

Section V – Part 2:

6.3.6 – Technical – O&M Approach

Project Understanding and Commitment



MAINTAIN

...the operational knowledge that the current O&M team holds and bring it forward. We commit to retaining your existing employees and leverage their long-standing operational know-how.



SUPPORT

...the existing staff with state-of-the-art tech training and educational opportunities. Veolia's Partnership with Rutgers University and our proprietary and custom online training will help them grow.



ENHANCE

...their access to regional and corporate support via Veolia's deep New Jersey regulatory resources. Veolia's unmatched New Jersey bench will continue to serve the Township now and into the future.



41,500

Residents served via 152.8 miles of water transmission system.



8.8

MGD (peak) water treatment plant; 3 treated water storage facilities/towers (9 MG total).



4

Pump stations and a 25-inch water line to the transmission system.

Veolia will deliver a Comprehensive O&M Approach for the Water System Assets that will be Part of this Partnership with the Township of North Brunswick. Our depth of local New Jersey resources – available for planned support and emergency events, will ensure your customers receive the highest quality water, on a consistent and reliable basis, at rates that remain affordable and fair.

We have prepared our response to the Technical Information Submittal Requirements, Section 6.3.6 of the Request for Proposal (RFP), in two sections. This section, Part 2, provides a discussion of Personnel and staffing, and a detailed discussion of our Operations and Maintenance approach for the Township's water system assets. This builds on the information provided in Section 6.3.6, Part 1, covering our firm's overall capabilities and related work experience and references.

PERSONNEL AND RESOURCES

Veolia will Maintain, Support, and Further Enhance the Township’s Experienced O&M Team.

Veolia is about people. It sounds simple but it is often overlooked. When Veolia begins a new partnership with a community, it also begins a new partnership with the employees. Veolia’s goal will be to utilize the experience of the existing Municipal workforce with the specific equipment and process, and then supplement with training, licensing incentives and experienced project management to generate a renewed passion for the work and a desire to advance.

At a time when finding qualified Operators is an industry-wide struggle, New London has not had an open position for a single day, over the last 10 years. Further, an intern program in place at New London has been developed and is run using the principles of an old world apprenticeship. Untrained individuals work minimum wage learning the skills necessary to succeed as an O&M Technician, Field Service Technician or Maintenance Mechanic. It is an open ended opportunity that ends when the individual is deemed qualified for a position opening and they are hired into the position. **Over the last 11 years, 31 Interns have entered the program, 19 of which completed the program, 17 of which are current employees. Four of these individuals are now Managers at New London, and two are Managers elsewhere in Veolia.** This program is fully supported by the Union and is viewed as an essential element in developing the next generation of passionate union employees.

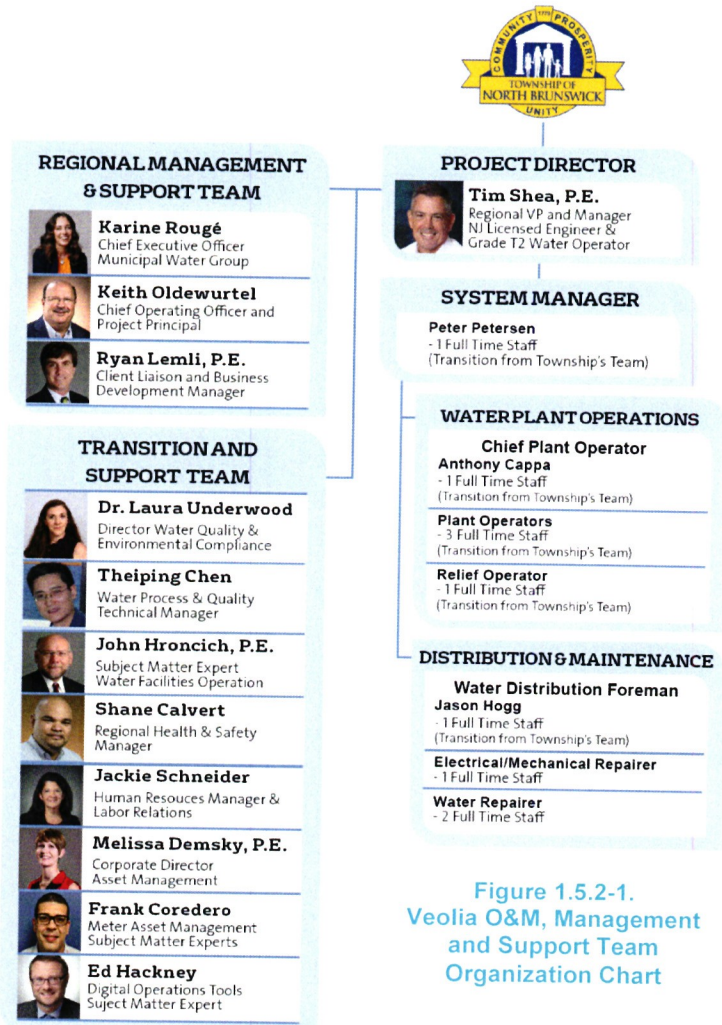


Figure 1.5.2-1. Veolia O&M, Management and Support Team Organization Chart

The benefits to North Brunswick of a staff that is developed from within will be:

- **Stability – Promoting from within is self-propagating, ensuring continuity and passion.**
- **Continuous Improvement – Motivated employees make positive change that your customers and other stakeholders see.**

A unique incentive program is fully integrated into the everyday life of the employees. Employees always have incentive to gain additional licensing and skills. A tiered approach to position titles allows motivated employees to study and test for higher certification. All cost associated with licensing is paid for by Veolia with regular tutoring and scheduled training classes.

In the 11 years of service to the City of New London, the 34 Veolia employees have secured over 85 Operator's Licenses. For each Licensing Exam offered by the State, three to four Veolia employees from our New London operation can be found sitting for it. Our New London Operations Manager and Road Crew Manager teach in-house classes after hours to help fellow colleagues prepare for the exams.

Employees are encouraged to qualify for and obtain higher paid positions regardless of the regulatory need for these certifications. The North Brunswick project goal will be to have all employees trained and certified to the fullest extent possible; no limitations are placed on the amount of T4 Operators on staff with all qualified receiving the elevated salary and benefits. These people are our future, the Township's future and a very worthwhile investment.

The benefits to North Brunswick of a highly trained and licensed staff will be:

- **Innovation – We are your operational experts.**
- **Maximization of equipment efficiency and overall lifespan**
- **State regulators respect and support organizations that value education and licensing.**

Why this matters... The quality of the employee makes the difference between simply *running* the plant and truly *operating* it. We empower our employees to view themselves as an integral part of an important, valued structure that is performing essential service to the community, they become front line to success. Our operators and maintenance technicians are the first to identify issues and trends. The more educated and experienced they are, the better the observation.

The maintenance department will see equipment issues develop and correct them long before capital replacement by our client is necessary. By having access to the right training and tools it will become a matter of pride for staff to properly maintain and repair existing equipment. They will not accept leaking pump seals. Temporary workarounds will not be necessary - which will ensure continued site safety, performance and reliability.

The benefits to North Brunswick of a staff that cares for the equipment as if it were their own will be:

- **Maintenance “work arounds” are not tolerated. This extends the life of your equipment**
- **Having all of the equipment available is essential to ensure uninterrupted operations**
- **Systems will not be allowed to operate without full redundancy, having properly maintained pumps, controls and spares on hand ensures bypass operations are minimized**
- **Knowing that the employee turning the valve or maintaining the equipment shares the Township's commitment to environmental compliance and stewardship.**

North Brunswick will benefit from our Veolia Model through:

- ✓ **Professional Staff representing the Township to the public**
- ✓ **Extended Equipment Life**
- ✓ **Individuals you can trust, who will be with you for the long haul.**

Figure 1.5.2-1, presented earlier, provides our project organization chart.

Our team's responsibilities will be as follows:



SYSTEM
MANAGER

System Manager, a full-time staff role (Peter Petersen, a transitioning municipal employee) based at the water treatment plant. Mr. Petersen will manage the day-to-day operations of all elements of the water system, and stakeholder and client interaction. Specifically at the Water Treatment Plant, he will integrate the two functions of operations and maintenance, meeting regularly with the Chief Plant Operator, Distribution System Foreman, and Electrical/Mechanical Repairer to make sure maintenance needs for operations and compliance are well coordinated and prioritized. He will report to Veolia's Project Director, Tim Shea, P.E.



CHIEF PLANT
OPERATOR

Chief Plant Operator, this full-time role (Anthony Cappa, a transitioning municipal employee) will be responsible for the operational management of the water treatment plant – oversight of the four Plant Operators - and will report to the Mr. Petersen. Mr. Cappa is the licensed water treatment plant operator, and as such, will have the lead role on developing, implementing, and running the Process Control Management Plan (PCMP) and associated tasks within Hach-WIMS. The PCPM, as discussed later in this section, is the core operating plan for the plant, and blends efficient operations and monitoring with ensuring water quality compliance, and overall reliability of the treatment systems.



PLANT
OPERATORS
& RELIEF
OPERATOR

Plant Operators & Relief Operator, these four full-time staff (all transitioning municipal employees) will report to the Chief Plant Operator and be responsible for operations, SCADA monitoring, PCMP data input and reporting tasks, regulatory and process control sampling, process control laboratory analyses, daily rounds & equipment checks, and basic preventive and predictive maintenance tasks (a core example of Veolia's unique cross-training approach for blending operations & maintenance responsibilities).



WATER
DISTRIBUTION
FOREMAN

Water Distribution Foreman, this full-time supervisor (Jason Hogg, a transitioning municipal employee) will report to the System Manager and manage the O&M tasks related to the water distribution system. Mr. Hogg will manage both the operations and maintenance tasks associated with the field-located facilities (storage tanks, booster stations, customer and commercial meters, and piping networks) and will oversee the Electrical/Mechanical Repairer as the lead maintenance technician for the WTP. Mr. Hogg will manage outside contractors that will be engaged on an emergency/on-call or as-needed basis field located facilities (i.e., watermain breaks, valve replacements within the distribution system, etc.). As the licensed distribution system operator, he will also have primary responsibility for compliance-related tasks for these facilities – water quality sampling (including chlorine residual, disinfection by-products, Lead & Copper compliance, and Water Quality Accountability Act compliance). Finally, he will direct the maintenance programs – many of them regulatory driven through the WQAA – associated with below-ground assets in the distribution system (hydrant flushing, valve exercising, etc.)



ELECTRICAL /
MECHANICAL
REPAIRER

Electrical/Mechanical Repairer, this full-time technician (a new hire) will report to the Water Distribution Foreman. This position will plan, schedule, oversee and help execute, and then close-out above-ground maintenance tasks related to the water treatment plant and booster stations. For the most part, these will be more complex preventive/predictive maintenance tasks that are not performed by the Plant Operators, and the corrective maintenance tasks that our team will perform in-house. The person in this role will have primary responsibility for work orders and reporting related to the Computerized

Maintenance Management System (CMMS). This team member will also coordinate the work of specialty vendors and outside contractors related to above-ground equipment maintenance tasks.



