



**TOWNSEND WATER DEPARTMENT**  
540 Main Street West Townsend, Massachusetts 01474

Michael MacEachern, Chairman  
Paul Rafuse  
Water Superintendent

Nathan Mattila, Vice-Chairman

Todd Melanson, Clerk  
(978) 597-2212  
Email: [water@townsend.ma.us](mailto:water@townsend.ma.us)

**WATER COMMISSIONERS MEETING MINUTES**  
**November 12 2019, 2019 - 6:00 P.M.**  
**Water Department 540 Main Street, Meeting Room**

**I. PRELIMINARIES:**

- 1.1 MM called the meeting to order at 6:00 P.M., 540 Main Street.
- 1.2 Roll call showed Members Present: Chairman Michael MacEachern (MM), Vice-Chair Nathan Matilla (NM), and Todd Melanson (TM), Clerk and Interim Superintendent, Rebecca McEnroe (RM). Guests Present: Dave Fox, Lisa Lewand and Ryan Lapierre, Tom Mahanna, Tammy Rafuse, Paul Rafuse, Sara Gaj, James Kreidler and Sue Lisio.
- 1.3 MM announced that the meeting is being audio recorded.
- 1.4 Chairman's additions or deletions. **TM moved to submit a new contract for the Interim Superintendent, McEnroe Consulting LLC not to exceed \$10,000 for a new 6 week period. NM seconded. Unanimous vote. NM to vote to accept said contract. Unanimous vote.**
- 1.5 Approve meeting minutes of September 9, 2019, October 7, 2019 and October 21, 2019. **NM motioned to approve the meeting minutes of September 9, 2019, October 7, 2019 and October 21, 2019. TM seconded. Unanimous vote.**
- 1.6 Review correspondence. The Board reviewed the correspondence FEMA.

**II. APPOINTMENTS VOTES MAY BE TAKEN**

- 2.1 6:00 P.M. Dave Fox, Raftelis Utility and Public Sector Consultants RE: Water Rate Study Dave Fox gave a brief presentation to the benefits of a professional water rate study. The Board will consider having a professional rate study after our Mater Plan has been updated.
- 2.2 6:15 P.M. Tom Mahanna, Tighe & Bond RE: Master Plan. Tom Mahanna submitted a Master Plan proposal for \$50,000.00. **TM moved to accept the Tighe & Bonds professional engineering services for a Master Plan in the amount of \$50,000.00. NM seconded. Unanimous vote.**
- 2.3 6:30 P.M. Superintendent Paul Rafuse RE: Discuss return to work date. Paul Rafuse read aloud a statement he had prepared and his intent to retire on December 4, 2019.  
**NM moved to allow for a five minute recess TM seconded. Unanimous vote.**  
**MM motioned to resume the BOWC meeting after the break. NM seconded.**  
**Unanimous vote.**

**III. MEETING BUSINESS VOTES MAY BE TAKEN**

- 3.1 Discuss/Sign Application to MAWARN. Votes may be taken. **TM made a motion to join and sign the MAWARN Agreement. NM seconded. Unanimous vote.**
- 3.2 Discuss increase of water rates. Tabled
- 3.3 Discuss/vote to refund Acct# 60915A, Anthony Detore, 230 Main Street, \$116.50. RE: Final water bill was paid twice. **NM moved to refund acct #60915A. Anthony Detore, 230 Main Street \$116.50. TM seconded. Unanimous vote.**
- 3.4 Discuss/Vote to abate acct# 60039, Bapugi, 440 Main Street, \$37.50 RE: units decreased from 3 to 2. **NM moved to abate acct #60039. Bapugi, 440 Main Street the amount of \$37.50 due to units decreasing from 3 to 2. TM seconded. Unanimous vote.**
- 3.5 Discuss reconsideration of White Mountain IT services. TM asked the Town Administrator that White Mountain be reconsidered for our IT services. Rebecca asked that the Board be able to review plans so that we can tailor it to our specific needs as well.

- 3.6 Discuss formal Intermunicipal Agreement with Town for FY21 Budget. TM asked for an update on the direct/indirect charges so the BOWC can better plan for the department's annual budget. JK suggested working with TM on this issue.
- 3.7 Discuss HLS Cyber Security Audit. Ryan reported that he was unaware that Bassem needed to attend the meeting. The Meeting is rescheduled for December 2019.

IV. COMMISSIONERS UPDATES AND REPORT

- 4.1 TM moved to vote to submit a new contract for the Interim Superintendent, McEnroe Consulting LLC not to exceed \$10,000 for a new 6 week period. NM seconded. Unanimous vote. NM to vote to accept said contract. Unanimous vote.

