering savings**
- **Support to assist local employees for a transition period**
- **Best Practices in asset management and security assessment**

Management and Staffing Approach

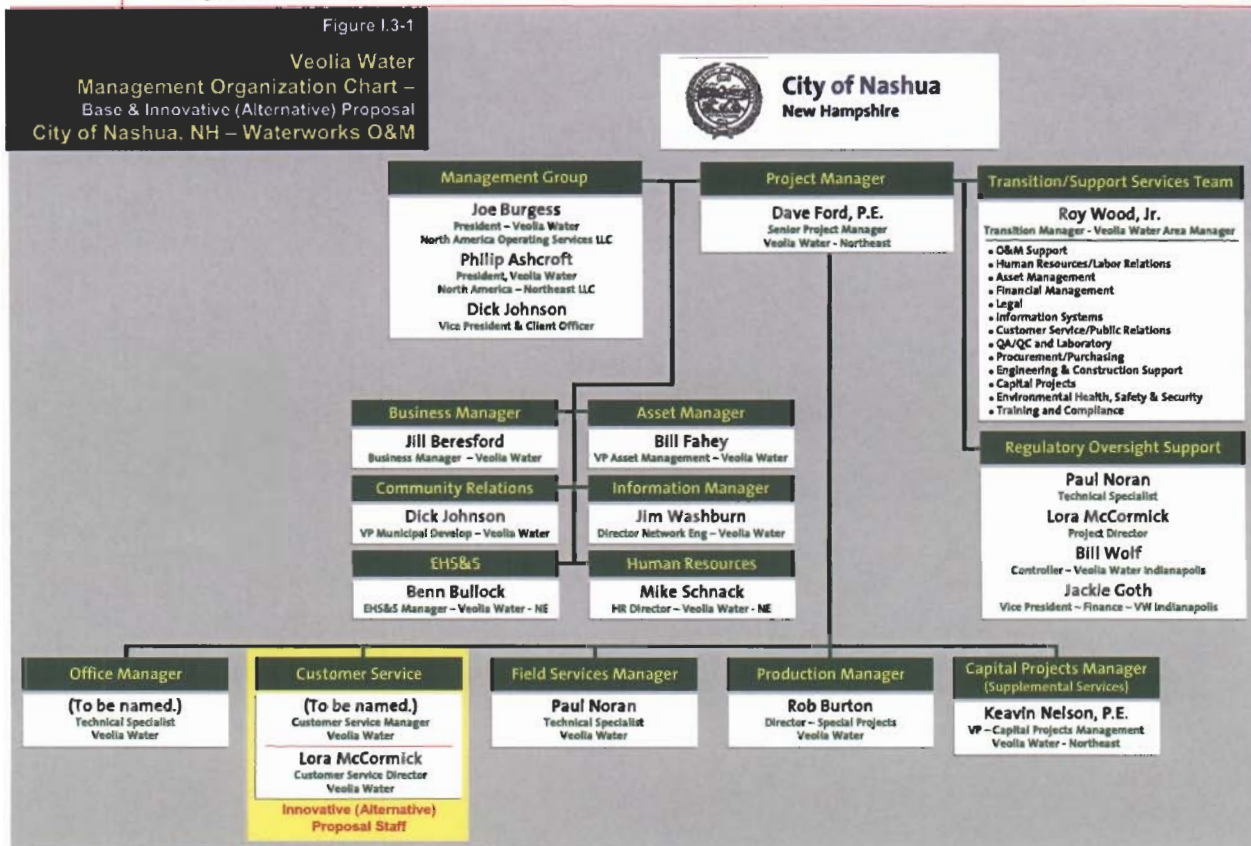
We are confident that the Water Works currently employs a complement of capable local people that will become valuable and committed Veolia Water team members. We expect that most management positions will be filled with existing Water Works staff. However, we do not expect to have available positions for many of Pennichuck's senior staff, especially those involved with Pennichuck's corporate governance and non-utility businesses.

Project Manager

Veolia Water has identified an experienced Project Manager to lead our team, **Dave Ford, P.E.**, a **Senior Project Manager** with Veolia Water in New Hampshire. He brings a unique blend of public utility management experience, having worked as the Public Works Director for the City of Rochester and the Superintendent of Public Works for the City of Wolfeboro, as well as managing and supporting public-private partnerships throughout the Northeast.

We have found that employing a local person with significant utility experience and supporting that individual with our resources is a noticeable benefit to a new agreement. Mr. Ford has established professional relationships in the New Hampshire community and will bring a local perspective and commitment. He will lead a team that will be formed from existing Pennichuck staff that transition to our team, combined with local hires and potential transfer-employees from other Veolia Water projects in New England.

Figure I.3-1, next page, provides an organization chart for key managers and interim managers that will provide leadership roles, as proposed in our Base Proposal approach. Our Innovative (Alternative) Proposal includes only one difference as noted in Customer Service.



Transition and Management Team

We have identified the core management team that will be committed to transitioning the water utility operations and ensuring the effective long-term delivery of services to the City of Nashua. This team will support our dedicated Project Manager and will include:

- **Roy Wood**, a Veolia Water Area Manager in the Northeast, will be the **Transition/Technical Services Manager**, with responsibility for the mobilization and management of the transition team. Mr. Wood brings more than 20 years of operations and management experience and has been involved in the transition of numerous projects in the New England area. He is a resident of Leominster, Massachusetts, which provides him with ready access to Nashua.
- **Paul Noran**, a Veolia Water Technical Manager in the Northeast, will be the **Field Services Manager** and work with Mr. Wood in managing and implementing the transition of staff and services. In this role, he will be responsible for transitioning all aspects of field services and serve as the line manager for Field Services Group. Mr. Noran has more than 32 years of experience and has been involved with major project transition programs and management and operations of regional New England water supply systems. A resident of Maine, he is very familiar with the challenges of a water system in the cold weather of New Hampshire.
- **Rob Burton**, Special Projects Director with Veolia Water in Indianapolis, will provide leadership for the Water Production group. As the **Production Manager**, he will manage the transition of day-to-day operations of the water treatment and supply system to Veolia Water and then provide leadership for the operation and maintenance

of all elements of the water utility. Mr. Burton has more than 13 years of experience, which includes managing Veolia Water's project with the City of Boonville, Indiana. Additionally, he is a certified water and wastewater professional in two states.

- **Keavin Nelson, P.E.**, Vice President for Operations with Veolia Water in the Northeast and our Capital Program Management (CPM) in the region, will lead the capital program and engineering support group. This team will provide the engineering and construction expertise and management needed to implement small and large capital projects. This is a role that the CPM group routinely plays on Veolia Water projects in the Northeast and is a key part of our commitment to delivering a full-service approach to Nashua. Mr. Nelson has more than 28 years of engineering, operations and management experience, and he will be supported by the in-house expertise of our firm as well as the resources of **Dufrense-Henry**, our primary subcontractor on this project.
- At the corporate level, this project will be managed by **Philip Ashcroft**, the President of Veolia Water North America – Northeast, LLC, with oversight and support by **Joe Burgess**, the President of Veolia Water's national operations. These project principals will ensure our commitment. **Dick Johnson** will continue to closely support client relations and be directly involved on a 24-hr on-call basis for community leaders.

Resumes for all of the key team members are presented in Appendix A.

O&M Staff

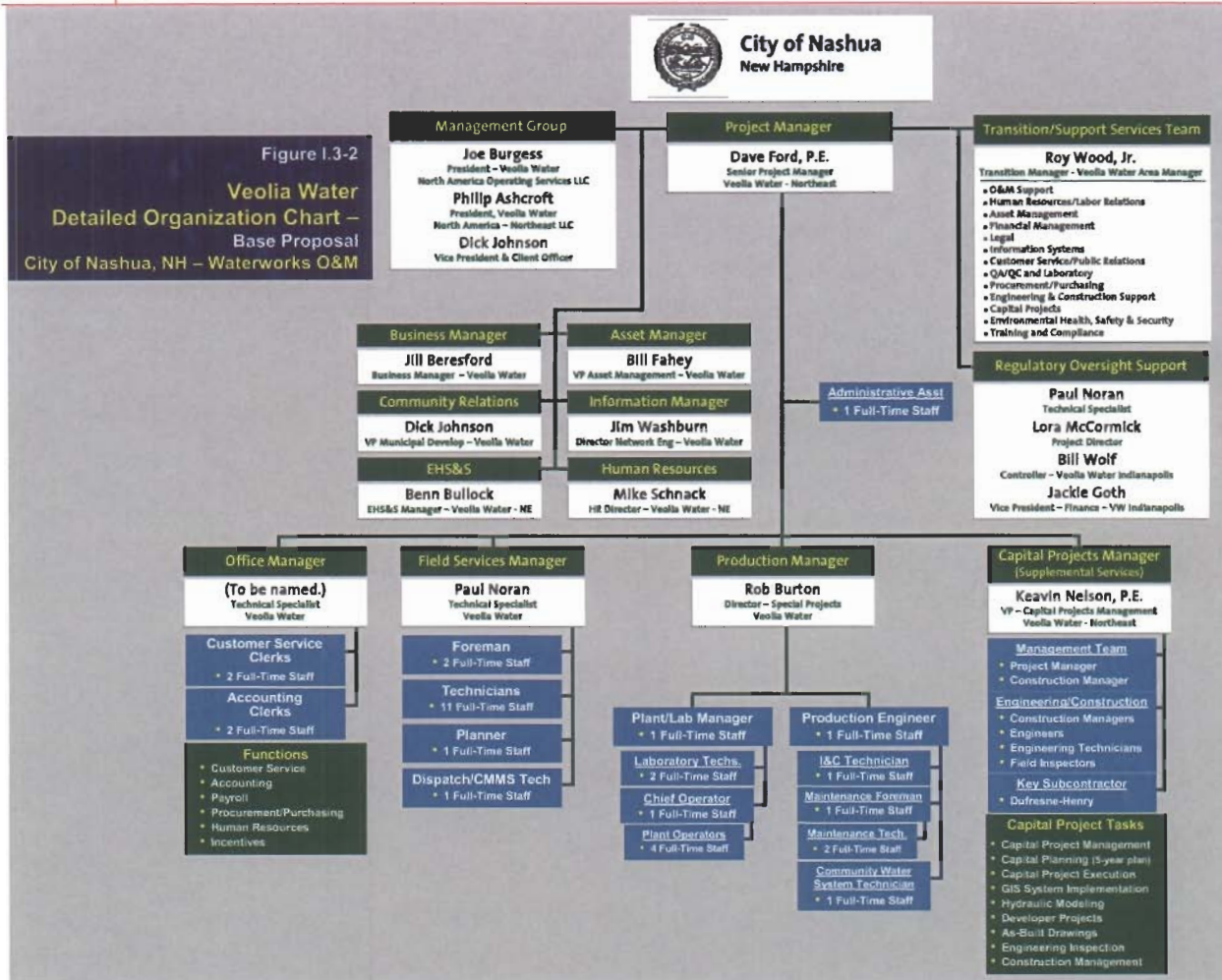
The Veolia Water O&M Project Manager will lead a team that, as discussed above, will be formed from existing O&M staff that transition to our team, combined with local hires and transfers from other Veolia Water projects in New England.

This O&M team, as shown on our detailed organization chart (Figure I.3-2, next page), will have all of the requisite certifications necessary to meet applicable federal and State of New Hampshire regulatory requirements for your water facilities.

The total O&M staff for the Base Proposal will number 40 and will be composed of the following classifications of staff:

- Project Manager – 1 Full-time Staff
- Other Managers- 3 Full time Staff
- Foreman/Supervisors – 3 Full-time Staff
- Certified Water Plant Operators – 5 Full-time Staff
- Mechanics – 4 Full-time Staff
- Laboratory – 3 Full-Time Staff
- Field Service Personnel – 11 Full-time staff
- Other Technical/Operations/Support - 8 Full-time staff
- Engineering – 2 Full-time Staff

Veolia Water is committed to provide the City of Nashua with the benefit of the expertise and experience that our firm provides regionally and nationally, with strong local management and support for the O&M team that will be responsible for the day-to-day management of service delivery. Some of the key technical, administrative and other



support resources that will be involved in this project, beginning at the project transition stage, include:

- **Benn Bullock**, Veolia Water's **Environmental, Health, Safety and Security (EHS&S) Manager** for the Northeast LLC, will manage the transition of safety, compliance and site security responsibility to our firm. He will implement our firm's EHS&S standards and procedures for the City's Water Works, train all staff in these procedures, and then provide regular reviews/audits of compliance. Mr. Bullock has more than 12 years of experience, with almost 10 years of experience in safety and compliance management at environmental facilities.
- **William Fahey**, Veolia Water's **Asset Management** expert, will assume the role of **Asset Manager** for the Nashua project. He will direct the transition of the asset management program. Mr. Fahey has more than 18 years of industry experience, with more than 14 years of experience in the construction and startup of new facilities. His background includes managing the maintenance assets and developing a long-term strategic maintenance plan for a \$3.4 billion wastewater plant. He also develops models for plant maintenance and asset management, ensuring optimization of a plant's CMMS.