Water Repairer, these two staff (one transitioning municipal employee, one new hire) will also report to the Water Distribution Foreman and be engaged in maintenance tasks for the water treatment, pump stations and distribution system. Our vision is to first assess, and then develop (through training) the maintenance and repair skill sets of each of these individuals to the point where they can float between water treatment plant related equipment, meter repairs, and distribution system below-ground assets (valves and hydrants). The Water Distribution Foreman will have ultimate management-level authority in how their daily tasks are allocated, and sometimes one or both of them may fall under the supervision of the Electrical/Mechanical Repairer for a given task or set of duties. **The wide-ranging maintenance-related tasks we are envisioning for these individuals is the primary reason why we have decided to add a second full-time staff member in this category. Not only will maintenance and reliability of your assets benefit, but your costs on outside repair contractors will be reduced.**

Vehicles & Equipment

Veolia anticipates providing SUV's and/or pickup trucks for transport of personnel and equipment within the Township and water system facilities. We typically provide these through lease agreements with our national leasing company: Automotive Rentals Inc.

If one-time needs arise for additional vehicles or equipment, our North Brunswick O&M team will also be supported by the range of resources that we own and operate locally in NJ. Relying on our significant local NJ presence, especially where the need may be of a short duration, benefits the Township by providing a low or no-cost, rapid deployment of resources.



OPERATIONS & MAINTENANCE PLAN AND APPROACH

Commitment, Innovation and Safety & Compliance

- **Commitment:** Veolia seeks to be a devoted Partner to the Township, loyally helping to achieve your goals and supporting the continuous improvement of your water system
- **Innovation:** The Township will get fresh ideas and opportunities in energy and chemical efficiencies, beneficial, sustainable use of water sludge/ solids and asset management
- **Safety & Compliance:** You get peace of mind knowing that Veolia has a zero tolerance policy for non-compliance and is focused on customer service.



The City of Buffalo, NY, water treatment plant, managed by Veolia.

a. Plant and Systems Evaluations

Team Members: Laura Underwood and Theping Chen

These evaluations are conducted as part of our transition process, and then on an annual basis throughout the operations contract. We appreciate the opportunity to explore process optimization initiatives with our clients, as it has the mutual benefits of reducing energy and chemical usage, optimizing sludge production, and improving the overall water treatment process. Areas we will focus on for North Brunswick include:

- Chemical Use Optimization
- Process Control
- Energy Use
- Sludge Production & Processing

Ms. Underwood and Mr. Chen will also draw from our systematic approach at the Buffalo water operation. There, Veolia's O&M management team has responsibility for conducting comprehensive audits of the water system on an annual basis, employing American Water Works Association (AWWA) methodology, evaluating water produced, metered and unmetered consumption, billed and unbilled consumption, leakage from pipes and storage towers and service connections. The result is a targeted and scientific approach to system improvement initiatives.

b. Ensuring Regulatory Compliance

Veolia is accountable to you, our clients, the public, and the environment for ensuring regulatory compliance for the facilities we operate. Regulatory Compliance is in our DNA, and we approach it from multiple angles, with a suite of different approaches:

Veolia's proprietary Process Control Management Program (PCMP) is a custom-designed operational tool reflecting each plant's unique design characteristics, permit requirements, and resultant strategies – and which helps operators monitor and adjust the treatment process to produce treated water that consistently exceeds regulatory requirements. Our PCMP tools are discussed in more detail later in Subsection b. Operating Plan of this Section

We have an excellent history of compliance with our other NJ water facilities, and we will bring the benefit of our existing positive relationships with the NJDEP regulatory community to North Brunswick, aligning our public health stewardship goals with yours.

c. Emergency & Contingency Plans

If an emergency occurs, Veolia will be prepared to manage any issues that may arise using the site and operations specific Emergency Response Plan (ERP) that will be developed during the Transition Phase.

This plan will meet the standard for promptly (within two hours) responding to all customer problems and emergencies relating to the water system.

We will coordinate our ERP with the Township's own emergency response programs, local emergency planning committees, as well as with first responders (police, fire and others).

Our site ERP will utilize the Federal Emergency Management Agency (FEMA)'s Incident Command System framework. This allows smooth interfacing with most government agencies and their ERPs.

In addition, our ERP will incorporate levels of complexity aligned with the National Incident Management System's (NIMS) Incident Complexity Guide. The NIMS guide assigns degrees of complexity (resources needed, impacts to stakeholders, etc.) for each planned event. For each type of event in the ERP, the levels of complexity will help determine the type of response needed.

In addition to activating the site ERP, some emergency responses, with a higher level of complexity, will necessitate involvement with the Township and other local/area agencies. For example, in a case where there was some major plant failure (fire, localized tornado, etc.), the site would have to coordinate with you regarding communications, plant operability & capability, timelines for repair and/or emergency use of Township resources to name a few. Veolia's ERP will take all of this into account in making sure communication networks were robust (call out lists, cell phone availability, satellite phone availability and so forth). Local equipment and parts contacts, craft contractor contacts, heavy equipment firms and others would be part of the ERP with relationships and potential needs established in advance.

During an extreme emergency, such as widespread tornadoes that will impact the service area, the Township's water operations will benefit from Veolia's regional and national response resources as part of its ERP.

Veolia's three levels of emergency response approach – Site, Region and National – assure the Township that Veolia will be able to respond to any emergency with the necessary resources to mitigate impacts.



Veolia helped our Washington Borough client address a spill event that resulted from a diesel fuel discharge that occurred in their sewer system. Working in cooperation with the NJDEP's enforcement group, our O&M team conducted a detailed search, going manhole-to-manhole in order to pinpoint the source of the fuel discharge. This approach enabled our team to quickly identify the source of the spill.

Computerized Maintenance Management Program (CMMS)

The backbone of our maintenance program is our Computerized Maintenance Management System (CMMS). *In an effort to bring the Township the best Veolia has in terms of technological advancements, Veolia proposes an upgrade of the CMMS to Veolia Asset Management System (VAMS) CMMS.*



Strategic direction, and commitment of technical resources for implementation of the CMMS will be provided by Melissa Demsky, P.E., VP of Municipal Water Technical and Performance. Melissa is

responsible for leading a team of Asset Management subject matter experts. VAMS will bring the following benefits – above and beyond the existing system – listed in Table 1.5.2-1, below.

Table 1.5.2-1. Benefits of Our Next Generation CMMS

VAMS (Proposed CMMS)	Benefits of our Asset Management Program for the Township's Infrastructure
Full Transparency	Guaranteed 100% transparency for the Township in viewing asset, history, and cost information
Enhanced Risk Criticality	Asset risk criticality scoring to ensure proper work order prioritization
Automated Warranty Enforcement	Warranty timeline tracking Automated warning flags during coverage period
MOBILE Work Order Management	Technician friendly system interface Paperless, environmentally friendly solution Error reduction and time savings
Advanced Reliability-Based Approach for Preventive and Predictive Maintenance (PdM) Tasks	Incorporates PdM technologies for early detection & intervention Focused on failure finding tasks for hidden failures Ensures periodic condition evaluation Attention to housekeeping & preservation Partnership with specialty service providers for targeted expertise
Interfaced & Automated Purchasing Management	Ensures 100% cost capture back to the work order and asset Provides data driven analyses for repair vs. replacement decisions
Intuitive Dashboards	Provides key analytics and visual representations for strategic decision making

Technology Enhances Transparency and Accountability

When it comes to caring for your assets, we also strive for knowledge sharing and accountability to you. *We will be implementing technology to illustrate Key Performance Indicators (KPI's) on a visual dashboard for site specific elements of the asset management program and contract compliance performance metrics.* The KPI Dashboard described above will be viewable by the Township on your individual computer workstations. You will have unprecedented access to near-real time information, and ability to monitor Veolia's performance. See [Figure 1.5.2-2](#), at the top of the next page, which depicts the Veolia Asset Management System (VAMS).

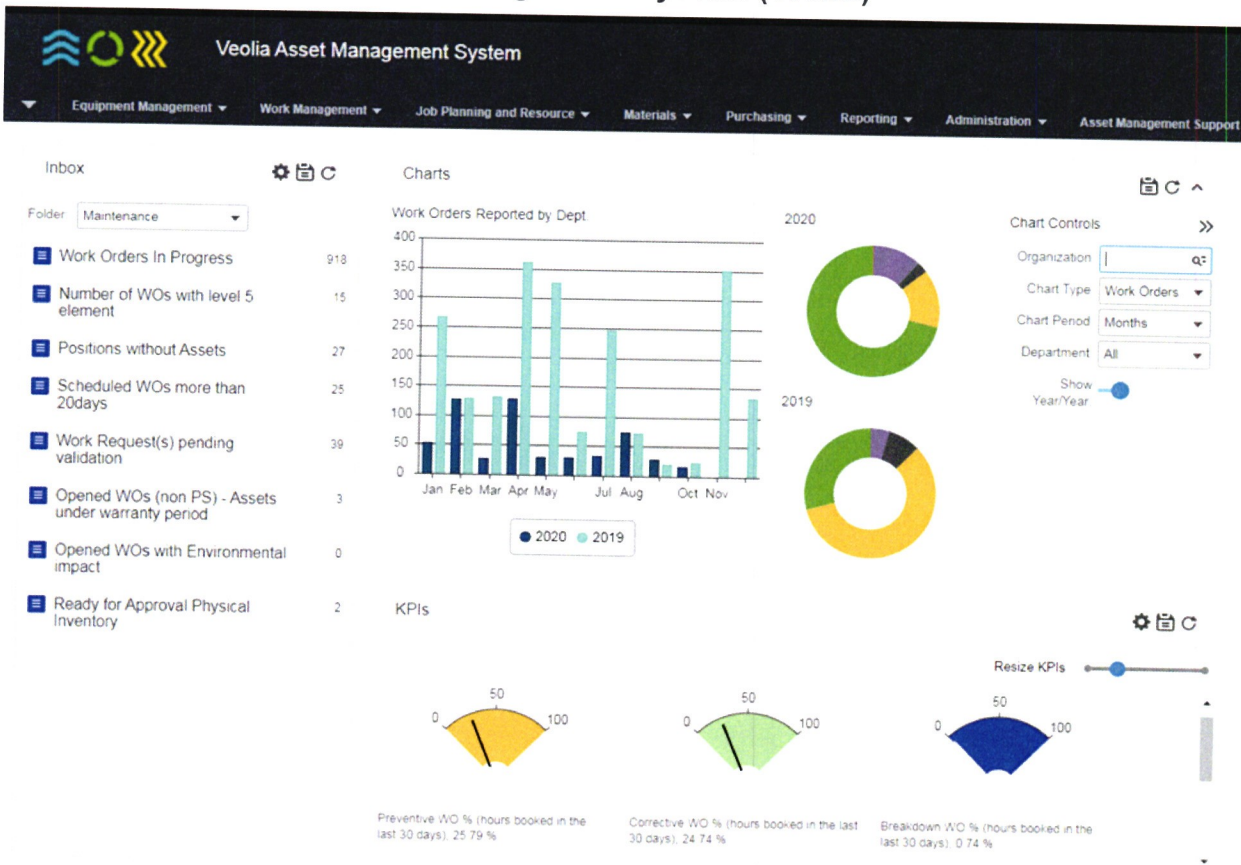
Preliminary Operations Plan

By the time we reach the Transition Phase, Veolia will already be well on its way to implementing a Final Operations Plan. The preliminary Operations Plan presented below incorporates the operations approach from our *nearby Rahway, NJ Water Treatment Plant O&M Project, which has similar size, process stream, and equipment to North Brunswick's facility.* Combining our knowledge and experience base, with that of your seasoned Operations Staff, will give the Township confidence that our Operations Plan is ready to go on Day 1.

a. Transition Plan

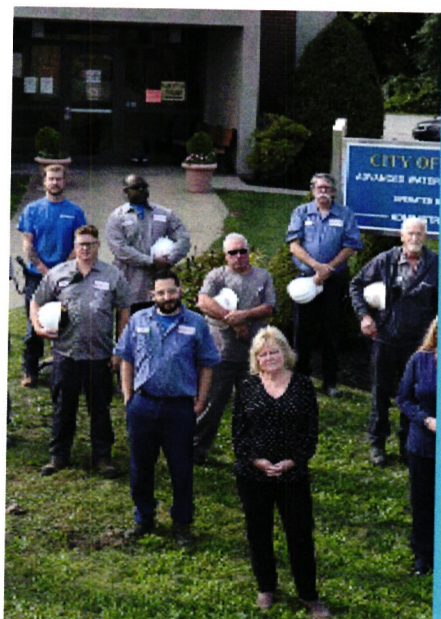
We constantly remind ourselves that Veolia is only as strong as our people. They are the lifeblood of our success, and they are truly valued and will be given every opportunity to succeed and grow within our company. This

Figure 1.5.2-2. Veolia Asset Management System (VAMS)



commitment must start from the very beginning of the Transition Phase. Having a well-thought out transition plan leads to an easier process for the Township’s Operations Staff, which results in **zero** disruptions to the operation for

your customers or your plant’s compliance record. To achieve and balance all of these goals, Veolia will mobilize our regional support team members (shown in Section III) to the site over the first several weeks.