V. INTERIM SUPERINTENDENTS UPDATES AND REPORTS VOTES MAY BE TAKEN

- 5.1 Discuss Main Street Water Main Project. Rebecca met with Andrew Shepherd to update on the project. They are still trying to find the leak in the ductile. Later that night they tested again with little traffic and determined it was at the end of the line. They hope it will pass when they pressure-test later this week. Rebecca will ask Shepco to chlorinate the section of main that passed the pressure-test so that they can begin connecting homeowners. Ryan reported that they helped to isolate the leak.
- 5.2 Update on FY21 budget planning.
- 5.3 Update on Meadow Road Main Project. Rebecca believes during construction there are large amounts of dirt in the main which is why they cannot pass the bacteria test. Ryan reported that they are having issues with the bacteria samples failing. Rebecca will be specking with Tighe & Bond to assess fines on the contractor. Ryan suggested the contractor install a hydrant to flush the line with increased pressure.
- 5.4 Discuss Level 2 Assessment Review. Ryan reported that during our Sanitary Survey DEP requested that we not chlorinate the tanks for one month. Ryan reported that they did that and there was a bacteria hit but that was because of the tank cleaning. They will begin to chlorinate the tanks monthly.

VI. FOREMANS UPDATES AND REPORTS:

- 6.1 Report on stations/systems updates. See 5.1 and 5.3 Ryan also wanted to update the Board on 536 Main Street because of loss of pressure. After investigation it was determined that the pressure release valve failed. The plumber told her it was our responsibility. Our Rules and Regulations states that we are not responsible for any repairs after the curb stop. Ryan will have Kevin stop by and explain it to the homeowner.

VII. OFFICE ADMINISTRATOR'S UPDATES AND REPORTS:

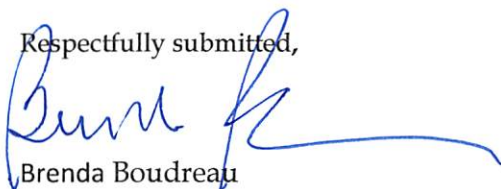
- 7.1 The Board scheduled next BOWC meeting on November 25, 2019.
- 7.2 The Board reviewed and signed Bills Payable Warrants
- 7.3 The Board reviewed and signed Schedule of Bills Receivable report.
- 7.4 The Board reviewed Accounts Receivable Report.
- 7.5 The Board reviewed year to date expenditures.

ADJOURNMENT:

NM moved to schedule the next BOWC meeting, review and sign reports out of session. TM seconded. Unanimous vote.

MM Adjourned the November 12, 2019 BOWC meeting at 7:50 P.M.

Respectfully submitted,



Brenda Boudreau  
Office Administrator  
Townsend Water Department



# WATER DEPARTMENT MEETING

DATE November 12, 2019

NAME	ADDRESS	PH/EMAIL
DAVE Fox	20 MAE ST. SUITE 301 MATELA, MA 01760	774.243.0619 DFOX@PARTELIS.com
Ryan Lapierre	540 Main	
Becky McEnroe	406 Sugar Rd Bolton MA 3 WYMAN RD	978-339-3731
LISA LEWAND	TOWNSEND, MA 01474	781-308-9072
Tom WILLIAMS	120 FRONT STREET Worcester, MA 01603	508-971-9607
Tammy Rafus	Milford MA	
Paul Rafus	Milford, MA	
Sara Gay	Milford, MA	
Tom Kneen	Town Hall	
Sue Lizio	26 Ash St	978 597 6473



**FEMA**

October 18, 2019

Sue Lisio, Chairperson  
Board of Selectmen  
Town of Townsend  
Memorial Hall  
272 Main Street  
Townsend, Massachusetts 01469



Subject: Town of Townsend, Middlesex County, Massachusetts  
Community No.: 250219

Dear Ms. Lisio:

The effective Flood Insurance Rate Maps (FIRMs) for Town of Townsend were issued on June 4, 2010. Your community received communication in April 2016 informing you that the flood hazard mapping for Town of Townsend will continue under the Federal Emergency Management Agency's (FEMA's) Risk Mapping, Assessment, and Planning (RiskMAP) program. Due to flood map improvements initiated under the RiskMAP program, the U.S. Geological Survey (USGS), who is serving as FEMA's mapping partner, has updated the engineering analysis on several river reaches in your community. The USGS would like to invite your community to review the workmaps.

For your convenience, we have scheduled two Flood Risk Review meetings (also known as workmap meetings) for communities to review their workmaps. The content of both meetings will be the same; you may attend either of them. Both are at the same location but at different times. We will begin with a brief presentation, after which we will issue to each community a set of workmaps and give you a chance to discuss them with project team members.

- **Thursday, November 21, 2019 at 9:30 AM**, Leominster Office of Emergency Management, 37 Carter Street, Leominster, MA 01453.
- **Thursday, November 21, 2019 at 1:00 PM**, Leominster Office of Emergency Management, 37 Carter Street, Leominster, MA 01453.