- **Lora McCormick, MBA**, a Project Director with Veolia Water in Indianapolis, will direct **Customer Service Transition**. She will manage all aspects of implementing delivery of customer service, client relations, and government affairs with responsibility for a staff of three. Ms. McCormick brings to this role more than 13 years of water utility experience in client relations, customer service and performance measurement. She participated in the transition process and led the incentive development program in Indianapolis. She also participated on an AWWA work group responsible for developing national water and wastewater performance.
- **John Fritsch**, the Veolia Water Project Manager for the Gilson Road Superfund site in Nashua and the OK Tool/Savage Wells Superfund site in Milford, New Hampshire, will assist in the transition and provide ongoing regulatory support. He has nearly 30 years of industry experience, with almost half of it in the State of New Hampshire. He managed the Gilson Road Superfund site project in Nashua, completing the remediation and facility closure, and continues to provide site maintenance and emergency support. He brings to the team a strong relationship with State of New Hampshire and Federal regulatory agencies and a familiarity with the Nashua community. He is a licensed wastewater operator in two states and holds a national reciprocal license. He has a Class 4 wastewater operator certification and a Class 1 water certification in New Hampshire.
- **Jill Beresford**, the Business Manager for Veolia Water in the Northeast, and will provide oversight for this contract with the City of Nashua. She will support the locally based procurement staff and will direct all aspects of accounting/budgeting, purchasing and subcontracting. Ms. Beresford brings to this role more than 27 years of finance and business management experience in the U.S. and internationally.
- **Mike Schnack**, the Human Resources Manager for Veolia Water in the Northeast, will be the Human Resources Coordinator for this project. As O&M staff are hired for the Nashua facility, he will arrange for employee benefits and the training and career growth opportunities offered by our company. Mr. Schnack has over 10 years of human resources experience and has managed all areas of Human Resources, including employment, employee relations, wage and benefit administration, labor relations, regulatory compliance and training.
- **Jim Washburn**, the National Director of Systems and Network Engineering with Veolia Water in Indianapolis, will be the Information Technology Manager. He will be responsible for transitioning the computerized networks and tools and then implementing our company's protocols and management tools. Mr. Washburn currently manages Veolia Water's corporate data center, which is located in Indianapolis, as well as the company-wide network for Veolia Water. He has over 24 years of experience, which includes project management, help desk management, hardware and software support and local and wide area network installations and support.
- **Chandra Mysore, Ph.D.**, serves as Veolia Water's National Director of Drinking Water Treatment, one of the leading water service providers in the U.S. He has more than 20 years of experience in the area of water quality and treatment, water and wastewater disinfection, operations, desalination, water reuse, soil and water treatment systems employing advanced oxidation processes (ozone/UV) and membranes. Dr. Mysore has directed several large projects to investigate disinfection, biological filtration and membranes in treatment plants, biofilm control and water quality in distribution

systems. He has provided technical support to numerous DBO projects (e.g. Tampa, Indianapolis). As a part of the Veolia Water team for the City of Nashua, Dr. Mysore will assist in the areas of watershed management, water production operations and process control, and provide expertise to Veolia Water's CPM group for value engineering.

- **Dan Moran**, Veolia Water's Process Engineer for the Production Department at Indianapolis, Indiana, will provide technical and research expertise on this project. He has more than 20 years of engineering experience, including evaluation and implementation of process modifications to optimize water treatment plant performance; oversight of capital improvement upgrades to water treatment facilities; and negotiation with regulatory agencies on compliance issues. Process evaluations include design of pilot and/or bench scale testing programs aimed at meeting increasingly stringent water quality goals. Previous experience includes planning, design and implementation of environmental engineering projects for commercial and industrial clients.

Resumes for all of the key management and support staff that will be a part of our team are presented in Volume III, Appendix A.

SECTION FOUR

Transition Plan and Approach

VEOLIA WATER'S COMMITMENT TO THE CITY OF NASHUA Delivering the Best Value Through Innovative Approaches



The City of Nashua, New Hampshire, and the communities served by the Pennichuck Water Works face critical challenges as they proceed through the eminent domain process for the purchase of the water treatment, storage and supply systems now owned by a private entity.

Veolia Water North America – Northeast, LLC (Veolia Water), as discussed in our operations, maintenance and management (O&M) approach presented in Section One of this Proposal, has defined a plan and approach for the effective operations and management of the water system.

Veolia Water brings to the clients we serve in the State of New Hampshire, and the New England region as a whole, an unequalled base of resources, capabilities and direct and relevant experience—factors that will ensure that the Water Works system is transitioned safely and that ongoing operations are efficient while yielding the highest quality water the facilities are capable of producing.

Our Proposal relies heavily on our firm's track record throughout the U.S., because this proven experience in managing some of the largest and most complex water systems means that we have an understanding of the issues that you will face as you acquire and then transition the Water Works.

A key element contributing to the success of this proposed contract relationship with the City will be the transition of the existing water system employees to our team. Our employee relations plan, discussed in greater detail later in this section, provides for considerable communication, spousal meetings to address concerns at home, recognition of legacy knowledge and other programs to embrace employees and make them part of our team.

Existing Pennichuck employees will be given priority for all required positions created by the new contract between Nashua and Veolia Water.

Throughout the years, these individuals have formed the backbone of the Pennichuck water system and they will be a critical component of our success going forward. Their years of service with Pennichuck will be recognized for the computation of benefits. Union representation is welcomed if it is desired by our employees.

Additionally, in this section of our Proposal, we discuss the Transition Plan and Approach for this project, addressing the management, staffing and support aspects of this approach, as well as our plan and approach for the transition of staff from the current service provider.

Transition Plan and Approach

The City of Nashua's objective in the RFP is to "... select a qualified water service provider that will protect the assets and stabilize rates..." and critical to that decision will be the knowledge that transition to City ownership can be accomplished with no negative impact to water quality, security and safety, current employees, and customer service. Therefore, our overriding objective in this Proposal is to demonstrate that this decision can be made with confidence and that significant benefits will be realized with Veolia Water operating, managing and maintaining the assets under a direct performance contract with the City.

Veolia Water's transition plan objectives ensure the highest level of customer service, providing for the following:

- Safe and reliable water delivery of the highest possible quality will be assured by dedicating significant resources to completing due diligence of the capital plans that presently exist, completing a comprehensive audit during the transition period to identify any process or equipment reliability issues, hiring qualified and certified operators with priority given to existing Pennichuck employees, validating all proposal plans and assumptions and incorporating legacy knowledge with the help of the current employees when they join our team, and supporting their efforts with the full resources of our company.
- Security of the water production and transmission assets will be maintained by first auditing current practices, comparing them to our industry best practices and then making necessary recommendations and taking steps to ensure the facilities are secure. Veolia Water has literally hundreds of certified staff to conduct Vulnerability Assessments and Emergency Response Plans in conjunction with new Federal Guidelines that were mandated after 9-11. With open reservoirs and a single access to the Merrimack River, this preparedness activity is critical to protect the raw water sources.
- Customer service will be a major focus of our transition efforts. Using our knowledge of customer service over the years and local resources, Veolia Water will develop a system for Nashua that will exceed existing services and constantly monitor and respond to customer concerns.
- Our employee transition will result in a committed and dedicated work force – well-motivated with high morale. Our plan, as discussed in detail later in this section, demonstrates our commitment to this objective. Pennichuck employees will be given priority consideration for all positions. The transition staff will include technical experts from Veolia Water in all aspects of water service. The Veolia Water employment program offers incentives for safety as well opportunities for education and career advancement. Our employees are our most valuable assets and Veolia Water welcomes the Pennichuck employees as part of our team.
- Excellent working relationships with local vendors, regulatory agencies, City officials and our new customers, will be established. Veolia Water will identify local vendors that currently supply the Water Works that could provide services or materials for the project. We hope to commit a significant percentage of our purchased goods and services in this proposal, but we will certainly be able to do so during the transition

period. The program team will survey local firms and utilize our proven methods to mentor and engage the maximum percentage of these firms possible.

- An asset condition survey will be performed to quantify the state of the assets, identify all deficiencies and prioritize them according to criticality. This survey will be performed within the first 180 days after contract commencement. This survey will establish the condition of the assets turned over to the City, and provide for recommendations of any necessary capital improvements.
- We will complete all deliverables as proposed and as required in the ultimate service agreement. A key element will be to prioritize the deliverables and spread them out over an appropriate period of time. A high number of deliverables, especially those not critically important, puts tremendous strain on the organization at a time it is already stressed due to the transition taking place. Veolia Water will provide definitive recommendations in this regard, but we request you consider this issue.

Transition of Management and Staff

Veolia Water has successfully accomplished the transition of other private-sector employees under contract O&M services agreements to our employment with little or no disruption of service and with empathy for the new employees and their families. Our firm's approach keeps our clients fully informed without creating a major distraction for them during this process. The entire progression is orderly and uncomplicated.

Today, Veolia Water's staff in North America numbers more than 2,800, including management, technical, operations, and other personnel. Our firm has a low turnover rate, less than 10%, in all areas of employment. This is largely credited to the competitive benefits and compensation, training and enhanced career opportunities that our firm offers. Indeed, over the past two years, Veolia Water staff has grown significantly through new projects such as the 20-year outsourcing contract with the City of Indianapolis, Indiana, which brought more than 460 new employees to our company.

Transitioning the operation, maintenance and management (O&M) of Pennichuck's Water Works will be a complex undertaking that must be successful to solidify public support and instill confidence in the City Alderman and Mayor's decision to purchase the Water Works. Veolia Water's experience suggests that planning is absolutely critical, but success will also be dependent on having an experienced and capable team, adequate resources allocated and available, and the support of a firm and its management to do what it takes to get the job done. The first few months will be critical and Veolia Water will provide as many resources as needed to complete the task.

The Transition and Employee Relations plans outlined in this section rely heavily on our experience with similar projects, which has many of the same characteristics of the Pennichuck Water Works and its employees' issues. The knowledge has been applied to these plans, which will ensure a continuous supply of safe drinking water and the highest levels of customer service. This transition involves private-sector employees transitioning to a private-sector operator. No other U.S. contract operator has more experience in this regard than Veolia Water.

Our transition plan also addresses the full spectrum of technical and administrative services to be transitioned that we know are needed to ensure reliable, uninterrupted service to the City. It is essential to develop the support of the existing staff, but also the cooperation of and coordination with the City, Pennichuck Water Works and regulatory agencies. This

approach is guided by first dedicating an expert team of transition specialists, understanding and meeting the needs of the existing employees and then assessing and reviewing each area of service, and ultimately implementing any changes that will improve the quality of water and reliability of service.

Transition and Project Support Team

Key to our ability to transition these facilities and provide safe and reliable water delivery will be the experienced and capable management team we will commit to this effort.

Veolia Water will commit to this project an experienced Transition Team that will provide all of the core management, technical and administrative disciplines that will be required to ensure success. This team will be formed from our management team and supplemented by other experts drawn from the resources of Veolia Water in the Northeast regional business unit and our operations nationally. Many of the members of this team are already involved in the development of this Proposal and will remain a part of our development team through interviews, presentations, contract negotiations and project startup. Each of these managers has significant expertise and experience in their specialty area, and all are committed to this project.

Table I.4-1, next page, identifies the key members of our proposed Transition/Project Support Team and their specific roles. Resumes for all of these staff are provided in Appendix A.

Each of the managers and subject matter experts identified as a part of the Transition Team brings strong expertise and experience in their specialty area, and each is committed to this project and to a successful transition, meeting all of the objectives stated above.

This Transition Team will be mobilized upon selection of Veolia Water as the City's partner, under the direction of our **Transition Team Managers - Paul Noran, a Technical Manager** with Veolia Water in the Northeast, and our **Area Manager, Roy Wood**. They will then begin the process of transitioning services, staffing and operations responsibility to our team. Supporting this team will be the resources of Veolia Water, as well as the technical, management and financial resources of firm as a whole, providing the City with access to a base of expertise and the financial and management resources needed to ensure success.

Transition Plan Objectives

Veolia Water understands that the City of Nashua is seeking a service provider that can provide the level of experienced staff that will ensure the safe and effective transition and long-term management of your Water Works. One of the key commitments that our firm makes in pursuing this contract with you is to provide superior management and staffing for your facilities, and, prior to the start of this contract, we will have our team in place and ready to implement the transition plan. As a part of this commitment, we will also provide proven leadership that can deliver all of your needs for this project. This means that we will manage and staff the City's water facilities with a sufficient number of qualified and certified employees, including management, technical and administrative staff.

As detailed in the project organization and management approach (see Section Three), the resources of our firm at the regional and national levels will support the newly hired employees. This staffing approach ensures that the City of Nashua will continue to benefit from the hands-on experience of existing Pennichuck staff, supplemented by the broader managerial and technical experience that we will deliver. Our project organization chart

(Figures I.3-1 and I.3-2 in Section Three) illustrates our proposed organization for ongoing operations with transition team members filling the key management positions that will later be staffed by the permanent management team. We expect that the majority of these positions will be filled from the current staff and local hires.

Transition of O&M Staff

Employee Relations

Veolia Water's approach to employee relations is one founded on experience and based on empathy to the uncertainty and change the employees will experience. Past successes, and mistakes for that matter, mean that we understand the hard work that must be put into this effort. We are committed to embracing the current employees and ensuring that we make the transition to Veolia Water as painless and rewarding as possible. We certainly value the institutional knowledge they have and know that our plans will be significantly improved with their help. Highlights of our employee relations approach include:

- Extending offers of employment to those existing employees that will be required.
- Providing for wages that are consistent with a recent salary survey for the area. Furthermore, employees who transition to the Veolia Water O&M team will be entitled to career-advancement opportunities, such as license and career-path training, tuition reimbursement, bonuses associated with certifications, safety training and a safety performance bonus plan and an annual project bonus program.

Table I.4-1. Veolia Water's Transition Team

Role	Name
Project Manager	Dave Ford
Transition Managers	Roy Wood <u>Support:</u> Paul Noran
Human Resources	Mike Schnack <u>Support:</u> Don Ellis
Production	Rob Burton <u>Support:</u> John Fritsch
Field Services including Distribution	Paul Noran
Asset Management	Bill Fahey
Performance Metrics and Implementation	Rob Burton <u>Support:</u> Lora McCormick
Finance	Jill Beresford <u>Support:</u> Joey Tolbert
Legal	Rob Arendell <u>Support:</u> Scott Schrang
IT Support	Jim Washburn
Customer Service	Lora McCormick <u>Support:</u> Debbie Willis
Public/Community Relations	Scott Edwards <u>Support:</u> Dick Johnson
Laboratory/QA-QC	Dr. David Peterson
Capital Planning	Keavin Nelson, P.E. <u>Support:</u> Dave Ford, P.E. and Dufresne-Henry
Environmental Health, Safety and Security (EHS&S)	Benn Bullock <u>Support:</u> Jim Galipeau
Development Team Knowledge	Joe Tomashosky <u>Support:</u> Dick Johnson

- Implementing a communications strategy that includes a project-wide kick-off meeting, just as soon as we are able, smaller group meetings with discrete teams, individual meetings to allow employees to interview us and for us to get to know them while addressing their specific concerns, spousal functions to address concerns at home and to put a face on “the new company”, newsletters and other regular forms of communication, development of a Web site, fun events to build camaraderie and team spirit, and other less formal communications to ensure we are on top of all employee issues.
- Providing for an “Employee Participation Program,” which will be designed to recognize and embrace the knowledge and capability inherent in the employees and to incorporate that knowledge into our approach. This was a key lesson learned after much experience with transitioning employees, where we continuously learn from people that have been part of the organization for many years. Using focus groups and individual meetings, we will work through our proposed approach and key assumptions and compare them with past practices. This will allow us to validate our plans and share best and legacy practices.
- If the newly hired employees desire union representation, Veolia Water will hold meetings with union leadership, to facilitate open communications. In addition, we hope to communicate with opinion leaders and other people having significant influence in a way that recognizes their position and importance.

