

Submitted to:



City of Nashua
New Hampshire

Exh. 1.5

Proposal

Volume I – Technical Proposal

RFP1305-061505

Operation and Maintenance of the Water Utility

July 14, 2005





July 14, 2005

Ms. Janice Tremblay, C.P.M.
Purchasing Manager
City of Nashua
Central Purchasing Office
229 Main Street
Nashua, NH 03061-2019

**Subject: Volume I – Technical Proposal
RFP1305-061505 -
Operations and Maintenance of the Water Utility**

Dear Ms. Tremblay:

In response to your specific Request for Proposals (RFP), **Veolia Water North America – Northeast, LLC (Veolia Water)** is pleased to present our separate Technical and Price Proposals (with a separate Appendix Volume), for the management and operation of the water systems that will be acquired from the Pennichuck Corporation. We understand that this project will involve providing operation, maintenance and management (O&M) services for what is collectively referred to as the Water Utility, which includes the water utility assets of the Pennichuck Corporation, namely, those of Pennichuck Water Works.

In preparing this Proposal we have reviewed all of the data available for the Water Utility and made assumptions based on our experience in operating and managing similar water systems under long term agreements. Based on this, Veolia Water has crafted a plan and approach to forming a long-term contractual relationship with the City of Nashua.

Our commitment to the City and those served by the Water Utility centers on:

- Supporting you throughout the asset acquisition process. **We will be at the table supporting your efforts in the eminent domain proceedings.**
- Delivering enhanced value through our Base Proposal offers and expanded Innovative Proposal offering. In the true spirit of what our company is all about, **we exceed the scope of this RFP by offering a significant watershed program** that will transform public transparency and safeguard the community's interests - **establishing a citizens advisory group**, and, importantly, **conducting a two-year study that will offer comprehensive solutions for protecting the community's water source.** Our community involvement will also extend to water education in the Nashua elementary schools, and include financial support for local civic and charitable organizations.
- Implementing a project management and operations approach that ensure that you maintain control of the system. We will **help you in establishing direct control over the system**, present and future operating and capital costs, rates and the path and required programs for your fellow citizens' future.

It is Veolia Water's desire to enter into a performance-based contract that creates a contractual relationship between the City, or the regional water district that you may establish, and our

Ms. Janice Tremblay, C.P.M., Purchasing Manager
City of Nashua, New Hampshire
July 14, 2005

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company—an approach that transfers environmental compliance and water quality responsibility to us while local government owns the asset and controls present and future destiny of the system. To facilitate this, we have responded to the Base Proposal requirements, as defined in your RFP, and provided a highly advantageous Innovative (Alternative) Proposal, one that expands on the value and overall cost savings that can be delivered under this long-term contract.

The approach and commitment that Veolia Water has defined in this Proposal is backed by our firm's proven base of experience in the operation and management of major water systems throughout the U.S., and our almost 20 years of work in the State of New Hampshire and almost 30 years of experience in serving clients throughout the New England region. Our work in the O&M of water and wastewater facilities for municipal clients dates back more than 33 years and today encompasses ongoing contracts with more than 180 municipal/governmental entities across the U.S. This experience includes our 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 contract with Indianapolis began in 2002 when the City acquired the water assets from a private investor-owned utility and then transitioned the O&M responsibility for the system to Veolia Water under a 20-year agreement. This base of experience will be applied to the benefit of your project through the involvement of many of the key technical and management staff who developed and transitioned 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. This includes the water systems that serve the greater London and Paris areas, as well as those that serve such first-class cities as Berlin and Sydney. 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.

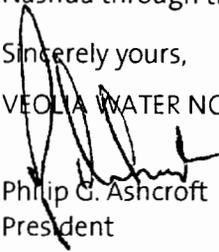
This Proposal submittal has been prepared to be responsive to your RFP of March 25, 2005 (and the addenda and clarifications issued to date), and is presented in three volumes, our Technical Proposal, a separate Price Proposal and a separate Appendix Volume. As the President for Veolia Water's Northeast LLC, I will be the Project Principal and have executed this Proposal transmittal letter. Veolia Water's contact person for the procurement process will remain:

Mr. Richard Johnson, Project Vice President
Veolia Water North America – Northeast, LLC
200 Cordwainer Drive, Suite 202, Norwell, MA 02061
Telephone: 781-792-0640 - Fax: 781-792-0653 - E-Mail: richard.johnson@veoliawaterna.com

I invite you to contact Mr. Johnson, or me, if you need any additional information or have any questions regarding this Proposal. We look forward to the opportunity of working with the City of Nashua through this public-private partnership.

Sincerely yours,

VEOLIA WATER NORTH AMERICA – NORTHEAST, LLC


Philip G. Ashcroft
President

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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Executive Summary



Executive Summary



THE BEST OF BOTH WORLDS: LOCAL CONTROL AND PUBLIC OWNERSHIP WITH A PERFORMANCE-BASED CONTRACT

VEOLIA WATER'S COMMITMENT TO NASHUA INCLUDES COST SAVINGS, WATER-QUALITY and WATERSHED PROTECTION WITH AN EXPERIENCED TEAM

We applaud the City of Nashua for your efforts to take control of the water system and assets serving the community, the area's watershed, as well as rates affecting local citizens. The eminent domain process creates a complex and demanding set of circumstances. We, at Veolia Water North America – Northeast, LLC (Veolia Water), are ready to support you with an experienced team.

We believe your efforts are just. Such battles are playing out nationwide, where local political officials and citizens band together with a common cause and vision – to purchase assets and impact their future destiny; to gain control over water resources, their most important natural asset; and to gain control over their rates.

We know this battle. Not only are we America's most experienced water contract services provider, we are the company that **supported the nation's most significant effort to transform an investor-owned utility into an efficient water system controlled by the community.** And we believe we can help Nashua *now*, during the eminent domain process, and *later*, as you establish the most efficient system for producing quality water at an affordable price.

How We Can Help You

- › **We will be at the table** supporting your efforts in the eminent domain proceedings.
 - **Credibility** - We can **strengthen your position in this fight** through our Proposal. Our transition plan and in-depth experience bring enormous credibility forward on your behalf.
 - **Lower Costs** - We will **dramatically lower your costs** through our programs, practices and technology. Our economies-of-scale allows us to seek the lowest life-cycle costs for both capital and operating cost considerations, supporting your economic model for the asset acquisition.
 - **Experience** - More than any other company, we have **in-depth experience in transitioning water systems from one party to another party** and have transformed the investor-owned utility serving the nation's 12th largest city into what is now the nation's most significant water services contract.
- › It is a reflection of Veolia Water's community spirit that we exceed the scope of the Request for Proposals (RFP) by offering a **significant watershed protection program** that will safeguard the community's interests and transform any public concerns or doubts into confidence. Our program establishes a Citizens Advisory Group, and, more importantly, conducts a two-year study that will offer comprehensive solutions for protecting the community's water source and buffer zones.

- > Our **community involvement** will also extend to water education in the Nashua elementary schools, high schools, colleges, and **will include financial support for local businesses, civic, and charitable organizations.**
- > We will help you establish **direct control** over the system, from operating and capital costs to rates, in order to establish a path of success and savings for generations to come.

Your Local Company with Resources of the Industry Leader

Our core competencies will be put to good use when coupled with the skills of Pennichuck employees.

Veolia Water is unique in our ability to ensure your objectives are met. We will be your local neighborhood operator with access to the resources of world's most experienced water company. We have transitioned more employees (public & private) than any other water services provider.

Our firm's record of success is evident from maritime New England to the desert Southwest, from large cities to smaller communities – 600 in all, from coast to coast.

Just down the road in Leominster, Massachusetts, Veolia Water has effectively and efficiently managed the community's water and wastewater system for almost 20 years, working through service and system improvements and helping them to meet the challenges every city faces. On a larger scale, we manage the nation's largest public-private partnership; by acquiring assets from a regulated utility company, **Indianapolis has witnessed the tremendous benefits of local control, rate stability, customer service improvements, and enhanced performance on water quality such as taste-and-odor improvements.**

We have direct, relevant experience in New England that will ensure Nashua's water works system is smoothly transitioned and that ongoing operations are efficient, yielding the highest-quality water the facilities are capable of producing. We also bring world-class industry experience in current security practices to assist you in protecting your water system.

Our core competencies will be put to good use when coupled with the skills of Pennichuck employees. The management and operations plan we have created is empathetic to employees, **who will be given preference for all positions** needed to effectively operate the water system. We recognize that throughout the years, these individuals have formed the backbone of the water system.

Service Provider Contracts Versus Investor-Owned Utilities (IOUs)

Our response to your RFP is not only to meet its tenants, but to exceed your expectations by proposing a **performance-based services contract**. Such a contract will establish specific



In 2002, Indianapolis took back control of its water system and selected us to manage their system. Benefits to date include a five-year rate freeze, customer satisfaction that greatly exceeds the national utility average, and a sharp decrease in water quality complaints.

performance requirements that will impact the quality and delivery of our work and how we get paid. You will pay us for performance for these specific activities – or you will reduce or eliminate your payment for specific activities if they do not meet your expectation.

Investor-Owned Utilities (Pennichuck’s water service delivery model) and Service Provider Contracts, as we are proposing here, are fundamentally different. **Investor-owned utilities, like Pennichuck, are focused on the stockholder not the customer. Our focus is on the customer, returning “dividends” to the ratepayers through the lowest life-cycle costs and high-quality service. Simply put, we have to do it better for less, and our profits are included in your savings. Our capital improvements are aimed at reducing life-cycle costs not increasing fees or rates.** Importantly, this contract model is now employed by more than 1,000 communities across America.

We are operators, not owners. Veolia Water is *not* an owner of Investor-Owned Utilities. All of our contracts are in the form recommended by the City of Nashua in this RFP. Our Business Model is not to own assets, but to protect and operate them for public benefit and use. We encourage you to review the differences between IOUs and your proposed model below.

A Stark Contrast Between Investor-Owned Utilities and Our Services Contract

<i>Investor-Owned Utilities</i>	<i>Services Contract</i>
High-quality water	High-quality water
Watershed developed	Watershed planned and protected
Costs	Costs
- Formula-driven rates with limited incentives for cost control	- Lowest life-cycle costs incentives
Rate increases	Rate stability
Shareholder focus	Customer focus
- Stock price	- Best investment alternative
- Dividend payout rates to Shareholders	- Fixed price contract
- Money goes to water systems	- Money goes to water systems
Corporate financing – more expensive	Municipal financing – less expensive
Utility controls assets	Municipality controls assets

In the current IOU model, the utility company owns the assets while establishing rates through filings and hearings with a public utility commission. There are layers of costs related to Pennichuck’s NASDAQ listing and with respect to New Hampshire Public Utility Commission hearings. An IOU’s profits are derived from capital improvements, rate increases, costly higher life-cycle choices and other measures. Profit incentives are tied directly to capital programs and are passed onto rate payers. It is our experience that IOUs are not necessarily focused on accurate life-cycle analysis and costs. Additionally, a municipality’s financing structure and available rates are less expensive than those of an investor-owned utility.

Highlights of Our Offering

We are proposing both a Base Proposal, which meets or exceeds the requirements of the RFP. An even higher return option for the City can be found in the Innovative (Alternative) Proposal, located Section Six of this Volume. Both will contain performance-based components and guarantees to reduce costs and ensures environmental compliance that offers maximum protection on City liability issues, watershed protection, high-quality water standards and service.

At the heart of our commitment is serving as a good corporate citizen, actively working to enhance the quality of life for all citizens and support activities in the environmental sciences and education. The key elements and benefits of the Veolia Water plan can be summarized as follows:

- Cost Reductions and Savings through an Efficient Operations Model and Sound Economic Management** – We have commented on some of the differences between IOUs and service contracts. Our proposed contract will include a fixed-fee operations and maintenance program with shared risks and shared rewards for unplanned costs. Veolia Water’s plan demonstrates that efficiencies will result in lower costs, supporting the city’s decision to buy the assets and control them. We have proposed a responsible and reasonable service fee that will enable the City to allocate appropriate funds toward facility upgrades and leave sufficient funds for debt repayment. Because we have not been able to tour facilities and conduct specific due diligence, we are not able to provide exact estimates of Pennichuck’s expenditures to determine exact savings. However, our analysis – based on benchmarked costs of similar sized facilities and the Pennichuck annual reports – supports Nashua’s best economic decision to purchase the Water Works for a fair price, with likely savings of several million dollars annually. The elimination of corporate overhead associated with an IOU changes dramatically with public ownership and private operations management, and given our strong presence in New England, we are able to pool additional resources on an as-needed basis and **secure preferred pricing on various supplies due to volume purchasing.** We will utilize computerized systems as tools to reduce energy and chemical costs and reduce overtime with advanced telemetry throughout the system.
- Asset Management Will Reduce Costs and Protect the Life of Assets.** Veolia Water will employ Total Asset Management, a proven methodical approach to managing the asset’s life cycle. Our program brings together financial, engineering, economic, operating, managerial, and maintenance practices to determine the most cost-effective means of maintaining, managing and operating the water system. Veolia Water’s above- and below-ground asset management approach is proactive. **Through our proven maintenance strategies and asset management tools, we are able to perform repairs in a timely manner and track these costs at the asset level. This allows us to make repair-or-replace decisions and optimize your capital spending around your system’s most critical assets. Our past experience has shown an average cost savings of 5-10% is possible on just the asset management component.**



Veolia Water employees tackle their work with pride – providing high-quality water, with a commitment to the communities in which they live and work.

- **Watershed Management Program Will Spur Safeguards.** Going outside the scope of this RFP, we will conduct a two-year study of the Nashua watershed. This study is

Our two-year Watershed Study – a value of \$200,000 to the city – will result in solid recommendations. A Citizens Advisory Group will provide direct input into our programs.

valued at \$200,000. After extensive testing, research and collaboration, we will provide recommendations to the City on required best management practices to maintain and improve the quality and the quantity of water in the watershed. This will assist in improving the quality of water delivered to customers; and will reduce the impact to source water quality from using

water from the Merrimack River. An important goal of this program will be to develop and implement measures to reduce the usage of and dependency on water from the Merrimack River. A series of ponds, totaling approximately 350 surface acres of water, and flow from the Merrimack River comprise the water system's source of supply. The total watershed consists of approximately 18,000 acres. Present concerns include pond eutrophication, buffer zones, storm water run-off and other impacts, all of which affect water quality. Management of the watershed will be enhanced through our Best Management Practices including capital improvements in the pond system, potential regulatory controls, research and analysis to further our understanding and protection of the watershed, development of educational and public awareness programs, and standard operating procedures for operations and maintenance of the pond system. Additionally, we will meet and consult with watershed groups on a regular basis and, with the assistance of the city, form a Citizens Advisory Group to provide direct input and recommendations. We recognize the importance of the watershed – and we're going above and beyond the terms of the RFP to facilitate direct local input for our plan. We will also support implementation of community cleanup programs and community education tools.

- **Protecting the Water System's Current Employees** – A key element contributing to the success of the proposed service contract will be the transition of the required 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 any concerns, recognition of their institutional knowledge and other programs to embrace employees and make them part of our team.

Existing employees will be given priority and are recognized for their service.

Existing Pennichuck employees will be given priority for all positions created by the service contract, fully recognizing their years of service. We will not transfer these employees to another facility outside of the Nashua area.

- **Water Information Website** – A newly created website will provide information for public officials, neighboring towns, and citizens on this important public resource. We believe open access and communication is an important tool for maintaining regional involvement and support.
- **Guaranteeing a Safe and Reliable Water Supply** – Our firm's proven transition approach includes significant due diligence by a team of experts that has executed such plans before. Our plan will include a provision to shadow the existing operations to identify any problematic issues to ensure the water supply is safe and reliable. Security provisions are included to ensure high levels of protection to the facilities. Our O&M plans will identify key process and equipment needs and make sure they are optimized

and operational. Dedicated support resources will identify potential problems and will be available should any occur. The support of our company's technical experts and our vast network of resources are available, if necessary.

- **Performance Metrics to Ensure Performance** – Our Base Proposal includes performance measurements in five key areas. Under our program, achievement in these areas means that we will essentially be financially punished if we do not meet the specific performance criteria. In other words, we will be paid less for unsatisfactory achievement in these areas. These areas include Emergency Responsiveness (dispatching personnel to emergency distribution and customer service emergencies within 30 minutes), Turn-On/Shut-Off Response Time (responding to requests for turn-on/shut-off service within 24 hours), Employee Safety (improving employee safety), Meter Reading (decreasing the rate of meter misreads) and Fire Hydrant Repairs/Replacements (inoperable fire hydrants repaired or replaced within 15 days). Our Alternative Proposal will include even more dramatic provisions.
- **Local Community Commitments** – Veolia Water will build a strong and effective community relations program, modeled after those that which our firm has proven in application in similar “world class” water and wastewater operations. We are committed to making a real difference in the communities that we serve by lending a “helping hand” wherever it is needed in order to improve the quality of life for the citizens that depend on the water and wastewater services that we provide. Our firm and our employees take leadership roles in many community outreach programs throughout the country, seeking out the best ways to make a difference in each community. To facilitate this approach, Veolia Water is committed to providing significant community involvement in Nashua. This commitment will include a Citizens Advisory Group, partnerships for education using Veolia Water's Water Box educational tool, and water career opportunities workshops to encourage students to pursue careers in the water and environmental industries.

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**

- **Delivering a Strong Customer Service Focus** – Your customers will not be left on hold. Veolia Water's plan is to deliver customer service and take full advantage of our proven, client- and **customer-audited record** of performance in other cities – a record that no other company can bring. We will provide accurate, timely meter readings for residential and commercial customers according to the Nashua prescribed schedule. Accurate answers to water quality questions will be delivered in a helpful, responsive manner. Prompt resolution of field service requests and concerns will be delivered while records will be accurately maintained. We will establish and manage a backflow inspection program. We will also provide information to customers on tap fees.

- **Teamwork that Delivers Experience and Results** – We firmly believe that you will not find a more powerful or credible team to work with you during the process of acquiring the assets. The Veolia Water management and support team will commit to work with Nashua or the Regional Water District to make the Water Works one of the best water utilities in the country. The team that we are proposing as part of your Acquisition and Transition 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. Local employees will also be involved as members of our transition team. Complementing our Nashua-specific team will be the resources of our parent and affiliated companies.

In the pages that follow, we provide you with an understanding of the key elements of this submittal and the basis for which we will move forward in building effective results.

Our Approach to Meeting Your Needs

Veolia Water has developed a well thought-out transition plan to address the concerns of the current (Pennichuck) employees while also planning the technical systems and processes of which our company takes pride.

Transition Plan

Our overriding objectives are to demonstrate that you can be confident in securing significant benefits through our transition and management plan and approach, allowing your acquisition to deliver the best long-term returns for the rate payer. Our approach will also support your PUC hearing efforts.

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.

Key Objectives for Successful Transition:

- **Safe & Reliable Water**
- **Secure Water Facilities**
- **Strong Customer Service Focus**
- **Open & Transparent Employee Transition**
- **Assessment/Rating of Critical Equipment and System Assets**
- **Building Relationships with All Stakeholders**
- **Complete the Transition Process – Schedule and Deliverables**
- **Form an Effective Partnership with the City**

Many of our team members 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 manager has significant expertise and experience in their specialty area, and all are committed to this project.

Table I.ES-1, next page, provides a listing of these key technical and management staff and their resumes are presented in Appendix A of this Technical Proposal volume.

This Transition Team will be mobilized upon selection of Veolia Water as the City's vendor, under the direction of our **Transition Team Managers – Dave Ford**, Senior Project Manager in the Northeast, **Paul Noran**, a **Technical Manager** with Veolia Water in the

Northeast, our local **Area Operational Manager, Roy Wood** and our **Northeast Human Resources Manager Michael Schnack**. They will then begin the process of transitioning

services, staffing and operations responsibility to support the operations and maintenance of your water assets. Supporting this team will be the technical, management and financial resources of Veolia Water, providing the city with access to a national and international base of expertise needed to ensure success.

Transition Plan Objectives

Veolia Water’s transition plan objectives will ensure the highest level of customer service, providing for:

- **Security Vulnerability Assessment Program Compliance** - The review of Pennichuck’s existing Security Vulnerability Assessment may be the most important aspect of Veolia Water’s initial service. We have employees certified in security protocols and who provide these types of assessments. 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/or act as a deterrent to attack. This assessment is required by the federal government. Our plans have drawn significant praise in other communities. This is often an important factor in successful grant applications.

- **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. To ensure success, our Transition Team will be supported by the extensive resources of our company.

- **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

Veolia Water’s Transition Team Table I.ES-1

Role	Name
Project Manager	Dave Ford
Transition Manager	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	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	Keavln Nelson, P.E. <u>Support:</u> Dave Ford, P.E. and Dufresne-Henry
EHS&S	Benn Bullock <u>Support:</u> Jim Galipeau
Development Team Knowledge	Joe Tomashosky <u>Support:</u> Dick Johnson

safe supply of water. An asset condition survey, by a third party, is recommended to quantify the state of the assets, identify all deficiencies and prioritize them according to criticality. Veolia Water will facilitate the review by making equipment, tanks and other assets available to the auditors in a timely and convenient manner. This audit will establish the condition of the assets turned over to the City (and that any representations made in the Asset Purchase Agreement are accurate) and make recommendations of any necessary improvements.

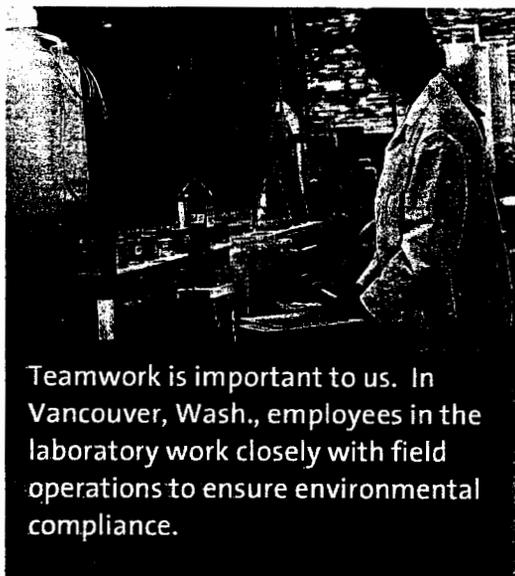
- **Focus on Deliverables Needed for Transition of Operations and Management Responsibility** - Veolia Water will complete all deliverables as detailed in our Proposal and as required in the ultimate service agreement. A key lesson to success is to prioritize deliverables and spread them out over a longer period of time. A high number of deliverables, especially those not of critical importance, puts 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.

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.

Employee Relations

Veolia Water's approach to employee relations is one founded on experience and based on empathy to the uncertainty and change employees will experience. Past successes and unparalleled experience mean that we understand the hard work that must be put into this effort. We are committed to embracing employees and ensuring their transition is successful. Highlights of our employee relations approach include:

- Extending offers of employment to required existing employees who choose to join our firm, assigning them to jobs with comparable assignments, duties, responsibilities and titles to reduce stress and to ensure reliable service through the transition period. For the purpose of computing benefits Veolia Water will recognize their years of service with Pennichuck. They will not be asked to transfer to a facility outside of the Nashua area.
- Providing for wages that are consistent with a recent salary survey for the area. Furthermore, employees who transition to the Veolia Water 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.
- 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



Teamwork is important to us. In Vancouver, Wash., employees in the laboratory work closely with field operations to ensure environmental compliance.

and for us to get to know them while addressing their specific concerns, spousal functions to address concerns 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 Pennichuck’s local employees. We continuously learn from people who 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.

Today, Veolia Water’s staff in North America includes 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 competitive benefits and compensation, training and enhanced career opportunities.

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



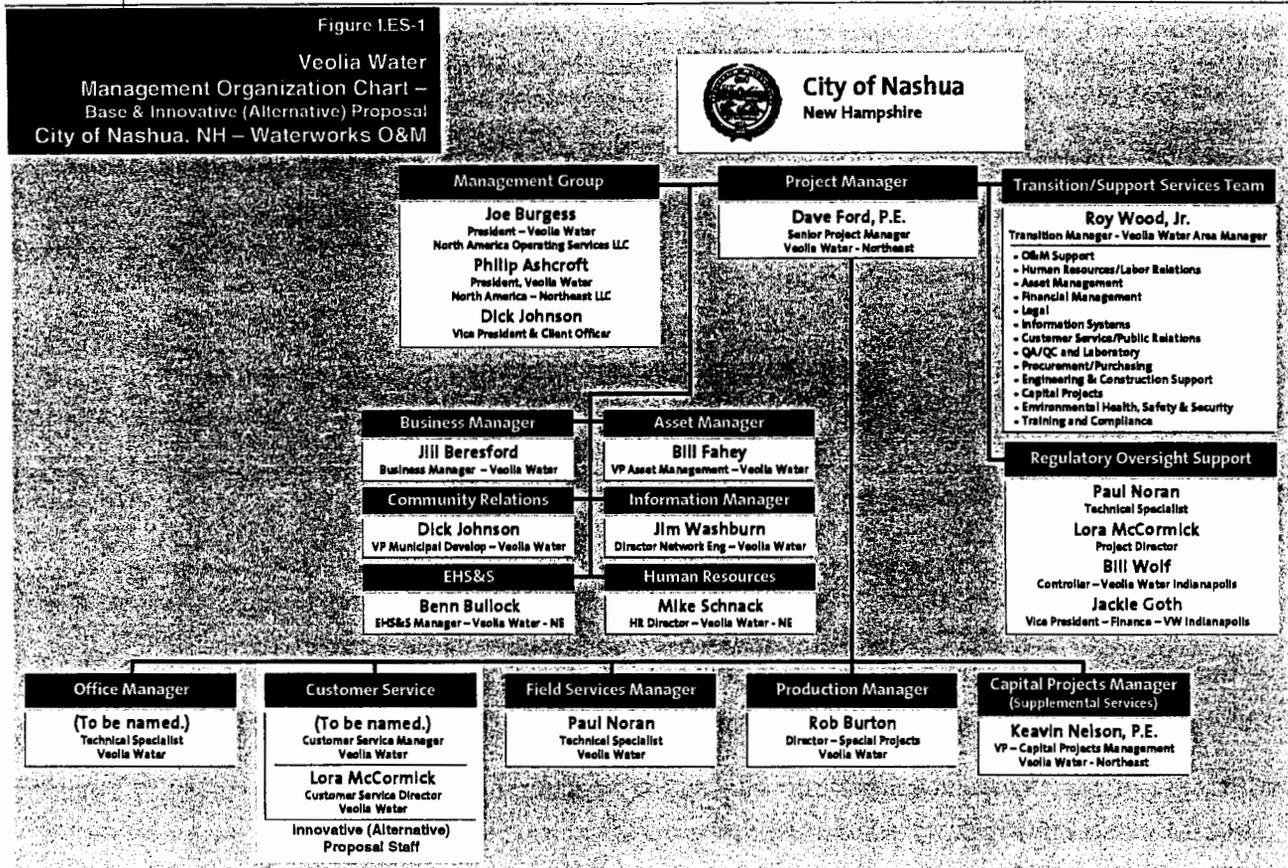
Technical competence applied on a local basis.