Parking is available at the facility and on the street. If needed, and if not in use for a funeral, extra parking may also be available at Simard Funeral Home at the corner of Carter and Walker Streets.

Please RSVP to the Project Manager, Scott Olson, at [solson@usgs.gov](mailto:solson@usgs.gov) or by telephone at (603) 226-7815.



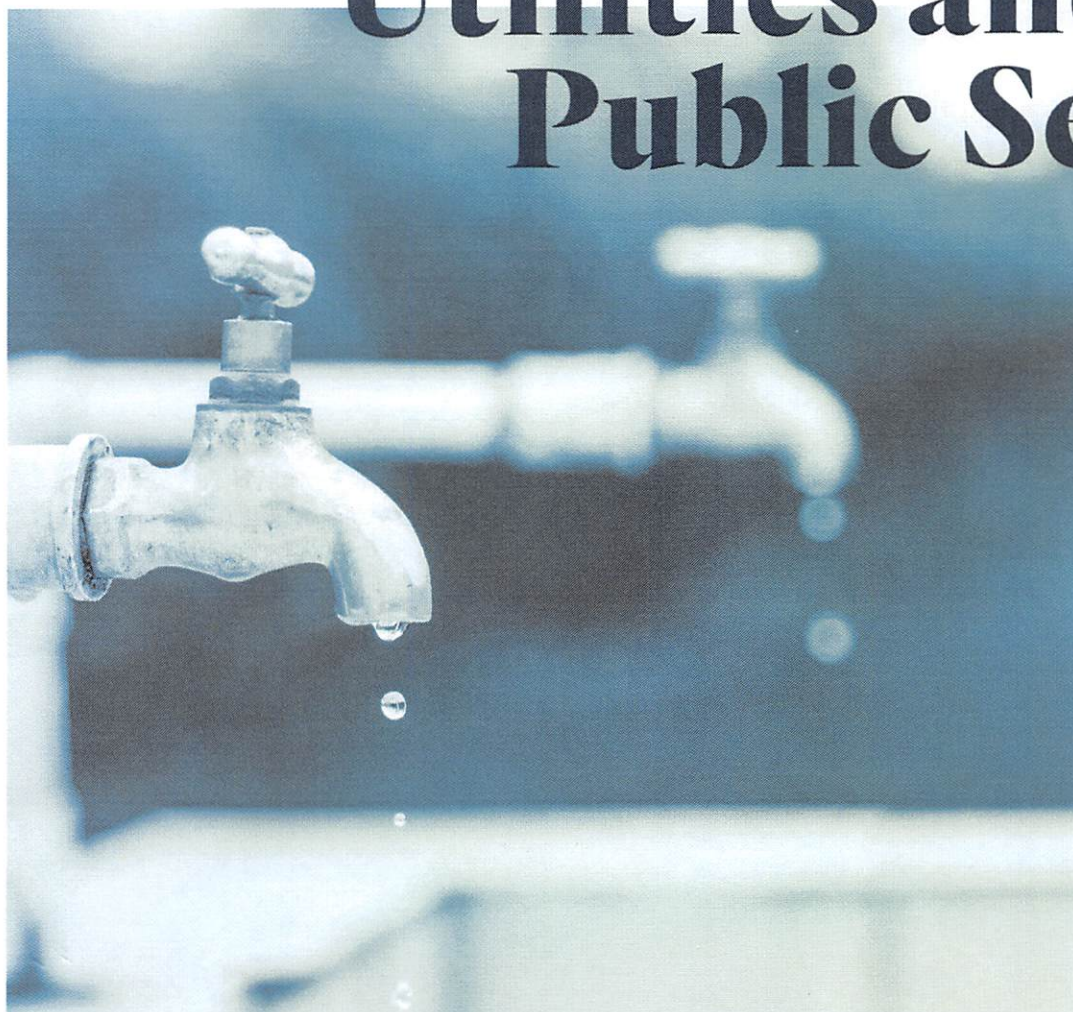
Sincerely,

A handwritten signature in black ink, appearing to read "K. Bogdan", with a long horizontal flourish extending to the right.

Kerry Bogdan  
Risk Analysis Branch Chief  
Mitigation Division  
FEMA Region I

cc: James Deroian, Chairperson, Conservation Commission, Town of Townsend  
James M. Kreidler, Jr., Town Administrator, Town of Townsend  
Karen Chapman, Land Use Co-coordinator, Town of Townsend  
Lance J. McNally, Chairperson, Planning Board, Town of Townsend  
Paul Rafuse, Water Division Superintendent, Town of Townsend  
Richard Hanks, Building Commissioner, Town of Townsend  
William Cadogan, Chairperson, Zoning Board of Appeals, Town of Townsend  
Joy Duperault, State NFIP Coordinator, Massachusetts Department of Conservation and Recreation  
Scott Olson, Project Manager, U.S. Geological Survey

# The Trusted Advisor to Utilities and the Public Sector







## **Raftelis is registered with the U.S. Securities Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor.**

Registration as a Municipal Advisor is a requirement under the Dodd-Frank Wall Street Reform and Consumer Protection Act. All firms that provide financial forecasts that include assumptions about the size, timing, and terms for possible future debt issues, as well as debt issuance support services for specific proposed bond issues, including bond feasibility studies and coverage forecasts, must be registered with the SEC and MSRB to legally provide financial opinions and advice. Raftelis' registration as a Municipal Advisor means our clients can be confident that Raftelis is fully qualified and capable of providing financial advice related to all aspects of utility financial planning in compliance with the applicable regulations of the SEC and the MSRB.