A transition of this magnitude cannot simply begin once the contractor is selected. It requires months of planning in order to ensure successful execution.

Veolia Water has a methodical, but flexible and sensitive Transition Plan that minimizes uncertainty and treats the current employees with respect. All required positions will be offered to Pennichuck employees prior to the local labor market. The experience of the existing Pennichuck employees will enhance our success.

Veolia Water’s management staff for this project will, as discussed earlier in this section, be supported by a skilled and experienced transition team composed of resources drawn from the regional, national and international resources of our firm. We also anticipate hiring local employees to assist with the transition. This team will be composed of experts/specialists in the areas of human resources, operations, maintenance, laboratory, capital projects, information technology, customer service, accounting, safety and security. The overall Transition Team will be comprised of 15–25 individuals at various stages of the transition, with a core management group that will be with the process from start to finish. The paragraphs that follow provide specifics regard to the employee relations elements of our transition plan and approach.

Implementation of Pre-Commencement Activities

One of the first steps in recruiting the current employees into the Veolia Water organization will require the cooperation of Pennichuck Water Works Operating Company and the City to allow us to meet with Pennichuck employees immediately after selection. The intent of the meeting will be to discuss the transition process, begin the employment application process, interview interested candidates, convey expectations, and begin to develop a working relationship based on mutual respect and trust. The next step will be to meet with the

newly hired employees and their families face to face, establishing lines of communication, and beginning the employee transition process.

Human Resources Interface

Veolia Water will implement our proven human resources programs, prior to the project Commencement date, in order to ensure continuous communication and a smooth transition. For example:

- Informational meetings will be conducted with employees and their families to help them understand the Veolia Water organization, management team, its philosophies, ethics, and values, policies and benefits program, and to answer employee questions. These meetings will be held at various times (during and after the regular workday) and convenient locations to accommodate the schedules of employees and their spouses.
- In-depth orientation sessions will be provided for each employee that encompasses the topics of project organization, group benefits, policies and procedures. There will be both group and private, one-on-one, sessions.
- Benefit specialists will assist with information and enrollment for employee-selected benefits.

Employee Communication

Critical to our Employee Transition Plan is extensive communications with the selected employees and their families to answer questions and dispel concerns. This communication program consists of three main components: 1) making our Employee Transition Team members available on site at various work places throughout the transition period to meet with employees; 2) establishing a 24-hour-a-day telephone hotline for employees to obtain immediate information, pose questions, or express concerns in a confidential manner; and 3) providing access by phone to the regional HR team to receive information in a confidential manner.

From the Current Employee's Perspective

Project personnel are our greatest resource, and our initial transition activities are directed to furthering their understanding of our company, minimizing their concerns, and embracing them as members of our team.

Following the execution of the Management Agreement, Veolia Water's Transition Team will sponsor **informational exchange get-togethers** as the first phase of our successful workforce transition. We will hold luncheon and dinner sessions at locations that will permit the employees and spouses to easily attend.

These get-togethers will be attended by Veolia Water senior management, Human Resources Specialists, and Operations Management. The purpose is to communicate to our new employee family the organization, philosophies, policies, and benefits of Veolia Water. These informal, family oriented gatherings have proven to be a key component of our transition planning.

We know that these sessions will raise various questions in the minds of some employees who will not ask them in a group setting. Accordingly, Phase II of our transition plan provides substantial opportunity for one-on-one sessions. Upon leaving the informal get-togethers, employees are encouraged to sign-up for individual sessions.

Everyone recognizes that with the selection of a new private contract operator, some changes related to employee programs will occur. We again make every effort to reasonably address these concerns and establish positive employee relations practices. This is accomplished by maintaining and extending existing programs and benefit offerings to the extent reasonable and prudent to do so.

Personnel Orientation

Immediately after Contract Award, benefit specialists and Human Resources professionals, along with representatives from the respective insurance carriers, will begin extensive group and individual sessions to thoroughly review the group benefits provided by Veolia Water. Employee benefits orientation will cover the following:

- Discussion of procedures that will allow employees to accumulate retirement funds into our 401(K) plan, to the extent permitted by law.
- Presentations by Veolia Water's financial consultants, Edward Jones, whose representatives will provide information and financial planning services and products.
- Presentations by Veolia Water's retirement consultants, Putnam Associates, whose representatives will participate in employee meetings to offer assistance in understanding 401(k) plans and 401(k) investment options and to respond to questions.

With the permission of the City and Pennichuck Water Works, Veolia Water will hold preliminary briefings with employees prior to the actual commencement date. During these meetings, employees will be given the necessary employment and payroll forms to be completed. These meetings will also encompass safety issues, the transition schedule, and applicable legal requirements regarding employment rights. They will provide a description of management, operations and maintenance policies and procedures; plans for providing services under the Agreement; hiring and promotion policies; compensation and benefits; plus answers to any remaining employee questions. Further, in-depth orientation sessions will be conducted throughout the initial startup phase of the project.

Additionally, Veolia Water will clearly define the roles of the on-site staff and the external technical support specialists during the transition period. This group will provide on-call support to the facility 24 hours per day during the initial months of the contract.

Policies & Procedures

Veolia Water professionals will develop and communicate our administrative policies and procedures to ensure that matters are being handled in a consistent and uniform manner and in compliance with various laws and regulations.

Employee Interviews, Employment Offers and Job Assignments

As discussed at the start of this section, Veolia Water will first extend offers of employment to those existing Pennichuck employees that chose to join our firm and are selected by the Transition Team. The Pennichuck employees that transition to our firm will initially be assigned to jobs with comparable assignments, duties, responsibilities and titles to reduce the stress on employees during the transition process and also to ensure reliable, uninterrupted service through the transition period.

Veolia Water's Project Management and Human Resources Transition Team members will hold one-on-one interviews with all existing employees. These interviews present both our team and the prospective employees with an opportunity to ask and answer questions. During these meetings, Veolia Water's transition team members will:

- Review the organization of the employee's work group.
- Explain position expectations

- Determine employee career interests and explore potential career path opportunities available within Veolia Water

During the first year of service, more in-depth interviews will be conducted as part of our organizational and training needs assessment.

Veolia Water requires all employees to pass a pre-placement drug test as a condition of employment. Prospective employees who fail the drug screen will not be employed but may reapply after six months.

In North America, no other company has transitioned more employees to contract O&M than Veolia Water. One of our largest municipal project transitions in recent years was that for the City of Indianapolis. This involved the transition of more than 460 management, professional and technical staff under a fast-track approach. As this experience demonstrates, Veolia Water is unequalled in the depth of corporate resources and experience it can apply to handle an employee transition of any magnitude.

Safety and Training Assessment

Safety is of utmost importance, and our EHS&S staff will have the responsibility for conducting in-depth safety training programs that will continue throughout the life of the contract.

As part of this, and prior to the start of services, personal protective clothing and equipment will be selected and fitted so that all required safety equipment will be available for transitioned employees on their first day of employment with Veolia Water.

Veolia Water will conduct a thorough safety audit with 90 days of commencement of contract services. Veolia Water will outline all required operational changes, safety equipment purchases and capital improvements needed to meet the requirements of the safety audit. Veolia Water will use this information as a basis for the site specific safety program, which will be implemented in the Nashua Water Works.

During the transition phase, our Safety Program will focus on establishing a general understanding of all safety-related requirements. In the first six months after commencement, safety training will be delivered by our on-site EHS&S Coordinators and will focus on those areas identified by our “training needs assessment.” This assessment will cover all areas of training needs, including operations, maintenance and management.

Veolia Water will also provide an ongoing comprehensive training program that addresses safety, project-specific, ongoing education, and certification and licensing and career advancement related topics.

Operational Transition Elements

In the transition of services from the current private service provider, Veolia Water understands that the City of Nashua’s objective is to select a company that has the experience and technical knowledge needed to operate a regional water system with sensitivity to existing employees. Further, we understand that critical to that decision will be the knowledge that transition to City ownership can be accomplished without a negative impact to water quality, security and safety and customer service. Therefore, Veolia Water’s overriding objectives in this Proposal is to demonstrate to the City of Nashua that you can be confident that you will realize significant benefits through our plan and approach to the transition of service and the management of the water system.

Veolia Water's transition plan objectives, as discussed in this section, will ensure the highest level of customer service, providing for:

- **Security Vulnerability Assessment Program Compliance** - The review of the Pennichuck's existing Security Vulnerability Assessment may be the most important aspect of Veolia Water's initial service to your customers and citizens. We have certified employees who provide these types of assessments, and the benefits of their experience and in-house expertise cannot be overlooked. Your single access to the Merrimack River and open fresh water sources are a target for attack at any time. Veolia Water has the responsibility for Vulnerability Assessments for literally thousands of square miles of open raw water supplies across the country. We cannot eliminate an attack on these resources, but we can develop a plan that will minimize the effects of an attack and act as a deterrent to attack.
- **Water Quality Maintenance and Protection** - Safe and reliable water delivery of the highest possible quality will be ensured by dedicating significant resources to complete a comprehensive audit during the transition period to identify any process or equipment reliability issue. A team will shadow existing operations, validate all proposal plans and assumptions and incorporate legacy knowledge with the help of the current employees when they join our team. Our Transition Team will be supported by the full resources of our company.
- **Best Practices Compliance** – Efficient and effective operation of the water production and transmission assets will be ensured by auditing current practices, comparing them to industry and Veolia Water best practices, making necessary recommendations and taking steps to ensure the facilities are operated according to these best practices.
- **Customer Service Enhancements** Customer service will be a major focus of our transition efforts. We will meet with existing staff members and begin an exchange of information to address critical customer service issues and to ensure accessible and responsive customer service.
- **Adequate Staffing from Day 1** - Employee transition will result in a committed and dedicated work force – well motivated with high morale – with the needed complement of O&M staff in place on day 1 of the transfer of operations responsibility for the water utility. Our plan, discussed later in this section, demonstrates our commitment to this objective. Our success is directly related to transitioning Pennichuck employees to Veolia Water. Extensive education programs and the opportunity for upward mobility will compliment their experience and knowledge. Our employees are our greatest assets and we work hard to keep them motivated through bonuses and awards for achievement.
- **Effective Asset Condition Assessment** –Identifying critical equipment, assessing its condition and addressing any deficiencies will be a prioritized activity of our asset management team to make sure that all critical equipment is in a reliable condition. In addition, standby and backup equipment will also be assessed. This important activity will ensure that we can meet our first and most important objective of providing a reliable and safe supply of water. An asset condition survey will be performed within 180 days in order to quantify the state of the assets, identify all deficiencies and prioritize them according to criticality. This audit will establish the condition of the

assets turned over to the City, and make recommendations of any necessary capital improvements.

- **Focus on Deliverables Needed for Transition of Operations and Management Responsibility** - Veolia Water will complete all deliverables as detailed in our Proposal and as required in the ultimate service agreement. A high number of deliverables, especially those not of critical importance, put tremendous strain on the organization at a time it is already stressed due to the changes taking place. In our Proposal, we have provided definitive recommendations in this regard.

Key Objectives for Successful Transition:

- **Safe & Reliable Water with stable rates**
- **Secure Water Facilities meeting the new requirements of 9-11**
- **Strong Customer Service Focus**
- **Provide Pennichuck employees with priority for all positions**
- **Assessment/Rating of Critical Equipment and System Assets**
- **Building Relationships with All Stakeholders**
- **Complete the Transition Process – Schedule and Deliverables**
- **Form an Effective Relationship with the City and Regional Water Authority**

In summary, Veolia Water's transition plan addresses the full spectrum of technical and administrative services to be transitioned to ensure reliable, uninterrupted service to the City of Nashua and those served by the water utility. It is essential to develop the support of the existing staff, but also the cooperation of the City and other communities served by the water system.

Element of the Operational Transition Plan

It is important that effective plans are executed to ensure that daily operating responsibilities are transitioned seamlessly. Veolia Water, as discussed in this section, will commit a technical transition team representing a wide array of experience to work concurrently on the critical technical aspects of transition. This Transition Team, representing experienced technical managers in each discipline, will arrive at least four weeks before contract commencement to:

- Begin setting up accounts with local providers and arranging for the transfer of existing contracts with key vendors and suppliers.
- Begin the installation of process control management, maintenance management, and regulatory reporting software, which our firm uses nationally as a key management control in monitoring and managing the performance of each facility.
- Review daily, weekly and monthly reports used in key areas of service; review in detail with the City as regarding the format and scope of information.
- Assess the operating condition and performance of each process area so that there is a confidence in the operations.
- Identify any pending problems so that an action plan can be put in place to rectify them.
- Review and refine standard operating procedures (SOPs), process models and other tools that may already have been developed for the facility.

- Perform a preliminary safety audit and vulnerability analysis of the facilities to identify any safety issues that could compromise the safety of our personnel, infrastructure and public health. The vulnerability analysis will be directed at evaluating security and vulnerability to terrorist actions.
- Assess, modify or develop SOPs and operational checklists to be used in each process area; review any existing SOPs for their quality and consistency with Veolia Water policies and practices.
- Field-verify all material by operational personnel before SOP finalization.

Operations - Water Treatment

The transition of operating responsibility will be accomplished as follows:

- Begin an initial orientation of key managers on current operating practices for routine and emergency operating modes.
- Ensure that New Hampshire state-certified operators are in place at all required positions.
- Shadow the existing personnel, prior to commencement, to observe daily operations and maintenance – preferably for a minimum of 30 days.
- Become familiar with key personnel in each discipline.
- Make contact with key individuals within the District, regulatory agencies, vendors and subcontractors.
- Develop a clear understanding of the monitoring and reporting requirements of each facility.
- Begin the implementation of process control management plans to ensure the treatment process is monitored and controlled.