Veolia has a long history of successful operations transitions. These range from small operations covering staff groups of five or more, up to large scale transitions such as that in 2018 when Veolia completed the acquisition of 23 water and wastewater operations contracts from American Water. These contracts covered O&M services agreements for: water treatment and distribution systems; wastewater collection and treatment systems; customer service operations; and energy facilities. In total over 115 staff were transitioned from these American Water run projects to Veolia, and the majority of these staff have remained with us. More recently, Veolia transitioned operations and staff at Mendham Township and the Plumsted Municipal Utilities Authority, New Jersey. These two operations transitions were supported by the core regional team in New Jersey and the East region that will work with North Brunswick.

Veolia looks forward to working with the Township during the negotiation phase to refine the activities and schedule presented below in Table 1.5.2-2. This Plan represents

our years of experience with transitions, but our ultimate goal is to make it reflect your goals, and keep **Continuity of Service** for your customers at the forefront of all activities.

Table 1.5.2-2. Veolia – Preliminary Transition Schedule Township of North Brunswick Water System Operations		
Task	Team Member	Delivery Schedule
Meet with client in a workshop to develop the detailed Transition Plan	Project Director/VP of Operations, Transition Manager and Project Manager	Within 30 days of the contract award
Recruiting and hiring of new staff to fill staffing vacancies	Human Resources Manager, Transition Manager and Project Manager	Ongoing with status updates to client.
Review site-specific safety policies	Project Director (with support from the Safety Manager and Transition Team)	One month prior to project startup.
CMMS kick-off and requirements workshop	Project Director and Regional Director of Asset Management	Within 30 days of project startup.
Provide safety training	Project Director (with support from the Transition Team, as needed)	Starting one month prior to project startup.
Review the Transition Plan and other deliverables with the client's management team	Project Director, Transition Manager and Project Manager	Every 30 days, from development through completion.
Develop Customer Service and Emergency Response Plan	Project Director (with support from the Transition Team)	30 days from contract award.
Develop Site-specific Safety and Security Plan	Project Director (with support from Safety Manager and Transition Team)	30 days from contract award.
Review all regulatory correspondence and discuss with the client's management team	Project Director	30 days from contract award.
Inventory requirements and procurement vendor review	Project Director and Transition Manager (with support from Transition Team)	30 days from contract award.
Begin vendor setup	Off-site Administrative Support and Project Director	Two weeks prior to project startup.
Perform inventory (vehicles, equipment, spare parts, chemicals, fuel and supplies/materials)	Project Director (with support from the Transition Team)	First day of project (following transition completion).
Perform a laboratory audit	Laboratory QA/QC Manager, with Project Director	Within two weeks of project startup.
Perform a safety audit	Regional Health & Safety Manager and with Project Director	Within 30 days of project startup.
Perform photo or video inventory (facilities)	Project Director (with support from the Transition Team)	Within 60 days of project startup.
Install and configure the data management software	Project Director and Specialists from Regional and Corporate teams	Within 60 days of project startup.
Operations and Maintenance Plan (including SOPs)	Project Manager (with support from the Transition Team)	Within 90 days of project start up.
Initial condition assessment	Project Manager and Regional Director of Asset Management	Within 120 days after start date.
Implementation of the CMMS	Project Manager and Regional Director of Asset Management	Within 120 days after start date.

b. Elements of Operating Plan

We will describe the basic elements of our Operating Plan in two ways:

- 1) Staff Assignments and Responsibilities by Facility, and
- 2) Operating Plan Work Packages – the basic building blocks that make up our overall operational approach:
 - a. Process Control Management Plan
 - b. Laboratory Operations
 - c. Regulatory Monitoring
 - d. Standard Operating Procedures (SOP's)
 - e. Energy Management

Staff Assignments and Responsibilities by Facility

Facility: Water Treatment Plant

- influent screens
- PAC (Powdered Activated Carbon)
- influent pumps
- chemical feed systems
- precipitators
- gravity filters
- high lift pumps
- backwash equalization tanks
- backwash thickeners
- sludge dewatering belt filter press
- process laboratory
- generator

Staff Assignments:

- System Manager
- Chief Plant Operator
- Plant Operators (4) – 24/7 coverage
- Electrical/Mechanical Repairer

Facilities:

- Meters (Residential & Commercial Large Meters)
- 24-inch Transmission Main (future 30-inch)
- South-West Renaissance Elevated Storage Tank
- Central Adams Lane Stand Pipe & Booster Station
- North-East Nassau Street Ground Storage Tank & Booster Station
- Distribution System

Staff Assignments:

- System Manager
- Water Distribution Foremen
- Water Repairers (2)

Operating Plan Work Packages

Process Control Management Plan

The Process Control Management Plan (PCMP) is a protocol for establishing process control strategies at our facilities. It relies on the development and regular review of reports that are developed in Hach WIMS, our company-wide web-based process control software system.

The PCMP tool forms the cornerstone of Veolia's computerized process control operations and laboratory data management system, and it is integrated with permit requirements, performance goals and SOPs. High and low warning and control limits for each critical control parameter along with a "report by exception" approach enable System Managers and Operations Staff to react to process variations before they may become effluent permit excursions.

Veolia has consistently implemented the PCMP protocol at every one of our plants. With a process-oriented mindset ingrained in our operational culture, process control parameters are understood by all plant staff, and each member of the team is empowered to diagnose when conditions may be an early-indicator of a permit excursion or process upset. The Township will directly benefit in terms of water quality compliance.

This overall system provides our operators with the capability to quickly review and analyze daily reports and make proactive/real-time process control adjustments and modifications to operational strategies in order to ensure compliance and efficiency. Veolia uses the information from PCMP to make necessary adjustments in unit operations and to maintain process control within target control ranges. A key outgrowth of the PCMP is the weekly process control meeting, during which the Chief Operator sets the target values for each process unit.

These setpoints, along with the daily laboratory results, are entered into the process control program, and daily flash reports are generated. If at any time the process is not within the desired target range, the program alarms automatically notify Plant Operators of the problem. The operating plan is revised and the results reevaluated until the process returns to normal operating conditions. Veolia has found this approach to be instrumental in terms of maintaining continuous compliance.



Laboratory Operations

Veolia will operate and maintain the laboratory facility at the water treatment plant which will be used by the O&M team for process control testing. Our O&M team will be responsible for sampling at the water plant and in the distribution system, with the number, frequency and location of tests done in accordance with the applicable provisions of the regulations, including the Lead and Copper Rule, 40 CFR 141 et. seq. They will be responsible for regulatory reporting.

Veolia will also contract with a State of New Jersey (NJDEP) certified contract laboratory for the other testing required under this contract, including: coliform determinations, pH, color, sodium, hardness, iron, manganese, lead, copper, heavy metals, THMs, PFAS, 1,4-Dioxane, volatile organic compounds (VOCs), corrosiveness, alkalinity, magnesium, calcium, turbidity, fluoride, cryptosporidium, giardia lamblia cysts, along with other tests required by the NJDEP and the U.S. EPA.

As with other contractors and support services agreements that in-place under the current American Water contract, we will evaluate the continued use the current contract laboratories

Quality Assurance & Quality Control Approach for Laboratory Analytical Data



Veolia's Technical Support team includes Subject Matter Experts that are responsible for QA/QC for plant and operations laboratory services, providing oversight of internal and external laboratory operations. This includes providing on-site technical assistance when needed, with an emphasis on managing and implementing Veolia's QA/QC program.

along with the use of other NJ laboratories that our firm has established relationships with.

Regulatory Monitoring

Veolia has a national contract with Citation Publishing, Inc., for their CyberRegs® service. This is a comprehensive, real-time, web-based database of federal, state and international government regulations, statutes and related data - including the Federal Register, Code of Federal Regulations, and state health and safety regulations. Regulations applicable to our sites are identified and summarized in a Regulation Tracker. These regulations are monitored closely from proposed, to comments, and to promulgation. Changes in regulations are communicated via targeted communications to affected Project Managers and Technical Directors, webinars, seminars, conference calls, and other environmental awareness campaigns.

Veolia will notify the Township when pending regulatory changes are first known, often years before they are set to become effective. We will both have adequate time to plan for operational changes or plant systems

improvements so service level to customers is not affected.

Standard Operating Procedures

All activities that materially impact the plant operations will be documented by written, step-by-step procedures, outlining proper handling, safety equipment required and hazards associated with the activity. Annual review and training regarding these Standard Operating Procedures (SOPs) ensures that a given procedure or practice is performed consistently and correctly, regardless of who performs it. A partial list of SOP's we envision for North Brunswick is as follows, which will be finalized during the Transition Phase:

- Daily Rounds Sheets SOP's
- Laboratory SOP
- Maintenance procedures SOP
- Emergency generator operations SOP
- Emergency Preparedness SOP
- Chemical delivery SOP
- Lock out tag out SOP
- Chemical system SOPs
- Sludge Processing and Disposal SOP
- Confined space entry / Multi gas detector SOP

Energy Management

Veolia's goal of being energy efficient aligns with the Township's. The first step to managing energy performance is collecting and analyzing relevant data. Through a new tool – The Veolia Efficiency

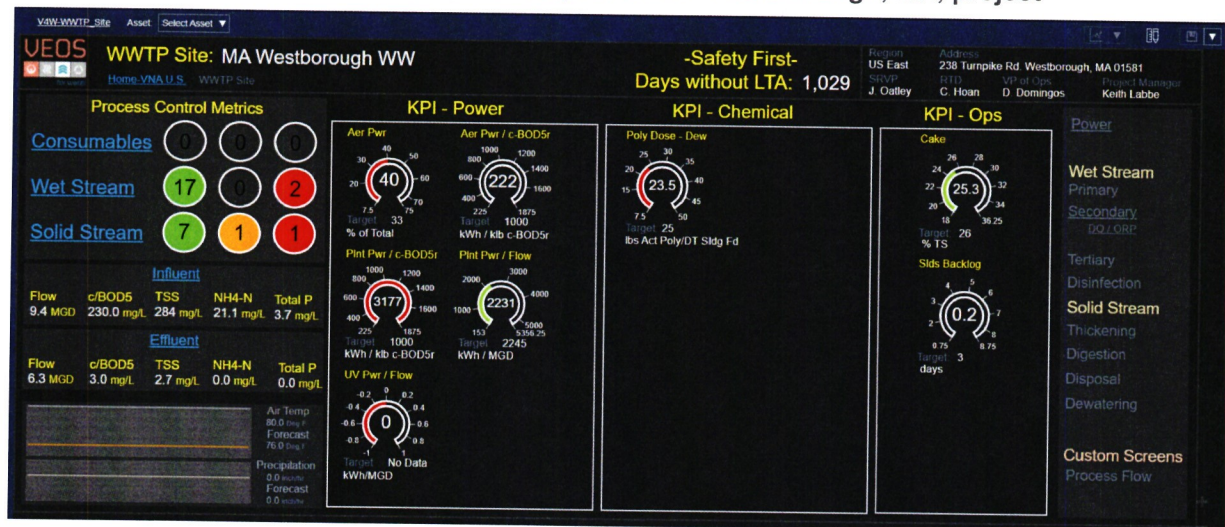
Optimization System (VEOS) - Veolia is implementing a new process to manage and optimize energy consumption.