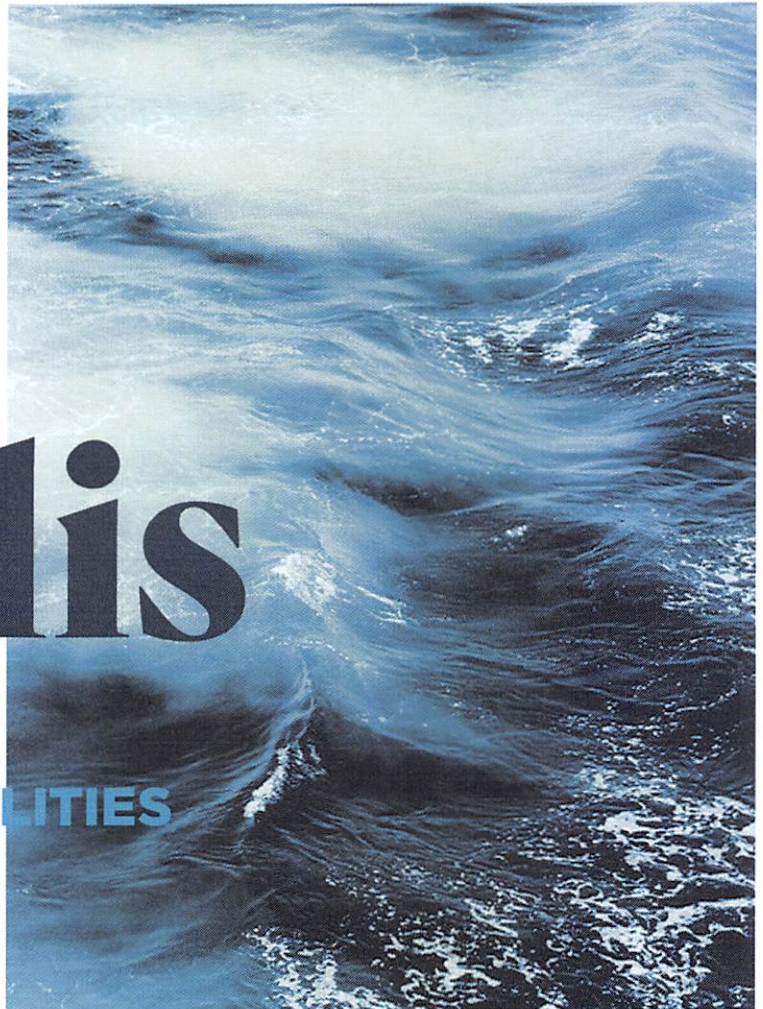


# WHO IS Raftelis

**RAFTELIS IS THE  
TRUSTED ADVISOR TO UTILITIES  
AND THE PUBLIC SECTOR.**

+ Visit [www.raftelis.com](http://www.raftelis.com) to learn more

Raftelis provides utilities and public-sector organizations with insights and expertise to help them operate as high-performing, sustainable entities providing essential services to their citizens. We help our clients solve their finance, organizational, and technology challenges, achieve their objectives, and, ultimately, make their communities better places to live, work, and play.





**25** years  
serving the  
utility industry

*Our team includes*

**70+** consultants  
focused on utility finance/  
organization/technology

**7** members of the  
**AWWA Rates & Charges Committee**  
including the current & previous Chair

**4** members of the  
**WEF Utility Management Committee**

How  
we  
stack  
up

*Raftelis has provided financial/organizational assistance for*

**1,000+** water/wastewater/  
stormwater  
utilities

which serve more than

**25%** of the  
U.S. population

and includes the utilities serving

**33** of the nation's  
50 largest cities

In the past year alone, we worked on

**600+** projects for **400+** utilities in **40** states





## Leading the industry

Raftelis staff shape industry standards for water and wastewater utility finance and management through our active leadership in AWWA, WEF, and EPA. Raftelis' staff includes:

### AWWA

- Asset Management Committee - 1 member
- Benchmarking Committee - 1 member
- Finance, Accounting, and Management Controls Committee - 2 members
- Management and Leadership Division - Chair and Vice Chair
- Public Affairs Council - Chair
- Rates and Charges Committee - Chair and 7 members
- Strategic Management Practices Committee - Chair
- Technical and Education Council - 1 Trustee