Inventories

Within 30 days after the Service Commencement Date, Veolia Water will produce an inventory of all chemicals, parts, tools, and equipment noting the condition of each item on hand on the Service Commencement Date. The inventory will include the following:

- The number, or as applicable, the quantity of such inventory.
- Detailed description of the inventory.
- The condition of the inventory.
- The monetary value of the inventory on an aggregate basis.
- As service requirements are developed, analysis of materials and parts necessary, not only for recurring service but for anticipated corrective service will be determined and compiled, which will permit a programmatic approach to developing an integrated set of spare parts and establishing an appropriate inventory.
- The Service Agreement will provide details on handling the inventory at termination or expiration.

Maintenance

Maintenance specialists will make an assessment of the critical equipment, spare parts inventory, and the preventive maintenance program in use. They will build from the existing

base of equipment and service history, if available. In time, all land, buildings, wells, vehicles and equipment will be incorporated into a comprehensive maintenance program. Detailed maintenance schedules for the facilities and equipment will identify the type of maintenance to be performed and the frequency of these maintenance activities. This information will be consistent with accepted industry standards and will comply with the manufacturers' maintenance recommendations. Proper maintenance will improve reliability for customers, reduce long-term capital needs, and improve overall service to Nashua's customers.

Veolia Water's maintenance programs are based on four major fundamental aspects, including:

- Specific asset service, wear, and life cycle characteristics.
- Asset application and service context related impacts.
- Asset criticality in terms of unit and process reliability.
- Maintenance and service characteristics, techniques, and procedures including costs/benefits.

No less than 30 days prior to the Service Commencement Date, Veolia Water will submit an update to the Maintenance Plan provided herein. The updated maintenance plan will address any conditions that have changed in the period between negotiation of the agreement and the Service Commencement Date. Also within 90 days after the Service Commencement Date, Veolia Water will submit a final maintenance plan reflecting all changes not previously known by the City or Veolia Water. The Plan will include the details about directional flushing to be performed.

The objectives of our maintenance program will be to maintain a high state of reliability in a cost effective manner while protecting the investments made in the facilities and assets. PWW is currently using the Synergen™ maintenance management software (now SPL Enterprise Asset and Work Management System) to track their maintenance tasks and procedures. We plan to continue to use this program and database until such time that we implement our new Asset Management system and software. Accordingly, the program as discussed below addresses our plans and goals. Maintenance-related discussions that follow are for the interim period prior to the implementation of the future program.

Capital Projects

Our experienced **Capital Projects Manager, Keavin Nelson**, will be among the technical support group on site to become more familiar with the scope and status of the current capital improvement program, observe the prioritization and scheduling of resources, meet with key contractors performing work, and begin to compare our proven construction management practices against those that are currently being used. The Capital Projects Manager will begin to identify and prioritize capital required for system improvements to meet regulatory requirements and those needed to satisfy the growth of the community. These activities will continue throughout the transition period, ensuring the City that all criteria have been addressed and that the facilities perform to the required standards immediately upon Veolia Water assuming operating responsibility.

Laboratory

The existing laboratory has not been evaluated, but our initial efforts would be to complete a full assessment of laboratory operations as they relate to analytical procedures being used, the capabilities and use of the laboratory information management system, the QA/QC

program in effect, the adequacy of reagents and supplies on site, and the frequency and type of analyses being performed.

These all relate directly to ensuring that the data collected is accurate, legally defensible, cost effective, and in compliance with the monitoring and reporting requirements of the facilities.

A laboratory transition plan will be developed and initiated as the contract commences and will include the following:

- Integration into our firm's national purchasing contracts with laboratory vendors.
- Procurement of the necessary equipment and supplies.
- Documentation of a detailed equipment and chemical inventory.
- Training in document control and distribution procedures for internal and external reporting.
- Training in our health and safety procedures and reporting requirements.
- Modifications to the sampling and testing plans.
- Development of a site-specific Laboratory QA/QC Plan and Chemical Hygiene Plan.
- Implementation of our corporate Quality Assurance Program and integration into the existing quality assurance plan.

The laboratory transition planning will begin two months prior to the contract start date and will continue for two months after startup. Our quality assurance staff will work with the laboratory to ensure a smooth and successful laboratory transition.

Field Services and Distribution

Veolia Water field services and distribution system specialists will work in concert with field and engineering specialists to assess daily activities regarding manpower and equipment utilization, water distribution, repair and field customer service activities. They will review the size and capabilities of the field crews, service records and software and mapping systems. They will ensure that all of the required information for monitoring and reporting are in use, or will establish them.

Information Technology

Computer systems, including hardware, software and networks, will be integrated to provide a shared database of information related to the management, operations and maintenance of the Water Works. This will include customer information, facilities maintenance, inventory, and other related systems. Veolia Water's Information Technology (IT) specialists will meet with existing staff and assess the hardware and software inventory. Additionally, they will determine software license compliance and determine the condition of communication carriers. The IT team will meet with all departments within the Water Works to determine if their IT needs are being met. They will determine what personnel are critical. The team will assess the physical security of the entire IT area, as well as make an assessment of the security of the IT systems. Security clearance to sensitive information and/or systems will be immediately determined, and protocols will be put in place. An assessment of the data backup, auxiliary power and hot site will be determined. The team will develop systems (if they do not already exist) to determine the root cause of help desk inquiries with an eye on

significantly reducing these problems. The team will develop contingency plans should critical talent leave the Water Works.

Of particular note will be the transition, as required, from the current accounting system to Veolia Water's. Procedures will be put in place to allow this transition to take place as quickly and efficiently as possible. The Team will work to ensure that this data transfer occurs while not interrupting the normal course of business. Veolia Water will ensure that accounting information is provided to the City in the format required by the contract services agreement.

Community Involvement

In order to provide a seamless transfer of operating assets, Veolia Water will join with the City to develop a comprehensive marketing plan for a shared community outreach effort during and after the transition period. Communications may include direct mail, advertising, speaking engagements, special events and other strategies to introduce citizens to their new water company—owned by the City and managed by Veolia Water. We will work with the City to produce public service announcements to run on local media, at our cost, describing the transition through a local spokesperson, as well as the development of a Web site.

Beyond the transition, we will work with the City to ensure clear communications with the public through a variety of vehicles, including a Web-site to provide the local community with access to important water-related information. This interactive site will afford the public a convenient venue to express their views, ask questions and deliver opinions on issues of concern to them.

Bottom line, Veolia Water will work closely with the City and other communities served to keep officials aware of the issues and concerns on the minds of the ratepayers. Other customer communication vehicles include quarterly newsletter reports, collateral materials and media relations.

Security/Vulnerability

It is assumed that Pennichuck Water Works has completed the U.S. Environmental Protection Agency's mandated Security Vulnerability Assessment process, and during the transition phase our EHS&S team will review these findings and develop a specific EHS&S plan and approach for the water system.

This work will begin with an evaluation of the security and vulnerability of the Pennichuck Water Works and assessment of the current security program that Pennichuck has in use. It will be critical to meeting our objectives that we have full access to this information so that we can assess its effectiveness, provide adequate resources to ensure its optimization and make any necessary changes – security of the assets and of the public will be paramount in our transition efforts. And, making sure the City and the public know the facilities and their drinking water are safe will be critical to our transition communications strategy.

Veolia Water will report to the City on any deficiencies and make recommendations for obtaining compliance with the updated plan.

Customer Service – Base Proposal

During the transition, Veolia Water's Customer Service Specialists will **meet with existing staff and assess the current customer service procedures.** Communication with

sensitivity to existing employees during this time period will be important to allay uncertainties and to help them feel included in Veolia Water's Customer Service team.

Utilizing the knowledge of the current owner's employees to **develop a Customer Service Policies and Procedures Manual (PPM)** will be a high priority. In consultation with key Nashua water system stakeholders, the team will determine the critical

customer service issues to be addressed to start the organization moving toward more accessible and responsive customer service. Veolia Water will develop a Customer Service Plan that will detail our objectives to provide the scope of services outlined in the RFP.

During the transition period Veolia Water will **monitor day-to-day performance, assess individual skills and establish structured training programs to create and implement a multi-skilled workforce.** Training Veolia Water employees on Nashua's policies and procedures prior to the transition period will be important so that Nashua's desired policies are uniformly followed.

Responding to Customers

Veolia Water will establish procedures to deal efficiently with customer questions and complaints, whether they are received by mail, Internet, telephone or in person. Response will be immediate when possible. All incoming correspondence will be registered and set times allocated for replying.

The goal is that any question will be fully answered by the first line of response, a "one and done" philosophy. For complaints or inquiries requiring the presence of a field service specialist, an appointment will be made with the customer immediately when the complaint is received. Set response times will form a primary component of the Veolia Water's Customer Service Plan.

Customer Service – Alternative Proposal

Veolia Water's transition plan, under the Alternative Customer Service Proposal is presented in Section Six of this Proposal volume.

Conclusion

The Nashua experience with the acquisition of the Pennichuck Water Works truly mirrors the transition that we went through with an investor-owned water utility a few years ago. It was acquired by a municipality, and Veolia Water was awarded the 20-year O&M contract. The elements of the transition from both an employee and technical standpoint are very similar. Because of Veolia Water's experience during the referenced transition, *we are uniquely qualified to make the transition in Nashua a resounding success.*

Many important lessons were learned about how to make transitions more successful. We will utilize the lessons learned there to *make the transition a less stressful experience for the*

Veolia Water's Training Program for Customer Service Representatives

- A Policies and Procedures Manual (PPM) will be developed initially to define Nashua specific business rules.
- All Customer Service Representatives will be trained using the Nashua PPM to ensure that they are thoroughly knowledgeable of Nashua's specific policies.
- Veolia Water will use its highly structured training program to ensure a high level of competency.

City and our new employees. Using lessons learned, we will build upon the institutional and industry experience of our new employees and help them understand the differences between an investor-owned utility and publicly owned system with a private operator. This educational component will be much easier for Veolia Water than for any of the other bidders because of this recent experience. We are confident that the Pennichuck employees will be excited about the new opportunity and the benefits that we will offer.

Veolia Water operates more water facilities for public entities than any other water company in this business. This extensive experience coupled with the \$50 million annually invested in research and development places Veolia Water at the cutting edge of new technology and at the forefront of new regulatory requirements. *Therefore, the technical and operation transition that we have completed many times before will be facilitated in a timely and professional manner.* We welcome this challenge and look forward to being a part of your great community.

SECTION FIVE

Experience and Qualifications

VEOLIA WATER'S COMMITMENT TO THE CITY OF NASHUA Bringing a World-Class Base of Experience and Expertise



In this procurement process, the City of Nashua, New Hampshire, is seeking to enter into a contract with a “world class” team for the operations, maintenance and management (O&M) of the water system assets that serve your community.

The process that the City is undertaking will involve acquiring the water utility assets of the Pennichuck Corporation, namely those of Pennichuck Water Works, (Water Works). The system then will be operated and managed by a service provider under a direct contract with the City, with the goal of delivering to the City’s water customers’ drinking water of highly acceptable quality and in full compliance with all applicable standards, laws, rules and regulations. In tandem with these goals is the mandate to provide for uninterrupted water service, with no affects on the quality of water or the level of service delivered.

Veolia Water North America – Northeast, LLC (Veolia Water) is unique in our ability to ensure this critical objective is met. Our firm brings to the clients we serve in the State of New Hampshire, and in the New England region as a whole, an unequaled base of resources, capabilities and direct and relevant project experience—all factors that will ensure that the City’s Water Works system is transitioned safely and that ongoing operations are efficient while yielding the highest quality water the facilities are capable of producing.

Our focus under this long-term agreement with the City of Nashua will be to transition the water system operations, to establish a new management team and approach, and then to deliver on the commitments that we have made as a part of this Proposal. In tandem with these goals for high quality and compliant drinking water is the mandate to provide for uninterrupted water service.

Veolia Water, as is demonstrated in the experience and capabilities discussion provided in this section, is unique in our ability to ensure this critical objective is met. Not only are we part of the largest water company in the world, but our company as a whole has transitioned more employees, both public and private, to our organization than any other water O&M services provider. In addressing the scope of work for this contract with the City, we will also form a project team, one which will include Dufrense-Henry, a leading provider of engineering, construction and related services in the New England region.

This section of our Proposal discusses the background and experience of our Team and provides specific references for our work with other water projects.

The Veolia Water Team

This proposed relationship with the City of Nashua is one that will demand the resources of a leading O&M services provider, backed by strong engineering, construction and other resources to support the capital and related project work scope. To best address this need, Veolia Water has formed a project team that can provide the base of experience required and a strong base of local expertise and resources that will ensure success.

Veolia Water will be the lead firm and the direct contractor to the City of Nashua for this proposed contract. Under this approach we will provide all of the management, O&M and other resources needed to effectively operate and manage all aspects of the water system.

Joining with us, as our engineering and construction services partner, will be **Dufresne-Henry**, a New England-based firm that specializes in planning, environmental science, landscape architecture, construction management and other related services. The firm provides a wide range of services throughout the duration of a project, from initial planning, evaluations, and modeling, through the design and construction phases, and into operational startup. They have established offices in New Hampshire and Massachusetts from which they will support this project.

In this section, we profile the background and experience of our two firms, and additional detail related to experience and references is provided in Appendix B, Volume III of this submittal.

Veolia Water

As the leading provider of O&M services for water and wastewater utilities across the U.S., Veolia Water brings the base of experience and expertise needed to be a successful partner to the City of Nashua under this proposed long-term agreement.

Our firm also brings to this project a proven base of experience in the State of New Hampshire and the New England region as a whole, with some 30 active governmental/municipal clients. Under our contracts with these clients, we manage the operation of both large and small water systems.