The first component of this system, proposed by Veolia to be installed at our cost, are newly-available wireless power sensors. We will install these sensors on the most power-intensive – primarily pumping units - equipment in the plant.

The second component of this system is the VEOS tool itself. The VEOS is a custom-designed and built online process engineering monitoring program. It was fully developed in-house by Veolia's Technical & Performance Group, and tracks and displays near real-time equipment-specific energy consumption, consumables and "actionable data". These are shown in the form of Key Performance Indicators (KPI's) and KCPs (key control parameters). These provide our team something tangible they can all shoot for, monitor and achieve. This displayed data also serves an "early warning" function, so variances can be corrected before they become an issue.

The VEOS – also installed at Veolia's cost - will display these KPIs and KCPs for energy consumption – bringing in data from the power sensors mentioned above, displaying near-real time energy use for the major equipment in the plant. Armed with this data, and comparing it against energy KPIs for these unit processes, gives our team the ability to monitor and manage energy use in a new and powerful

Recent VEOS Home Screen Display Developed for our Westborough, MA, project



way. **Active energy management will have a direct impact through energy savings and lower energy bills.**

As added benefits beyond energy savings, the energy data being collected by the wireless power sensors, and relayed into the VEOS, will allow Veolia to perform regular assessments of the equipment's power consumption and comparative electrical health. In addition, when married with process information currently being monitored in other modules of the VEOS platform (i.e., flowrates), it provides the ability to analyze rotary equipment efficiency. This ability allows Veolia to monitor the condition and performance of the Township's major assets, and protect your investment.

c. Complaints & Emergencies

The System Manager and Chief Operator and will be immediately notified when issues arise that may potentially compromise treatment and water quality compliance.

For water treatment or booster station alarms or emergencies, one of our on-shift Operators will respond. This is one benefit of having a minimum of two O&M team members available at all times. In the first level of response - for a booster station alarm for example - one of the on-shift O&M Technicians will have SCADA information on alarm status and how urgent the situation is. Depending on the nature of the alarm, the tech may be able to resolve it over SCADA. If not, one of the on-shift O&M Technicians will be dispatched to the booster station. If the tech cannot resolve the issue once on-site, one of the on-call Maintenance Technicians would be brought on. Because the maintenance group is not staffed 24-hours a day, staff within these disciplines will perform on-call duty on a rolling basis and receive a stipend for such work.

In the case of a distribution system issue, such as a watermain break requiring excavation, it is possible that the Operator first responding would need to bring in one of our local, on-call emergency contractors. A Veolia Communications Team member will be on site during major events with an impact on customers, and interface with the public, such as watermain breaks.

Emergency situations could include, but are not limited to:

1. critical WTP equipment, such as raw or finished water pumps, or disinfection equipment failures.
2. distribution system watermain breaks
3. booster station critical pump failures, potential overflows or floods/bypasses
4. severe weather conditions impacting any of the above facilities.

d. Use of In-House Labor, Subs, and Vendors

In House Labor

Management and Operation of the WTP Facility, Booster Stations, Storage Facilities & Distribution System

- Daily Rounds & Readings
- SCADA Monitoring
- Process Sampling & Analysis
- Compliance Sampling
- Building & Grounds Maintenance
- Valve exercising
- Hydrant Flushing

Equipment Maintenance and Repair

Veolia performs nearly all preventive and corrective maintenance with in-house labor. Our goal is to limit the need for outside contractors and use your maintenance budget as efficiently as possible. This can best be done by continuously training personnel in a variety of maintenance techniques

When it comes to repairs requiring special expertise, for example, on rotating equipment, regional maintenance techs from one of our nearby NJ operations will be able to lend their guidance and expertise to oversee tasks by our onsite maintenance personnel. Veolia saves our clients significant cost by undertaking duties often subcontracted by other O&M firms.

Meter Replacements

Veolia will perform the required 50 residential meter replacements using technicians from our Distribution/Maintenance Team.

In NJ alone, Veolia replaces approximately 20,000 residential meters each year on a rolling basis. Critical to the success of this activity involves correctly identifying and prioritizing which meters get replaced.

As a starting point, we would offer the following process and criteria to identify meters for replacement. We look forward to developing this analysis and prioritization approach further with the Township, leveraging our experience elsewhere in NJ, and aligning this with our collective goals of providing superior customer service.

- Veolia understands that the Township uses Edmunds software for reviewing water meter data and work orders. The Township will provide Veolia with a laptop for access to the Edmunds software for viewing and completing work order tickets entered by users of the Water System. Veolia will also have access to the Township's Neptune Water Meter software to access meter data.
- Coordinate resources between Veolia and the Township to review consumption and billing on a regular basis.
- Optimize metering reports from the Neptune system to help identify meters which are faulty or beginning to fail to guide replacement work.
- Replacements are required if the meters are found to be damaged or faulty, so we would review the current process and suggest improvements if necessary to ensure meter performance issues are accurately and consistently captured and fed into the work order system.
- Develop replacement guidelines due to age for:
 - Meters 5/8" through 1"
 - Meters 1 1/2" or greater



- Develop replacement guidelines due to flow-through criteria found in the American Water Works Association (AWWA) M6 Manual. "Flow-through" refers to the amount of water - in total - that has passed through a meter of a given size over its lifespan. Above a given amount, industry standards dictate that the meter accuracy may be declining and should be considered for replacement.

Large Meter Testing Program

In NJ alone, Veolia replaces approximately 500 large meters each year on a rolling basis. The testing methodology plays an important role, and typically the costs/benefits of full bench testing (which requires removal and replacement of the meter to bench test), vs in-situ field testing need careful consideration. We look forward to weighing these options with the Township and developing the approach that best suits your needs.

From a testing criteria standpoint, we would offer the following as a starting point to be further developed with the Township.

- Develop standards for Meter Accuracy Rates:
 - 98.5% - 101.5% - Accurate within Industry Guidelines
- <98.5% - Measured less than actually used
- >101.5% - Registered more than actually used
- Develop standards for meter testing flow rates. The tables below - from AWWA Manual M6 - provide the flow rates recommended for testing meters of various sizes and types. To measure accuracy across a full spectrum, there are three flow rate ranges for testing meters: High Flow (Max Rate), Low Flow (Min Rate) and Intermediate flow (rate).

Veolia's recent experience has trended towards moving away from large Compound or High Performance Turbine meters, because these traditional meters have moving parts that degrade over time and flow-through, and are more prone to jamming, reducing accuracy.



Veolia's NJ-Based Meter Test Bench Facility - For Meters 3-inch and larger

We have found solid state meters - particularly those manufactured by Neptune (MACH 10 meters) - superior to traditional mechanical meters because they have no moving parts, which make them more resistant to jamming, degradation and tampering. Solid state ultrasonic meters also keep their accuracy through a wider flow range. We look forward to providing the Township with recommendations based on our experience as we progress through the large meter testing and replacement program.

Work by Subs and Vendors

Veolia recognizes the long-standing relationship the Township has enjoyed with many of its locally-based subcontractors and vendors. We will continue to honor these working relationships. When and if assistance from new entities becomes necessary, we will leverage our trusted service providers we have built relationships with across our NJ Operations.

We will provide a dedicated point of contact from our on-site workforce, or regional support teams, to oversee and direct the work of outside third parties. Work performed using outside parties is anticipated to include:

- Work requiring excavations - watermain break repair, etc.
- Meter testing (Metertech)
- Compliance Testing & Analysis – Lab work (Aqua Pro-Tech Lab)
- Calibration of Instruments & Process Meters
- Predictive Maintenance data analysis and reporting Azima and Selmon.

- Major or specialized repairs requiring outside labor (e.g., storage tank painting, roof replacements, site work)
- Sludge Transport & Disposal - HEI
- SCADA – ACC
- Software providers

e. Equipment and Procurement

Earlier in this section we provided a list of the Veolia owned equipment and vehicles to be dedicated to the execution of the work.

Veolia's Corporate Procurement Group provides our operations teams with dedicated personnel that are solely focused on optimizing financial and operational performance through procurement activities. This dedicated Procurement group utilizes Veolia's national buying power and corporate level agreements to leverage purchasing power with key vendors of commercialized, "commodity-type" materials (preventive maintenance equipment and consumables, chemicals, janitorial supplies, etc.) Veolia's Procurement Group negotiates national purchasing agreements for these items that significantly lower costs of operation to our clients and your ratepayers.



f. Operating Procedures for Health & Safety and Aesthetics Management

This section is discussed as two sub-topics:

- 1) Health & Safety (including Security)
- 2) Aesthetics
 - Control of odors
 - Noise
 - Litter

Health and Safety Operating Procedures



Safety Organization and Responsibility

Veolia’s proactive and positive safety culture will be led by our System Manager, Peter Petersen, along with a designated Site Safety Coordinators (SSC), appointed from one of the other on-site team members. They will be supported by the Regional Health and Safety Manager, Shane Calvert. The Site Safety Coordinator has a dual reporting relationship, working as part of the on-site operations team and also reporting independently to the System Manager on safety and health. The role of SSC represents an opportunity for staff to assume leadership responsibilities and promote their professional development, and new volunteers are always encouraged.

Safety Training

Our proactive safety training platform is implemented and managed by our SSC, with support from the System Manager and Regional Health and Safety Manager.

Training is reinforced through other means such as tailgate/toolbox safety talks, Take-5-for-Safety program modules, our monthly

Hazard Recognition program, annual Safety Week event, and our annual employee safety incentive program.

Table 1.5.2-3. Veolia Safety Training Calendar of Awareness and Training Topics

Month	Awareness Topics	Training Topics
Jan	Tailgate/Toolbox Safety Meetings	Hazard Communications
Feb	Asbestos in the Workplace	Respirator Protection & PPE
Mar	Electrical Safety	Hazardous Energy and Lock-Out/Tag-Out
Apr	Preventing Sprains and Strains	Excavation: Trenching & Shoring
May	Good Housekeeping (Facility & Security)	Laboratory Chemical Hygiene Plan
Jun	Office Safety	Bloodborne Pathogens and First Aid/CPR
Jul	Preventing Heat Stress and Heat Exhaustion	Fire Extinguisher Use & Hot Work Welding
Aug	Slips, Trips & Falls Protection	Emergency Action Plan & Response Actions
Sep	Ergonomics	Confined Space Entry
Oct	Inclement Weather Hazards	Cranes & Forklifts, Vehicles Safe Driving
Nov	Grounding Hand and Power Tools	Control of Power in Portable Equipment
Dec	Incident Investigation	Hazardous Materials & Bulk Chemicals SOPs

Other Tools and Approaches

Veolia will employ a variety of other means to foster a strong safety culture at the Township’s facilities, including:

- Awareness Campaigns – We use awareness campaigns and tools to keep safety topics fresh and at the forefront of our personnel’s daily routines. We continually remind our employees to conduct a Mental Safety Assessment as second nature before performing any task. We also run multiple Take-5-For-Safety campaigns, hold an annual Safety Week event, and conduct monthly "H&S All Hands" calls that management staff attend.