### WEF

- Finance and Administration Subcommittee - Chair
- Technical Practices Committee - 1 member
- Utility Management Committee - 4 members
- WEFTEC Conference Planning Committee - 1 member

### EPA

- Environment Financial Advisory Board - 1 member



## We wrote the book

Raftelis staff have co-authored many of the industry's leading guidebooks regarding water and wastewater financial and management issues, including:

- Affordability of Wastewater Service (WEF)
- Financing and Charges for Wastewater Systems, Manual of Practice 27 (WEF)
- Manual M1, Principles of Water Rates, Fees and Charges (AWWA)
- Manual M5, Water Utility Management (AWWA)
- The Effective Water Professional (WEF)
- Water and Wastewater Finance and Pricing: The Changing Landscape
- Water and Wastewater Rate Survey (conducted and published collaboratively with AWWA and Raftelis)
- Water Rates, Fees, and the Legal Environment (AWWA)



WITH  
**70<sup>+</sup>**

**UTILITY FINANCIAL  
& MANAGEMENT  
CONSULTANTS,  
RAFTELIS HAS THE  
LARGEST PRACTICE  
IN THE U.S.**



# How We Can Help

Utilities and public-sector organizations provide life-sustaining services to maintain a high quality of life for their citizens and to help their communities thrive. Raftelis provides trusted expertise, coupled with a focus on innovation, to help utilities and public-sector organizations function as high-performing, sustainable entities.

We are consultants focused on helping our clients solve their finance, organizational, and technology challenges, achieve their objectives, and, ultimately, make their communities better places to live, work, and play.

Our services primarily focus on the areas of finance, organization, and technology; however, we listen to our clients to understand their unique needs and develop solutions that meet their specific objectives.



## Finance

Utilities and public-sector agencies all share a common requirement – to provide critical services on which their communities rely. At the core of providing these services is maintaining revenues that support sustainable operations and long-term planning.

Raftelis collaborates with organizations to identify the financial policies, business

processes, and customer rates and charges that promote financial integrity and the equitable recovery of costs to achieve the objectives of the organization and community.

### Affordability Analysis & Program Development

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Access to clean water is one of the most basic needs to ensure the health of any community. The cost of providing such

water has steadily increased as water utilities are faced with growing costs related to aging infrastructure, regulatory requirements, and system reinvestment. With the resulting water and wastewater rates consistently increasing at a pace that sometimes exceeds inflation and wage growth, affordability is a growing focus within the water industry, both at the utility- and customer-level. Raftelis helps utilities address affordability concerns, implement solutions to address them, and communicate these



problems to utility rate-setting boards and their customers.

### **What is Affordability?**

The most commonly used metric to assess water and wastewater customer rate affordability is based on guidance provided by the U.S. EPA which utilizes median household income (MHI) metrics. However, MHI can be a poor indicator of utility rate affordability, and specifically affordability at the individual household level, because it does not describe the situation of those people at the lowest ends of the income spectrum. We utilize industry-leading analysis techniques to combine unique customer billing data with census block-level demographic information to develop a comprehensive evaluation of the local affordability conditions which can be used for negotiation with regulators, assistance program development, and utility management decision making. Raftelis is at the forefront of industry efforts to define and assess affordability.

### **Who is At Risk?**

The first step in assessing customer affordability is to fully understand the demographics and consumption characteristics of your customers. We do this by analyzing various data sets, such as census information and billing data, with the ultimate objective of identifying "at-risk" customer groups. Through this analysis, we are able to identify: household income characteristics; consumption geocoded to address and by census tract; and, ultimately, "at-risk" customers.

### **What Solutions are Available?**

Raftelis assists utilities in developing and implementing affordability programs that address critical needs within the community, while minimizing administrative and cost impacts to the utility. At the utility-level, by conducting a financial capability assessment, utilities can assess their ability to address growing needs for capital investment. There are a number of ways to ensure customer affordability, including implementing bill assistance programs or water efficiency programs, or incorporating affordability programs directly into the utility's rate structure.

### **How will this Impact My Utility?**

When considering affordability programs, utilities must understand the impact of proposed programs on utility operations and financial performance. Raftelis can help quantify these impacts and ensure the utility isn't "biting off more than it can chew".

### **Stakeholder Outreach**

Once an affordability program has been established, Raftelis assists utilities in stakeholder outreach initiatives to ensure that target customer groups are aware of the available programs.

### **Capital Improvement Planning / Prioritization**

Your organization has limited funds, and investments must be made to support growth, regulatory compliance, and capital renewal. Balancing these competing needs is part of managing any public organization.

Pressures from stakeholders and inefficient practices complicate this process. Raftelis can work with you to develop rock-solid capital planning strategies and tactics that manage risk and provide the appropriate resources to meet your organization's needs.