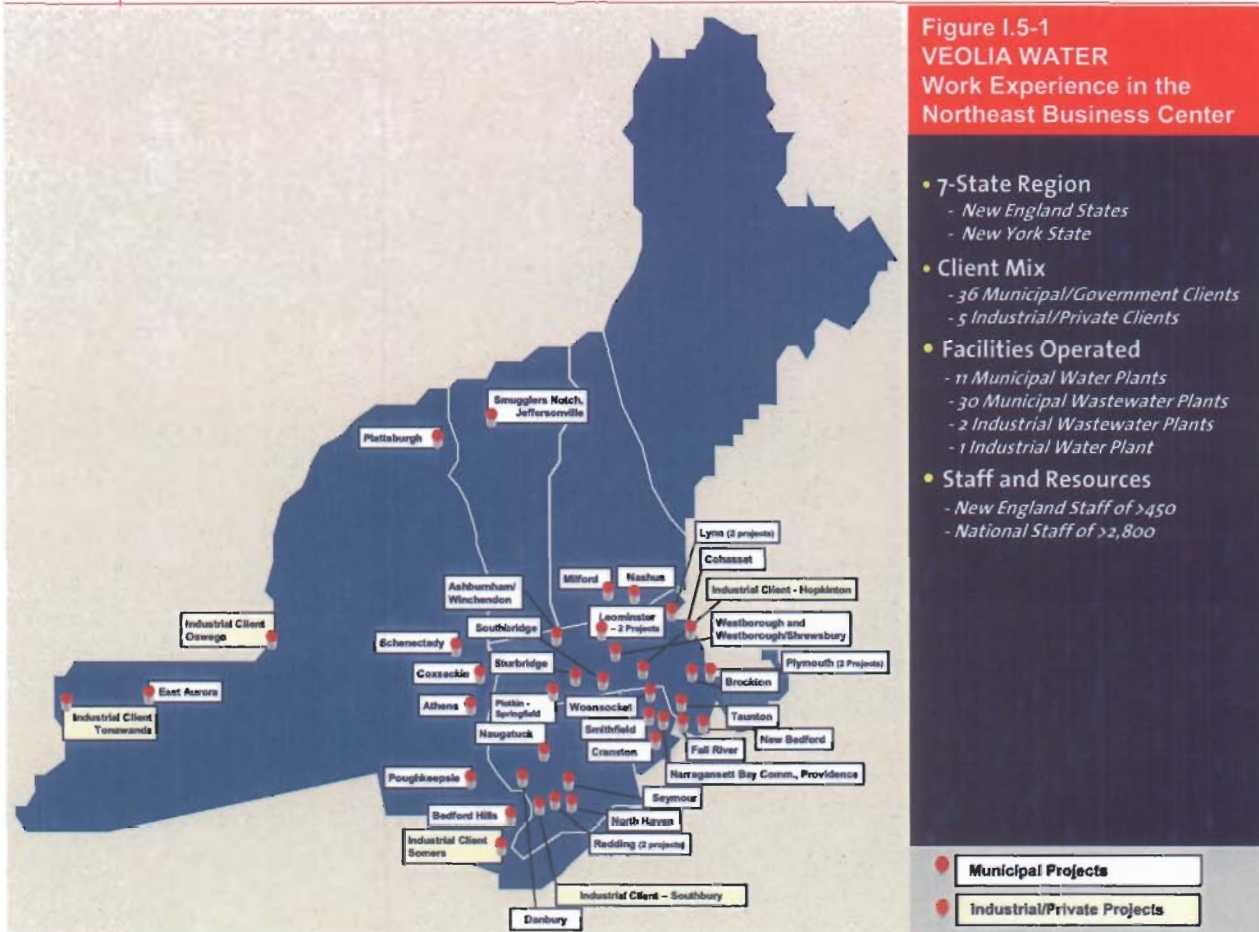
In total our firm has almost 30 years of continuous experience in providing O&M services for water supply systems and wastewater systems in the New England region. Our work in the State of New Hampshire covers almost 20 years, and has involved provided engineering, construction and O&M services for water systems under multiple contracts with the State of New Hampshire, Waste Management Division of the Department of Environmental Services (NHDES); these contracts, for multiple water systems, continue today and involve providing



In 2002, Veolia Water began a \$1.5 billion, 20-year contract with the City of Indianapolis, Indiana, for O&M and customer service facets of the City's waterworks system, which currently serves more than 1.2 million people.

Veolia Water does not have investor-owned utilities in our portfolio of U.S. activities.

**Figure I.5-1
VEOLIA WATER
Work Experience in the
Northeast Business Center**



O&M and related project services. Through these projects we provide a base of resources and certified State of New Hampshire operations staff; staff that **will be available** as a part of the base of support resources that we provide for this project.

Beyond this local experience, Veolia Water has more than 50 years of **continuous experience** in providing O&M services to **governmental and industrial** clients across the U.S. Our work in the operation and maintenance of water and wastewater facilities for **municipal** clients dates back more than 33 years, and today encompasses ongoing contracts with over 180 municipal/governmental entities across the U.S.

Throughout **New England and the Northeast**, as shown in Figure I.5-1 (above), Veolia Water has more than 40 active O&M contracts to provide water and wastewater treatment and related services to communities and industries large and small. From a tiny 0.008-MGD treatment plant at Joel Barlow High School in Redding, Connecticut, to a giant 134-MGD operation at **Wilmington, Delaware**, from condominium pump stations in Massachusetts to a ski resort, **Smugglers Notch** in Vermont, Veolia Water is committed to **providing** the highest quality services to protect the environment and provide safe and compliant services to our clients and our citizens.

Nationally, our firm's experience includes current **work with the City of Indianapolis, Indiana**, where we **operate and manage a water treatment and supply system** that serves more than **1.2 million people** in and around the City. Like this proposed project with the City of Nashua, our partnership with Indianapolis began when, in 2002, the City

reacquired its water assets from a private owner and then transitioned the O&M responsibility for the system to Veolia Water under a 20-year agreement. The experience gained on the Indianapolis project will be applied to the benefit of your project through the involvement of many of the key technical and management staff from that project.

The water system in Indianapolis is one of the more than 100 municipal water systems that Veolia Water operates and manages throughout the U.S., and is among the thousands of water systems that Veolia Water companies operate and manage for communities throughout the world.

VEOLIA WATER O&M STATISTICS

- 180 Municipal Clients
 - 186 Municipal Wastewater Facilities
 - 104 Municipal Water Facilities
 - 3,635 Miles Collection System Lines
 - 7,400 Miles Distribution System Lines
 - 415,266 Meters Read
- 87 Industrial Clients
 - 76 Industrial Wastewater Facilities
 - 36 Industrial Water Facilities
- 1.34 Billion Gallons of WW Treated Daily
- 875 Million Gallons of Water Treated Daily
- 14 Million Population Served Daily

What this means to the City of Nashua is that we will bring to bear the national and international experience of our firm to provide you with a world-class water utility.

While we may draw upon resources from throughout the world, this project will be managed and supported at the local level, with our regional company, Veolia Water North America – Northeast LLC as the direct contracting entity to the City of Nashua for this project. This business unit of Veolia Water has the management, technical, financial and other resources needed to effectively serve the City of Nashua under this proposed long-term agreement.

Service Capabilities

Veolia Water is North America's leading water services provider for local and federal governments, business and industry. Our company designs, builds, equips, operates and manages various types of facilities, programs and systems. This capability allows us to ensure safe, compliant and efficient operation of municipal or government water and wastewater assets while steadily keeping customer costs lower than previously experienced. Municipal customers can also benefit from a full range of customer services, such as meter reading, and billing and collection.

Under an O&M services agreement, the community owns the assets, controls the water rates and sets the direction for the future development and growth of the system. Veolia Water serves as the technical partner to ensure quality services and can offer services ranging from facility operations and capital program management to customer service.

We never forget that our client is the system owner, and we are always aware of our role as your service provider.

Veolia Water has operations experience with virtually every type of water and wastewater treatment process and approach, and we have operated many communities' municipal water and wastewater treatment plants continuously for periods of 20 years or more. The extensive scope of services that we provide the communities we serve includes:

- **Operations & Facility Management** - Veolia Water's primary line of business, the operation, maintenance and management of environmental facilities. Our more than 33 year experience history spans the O&M of potable water, process water, collection and

distribution, wastewater, biosolids (sludge) and residuals, stormwater management and related systems. Under the contract O&M approach, we deliver the management, employees, consumable goods (e.g., chemicals and alternative disposal services), facility maintenance and purchasing power to provide a full-service approach to managing a client's facilities operations and management needs, all for a fixed, guaranteed contract price for the term of the agreement. We also guarantee to meet or exceed all permit requirements and provide a comprehensive maintenance management approach.

With more than 33 years of O&M experience, Veolia Water today serves over 600 communities across the U.S. We remain the leader in the O&M field, with nearly 200 municipal and commercial clients for whom we operate some 120 drinking water treatment systems capable of processing over 660 million gallons of water every day. Coupled with the resources of our parent company, Veolia Water, S.A., we can literally bring the world to the City of Nashua.

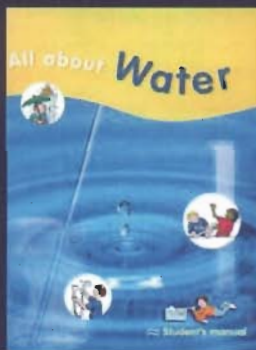
- Maintenance Management** – Veolia Water's maintenance programs address the corrective, preventive and predictive maintenance of equipment and structures. We focus on establishing an asset management maintenance strategy and approach based on several fundamental factors, which include individual unit basis, reliability, efficiency and integration with other programs. Under our watch, the City can be assured that its facilities are maintained at their optimal condition, both aesthetically and functionally.
- Regulatory Compliance & Permitting** - Veolia Water works with our O&M customers to ensure that they maintain environmental and regulatory compliance, while assuming full responsibility for our violations. Regulatory compliance becomes our company's business when we enter into an outsourcing agreement, under which we guarantee compliance within the design parameters of a given facility. We also provide the systems and engineering capabilities to add any needed flexibility within a given system. As explained earlier, we also enjoy a strong working relationship with all regulatory agencies in the State of New Hampshire, and we remain fully informed of any pending or contemplated regulatory changes. Additionally, we currently have two O&M contract with the NHDES, under which we operate and manage water systems with many of the same regulatory requirements as those that will be involved in the proposed operations and management contract with the City of Nashua; these projects are discussed in greater detail in the project summaries that are presented in Appendix B, Volume III.
- Customer Service** - Veolia Water works with municipal agencies to ensure responsive customer service, which is unmatched, for both regulated and non-regulated utility systems. This expertise and experience includes all aspects of customer service, meter reading, meter repair and replacement, service turn-on and shut-off, billing and collections and/or call center management. And, we provide these services for more

Veolia Water, under a contract that began in 1986, has served the NHDES in the operation and management of a groundwater facility in Nashua--the first U.S. Environmental Protection Agency Superfund groundwater cleanup using a contract O&M agreement. Under a separate contract, we are operating a groundwater system at the OK Tools portion of the Savage Wells Superfund site. Both of these O&M project required addressing regulatory and permit requirements at the Federal and State levels.

than 40 of our current municipal contract O&M projects in the U.S., addressing the needs of a customer service base of more than 670,000.

- **Safety Programs & Employee Training** - Veolia Water's training programs are time-tested, and our safety programs achieve ratings among the highest in the industry. Indeed, our firm's safety program is 20% better than the wastewater/water industry average. In our employee training programs, our firm emphasize cross-training to improve the skills and range of capabilities of our staff. To enhance employee effectiveness in daily operation and to provide for career advancement potential as further incentive for training, Veolia Water maintains a tuition reimbursement program to encourage career advancement. Incentives for operators to advance their certification levels and responsibilities also are provided. In addition, safety training is a priority at all Veolia Water facilities, and staff achieving no lost-time accident milestones are rewarded.

One of the key public educational tools that Veolia Water makes available to many of the communities we serve is the **Water Box**, a hands-on tool for teachers to introduce their students to the importance of our water system and to demonstrate how it works to ensure the quality of the water delivered to homes and businesses in the community. The curriculum emphasizes the importance of safe drinking water, the realities of our diminishing natural resource, and fascinating facts on how water is treated. The Water Box program can be found only in communities served by Veolia Water and is structured to meet the state's teaching standards for science. For instance, in Tampa, Florida, and Indianapolis, Indiana, we have matched the Water Box with their standards for science so that the program is an accepted, effective tool for teaching science.



- **Community Relations/Community Involvement** - From supporting local schools to providing facility tours to creating Web sites and literature, Veolia Water provides public and community relations programs that are designed to help strengthen the understanding of water and other environmental issues in the communities that we serve. In each of our long-term projects, we make a commitment to being part of the community and a good corporate citizen. This commitment takes the form of contributions of time, money and materials for community programs; plant tours and open houses; scholarship programs focused toward providing needy students with the resources to pursue a career in environmental protection; and educational initiatives.
- **Engineering & Construction** - The engineering and construction arm of Veolia Water enables our firm to effectively manage and implement projects ranging from repairs and capital improvements to full-scale design/build projects. Veolia Water's Capital Program Management (CPM) group is responsible for directing and supporting design/build, design/build/operate (DBO) and capital improvements at our O&M projects. Under this approach, our O&M teams draw on the internal engineering and construction management expertise of our CPM group to cost effectively implement and manage capital programs for our clients. Using creative process design, our engineers and engineering partners can design new facilities complete

with the latest technologies or make modifications to existing processes to improve performance and reduce operating costs.



Figure I.5-2. Veolia Water Companies –
Water Systems Experience Internationally

Client/Location	Population (in millions)	Size (in MGD)
Adelaide, Australia	1.064	477.2
Shanghai/Pudong Area, China	2.2	334.8
North Bohemia Region, Czech Republic	1.053	36.44
Prague, Czech Republic	1.2	265.37
Paris, France (Suburban Water System)	4.037	511.47
City of Paris, France	2.680	341.9
City of Lyon, France	1.121	39.55
State of Gabon, Africa	1.330	48.3
City of Berlin, Germany	3.840	300.55
London Suburbs (Three Valleys Water), UK	2.029	350.57

Major Water Programs in the U.S. and Internationally

Veolia Water companies are the world's leading water services provider, and we trace our experience back to 1853 and the founding of our ultimate parent company, Veolia Water, S.A. Around the globe, Veolia Water companies operate some of the largest water and wastewater systems in the world, including: the Paris city and suburban water systems, which deliver over 850 million gallons of water to more than 6 million consumers each day; the London suburban water system, which provide water to more than two million people each day; and the City of Berlin's water system, which supplies water to more than 3.8 million people every day.

In the U.S., Veolia Water manages one of the largest water partnerships in the industry, that for the City of Indianapolis. The City's water system can deliver over 200 million gallons a day of water to a population service base of more than 1.2 million.

This is one of the more than 100 water systems that our firm operates across North America, and from this base of experience we have selected the group of reference projects that are highlighted in

the paragraphs that follow. More detailed discussions of each projects is provided in Appendix B, Part 1, which is presented in Volume III.

These reference projects are followed by a discussion of our firm's capital project work experience for municipal water and wastewater projects, which also are discussed in greater detail in the brochure included in Appendix D, Part 1, Volume III.