- Audits and Inspections – Veolia management and third-party H&S professionals, trained in safety and compliance policies, procedures and best practices, perform periodic on-site safety audits and inspections. In addition, Tim Shea, as the Regional VP of Operations will conduct quarterly senior management safety assessments that focus not only on compliance items, but general safety management and site safety culture.
- Annual Employee Safety Incentive program – To gain further involvement from employees at our plant sites and in distribution, we set annual metrics and targets for all workers (including site management) to complete to earn a special safety bonus award. This award program is not based on injury rates or similar lagging indicators, but rather on leading indicators including training and a requirement for all workers to identify proactive safety measures.
- Before and After Safety Campaign – In 2020, we began a program that asked each of our project sites to identify areas where safety improvements were needed, and where a solution was determined and subsequent action taken. Employees were engaged to take a “before” photo showing the original condition, and an “after” photo to show the safety improvement that was made.

Safety Program Conclusion

While policies and procedures are the cornerstones of an effective safety program, we believe that the success of our program can be directly attributed to employee involvement, accountability standards and management commitment – demonstrated through leadership-by-example from our top-line executives to the front-line supervisor. Backed by our commitment to Goal Zero, and with the enactment of our Always Safe Rules, employees at all levels of the organization are clear on the company's expectations that safety is a top priority along with the importance of working safely every day -- not just for their own safety, but for the safety of

their coworkers, our clients, and the community.

Security Program

During the Transition Phase we will conduct a security audit of the facilities to develop a site-specific security plan. This plan and approach would be based on our corporate [Facility Security Guidance Manual](#), which has been developed and refined in application by our company. It is used to assist local O&M teams in assessing the current state of system security and color-coded charts to assist with addressing the various threat levels.

This Guidance Manual will be reviewed with the Township, and we will also review any current policies and procedures that you have in-place.

This Guidance Manual will also be reviewed periodically, and updated when needed, and will also be maintained in accordance with the current vulnerability assessment and emergency operations plans for the Township's water facilities.

Veolia also employs SOPs and Best Practices company-wide for security measures that are focused on four main initiatives: security of individuals and property; cyber security; investigations; and alerts/crisis management.

Veolia's site security approach for water facilities like yours is composed of multiple factors, including:

- Physical protection (walls and perimeter boundary fences and access, the perimeter of the buildings and their access - doors and windows), based on the resistance of materials to climbing or burglary.
- Control access at the front entrance to each facility.

The overall purpose of our Security Plan and approach is to prevent threats and deal with any attempts to harm physical and non-physical assets and the public.

In addition, Veolia has developed crisis management and business continuity plans to be employed in the event of a significant security incident. Depending upon the nature of the business unit operations, several Veolia facilities have also established security programs to meet the regulatory obligations

established by the U.S. EPA and other federal agencies. Specifically, where needed, facility vulnerability site assessments and site security plans have been developed, documented and implemented to comply with these regulations.

Aesthetic Management Plan



Veolia has an internal mandate to operate exemplary facilities, and an integral part of that is a positive image. Regardless of facility age, the caliber of an operation is usually gauged by the appearance of the facility upon first arrival.

The image portrayed by the facility is a measure of the pride of its operating personnel and corresponds to the efficiency of operations and is indicative of the treatment performance level being achieved. The time made to keep operations clean is equivalent to time spent making the facility a safe workplace.

To that end, we place a great deal of importance on maintaining facilities free from odors, noise, and fugitive dust, vectors, litter and safety hazards. In addition, we plant flowers, wash windows, sweep roadways, and maintain proper lighting, all in an effort to demonstrate our pride in operations and proper maintenance of your assets.

- We quickly dispose of all grit and screenings materials.
- We train our staff on the importance of maintaining a workplace free from odors, noise, vectors and litter.
- We assign our employees specific site maintenance and housekeeping tasks and equip them with the necessary tools and supplies.
- We monitor fence lines for fugitive odors

Noise is another area we monitor in our day-to-day operations to ensure that our activities are neighbor-friendly. We keep doors and windows closed on noisier buildings that house moving equipment, and endeavor to limit outdoor construction activities to reasonable day-time hours.



Seasonal power washing of concrete at Veolia's Southbridge, MA, WWTP Project

g. Reporting Systems and Sharing Information

In the Information Age, it's easy to suffer from Information Overload. At the same time, we are accountable to the Township as our client, and our best projects are ones where we keep our clients engaged and informed. Two-way communication results in successful projects, and happy utility customers.

While it would be easy to list all of the types of information we can furnish the Township with, the truth of the matter is we want to make the information exchange valuable (what you care about), timely (when you want it), and user-friendly (how you want it – desktop dashboards showing KPI metrics, mobile apps, shared websites, or even the tried-and-true - and still much-loved - hardcopy monthly report)

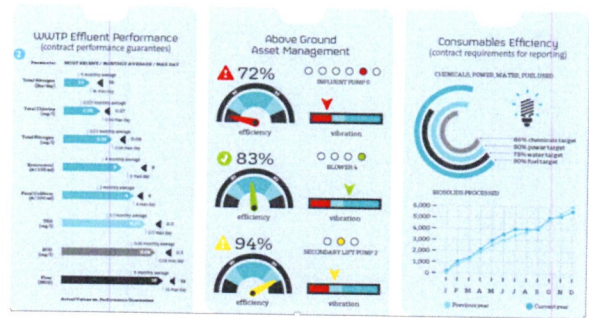
Value-Driven Reporting Topics to the Township of North Brunswick

We have only just begun to understand the aspects of Veolia's operations that will be the most valuable to you, and we offer a preliminary list of topics to report on below. We anticipate much more to come as we engage with you and your stakeholders through the negotiation and transition process.

- Plant Operating Efficiency and Regulatory Compliance
- Meter population condition, age, accuracy
- System Water Loss
- Equipment Condition and Performance
- Use of Energy
- Year-to-Date and Forecasted Spending for Pass-Through Costs:
 - Consumables – chemicals, etc.
 - Sludge Disposal Quantities and Costs
 - Maintenance Spending

most two-way communication and collaboration.

Appendix B, Part 1, provides example Monthly Project Report documents from our water operations at Buffalo, New York. These are representative of the types of reports that we can deliver to the Township over the course of this new operations partnership. Other examples that show digital reporting options we have created for clients, and for our internal purposes, are shown below. We look forward to customizing all the aspects mentioned above – what you want, when you want it, and how you want it – with the Township as we move forward.



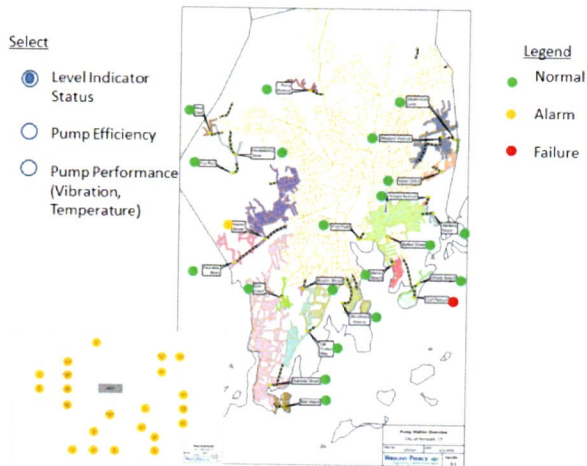
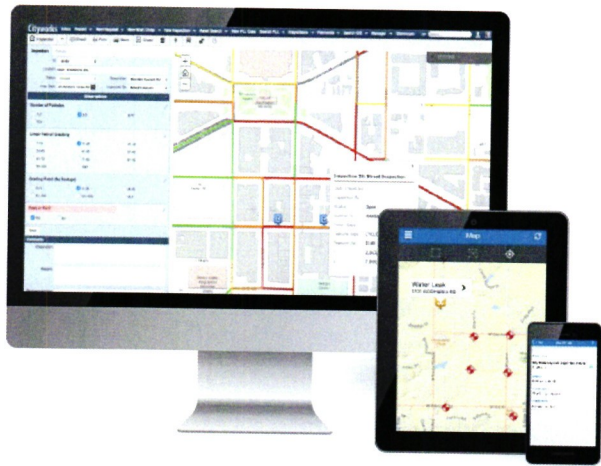
The KPI Dashboard can integrate information from our process control (Hach WIMS), CMMS (VAMS) and the Township’s SCADA systems into a single platform. Not only does this provide a single application for ease of access, but separate data trends can be correlated to develop a deeper understanding of interrelated plant and system functions. The Township can understand the “total picture” of how the plant is performing, and asset condition, in a single interface.

A consistent PCMP program at all of Veolia’s plants allows annual measurement and benchmarking of approximately 20 KPI’s at facilities across the globe for energy, consumables, and process performance. This internal initiative represents a significant undertaking for Veolia, and allows us to impart global best practices to our clients on a local level.

We also acknowledge the list of reporting requirements and topics listed in RFP section 3.11. All of these topics are ones which we are readily able to address in Monthly, YTD, and Annual Reporting timeframes. Again, we look forward to a deeper dive with you and your stakeholders to examine which aspects of these topics are of most value to you, and what format the reporting should be in to drive the



Sample Graphics from Veolia’s VEOS System for our Naugatuck, CT, WWTP project



Veolia can integrate GIS map-based reporting with mobile apps for distribution network maintenance activities

h. Accounting & Financial Reporting

SAP Concur is Veolia’s standard tool for requisitioning, purchasing and reporting at the project, regional and corporate levels.

This tool is used to manage indirect purchases, invoices and expenses in real-time, providing executive dashboards, alerts, expense management and real-time benchmarking.

Using the power of the SAP Concur tool, financial records in the form of invoices, purchase orders, packing slips, and receipts can be collected daily, recorded weekly and consolidated monthly for payment or reimbursement.

Detailed cost records must be maintained to justify the purchase or repair of facility equipment, ensure that vendors are paid and that the facility demonstrates fiscal

responsibility to the company and the client in managing its operations costs.

Additionally, this financial platform allows Veolia to leverage our company’s buying power with key vendors, such as equipment, chemical and service vendors.

Veolia also offers robust purchasing, financial tracking and reporting tools that will provide the level of detail required under this contract, including monthly and annual cost and operations reports that ensure no surprises and effective tracking of the cost and operational details associated with Veolia’s contractual obligations to the Township.

i. Transition of Material Supply Contracts

Veolia will, at the Transition Stage, evaluate the material supply contracts in place with the current System Operator.

Our goals in evaluating and then selecting/transiting these contracts will be three-fold:

- a. First and foremost, to ensure the continuity of the operations, seamless and undetected from the standpoint of your utilities’ customers.
- b. To also ensure the best value for the Township, especially for items such as chemicals, sludge disposal, and certain repair parts and materials, that represent a significant portion of the overall operations cost, and
- c. Finally, to recognize the economic and community benefits of continuing to source these items from locally-based, trusted suppliers.

Our Transition Team will use the resources of our Corporate Procurement Team to evaluate current vendor and supplier agreements, achieving the optimal balance of all three of these goals. Whenever desired by the Township, we will bring you into these decisions as they affect your local community.