We have a proven track record of operating highly sophisticated operations – from managing water plants to providing customer service. Pictured above: Tampa Bay Water’s 66-mgd water treatment facility, which we designed, built and now operate on a long-term services contract basis.

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.ES-1, at the top of the 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 Alternate 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 12 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 and the Capital Program Management (CPM) group, 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-hour on-call basis for community leaders.

Veolia Water's transition plan, and management and staffing approach are fully discussed in Section One, and resumes for all of the key team members are presented in Appendix A.

Technical Approach

Veolia Water's technical approach will include the O&M of the raw water supply, treatment and distribution systems, as well as capital planning, engineering, inspection and project management to maintain your new Water Assets and ensure best life-cycle cost options.

Our approach is founded on our firm's experience in other successful operations as well as on the work of the American Water Works Association (AWWA) Research Foundation related to customer-driven priorities for quality water service. Veolia Water's technical approach will deliver:



As you establish control over your assets, we'll be working hand-in-hand to ensure that high-quality water is provided to Nashua's citizens.

- **A Safe and High-Quality Product** - A product that meets regulatory and aesthetic requirements.
- **Adequate Supply and Pressure** - Adequate pressure and volume to meet the customer requirements.
- **Reliable Service** - Minimizing service outages due to water main breaks, equipment failures, and operational problems.
- **Proper Planning and Construction** – A long-term approach to meeting system demands, including growth and regulatory changes.
- **Risk Minimization** - Performing O&M to minimize water quality risks, service outages and catastrophic events, and having contingency and emergency plans in place.
- **Watershed and Water Quality Management** – Protection of this critical asset through Best Management Practices and

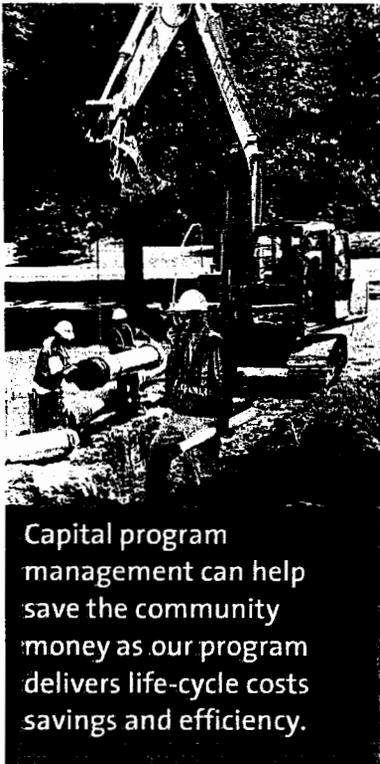
developing long-range plans for both source water protection and effective and efficient treatment facilities.

Veolia Water has a reputation for setting the standards of performance and safety in the industry. We will continue to protect our good reputation through our excellence in Nashua.

Our Alternative Proposal Delivers Additional Savings, Greater Rate Stability, Improved Customer Services, and Greater Savings and Value for Citizens

There are several primary differences between our Base and Alternative Proposal – *length* (20-years) which enables us to more aggressively deliver savings and long-term value, *capital program management*, which will have a direct impact on rates, *customer service programs*, which includes an expanded program with more benefits to Nashua citizens, and *reliability centered maintenance*, which identifies critical plant and equipment maintenance needs to optimize the maintenance and asset management program.

- **Capital program management** is important to customers because any capital program has a direct impact on rates. With Pennichuck's plan to spend \$50 million in the coming years, it is essential to capture any potential cost efficiency as savings directly, and therefore positively impacting rates and the costs of services to customers. Our capital program management (CPM) allows us to identify, prioritize and execute capital projects to focus on the lowest life-cycle costs. Because we will hold operations and maintenance responsibility of the system, we will have the most direct knowledge of the system's functionality and needs. Costs are often reduced by 15-20% under this CPM model through value engineering, life-cycle costing, selecting the best project alternatives, and selecting the most efficient project delivery system. Based on an



Capital program management can help save the community money as our program delivers life-cycle costs savings and efficiency.

aggregate capital investment of \$80 million (assuming \$4 million dollars of ongoing city capital per year), the savings would be between \$12 million and \$16 million dollars over the life of the contract. This program will include local engineering firms to keep dollars local – it is simply a way to be more efficient for rate payers. To demonstrate the effectiveness of our program, we have completed analysis of three specific programs currently out to bid by Pennichuck through the Fay, Spofford & Thorndike (FST) report. We believe we can generate groundwater quality management savings of \$600,000, an additional savings of \$1.5 million through optimizing coagulation at the treatment facility, and estimated savings of \$1.1 million via alkalinity supplementation at the treatment facility. This is a preliminary review showing \$3.2 million in specific savings by a review of just three component parts of the capital plan. This secures rate stability and ongoing saving for customers. (Please note that we believe the total savings from a thorough review of the FST report could yield up to \$6 million in savings.)

- **Customer service.** We recognize that customer service functions such as bill generation and payment processing will be handled by the city under the Base Proposal. In the Alternative Proposal, as discussed in Section Five of this volume, we have developed an enhanced customer service approach providing enhanced value and cost avoidance. Under this approach, we will add a local manager to our team. This local director would work with **Ms. Lora McCormick**, MBA, a Veolia Water project director in Indianapolis. They would be responsible for managing all aspects of customer service delivery including billing and collections and client relations. Ms. McCormick has more than 13 years of water utility experience in client relations, customer service and performance measurement. She was part of the AWWA work group responsible for developing national water and wastewater performance metrics



Customer service focuses on higher levels of customer service and cost avoidance. Our one-and-done philosophy enables customer service specialists to develop work orders to ensure timely resolution of customer issues.

Our customer service will mitigate risks (and headaches) and implement a one-and-done philosophy to customer service representatives to initiate work orders and take other steps to immediately resolve customer issues. This will also help ensure a smooth customer transition. We will focus on two key things – **higher levels of customer service** (customer satisfaction, responding to field operations concerns, customer service calls on billing, etc.) and **cost avoidance. On this point, the city can avoid purchasing Pennichuck’s existing utility billing software system – easily a \$1-3 million capital investment required upfront** – if you allow us to take on the billing and collection components. To transition Pennichuck’s services, additional infrastructure will be required, whether that be telephone systems or software. Under our Alternative Bid, these costs can be included in a more affordable contract fee with our company.

We will establish a local office that will be conveniently located for citizens to pay their bills and resolve questions. Finally, we will establish a website allowing Nashua citizens to pay bills online. To signal a change of the guard, we will expand the amount of information provided to the public including reservoir information, water quality information and watershed programs.

- **Reliability Centered Maintenance.** RCM is a program that identifies critical plant and equipment needs and tailors a maintenance program to ensure operating reliability while determining the timing and level of required maintenance. There is a four-fold benefit: 1. Maintenance Costs are lowered through reduction of routine maintenance activities that are part of a historical pattern and not reflective of actual needs; 2. there is a Reduction in Required Capital Investments because we will invest into this program to generate these savings; 3. Improved Reliability of critical plant and equipment occurs; and, 4. we Conduct Operations and Maintenance Under a Fixed Fee to reduce your exposure to unplanned maintenance.

Potential Near- and Long-Term Savings

Through the RCM and CPM programs, the savings realized to the City of Nashua are substantial. The potential savings resulting from the Alternative Proposal include:

- **RCM Savings** - It is estimated that the savings to the City would be approximately \$1.8 million over the life of the contract. These savings are a result of reduced labor, materials and supplies.
- **CPM Savings** - It is estimated that the savings to the City, based on an aggregate capital budget of \$80 million (annual expenditures averaging \$4.0 million), would be between \$12 and \$16 million dollars over the life of the contract. Based on an initial review of Pennichuck's engineering report completed by Fay, Spofford & Thorndike, savings through our CPM approach on this \$30 million dollar capital plan could be as much as \$6 million, with \$3.2 million readily identified.
- **Customer Service Cost Avoidance** – The city will avoid a \$1-3 million purchase of a utility billing software system.
- **Cost Avoidance During the Eminent Domain Process** – The estimated benefit of cost avoidance during the eminent domain process will be approximately \$2 million. The City of Nashua can avoid the purchase of Pennichuck's utility billing software system.
- **Startup Costs** – Veolia Water estimates startup costs of approximately \$100,000 related to setting-up telephones service and system infrastructure could be avoided.

Veolia Water Has the Experience and Resources Needed to Deliver on Our Commitments

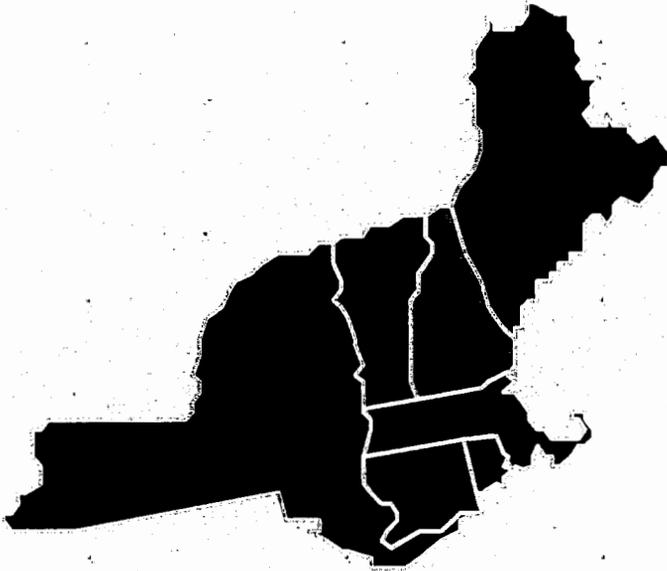
As the leading provider of water services provider for utilities across the U.S., Veolia Water brings the base of experience and expertise needed to be a successful service provider to Nashua.

Veolia Water also brings a proven base of experience in New Hampshire and the New England region, with some 30 active contracts with governmental/municipal clients.

Our work in New Hampshire spans almost 20 years, and has involved providing 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). What this means to the City of Nashua is that we will bring to bear the experience of our firm to provide you with a first-class water utility.

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



VEOLIA WATER
Experience and Resources
Northeast Business Center
Figure I.ES-2

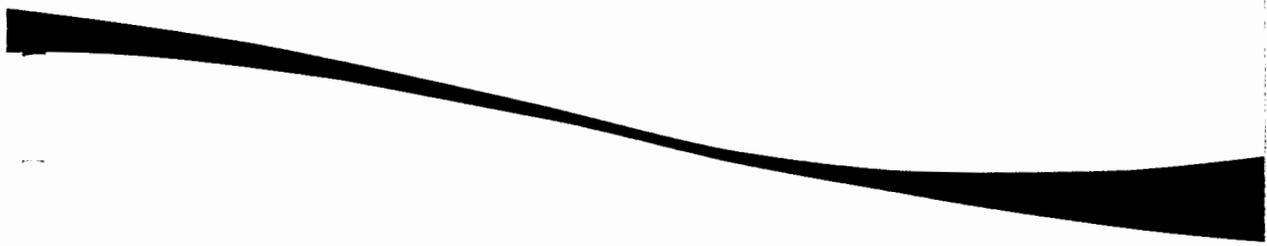
- **7-State Region**
 - *New England States*
 - *New York State*
 - *560+ O&M and Support Staff*
- **Client Mix**
 - *36 Municipal/Government Clients*
 - *5 Industrial/Private Clients*
- **Facilities Operated**
 - *11 Municipal Water Plants*
 - *30 Municipal Wastewater Plants*
 - *2 Industrial Wastewater Plants*
 - *1 Industrial Water Plant*

Providing the Best Choice for the City of Nashua

By choosing Veolia Water, the City of Nashua will reap the benefits of local, regional and national resources. In this performance-based, service provider contract, we will work with you to elevate your utility to “best-in-class” by implementing significant improvements in long-term planning, regulatory compliance and asset management, all at steady costs and substantial savings.

From staff transition and training to long-term management and customer service, Veolia Water is prepared to provide a comprehensive range of services and strongly support you to a successful conclusion of the upcoming eminent domain process through the development of a first-class utility.

Section One



Section One

SECTION ONE

Operations Plan (Base Proposal)

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

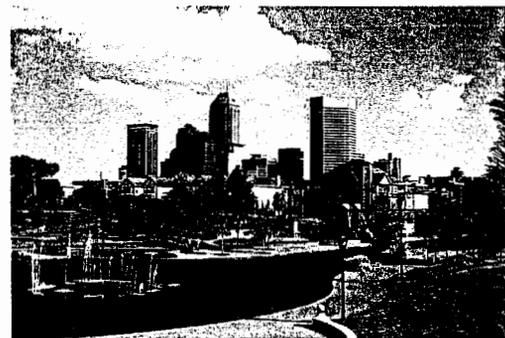


In your Request for Proposal (RFP), the City of Nashua, New Hampshire, defined an ambitious plan and approach to take control of the water systems and facilities that serve your community. These water treatment, storage and supply system assets are now owned by a private entity, and the City plans to acquire these assets from the current owner and operator through the eminent domain process.

Veolia Water North America – Northeast, LLC (Veolia Water) discusses in this section our detailed plan and approach for addressing the Base project defined by the City for the day-to-day operation, maintenance and management (O&M) of the water supply facilities for your community. The focus of this work will be on delivering the City's water customers' high quality drinking water that is 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, protection of the watershed, with no affects on the quality of water or the level of service delivered.

In this section of our Proposal, Veolia Water defines a clear plan and approach to meeting the City's plan and goals, as they were defined in your RFP. Section Three addresses our proposed Management and Staffing Approach, and Section Four completes our Base Proposal with a discussion of the Transition Plan.

Section Five of this Technical/Management Proposal provides a discussion of the experience of our firm, as well as that of our proposed primary subcontractor for this project, Dufrense-Henry. This volume concludes with our Alternative Proposal, Section Six, which outlines our plan and approach to provide the City with the opportunity for enhanced savings and greater value from this new relationship. The approaches that we define in that section are those which our firm has applied in our work on similar projects, such as Indianapolis, Indiana.



In 2002, Veolia Water began a \$1.5 billion, 20-year contract with the City of Indianapolis for O&M, Capital Program Management and Customer Service of the City's waterworks system, which currently serves more than 1.2 million people.

Our Price Proposal, presented in Volume II of this submittal, provides a pricing scheme for both the Base and the Innovative (Alternative) plans, and documents the savings and clear benefits that are offered by the alternative approach.

1 - Project Understanding

As demonstrated in Proposal and our earlier submittal, Veolia Water has the experience and resources needed to meet the scope of services that the City of Nashua defined for this project. This includes our 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.

Our Indianapolis project is very similar to this proposed project with the City of Nashua. Our relationship with Indianapolis began in 2002 when the City acquired its water assets from a private investor-owned utility and transitioned the operations and management responsibility for the system to Veolia Water under a 20-year agreement. The Indianapolis Waterworks contract is one of the more than 100 municipal water systems that our firm operates and manages throughout the U.S., and among the thousands of water systems that Veolia Water companies operate and manage for communities around the world.

What this all 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 first-class water operations delivered by a locally based operations, management and support team. Our demonstrated success in Indianapolis will serve as the model we will use for the O&M of the Nashua Water Works.

In this Proposal, we define Veolia Water's plan and approach that addresses all of the critical needs that the City of Nashua has outlined for this project, and applies the experience and knowledge gained at other projects, including Indianapolis.

We will apply the base of experience and expertise that we offer by providing an experienced and proven project management and support team that includes many of the key staff that were involved in the successful development of the Indianapolis public-private partnership contract. This core team will be supported by an array of experts from our firm's local, regional, national and international resources.

While we may draw upon resources from throughout the Company, this project will be managed and supported at the local level. Veolia Water will be 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.

1.1 - Overview of the City of Nashua's Water Works

The City of Nashua is seeking to acquire the water utility assets of the Pennichuck Corporation's three subsidiaries. However, the New Hampshire Public Utilities Commission is limiting the acquisition of the Nashua Water Works, currently known as the Pennichuck Water Works (PWW), only. The Nashua Water Works, or PWW, are now owned by the Pennichuck Corporation, and this system serves the City of Nashua and some surrounding communities outside of the City limits.

The assets of PWW include a conventional surface water treatment plant (WTP) with a rated capacity of 35 MGD. The primary water supply for the WTP consists of about 351 acres of water in a series of ponds that include Supply Pond, Harris Pond, Bowers Pond and Holts Pond, as well as Stump Pond, Pennichuck Pond, and many smaller ponds. The total watershed is approximately 18,000 acres. The facility treats an average of 14.1 MGD and a peak flow of approximately 25 MGD. It also has 25 community water systems, approximately 48 wells in 20 well fields, 6 dams, approximately 34 booster stations with 71 booster pumps, and 10 storage tanks.

The water distribution system has approximately 425 miles of main. Ductile iron and cast iron pipe account for 72% of the materials. PVC is 14% and transite is 10%. A portion of the cast iron pipe in the distribution system dates to the early 1900s. The system includes approximately 24,700 non-fire services, 760 fire services, 24,300 meters and 2,430 hydrants.

To facilitate the transfer of the PWW to ownership by the City, Nashua, and surrounding communities formed the Merrimack Valley Regional Water District (District). As stated in the RFP, "it is the City's intention to transfer ownership of the water utility assets acquired to the District upon completion of the taking, if possible."

The District was created as a regional water district and established to provide and ensure an adequate and sustainable supply of clean, potable water at reasonable cost and to advance the conservation and compatible recreational use of the land according to the District's goals and objectives. It works for the benefit of its customers and ratepayers, ensuring the health, safety, welfare, and well-being of all residents of the District.

1.2 - Transferability

Veolia Water understands the City of Nashua's plans to transfer ownership of the acquired utility assets to the District, and our Agreement with the City will be structured to accommodate this transfer. There will be no change in terms or conditions when the Agreement is transferred from Nashua to the District.

2 - O&M Plan and Approach

In this, and the succeeding two sections of this Technical/Management Proposal, Veolia Water defines our approach for the day-to-O&M of the water system that serves the City of Nashua. Our Proposal has been structured to address the O&M requirements of the City's RFP.

Veolia Water's technical approach is designed to improve the quality of service for the customers of the Nashua water system. Veolia Water's priorities for quality water service are as follows:

- **Safe and High Quality Product** - A product that meets regulatory and aesthetic requirements.
- **Adequate Supply and Pressure** - Adequate pressure and volume to meet the customer requirements.
- **Reliable Service** - Minimizing service outages due to water main breaks, equipment failures, and operational problems.

- **Proper Planning for System Demands** – Planning for and constructing new facilities to accommodate community growth and meet system demands.
- **Risk Minimization** - Performing O&M to minimize water quality risks, service outages and catastrophic events, and having contingency and emergency plans to effectively deal with risks.
- **Watershed and Water Quality Management** – Protecting this critical asset through Best Management Practices and developing long-range plans for both source water protection and effective and efficient treatment facility operations and maintenance.

The paragraphs that follow detail the key elements of our O&M plan and approach in a series of Technical Plans that discuss each of the critical areas that will be involved in the day-to-day O&M of the various elements of the water system. The core elements, or plans, that form our approach include:

- Watershed Management Plan
- Water Quality Plan
- Asset Management Plan
- Maintenance Management Plan
- Operations, Maintenance and Management Plans

Section Three of this Volume outlines our management and staffing approach for implementing the plan defined here, and Section Four documents how we will transition services for the current investor-owned utility to operation and management by our firm.

The plans presented as a part of this Proposal are based on the information and limited due diligence allowed to date. As we move forward in this project, Veolia Water will provide specific details for the Nashua water system assets, based on the results of the final due diligence.

2.1 – Watershed Management Plan

Veolia Water proposes to fund \$200,000 in the first two years of the services agreement to perform a comprehensive watershed evaluation and develop a watershed management and source water quality plan.

Veolia Water is proposing a comprehensive watershed management plan and approach for the City of Nashua. Protecting and preserving this water source is critical to the community both from water quality and quantity perspectives and as a natural resource.

Key objectives of the comprehensive watershed evaluation will include:

- Evaluating prior watershed and source water quality engineering reports
- Performing additional water quality testing of problem areas, and perform water quality testing throughout the year to account for seasonal differences
- Researching and analyzing data and identify problem areas
- Developing recommendations and approaches to deal with identified source water quality problems
- Presenting a report on findings to the City of Nashua and other stakeholders and communities within the watershed

- Providing support to stakeholders in developing policy improvements and in developing community outreach programs
- Providing for ongoing watershed analysis, watershed education and community support of watershed initiatives

Description of the Watershed

The watershed land that surrounds and contributes water to the ponds that make up the Nashua Water Works lie in five towns, including Nashua, Merrimack, Amherst, Milford, and Hollis. The primary water supply consists of about 351 acres of water in a series of ponds that include Supply Pond, Harris Pond, Bowers Pond and Holts Pond; as well as Stump Pond, Pennichuck Pond, and many smaller ponds. The details of these supplies are summarized in Table I.1-1, below. The estimated storage for two of the ponds was indicated as unknown due to sediment buildup.

Pond Name	Cumulative Drainage Area	Surface Area	Estimated Storage in 2000
Holts Pond	14,171 acres	23 acres	Unknown
Bowers Pond	15,955 acres	92 acres	180 million gallons
Harris Pond	17,199 acres	78 acres	340 million gallons
Supply Pond	17,598 acres	16 acres	Unknown

The total watershed is approximately 18,000 acres and supplies water to the ponds through surface water flow and base flow—or groundwater flow.

Additionally, the Nashua Water Works can receive flow from the Merrimack River through an intake, which delivers water into the pond system by way of Bowers Pond downstream of the Everett Turnpike Bridge.

Veolia Water has reviewed a number of documents in its evaluation of the watershed, including the Rizzo Associates reports dated November 1, 2002; the Fay, Spoffard & Thorndike report of dated May 2004; and Pennichuck Water Works Watershed Management Plan prepared by Comprehensive Environmental Inc.

Each of documents highlighted common areas of concern for the Nashua Water Works watershed:

- **Pond Eutrophication** – Increased nutrient levels and decreased pond capacity due to sedimentation buildup
- **Buffer Zones** – To control run-off from various sources
- **Storm Water Run-Off** – Primarily focused on developments that result in decreased amounts of permeable land -- impacting ground water recharge
- **Other Impacts** – Agriculture, transportation facilities, industrial and commercial effects, sewage facilities – both municipal and private -- and documented hazardous waste sites

Each item contributes to the overall water quality issues faced by the Nashua Water Works. Some of the water quality issues facing the Water Works as a direct result of the current condition of the watershed and pond system are:

- High and fluctuating turbidity levels
- Temperature fluctuations
- High levels of iron and manganese
- Taste and odor issues due to blue-green algae

Veolia Water's Watershed Management Plan will focus on working with the City of Nashua to implement Best Management Practices for the watershed; to develop educational tools and approaches; to seek regulatory controls, where available, to manage the watershed; and to implement targeted capital improvements into the pond system.

Objectives of the Watershed Management Program

Veolia Water's goals for watershed management center on 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 our understanding of the watershed and its long-term health.

Veolia Water will provide its expertise from projects such as our Indianapolis project. Research conducted and experience gained there has shown that watershed water quality can be managed to improve finished water quality. We will expand its knowledge base by working with local entities that can add valuable knowledge of the area and tap into expertise within the Nashua area.

The objectives for the Veolia Water watershed management plan for the Nashua Water Works are:

- Complete the comprehensive watershed evaluation study and develop the watershed and source water quality management plan in years 1 and 2 of the service agreement at a cost of \$200,000.
- Develop a source water quality protection plan.
- Partner with local governmental and environmental groups to develop and implement best management practices for watershed protection.
- Provide standard operating procedures for operation and maintenance of the pond system.
- Develop water withdrawal protocols to ensure optimal source water quality and source water management.
- Develop educational tools and approaches, such as public awareness, technical workshops and school age educational programs.
- Work with the City of Nashua and local groups to develop and implement community clean up days on the watershed.
- Implement a Citizens Advisory Group to provide expertise and guidance to both watershed and water quality issues.

Veolia Water realizes the importance of the Nashua Water Works watershed to the overall health of the community. Veolia Water also realizes that a significant portion of the watershed lies outside the City of Nashua. Veolia Water will work with the City of Nashua in encouraging and educating neighboring communities on the importance of protecting this water source, not just for drinking water, but for the health of the ecosystem of southern New Hampshire.