These reference projects have been selected to best illustrate the base of experience that our firm provides in the area of water systems O&M, as well as our depth of experience in serving clients in the New England region.

O&M Reference Projects

Veolia Water provides over 876 million gallons per day of water supply to the almost 150 governmental and industrial water systems that our firm operates and manages. This includes serving the water needs of over 3.9 million people across North America, with more than 110 water plants operated, managed and supported by Veolia Water's over 2,800 staff.

The project summaries that follow provide a select few examples of how our firm is now working with communities similar to Nashua to deliver the water supply services that meet the day-to-day needs of household, commercial and industrial users. Detailed summaries for these reference projects including client contact information, are presented in Appendix B, Part 1, Volume III. The key reference projects include:

- **Indianapolis, Indiana – North**

America's largest public-private partnership for water services meets the drinking water needs of a population of 1.2 million each and every day. Twelve distinct treatment facilities can produce up to 200 million gallons of water per day of water. The system includes 4,000 miles of distribution lines, 31 wells and nearly 20 finished water storage facilities. Veolia Water was selected for our innovative transition plans, employee relations plans, technical approach, experience, management fees, customer service and local commitment. We are setting new standards for public-private partnerships through our performance-based fee and our pledge to accomplish \$20 to \$40 million each year in capital improvements. Almost immediately upon assuming O&M responsibility for the Indianapolis water system, we resolved long-standing water taste and odor issues. Our sophisticated customer service program includes a 24/7 call center to manage customer concerns regarding their water service. The customer service organization is responsible for meter reading for some 325,000 connections. We also provide billing and revenue collection for 600,000 accounts. In addition to billing for the waterworks, we provide sewer billing for Indianapolis, and we also supply utility billing for the nearby City of Elkhart. In 2004, the Indianapolis-Veolia Water partnership was recognized with the prestigious Service Award by the National Council for Public-Private Partnerships.

"The City of Indianapolis and Veolia Water have and continue to work closely together in a win-win partnership to realize economic and environmental benefits to our entire community, including a five-year rate freeze for our customers. We built this partnership with the interests of the citizens in mind and are pleased with the progress we've made in our first two years."
-- Mayor Bart Peterson

- **Brockton, Massachusetts – Since 1988,**

Veolia Water has provided O&M for both drinking water and wastewater treatment. The water operation encompasses two surface water treatment plants, rated at 24 MGD and 1.3 MGD. Our firm also has responsibility for a 40-MGD raw water pump station and finished water storage facilities. The City's wastewater facility is an 18-MGD plant that provides tertiary levels of treatment. The first contract with the City was innovative in that we provided the first year of O&M service for no cost because of our ability to achieve operational savings of more than \$500,000 per year. Over the years the partnership between the City and Veolia Water has been recognized with awards and commendations, and, most recently, was renewed a 20-year term—making Brockton one of the longest-running contracts in the North America O&M industry.

"Brockton is an example of how the public and private sectors can substantially benefit both environmentally and financially from long-term arrangements. The partnership has helped decrease pollution in our community that might not have happened had we not chosen to work with the private sector."
-- Mayor John T. Yunits, Jr.

- **Lynn, Massachusetts – When Veolia Water assumed responsibility for the City's then new 15.3-MGD water treatment plant in 1987, we already had a successful two-year**

history as Lynn's wastewater treatment facility operator. Under this contract, our firm is an active partner with the City, consistently reducing the costs of plant operations and improving the quality of water delivered to the customer. The Lynn water project has achieved 13 years of zero lost-time accidents—an exemplary safety record. The project has received repeat honors from the state regulatory agency and the Water Works for our quality operation at Lynn. Under a separate 20-year contract, Veolia Water provides total asset management and capital improvements for the City's 25.8-MGD wastewater plant, assuming the maintenance risk for the term of the agreement. Both facilities are repeat award winners, for safety and environmental excellence over the years.

- Leominster, Massachusetts** – Veolia Water began operating the City's 9.3-MGD wastewater treatment plant and providing related services in 1983. Thirteen years of successful O&M were rewarded when a 1996 20-year renewal awarded Veolia Water O&M of the City's 4-MGD and 1.2-MGD water treatment plants. Our contract also provided \$4.5 million in design and construction for improvements to the water facilities. The City had estimated \$8 million for the cost of these improvements. In 2002, we conducted a Security Vulnerability Assessment and Emergency Response Plan for the City's water treatment facilities to identify areas of water security risk and to recommend mitigation measures. This assessment focused on identifying critical assets used in the production and delivery of clean, safe water to those served by this system. The Security Vulnerability Assessment report provided recommendations to make those assets more secure. Veolia Water has also conducted hazardous materials and emergency response training for the City's water and wastewater facilities, and provides routine operations and maintenance training. Our operation at Leominster has received numerous honors, including O&M Excellence awards from the U.S. Environmental Protection Agency (EPA) and the George W. Burke Safety Award. Leominster staff have operated more than 20 years without a lost-time accident – a remarkable achievement.

Leominster's O&M staff have worked their entire history – some 22 years – without a lost-time accident!
- Atlanta-Fulton County, Georgia** – Veolia Water began operating the 90-MGD North Area Water Treatment Plant in 1990 and has received repeated contract renewals and been honored by dozens of excellence and safety awards from virtually every associated local, state and federal agency. The scope of work for this project has involved all aspects of facility O&M, as well as working with the plant owner to expand and upgrade the facility. Veolia Water implemented a pilot program to increase the plant's 30-MGD production capability to meet its rated flow capacity of 45 MGD with no capital expenditures. Subsequent efforts further increased the plant's rated capacity to 56 MGD. The plant is designed for an ultimate treatment capacity of 135 MGD. The demand for potable water is so great that the client began Phase II earlier than planned to upgrade the plant to 90 MGD. The plant has been running at this new flow capacity since March 1998. Veolia Water's O&M resulted in reduced water rates to consumers. Accumulated savings to ratepayers totaled nearly \$15 million at the end of 2004.

Accumulated savings to Atlanta-Fulton County ratepayers through reduced water rates totaled nearly \$15 million at the end of 2004.
- Maple Shade, New Jersey** – When Veolia Water assumed operation Maple Shade's water and wastewater facilities in 1988, the Township was under consent orders from

the New Jersey Department of Environmental Protection as well as the EPA. Within 10 weeks, we brought the wastewater facility into compliance. We have responsibility for Maple Shade's entire water and wastewater program. Facilities include 2.4-MGD and 2-MGD water treatment facilities and a 3.4-MGD tertiary wastewater treatment plant, along with more than 100 miles of collection distribution lines and associated services. Veolia Water has maintained the operation of the aging water treatment plants and distribution system without violations and without loss of service. The Township's water facilities, which date in part from 1925, have undergone continuing rehabilitation to guarantee consistent water quality. This has included the development and implementation of a capital improvement program and the replacement of distribution lines and other equipment that was no longer functioning properly because of age. Veolia Water assists Maple Shade with regulatory matters and has succeeded in defending the Township's position with State of New Jersey's Department of Environmental Protection (NJDEP) to raise the phosphate limits on its permit. The American Water Works Association awarded this project its President's Gold Performance Award two consecutive years.

- **Southern Water and Sewer District, McDowell, Kentucky** – Veolia Water and Southern Water formed a public-private partnership in 2000 to expand the District's water system and find solutions to water losses. Under this long-term, 20-year contract, our firm has designed, financed and built 24 miles of new distribution system, adding three pumps and three tanks to bring 500 additional connections into the water and sewer district. A second expansion project followed to bring additional customers onto the system. A third segment is underway that will bring the total of additional lines to approximately 100 miles and new connections to some 1,500. Additionally, Veolia Water implemented a management program to help integrate the Beaver-Elkorn and Mud Creek water districts into the newly formed Southern Water and Sewer District. Many customers along the distribution system were not connected and multiple homes were connected to a single meter. We offered customers the opportunity to connect to the system at a reduced connection fee with a deferred payment plan. We also provided the District with a first-year concession fee. District revenues will increase drastically as water losses are further curtailed and the customer base increases. In addition to arranging long-term financing for the District, we immediately began applying for State grants and low-interest loans to help the District expand even further. In 2005, the District's customer base of 6,030 is nearly double the original 3,800 served prior to Veolia Water's O&M.
- **Pikeville, Kentucky** – Under a contract that has been renewed or extended seven times since 1987, Veolia Water provides O&M for the City of Pikeville's utility systems, including water, wastewater, natural gas, and sanitation. Our first contract involved providing complete O&M services for the City's existing trickling filter wastewater treatment plant, as well as their 4.8-MGD water treatment facility. We

The City of Pikeville demonstrated its confidence in Veolia Water in 2004 for the eighth time. Yet another scope expansion turned over responsibility for the City's landscaping and parks department. Veolia Water provides regular mowing for the parks and cemeteries, landscapes park entrances and maintains the ballfields and pool. Further, we are charged with event scheduling for public and sports teams' use of the parks and ballfields. Veolia Water is a backbone of this community of 7,000.

assisted the City with the building of a new 2-MGD extended aeration wastewater plant. Using a DBO approach, Veolia Water worked the City's engineers to design and build this facility under a fixed, not-to-exceed price with a long-term warranty covering the plant and equipment. Veolia Water also assisted the City with the 201 Planning Process and obtained a new loan under the State Revolving Loan Fund. This contract also involved providing startup and management services for a new regional 6-MGD water treatment plant. Over the course of this contract Veolia Water has handled several disaster flood events. In 1997, as a result of stream flooding, roads were washed out, a mudslide claimed two houses, culverts were blocked, and flood pumps were put into operation. This event occurred while utility O&M resources were severely strained, mobilizing to handle the multiple problems simultaneously. The successful management of these events involved coordinating the assistance from outside contractors and the Kentucky Department of Environmental Services. Veolia Water has also maintained a strong commitment to the Pikeville community over the years, working to improve the overall quality of life by providing donations and assistance to meet community needs. Our Pikeville operation has been cited numerous times by various regulatory agencies.

While we may draw upon resources from throughout the world, this project will be managed and supported at the local level, with our regional company, Veolia Water North America – Northeast LLC, as the direct contracting entity. This business unit of Veolia Water has the management, technical, financial and other resources needed to effectively serve the City of Nashua under this proposed long-term agreement.

Capital Project Experience

Drawing upon the resources of our firm in the Northeast, and those of our proposed design and construction services partner, Dufrense-Henry, Veolia Water can effectively manage and implement all manner of capital projects for the Water Works at Nashua.

Veolia Water's CPM group, as discussed earlier, is a part of the regional technical and management resources that our firm provides to municipal clients. The focus of the work of this group is on the implementation and management of upgrades, improvements and other capital project work at Veolia Water operated and managed facilities. This group is composed of senior-level engineering design and construction professionals who are able to effectively manage and implement design and construction project, drawing on a combination of in-house resources and expertise, and local firms (pre-qualified subcontractors) that provide design, construction and related expertise.

The experience of Veolia Water and our affiliated companies includes engineering and design for the development and implementation of a wide range of treatment technologies for industrial and municipal applications. This work has included all aspects of plant design, construction, construction monitoring, acceptance testing and startup, as well as construction management, and the construction and modification for all manner of water and wastewater facilities. Another key area of experience that Veolia Water brings to our municipal projects is our work in providing for continuous facility O&M while a plant is undergoing upgrades, expansions or rehabilitation. Indeed, our firm has vast experience in working with engineers and contractors to ensure minimal service disruption and continued compliance.

The management and implementation of DBO projects is another area where Veolia Water companies demonstrates strength. Our firm is among the leading water and wastewater DBO firms in North America. Since 1998, Veolia Water has designed/built and now operates some 26 treatment facilities. Since 2002, our work includes new, from-the-ground-up plants as well as multi-million dollar upgrades to modernize systems, upgrade treatment capabilities and/or expand capacity.

The engineering and construction arm of the Veolia Water companies enables our firm to effectively manage and implement projects ranging from repairs and capital improvements to full-scale design/build projects. This group has more than 90 years of experience for a wide range of industrial and governmental clients. With staff resources that include engineering, construction management and other support functions, they provide the staff and other resources needed to deliver engineering and construction services for major repair and capital improvement type projects, and they also offer design/build project approaches for project work. Using creative process design, our engineers and engineering partners can design new facilities complete with the latest technologies or make modifications to improve on performance and operating costs.

Veolia Water, as discussed above, also has extensive experience in the area of providing ongoing facility O&M throughout the implementation of capital improvement work projects. We have participated in literally hundreds of capital projects for our clients over the years, and the majority of these projects have entailed providing continuous O&M while facility improvements were underway.

Veolia Water has been involved in literally hundreds of capital projects for our clients over the years, providing design, construction and O&M services. Some key examples of our firm capital project work experience includes:

- **Lynn, Massachusetts** – In 1990, Veolia Water oversaw a \$53.8-million upgrade to secondary treatment at the wastewater plant. Between 1996 and 1998, our firm oversaw some \$10 million in capital improvements at this facility, which included installing variable frequency drives for influent and effluent pumping, process water pumping modifications, and a new indirect sludge dryer. Veolia Water is currently implementing some \$14 million in capital improvements to the wastewater facility under a three-year program, using a design/build approach. These improvements include a larger fluidized-bed incinerator to replace the two existing incinerators; two high solids centrifuges; modernized SCADA controls; screening upgrades; and an odor control program that includes covering all preliminary and primary tankage and treating the odors from these tanks. All of these improvements were made while Veolia Water provided ongoing O&M of the 25.8-MGD facility.
- **Indianapolis, Indiana** – Veolia Water has funded more than \$89 million in capital projects to date under this agreement to provide for improvements to the City's aging water infrastructure. The City anticipates commissioning an additional \$20 million - \$40 million in capital projects in each of the 15 years of our contract. Veolia Water's engineering affiliate is managing this work, which is being performed by Veolia Water's staff, along with specialty contractors. In the first two years of our contract, we implemented or completed some \$94 million in capital work. Throughout these vast and ongoing improvements, Veolia Water provides continuous, uninterrupted water

treatment services for 12 water treatment plants having a daily production capability of 200 MGD.