Veolia has recent experience with similar types of transitions. In 2018, Veolia completed the acquisition of 23 water and wastewater operations contracts from American Water. These contracts covered O&M services agreements for: water treatment and

distribution systems; wastewater collection and treatment systems; customer service operations; and energy facilities. In total over 115 staff were transitioned from these American Water run projects to Veolia, and the majority of these staff have remained with us.

j. Plan for Addressing Scope of Work Issues

We have organized this subsection according to the Scope of Work as described in Section 3 of the RFP.

General – Water Facilities Services

- Meters and Automatic Meter Reading Devices Installation - Meter and AMR Device Installation will be performed by our Distribution & Maintenance Division. Testing and replacement program development will be overseen by our team members Frank Cordero and Ed Hackney, and we will use a subcontractor for testing of the meters.
- Wholesale Water Supply Agreement - The contract allows the Township to withdraw an average of 8.0 MGD with a peak of 8.8 MGD of raw water from the canal in accordance with the current rate structure (RFP Appendix C-2).
- Water Quality Standards – Veolia will provide a Permit Compliance Guarantee as part of our Service Agreement with the Township.
- Municipal Water (Non-Billed) Service Charges

Operation, Maintenance, Management and Repair of the Facilities – our plans are detailed throughout this Section 5 – Part 2, including information on:

- Water System Facilities
- Testing and Laboratory Analysis

Staffing – our plans are detailed in Section 3 – Administrative, as well as earlier in this Section 5 – Part 2 under the Personnel Discussion

- Municipal Personnel – we specifically acknowledge the employment offer, transition, and professional development and support of the Township’s municipal personnel that

are so integral to the continued success of your water utility operations.

Licenses – Licenses will be provided by the transferring Municipal Personnel. If these individuals elect to leave Veolia’s employment, we will backfill the licenses through our deep bench of NJ water licensed operators. We are continually feeding this pipeline through our partnerships with educational institutions in NJ, such as the Rutgers University Operator Training Program.

Permits – we will be responsible for obtaining all permits in the name of the Township as permittee – our network of in-house NJ water professionals, along with your transitional Municipal Employees, all of whom have long-standing relationships with NJDEP personnel, will help facilitate this process.

Compliance with Laws and Regulations – Through the combination of your transitioning Municipal Personnel, Veolia’s network of NJ-based water industry professionals, and our in-house operational experts in the wider realm of environmental and hazardous waste operations and regulatory compliance, the Township can be confident we can address anything that comes our way, often with decades of first-hand experience to guide us.

- Water Quality Accountability Act – resources from our other NJ-based water projects – in particular John Hroncich, P.E. (pictured) – will lend experience and expertise with structuring an efficient program to comply with this relatively new, and multi-faceted, regulation.



Safety & Security – Detailed in part f. Operating Procedures for Health & Safety and Aesthetics Management.

Capital Improvements – We are prepared to assist the Township and your consulting engineers in preparation of Capital Plans and Budgets, bringing in our operations and maintenance expertise.

Repairs – In the following pages we discuss our approach to build skill sets of our in-house maintenance team to in-source as much labor as possible in completing repairs of the

Township's equipment and buried infrastructure. Subcontractors from the local community will also play a critical role when the nature of the work demands a specialized skill set. Accurate and timely reporting of monthly and YTD expenses and year-end forecasts to the Township will be important coordination activities given the shared approach to Repairs.

Chemicals and Sludge Removal – similar to the approach outlined above for repairs, we acknowledge and appreciate the importance of the exchange of financial information related to this items with the Township. We will strike the balance between cost, service, and relationships with the Township's long-standing vendors and service providers. We will seek opportunities where Veolia's purchasing power can be leveraged without upsetting this balance.

Reporting Requirements – A significant focus during the Transition Phase, we detailed our approach earlier in Section g. Reporting Systems and Sharing Information

Township Access to Facilities and Records – as the owner of the facilities and records, and our client and valued partner, we acknowledge our duty to facilitate and provide access to the Township.

Public Relations – Chris Halleron (pictured) will assist with developing this program during Transition Phase. This topic takes several forms:



- Hosting and participating in events that engage with, build relationships with, and benefit the local community. We have provided examples in the Executive Summary where we do this in NJ.
- Specific information-sharing sessions with community groups and other stakeholders when an upcoming water system operation will impact them.
- During emergencies, or events that have a particularly significant public impact (watermain breaks), having an on-site presence – for community relations. Also, using on-line applications to disseminate useful information to the public.

- We will always go through the first Township for pre-approval and alignment of our activities in this area.

Continuity of Services – We will ensure not only uninterrupted service – but **undetected change** – to your residents and customers as we transition in as your O&M Provider. See Table I.5.2-2, presented earlier, for details.

Emergency Situations – See subpart “c,” presented earlier, for details on Veolia's Emergency & Contingency Plans.

Miscellaneous

- New Equipment, Relationship, and Notice of Litigation are all acknowledged by Veolia.
- Hazardous Wastes
 - Veolia operates three business lines – Water, Waste, and Energy. Our Waste business line specializes in the responsible and safe management and destruction of Hazardous Wastes. We can offer expertise, guidance, or direct assistance should any issues of this nature arise.

k. Copy of Veolia Employee Handbook

As outlined in the RFP, the Township has designated nine positions for the O&M team as “Municipal Employees” that will be transitioned and retained during the first year of the contract. Veolia has structured our O&M team to meet this requirement, and we will support these staff with ongoing training programs covering operations and maintenance procedures, management, compliance, safety and other areas required for the proper performance of their duties and opportunities for professional development.

To illustrate the types of information that will be available to our staff at the Township's water operations, we have provided the printed copy of the Employee Handbook as Appendix B, Part 2. This summarizes the types of information that we offer to our staff on health care coverage, benefits, training and other benefits they can access through the on-line Handbook.

In recruiting and retaining staff for our O&M team we will offer a competitive wage and benefits package, along with the other protections that are documented in our Employee Handbook.

I. Sample Maintenance Program Documentation

Veolia develops and maintain site and operations specific maintenance and asset management documentation and SOPs for our water operations. [Appendix B, Part 3](#) provides a sample Maintenance Management Program that was developed for our Brockton, MA, project. This is typical of the type of document that we will develop for the Township’s water system as part of comprehensive maintenance and asset management approach, which is summarized in the next subsection.

m. Elements of Veolia’s Maintenance & Asset Management Program

Asset Management Approach – People, Process, and Technology

Our Asset Management approach centers around three main aspects: People, Processes, and Technology. Today, with so much of the water industry workforce having retired or retiring soon, we are putting a renewed focus on equipping our O&M staff to preserve our clients’ assets. With the older workforce departing, we must strike a balance between retaining and passing down institutional knowledge, developing new staff, while also incorporating opportunities for new technology into the maintenance program. [Staff development in North Brunswick will be even more important, given that we plan to hire](#)

[two new technicians for our Maintenance Team.](#)

People

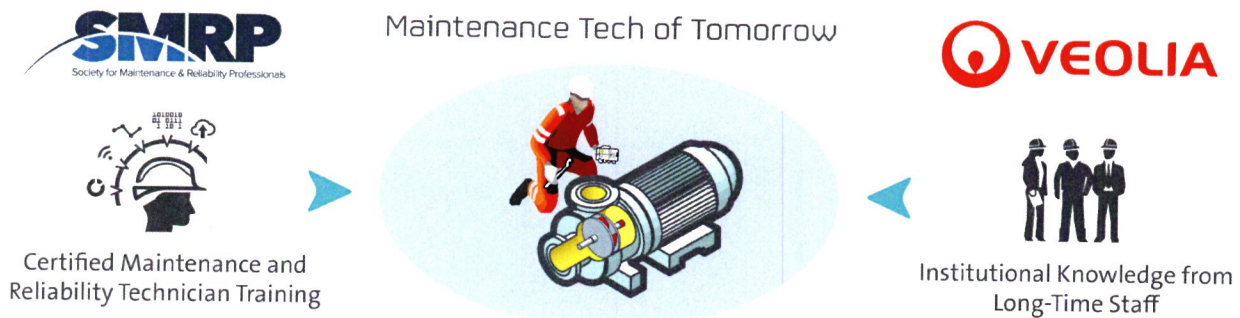
People are our greatest asset at Veolia. Investing in them, and enhancing their skills, fulfills a dual benefit: to Veolia in terms of workforce retention, and to the Township in terms of asset condition, lifespan, and efficiency.

Veolia is continuing our rollout of an initiative to train our maintenance staff on holistic maintenance and reliability principles. Having the correct skillset to perform a specialized maintenance task is critical. But ensuring that our employees have the ability to operate and maintain assets in a manner that avoids the need to apply that maintenance technique is even more ideal. As an example, resources spent training technicians on the correct way to repair or rehabilitate a pump would be more effectively spent training technicians on how to maintain and inspect that same pump, so that it needs repairs or rehabilitation less frequently. This knowledge comes in the form of maintenance & reliability assessment, training and certifications.

Investing in building the best Maintenance Team for North Brunswick means your assets last longer, and perform more efficiently. And equipment health leads directly to Environmental Compliance.

Veolia’s maintenance and reliability training program is based on skill development, qualifications and certifications obtained through the Society of Maintenance & Reliability Professionals (SMRP). SMRP is a

Figure 1.5.2-3. Maintenance Tech of Tomorrow



global organization that has established guidelines for maintenance and reliability knowledge and provides the only ANSI-accredited (American National Standards Institute) certification programs that are ISO/IEC 17024 compliant.

We will be working to accredit our in-house O&M technicians and maintenance staff with the Certified Maintenance & Reliability Technician (CMRT) certification. The value of this certification process is two-fold. Once achieved, it illustrates that the credentialed person is competent and knowledgeable in many aspects of the following four primary areas of maintenance and reliability:

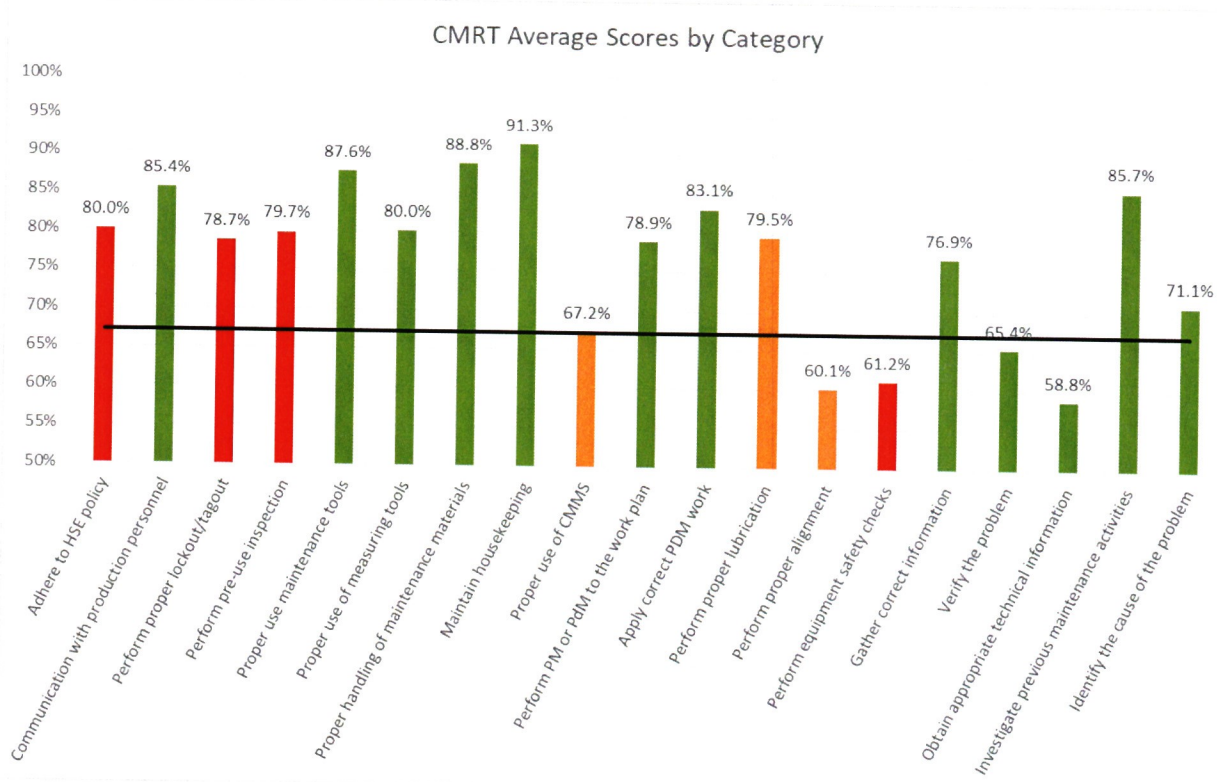
- General Maintenance Practices
- Preventive & Predictive Maintenance Practices
- Troubleshooting & Analysis
- Corrective Maintenance Practices