### **An Implementation Focus**

While many firms can talk about the latest and greatest capital planning techniques, few can help you effectively

implement them. What good are strategies if they do not become a key component to how your organization does business? Raftelis links the technical elements of capital planning with organizational changes and engagement strategy to implement capital planning solutions. From creating defensible prioritization processes to incorporating new technologies and asset management concepts like reliability-centered maintenance, Raftelis will help you imple-





ment streamlined practices that maximize your precious resources.

### Defensible Prioritization

Making choices about which capital investments to make and when to make them is difficult and often politically charged. Every organization needs a defensible system to share with stakeholders explaining capital prioritization methods. Using stakeholder-supported and easy-to-understand rationale, we will work with you to implement a system that stakeholders understand and embrace.

### Debt Issuance Support

As the need for capital investment grows, including repair and replacement of aging infrastructure and the addition of new assets, more utilities and government agencies are leveraging their available funds by issuing tax-exempt revenue bonds and other types of debt financing. These funding sources are often a better alternative than funding capital improvements with rates, and can dramatically decrease the rate volatility that often accompanies pay-as-you-go funding. However, to fully realize the benefits of debt financing, a utility must take steps to reduce its cost of borrowing.

### Provide Confidence

Through the preparation of a financial feasibility report that is included in the official statement prepared to help market

and sell the bonds, Raftelis can help you demonstrate to potential investors and rating agencies the relatively low level of risk associated with your borrowing, thereby reducing your cost of borrowing. Rating agencies, investors, and underwriters are familiar with Raftelis reports, which provides them with a confidence regarding the information provided in the report. We have participated in many meetings with rating agencies and state agencies that regulate the issuance of municipal debt to demonstrate the credibility of the financial forecast prepared for the issuance.

### Understand the Impacts

Another benefit of having Raftelis as a member of your financing team is that we can translate different financing options into potential rate and customer impacts. This will allow you to understand how the debt issuance will directly impact your customers.

**Raftelis can assess the City's current and future revenue requirements by developing a financial plan that is customized to the unique aspects and circumstances of the City.**

### Registered Municipal Advisor

Raftelis is registered with the U.S. Securities Exchange Commission (SEC) and the Municipal Securities Rule-making Board (MSRB) as a Municipal Advisor. Visit the MSRB's website for more information on this designation.

### Economic & Financial Evaluations

Opportunities often arise that require data-driven decision making. Information is critical to making decisions to guide and direct future performance when developing a management plan. Raftelis has a suite of capabilities to assess your utility or public organization's current capabilities and performance, as well as evaluate future opportunities.



## Identification of Financial Policies and Objectives

Raftelis works with you to determine and document the goals and objectives that have guided past decisions and what goals and objectives are needed to support future plans. Raftelis will draw upon our comprehensive experience with utilities, regulatory and rating agencies, and other stakeholders to recommend financial policies that meet the current and future needs of your agency. Once these policies have been enumerated, evaluated, and established, we will identify a plan to achieve and surpass these goals that will provide confidence to both internal and external stakeholders.

## Current State of the Utility Assessment

If you have ever wondered, how well are we doing right now? Raftelis has developed a streamlined process for assessing the performance of a utility or public-sector organization and benchmarking them against their own policies and objectives, as well as against industry peers. Raftelis assessments review past and current performance, while providing a firm starting point for making management and policy decisions. We leverage our expertise to develop a holistic view of the industry and share this perspective with your organization to explain trends, opportunities, and best practices. We are also aware of regional and local concerns, and use this awareness to best position you to solve challenges ranging from revenue stability to water supply funding.

## Economic Feasibility Analysis

Do you know if that \$10 million investment to provide service to a new service area is a wise decision? Or should your utility expand current facilities instead of increasing wholesale purchases from an adjacent utility? Raftelis develops economic models that provide utility and government managers with the data needed to make informed decisions about the best use of resources. Our analysis provides visibility into the future cost-benefit of any opportunity with the ability to measure outcome sensitivity based on changing input parameters.

## Financial Planning

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In today's environment, utilities and government agencies need to have a multi-year financial plan that integrates capital improvement financing and customer impact awareness. Raftelis tailors each financial plan to meet the specific needs of the utility. Raftelis works with our clients to develop a comprehensive, reliable, and flexible financial plan that forecasts system operational and maintenance (O&M) costs, plans for necessary capital improvements and how these will be financed, projects customer account and usage information, and monitors the overall financial performance and health of the organization.

## Managing Capital Spending

A key component in utility and public sector financial planning is the management of capital spending. Whether your capital improvement pro-

gram is driven by rehabilitation and replacement or meeting regulatory requirements, Raftelis has the industry experience and tools necessary to help schedule and identify funding for these capital projects. Raftelis is registered with the U.S. Securities Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor – this allows us to include robust capital financing planning modules in our financial planning models. Our financial planning models are designed for scenario-based analysis, allowing you to quickly adjust capital project lists and the associated funding options, easily varying cash and debt funding levels and seeing the impact on revenue requirements.