Methodology for Implementing the Watershed Management Program

Veolia Water will develop a Source Water Quality Protection Plan for the watershed, which will outline the water quality parameters to be monitored, sampling and testing regimens required, potential in-pond treatments required, and raw water characteristics analyses for enhancing the water treatment requirements. This plan will provide the raw water quality data required for developing and implementing the overall watershed management plan. The plan will utilize data already collected for the various reports conducted for Pennichuck Water Works and will continue these efforts.

In developing the watershed management plan for the City of Nashua, Veolia Water will draw upon its knowledge of reservoir and watershed management as well as solicit expertise from local and state groups that have intimate knowledge of the watershed.

Veolia Water's plan to achieve the objectives proposed includes the following:

- Outline projects in the Capital Plan that will improve source water quality. Numerous capital improvements have been proposed by Pennichuck, and Veolia Water offers some specific recommendations for these improvements in Section Six, our Alternative Proposal, under Capital Program Management.
- Work with local groups such as the Pennichuck Brook Watershed Council to increase public awareness of the watershed, as well as develop both technical and school-age education programs.
- Work with the City of Nashua, municipalities surrounding the watershed, environmental groups, and other local and state regulatory groups to develop and implement best management practices for the watershed. The program will incorporate zoning regulations, subdivision regulations, protection overlay districts, septic systems regulations and maintenance and creation of buffer zones.
- Provide training to employees on standard operating procedures for operations and maintenance of the pond system and all raw water sources.
- Integrate the watershed's source water protection plan into the treatment plant Process Control Management Plan and the overall Water Quality Plan to ensure that source water quality is managed as aggressively as finished water quality.

Veolia Water's approach will ensure the long-term viability of this important resource. Veolia Water will work with the City of Nashua to ensure that both water quality and water availability are maintained and improved.

A summary of our Watershed Management Plans and Activities that we've implemented for Indianapolis is included in Appendix C, Volume II, of this submittal.

Challenges and Solutions of the Watershed Management Program

Challenges	Solutions
The ponds have serious water quality issues, especially during the summer -- temperature fluctuation, iron and manganese, turbidity, and taste and odor precursors.	Outline recommendations in the Capital Plan. Implement a source water quality plan and implement Process Control Management Plans to ensure finish water quality is maintained.
Not all of the watershed is within the City of Nashua.	Work with neighboring municipalities, as well as local and state regulatory groups, to develop and implement best management practices.
Safe water yields are exceeded in the summer months.	Work with the City of Nashua in implementing City Capital projects to increase water availability; pond dredging, additional Merrimack River water, potential for developing well sources, other.

2.2 – Water Quality Plan

Water Quality Issues Affecting the Nashua Water Works

The Nashua Water Works contains a mixture of both surface water and groundwater. The core system, drawing source water from the Supply Pond and Harris Pond and peak usage from the Merrimack River, is faced with numerous actual and potential water quality issues, including:

- **Algal Blooms and Algal Toxins** – These can contribute significantly to taste and odor problems.
- **Disinfectant Byproducts** – These are caused by the high levels of silt and organics in the watershed and pond system mixing with the treatment chemical chlorine in the water plant.
- **Mixing Merrimack River Water with the Pond System** – This problem causes a number of issues such as temperature and flow fluctuations, spikes in turbidity, de-stratification of the ponds resulting in the release of organics such as phosphorus, nitrogen and ammonia, as well as iron.

The community water systems within the Nashua Water Works are well systems. Well systems have different water quality issues such as:

- Well head protection
- Iron and Manganese
- Arsenic
- Taste and odor issues

Veolia Water will use its expertise and experience in water operations to ensure that the Nashua Water Works' water quality is maintained and improved, and that safe, compliant, reliable and aesthetically pleasing water is provided at all times.

Objectives of the Water Quality Plan

Veolia Water's objectives regarding the Nashua Water Works water quality issues are as follows:

- **Regulatory Compliance** - Maintain Regulatory Compliance 100% of the time.
- **Source Water Management** - Manage source water use to maximize both water quality and water production.
- **Wellhead Protection** - Work with the City to update or develop well head protection plans.
- **Operational Controls** - Institute operational controls to limit watershed water quality impacts.
- **Distribution System Flushing** - Use a flushing program to maintain water quality throughout the distribution system.
- **Capital Planning** - Propose capital improvements that will limit the development of taste and odor precursors in the pond system, and propose projects that will improve water quality through the treatment facility.
- **Public Education** - Work with local watershed and environmental groups to protect the watershed and educate the public about the importance source water quality.

Veolia Water will work closely with local environmental and conservation organizations to educate the public about the watershed and about their water use practices. Through this collaboration, we will investigate the water quality issues that are most prevalent in the Nashua area. In due course, an effective and long-term water quality management program will be developed and engaged.

Methodology for Implementing the Water Quality Plan

The solution to water quality issues will not come without commitment, dedicated expertise and investment. Management of these issues will involve coordination between plant operations, field services and asset management and City Capital investment with the common goal of providing a product that not only meets regulatory requirements, but minimizes any aesthetic concerns.

Veolia Water's plan to achieve the objectives proposed includes the following:

- Developing Watershed Management and Source Water Quality Plans.
- Capital planning to improve water quality and to meet all current and pending drinking water rules and regulations.
- Developing and implementing Process Control Management Plans (PCMPs) for all treatment facilities. PCMPs are used to ensure that all operational and water quality parameters are maintained within set parameters. PCMPs are discussed further in the Plant Operations Plan and in the Regulatory Compliance Plan.
- Developing and implementing an employee training program – latest treatment techniques, best practices, laboratory sampling and analysis, safety, other.
- Developing and implementing a distribution system flushing program to minimize any aesthetic issues generated in the distribution system.

Benefits of the Water Quality Plan

The benefits of Veolia Water’s water quality plan include:

- Providing the highest quality water to the customers of the Nashua Water Works, building customer confidence and satisfaction.
- Limiting taste and odor and other water quality problems through effective watershed management and focused operational controls.
- Addressing color or clarity concerns generated either in the treatment facilities or the distribution system.

Veolia Water is committed to maintaining and improving water quality in the Nashua Water Works. Through operational controls and City capital investment, Veolia Water will ensure that the water works meets the expectations of the City and its customers with regard to water aesthetics and water quality.

Veolia Water’s Experience in Large Water System Water Quality

In Indianapolis, Indiana, Veolia Water accepted the challenge of resolving significant taste and odor problems related to algae growth, atrazine, and geosmin and methylisoborneol (MIB) in the drinking water supply reservoirs. By focusing efforts on controlling the growth of nuisance algae, by instituting carbon feed protocols, and by using reservoir water quality analysis effectively, Veolia Water significantly reduced the number of customer complaints and significantly improved the aesthetic water quality. We continue to work to ensure that water quality is maintained and improved, both within the watershed and within the treatment plant and distribution system. Our success in Indianapolis has been based on partnering with the community to solve technical problems as follows:

- Veolia Water worked hand-in-hand with a Technical Advisory Group (TAG), made up of scientists and engineers representing local industries, environmental organizations and universities, to seek advice on technical water quality issues and prioritize the needs of the water system. Veolia Water reached out to include the regulatory personnel from various agencies to provide a forum for addressing complex water quality issues that cross multiple jurisdictional boundaries.
- Veolia Water formed a research partnership with Indiana University-Purdue University at Indianapolis (IUPUI). The Central Indiana Water Resources Partnership (CIWRP) relationship is based on Veolia Water’s long-term commitment to invest in the improvement of the source water quality and the expectation that this investment will result in improvements to both the source water and finished drinking water quality in Central Indiana. This partnership has been a huge success in helping develop and implement improved watershed management programs.

Veolia Water expects to implement similar activities and initiatives for the Nashua Water Works, and some of key approaches that we are proposing are discussed in Section Two of this Volume, our Community Relations plan and approach.

Challenges and Solutions for the Water Quality Management Plan

Challenges

Source water may contain compounds that present water quality issues.

Solutions

Conduct jar tests to optimize selection of most effective treatment chemicals. Implement PCMP to

Challenges	Solutions
Water Quality issues may require capital improvements, operational process improvements, or additional source water protection measures.	optimize plant operations to mitigate water quality issues. Work with watershed stakeholders on long-term watershed improvements. Leverage Veolia Water's extensive expertise to develop the most cost effective solution. Identify improvements to meet regulatory requirements or for needed capacity upgrades.
Problems related to stagnant water or high turbidity may occur in the distribution system.	Develop and implement a flushing program to minimize problems associated with distribution system flows. Recommend capital improvements to resolve inherent flow problems.

2.3 – Asset Management Plan

A major benefit of our asset management program will be to minimize the required City capital investment. Minimizing City Capital investment is absolutely essential to control rate increases required to support ongoing City Capital investment. An example would be to perform timely maintenance on critical plant and field equipment, which extends service life and allows for deferment of City Capital investment.

The second major benefit of our asset management program will be to increase reliability of critical plant equipment and provide uninterrupted quality water service for the customers.

Another benefit of our asset management program is to enable the City to use the “Modified Approach” to GASB34. To use the “Modified Approach,” an accurate assessment of the condition of the asset and the remaining service life must be made. The benefits of using the “Modified Approach” to GASB34 are as follows:

- Record annual depreciation costs.
- Improved balance sheet asset value.
- Improved borrowing and bonding capacity.
- Greater understanding of infrastructure condition.
- Improved long-term financial management of infrastructure assets.

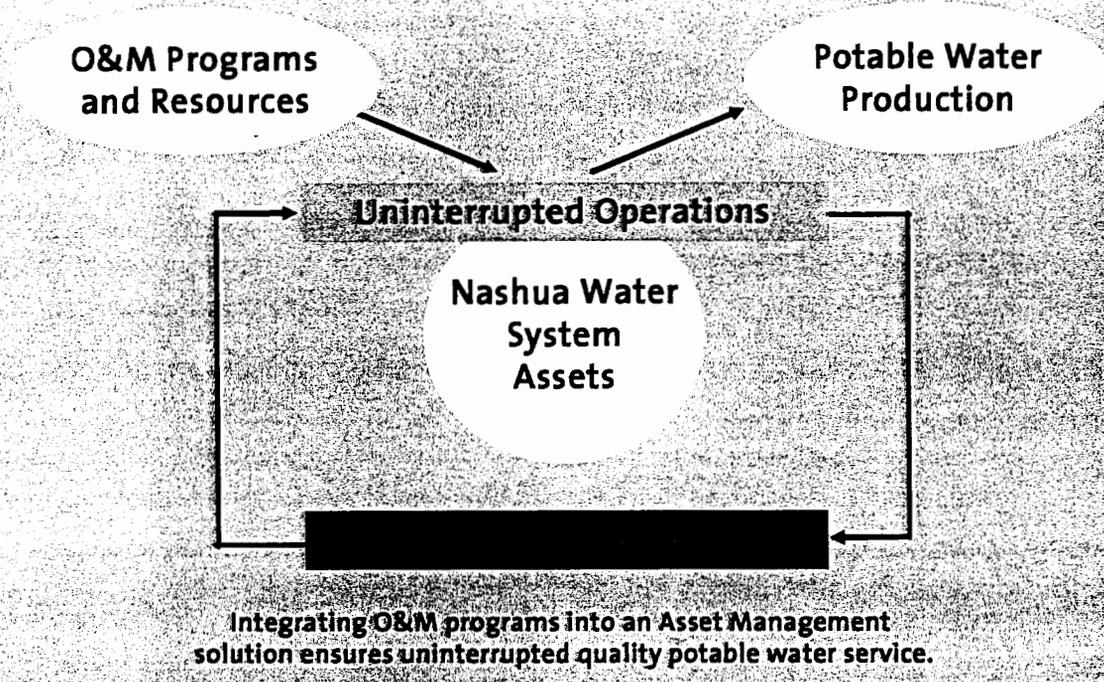
In operating and managing the Nashua water system assets, Veolia Water will employ Total Asset Management.

Asset Management, essentially, is a proven methodical approach to managing the asset's life cycle. Veolia Water's Asset Management program brings together financial, engineering, economic, operating, managerial, and maintenance practices to determine the most cost-effective means of owning, managing and operating the water system.

Overall Asset Management Strategy

Figure I.1-1, next page, represents how Veolia Water's approach to Asset Management delivers customers quality services and targets programs and resources to ensure uninterrupted water production. Figure I.1-1 also shows how uninterrupted operation of the water production facilities generates a demand for planned maintenance.

Figure 1-1. Veolia Water’s Asset Management Strategy



Asset Management Essentials	
O&M Staffing	<ul style="list-style-type: none"> • Fully certified and properly trained • Integrated with engineering to bring lifecycle knowledge and experience through the duration of the project • Employed from transition, allowing single-point accountability through the term of the project
Operations	<ul style="list-style-type: none"> • Operating strategies that are science- and engineering-based, allowing us to identify and mitigate risks at project startup • Lifecycle costing reduces process management costs and improves performance reliability • Understand and anticipate operational challenges and mitigate them through process optimization
Maintenance	<ul style="list-style-type: none"> • Proactive maintenance significantly reduces costs associated with corrective maintenance • Equipment savings are passed on to City through our lifecycle costing strategy
Preventive Maintenance	<ul style="list-style-type: none"> • Extends life, performance reliability and efficiency of equipment and manages wear-related failures • Reduces the need for costly corrective maintenance
Equipment Repair & Replacement	<ul style="list-style-type: none"> • Ensures long-term integrity of equipment • Obsolete machinery is replaced with improved functionality
Permit Compliance	<ul style="list-style-type: none"> • Guaranteed full compliance with EPA Safe Drinking Water Act and NHDES standards
Contract Compliance	<ul style="list-style-type: none"> • Guaranteed full compliance with the service agreement
Information Technology	<ul style="list-style-type: none"> • Our CMMS can be integrated with the City’s information, ensuring effective project management and performance monitoring • CMMS tracks O&M performance, allowing us to provide efficient delivery of services while protecting the City’s infrastructure investment over the long term
Safety	<ul style="list-style-type: none"> • Our performance exceeds industry standards, ensuring safety for both City and Veolia Water employees
Quality Assurance	<ul style="list-style-type: none"> • Veolia Water standards guide our employees in providing quality service to our clients.

Our approach is to evaluate the asset based on its design, initial installation, operating costs, maintenance cost, and overall reliability. This approach allows us to really understand the total cost of ownership of an asset and results in better-informed asset care decisions. The Veolia Water Asset Management strategy considers the performance history of equipment in comparable operating conditions so that equipment that demonstrates more reliability and lower O&M costs over the life of the asset is selected when replacements are necessary. Veolia Water uses a proven cost/benefit analysis tool that evaluates equipment reliability, failure frequency, safety and health of personnel, potential risks and hazards to the environment and costs; initial installation, maintenance, operational and retrieval. By understanding the equipment life cycle costs, Veolia Water will assist Nashua in making sound investment decisions that lead to a safer, more reliable, and cost effective operation.

Application of the Asset Management program decision process requires that an accurate record of maintenance history and associated costs be maintained. Veolia Water's recommendations for equipment replacements are based on manufacturers' recommended replacement schedules and its experience in maintaining similar equipment at other projects.

Objectives of the Asset Management Approach

Outlined below is Veolia Water's comprehensive approach for maintaining the assets of the Nashua Water Works, which includes reservoirs, ponds, the treatment plant, pumps, storage tanks, water mains, valves, hydrants, meters, etc.

At Veolia Water, disciplined asset management allows for the optimum integration of maintenance programs and operating resources in support of uninterrupted quality water production. Our Asset Management program places emphasis on three goals:

- Performance of maintenance and repairs in a timely, efficient, and effective manner
- Practical accountability methods to measure and sustain asset condition and performance
- Managing risk and the associated costs

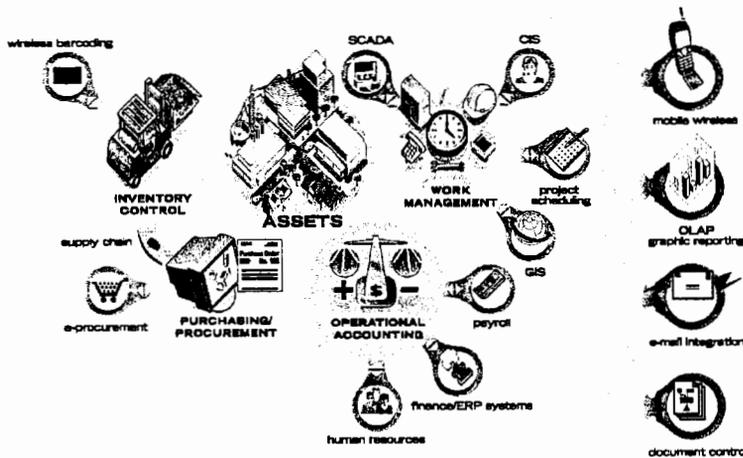
Veolia Water's Asset Management program is results-oriented, rather than task-oriented. Priorities and measures of performance are based on cost-effective solutions

Veolia Water's asset management approach is proactive. It makes productive use of planned maintenance strategies to reduce costs normally associated with corrective maintenance. Our maintenance objectives include:

- Caring for and fully maintaining infrastructure through the life of the service agreement.
- Limiting unplanned maintenance through a comprehensive preventive and predictive maintenance program.

Veolia Water's Asset Management tools support the complete lifecycle management of an asset. **SPL Enterprise Asset and Work Management System (SPL)**, our computerized maintenance management system (CMMS), permits the inclusion of various equipment attributes to monitor elements such as environmental conditions, equipment application, sludge disposition or chemical dosing to evaluate system performance. The Asset Management system also tracks inventory, equipment condition data, defined service levels

ENTERPRISE



SPL Enterprise Asset & Work Management Solutions Enterprise Asset Management/Computerized Maintenance Management System (formerly Synergen)

performance limits and tolerances, failure of serviceable assets, and supports a condition-based maintenance plan.

Veolia Water uses predictive and preventive procedures as a principle component of the Asset Management program. Predictive testing generates data for review and analysis. Performance trends are tracked, and non-invasive maintenance is performed to maintain reliability and keep equipment performance at required levels. Specific maintenance programs will be developed that define customized maintenance tasks, task frequencies, required skill sets, and materials.

Root cause failure analysis is another consideration of the Asset Management strategy. Every equipment failure is investigated to determine the actual root cause. Through a series of questions and the resulting answers, the failure may be tracked to such ultimate causes as an engineering defect, an operational problem, a previous maintenance error, a training issue or another issue as determined by the analysis. The results of the root cause analysis are used to modify the maintenance program when appropriate.

In an Asset Management strategy, using the data gathered from our maintenance practices, we compare the maintenance and performance history to comparable equipment in similar applications to determine best reliability when making decisions about what equipment manufacturer, make or equipment model to select as a capital replacement. The City of Nashua will benefit by being a part of Veolia Water’s large maintenance database.

The Veolia Water maintenance database has valuable information on the reliability of specific vendor equipment for each process application. By using this information, poor operating equipment can be replaced with assets with proven reliability numbers.

Methodology for Implementing an Asset Management Approach

Asset management will provide the City of Nashua with a set of success factors by which performance can be measured. The City’s goal to achieve facility reliability and asset protection will be the keystone of Veolia Water’s Maintenance Management Plan, presented in subsection 2.4 of this operations plan.

Veolia Water has implemented the SPL (Synergen) program at O&M projects for:

- Indianapolis, IN (12 water plants with 200-MG daily production capability)
- Vancouver, WA (three wastewater plants).
- Oklahoma City, OK (four wastewater plants, capable of processing 106 MGD).
- Cranston, RI (Asset Management for a 23-MGD regional wastewater plant).
- Streator, IL (3, 3-MGD wastewater plant).
- Additional sites in the start-up phase for this program include: Junction City, KS (municipal and industrial wastewater plants); Richmond, CA (16-MGD wastewater plant), and Fort Knox, KY (military utility privatization project).

Our firm has also targeted a number of other of our facilities for conversion to SPL in the near future.

Veolia Water's experience in providing quality maintenance for more than 7,500 water facilities worldwide places emphasis on:

- Safeguarding the City's multi-million dollar investment in equipment and facilities.
- Using predictive, preventive and proactive maintenance programs that can extend the life, performance reliability and efficiency of equipment.
- Ensuring that maintenance is performed in accordance with the equipment manufacturers warranty, specifications and generally accepted industry standards.

The Asset Management strategy places emphasis on the following Best Maintenance Practices by:

- Using a comprehensive maintenance evaluation to assess the quality of the water works equipment maintenance and ensure that equipment is returned to the City in substantially the same or better condition.
- Tracking maintenance activities with our CMMS.
- Organizing and training operations and maintenance personnel to work together toward becoming autonomous in daily activities to improve equipment effectiveness.
- Avoiding operational problems through preventive and predictive maintenance performed in advance of equipment failure.
- Proactively planning corrective maintenance work assignments.
- Monitoring the quality of maintenance performance to optimize employee performance and productivity while enhancing equipment reliability.
- Maintaining good housekeeping and attention to landscaping as an integral part of facilities maintenance.
- Managing new equipment warranties.
- Following standard maintenance procedures, maintaining up-to-date equipment maintenance manuals, including written standard maintenance procedures.
- Using local vendors and our well-developed network of national purchasing agreements to take advantage of quality materials at the lowest cost.

Supporting the City's strong commitment to protect its investment and using Veolia Water's proven knowledge of maintenance management, we will achieve a first-class maintenance program that can be measured by the following success factors:

- Limited equipment downtime.
- A reliability driven, proactive operations and maintenance culture.
- Consistent and reliable maintenance of the equipment that promotes use of good process control methods.
- Systematic development and implementation of a predictive testing program to avoid emergency equipment down time.
- Evaluation and redesign of processes to develop more robust operation.
- Use of Root Cause failure analysis to continuously improve the asset's maintenance plan.

- Managing materials consumption to eliminate emergency procurements while avoiding unnecessary inventory costs.

Computerized Maintenance Management System

Veolia Water will utilize a CMMS, which will allow for the inclusion of various equipment attributes. The system also includes information on inventory control, condition assessment and monitoring data, defined service levels, defined performance limits and tolerances, functional failure definitions for all serviceable assets, and supports a condition-based maintenance plan, that incorporates predictive and preventive maintenance procedures. The CMMS supports both aboveground and below-ground maintenance. The major benefits of the CMMS system include:

- Asset and resource management
- Work and maintenance management
- Inventory control and materials management
- Reporting and analysis
- Mobile computing
- GIS integration

The system will be integrated with other software including the SCADA system, and work orders will be downloaded to the maintenance staff directly to their hand-held PC units in the field. This approach saves valuable time and improves overall wrench time availability.

The following provides an overview of how Veolia Water will utilize the CMMS to meet Nashua's objective of asset protection:

- **Work Order System** - Generate preventive, predictive and corrective work orders to document each task with an assigned priority; collect the cost data.
- **Project Planning and Scheduling** – Place all equipment on a maintenance schedule.
- **Maintenance Measurements** – Maintain current information base of all predictive measurements.
- **Equipment History** – Determine life cycle cost for the equipment and compare to replacement.
- **Inventory System** – Maintain key or critical spare parts inventory for all equipment.
- **Property Management** – Work with the City to implement a life cycle asset management system for physical assets.
- **Work Performance Standard** - Work performance standards published by Means Facilities Maintenance Standards (Means) will be used as the baseline for all maintenance and construction tasks.

O&M Manuals

Within the first 12 months, the O&M manuals will be updated for the treatment facilities and other water system assets. The updated O&M manuals 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. SOPs would include plant and source of supply operations, safety, maintenance, vehicles and heavy equipment and employees.

Updating O&M Manuals

O&M manuals will be updated annually, as required. Any new or replacement equipment will be included in O&M Manual 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. These manuals will combine the knowledge of designers, constructors and operators involved in the project.

Condition Study

Within 180 days of the Service Commencement Date, Veolia Water will conduct a comprehensive survey of the acquired water system assets with recommendations for any major capital improvements required to maintain the system in adequate condition.

Veolia Water will recommend the equipment to be surveyed. The overall condition of the equipment will be determined and deficiencies will be noted. This evaluation is important because it allows both the City and Veolia Water to identify immediate problems and to predict problems and identify capital improvements required.

This condition survey will serve as the baseline to provide a mechanism to ensure the facilities will provide reliable service. These measurement techniques are subsequently used for:

- Making long-term predictive maintenance measurements and prioritizing any necessary repairs
- Allowing Veolia Water to take any immediate action necessary
- Identifying the required capital improvements

Veolia Water will update the condition study and provide a report summarizing the findings on an annual basis. Recommended capital improvements will be identified.

Above-Ground Assets

Treatment Facility and Equipment Maintenance

The water treatment facility and associated treatment equipment will be maintained to ensure that safe, compliant water is produced at all times. Veolia Water's asset management plans provide for a comprehensive preventive and predictive maintenance program. Key areas of asset management in the treatment facilities and equipment will be:

- Water facilities and equipment will receive preventive and predictive maintenance according to manufacturer's recommendations and industry standards.
- All chemical metering equipment will be maintained to ensure proper chemical dosing occurs at all times.
- Source of supply and pond system treatment equipment will be operated and maintained so the water entering the treatment facility is as high a quality as possible to ensure that the water treatment process is optimized.

Building Maintenance

Building maintenance is an important aspect of Asset Management and will include roof leak repair, regular pest control, janitorial services, repainting of facilities to prevent rapid deterioration or loss of aesthetic value, immediate repair of plumbing leaks and failures.