The second valuable feature of the CMRT credential process is the applications of the testing results for individual specific development plans. There are 23 subset categories of knowledge and each candidate is

scored against the industrial average. While this average score defines certification passing or failing, the additional information facilitates the development of focused training efforts at both the individual and group level. *Within the first six months of contract commencement, our maintenance staff will sit for the CMRT exam and we will build our employee training plan based on those results.* We are confident that many will be successful in their first attempt to obtain the CMRT certification, and Veolia site management will be focused on the test results in order to address in-house skills development needs. Figure 1.5.2-4, illustrates an example of test results from a proctored group testing session. The scores across the team are anonymous and aggregated to obtain an overall view of the proficiency in the 23 individual areas.

The Certified Maintenance & Reliability Professional (CMRP) is a separate credential that our maintenance supervisors and managers will obtain in addition to the CMRT certification. This certification tests the individual on a much broader category of maintenance, reliability, and overall asset

Figure 1.5.2-4. CMRT Average Scores by Category



management principles. Like the scoring methodology of the CMRT examination, the individual is scored on a broad scope of expertise against a universal industrial standard. The CMRP exams covers five pillars of the SMRP body of knowledge:

- Business and Management
- Manufacturing Process Reliability
- Equipment Reliability
- Organization and Leadership
- Work Management

Obtaining either of these credentials is an achievement, but to remain certified, each individual must obtain a required amount of continuing education credits on a three-year basis. There are numerous ways to obtain the required CEU's and the benefit is that our staff will continuously be engaged in the improvement process on both a personal and professional level. *The more continuous improvement training our people complete, the better the long-term condition of your assets.*

Process

While our People provide the horsepower to effect maintenance tasks, the Process is the "brain". The process drives the selection, scheduling, and quality assurance of each task. Developing, maintaining, and improving processes is vital to the effectiveness and sustainability of our asset management program. A well-functioning maintenance process positively impacts your facility and assets, with improved asset health, life, and efficiency, ultimately resulting in control over capital costs and robust environmental compliance.

The maintenance management process consists of everything from the work identification process, work planning and scheduling, work execution, to work reporting and follow-up. Our staff employ both formal and informal processes in relation to these areas, which include:

- Work Identification
- Work Planning /Scheduling
- Work Execution

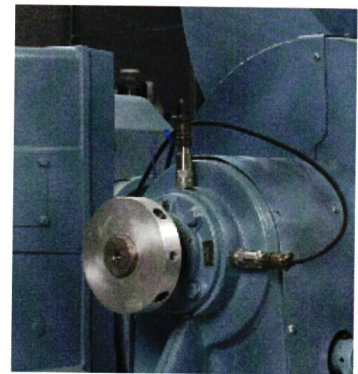
- Reporting - Site Specific Key Performance Indicators & Dashboard
- Capturing Maintenance Task Data
- Risk Assessment
- Preventive Maintenance Review & Optimization
- Asset Condition Assessment
- Inventory Control

Technology

We discussed the transition to our VAMS CMMS earlier in Section 5 – Part 2.

In addition, we will incorporate technology for **Predictive Maintenance**. To protect the Township's investments in the major pumping equipment at the water treatment plant, Veolia proposes to develop a Predictive Maintenance Program, incorporating the latest sensors and monitoring technology. This will allow Veolia to regularly monitor the condition and mechanical performance of the rotating equipment, and proactively identify, diagnose, and address minor performance issues before they become major maintenance headaches, and costs.

Across our organization, Veolia uses various predictive technologies, including thermography, oil analysis, ultrasonic technology, vibration analysis, ultrasonic thickness testing, motor circuit analysis and electrical testing to more accurately predict potential failures and support planning of costs to repair or replace. For the new rotors, we believe vibration monitoring will be the most cost effective method of predictive maintenance.

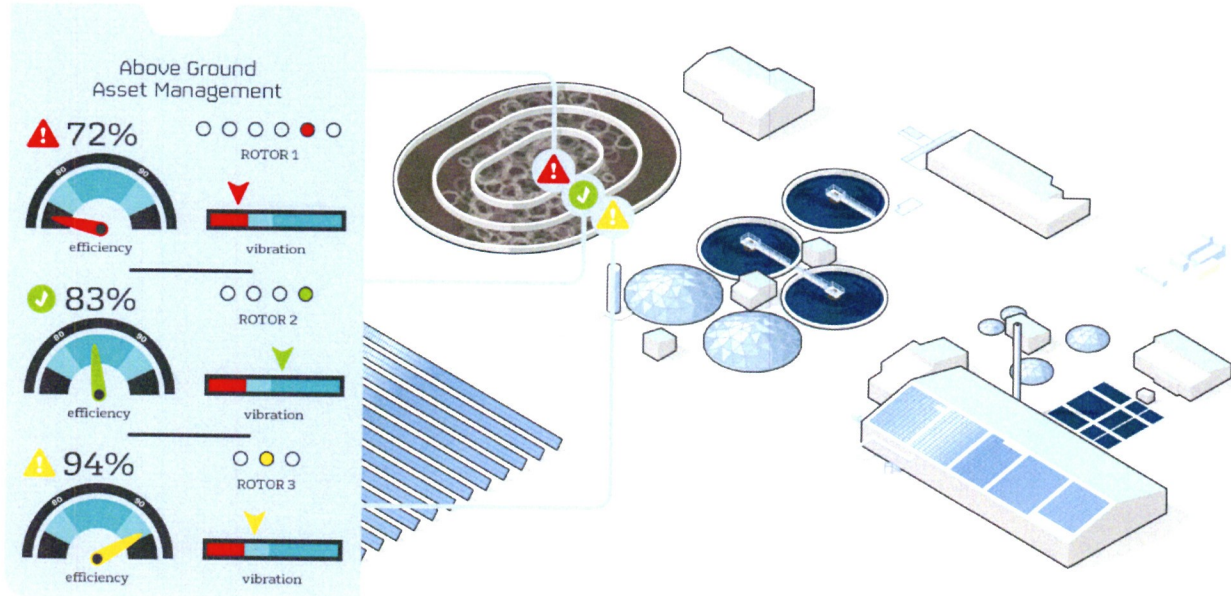


Proper Accelerometer Installation for Predictive Maintenance Analysis

Vibration Monitoring

Vibration monitoring and analysis is capable of proactively identifying a variety of mechanical failure modes in equipment, including:

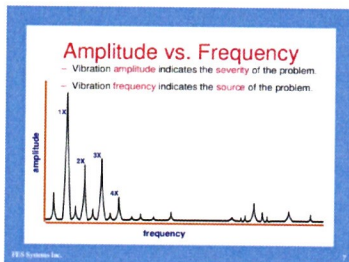
Figure 1.5.2-5. Efficiency and Vibration Monitoring Diagram



- Bearings
- Shaft Misalignment
- Foundation anchoring (“soft foot”) issues

This wide-ranging applicability makes it the best parameter to monitor general mechanical equipment condition and provide alarm/trip protection.

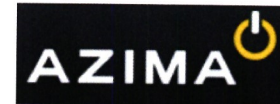
Vibration for the major pumping equipment will be measured by accelerometers. They will be permanently installed to allow ongoing



equipment condition assessment, and provide alarms and trips at predetermined levels. The accelerometer measures dynamic acceleration, or vibration, and generates a 4 – 20mA signal proportional to the amplitude of that vibration. That signal can be used to alarm and trip assets.

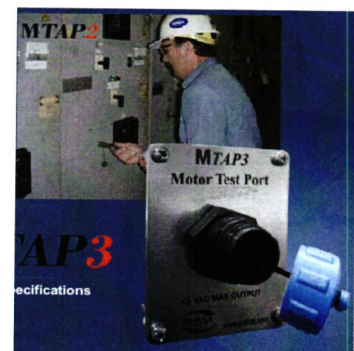
Beyond this, the signal will also be post-processed to provide a vibration spectrum for regularly scheduled, detailed equipment condition analysis. If vibration is present outside of normal ranges, this analysis identifies the source of the vibration, such as bearing inner race fault, or shaft misalignment.

This analysis will be performed by one of our specialty subcontractors (Azima), and will then be sent to our Maintenance Manager for review. It will be represented in a simple graphical format on the VAMS Dashboard interface, and will also integrate with VAMS to generate corrective maintenance work orders if necessary.



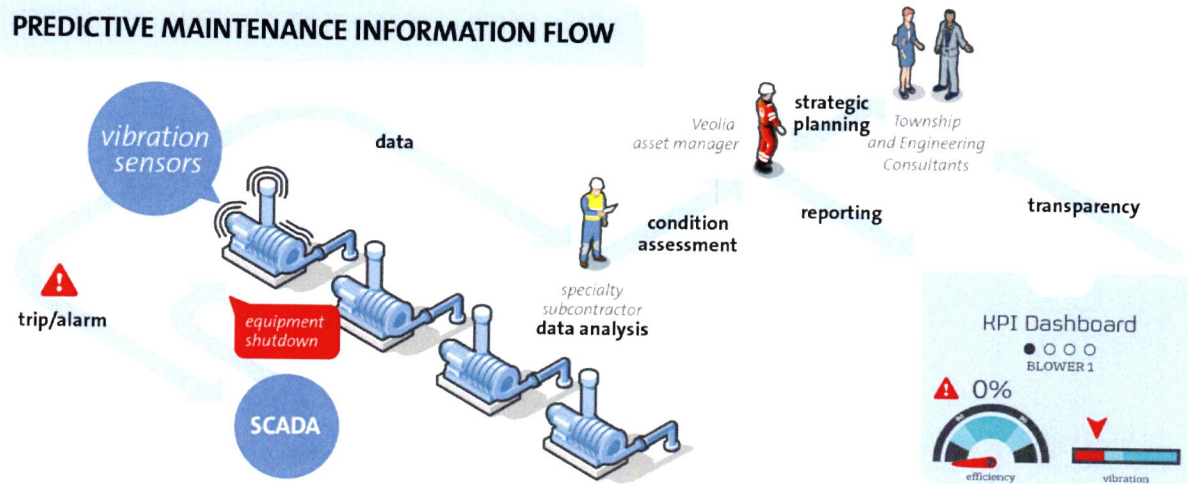
Pump Motor Condition Monitoring

Recognizing the criticality of the motors that drive the pumping equipment, Veolia also proposes to install test ports on MCC panels to allow electric motor condition monitoring. This Predictive



Maintenance test will analyze the condition of the power circuit, power quality, motor rotor condition, motor stator condition, air gap and insulation. Installing this monitoring equipment on the outsides of MCC panels provides a safe interface without having open electrical equipment, eliminating exposure to high voltages. The data collection and analysis will be performed annually by one of our specialty

Figure 1.5.2-6. Predictive Maintenance Information Flow Diagram



subcontractors (Selmon Co.), sent to our Electrical/Mechanical Repairer for review and transferred to the VAMS Dashboards for reporting and for further corrective action by Veolia if necessary.