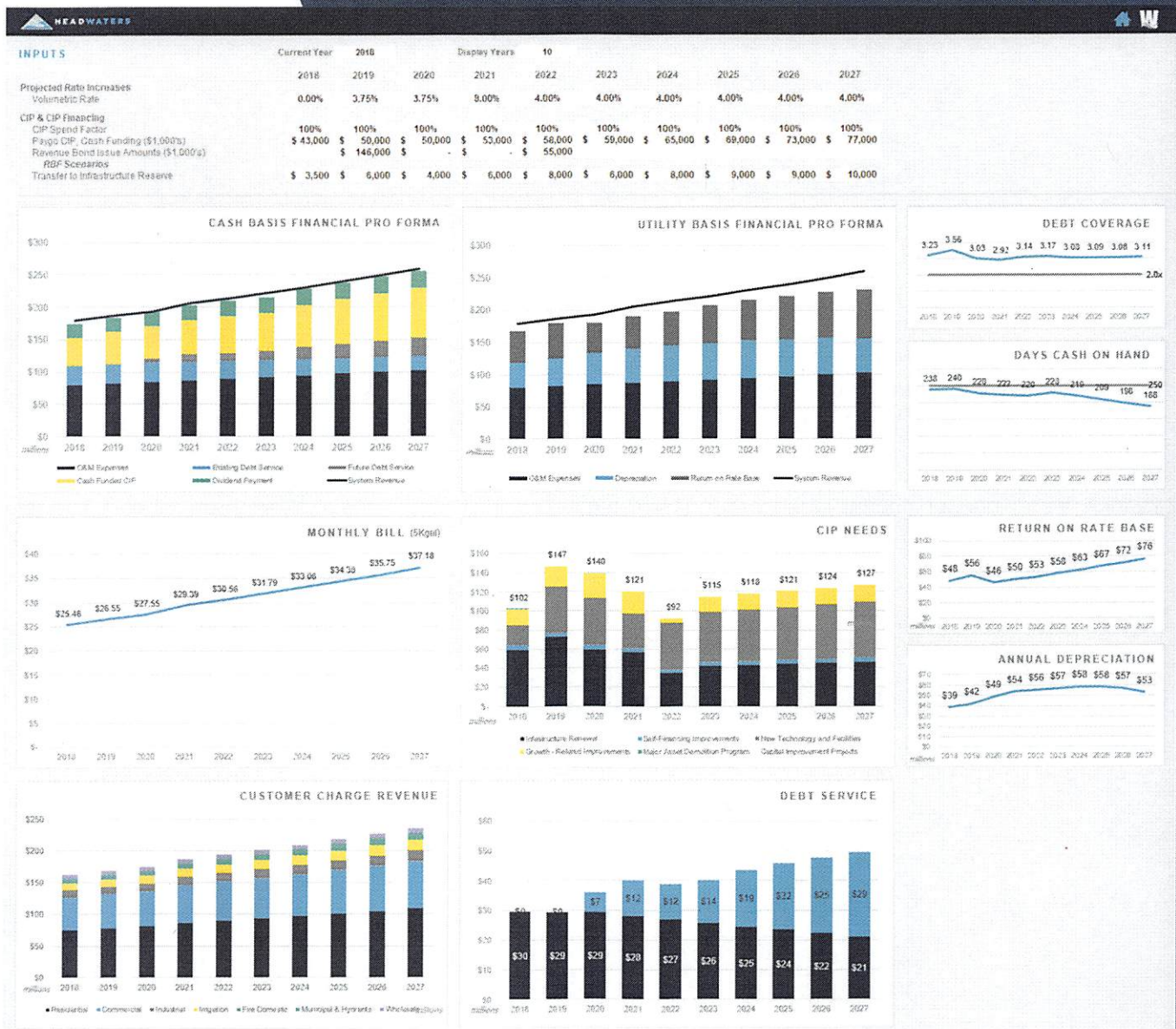
## Understanding and Predicting Customer Behavior

Raftelis has helped hundreds of utilities and public-sector entities across the United States better plan for the ever-changing behavior of their customers. Mitigating the impacts of declining per capita water usage is a major concern for many agencies. Others are facing water shortages and must consider developing drought rates, and designing rates that promoting conservation through clear price signals. All of these challenges require an understanding of the current customer base served by your organization, how those accounts have changed over time, and how each member of the various customer classes is expected to behave in the future. Raftelis' experience throughout the industry helps us to interpret your data and



**Raftelis develops customized financial models that incorporate a dashboard to allow you to easily run scenarios and see the impacts in real time.**

Shown below is a sample dashboard that we developed for another project.





plan for dynamic customer behavior.