Water Works facilities will be maintained, at a minimum, to existing standards to provide a safe comfortable work environment. Some key areas of work include:

- **Parking Lots** -Parking lots will be maintained to provide proper ingress and egress to the facilities. All paved parking areas, access to these areas and asphalt-paved areas will be maintained.
- **Grass Cutting and Landscape** - Grass cutting and landscape maintenance will be provided on a seasonal schedule that ensures the grounds are kept neat and orderly.
- **Snow and Ice Removal** – Snow will be removed and walkways de-iced to ensure safe access to the plant offices and treatment facilities.

SCADA Systems

Veolia Water will continue to operate and maintain the existing SCADA systems associated with the facilities. Veolia Water will provide for O&M, training and service level standards for the SCADA system including backup systems. Veolia Water will make recommendations for City Capital improvements associated with the SCADA system.

Well Maintenance

The well maintenance program will be incorporated into the Web-based CMMS software, OPS 32, for water quality data and regulatory compliance. This program will be used to produce inspection requests and the resultant reports.

In addition to regular maintenance, Veolia Water will evaluate well performance versus historical records to detect any changes. This evaluation will include items such as flow rates, water depths, run times, pump ratings and well construction, and resulting data will be placed in the CMMS. Changes in performance, such as a decrease in well yield or specific capacity may be due to hydrogeologic conditions or due to mechanical and physical degradation within the well.

Examples of specific items that will be addressed during maintenance include:

- Capacity of individual wells.
- Assessment of mechanical and electrical problems.
- Assessment of mineral scaling, encrustation or bio-fouling.
- Inspections of the well fields and wellhead protection areas.

The frequency of any such maintenance activities and subsequent corrective actions will be dependent on the evaluation of well performance, as indicated by the historical record or as indicated by the manufacturer's recommended schedule (e.g., pumps).

Below-Ground Asset Management

Below-ground asset management focuses primarily on the water mains and service lines. These assets normally account for approximately 50 percent of the total dollar value of the water utility assets. The regular replacement of components of the underground water system assets is part of the overall Asset Management program, which encompasses regular inspection, preventive, predictive or corrective maintenance and replacement.

The Field Operations Plan, discussed later in this section, reviews in detail the O&M of the underground assets. This includes the repair of water main breaks, system flushing, and the repair and replacement of fire hydrants and valves.

An important aspect of Veolia Water's approach to below-ground Asset Management will be the development of an Underground Asset Rehabilitation and Replacement Plan (UARRP) for the Nashua Water Works. This is discussed in our Alternative proposal in Section Six.

Another important aspect of below-ground Asset Management is system replacement and rehabilitation (R&R). As discussed in Section Six, our Capital Program Management (CPM) will develop an annual replacement schedule for the water lines and distribution system components. This annual schedule will ensure that funds are spent each year on replacing the components that are in the worst condition. Based on the age of the Nashua underground pipes, the R&R rate should be between 0.5 percent and 1.0 percent per year of the total 425-mile system. This translates to an annual City R&R capital cost of approximately \$1 million to \$2 million. Veolia Water has processes and tools to ensure the City's R/R program will result in the following:

- Correcting service deficiencies, including pressure, flow and water quality
- Best use of the available capital funds
- Addressing the highest priority needs
- Reducing the water main break frequency
- Reducing system water leakage, losses and unaccounted-for water

Veolia Water's technical approach to its water distribution system R/R program will establish priorities based on the following criteria:

- Asset criticality (pipe asset will be assigned a rating of Highly Critical, Critical and Non-Critical)
- Asset condition, including failure data analyses and maintenance history
- Quality customer service
- Regulatory issues
- Environmental considerations

Ancillary Tools

A number of tools will support the Asset Management program. GIS system, hydraulic modeling, computerized maintenance management, and reliability centered maintenance are among those that will be used.

A GIS system that uses piping maps available in electronic format (see illustration at right) and any source documents that help identify system entities will be a key component of the underground asset program. Knowing the land-cover characteristics before conducting an emergency repair to a broken water main will allow the crews to bring the appropriate tools and equipment. In maintaining the system, techniques to record the horizontal and vertical position of a potable water system's point features (e.g., valves) will be employed. Using survey-grade GPS data collection techniques, depending on the prevailing conditions, Veolia Water has been successful at other projects, such as Indianapolis, in locating features to within one-foot of their true horizontal and vertical position. The GIS system can be integrated with Veolia Water's CMMS system to ensure that the repair history is tracked and used to make replacement decisions

Hydraulic modeling requires accurate information about depth of lay, top of pipe, pipe bends, valve elevations, etc., for the water system. Data captured through a GPS survey provides the necessary accuracy. Veolia Water plans to use Nashua’s existing **water distribution system hydraulic model** of the potable water system. We anticipate that the model descriptions of the layout, configuration and sizes of system features can be extracted from the GIS system mapping and associated databases.

The data for the completed hydraulic model will reside in the computerized GIS mapping system. Over the long-term, the model, in conjunction with other software, such as the KANEW model, which determines pipe survivability used in R/R programs, will be able to identify sections of pipe to be cleaned and lined or replaced. Long-range strategy or master planning will allow the system to be maintained and customized to meet future population or demand increases and to handle geographic expansion.

Challenges and Solutions of an Asset Management Approach

Challenge	Solutions
Provide maintenance in accordance with the most stringent of applicable laws and prudent utility practice.	Veolia Water’s proactive asset management program places emphasis on planned and predictive maintenance to ensure protection of the City’s investment in water treatment facilities and equipment.
Implement the CMMS.	Establish a milestone implementation schedule that tracks Veolia Water’s progress and performance. Provide the City with oversight for installation of CMMS. Promptly correct any CMMS deficiencies identified by the City.
Condition and age of facilities, equipment particularly in older facilities.	Carry out an initial condition survey, implementing predictive and preventive maintenance in CMMS to address deficiencies.
Update all O&M documents and implementing all SOPs.	Utilize the transition team and other Veolia Water resources to work with the water system staff and deploy a team accountable for this.
Maintain on behalf of the City all manufacturers’ warranties.	Equipment warranty information, including warranty start and end dates, will be entered into the CMMS to ensure tracking of all maintenance and vendor activities.
Provide maintenance reports to the City in a timely manner to ensure compliance with the City’s requirements and schedules.	Develop a mechanism for delivering maintenance reports to the City.
Condition and age of facilities, equipment particularly in older facilities.	Carry out an initial condition survey, implementing predictive and preventive maintenance in CMMS to address deficiencies.
Assess condition of all equipment, determine equipment that needs replacement, apply a schedule for preventive and predictive maintenance.	Evaluate asset criticality and focus efforts on improving reliability and managing the effects of equipment failure.

2.4 - Maintenance Management Plan

Veolia Water's maintenance management plan will be integrated with our asset management program. Our maintenance strategies and programs are always based on a few clear and prioritized objectives: Reliability, Cost Effectiveness and Client Satisfaction. As such, we will, under this O&M contract with the City of Nashua, maintain a high state of reliability in a cost effective manner while protecting the investments made in the facilities and assets.

Veolia Water's maintenance programs are specific and targeted. All of our experience and expertise developed at the vast array of other facilities and systems we operate will be used in support of development, implementation and operation of our maintenance programs for the City's water works facilities. The resulting program will be proactive, dynamic and specialized.

Veolia Water will, no less than 30 days prior to the Service Commencement Date, submit an update to the Maintenance Plan incorporated in the services contract. This update will reflect any conditions that have changed in the period between the negotiation of the services contract and the service commencement date. Veolia Water will within 90 days after the service commencement date, submit to Nashua a final maintenance plan reflecting all changes required by conditions not previously known to either Nashua or Veolia Water. The plan will include the details associated with directional flushing, which Veolia Water will perform.

Our maintenance management plan will entail a variety of elements, including:

- **Preventive maintenance** - to replenish routine wear or expendable components, extending operating functionality.
- **Predictive maintenance** - to quantify the condition and rate of change of material condition, allowing targeted reliability objectives to be monitored and controlled, and to support cost effective planning and scheduling.
- **Service Methods** - selection of internal and external service methods for cost effective use of staff labor and outside services.
- **Targeting Staff Skills and Abilities** – to ensure efficient, professional and cost effective manpower utilization and significance for each employee.
- **Evaluate Maintenance Activity Types** - to eliminate ineffective activities and enhance the value of effective ones.
- **Review and Evaluation of Maintenance Programs** – that considers results extracted from actual asset history and considers new and innovative maintenance activities, approaches, tools, and equipment.
- **Enhanced Reliability and Cost Effectiveness** – involves the alteration of assets to increase reliability and cost effectiveness, through measures such as the installation of run time totalizers to allow service to be run-time rather than calendar based.

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.

Maintenance Management Plan Approach

The Veolia Water maintenance approach will be developed based on several fundamental basics. The program will essentially be a coordinated compilation of elements determined individually for each asset and the specific conditions under which each operates and is exposed. The objective is that each unit be retained at desired condition levels. Overall system or facility levels will be automatically met if each component is met.

Maintenance Management Methodology

The methodology Veolia Water will utilize and follow in developing maintenance programs include:

- **Asset Inventory and Evaluation** - Veolia Water will begin with a thorough audit and evaluation of the assets at the City facilities. This was discussed previously in this section under “Condition Study.”
- **Asset Service Requirement Determination** - an integrated set of service needs will be developed based on manufacturer recommendations, experience with similar types of assets in similar operational circumstances, historical information on the actual assets, and established industry standards.
- **Recurring Service Scheduling and CMMS Development** - scheduled service activities will include conventional preventive maintenance, predictive maintenance and run-time or periodic-based service. The CMMS will be used to hold the procedures, resource requirements, reference information, scheduling, and historical compilation of performance and associated measurement information.
- **Inventory and Spares** - analysis of materials and parts necessary will be determined and used to develop an integrated set of spare parts and to establish an appropriate inventory.
- **Development of Maintenance Program Policies and Procedures** - identify a service need, enter into the CMMS as “open” work, perform scheduling and prioritize operational needs, implement efficient and effective procurement activities, maintain physical inventory control procedures, and develop and implement procedures for the process of collecting, recording, and entry of appropriate service data into the CMMS. As these site specific policies and procedures are developed, they will be incorporated in the Veolia Water site specific SOPs.
- **Repair and Replacement** - the R&M Budget developed by Veolia Water is consistent with the RFP and Veolia Water definition of City Capital. Major repair and replacement will be accomplished in similar fashion to the Repair and Maintenance as described above, with the difference being the financial aspect of the source funds as well as City review and approval.
- **Housekeeping and Beautification** - Veolia Water takes facility appearance very seriously. As such, appearance and aesthetic condition of the facilities is of utmost importance to us. As a matter of routine, Veolia Water will keep the facilities in a neat and professional manner. We will cooperate proactively with the City in advancing programs of beautification or appearance improvement.
- **Upgrade of Obsolete Equipment** - our approach is that some smaller, inexpensive and/or low reliability contribution assets are best replaced rather than service the units.

Maintenance activities to prolong the life of the unit may well cost more than the value of the increased life. Veolia Water analyzes full life-cycle costs and benefits of each service activity. We develop an integrated life-cycle strategy for each asset type that minimizes cost and maintains reliability.

Maintenance Management Plan Summary

Veolia Water will develop a customized maintenance plan for the City of Nashua under this contract. The key features and benefits offered by the Veolia Water plan and approach include:

- **Proven Management Tool** - The SPL enterprise asset management/computerized maintenance management system (CMMS), a state-of-the-art, Web-based asset management data collection software program, which offers:
 - Real-time viewing of all network equipment helping understand failures and to spot abnormal conditions.
 - User-definable metrics and key performance indicators for monitoring and benchmarking across all Veolia Water projects.
 - Unparalleled insight into both the physical and financial condition of assets for improved decision making regarding resource allocation.
 - Improved cost control and budget compliance due to real-time views of asset lifecycle costs per user-defined categories.
 - Minimal training required for casual and intermittent users due to tutorial wizards, embedded workflow processing, and an e-mail approval portal.
- **Enhanced Reliability Approaches** – These focus on:
 - Identifying critical assets and establish specific preventive maintenance schedules to protect those assets.
 - Establishing Root Cause Analysis of failures to understand their cause.
 - Significantly enhancing the availability of required inventory including spares based on rigorous failure analysis of assets.
- **Enhanced Capital Planning** – Made possible by:
 - Providing updated and cost justified information to support Nashua’s long-term capital planning.
 - Facilitating close cooperation between Veolia Water and the City in planning future CIP.
 - Minimizing financial spikes by forecasting the need for additional funds in historically under-budgeted programs or in reducing money tied-up in programs over budget.

Protection of the City of Nashua’s investment in your water facilities will be central to the Veolia Water O&M plan and approach. This approach was developed on the basis of our “stepping into the owner’s shoes,” which for us means to strike the best possible balance between maintenance and capital costs to optimize overall costs for the community. It

raises the issue of maintenance to a whole new level of understanding, and we believe that Veolia Water is the only firm capable of providing this.

Subsection 2.3 of this Operations Plan offers a complete discussion of Veolia Water’s Asset Management plan and approach proposed for this contract with the City of Nashua. Veolia Water has implemented this approach successfully in the largest public-private partnership in the U.S., our current contract with the City of Indianapolis.

2.5 - Operations, Maintenance and Management Plans

2.5.1 - Production Operations Approach

Objectives of the O&M Approach

Veolia Water’s objectives for the successful O&M of the Nashua Water Works are as follows:

- Provide uninterrupted, safe, timely, professional and reliable operations and management of the water works in a cost-efficient manner
- Maintain compliance with all safety, environmental and water quality requirements
- Operate and maintain all the components of the Water Utility as required by the RFP
- Perform all Water Quality testing and reporting
- Compile and file all required reports
- Implement an effective and efficient maintenance management system
- Protect the system assets
- Institute preventive and predictive maintenance

Methodology of the O&M Approach

Veolia Water’s plan and approach to providing O&M of the system will guarantee that the water quality, demand, plant production, delivery and system storage capabilities are integrated into the operating plan. Plans will focus on making efficient use of personnel, controlling power, chemical consumption and sludge disposal costs and, most importantly, maintaining the confidence of customers by delivering excellent water quality. Components of the plan include:

Methodology of the O&M Plan

- Process Control
- Standard Operating Procedures
- Training
- Analysis of Water Quality
- Information Management
- Early Warning System
- CMMS

- **Data Management** - Utilize a comprehensive process control data management software system called OPS 32, for example, to improve finished water quality, increase employee productivity, reduce the cost of facility operations, and generate regulatory reports.
- **Process Control Management Plans (PCMP) for the Water Treatment Facilities** - This is a management tool to identify and quickly assess the control of critical unit treatment processes. An effective PCMP will ensure that all operational systems are operating within desired and designed parameters.

- **Standard Operating Procedures (SOPS)** – Apply Veolia Water’s experience to establish SOPs for the O&M of all assets. Detailed SOPs will be developed for all critical and regulatory functions of the facility. This includes daily O&M activities, chemical loading and unloading, backwash procedures, satellite systems operations, laboratory procedures, and many others.
- **Training** – Provide staff with training in all areas and refresher training as required. At a minimum, training will be provided for in the areas of operations, maintenance, safety, regulatory compliance and company policies.
- **Analysis of Water Quality** – Veolia Water’s laboratory QA/QC program will be applied and all data entered into the OPS 32 software. A specific Laboratory QA/QC Manual will be developed and will include:
 - *Water Quality Plan* – Integrates the source water quality, treatment water quality and the distribution water quality to meet or exceed the requirements of the drinking water performance criteria
 - *Source Water Quality* - Ensures that the source water is of high quality and reliable
 - *Treatment Water Quality* - Ensures that treated water quality is optimized, with the raw water quality analyzed on an ongoing basis
 - *Distribution System Water Quality* – Maintains the finished water quality leaving the treatment plant as the water is transported in the system

Our Water Quality Plan was discussed in detail in subsection 2.2 of this Operations Plan.
- **Information Management** - Information generated in the SCADA system will be stored and available for subsequent review and uploaded into the process monitoring database, which will be maintained using the OPS 32 program.
- **Early Warning System** – This system will ensure all regulatory requirements are met. Any significant change in water quality for any parameter found in the regulatory sampling program will be flagged by the SCADA or the OPS 32 system before it approaches the regulatory maximum acceptable level.

2.5.2 - Field Operations Approach

Objectives of the Field Operations Approach

The primary objective of Veolia Water’s Field Operations Plan (FOP) will be to improve the quality of service being provided to the customers served by the water system. The FOP will address all aspects of field O&M activities including field customer service. The FOP will be updated annually or as required.

Methodology for Implementing the Field Operations Plan

Field operations include field maintenance activities related to maintaining the water works facilities. A brief description of each of the activities is provided in this section. In addition, the customer service issues are discussed.

Veolia Water will have people, equipment and materials available 24 hours per day, 7 days per week to respond to emergencies. Periodically, emergencies may require outside

resources. Veolia Water can draw upon outside resources from its Team members and local contractors to assist in dealing with emergencies.

Veolia Water will respond immediately to all reported water main breaks, alarms, pump station failures and other emergencies. The response time will be within two hours of notification. A detailed record of our emergency response will include the type of emergency, actions taken and any follow up work that may be required. The detailed information on our responses to emergencies will be provided in our monthly report.

The improvements in water quality that Veolia Water expects to achieve will result from an integrated approach in every area of operations. In this regard, our **Field Operations Plan** will be focused on:

- Ensuring quality water in the distribution system
- Improving customer satisfaction.
- Improving emergency response time for main breaks (dispatched in 30 minutes or less, guaranteed)
- Effectively communications with customers.
- Providing measurable standard of service with service guarantees.
- Improving employee productivity and reducing operating costs.

Water Mains

The water distribution system has approximately 425 miles of pipe. Ductile iron and cast iron pipe account for 72% of the materials. PVC is 14% and transite is 10%. A portion of the cast iron pipe in the distribution system dates to the early 1900s.

Veolia Water is committed to the following:

- Dispatch personnel to emergencies within 30 minutes.
- Keep customers informed during a service outage.
- Analyze pipe samples to determine causes of failure and remaining service life.

Veolia Water will recommend programs to reduce the water main break frequency. In Section Six of this Proposal, Veolia Water offers to provide complete Capital Program Management. A function of this would be the reduction of water main break frequency, which will be tied to recommended performance guarantees.

Fire Hydrants

There are approximately 2,430 fire hydrants in the system. The 2004 NHPUC report does not indicate any private hydrants. The O&M of the fire hydrants will be closely coordinated with the City and local fire departments.

With respect to public fire hydrants, the City of Nashua Draft Water Ordinance indicates the following:

- 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. Such taking of water will be billed.
- The fire hydrants will be operated by the agent of the City or duly authorized representative of the municipality.

Fire hydrants will be inspected on a regular frequency after report of an emergency leak. A seriously leaking hydrant could do extensive property damage if left unattended. Fire hydrants will be repaired on a high priority basis.

An objective of Veolia Water's hydrant program will be for all fire hydrants on the distribution system to function properly. Fire hydrants in poor condition will be replaced on an as-needed basis. Leaking or malfunctioning fire hydrants will be repaired or replaced. Based on age and condition, a certain number of fire hydrants will be replaced annually. This need will be included in the City's capital plan.

Veolia Water's fire hydrant painting program will be performed as part of the regular annual inspection program. Fire hydrants will be painted to properly maintain the assets and their appearance.

Valves

There are approximately 2,500 valves in the distribution system. Valves that cannot be located or are inoperable reduce system reliability and increase the number of customers that are out of service when a water main break needs to be isolated. The objective of Veolia Water's valve replacement program will be to ensure valves are operational. Veolia Water will inspect and exercise all system valves annually. Valves will be located, boxes cleaned, raised or lowered if required, and the valve will be turned to ensure proper operation. Valve measurements will be verified (if available) or created and recorded. The City will be furnished with a copy of the updated valve records annually. Valve replacements will be either Unplanned Maintenance or City Capital.

Service Lines

As indicated in the City of Nashua Draft Water Ordinance, the service line is the pipe from the water main to the curb stop within the public right-of-way. Such pipe will be owned and maintained by the City. There are 24,685 non-fire service lines and 759 fire service lines in the water system. Older service lines are a major contributor to unaccounted-for water. Service lines will be part of the regular leak detection program. Based on the age of the system, Veolia Water will establish a repair program for leaking service lines. The City's capital plan must allocate funds for the replacement of aged service lines.

Booster Pumping Stations

The PWW distribution system has approximately 34 booster pumping stations. A portion of the pump stations are monitored and controlled from the SCADA system. Operating data and information for the remote pump stations will be collected and processed by the 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 predictive and preventive maintenance program. The CMMS will be used to plan and track maintenance data and information.

Storage Tanks

There are 10 finished water storage tanks that supply water to the distribution system. The operating levels of the water storage tanks will be monitored and controlled from the SCADA system. Recent research conducted by the AWWA Research Foundation found that water quality deterioration in finished water storage tanks is a serious problem. Veolia Water will have a program to ensure that water quality is not deteriorating in the finished water storage tanks. For example, we will use operating data and information to determine daily turnover. The goal will be to achieve at least a 25% daily turnover in the storage volume to ensure fresh water in the storage tanks.

Each water storage tank will be washed down with high-pressure water spray every five years. Following the tank wash down, Veolia Water will advise the City of the need for a joint inspection. The integrity of the paint and the tanks' condition will be evaluated by Veolia Water. We will submit a report detailing the condition of the painting system and noting needed repairs and recommend when painting of the tank will be required. Major tank repairs and painting will be part of City Capital.

Restoration

Restoration involves the repair and replacement of streets, curbs and gutters, sidewalks and landscaping that have been damaged as a result of repairs or replacements to the water system. The drivers to complete the restoration as soon as possible are safety, aesthetics and building goodwill with the customers and residents. Customers appreciate the timely and quality completion of needed restoration.

Vehicle and Heavy Equipment Management/Maintenance

Veolia Water will implement a comprehensive maintenance program for the vehicles and heavy equipment that will include preventive and predictive maintenance. The primary objectives of the maintenance program will be to achieve the expected service life of the vehicles and heavy equipment, while avoiding emergency breakdowns, which are costly and disrupt operations. Emergency maintenance is the most costly maintenance. Having a major piece of equipment, such as a backhoe, breakdown in the field disrupts operations and delays the completion of the work.

Reading and Maintaining Meters

The City's system includes approximately 24,274 active meters to be read and maintained. Of these, approximately 93% are the small, 5/8-inch meters. Veolia Water will read residential meters without AMR quarterly. Commercial and industrial meters and meters larger than 3/4" will be read monthly. Under our base proposal and as indicated by the RFP, the information gathered will be provided to the City of Nashua for billing purposes.

Meters will be tested in accordance with NHPUC Rule 605. Meters, which register outside a range of 97 - 103%, will be removed and replaced with an accurate meter from stock or from the new meter inventory. All replaced meters will be sealed to prevent tampering. Meters that fail the test will be repaired and/or replaced. Meters that are impractical to repair will be scrapped. Veolia Water will update available meter records for the City or establish a meter record maintenance system. Meters that have been damaged due to abuse, tampering or neglect will be repaired at the City's expense as part of Unplanned Maintenance. Meters replaced as part of the annual meter replacement program will be funded by City Capital.

Automated Meter Reading (AMR)

Within 90 days of the Service Commencement Date, Veolia Water will submit a detailed recommendation for conversion of meters in the water utility to automated meter reading (AMR). The recommendation will compare available AMR systems and include a cost to benefit analysis for the various alternatives. The major benefits of an AMR system are as follows:

- Improved meter reading productivity and reduced costs
- Identify leaks

- Identify tampering
- Backflow detection
- Analyze usage patterns
- Provide data for a conservation program.

Backflow Prevention and Cross-Connection Control

Veolia Water will implement a backflow prevention and cross-connection program in accordance with the New Hampshire Department of Environmental Services (NHDES) requirements. The cross-connection backflow prevention program for communities serving more than 1,000 persons must be approved by the NHDES. The backflow prevention devices are owned and maintained by the customers. Veolia Water also will perform the other activities for the cross-connection program, including the following:

- Owners must have the backflow devices tested in accordance with NHDES requirements and provide the results to Veolia Water. High-hazard applications must be tested at a six-month frequency and all other at a 12 month frequency.
- A list of high-hazard locations will be maintained as required by the NHDES.
- A list of low-hazard locations will be maintained as required by the NHDES.
- A list of inspection frequency and inspection results will be maintained as required by the NHDES.
- An annual summary inspection form will be submitted to the NHDES by February 1 of each year for the inspections that have occurred in the prior calendar year.
- Veolia Water will support the City in its efforts to identify backflow devices for new and existing users.
- Veolia Water will work with the City to establish new service requirements.

Managing Unaccounted-for Water

The NHPUC statistics for 2002 indicated 5,274 million gallons (MG) of water production and 4,842 MG of water sales. This results in a metered ratio of 91.8%. The NHPUC statistics for 2003 indicated 5,162 million gallons (MG) of water production and 4,618 MG of water sales. This results in a metered ratio of 89.5%. The production data in the 2004 NHPUC report is inaccurate.

Based on available data, this would indicate un-metered water averages between 9 and 10% of annual production. This is considered very good water loss, compared to industry standards. A portion of the un-metered water is for authorized usages such as fire protection. The remaining un-metered water is normally unaccounted for water due to system leakage.

Unaccounted-for water adversely impacts operations in two ways: first, the incremental cost for power and chemicals due to additional pumping and pumping rates; second, the need for additional treatment and conveyance facilities to produce and pump non-revenue generating water. The benefits to the City for maintaining low unaccounted-for water will be capital savings and electrical power savings.

Understanding the hydraulics of the distribution system is an essential activity to minimize unaccounted-for water. Veolia Water will use technical support staff to monitor and control system leakage. We will perform leak detection on an ongoing and as needed basis. Leak

detection equipment will be used to listen to fire hydrants, valves, meters, mains and services. Computer-assisted leak detection equipment will be used to identify and locate the small, difficult leaks. Veolia Water has included added resources in its proposal for system leak detection to ensure unaccounted-for water remains low. Results of the leak detection program will be used to identify needed infrastructure improvements in the distribution system.