CMMS-Driven Activities

In addition to the wide-ranging capabilities of our proposed CMMS outlined earlier in this Section V Part 2, at its core, the VAMS CMMS will ensure the maximum useful life of the Township’s capital investment, and will continue to incorporate the following components:

- Predictive Maintenance Program
- Preventive Maintenance Program
- Corrective Maintenance Program
- Reliability-Based Maintenance
- Equipment Warranty Support
- Maintenance Management Reporting
- Records Preservation

Preventive Maintenance Program

Veolia’s Preventive maintenance (PM) program will include the performance of routine procedures, such as filter replacement, oil changes and greasing at scheduled intervals recommended by equipment manufacturers. To optimally maintain your equipment, we consider the manufacturers’ recommended-

service intervals, which are usually operating hours or calendar based. We modify these procedures based upon experience gained at our multiple facilities with similar types and sizes of equipment to the Township’s, experience of the transitioning Municipal Employees, as well as site-specific operating conditions.

Predictive Maintenance

Earlier we discussed specific PdM instrumentation and analysis for your major pumping equipment, but from a more general perspective, our PdM techniques employ monitoring and test equipment used for the collection of data. This data not only provides a real-time snapshot of equipment conditions, but the data collected is trended over time. Trending allows for establishing a baseline for site-specific equipment and measuring the wear of equipment components as well as prediction of useful service life before repairs are necessary. This system also serves to reduce the cost of maintenance by shifting tasks such as oil changes and replacement of wear items from a time-based system to a system measuring actual equipment conditions. This can extend the intervals between such tasks, resulting in savings to the Township materials and potential outside labor.

Corrective Maintenance Work and Documentation

The main thrust of Veolia’s corrective maintenance (CM) strategy is to prevent

FUTURE TECH

Veolia's Asset Management Group is pushing asset management into the future with **Augmented Reality**.

Digitally guided inspections

Virtual training

Remote tech support

Watch a video on how Veolia uses **Augmented Reality**, a tool that can help in providing our maintenance team at the water system with access to expert support to address immediate needs.

toward predetermined warning limits. We schedule the equipment for corrective maintenance when the predictive measurement reaches the pre-determined warning limits. CM is then scheduled to accommodate Maintenance personnel work schedules, rather than waiting for equipment failure, which historically requires overtime to repair.

Capital Planning Input to the Township

Currently the Township's on-site operations team works in collaboration with the Township to develop Capital Plan updates each year. This process may benefit from the use of a more formalized software system to convey asset condition and expected remaining lifespan from our VAMS CMMS to the Township and your consulting engineers.

The following screenshots below provide general examples of system functionality to support planning and organization of renewal & replacement activities and significant capital improvement initiatives.

Assets managed in our CMMS are analyzed for renewal / replacement requirements based on a range of factors and variables, including the asset type, estimated useful life, asset

breakdowns requiring unscheduled maintenance by proactively predicting equipment failure. At your plant, we look for trends by comparing predictive-maintenance measurements made over a period of time. The frequency of predictive measurements is increased if a piece of equipment is "trending"

Asset View

Switchboard | Asset Summary | **View Asset**

SELECTED ASSET

Operation: City WTP
System: Reverse Osmosis System
Asset Name: RO Transfer Pump #1
Asset Code: P-901

RENEWAL PROFILE

	PLAN	PAST AVG
Replace cost	\$57,000	
Refurb cost	\$14,500	\$12,000
Interval (yrs)	10.0	9.9
Refurbs / cycle	2	1.0
Useful Life (yrs)	30.0	
Residual Life (yrs)	11.4	

RISK EXPOSURE

Criticality: 2 Medium
Condition: 3 Average
Risk Exposure: 6 Moderate
Last Assessed: 6/20/2020
Asset Risk Controls: PLAN REFURB 2022

Overview | Past Investment | Condition | Deterioration | Reliability | Criticality | Plan Program

PROFILE UPDATE (Real spend)

	LAST PLAN	NEW PLAN
Replace Cost	\$57,000	
Refurb Cost	\$14,500	
Interval	10	
Num Refurbs / cycle	2	
Date Updated	8/24/2020	

UPDATE

PROGRAM SHIFT

Program Advance: 0
Force Replace:
Final Handback Shift: 0

Profile Comments: (8/24/2020) Updated refurb cost to reflect latest information from vendor; scope of work includes mechanical overhaul and recoating of pump bowl.

PROJECTED PROGRAM

Date	Cost (Real)	Cost (Today)	Interv Type	Recover?	Handback	Overdue
3/27/2022	\$14,500	\$14,500	Refurbish	Yes	No	No
3/27/2032		\$57,000	REPLACE	Yes	No	No

Record: 1 of 2 | No Filter | Search

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1.5.2-29

Switchboard | Planned Activities

Planned Activities

SELECT Contract: CITY O&M

FILTER Year: 2024

PROJECTED ACTIVITY LIST

Operation	System	Asset Name	Date due	Cost (today)	Activity	Exposure	Risk Controls	CMMS Tag
City WTP	Filtration Air Blower System	High Pressure Blower #1	1/1/2024	\$120,000	REPLACE	High	PLAN REPLACE - New rotary screw type Blower, high efficiency unit	B-101
City WTP	Finished Water System	Clear Water Tank	1/1/2024	\$75,000	Refurbish	Moderate	PLAN REFURB - External recoating, vent replacement, concrete foundation repairs	T-1000
City WTP	Compressed Air System	Air Receiver	1/1/2024	\$42,000	REPLACE	Extreme	PLAN REPLACE - New receiver Pressure Vessel required (increased capacity)	PV-200
City WTP	Filtration Backwash System	Backwash Pump #2	1/1/2024	\$37,000	Refurbish	High	PLAN REFURB - Major rebuild on Pump + Electrical wiring upgrade	P-402
City WTP	Controls System	MF Feed Pumps PLC	11/1/2024	\$24,000	REPLACE	Low	PLAN REPLACE - PLC replacement upgrade project scope	PLC-700
City WTP	Polymer System	Polymer Dosing Tank	9/1/2024	\$17,000	REPLACE	Moderate	PLAN REPLACE - New Poly tank will be required	T-830
City WTP	Microfiltration System	MF Feed Pump #3	3/1/2024	\$14,000	Refurbish	High	PLAN REFURB - Mechanical rebuild on Pump / Motor rewind	P-703

Select Activity: 1 of 7 | Filtered | Search

VIEW ASSET | REPORT WORKS | PLAN CHART | PLAN TABLE | PLAN BY CLASS | PLAN BENCHMARK | Calendar Year | Financial Year | BACK

Operation name

criticality and on-going condition assessment information, to develop effective planning profiles.

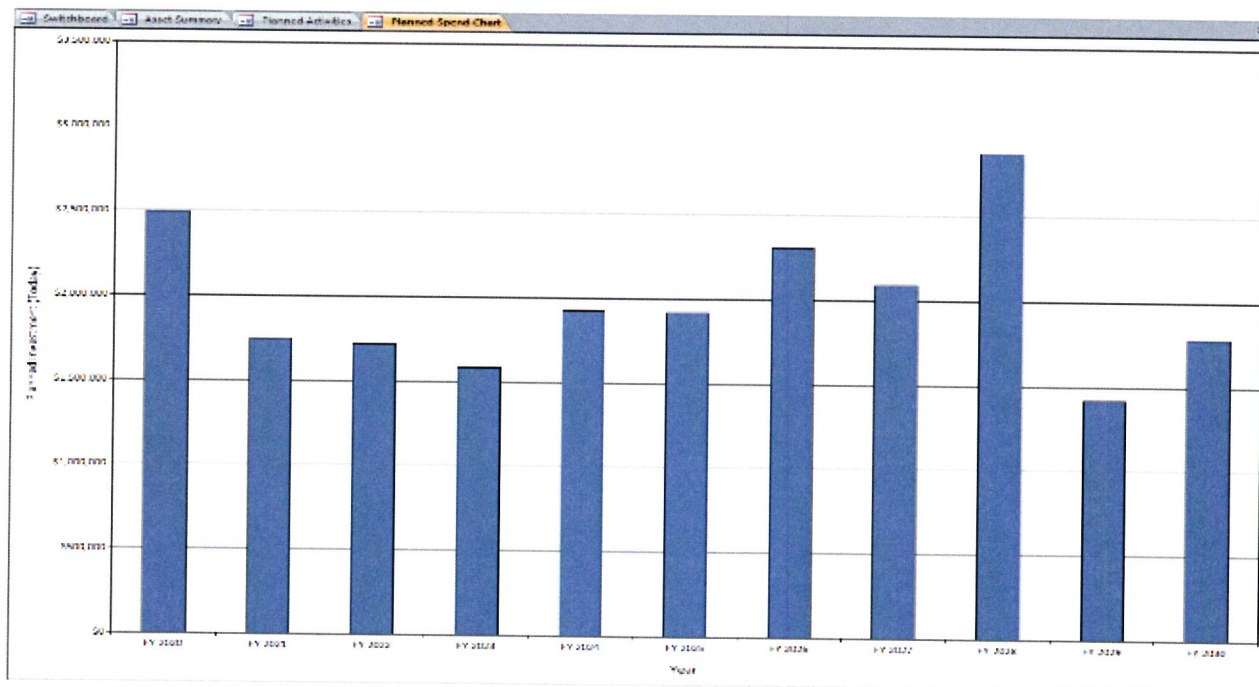
projects can then be tailored to the planning focus period to align R&R and capital budgets with specific planned activities.

Planned Activities

This software system enables efficient management of large data sets and organization of planned / projected activities by each year in the contract term. Committed

Planned Spend Chart

System reporting allows for visual indication of the projected activities over the duration of the contract / planning period. The projections include committed R&R / capital improvement



projects in the short to medium term, as well as forecasted allowances for the long term based on asset modeling and assessment by Veolia. This data can also be exported to a spreadsheet for further analysis and to facilitate presentations by the Township or your consulting engineers to the Council for capital spend authorizations.

n. Copy of Safety Manual

Provided as an [Appendix B, Part 4](#), as requested in the Township's RFP.

Subcontracting

Veolia is not submitting qualifications of a subcontractor joint venture partner to satisfy the technical qualifications.

However, as we have discussed earlier in this section, we will use local contractors, suppliers and vendors, to support the work of our O&M team for both routine and emergency response needs.

In securing any support contractor services, Veolia will seek to use local firms and provide a preference for small and disadvantage businesses.

Attachments

In Appendix B, we provide copies of the types of sample documents request in the RFP. They illustrate the type standard SOPs, manuals and reports that will be developed and used under this new contract with the Township. They include:

- [Appendix B, Part 1](#) – Sample Project Monthly Report
- [Appendix B, Part 2](#) – Veolia Employee Handbook – Table of Contents and Excerpt
- [Appendix B, Part 3](#) – Site Maintenance Plan (sample)
- [Appendix B, Part 4](#) – Veolia's Corporate Safety Plan – Table of Contents and Excerpt