- **Taunton, Massachusetts** – This Total Asset Management project calls for Veolia Water's O&M of the City's 8.4-MGD wastewater treatment plant while overseeing an \$11 million capital program to upgrade the facility to tertiary treatment. The City estimates it will benefit from \$15 million in capital savings and \$47 million in O&M savings through this 20-year partnership.
- **Tampa Bay Water, Florida** - On October 11, 2002, Veolia Water dedicated a new water regional water treatment plant for Tampa Bay Water in Florida, completing a more than two-year design/build project. The project began in April 2000 when, following a year-long selection process among four competitive teams, Tampa Bay Water awarded a \$135-million, 15-year (with a 5-year option) contract to Veolia Water for the design, construction and operation, using the DBO delivery approach, of the agency's regional surface water treatment plant. In 2003, the facility received the prestigious Infrastructure Award from the National Council for Public-Private Partnerships (NCPPP). The project has included \$79 million in capital (construction) costs, and \$56 million in O&M fees, which are expected to generate a 21% savings, or about \$85 million, over the 20-year life of the project.
- **Woonsocket, Rhode Island** – While operating this 16-MGD wastewater facility, Veolia Water oversaw \$18 million in capital improvements and upgrades in this joint-venture design/build effort to upgrade the plant to tertiary treatment to meet consent order requirements for nutrient removal. Once called the worst in the State, the plant recently received an award from the state environmental agency for Most Improved Plant.
- **Cranston, Rhode Island** – In the past five years, Veolia Water has invested more than \$3.5 million in capital projects for this Total Asset Management project. Veolia Water's engineering affiliate currently is working on some additional \$9.3 million in upgrades as part of our current amended contract, which runs through 2027. We are operating this 23-MGD facility throughout ongoing improvements that include upgrading the plant to accommodate advanced treatment for biological nutrient removal, adding odor control processes and equipment, a new incinerator and a flue gas recirculation system.
- **Richmond, California** – In 2002, Veolia Water was contracted to oversee the design/build implementation of \$7 million in capital improvements while operating City's 16-MGD wastewater treatment facility. The work was completed in less than two years, rehabilitating deteriorated systems and resolving long-standing odor problems. Delighted with Veolia Water's success at the wastewater facility, in 2004, the City of Richmond expanded our scope to include a similar effort to the 240-mile collection system—adding \$20 million in capital to our O&M project scope.
- **Plymouth, Massachusetts** - On June 28, 2002, Veolia Water started-up a new sequencing-batch reactor (SBR) wastewater treatment plant for the Town of Plymouth. This 20-year project was implemented using a DBO project approach, and involved the design and construction of a new 3.1-MGD treatment plant with three SBR tanks (providing a peak treatment capacity of 9 MGD). Veolia Water worked with the Town to finance this project under U.S. Internal Revenue Service's 97-13 rules, using funding from the Massachusetts State Revolving Fund for the \$23.3 million in capital costs. The new wastewater plant is located five miles inland from the original facility, and Veolia Water

has responsibility for equipment replacement, capital improvements and regulatory compliance. Our firm's O&M responsibility includes managing the Town's sludge disposal operations (700 dry tons per year, dtpy), as well as operating and maintaining the wastewater collection and conveyance system. A key challenge of this DBO project involved keeping the Town's existing wastewater plant in operation during the construction of the new facilities. This plant, now decommissioned, was an aged 1.75-MGD wastewater treatment plant that routinely exceeded the State's discharge limits for Plymouth Harbor.

As these projects demonstrate, Veolia Water is experienced in managing capital project work at water and wastewater facilities, while at the same time ensuring that plants stay in operation and in compliance. The experience of our proposed engineering and construction contractor, Dufresne-Henry, is highlighted later in the paragraphs that follow.

Dufresne-Henry

Dufresne-Henry, as discussed earlier in this section, will be the engineering and construction services partner to Veolia Water for this proposed water systems partnership with the City of Nashua. The firm is based in New England and traces its history to 1955.

Today the firm has offices throughout New England, as well as in New York and Florida, providing a range of services in planning, environmental science and landscape architecture. Dufresne-Henry also supports a contract operations division that provides assistance in operating municipal and industrial water and wastewater treatment facilities.

Dufresne-Henry offers comprehensive services in the engineering field, with nearly a half century of experience in the design of airports, buildings, sites, electrical and mechanical systems, solid waste management facilities, structures, wastewater treatment facilities and water resource projects.

The firm has direct work experience with the City of Nashua on an inflow/infiltration (I/I) study. This ongoing project involves working with the City's Department of Public Works on an evaluation of the sewer system. This project has allowed Dufresne-Henry to develop a relationship with City officials, as well as an understanding of the operations of the public works and underground utilities—both of which will be of direct benefit to their anticipated role on this project. As a part of this project, the firm is working with the City's GIS system to develop sewer tributary areas and subareas to determine field monitoring locations, allowable I/I and current I/I rates; allowing for the identification of problem areas and impact of reports.

Beyond this work with the City of Nashua, the firm's other key work experience in the State of New Hampshire includes projects with:

- **Town of Milford** - Water System Engineering - Dufresne-Henry has been providing water works engineering services to the Town of Milford for more than 15 years. This work has included master planning, implementing capital improvements projects, water treatment, SCADA and review and inspection of water system extensions. Additionally, they are currently working on projects including: the Holland Road water storage tank and transmission main; a water and sewer rate study; hydraulic modeling for the Town's water system; and construction oversight for road and utility

subdivisions. Dufresne-Henry has also provided extensive sewer system consulting and general public works consulting for the Town and Planning Board.

- **Tilton-Northfield Aqueduct Company** - System Evaluation - The Town and the Tilton-Northfield Aqueduct Company are negotiating a purchase of the private system by the Town. Dufresne-Henry has provided engineering services to the TNAC for many years. As part of the transaction process, the firm has provided a detailed system inventory and evaluation that included a system background, infrastructure inventory and evaluation, a summary of known problem areas, a review of water quality, and a list of recommended improvements to the water supply, distribution, and storage systems. Additionally, the firm performed an evaluation of the ADA compliance at the office building and presented recommendations for the building to meet ADA requirements.
- **City of Concord** - Vulnerability Assessment and Emergency Response Plan - On June 12, 2002, the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 was signed into law. This Act amends the Safe Drinking Water Act to require that communities that have water systems serving more than 3,300 people prepare and submit a Vulnerability Assessment and Emergency Response Plan to the EPA. The Vulnerability Assessment analyzes water system components while the Emergency Response Plan is a guidance document that allows the city and water division to make decisions and respond to an emergency. Dufresne-Henry assisted Concord by evaluating site vulnerability and physical security, working with city personnel to fill out worksheets on the water system components and identifying "critical customers" and a chain of command.
- **Town of Barrington** - Comprehensive Master Plan - Barrington is a rural community with rolling hills, lakes and farms, and over the past 20 years the Town has become one of the fastest growing communities in the state. Barrington has one of the highest roadway miles per dwelling ratios in the state. Many of the roads are dirt or gravel and cannot handle the additional traffic volumes from new development. Other key issues facing the Town are the growing demand on municipal services, strip development and the lack of a true town center. Dufresne-Henry partnered with another consultant and the town to create a new Master Plan. They assisted the Town in planning for transportation improvements, land use management, zoning and site plan regulations and creating a plan for the new Barrington Town Center.
- **City of Keene** - Well Water Treatment Study - The City of Keene uses groundwater wells and surface water as its sources of supply. Historically, the wells comprised 20 percent of the City's total water usage. However, in recent years due to high disinfection byproduct formation, the City increased the use of its groundwater sources to over 60 percent. In doing so, there was an increase in consumer complaints related to discolored water. Keene selected Dufresne-Henry to perform a detailed well water treatment study for naturally occurring radon and the color producing elements of iron and manganese. Dufresne-Henry recommended treatment alternatives to improve water quality, estimated capital and O&M costs for planning purposes and identified potential funding options to lessen estimated capital investment.
- **Town of Durham** - Lamprey River Water Resource Upgrade - New Hampshire's Lamprey River is a valued asset that provides wildlife habitat, recreational

opportunities, picturesque scenery and primary or supplemental surface water supply or recharge for groundwater supply to four communities. With all of these demands on the river, it is no wonder that projects involving the Lamprey typically also involve scores of interests. This was the case in Durham as the Town and the University of New Hampshire sought to upgrade their joint supplemental water supply system. An intake, pump station, and transmission main from the Lamprey River intake to the Oyster River proved to be operating inefficiently, allowing evaporation and groundwater recharge to claim large volumes of water. In addition, the mixing of the supplies placed the whole supply at risk from contamination. Town and university officials asked Dufresne-Henry to identify potential improvements to their supplemental water system. Dufresne-Henry helped develop a comprehensive water resources management plan and designed a new transmission main that allows operators to transfer water from the Lamprey River directly to a treatment plant.

In the field of water system engineering the firm's other key experience includes:

- **Water Supply Optimization Study - City of Bellingham, Massachusetts.**
Bellingham was in need of finding an additional water supply to support anticipated community growth and hoped to find at least another 2-MGD in water resources. Instead of searching for a new water source, the town decided to try the alternate route of optimizing current use of nine pump stations. Dufresne-Henry was retained to perform this study. A Dufresne-Henry engineer performed flow tests and obtained drawdown measurements on the pump stations. Field measurements found pumping inefficiencies due to fouled well screens, and worn and undersized pumps. Bellingham implemented Dufresne-Henry's recommendations and located 1-MGD by cleaning wells and increasing pump capacity through proposed Water Management Act Permit modifications. The community also benefited from time and cost savings rather than searching for a new water supply.
- **New Water Source and Treatment Facilities – City of Maynard, Massachusetts.**
With the enactment of the Safe Drinking Water Act, Maynard was required to treat its surface water supply at White Pond. Dufresne-Henry completed studies over a seven-year period to determine the cost of treating a safe yield of 1-MGD. In the meantime, Maynard was enduring a water supply shortage and outdoor water bans. After two denials of a proposed treatment facility by voters, Maynard was forced to refocus the project to finding a new groundwater source. A source at Rockland Avenue was capable of providing a stunning 800-gpm from three rock wells. Treatment facilities were required to remove iron, manganese and radon from the new water supply. The key results and benefits from the work performed by Dufresne-Henry in conjunction with Maynard were compliance with EPA and the State of Massachusetts Department of Environmental Protection (MADEP) regulations, relief of long-term water supply shortages, capability to treat 3.1-MGD to supply an average day demand of 1-MGD, capability to provide additional water for future industrial growth and treatment of 2.1- MGD of ground water for \$6 million versus treating 1-MGD of surface water (White Pond) for the same cost.

The firm's background and experience is further highlighted in the materials presented in Appendix B, Part 2, Volume III.



The Committee on Energy and Commerce

Joe Barton, Chairman
U.S. House of Representatives

Tipline

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Witness Testimony

Mr. Donald L. Correll

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Tapped Out? Lead in the District of Columbia and
the Providing of Safe Drinking Water
Subcommittee on Environment and Hazardous
Materials
July 22, 2004
09:30 AM

Mr. Chairman and members of the
subcommittee, thank you for the invitation to
testify before you today.

My name is Donald Correll. Since August of 2003
I have served as President and CEO of
Pennichuck Corporation. Pennichuck Water
Works was founded in 1852 and has grown to
become the largest investor-owned water
company in the state of New Hampshire, serving
a population of 120,000 people in 22
communities throughout southern New
Hampshire and in Massachusetts.

Pennichuck Corporation is a holding company
with five wholly owned operating subsidiaries.
The Company is comprised of three private
water utilities, Pennichuck Water Works, Inc.,
Pittsfield Aqueduct Company and Pennichuck
East Utility that are regulated by the New
Hampshire Public Utilities Commission, and two
non-regulated companies, Pennichuck Water
Service Company and The Southwood
Corporation. Pennichuck is the oldest
continuously operated company in New

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Hampshire.

Prior to joining Pennichuck, from 1990 to 2001, I served as Chairman and CEO of United Water, one of the largest water service companies in the United States with operations and investment in 19 states, Canada, Mexico and the UK. I also serve as an advisory director with Underground Solutions Inc., a water technology and service company, based in Sarver, Pennsylvania, which is involved in the water infrastructure industry.

I am testifying today on behalf of The National Association of Water Companies, NAWC is the only national organization exclusively representing all aspects of the private and investor-owned water industry. The range of our members' business includes ownership of regulated drinking water and wastewater utilities and the many forms of public-private partnerships and management contract arrangements. NAWC has more than 150 members, which in turn own or operate thousands of utilities in 38 States around the country.

ROLE OF THE PRIVATE SECTOR

The private sector has long played a vital role in the provision of water in our nation, and stands ready to do much more. The privately owned water utility business traces its roots back to before the very existence of our nation. And today, one out of every six Americans receive their drinking water service from a private water company.

However, outright private ownership is but one-model localities can pursue as a means of addressing their infrastructure challenges. Another large and growing option is some form of public-private partnerships, including contract operations, wherein the municipality retains ownership of the asset; in this case a water utility and its infrastructure, but the management and operations of the facility are contracted out to a private company.

Management contract or public-private partnership arrangements between municipalities and private companies represent a newer model (started in the 1970s), and have become hugely popular in a very short period of time. Today, private firms operate more than 2,400 publicly owned water and wastewater facilities for nearly 2,000 municipalities. Such arrangements have proven to be very popular with municipalities and enjoy a 90% contract renewal rate.

History has shown that the private sector can and does provide the public with safe and efficient water service through market-based solutions. The private water industry has been on the cutting edge of technical innovation and research. Furthermore, in this time of increased utility security awareness, the private sector has once again been on the forefront of these initiatives, bringing to the industry firsthand security experience derived from working in some of the world's hot spots.

THE AGING INFRASTRUCTURE CHALLENGE AND SOLUTIONS

NAWC commends the Subcommittee for tackling the complex issue of safe drinking water and specifically the lead problems we have seen. Many of the issues are related to the broader infrastructure problem this committee has been looking at for some time. Let me start there, and then I will talk specifically about the lead issue.

It has been well established from a number of sources that cities, towns and utilities face a major challenge over the next several decades replacing aging and worn-out drinking water infrastructure. According to the EPA infrastructure gap analysis, issued in 2002, drinking water systems will spend between \$154 and \$446 billion through 2019. Wastewater systems will spend between \$331 and \$450 billion over that same period. In addition to EPA, the Congressional Budget Office and the General Accounting office have done studies on the country's infrastructure challenge and their cost estimates are similar to EPA's.