Conservation Plan

Within 18 months of the Service Commencement Date, Veolia Water will submit a report detailing measures that can be implemented to conserve water and water resources within the water utility. This plan will be drafted using the U.S. Environmental Protection Agency (EPA)'s guidelines that contain a voluntary provision.

Its main purpose is to educate the stakeholders and initiate a reflection among them in order to define a list of actions. According to its design it is, and will be for several years, a working document.

The first part in the development of a water conservation strategy requires preparation of a water system profile to identify where conservation programs can be focused to identify and review water conservation measures. The second part includes guidelines for the process of developing drought response triggers.

For the drafting of a Water Conservation Plan, the EPA identifies three guidelines which correspond generally to the water system size: Basic, Intermediate, and Advanced, as follows:

- The Basic Guidelines are geared to systems serving fewer than 10,000 people.
- The Intermediate Guidelines are appropriate for systems serving between 10,000 and 100,000 people.
- The Advanced Guidelines are for systems serving more than 100,000 people.

The conservation plan will follow the EPA intermediate guidelines for the core system and the Basic Guidelines for the Satellite systems. The major ingredients of the conservation plan will be as follows:

- Beneficial water conservation occurs when the total benefits of conservation exceed the total costs associated with the conservation.
- Growth in consumption and customers will be projected over 15 years. The rate of growth and maximum-day consumption will be projected.
- Existing water supply, treatment, distribution and storage infrastructure will be evaluated with and without conservation. This data will be used to identify the benefits of conservation.
- Commercial, industrial and residential demands will be evaluated.
- Growth projections will be made to estimate demands for 20 years. An evaluation of existing water supply yields to meet projected growth including droughts or water shortages (i.e., droughts with a severity greater than 25-year recurrence) will be evaluated. Our staff has met with the Director of the Nashua Planning Commission for information regarding the newly developed plan that will be released in July.
- Competition for existing water supply sources will continue to increase with growth in surrounding communities, expansion of industrial facilities and more attention to

sustaining minimum stream flows. This competition may limit Nashua's ability to withdraw raw water supplies to meet growth. Even though Nashua is 90% built out, surrounding communities will be receiving substantial growth in the next two years that could have an effect on water availability.

- Drought episodes will be evaluated. Expanded water supply sources and treatment facilities to meet both system growth and high consumption periods as a result of drought will be evaluated.
- An effective water conservation program includes both supply-side and demand-side management practices. The selection of any water conservation measure or incentive must consider legal, social, political, institutional, technical and economic feasibility.
- Programs aimed at reducing average residential water use may not result in substantial savings, given the relatively low rate of consumption on a per capita basis.
- Public education programs should accompany any water conservation measure or incentive.
- Water reuse and recycling is a potentially important strategy to evaluate.

Customer Service Activities in the Field

The customer service activities for field operations include the following activities:

- Turn-ons and shutoffs
- Monthly and quarterly meter reading
- Testing, repair and replacement of meters
- Final and special meter reads
- Improving Key Performance Indicators
- Dispatch personnel to emergencies within 30 minutes
- Ensure accurate meter reading through performance guarantees
- Turn-ons and shut-offs conducted within 24 hours of scheduled time.

Challenges and Solutions of the Field Operations Approach

Challenges	Solutions
Effectively communicate with the customer and increase customer satisfaction in performing the field work.	Maximize scheduling of field work with the customers and be sure customers understand the reasons specific field operations are being performed.
Minimize customer inconvenience associated with field operations including service interruptions due to water main breaks.	Preplan, schedule and monitor field operations to ensure customers and residents are not unduly inconvenienced.
Ensure meter accuracy to maximize revenues.	Establish periodic meter testing that is the most cost-effective.

2.5.3 - Safety & Security

Safety Plan

Safety Plan Objectives

Veolia Water's experience in operating and maintaining large municipal water systems shows that a quality site-specific environmental, health, safety and security (EHS&S) program is critical to a project's success. An effective program reduces workers' compensation costs, as well as the frequency and severity of OSHA-recordable and lost-time injuries. Health and safety is the responsibility of everyone at Veolia Water, and the company will develop a comprehensive health and safety program for the Nashua project.

Keys to Veolia Water's Safety Program

- Meet all City and regulatory compliance requirements.
- Monitor all regulatory and contract obligations
- Training of staff in regulatory compliance requirements
- Develop a safety-focused culture
- Train and equip staff appropriately

Veolia Water will perform a comprehensive safety audit of the water works' facilities and operations. The results of this audit will be used to:

- Assess training needs
- Assess current and needed safety plans
- Assess needed capital improvements
- Assess needed operational controls

Safety Methodology

Veolia Water will assess the health and safety risks to project employees and will develop and implement a site-specific health and safety program to mitigate those risks. We will use established health and safety protocols to anticipate, identify, evaluate and control hazards to protect employees and build on the safety initiatives that the current Water Works safety personnel have developed. Veolia Water's primary goal is to provide a workplace free from health and safety hazards and to properly train all personnel in how to work in a safe workplace. All personnel will be trained in effective work procedures. For example, O&M staff will receive competent person training on safe trenching and shoring practices. Safe work procedures will be based on:

- The workers' knowledge of the work environment and their professional experience
- Veolia Water's management team, which is directly responsible for safety
- The site safety coordinator providing on-site safety, security and compliance leadership to the operational team
- Standards and requirements of applicable laws, including OSHA

A comprehensive review of existing health and safety procedures and controls will be conducted. Additionally, the City's water facilities will be served by a dedicated Site Safety Coordinator, and this person will be responsible for developing and implementing a site-specific safety program. This individual is supported by the facility Project Manager, the Business Center's EHS&S manager, as well as our corporate Director of EHS&S. An extensive and comprehensive corporate safety library is available to all facilities.

Challenges and Solutions of the Safety Management Plan

Challenges

Developing a safety-focused culture.

Solutions

Train staff and lead by example.
Implement Veolia Water’s “New Facility Startup” program.

Security Plan

Security Plan Objectives

Veolia Water is committed to ensuring the ongoing security of the City of Nashua’s water facilities. Veolia Water will use its experience in operating and managing large water utilities to ensure that the integrity of the water system is maintained at all times. Veolia Water will perform a comprehensive security analysis of the water works to:

- Determine the present state of facility security
- Review all current security plans
- Review and update the Vulnerability Assessment (discussed further in Subsection 2.5.7).
- Review and update the Emergency Response Plan (discussed further in Subsection 2.5.7).

Security Plan Methodology

Veolia Water’s approach to utility security is based on its experience in large water utility operation. All current plans and procedures will be evaluated for completeness and effectiveness. If necessary, Veolia Water will employ outside expertise to facilitate its review of the water works.

Veolia Water will serve as the liaison with the City and state emergency management staff and organizations and participate in reasonable periodic security drills and exercises.

Security Plan Challenges and Solutions

Challenges

Implement an effective Emergency Response Plan.

Implement required measures from the Vulnerability Assessment.

Solutions

Review current procedures, consult the City and state emergency management staff on desired components of the plan, update all procedures based on this due diligence.

Review and update the current plan, with outside expertise as required. Report to the City on all capital requirements for implementation. Implement those capital requirements as directed by the City. Adjust operational procedures as required.

2.5.4 - Performance and Contract Compliance

Veolia Water continually monitors the performance of all of the facilities it operates for regulatory and contractual compliance, as well as for cost control, optimization, safety and benchmarking. Using this information, efficiencies can be made and applied across all

facilities. To do this, Project Managers participate in networks to share the best solutions and corporate knowledge on the latest technologies and research through research and development activities.

Veolia Water understands how critical overall performance is for our customers. At each of our O&M sites, we currently implement management controls encompassing SOPs, project-specific software (e.g., OPS 32, and CMMS), and training programs to ensure our operations meet performance requirements, regulatory requirements, operate efficiently, and are proactive.

Objectives of Performance and Contract Compliance Plan

Veolia Water’s objectives for our Performance and Contract Compliance Plan include:

- Operate and maintain the system compliantly, efficiently and proactively to terms of the Agreement
- Conduct periodic audits and inspections
- Provide monthly, quarterly and annual reports as required to the City, state, and other regulatory agencies
- Participate in quarterly updates and an annual performance review with the City
- Outline the approach to various reporting requirements

Methodology for Implementation of the Performance and Contract Compliance Plan

As part of our due diligence process for this project, Veolia Water has reviewed and considered our obligations in developing our price and approach. These obligations will be incorporated into the various software systems that Veolia Water uses to track and monitor compliance. Veolia Water’s use and reporting functions under software systems like OPS 32, and CMMS are integrated. Further detail on this can be found throughout this Operations Plan.

Asset Protection Reports

Veolia Water’s asset protection reports identify yearly maintenance performed on each asset. Each equipment listing is filed in the equipment’s maintenance history record, which is organized to provide equipment maintenance information on a monthly, yearly and lifetime basis. The CMMS reporting system will automatically issue and report the progress of preventive maintenance service orders. Daily, a supervisory review of open work order status and summary reports to O&M management staff is carried out.

Records

Veolia Water will maintain the records of the water works as outlined in the RFP. Original records, both hard copy and electronic format, will be maintained by the City, with Veolia Water maintaining all appropriate copies. Electronic records will be backed up to the City’s data processing facilities daily.

Challenges and Solutions of Performance and Contract Compliance Plan

Challenges

Establish credible data in order to measure performance in the first year and all subsequent years.

Solutions

Verify systems and data in existence at contract commencement. Focus on the Performance Metrics proposed for the incentive fee.

Challenges	Solutions
Retention of key current staff and keeping them focused and maintaining a positive attitude.	Apply Veolia Water’s experience and expertise in applying and utilizing CMMS, and OPS 32 for data management and reporting. Veolia Water will provide a highly qualified and capable Project Manager, and provide an experienced and highly motivated transition team. Apply Veolia Water’s proven performance metric program.
Collecting data effectively, efficiently, analyzing, trending, reporting and take action.	Apply Veolia Water experience and expertise in applying and utilizing CMMS, OPS 32, and other regulatory and compliance tracking programs.

2.5.5 - Regulatory Compliance

Veolia Water will operate the Nashua Water Works so that at all times the facilities are in compliance with the EPA, the NHDES and other local, state and federal agencies as required.

Veolia Water has a proven track record of working with regulatory agencies at multiple facility locations in North America. We use experienced persons from other facility locations as well as corporate EHS&S expertise to periodically conduct on-site internal peer audits. Internal audits identify opportunities for corrective action implementation to ensure compliance with all applicable environmental and safety laws.

The Veolia Water management team at Nashua will develop and maintain positive relationships with those agencies having control over the water works.

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

Objectives of the Regulatory Compliance Plan

Veolia Water’s objectives for our Regulatory Compliance Plan are as follows:

- Develop and implement plant-specific PCMPs. These plans are used to 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.
- Develop action plans and recommend capital improvements in the Capital Plan to improve the existing water treatment facilities to meet existing and future EPA, NHDES and other regulatory regulations.
- Develop and maintain positive relationships will all applicable regulatory agencies.
- Implement regulatory update tools (e.g., www.cyberregs.com) to stay current about pending regulations that could impact operations.

Methodology for Implementing the Regulatory Compliance Plan

Veolia Water’s Regulatory Compliance Plan

Veolia Water’s plan to achieve the proposed objectives includes investing in computer systems software and developing written process control plans to ensure that the water works maintains compliance with all regulatory agencies at all times. Veolia Water will monitor all regulatory agencies for proposed and/or pending regulatory compliance rules and rules changes.

Veolia Water will analyze the facilities’ current ability to meet the following rule changes and will determine operational changes or recommendations for City capital needed to meet the standards. Upcoming rule changes include:

- Arsenic – 10 ppb (0.010 mg/L) by 1/23/06 (current standard – 50 ppb)
- D/DBP Rule – expected to be finalized in 2005
- Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) – expected to be finalized in 2005
- Radon Rule – expected to be finalized in 2005
- Groundwater Rule – expected to be finalized in 2005.

Benefits of the Regulatory Compliance Plan

The benefits of Veolia Water’s regulatory compliance plan include providing the highest quality water to the customers of the Nashua Water Works, meeting all state and federal (NHDES, EPA) regulations.

Veolia Water is prepared to commit to practicing continuous improvement to achieve optimum water quality and full regulatory compliance. Experience, resources and systems successfully employed in other Veolia Water locations will be used to consistently achieve and maintain regulatory compliance.

Challenges and Solutions of Regulatory Compliance Plan

Challenges

Water Quality issues may require capital improvements, operational process improvements, or additional source water protection measures.

Solutions

Establish baseline water quality benchmark profile, including source water monitoring to determine treatment alternatives to meet requirements. Determine what opportunities may exist to implement watershed management practices to improve and protect source water quality. Explore potential grant funding to leverage watershed management.

2.5.6 – Customer Service Plan

Veolia Water recognizes that the Customer Service function under the Base Proposal will include the management of a comprehensive meter reading, testing and replacement program, responding to water quality inquiries from customers in a timely and responsive manner, resolution of field service requests while maintaining accurate records, management of the backflow prevention program and providing information to customers

on tap fees. A description of Veolia Water's plan to meet the requirements of the RFP, and to effectively and responsibly deliver each of these services is explained in this subsection.

The City will provide all the administrative support required for handling customer inquiries, bill generation, payment processing and collection, and will also maintain the accounting systems to track these billing, payment and collection activities.

As indicated by the City of Nashua, there will be one telephone number for customers to contact Veolia Water to schedule field service activities and make water quality inquiries, and there will be a second telephone number for customers to contact the City for information on billing and payments.

Veolia Water recognizes the City's plan and approach under this Customer Service management model, and in our Alternative Proposal (Section Six), we provide a full-service ("One-Stop Shop") approach to Customer Service that has been shown to provide long-term value and enhanced services to water systems customers in other systems that are managed and operated by Veolia Water.

For instance, requiring customers to call multiple contact numbers for resolution of water-related issues tends to be confusing and frustrating to customers. (Many consumers don't clearly understand the difference between a billing or a field service issue.) In contrast, having a "One-Stop Shop" for all water-related inquiries (including water quality, meter reading, billing and payment processing) provides customers with faster resolution to inquiries and results in a higher customer satisfaction level. In our Alternative Proposal, Section Six, Veolia Water provides an explanation of the benefits and drawbacks of both approaches.

Customer Service Approach – Base Proposal

Comprehensive Meter Reading, Testing and Replacement Program

Timely, accurate and efficient water meter reading is a key to high quality customer service. In this model, Veolia Water will provide a comprehensive meter reading, testing and replacement program as directed by the City. We will replace meters consistent with NHPUC, AWWA and industry standards. Veolia Water will also test and analyze large commercial and industrial accounts consistent with City of Nashua's standards. For a full description of the Meter Reading, Testing and Replacement Program, see Subsection 2.5.2 the Field Operations Approach.

Respond to Water Quality Customer Inquiries

Veolia Water 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. Veolia Water will respond to customer inquiries on these and other water quality issues in a timely fashion with accurate, helpful answers. Customer inquiries and the



Customer service focuses on higher levels of customer service and cost avoidance. Our one-and-done philosophy enables customer service specialists to develop work orders to ensure timely resolution of customer issues.

type of inquiry made will be tracked on an on-going basis so that we and the City may track any trends or concerns.

When feasible, Veolia Water will work with the City to resolving any customer inquiries that could be alleviated by consumer education programs or further explanations on Veolia Water’s proposed customized Nashua water system Web site. It is proposed that this Web site will offer general information about water quality and treatment and an on-line copy of Nashua’s water quality report, when it is available. It is our experience that increased availability of information to consumers can increase their understanding of water quality issues, alleviate concerns and in turn, increase customer satisfaction.

**Veolia Water’s
Customer Service Objectives**

- Make the customer central to our business.
- Empower the staff to answer queries and rectify customer concerns efficiently.
- Exceed customer expectations.
- Respond to emergencies promptly and within a prescribed time limit.
- Achieve operational excellence.

Resolution of Field Service Requests

Under Veolia Water’s Customer Service management plan, all contacts resulting in work required to be carried out in the field will be scheduled by the contact center and, where appropriate, appointments made with the customer.

Backflow Inspection Program

Veolia Water will implement a cross-connection program in accordance with the requirements of the State of New Hampshire. Veolia Water’s Backflow Prevention Program is discussed in detail in subsection 2.5.2 of the Field Operations Plan.

Answer Inquiries on Tap Fees

As part of the Base Proposal, Veolia Water will manage customer inquiries concerning tap fees. Referencing documents provided by the City, Veolia Water will research tap fee prices on existing contracts and provide that information to customers. We will respond to these customer inquiries on a timely basis, and we will provide accurate information in a friendly manner. Records will be maintained of customer inquiries and Veolia Water’s response to customers.

Veolia Water’s Solid Expertise in Customer Service

Veolia Water has a solid record of providing customer service to water and sewer utility clients. This is demonstrated by the full menu of customer-service offerings Veolia Water currently provides on a contractual basis to communities and cities of various sizes. Although these services are not part of the Base Proposal, Veolia Water has extensive experience in bill generation and payment processing. Veolia Water generates billings, performs quality assurance, processes payments and answers customer inquiries for nearly 600,000 water and sewer accounts.

Challenges and Solutions for the Customer Service Approach

Challenges

Responding to customer inquiries in a timely fashion with accurate information.

Solutions

During the transition, a Policies and Procedures Manual will be developed documenting Nashua-specific rules. Employees will receive detailed

Challenges	Solutions
Making water quality information easily accessible to customers.	training on Nashua policies and procedures, and they will be cross trained to ensure that we have a knowledgeable, helpful work force. Veolia Water will develop a Nashua-specific Web site with water quality and treatment information, making it easy for customers to access water quality data. When completed, a copy of the annual water quality brochure will be available on-line.
Providing new customers with accurate tap fees in a timely fashion to expedite their service connections, thereby maximizing City water revenue.	As possible, databases with tap fee data will be developed to make it easier for Veolia Water personnel to provide accurate tap fee information. Records of inquiries and responses will be tracked. Response rate and accuracy will be monitored by management to assure timely response rates are maintained.
Resolving emergency distribution and customer service problems .	Response times to emergency requests and resolutions will be tracked. Response time will be monitored to ensure that system emergencies such as water main breaks are minimized to limit damage and disruption to surrounding residents and property.

2.5.7 - Vulnerability Assessment and Emergency Response

Vulnerability Assessment

Terrorist activities in the United States have created a sense of urgency and a need among water utilities to secure their water supplies. Veolia Water has become an industry leader in performing vulnerability studies and implementing security improvements. Veolia Water will review and update the current Vulnerability Assessment for the water works within 180 days of the Service Commencement Date.

Objectives of the Vulnerability Assessment Process

Veolia Water will improve the security of the City’s assets and water supply by:

- Identifying areas of the Nashua Water Works that are vulnerable to threats of physical disruption of service or contamination.
- Recommending measures to improve the security of the City’s water supply.

Methodology for Implementing the Vulnerability Assessment Process

Veolia Water will review the security and vulnerability plan for the water works prior to commencement, assuming reasonable access, using guidelines developed by the AWWA and the EPA for potable water systems. Security will be provided using an optimum balance between employees and technologies to address vulnerabilities and threats. The key objectives of this process will be to:

- Visit and inspect the facilities and subsystems associated with clean water production, looking for areas of increased risk.

- Visit and inspect facility perimeter fencing and other safety and security measures to ensure facility security is maintained.
- Develop recommendations for each facility and subsystem to address the identified security risks.
- Provide a cost analysis to implement the increased water security measures.
- Incorporate the implementation of increased water security measures into the City's Capital Plan.

Challenges and Solutions of the Vulnerability Assessment Process

Challenges	Solutions
Keep the water system secure.	Identify areas of vulnerability and actions to address the high priority vulnerabilities.
Early detection of a security issue.	Evaluate water quality monitoring and system surveillance and implement needed improvements.
Utilize customers and businesses to assist in providing oversight security.	Educate customers and businesses about the importance of keeping a watchful eye on water supply facilities including raw water reservoirs.

Emergency Response Plan

Objectives of the Emergency Response Plan

Veolia Water is acutely aware that the water works provides a vital service to Nashua’s water utility customers. These facilities are critical to the well-being of the entire community. As such, Veolia Water will strive to ensure the facilities and staff are prepared to respond quickly and effectively to any emergency situation that may arise. Within 15 days of the Service Commencement Date, Veolia Water will provide a preliminary review of and employee training on the Emergency Response Plan for the Nashua Water Works.

Within 180 days of the Service Commencement Date, Veolia Water will completely review and update the facilities’ existing Emergency Response Plan (ERP) and develop new methodology as needed to meet the needs of the water works, with the following goals:

- Address potential emergencies
- Protect public health and safety
- Protect the physical assets
- Aid other agencies if called upon.

Methodology in Developing the Emergency Response Plan

Veolia Water has the in-house technical expertise to develop a comprehensive, practical ERP. We intend to update and review the existing plan and work with the City to address any shortcomings, particularly in light of increased security needs. The teamwork among these personnel will ensure the Nashua water supply system has an ERP that is technically sound, consistent with NHDES regulations and is practical to implement.

A critical concern is the security against unauthorized entry or sabotage of facilities. Veolia Water will work with the City to identify and reinforce critical areas of concern.

Veolia Water works with the communities that it serves as well as with neighboring areas to make sure they are knowledgeable about its capabilities and what emergency services it can offer. We believe it is critical to work with emergency services providers in our communities, including recommending improvements and integration over time.

Overview of the Emergency Response Plan

Emergency Response Plans, including contingency and disaster recovery plans, are required to address many different scenarios, including the loss of critical assets due to flooding, fire or severe weather or other events.

Contingency and disaster plans are part of the overall crisis response and will assist the plant staff to respond logically and without panic to ensure:

- Safeguards for the community
- Employee safety
- Minimization of potential damage to property
- Quick, informed and responsive decision making
- Environmental stewardship

Key Elements of an Emergency Response Plan

The following lists the key elements in a comprehensive contingency and disaster recovery plan:

- **Communication Plan** – Developed in consultation with the City. As owner of the facilities, the City must have a key role to play in sharing information with the public. The communication plan will identify a spokesperson for the media and public and under what circumstances to respond. Different emergencies require different communication efforts.
- **Crisis Notification Procedures** –Addresses the chain of communication to manage the situation.
- **Post-emergency Checklist** – Ensures appropriate parties have been advised, situation understood, events recorded, review success of response.
- **Annual Review** - Annual review/update of procedures and contact information.
- **Ongoing Training** - Annual and new employee training.
- **Emergency Response Plans** –Guide the staff through each action to be taken for the specific situation.

Challenges and Solutions of the Emergency Response Plan

Challenges	Solutions
Integration with ERPs of Nashua and other serviced communities	Regular meetings with emergency planning officials of other agencies. Participation in emergency planning exercises.
Meet the requirements of the NHDES.	Follow the requirements of Env-Ws 360.14 <u>Emergency Plans for Community Water Systems.</u>

3 - Engineering Services

3.1 - Operational Engineering

Under the Base Proposal approach, Veolia Water will provide operational engineering services required for the normal course of operating and maintaining the water utility assets. Other engineering services required for the City capital projects or system growth (for example; updating GIS, updating hydraulic model, plan review of developer projects, preparation of as-builts, etc.) are covered under Supplemental Engineering Services later in this section.

Examples of the specific services to be provided for Operational Engineering are as follows:

- Preparing engineering analyses and studies required for the normal course of operations and maintenance of the water utility.
- Evaluation of specific capacity of well supplies.
- Analysis of water treatment processes to assure process optimization and finished water quality. Our proposal includes a “Production Engineer.”
- Operating recommendations to meet peak system demands.
- Process mapping.
- Evaluation of operating efficiencies including pumping efficiencies.
- Reviewing instrumentation and control system problems.
- Using the hydraulic model to evaluate specific and localized distribution system flow and pressure problems
- Helping evaluate system O&M problems.

As a part of our proposed Alternative Proposal, discussed in detail in Section Six, Veolia Water is proposing to provide enhanced capital services using both in house expertise and the resources of our engineering partner Dufrense-Henry, a local engineering company that is experienced in working with Nashua. The background and experience of this firm is discussed in detail in Section Five of this Proposal volume.

3.2 - Supplemental Engineering Services

In the RFP, the City of Nashua requested proposals for Engineering Services as supplemental services. Outlined below is a narrative on the services that can be supplied to the City as supplemental services. Specific costs for these services are included in Volume III, Appendix F.

Review of New Construction in the City

Veolia Water will meet with developers and other City customers who request main extensions or new service installations. We will review plans, establish appropriate sizing of facilities (may require additional services, as discussed below) and provide standards and specifications.

Inspect New Construction

We will provide on-site inspection of new installations to ensure compliance with City standards and specifications. Veolia Water will observe pressure testing, verify that the as-

built drawing provided by the customer is correct, and input the as-built record into the City system. For developer projects, we will make inspections during critical times to verify compliance with standard specifications, observe pressure testing, verify that the as-built drawing provided by the customer is correct, and observe disinfection of new facilities and appropriate follow-up bacteriological sampling before activation of lines.

Create As-built Records

Veolia Water will create an as-built record of new installations on an Auto Cad file. Copies of all such files will be provided to the City. For individual services, the customer will be responsible for supplying the as-built Auto Cad file and Veolia Water will only enter the file into the City system. 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 City system.

GIS Mapping

Veolia Water assumes that the City will provide, as part of the Asset Purchase, a reasonably accurate GIS map of the water system, however, there may be a need to provide updates on mains, hydrants and gate valve records. Veolia Water will provide updates to the City's distribution mapping and provide field location or verification of water mains and appurtenances as required.