Utilities and localities must take the lead in addressing this infrastructure challenge by accessing the many organizational, managerial and financial tools at their disposal. Clearly, the Federal Government has a role in assisting with this challenge, but that role does not need to be taking on the major financial responsibility for infrastructure. Instead the role should be to encourage utilities to pursue smart business-like management practices including improving operating efficiencies to free up cash for infrastructure replacement, charging what it costs to provide the service including capital investments, selecting cost-effective infrastructure replacement technologies, and implementing an infrastructure replacement program that will assure the utility's viability.

Public-private partnerships can often provide a proven model for accomplishing all of the above.

Direct government loan assistance to utilities is another government role, but, like the Drinking Water-SRF, should be carefully managed and targeted only where and when necessary. An inappropriate role of government would be to subsidize the water industry indefinitely with a massive federal grant program, as some have advocated.

Grants are a very inefficient method of providing assistance to utilities. Grants send the wrong conservation signals and can result in bad management practices,

The Construction Grants Program of the 1970s had many problems, which could very likely be reborn if a similar program were reconstituted. Those problems included procurement regulations that discounted quality for the sake of lowest price, lack of reliable capital replacement accounts to ensure that funds exist for future replacement (such as today), and little local buy-in or ownership on the part of grant recipients, which resulted in sometimes wildly overbuilt systems and wasted tax dollars.

The best means for providing federal funds are the State Revolving Loan Funds along with the

use of creative and innovative solutions. We can make considerable progress toward solving our infrastructure needs by avoiding the mistakes of the past and securing our water infrastructure for the future. I encourage Congress therefore to retain the State Revolving Loan Funds as the primary conduit of assistance to water utilities.

Congress should also ensure that Federal assistance is used to encourage strong management practices by water utilities. This should include full cost of service rates, asset management, consolidation and support for public-private partnerships.

Full Cost of Service Rates

Across the country, many water utilities are charging customers water rates that are misleading and do not cover the cost of providing the service. This has resulted in a devaluation of water as resource, which not only causes utilities to rely on federal subsidies for investment in infrastructure replacement, but also sends the wrong signals to consumers about the value of water and the need for conservation.

In some cases the actual cost of providing water service is greater than the rates charged by utilities. In fact, Dr. Janice Beecher of Beecher Policy Research said before this Subcommittee in March of 2001

"...when municipalities provide electricity and natural gas services, revenues exceed total capital and operating expenditures. For water and sewer services... total expenditures exceed revenues. The findings generally suggest that municipal water customers do not cover expenditures through rates and other user charges."

Also, in a study on this issue released by the General Accounting Office, they found the amount of funds obtained from user charges and other local sources of revenue was less than the full cost of providing service for over a quarter of drinking water utilities. Indeed many

municipalities pride themselves on their low rates, and publish their comparative rates as being lower than other when in fact, they are not charging the full cost of service.

This clearly demonstrates the need for full cost of service rates. Utilities must be able to generate the revenue needed to cover costs and invest in replacing aging infrastructure. This can only happen when we are charging customers the true cost of the services provided.

However, NAWC recognizes that increasing rates will put low-income families at risk of not being able to afford their water bills. To address this, NAWC supports a federal water rate payer assistance program modeled after the Low-Income Home Energy Assistance Program (LIHEAP).

However, we do not believe that the increased rates will be an overwhelming burden for most Americans. According to the Congressional Budget Office, Americans currently pay roughly 0.5% of their total household income for water and wastewater service. This is significantly less than other utility costs, which range from 2% to 5% of household income, and suggest room for increases.

Asset Management

Generally, privately owned and operated utilities manage their infrastructure assets, such as pipelines and other equipment to maximize the useful lives of the assets, increase efficiency, minimize costs, and maintain service to customers. Careful management of assets is essential if we are to successfully meet the infrastructure financing challenge. However, many localities do not have in place such asset management plans. In fact the General Accounting Office has estimated that as many as 25% of all utilities do not have such a plan.

Since good management of assets can go along way toward avoiding an infrastructure-financing gap as well as addressing the infrastructure replacement challenge, NAWC believes utilities

should adopt such practices. Congress should therefore encourage, as part of the SRF Funding process, the implementation of sound asset management practices.

Consolidation

There are over 50,000 community water systems in the United States today, many of which are very small. In many, but not all cases, the financial challenges facing these utilities can be addressed by improving their economies of scale through consolidation. By tying consideration of SRF funding to consolidation, Congress will encourage utilities to put aside parochial interests, expand their vision and improve the service to customers. Over the last five years, Pennichuck has consummated dozens of acquisitions of smaller systems, many of which would not have financially viable over the long-term. It is important to note, that consolidation does not work everywhere, and is not the answer for all problems. However, it is clear that consolidating ownership and/or management functions with other facilities can streamline a utility and save money.

Public-Private Partnerships

Municipalities large and small all over the country have realized great savings and success through partnerships with private firms. These partnerships take many forms, from contracting out small portions of a utility's operations such as billing or meter reading, to multi-year all inclusive management contracts wherein a private firm runs and manages all aspects of a municipally owned utility, to the transfer of assets to a private company. Cost savings that localities have realized over the years from such arrangements range up to 40%, freeing up much needed capital for infrastructure replacement, without burdening either the customer or the American taxpayer. Likewise these arrangements have often allowed municipalities to avoid significant rate adjustments while still meeting the higher EPA water quality standards.

Therefore Congress should, whenever appropriate, encourage the development of such partnerships as a tool for addressing our infrastructure replacement challenges.

Access to State Revolving Loan Funds for Private Water Companies

Access to the DW-SRF (and the Clean Water SRF for that matter) should be based on need and need alone. The ownership of the utility should not be a factor. After all, it's the taxpayers, all taxpayers, not just those of municipal utilities that fund The SRFs.

When Congress established the DW-SRF in 1996 they knew that the benefits of the SRF would flow to the customers of privately owned utilities, not the owners or stockholders. And this is working well in many states. NAWC has many examples of privately owned utilities working with States, receiving SRF assistance and extending service to underserved or badly served populations. These are some of the best examples of public-private partnerships.

However, we regret to report that there are still ten States (Alabama Arkansas, Colorado, Georgia, Kansas, Mississippi, North Carolina, Oklahoma, Tennessee, Wyoming) that, despite Congress's clear intent, do not allow private utilities access to the DW-SRF. Incredibly, these States are still allowed to use private utilities in their needs survey, and thus receive SRF capitalization grant funds based on this private utility need, a need they have no intention of meeting. NAWC believes that Congress should only allow EPA to provide SRF allocation grants to the States for the needs the State is willing to actually meet. If a State does not allow private utility access to the DW-SRF, EPA should reduce their allocation grant accordingly.

Also, I must report that in some of the states that allow private access to the SRF, there are often burdensome application requirements and fees that, in some cases, municipal utilities don't face. Also in some States, their priority lists clearly favor municipally owned utilities, and the

needy private utilities often receive little or no funding.

These processes are not in line with Congressional intent when you granted private utility access to the SRF. We hope to continue working with you on these issues.

Private Activity Bonds

Another role that the federal government, and specifically Congress can play is passing legislation to eliminate the state volume caps on Private Activity Bonds (PABs) for water and wastewater projects, thus providing billions of dollars in capital that can be used to invest in water infrastructure replacement. Changing the tax code and exempting water and sewage facilities from the state volume caps could be one of the most productive incentives Congress can provide to stimulate infrastructure investment and replacement. In fact, billions of potential investment will be stimulated by the tax change but it will cost the federal government less than \$150 million over ten years, according to the Joint Committee on Taxation.

I understand that this issue does not fall under the jurisdiction of this Committee, however it is an important tool for addressing the infrastructure challenge, and therefore, I wanted to bring it to your attention.

LEAD AND DRINKING WATER

Lead is a naturally occurring metal that was used regularly in a number of industrial capacities for most of the 20th Century. Lead was used as a component of paint, piping (including water service lines), solder, brass, and as a gasoline additive until the 1980's. According to the U.S. Environmental Protection Agency (USEPA), lead paint and the contaminated dust and soil it generates is the leading household source of lead exposure today. Research has confirmed that lead is highly toxic. Ingestion of lead can pose a serious health risk to humans, especially children.

Lead contamination in drinking water almost always occurs after water has left the treatment plant when it travels through piping and plumbing containing lead. Water is naturally corrosive, and in some cases will corrode the pipes and plumbing through which it passes, picking up lead. This corrosion can occur in home fixtures as well.

To control the corrosion, and thus the lead in water, many public water systems add a corrosion inhibitor such as zinc orthophosphate to the water. While this is often effective as a means of corrosion control, it does have a downside, which is increased phosphate content in wastewater in that community.

NAWC has a number of recommendations to address the lead issue before this Subcommittee. Our recommendations closely follow those of the American Water Works Association, including the idea that EPA must rethink the "Silo" approach to regulation. Today rules are generally developed in isolation from one another, without consideration to the potential interconnectivity one rule may have with another. The recent experiences some communities have had with lead may be due to the drawbacks of the silo approach. We believe a holistic approach to drinking water regulation is needed that takes into account simultaneous compliance with existing drinking water and environmental regulations. In addition to this, NAWC recommends the following:

1. NATIONAL LEAD REDUCTION STRATEGY.

NAWC advocates a comprehensive approach to reducing lead contamination from all sources. Congress should require a respected body such as the Centers for Disease Control to complete a comprehensive study of lead exposure from all sources, and to develop a national strategy to reduce lead exposure from all significant sources. Such research should include a determination of the contribution to lead in drinking water from lead service lines, pipes inside the home, and plumbing fixtures.

NAWC also strongly advocates a continuing public education program concerning all sources and hazards of lead exposure and effective protective measures. Public education is a key component of a lead exposure reduction strategy. Water suppliers, working in cooperation with local and state public health officials and others, can help deliver the needed messages on the dangers of lead and the part everyone has to play in reducing risks. Since most lead contamination occurs inside the home from paint chips and dust or comes from home plumbing, increased public awareness is especially important.

2. OPTIMIZATION OF CORROSION CONTROL.

NAWC advocates the treatment technique of optimizing corrosion control as the best way of reducing exposure from lead in drinking water. Determining the corrosivity of water is complex and depended on several characteristics of the water. Lead contamination of drinking water is primarily the result of lead in home plumbing and fixtures beyond the control of a drinking water utility. The means available to drinking water systems to mitigate the degradation of water passing through pipes and fixtures in home plumbing is through implementation or modification of the corrosion control process. This can be done by adjusting the finished water's pH and alkalinity or by adding corrosion inhibitors.

If source water were the only way lead could enter drinking water, establishing a maximum contaminant level (MCL) for a utility to meet at the plant or in the distribution system would be sufficient to protect public health as it is for the majority of regulated contaminants. If lead were to occur in source waters, it could be removed in the treatment process. Public water systems are clearly responsible for and can control water quality at treatment facilities. However, the major source of lead in drinking water is not source water, it is lead from plumbing systems and faucets in homes that are beyond the control of drinking water utilities. The contribution of lead service lines to lead

contamination is uncertain.

Some have suggested establishing an MCL for lead at the end user's tap. This would have the effect of holding water suppliers legally responsible not only for lead sources that they cannot control but also the mistakes, omissions, and even illegal activities of others. There is still lead solder in home plumbing although it was banned in 1986. Studies have shown that brass faucets holding lead free water for an eight-hour period can leach lead into water at levels of 10 ppb and higher. Grounding of electrical circuits in homes to water pipes and galvanic action between two dissimilar metals may increase corrosion that could cause lead to leach into the water. Customers who soften their water or otherwise change its corrosivity can affect the lead content of the water. These types of problems cannot be solved by an MCL at the tap or in the public water system. Each of these by themselves or in combination can cause lead to leach into drinking water. The SDWA limits EPA authority to regulating public water systems. A tap within a residence is not and should not be considered to be part of a public water system.

The SDWA also specifically prohibits USEPA from imposing both an MCL and a treatment technique for the same contaminant. Therefore NAWC advocates a lead control strategy of optimizing corrosion control in conjunction with public education and a lead service line replacement program as the best method to protect public health.

3. REPLACEMENT OF LEAD SERVICE LINES.

NAWC advocates lead service line removal as a means of reducing lead contamination in drinking water when the lead service line is significantly contributing to lead contamination. However, lead service line replacement is complicated by the ownership of the lines. In some instances, the water utility owns the entire line. In others, the property owner owns the entire service line. And in still other cases, part of the lead service line is owned by the utility and part by the property owner.

A public water system can only be held legally liable for replacing the service line or part of the service line owned by the utility. A public water system has no legal means to compel a property owner to replace a lead service line or portion of a lead service line. Requiring a water utility to remove privately owned lead service lines raises constitutional legal issues with regard to private property and eminent domain. All agree that partial replacement of a lead service increases lead levels in water and should be avoided. Further, removing a lead service line may not reduce lead contamination of drinking water. Tests have revealed high lead levels in homes that have no lead service line and low to no measurable lead contamination in homes with lead service lines. Removing lead service lines alone is not the complete solution to reducing lead exposure from drinking water.

Because of the costs involved and the likelihood there will be little or no public health benefit in some cases, lead service removal programs should focus on removing lead service lines owned by a utility that are significantly contributing to lead contamination as a high priority.

4. INDEPENDENT STUDY OF LEAD PROBLEMS AND LEGISLATIVE AND REGULATORY CHANGES.

NAWC advocates an independent study of the drinking water lead contamination incidents to evaluate what if any changes may need to be made in the law or regulation. Based on recent USEPA data (http://www.epa.gov/safewater/lcrmr/lead_data.html) there is no reason, at this time, to believe that there is a nationwide problem that would require changes to the SDWA. The current SDWA requirements protect public health and USEPA currently is engaged in an extensive national review of the Lead and Copper Rule implementation to identify how well the rule is performing across the nation and what gaps exist in federal guidance and regulation. The Lead and Copper Rule should not be revised until this review is completed.

NAWC recommends that Congress direct an independent study of the high lead levels in the District of Columbia water system be conducted. This could be done very soon in an appropriations bill.

CONCLUSION

We appreciate the leadership role that this Subcommittee has taken to address water infrastructure problems, and we also appreciate the concern that you have expressed regarding the need for cost-effective solutions. These are long-term challenges, and we look forward to working with the Committee to achieve long-term solutions that will allow the drinking water industry to stand on its own two feet.



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