Assess "Unaccounted Water"

At least once each year, we will summarize and compare water production records with total system consumption as measured through customer meters. Leak detection has been included in the Fixed Price Component.

Hydraulic Modeling and Analysis

Veolia Water assumes that the City will provide, as part of the Asset Purchase, a working, calibrated hydraulic model containing detailed computer files on the primary pipes, nodes, booster pumps, etc., and storage of the distribution system. We will become familiar with the hydraulic model and distribution system and be prepared to run specific queries for system improvements, fire flow determination or analysis of developer projects for a lump sum price. Veolia Water will provide system analysis to identify hydraulic bottlenecks and low pressure areas and develop recommendations for additions and improvements. We will also assess the impact of future growth on the system before the commencement of Developer projects.

Fire Flow Testing

Veolia Water will provide a field technician(s) to perform fire hydrant flow testing. These tests include operating the hydrant, flow meter and pressure gauge during the hydrant test; taking and recording readings; and providing a summary report to the City and the customer requesting the test.

Capital Planning for Water System Improvements

Veolia Water will meet with the City to review priorities and set goals for the overall Water System Capital program. In our role as service provider to the City, we will not only prepare the appropriate draft plans for City's review, but more importantly, Veolia Water will bring to

the project creativity and innovation in the assessment of situations; address cost and water quality needs; conceptualize alternatives; and develop recommendations that integrate with overall water quality and service goals. 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. Veolia Water has included \$50,000 per year in our fixed fee component to work with the City to annually develop a five-year Capital Improvements Plan (CIP).

Other Engineering Services

Veolia Water will supply other engineering services for capital planning; capital execution; detailed engineering studies; and GIS projects, based on hourly rates for various classifications or will negotiate lump-sum priced proposals on specific scopes of work as requested

4 - Technical/Management Innovations and Performance Guarantees

Veolia Water has identified a number of technical and management innovations to improve the standards of performance that the City will receive in terms of water quality, reliability, and customer service. These innovations, which have been consolidated from our national and international experience, will give us the ability and confidence to offer the firm performance guarantees which are discussed in Volume Two, our Cost/Price Proposal. These O&M innovations are discussed in the paragraphs that follow.

4.1 - Technical and Management Innovations

Comprehensive Watershed Evaluation/Study

The Nashua Water Works has a combination of surface and groundwater supplies that must be optimized to satisfy the peak water demands and ensure customers high-quality water. To meet these requirements, Veolia Water will perform the following:

- Monitor the raw quality of the water supplies
- Monitor the specific capacity of the well supplies
- Provide a comprehensive watershed management plan
- Perform pilot studies to evaluate the impact of various raw water supplies on the finished water quality
- Provide Capital Planning for water system improvements

Minimizing City Capital Investment and Improving Reliability

Our asset management program will increase the reliability of critical plant and equipment to provide uninterrupted quality water service for the customers by performing the following:

- Apply the results of the condition study
- Perform preventive and predictive maintenance
- Utilize advanced technologies including infrared, oil analysis and vibration
- Utilize software programs including CMMS, OPS 32 and SCADA

Scheduling and Routing of Field Activities and Crews

Customers are often inconvenienced by having to stay home waiting for the water utility service person. Often times a utility will indicate the service person will be there in the morning or afternoon. Axiom's Mobility scheduling solution will be an asset acquired by the City as part of the PWW acquisition. This is a powerful scheduling algorithm for the dynamic scheduling, real-time crew optimization by dispatchers, street-level routing of service personnel and second-to-none emergency response capability for customers. This will enable our customer service representatives to schedule real-time appointments for the customers. This is a huge benefit to the customer and improves the efficiency and productivity in the field.

CMMS

Veolia Water's computerized Asset Management and maintenance approaches and software have been discussed at length throughout this section. Our enterprise asset management software supports the complete lifecycle management of an asset. The CMMS system monitors environmental conditions, equipment application, sludge disposition and chemical dosing, among its many capabilities. It also tracks inventory, condition assessment and monitoring data, defined service levels, defined performance limits and tolerances, functional failure definitions for all serviceable assets, and supports condition-based maintenance.

Energy Savings

Veolia Water will evaluate the Nashua Water Works to identify potential energy savings either through operational efficiencies or through capital expenditures. Our sister company, Dalkia North America, is part of a world leader in energy management solutions. Dalkia North America will help evaluate the water works and provide assistance to Veolia Water in our overall energy analysis and improvement of the system. Specific actions to reduce electrical energy costs will be as follows:

- Utilize the hydraulic model to identify more efficient water distribution
- Operate at optimum pump efficiencies
- Operate to reduce demand charges
- Evaluate off peak pumping
- Identify and implement changes to reduce commodity charges
- Evaluate the use of variable frequency drives

Process Control Management Plans

As has been discussed, Veolia Water will implement comprehensive PCMPs at all facilities. PCMPs are utilized by plant management staff to ensure all plant operational processes are in line with predetermined parameters and quality control standards. PCMPs provide managers with the information they need to make informed decisions about plant operations. An integral part of the PCMPs is the utilization of computerized process control software. Veolia Water uses OPS 32 as its process control software. OPS 32 will take data from the SCADA system as well as the laboratory to provide a daily report on plant performance and operations. Outputs culminate in various reports as needed for the

internal project management and regular reporting to the NHDES, EPA and the City. The plant staff and the production manager will also have direct access to these, providing redundancy in reviewing operational data and plant performance.

4.2 - Performance Metrics

One of the key elements of our Proposal to the City of Nashua is our commitment to establish a performance-based approach to this project, one in which Veolia Water's receipt of a set amount of the Services Fee will be based on our achievement of clearly defined sets of metrics in the key areas of project and service performance. In this section, we discuss methods for implementing this approach under the proposed contract with the City of Nashua, and in Volume Two, our Price Proposal, we discuss the specific performance metrics proposed.

In this discussion, Veolia Water outlines our proposed Annual Performance Metric Program, an important feature of both the Base and Alternative Proposals. This section provides explanatory information so that performance metrics may easily be understood. Performance metrics are an important tool to focus the City of Nashua, stakeholders and regulators, Veolia Water and its soon-to-be-employees on the most important key drivers of the business. Performance metrics provide financial reward for improved performance. They provide Nashua and the community a vital tool to objectively judge Veolia Water's performance. Public openness about performance appears to be a particularly important issue to Nashua stakeholders.

The metrics presented in this section are specific to Veolia Water's Base Proposal, which offers customer services related to utility operations, such as field service requests, tap fee pricing and oversight of the backflow program.

As an introduction to performance incentives, here is an example of an incentive currently in use at Veolia Water's Indianapolis Project. Customer requests for water service turn on or water service turn off are responded to within 24-hours. This metric has been met by Veolia Water each year of our contract.

Like many other successful organizations, Veolia Water requires its managers to set performance goals, and they are subsequently rewarded for accomplishing those goals. Veolia Water has applied this same concept of setting goals and rewarding performance to its O&M and customer service contracts with municipal utilities with much success.

Use of this methodology enabled Veolia Water to significantly improve performance during a three-year period at our Indianapolis project, resulting in improved customer service, water quality, maintenance and compliance. A thorough discussion of this is included in Appendix D, Part 3, in the 2004 Indianapolis project Annual Report.

Veolia Water is "the contractor" with significant experience in managing to performance metrics. Competitors typically have contracts that penalize them for bad performance, but Veolia Water's performance metric methodology rewards significant and objective performance improvements. There is a big difference in these two approaches and the outcomes. Veolia Water's experience shows that rewarding performance improvements results in higher customer, and therefore client, satisfaction and a higher level of overall performance, compared to the penalty-fee methodology most of its competitors use.

Benefits of Performance Metrics to Nashua

Some of the key benefits of this type of approach include:

- Performance metrics establish an objective methodology for Nashua and its citizens to evaluate Veolia Water's true performance, especially in the areas of water quality, environmental compliance and responsiveness to customers.
- There are other firms qualified to run water treatment and distribution system operations, but few are willing to place themselves under open scrutiny and to hold themselves to high performance improvement goals. We welcome communication about our performance with the citizens of Nashua. Veolia Water typically posts this performance data on its Web-site for public review.
- Based on our past experience, use of performance metrics in Veolia Water's contract with the City of Nashua will result in improved customer satisfaction and increased overall performance, and this marked improvement will be demonstrated to the citizens of Nashua.

Objectives of the Performance Metrics Program

Veolia Water will provide Nashua with a set of quantifiable measures against which:

- Over the term of the contract, serve to reward Veolia Water for providing an ever-increasing standard of performance to Nashua.
- Stakeholders have an objective method to measure and evaluate performance.

Methodology for Implementing a Performance Metric Approach

The performance metrics, year-to-year improvement goals, incentive dollar values, and the methodology for measurement will be mutually agreed upon prior to the contract onset. The performance metrics will be challenging and provide our firm with stretch goals to improve performance and maintain accountability to the City of Nashua.

Under this approach, Veolia Water will:

- Thoroughly document incentive performance. On an annual basis, performance will be evaluated by the City of Nashua.
- Upon completion of the City's evaluation at year end, we will be awarded an incentive fee from the City of Nashua for each performance metric earned.

Performance Metrics

The performance metrics that we recommend for the Base Proposal are presented for five key areas, including:

- Emergency Response
- Turn Ons/Shut Offs
- Employee Safety
- Meter Misreads
- Fire Hydrant Repairs/Replacements

Future Improvements Beyond Five Years

Veolia Water recognizes that the performance metrics cannot be static over the term of the management Agreement. We want to continuously improve in all areas. We prefer to be measured and compensated for our performance in areas that are of importance to our key constituents—the City of Nashua, our customers, regulators, legislators, developers, suppliers and team members. We believe that the measures of success should be developed on a forward-looking basis. Our performance measures will drive excellence in O&M activities in the early years of our relationship, as measured by the areas outlined in the performance metrics discussed in Volume Two.

5 – Benefits to the City

Veolia Water has proposed an “Operations Plan” that will provide customers with quality water service at a competitive price. The water system assets will be incorporated into a comprehensive Asset Management program.

Specific benefits to the City include:

- **Watershed Management and Water Quality Protection** – As discussed throughout this Proposal, Veolia Water will develop comprehensive plans and provide for strict operational controls to ensure water quality is maintained.
- **Comprehensive Asset Management Program** – Veolia Water’s Asset Management program is based on minimizing life cycle costs
- **Operations & Maintenance Savings** – Veolia Water will provide savings and stable pricing for the term of the contract.
- **Capital Savings** – Veolia Water will properly maintain assets to optimize capital replacement requirements.
- **Increased Reliability** – Our maintenance approach will increase reliability of all critical equipment and all critical processes.

Selection of Veolia Water as the contract provider for the O&M of the Nashua Water Works system will bring to bear Veolia Water’s expertise and solid performance record to the benefit of the Nashua community.

Section Two



SECTION TWO

Community Involvement

VEOLIA WATER'S COMMITMENT TO THE CITY OF NASHUA



Veolia Water North America – Northeast, LLC (Veolia Water) understands that our responsibility to Nashua goes beyond providing a safe and cost-effective water supply. Our commitment also includes being a vital and contributing member of the Nashua community.

Commitment to the community and to being a good corporate citizen is a core value of Veolia Water and a part of our passion and the commitment that we bring to the more than 600 communities we serve throughout the U.S.

Veolia Water will build a strong and effective community relations program, modeled after those that our firm has proven in application in similar “world class” water and wastewater operations.

The Core Elements of Our Plan

Veolia Water is committed to making a real difference in the communities that we serve by lending a “helping hand” wherever it is needed in order to improve the quality of life for the citizens that depend on the water and wastewater services that we provide. Our firm and our employees take leadership roles in many community outreach programs throughout the country, seeking out the best ways to make a difference in each community.

To facilitate this approach, Veolia Water is committed to providing significant community involvement in Nashua. This commitment will include the following:

- Partnerships for Education - Veolia Water will provide educational and informational programs, designed to build awareness of the role that the water system plays in the vitality and growth of the community. The Water Box is one of the key public educational tools that Veolia Water makes available to many of the communities that we serve. The Water Box, a proprietary 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



Water Box in use at a primary school in Tampa Bay, FL.

standards for science so that the program is an accepted, effective tool for teaching science.

- **Water Career Opportunities Workshop** - Veolia Water is looking forward to working with area colleges and local high schools to offer them an exciting workshop to inform students and others in the community about the great and growing opportunities in the water services industry. The biggest problem facing all water providers, public and private, is the lack of trained professionals that are pursuing job opportunities in our industry.
- **Water Education Partnerships** - Veolia Water also proposes to work with area colleges, and local high schools to develop a water science curriculum that will provide a stimulus to attract new employees to water industry job opportunities. Certified water and wastewater operators are a diminishing commodity in New England. The need for chemists and biologists to deal with issues like the Pennichuck Brook Watershed and utilization of water from the Merrimack River is critical to the quality of life in Nashua, now and for future generations.
- **Community Groups** - We are committed to establishing strong relationships with various community groups in Nashua. Veolia Water has already begun meeting with various community, civic, environmental and business groups to determine potential involvement and activities. The employees of our company are committed to serving the communities in which they live and work.
- **Greater Nashua Chamber of Commerce** – Veolia Water is already a member of the Chamber, and organization that provides important services and employs many local citizens, all of whom are all water users. We recognize the importance of understanding the needs of the business community and networking with their members as we become a part of the Nashua community. Veolia Water envisions the Chamber as one avenue for our firm to demonstrate our commitment to the community as a service provider and good corporate citizen. We will utilize this opportunity to provide education and understanding of our relationship with the City to the private sector and at the same time gain knowledge of the business community's concerns with water quality and costs. Veolia Water is also an active member of many Chambers across the country.
- **Citizens Advisory Group (CAG)** – Veolia Water proposes to form a new advisory committee. This seven-to-nine member group will consist of technical members, abutters, representatives of stakeholders from other communities, environmental organizations, and educational institutions. The Board of Aldermen will direct all efforts and assist in the formation of this advisory group. CAG will provide monitoring and input into a comprehensive watershed operation and maintenance and asset management program that Veolia Water will recommend to the City. Veolia Water has included \$200,000 for a comprehensive watershed evaluation in the first two years to identify and prioritize problems and develop actions to protect the watershed. This comprehensive evaluation will include extensive water quality sampling and testing. The results of the watershed evaluation will be shared with the existing environmental organizations to address the most serious problems. The plan will be two-fold, including:

- 1) Develop a plan to protect that part of the watershed that has not been developed and will become the property of Nashua. The plan will include security measures as well as supporting the creation of Buffer Zoning Ordinances in all communities in which the Pennichuck Brook exists. Veolia Water takes security very seriously and unrepaired fences and open areas near the ponds would not be tolerated.
- 2) Evaluate the areas where the buffer zone has been used for development and develop corrective measures to eliminate negative impacts on the raw water quality.

Veolia Water has been successful in identifying various revenue sources, including federal and foundation funds, that we feel can supplement our financial commitment in developing a comprehensive strategy to deal with the improvement raw water quality.

Additionally, as Veolia Water's presence in Nashua grows, so will our ability to participate in the civic life of the City. As we move forward into a contract with the City of Nashua, our focus will be to meet the complex needs of a changing and growing city, county and region. In addition to providing superior water services, our mission is to serve as a responsible corporate citizen.

Veolia Water's Track Record in Community Involvement

Contribution and Community Program Sponsorships

Some of the ways in which Veolia Water has delivered on the community involvement objectives and commitments discussed above for the other communities that we serve across the U.S., include:



- **City of Indianapolis, Indiana - Indianapolis Children's Museum** – Veolia Water partnered with the Indianapolis Children's Museum on a multi-year, multi-dimensional commitment to support the museum's efforts in the areas of neighborhood outreach and revitalization and water features in the museum's permanent exhibits. The partnership enhanced the City's cultural tourism initiative by providing trees, better lighting, and steps toward transforming the museum's neighborhood into a world-class child and family district, with the museum serving as a beacon attracting visitors from around the world. In addition, Veolia Water supported the Children's Museum's outstanding water exhibits – in need of regular refurbishment – which no other facility in Indianapolis could possibly create as well or make available to as many as has the Children's Museum. The museum's focus on education, arts and the environment made the partnership with Veolia Water a natural fit.
- **Dayton, Ohio** - In a project that began in 1985, Veolia Water operates and manages the 11.2-MGD North Regional Wastewater Treatment Plant for the Tri-Cities North Regional Wastewater Authority, a joint venture of three communities in central Ohio (Huber Heights, Vandalia and Tipp City). As a part of our commitment to these communities, Veolia Water sponsors the Annual Great Miami River Clean Up. This is a community event that involves the cleanup of debris and trash from this river, to which the

wastewater plant discharges. The program has been active for more than 15 years, and over this time, the cleanup volunteers have removed more than 124 tons of debris from the river. (The Veolia Water brochure for this program is presented in Appendix D [Part 4], Volume III.)

Other examples of community involvement programs that we participate in at our projects include:

- Scholarships to local high school students interested in pursuing environmentally related college programs.
- Assistance to local sports teams through sponsorships and facility improvements.
- Sponsorship of community cleanup days.
- Sponsorship of the local and national and Special Olympics World Games

Additional examples of this include:

- Leominster, Massachusetts
 - The Johnny Apple seed Annual Parade – Corporate Sponsorship
 - The “Adopt and Island” Program - Corporate Sponsorship
- New Bedford, Massachusetts – Concert Sponsorship of Community Events -
- Lynn, Massachusetts - Computer donations for local schools
- Lowell, Massachusetts – Corporate support for the Convention Bureau
- Fall River, Massachusetts – Corporate sponsorship for the 250th Anniversary celebration

Other activities have included holding open houses at facilities, participating in community events, and also by providing educational programs and learning tools.

Additionally, our O&M project staff has participated in the river and shoreline cleanup, and we lend project personnel to assist the cities with plowing during snow events or cleanup following severe rain and wind storms.

Keeping our Clients and the Community Informed

Veolia Water recognizes that regular reporting to our clients and those served by the water and wastewater systems we operate is an important element for overall project success and acceptance.

One of the ways that Veolia Water keeps the lines of communication open is through the use of “Project Scorecards.” These are easily understood project reports that summarize the accomplishments of our project teams and highlight our work efforts, as well as the benefits



River cleanup on the Great Miami River, OH

Having **fun** supporting you **again** in Leominster.



Veolia Water, formerly known as USFilter, operating services, proudly sponsors the Shriners' Aqueduct Festival again. As your water and wastewater services provider for the last 20 years, we are proud to call Leominster home and to serve this great community. Love, respect and care are our beliefs at the festival.



that contracting with Veolia Water has brought to our clients. These scorecards are developed in tandem with our clients and are a part of the project review and reporting process.

Under this proposed contract with the City of Nashua, Veolia Water will each year provide the City with a performance scorecard that is specific to your project. This scorecard will provide an overview of our accomplishments to date, including a review of our incentives performance, highlight our achievements in the community, savings to the City, and a summary of your water quality. We provide this as a service to the community so citizens can feel confident about their water services.

In the Appendix volume, Appendix D (Part 3), we present several examples of scorecards that have been developed for some of the more than 600 communities that we serve. Some of the key items that you will note as you review these include:

- **Indianapolis, Indiana**
 - Veolia Water has been able to freeze water rate for five years as part of our comprehensive, 20-year agreement with the City.
 - We have reduced the number of taste and odor complaints from 501 in 2001 to 26 in 2004.
 - Veolia Water has undertaken capital project management as part of our contract and service to improve infrastructure, ensure fewer main breaks and provide for more efficient water production.
 - We have implemented customer service improvements, such as pay-by-phone, on-line bill pay, an interactive voice response system and more readable bills, to provide the water system customers with more and better access to their account information in a timely manner.
- **Jupiter Island, Florida**
 - We have had zero lost-time accidents or incidents in the past six years.
 - Veolia Water has provided close to 2,000 man hours of technical support to ensure successful operations of the facilities.
 - We provided emergency relief to Jupiter Island during Hurricane Frances by bringing in personnel and emergency generators from our regional sites to support the project.
- **New Bedford, Massachusetts**
 - Veolia Water assisted the City with the construction of new secondary treatment facility.
 - We have maintained near-perfect compliance at 99 percent.
 - Veolia Water has saved the city over \$23 million as a result of being their service contract provider since 1990.
 - We are active in the community by supporting numerous programs and associations.
- **Vancouver, Washington**
 - The Westside facility has had no major NPDES violations since 1978, and since 1995 the Marine Park facility has never exceeded its NPDES permit.
 - Veolia Water has helped the City to keep utility bills at cost-effective levels.
 - We have implemented asset management with an emphasis on life cycle costs along with sophisticated technologies to save the city money.

- Veolia Water is involved in over 28 different community activities. The honorable Mayor Royce Pollard summed our efforts by saying, “Veolia Water-Vancouver serves as an example of community involvement.”

As you will find in these project reports, Veolia Water has a project reporting approach that is simple and accessible to both the layperson and the governmental officials who are interested in understanding the benefits that an O&M services approach brings to their community.

These scorecards also clearly document performance standards by which the success of Veolia Water’s efforts can be measured.

Protecting the Water System’s Current Employees

Veolia Water is committed to providing the users of the Nashua water system with the greatest quality water with stability in rates and a plan for the future. In order to achieve this goal, we need the dedicated employees that have operated your plant and maintained the lines and meters for years. They are your neighbors, they attend your churches, their children attend local schools, and they constantly contribute to the quality of life in Nashua because of their knowledge and experience in the water system. To that extent, Veolia Water is committed to provide preference to these employees for jobs created through our operations contract with the City. Our most valuable assets are our employees, and Veolia Water commits to provide your transitioning staff with marketable wages and benefits that will encourage them to join our team for a successful contractual relationship with the City.

We will be offering job opportunities to existing employees in Nashua, at both the water plant and the service system. Veolia Water is sensitive to the roles that these employees have in Nashua, and we will not transfer employees to other sites.

Citizen’s Information Network

As a part of our community relations approach for the City of Nashua, Veolia Water will develop a network of information generating opportunities for both private citizens and public officials. Open and honest communication is the key to a good relationship as a service provider. We recognize the importance of information availability to the city and its citizens. As part of that network our first step will be to establish a dedicated water Web site.

Equal Employment Opportunity Plan

In that we will be working with the City to obtain State Revolving Loan Funds and other state and federal loans and grants, it will be required to maintain an equal opportunity plan. One of the core elements of a successful business operation is to provide employment opportunities on a fair and equitable basis and to build a workforce that reflects the community we serve. Veolia Water is commitment to being an equal opportunity employer. This specifically includes the EEO Contract Compliance Clause and the reporting and requirements that are a part of that policy.

To ensure full implementation of our equal employment policy as it related to the City of Nashua’s contract, Veolia Water will take steps to make certain that:

- Persons are recruited, hired, assigned and promoted without regard to race, religion, color, national origin, citizenship, sex, veteran's status, age or disability.
- All other personnel actions, such as compensation, benefits, transfers, layoffs and recall from layoffs, access to training education, tuition assistance and social recreation programs are administered without regard to race, religion, color, veteran's status, national origin, citizenship, sex, age or disability.
- Employees and applicants will not be subjected to harassment, intimidation, threats, coercion or discrimination because they have: (1) filed a complaint; (2) assisted or participated in an investigation, compliance review hearing or any other activity related to the administration of any federal, state or local law requiring equal employment opportunity; (3) opposed any act or practice made unlawful by any federal, state, or local law requiring equal opportunity; or (4) exercised any other right protected by federal, state or local law requiring equal opportunity.

The City of Nashua can be assured that Veolia Water will be a strong corporate citizen demonstrating a commitment similar to that which our firm has consistently demonstrated for communities throughout the country.

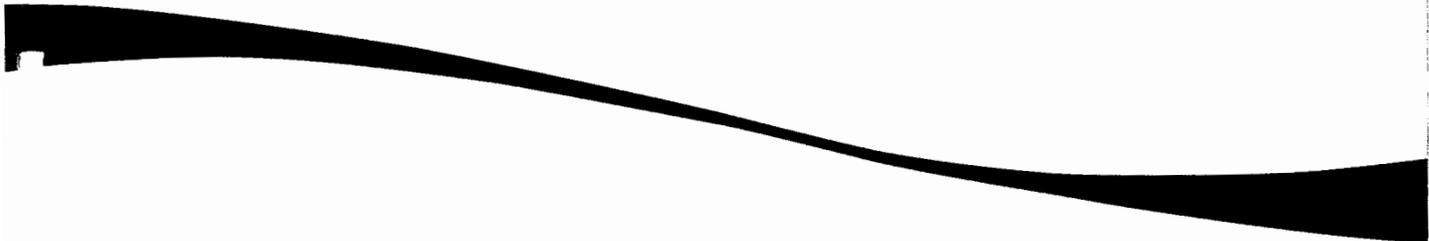
These policies and procedures are part of the commitment that we make in our corporate Affirmative Action/Equal Opportunity Employment Plan, and a copy of that plan is included in Appendix E (Part 2) to meet your stated RFP requirement to submit an EEO plan.

Conclusion

Veolia Water understands the relationship of becoming a good service provider for a community and knows well that Nashua needs and wants to control this great asset for future generations. Mistakes of the past will be eliminated when local government through the City or the regional water authority has ultimate control of the water system including the management of its critical buffer zones. Veolia Water is pursuing this contract to be your water service operator. This is our business. In our some 180 contracts across the country, we are the service provider to local government or our private client and Veolia Water works exclusively for them. The client is the boss and they have total control over their assets. This relationship has been used by hundreds of municipal entities in the U.S. with great success.

As this section clearly points out, Nashua will not lose the commitment of corporate support for community activities with this concept, in fact, it will increase. Our support of local educational institutions and environmental organizations will far exceed what has been done in the past.

Section Three



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

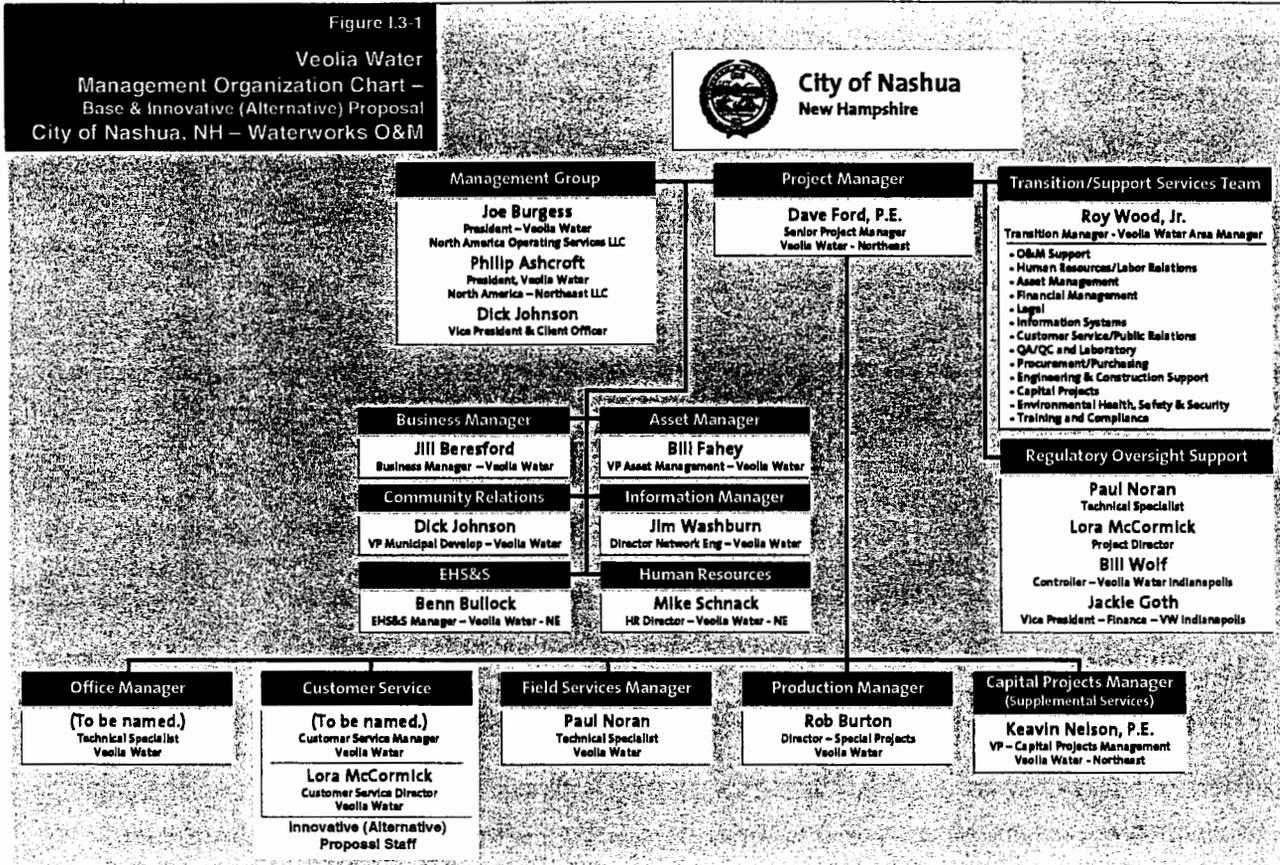
We are confident that the Water Works currently employs a complement of capable local people that will become valuable and committed Veolia Water team members. We expect that most management positions will be filled with existing Water Works staff. However, we do not expect to have available positions 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

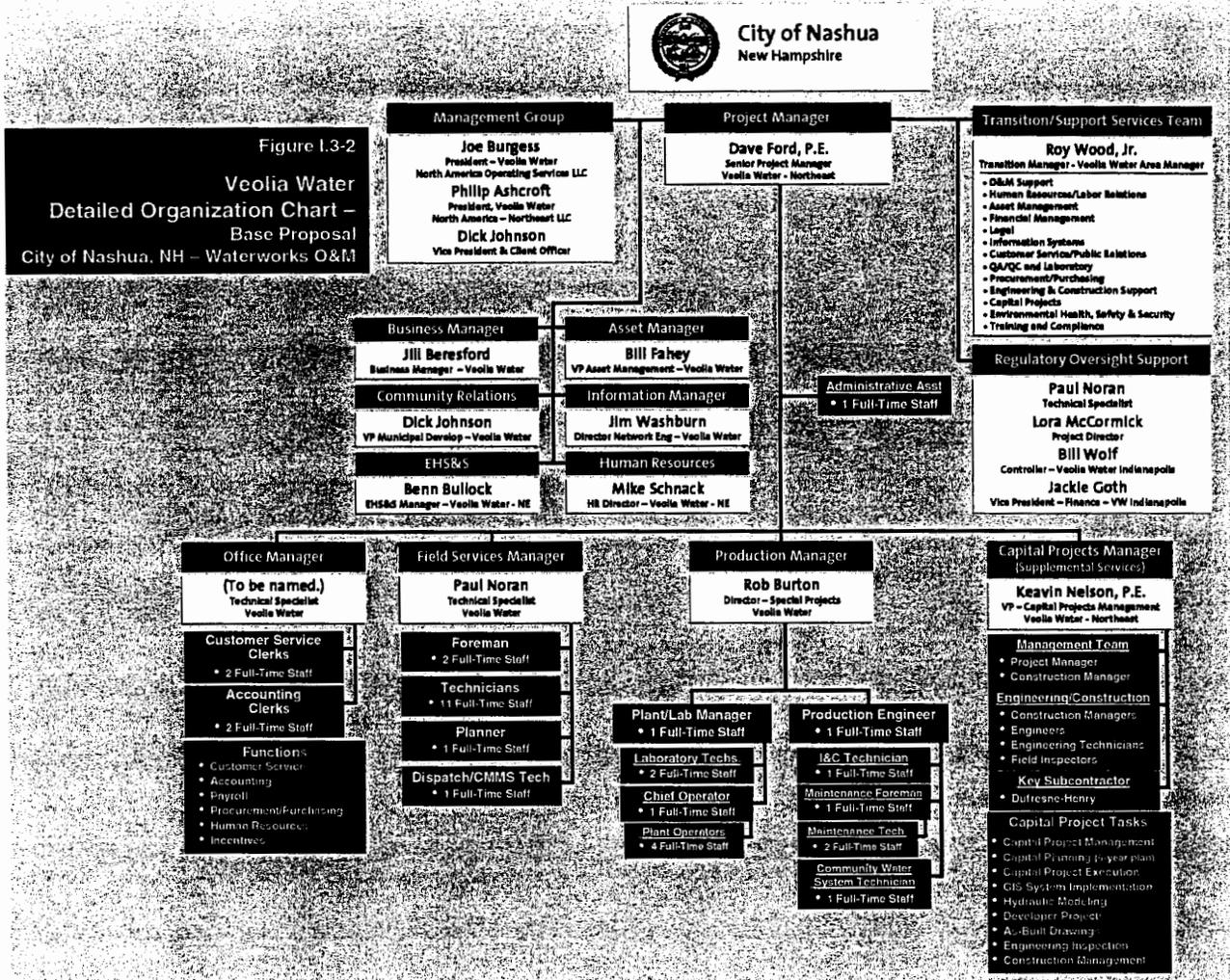
The Veolia Water O&M Project Manager will lead a team that, as discussed above, will be formed from existing O&M staff that transition to our team, combined with local hires and transfers from other Veolia Water projects in New England.

This O&M team, as shown on our detailed organization chart (Figure 1.3-2, 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



Section Four

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 Frltsch
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.

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.

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**

- 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

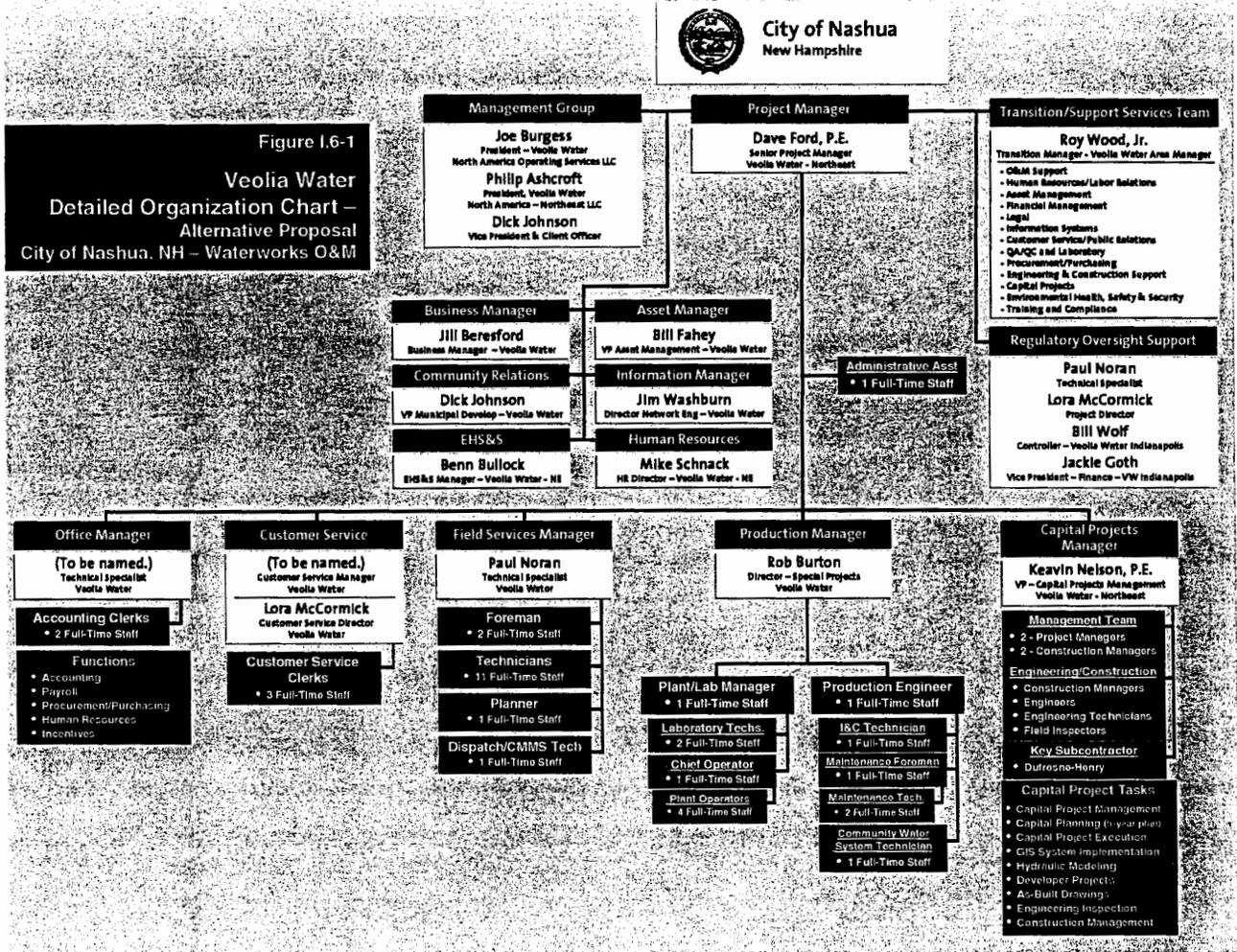
It is assumed that Pennichuck Water Works has completed the U.S. Environmental Protection Agency's mandated Security Vulnerability Assessment process, and during the transition phase our EHS&S team will review these findings and develop a specific EHS&S plan and approach for the water system.

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



6.4 - Summary

Veolia Water strongly feels that our Alternative Proposal offers the best value, utilizes the full expertise and resources our firm has to offer, and delivers the lowest cost of services to the City. This Alternative Proposal ensures that the City's assets and interests are maintained and that Local ownership and control is preserved.

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



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.

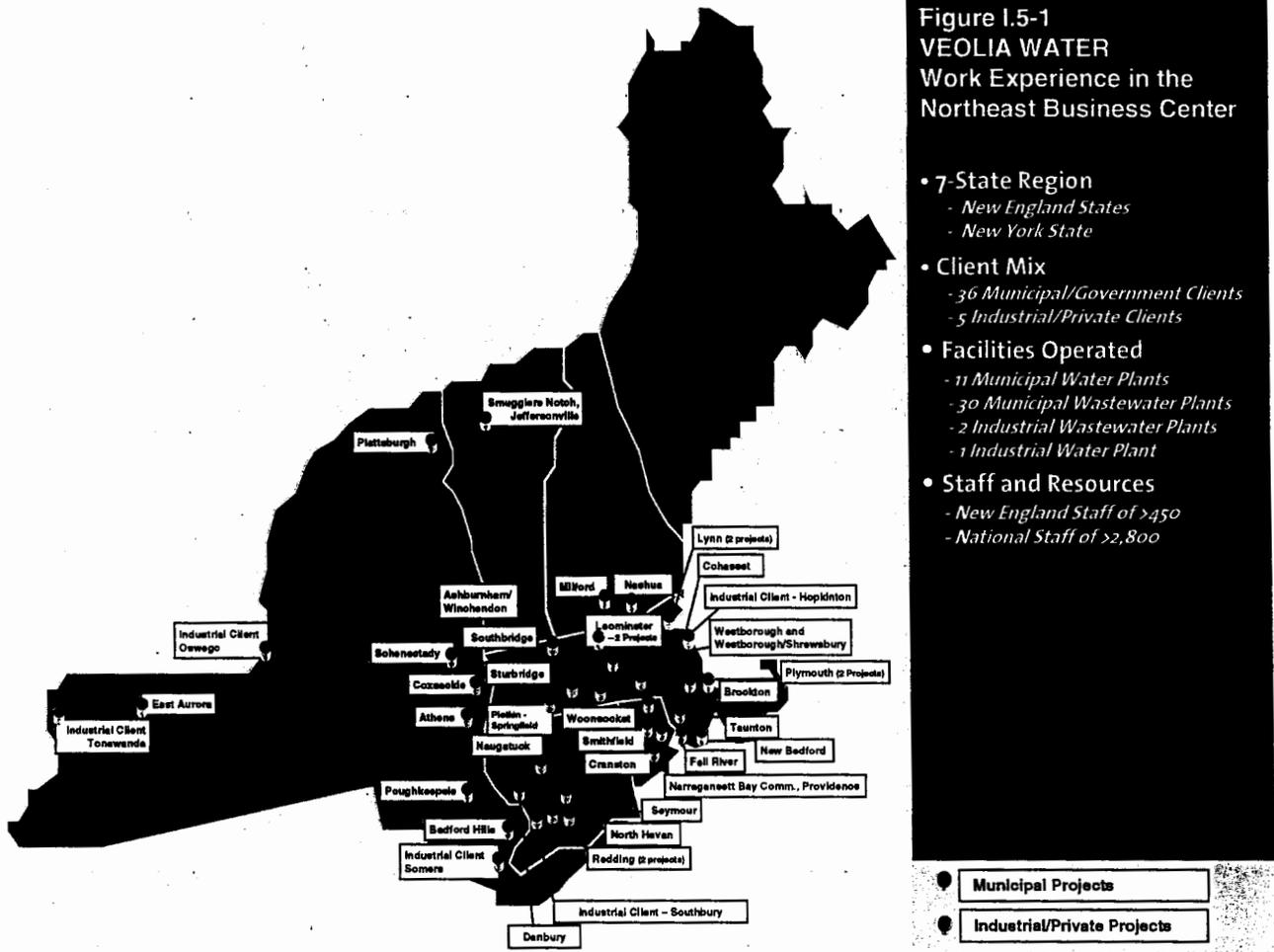
Our firm also brings to this project a proven base of experience in the State of New Hampshire and the New England region as a whole, with some 30 active governmental/municipal clients. Under our contracts with these clients, we manage the operation of both large and small water systems.

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.



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.

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

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

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.

- **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

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.

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.



with the latest technologies or make modifications to existing processes to improve performance and reduce operating costs.

- **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



Figure 1.5-2. 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 Elkart. 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 at 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 meets 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 (NCPPE). 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.

Section Six



SECTION SIX

Innovative (Alternative) Proposal

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



In Section One of this Volume, **Veolia Water North America – Northeast, LLC (Veolia Water)** discussed in detail our plan and approach for addressing the Base Proposal defined by the **City of Nashua, New Hampshire's Request for Proposals (RFP)** for the operation, maintenance and management (O&M) of the water supply facilities for your community.

One of the keys to our success in working with clients similar to Nashua is our ability to deliver innovative approaches that provide for cost savings and performance guarantees. It is in this spirit that Veolia Water has developed and presented in this section our Alternative Proposal. This section defines the key elements and advantages of this approach. We have provided a separate Price Proposal, Section Two, Volume II, for the scope of services that will be part of this Alternative project approach.

Key Enhancements to the Base Proposal

The primary areas our Innovative (Alternative) Proposal that will reduce the costs of owning and maintaining the assets and improve customer service are as follows:

- Increased effectiveness of the City's spending on Capital and Maintenance:
 - Reduced maintenance costs and capital replacement dollars by using Reliability Centered Maintenance (RCM) and Life Cycle Costing.
 - Improved reliability of critical plant processes and equipment.
 - A fixed O&M fee for the City that incorporates into the Fixed Price Component all of the Unplanned Maintenance as defined in the Base proposal.
 - Reduced O&M costs over the Base Proposal of approximately \$1.8 million over the life of the contract.
 - Reduced City Capital investment by having Veolia Water manage the City's capital program for the water system.
- Expanded and improved customer service approach:
 - Provide a 24/7 call center to resolve billing, payment and field operation inquiries from customers. This is an enhancement over what is currently offered to customers.
 - Offer water customers a "One-Stop Shop" for resolution of all water issues.
 - By selecting the Alternative customer service offering, avoid a \$1-3 million investment in a utility billing software package and an estimated \$100,000 in startup costs.

- Hold Veolia Water to a high standard of customer service responsiveness with customer service performance metrics.

6.1 - Increased Effectiveness of the City's Spending on Capital and Maintenance

6.1.1 - Reduced Maintenance Costs and Capital Replacement Dollars

Over the years, Veolia Water has made a significant investment in developing a cost effective and efficient Life Cycle Management program. The program is based on the principles of Reliability Centered Maintenance (RCM) and ensures that the maintenance program is tailored to meet the individual facility's needs.

RCM was developed in the 1970s by the U.S. civil aviation industry as a means to develop and quantify maintenance procedures for aircraft. The RCM approach is essentially a formal review process that systematically develops a maintenance plan that is geared toward improving how an asset is maintained to achieve the highest level of reliability and life expectancy. Though new to the water industry, RCM has been used with great success by the electrical power and gas utilities, major U.S. manufacturers, and the U.S. Navy.

The Navy's initial RCM pilot consisted of an evaluation of 31 ships in its fleet. The results were over a 70% reduction in maintenance costs, a 5% improvement in availability, and an extended life on average of eight to 10 years (Reference: Smith, Anthony M, *et al*, RCM Gateway to World Class Maintenance, Elsevier Publishing 2004, ISBN # 0-7506-7461-x). The Navy has since made RCM core to its entire fleet.

Veolia Water recently completed an RCM review of a residuals handling system in one of the water facilities that we operate, and the results were as follows:

- \$350,000 annual savings from a system redesign.
- \$144,000 cost avoidance from increased system availability.
- 60% reduction in planned maintenance hours.
- \$40,000 annual savings through redesign of the polymer feed system.

The RCM program identifies areas that need to be improved and focuses the capital spending on the economic return on investment and operational improvement. We believe that our RCM approach is ideally suited to building first class maintenance programs for our clients.

An RCM program could be implemented in Nashua over a period of three years. By using the RCM approach, one spends money early in the process to establish a program that pays out over time. You cannot improve a maintenance program overnight, but the benefits are there when you approach the implementation with patience and discipline.

6.1.2 - Improved Reliability of Critical Plant and Equipment

Veolia Water's RCM approach includes a thorough critically review of each asset in the system. Our proven methodology will result in a criticality ranking that is based on the assets role in providing safe and cost effective delivery of water. We have developed a process that allows us to review assets against a fixed set of criteria that will determine how we care for that asset over time. Our approach focuses maintenance activities towards predictive tasks.

The emphasis placed on predictive tasks helps to ensure that the potential failures are detected before they become functional failures and operating liabilities. This helps reduced operational consequences in three ways:

- Problems can be rectified at a time when stopping the machine will have the least effect on operations.
- It is possible to ensure all the resources needed to repair the failure are available before it occurs, which shortens repair time.
- Rectification is only carried out when the assets really need it, which extends the intervals between corrective interventions. This in turn means the asset has to be taken out of service less often.

Veolia Water has customized the RCM procedures for our water operations, and we will apply these techniques to develop sound maintenance plans for the City. We focus on criticality and failure evaluation to ensure that we are putting the resources where they add the most value to our clients.

6.1.3 - Fixed O&M Fee

Veolia Water is offering the City a fixed O&M fee that incorporates the Fixed Price Component and the Unplanned Maintenance component in the Base proposal. This is a benefit to the City as Unplanned Maintenance is a variable component of costs that are difficult to basis.

6.1.4 - Reduced O&M Fee

Veolia Water is offering the City a reduced O&M fee over the term of the contract. The reduced O&M fee is a result of RCM and capital program management. The savings reflected in the O&M Fee in our Alternative Proposal, as discussed in this section, are detailed in Section Two of our Price Proposal (Volume II).

6.1.5 - Reduced City Capital Investment – Veolia Water Capital Program Management (CPM)

PWW was driven to make capital investments to maintain and increase shareowner returns. The City has the opposite approach to capital investment, as capital investment is directly related to increasing rates. Over the next 20 years, the City may be required to invest up to \$80 million for capital improvements. This capital investment will have a direct impact on the rates customers will be required to pay for service. Any savings in capital investment will be of direct benefit to the customers. Veolia Water is offering the City Capital Program Management that will deliver reductions in capital investments.

By offering the City Capital Program Management (CPM), Veolia Water can reduce the City Capital investment requirements by 15 to 20% over a 20-year term, compared to the conventional approach to capital investment.

Based on an aggregate capital investment of \$80 million (assumes a \$4 million annual capital investment) for the 20-year period, the expected aggregate savings would be \$16 to \$20 million.

This expected savings is based on the size and complexity of the PWW core distribution and treatment systems.

In reviewing the PWW Annual Reports to the PUC from 2002 to 2004, it is clear that there are significant ongoing expenditures for capital projects. Over this three-year period, approximately \$2+ million has been spent by PWW on outside engineering firms, approximately \$1 million a year on water main replacements projects, \$4 million on source supply and treatment plant projects and millions on other miscellaneous capital projects. Based on a review of the "Water Treatment Plant Evaluation and Capital Improvement Plan" prepared by Fay, Spofford & Thorndike (FST) for the PWW systems (dated May 7, 2004), there is a \$31,325,000 Recommended Capital Improvement Plan. PWW is in the process of implementing this plan, which will take many years to complete. Again, there will be a definite need for a comprehensive CPM program when the City takes over this system.

Veolia Water's responsibilities will be as follows:

- Developing the initial five-year capital plan.
- Preparing an updated five-year capital plan annually.
- Executing capital projects as approved by the City.
- Completing capital projects on time and on budget.

City Capital Program Challenges include:

- Reinvesting in the existing infrastructure to improve the condition of the system and to upgrade older pipelines and treatment facilities.
- Meeting increasingly stringent treatment requirements, such as those expected from the U.S. Environmental Protection Agency (EPA) for D/DBP and ESWTR.
- Supporting the growth of the region by furnishing abundant supplies of high-quality treated water
- Controlling customer rate increases.
- Addressing watershed and water quality issues

6.1.6 - Veolia Water CPM – Major Functions

- **Capital Planning** - To establish and prioritize capital projects to meet new regulations, protect existing assets and expand the system.
- **Engineering** - To design solutions, prepare studies and reports, manage projects, perform modeling, and ensure Quality Control.
- **Value Engineering** – To ensure the lowest life cycle cost within project constraints.
- **Project Management and Construction** - To offer the most cost-effective procurement approach and deliver capital projects on time and on budget.

Capital Planning

Veolia Water will meet with the City to review priorities and set goals for the overall program. In its role as a services provider to the City, Veolia Water will not only prepare the appropriate draft plans for City review, more importantly, Veolia Water will bring to the project:

- Creativity and innovation in the assessment of the situation, always addressing the cost and water quality needs of the City.
- Conceptualizing alternatives and the development of solutions that integrate with overall water quality and service goals.

Veolia Water's approach for developing the Capital Plan uses the following processes, as summarized in Appendix D (Part 1), Volume III of this submittal.

The planning function will be an ongoing activity that will provide information, which will serve as a tool for the City to:

- Assess the condition and needs of the system.
- Identify upcoming needs in the short-term and in the long-term.
- Assist the City in developing an overall Capital Program strategy and prioritization of projects.
- Provide an annual summary and analysis of regulatory initiatives that may require new capital over the next five years.

The assessments made in the planning process will focus on five primary drivers for capital expenditures:

- Regulatory requirements and mandates.
- Existing system major replacement, upgrades and improvements.
- Capital expenditures for service expansion.
- Capital expenditures for other issues of consistent concern.
- Safety.

Each project will include a justification and a proposed cost for consideration by the City. Veolia Water will submit three documents to the City for each project in the Capital Plan:

- Scope, justification and alternatives.
- Detailed cost estimate.
- Capital project requisition template.

Veolia Water will prepare a Recommended Capital Plan as well as an update to the five-year Capital Plan on an annual basis.

Engineering

The core CPM staff will be composed of the Regional VP of the CPM group, a dedicated CPM Project Manager and Construction Inspector for Nashua Water Works Capital Projects and key engineering staff from our local engineering partner, Dufresne-Henry, which is located in Manchester, New Hampshire.

Veolia Water's staff will have the primary responsibility for planning, engineering and overall project management of capital improvements. In addition, this group will be responsible for the engineering services associated with this contract.

Value Engineering

Veolia Water will oversee all engineering activities and provide Value Engineering and QA/QC. City input and approval protocol will be developed to ensure that the desired level of input and control is afforded the City.

Based on experience with similar systems worldwide, Veolia Water will address the following:

- Investment in replacement of existing distribution mains. Main extensions will be examined on a cost/benefit basis.
- Capital allocated to major replacement/maintenance of the treatment plants and associated facilities and equipment.
- Ensure that adequate hydraulic capacity will be available for outlying areas as expansion occurs.
- Effective management of the capital required to support continued growth.

Investment of City Capital dollars is ultimately a policy decision. As part of Veolia Water's CPM, the City will approve all capital projects. Veolia Water will identify, prioritize and recommend capital projects. Veolia Water will also assist the City in identifying the economic benefits of the investment in growth. Veolia Water will assist in identifying whether loans and grants are available for this purpose and the economic impact of the investment in new underground infrastructure to serve new communities.

The approach to the capital program under a municipal utility will be different than the approach under a private company, particularly since the City's intent is to minimize rate increases. As part of an initial review, Veolia Water has identified savings of \$3.2 million associated with capital projects that are currently being proposed by PWW. Three examples of value engineering that could be realized by Nashua are detailed in Appendix G, Volume III, of this submittal, for the following FST-recommended projects:

- Raw Water Quality Management (Estimated \$0.57 million NPV savings)
- Optimizing Coagulation (Estimated \$ 1.5 million NPV savings)
- Alkalinity Supplementation (Estimated \$1.1 million NPV savings)

Project Management and Construction Management

Implementation of capital projects by Veolia Water may follow one of these execution alternatives:

- Implementation of a capital project via a design/build approach on a professional fee basis or a cost-plus fixed-fee basis.
- Implementation of a capital project via conventional engineering and construction on a professional fee basis.
- Implementation of a capital project via conventional engineering and construction on a fixed-cost basis.

Each approach for capital project execution offers unique advantages and disadvantages. Veolia Water will work with the City to determine the best approach for execution of each

City Capital project. We will also perform the following for each City Capital project we execute:

- Establish a management structure and protocol for the cost effective and timely execution of capital projects.
- Ensure a high level of participation by locally owned businesses.

Under the design/build approach on a cost-plus, fixed-fee basis, work will be completed by existing staff or qualified local firms at cost plus a percentage for overhead and profit. The design/build approach has the advantage of placing total responsibility, from project design and construction, on one entity. Risk for cost overruns and performance remains with Veolia Water.

Under the conventional approach, a design engineering firm would be retained to prepare plans and bid documents. Bid documents would be advertised and bids received. The construction work would be awarded to the lowest responsible bidder. A dedicated CPM Project Manager and Construction Inspector will be responsible for oversight of engineering, bidding and construction management on designated projects.

Construction

Veolia Water's overall approach and strategy to the completion of construction work is the same whether it is self-performed, design/build or design/bid/build.

The highest priority in any project is safety in the completion of the work. All construction activities are managed to maintain project schedule, project budget and project quality. Veolia Water's perspective as a long-term operator is to provide quality designs and construction to assure long life, low maintenance and no downtime. Overall project value must consider all costs including operations, maintenance, repair and replacement as well as initial construction cost.

The design/build approach is extremely cost effective and allows the rapid completion of a large number of projects within a short period of time. It is particularly well suited for smaller and routine projects such as pipeline extensions, quick response, small upgrades, replacement of obsolete equipment units and other small, routine or specialized projects. Our approach is as follows:

- Whenever possible, work will be designed and constructed by Veolia Water in conjunction with subcontracts to strong local businesses.
- Construction work will be completed by current in-house construction forces or outsourced to qualified local firms.
- Pricing will be based on site-specific negotiated prices, cost-plus or other approaches that ensure the City of a cost effective construction approach.

Capital project management will be provided by Veolia Water's Capital Project Group with support from our local engineering subcontractor, Dufresne-Henry, Inc., as well as from groups within the Veolia Water organization. A sampling of Veolia Water's experience in managing capital programs is included in Section Five, our project experience profile.

6.1.7 - Integrated Capital, Operations and Maintenance Plans

Veolia Water will integrate the capital planning process and the O&M of the water utility assets through the development of specific plans. Examples of the specific plans to be developed:

- **Redundancy and Backup Power Plan** - As part of CPM, Veolia Water will provide a Redundancy and Backup Power Plan to ensure that the water facilities' standby power and lighting equipment are maintained and or replaced as needed, ensuring that the water treatment and distribution system facilities provide reliable operations.
- **Water Main Break Management Plan** - As part of CPM, Veolia Water will provide a Water Main Break Management Plan (BMP) that will lay out the approach and details to reduce break frequency. We will analyze the current break frequency and prioritize the needs for main replacement or rehabilitation to reduce water main break frequency.
- **Water Yield Plan** - The water yield plan is critically important to the City to be sure adequate raw water supplies that meet current and future customer demands. As part of CPM, Veolia Water will prepare a water yield study that will evaluate and estimate the existing and potential yield capacities of the water resources, of the water collection and extraction elements of the Water Works and of the water treatment, storage and distribution infrastructure to ensure that available water can be supplied to the customer. The evaluations will also identify points of restriction or imbalance within and between these system elements.

6.2 - Expanded and Improved Customer Service Approach

6.2.1 - Customer Service Project Understanding and Overall Approach

Veolia Water is pleased to present an Alternative Customer Service proposal for your consideration. Our Alternative approach is to deliver the full range of customer service offerings on a 24/7 basis and take full advantage of our proven, client- and customer-audited record of performance in other cities – a record that no other company can bring. **Benefits of this approach are improved customer service and significant cost avoidance.**

Customer service is a complex and inherently risky business, and we believe that managing it can best be accomplished by the contractor having responsibility of day-to-day customer service activities in-house. If one entity has responsibility for bill and revenue creation, but another entity has responsibility for meter reading and field service, it makes resolution of customer concerns much more complicated and time consuming. Based on our experience with other similarly sized clients, a single contract operator having full responsibility for customer service activities will result in **improved client and customer satisfaction.**

Additionally, the Alternative Approach offers **cost avoidance during the asset purchase by the City.** Nashua can avoid the purchase of Pennichuck's utility billing software system, **at an estimated cost of \$1- \$3 million dollars.** Also, startup costs by Nashua for telephony and system infrastructure related to supporting the utility billing software system would be avoided, at an estimated savings of **\$100,000.**

Veolia Water is recommending a rent vs. buy option, under which the City of Nashua would enter into an agreement with Pennichuck to provide Veolia Water with access to Pennichuck's system and customer records for a period of time so that the records may be

loaded (converted) into Veolia Water's utility software system. After a period of parallel testing, Veolia Water would begin providing billing and payment processing for Nashua.

Veolia Water will establish a full-service management and customer service office in Nashua, making it the center of our Nashua Customer Service operation.

Veolia Water's Solid Expertise in Customer Service

Veolia Water has a solid record of providing 24/7 customer service to water and sewer utility clients. This is demonstrated by the full menu of customer-service offerings Veolia Water currently provides on a contractual basis to communities and cities of various sizes. Veolia Water generates billings, performs quality assurance, processes payments and answers customer inquiries for nearly 600,000 water and sewer accounts in the United States.

Some of Veolia Water's clients include the Indianapolis Department of Waterworks and the Indianapolis Department of Public Works, the towns of Cumberland and Speedway and the City of Elkhart. Veolia Water has managed these customer service contracts successfully for several years.

During the past three years, Veolia Water has utilized its expertise in customer service to significantly improve the level of service delivered to Indianapolis water customers. This is shown by a significant improvement in call answer rates and in customer satisfaction. During 2004, 82.7% of incoming calls were answered within 30 seconds, and customer satisfaction rates exceeded the national average for utilities.

See Appendix D (Part 3 – Veolia Water's Annual Report for the City of Indianapolis), Volume III, for a further explanation of the customer service turnaround in Indianapolis. Be assured that Veolia Water would use this same hard-earned expertise to provide quality customer service to Nashua customers.

Day-to-Day Management of "One-Stop Shop" for Customer Service

In the "One-Stop Shop" model, Veolia Water provides end-to-end services to Nashua water users. Those services include reading meters, generating bills, oversight of payment processing, offering a 24/7 call center to answer customer inquiries, and providing all water related field service operations. By having responsibility for end-to-end processes, Veolia Water can provide the highest level of service with the highest level of accountability.

The issue of accountability should be a key concern for the City of Nashua. If one entity does the billing and another entity reads meters and resolves field issues, it makes it difficult to hold the parties to a high standard of performance. In turn, it makes it more difficult for both of the parties to deliver a high level of service to customers. By having one entity deliver end-to-end services, the contractor can easily be held to a higher performance standard.

Appendix D (Part 2) provides a detailed discussion of our complete Customer Service Approach.

6.2.2 - Veolia Water's Customer Service Commitments

Veolia Water will provide customer service that is responsive to customer needs and concerns in both standard and unusual operating situations. This will include providing a "one-call" customer service center and 24/7 service to handle account inquiries and emergency service requests. A variety of payment options will be provided to customers, including the ability to pay water bills 24/7. We will also provide a walk-in service center with

in a location convenient to Nashua customers. Veolia Water's customer service offerings will be compliant with all City, local, state, and federal environmental, safety and other rules and regulations. We will work closely with the City to follow its customer service objectives, and we will maintain reliable systems to ensure quality and responsive customer service is provided to the citizens of Nashua.

A key to Veolia Water's success in establishing a tailored customer service program for other municipalities was the customer surveys we conducted to identify stakeholder issues and concerns. Knowledge of citizens' views of the existing water system enabled us to continue popular offerings and build solutions into our own Customer Service Plan from the beginning. Veolia Water's proposed Citizens Advisory Group will also help identify important customer service concerns. Veolia Water will perform similar surveys with members of the Nashua community to establish the foundation for our Customer Service Plan for the customers served by the Nashua Water system. Our Customer Service Plan will be dynamic, growing and changing, as necessary, to meet needs of Nashua's customers. A key part of our plan will be a thoughtful, effective transition program.

6.2.3 - Customer Service Transition



Customer service focuses on higher levels of customer service and cost avoidance. Our one-and-done philosophy enables customer service specialists to develop work orders to ensure timely resolution of customer issues.

During the transition, Veolia Water's Customer Service Specialists will meet with existing staff and assess the current customer service procedures. Effective communication with 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.

Development of a Nashua Customer Service Policies and Procedures Manual (PPM) will be a high priority. Veolia Water will consult with key Nashua water system stakeholders to determine the critical customer service issues to be addressed by the organization. Veolia Water will develop a Customer Service Plan that will detail our objective to be customer-focused, and we will direct the organization toward this goal.

During the transition period, our Customer Service Specialists will utilize Veolia Water's well-proven methods to 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. Training of Nashua-based employees on Veolia Water's customer service software system will also occur. Veolia Water has well-developed documentation and a training curriculum that will aid in the training process.

Customization of Veolia Water's call center software with a friendly Nashua-specific greeting will occur along with interactive voice recognition (IVR) software programming to capture Nashua's call center statistics. Veolia Water will also develop a Nashua water system Web site with a local feel to promote open communication with stakeholders. Cash handling and segregation of duties issues for security purposes will be assessed and changed if necessary.

Billing Software Conversion

It is our understanding that Pennichuck's existing billing system will not be provided to Veolia Water under the Alternative Proposal. By Nashua not purchasing Pennichuck's utility billing system, the City could avoid spending from \$1 - \$3 million dollars. Instead, Nashua would enter into an agreement for Pennichuck to provide Veolia Water with access to its customer accounts so that the data could be loaded into Veolia Water's utility billing software system. Pennichuck's cooperation and support would be needed during the conversion period while parallel systems are run and quality checks are conducted.

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 and innovative software documentation with all customer representatives to ensure a high level of competency.

Typically, a billing software conversion takes several months to complete. During this critical period, Veolia Water's planning and systems are all designed to prevent inaccurate bills or the catastrophic possibility of the bills not being sent at all. Veolia Water's Customer Service Specialists will work closely with the prior utility owners as billing history and rules are converted into Veolia Water's customer service system, which will include a computer server dedicated for the Nashua water system.

While the systems are running parallel, Veolia Water's Quality Department will ensure that transition issues are resolved and that bills are correctly calculated until Veolia Water and the City are mutually satisfied with bill quality. After the completion of the conversion period and when Veolia Water's billing system goes live, our Quality Department will continue checking a statistically significant sample of bills during each billing cycle to ensure statement accuracy. This commitment to billing accuracy is an important philosophy of Veolia Water.

During the software conversion in Indianapolis a few years ago, important lessons were learned about the systems required to ensure billing accuracy and timeliness. This experience means Veolia Water Customer Service Specialists know what it takes, and they can deliver a successful billing software conversion for the Nashua water system.

Billing and Collection

Veolia Water plans to read meters and bill on the prescribed schedule, as noted in the RFP. A customized bill format for Nashua will be developed. For many customers, their only contact with the water utility is through the bills they receive. The City will also have the ability to use bill inserts to get information to your water system customers. The presentation of bills to the customer is, therefore, of utmost importance.

6.2.4 - Oversight of Payment Processing

Veolia Water proposes use of a secure lockbox in the City's name for processing of customer payments. The City has control over all funds and Veolia Water simply acts as your agent. Proper security measures will be used by Veolia Water personnel at all times. For instance, Veolia Water personnel who receive payments from customers at the lobby location will be

appropriately bonded. Veolia Water will maintain records of customer transactions, including payments, and will submit a daily payment register to the City. Veolia Water will maintain auditable processes and assist the City as needed on any audits.

Walk-in-Payment

Walk-in payment is a popular option and is a way in which better customer relations can be fostered. Under Veolia Water's Customer Service Plan, we will accept payments at a designated lobby location in Nashua, and we will consider other convenient locations for payment acceptance. We believe that providing an easily accessible payment location to residents, particularly one that is in Nashua, will be a key to improving customer satisfaction.

Collections

The collection of revenue is another critical function of any customer service organization. Veolia Water will put contingency plans in place to facilitate payment collection and minimize debt. Our collection processes will conform to the rules and regulations of the City. A major focus of our Customer Service Plan will be achieving efficiencies and facilitating the payment process for customers.

Through promotions ranging from inserts in the bills to community relations efforts, Veolia Water will explore additional payment options for customers, including expanded direct debit options, payment by phone and credit card, setting up budget plans for customers, and Internet payment services.

6.2.5 - Customer Contact Center

Contact Center Staff

Critical to an effective Customer Call Center is a well-trained and cross-trained workforce. Call Center staff will be integrated with the Veolia Water Customer Information System, which allows for logical and efficient access to customer data.

Cross-trained staff will be knowledgeable about call center processes, water customers and other functions, such as billing, collections, work orders, water quality issues, meter reading and all aspects of the business. Such cross-training not only provides a customer service representative who is qualified to answer customer inquiries, but also allows interchange among staff members.

One and Done – This philosophy is central to our customer service focus and cannot be accomplished unless we provide the billing, collections and call center services. Our unique capability to do this improves customer service and takes it to a level not possible if a third-party is providing customer service.

Responding to Customers

One of the key features of Veolia Water's Customer Service Plan is that Customer Service Specialists will be available 24 hours a day/7 days a week.

Handling All Contacts

Veolia Water will establish procedures to deal effectively 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 technician, an appointment will be made with the customer when the complaint is received.

Response times to questions and complaints will be recorded and a key performance indicator will be used to monitor and improve the efficiency of service provided. Set response times will form a primary component of the Veolia Water's Customer Service Plan.

Auto-Call Distribution

Veolia Water will use an auto-call distribution (ACD) system in which customer calls can be grouped and distributed to the agents best equipped to handle the question. ACD provides the following advantages:

- A message center, which can provide general (non-account specific) information on water system activities while a customer is in the queue. Information will include outages, construction activity, flushing activity, directions to the water system and water system policies and hours of operation.
- Customer identification through pop-up screens before the call is picked up.
- Routing to first-available agent, message center or IVR.
- Language assistance for those customers who do not speak English and assistance for the hearing impaired.
- Real-time statistical displays for the call center, and reporting for management on productivity, wait time, idle time, time per call, etc.

6.2.6. Coordination with Field Operations

Under Veolia Water's Customer Service management plan, all contacts resulting in work to be carried out in the field will be scheduled by the contact center and, where appropriate, appointments made with the customer.

We will accept all customer contacts and resolve the customer's concerns. Employees in field operations are pivotal in terms of linking the revenue process to operations where necessary. They will be responsible for fostering good relationships with customers and will be trained in this regard.

Benefits of the Alternative Approach

Top Reasons Why Nashua Should Select Veolia Water's Alternative Proposal for Customer Service are as follows:

1. The City avoids having to purchase a utility billing system from Pennichuck.
2. Veolia Water will establish a “One-Stop Shop” with one phone number for all water billing and field operations issues.
3. The City maintains strict control over customer payments via a lockbox, receives detailed reporting of customer transactions, and the City retains control of all payments received.

4. A The City receives a customer service lobby in Nashua, an IVR phone system with Nashua-specific messages, and a Nashua-focused Web site.
5. Veolia Water provides economies-of-scale.
6. Veolia Water offers lessons learned in large utility operations and customer service, to develop best practices for delivering high quality customer service.
7. Nashua water customers receive Billing Quality Assurance/Quality Control.
8. Veolia Water offers staffing flexibility to meet high call volumes and reduce call abandonment rates, 24/7.
9. Guaranteed performance metrics – Veolia Water offers to place a portion of its service fee at risk.

Veolia Water's

Alternative Customer Service Offering

To ensure that the highest level of service is delivered by providing all base offerings PLUS:

- Generate accurate water bills and process payments in a timely fashion while using extensive quality assurance measures.
- Establish a customer lobby in Nashua to handle walk-up customer service traffic. Frontline staff will be empowered to make decisions and provide timely responses to customers.
- Utilize Veolia Water's Customer Contact Center, staffed 24-hours-a-day/7 days-a-week to answer customer inquiries, including resolving emergency issues in the field.
- Provide a Nashua-focused Web site with customer payment and billing information along with up-to-date notifications to customers about water quality and ongoing projects.

6.2.8 - Quality to Ensure Success

Veolia Water believes strongly in evaluating the services that are delivered to customers in terms of their perceptions and in measurable standards.

Review of performance is critical to ensuring that we maintain or exceed our customers' expectations. As a part of the customer service approach that we will deliver to the City of Nashua, we will establish key performance standards that will be rigorously monitored.

6.2.9 - Customer Service Innovations

The Veolia Water Alternative Customer Service approach discussed in this section will deliver a number of benefits and innovations, including:

- **Billing Inserts** – Use billing inserts to encourage alternatives for payment and to promote City-approved not-for-profit or community events or causes.
- **Performance Metrics Fee Risk** – As detailed in Section One, guarantee call center and responsiveness performance measures that put the Performance Metrics Fee at risk.
- **24/7 Call Coverage** - Provide customers with around-the-clock live, immediate response to questions or concerns.
- **"One-and-Done"** - Ensure that a customer call is handled from beginning to end by the representative receiving the call to improve customer satisfaction.
- **Responsiveness** - Respond within the required time period to emergencies.
- **24/7 Payment Acceptance** – Allows customers to pay water bills at their convenience, 24/7.

6.2.10 - Challenges and Solutions

Challenges	Solutions
Customers feel as though the Customer Service organization is not responsive.	Listen, utilize focus groups, form a Customer Advisory Panel, resolve problems, provide training to each Customer Service Specialist.
Adequately handling of customer contact volumes.	Determine causes of customer contacts, offer additional account information choices, Web-based payments and account balances.
Minimizing call waiting and lost calls.	Install additional phone lines, utilize technology (ACD and IVR), and realign operations to provide additional Customer Service Representatives during peak call periods.

6.3 - Management and Staffing Approach – Veolia Water Alternative Proposal

As discussed in this section, Veolia Water has developed an enhanced customer service approach focused on providing the City with enhanced value and long-term cost savings and a proposal for a comprehensive Capital Program Management approach. Our organizational chart for this Alternative Proposal is shown on Figure I.6-1 (next page).

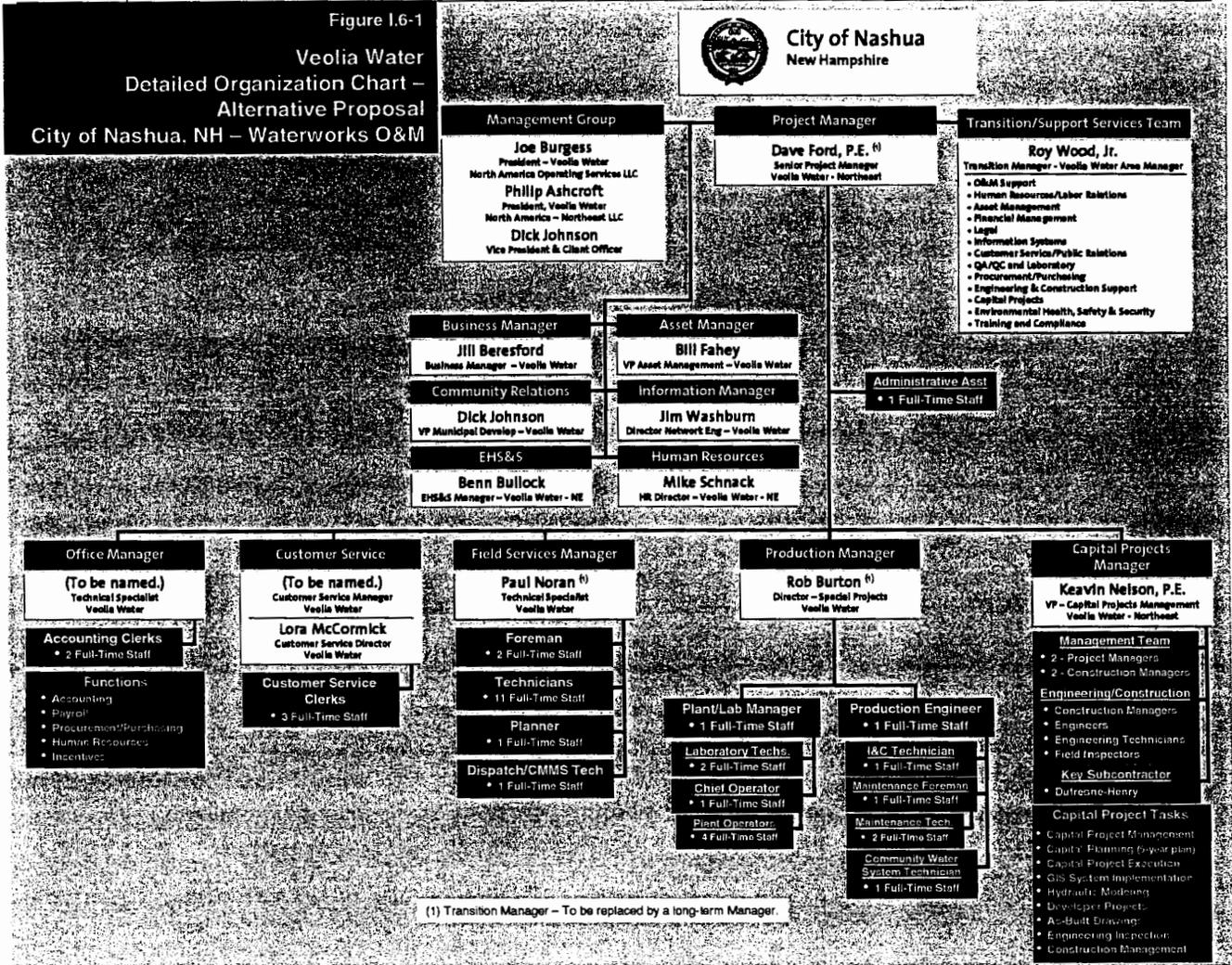
The Customer Service group will include billing and collections, customer contact management and integration with Field Operations. Leading this group will be a **Customer Service Manager**. This will be a full-time position, and this person will be responsible for managing the day-to-day work of the Customer Service Group, a group which will include three Customer Service Clerks.

The Customer Service Manager will be assisted in this role by our Customer Service Director from the City of Indianapolis project, **Ms. Lora McCormick, MBA**. She is a Project Director with Veolia Water in Indianapolis, and on this project with the City of Nashua she would be responsible for assisting with the management and the implementation of Veolia Water's Customer Service Plan. Ms. McCormick's resume is included in Appendix A, Volume III.

The Capital Program Management (CPM) group, headed by Keavin Nelson, P.E., includes four full-time staff (two Engineering Project Managers and two Engineering and Construction Managers/Inspectors), who will provide for CPM activities and Supplemental Services.

Veolia Water will supplement our in-house staff with the services of our partner Dufrense-Henry.

Under the Alternative Proposal approach, our staff complement would number 43, which includes the full-time O&M staff complement discussed in Section Two of this Volume, along with one additional Customer Service Manager and two engineers (a Project Manager and a Construction Manager).



6.4 - Summary

Veolia Water strongly feels that our Alternative Proposal offers the best value, utilizes the full expertise and resources our firm has to offer, and delivers the lowest cost of services to the City. This Alternative Proposal ensures that the City’s assets and interests are maintained and that Local ownership and control is preserved.