### **Tools for Planning and Communicating**

A financial plan that is only known to and used by the chief financial officer is not as meaningful as the plan that can be shared with internal and external stakeholders. Raftelis develops custom financial planning computer models that are built around your organization's accounting hierarchy, capital planning needs, customer information, and financial goals and policies. These models are built upon our defensible and proven methodologies and incorporate the latest in data analysis techniques, technology, and graphic visualizations with dashboard controls. Our models allow utilities and public-sector agencies to make plans for today while always being aware of the needs of tomorrow.

### **Rate, Charge, & Fee Studies**

The primary purpose of rates and fees for utility and government services are to recover sufficient revenues to cover costs. However, expertly designed rates can be used as tools to help accomplish your strategic objectives while maintaining equity among all customer classes.

### **Identification of Pricing Objectives**

Raftelis works with our clients to develop pricing objectives that guide the determination of the most appropriate rate structure to satisfy your organization's strategic and

operational goals. These objectives range from promoting conservation to minimizing customer affordability concerns to promoting economic development.

### **Evaluation of Rate/Fee Structure**

Raftelis has experience developing a variety of rate structures that meet the specific needs and goals of each client and its stakeholders. Some agencies are best served by basic rate structures, whereas others benefit from the most innovative solutions. There is no one size fits all solution and we use our experience to help you determine the optimal rate structure for your utility or organization.

### **Development of a Financial Plan**

Raftelis has a proven and data-driven method of forecasting costs and customer data to inform the rate-setting process. We forecast system operational and maintenance (O&M) costs, capital needs, and customer accounts and usage and monitor overall financial performance of a utility or government agency.

### **Allocation of Costs**

To ensure appropriate recovery of costs from different user classes, Raftelis reviews existing customer classifications to ensure proportionality. We consider historical customer class usage and peaking characteristics, along with emerging demographic and conservation trends. Raftelis employs methodologies and standards endorsed by the American Water Works Association, Water Environment Federation, and the National Association of Regulatory

Utility Commissioners to allocate costs that can withstand scrutiny under regulated rate cases and interjurisdictional disputes.

### **Model Development and Rate/Fee Alternatives**

Developing rates requires sophisticated models to project revenue requirements and customer data, allocate costs appropriately, and allow for the evaluation of multiple rate structure alternatives. Raftelis develops customized, non-proprietary computer models with an emphasis on being user-friendly and flexible. In addition, our models monitor customer impacts to provide organizations the information needed to minimize rate shock and unnecessary financial burden.

### **Gaining Buy-In and Adoption**

The perfect rate/fee structure that is not approved by the governing body has no value. Raftelis is adept at effectively communicating recommendations to stakeholders and elected officials. Our focus is on the importance of the rate recommendation and the comprehensive analysis behind our recommendation to ensure buy-in and adoption.

### **Additional Rate, Charge, and Fee Services**

- Capacity, system development, or impact fees
- Rate case support
- Dispute resolution and litigation support related to rates and fees
- Wholesale service rates
- High-strength and industrial wastewater surcharges

- Outside-city rate differentials
- Late payment, penalty, account activation, and other customer service-related charges
- Administrative procedures and on-going implementation of rates/fees
- Development agreements and evaluation of credits for system improvements

### **Stormwater Utility Development & Support**

Many local governments are faced with growing stormwater infrastructure maintenance and rehabilitation needs and meeting increasingly stringent water quality requirements. Raftelis can help clients develop stable funding strategies to serve customers over the long term. Our services range from setting up new utilities and fees to modifying existing rate structures accounting for stormwater cost drivers to assisting local governments with integrating bond funding into long-term plans and bond sales.

### **Stormwater Utility Development**

Whether spurred by regulatory requirements or local concerns, stormwater management needs are increasing for improving surface water quality and controlling flooding. Raftelis helps municipalities and management districts develop funding approaches that are tailored to local stormwater needs.

Raftelis offers an unparalleled depth of experience in the development and implementation of stormwater utilities. Our

Stormwater Management Consulting Division has experience in all aspects of local government stormwater management and utility program implementation. We have executed a wide range of analytical and evaluative projects, including policy development, process development, data management, and public stakeholder process implementation. For clients just starting to differentiate stormwater service delivery from streets maintenance or water/wastewater, to those with well-established stormwater programs aiming to improve service delivery, fee structures, or customer service, our staff have helped many utilities evaluate alternative policies, benchmark their stormwater programs and policies, document and improve business processes, and develop and implement new programs.

### Stormwater Program Development Support

A crucial component of stormwater program cost of service development is defining exactly which historic activities and which future activities make up the stormwater program. Unlike some government activities such as wastewater treatment or police response, stormwater services are often provided in a distributed manner by different departments. Raftelis has used a variety of approaches to help clients define these services for cost analysis and stormwater entity development.

Raftelis also assists with regulatory compliance by supporting client interaction with regulators, developing permit-based programs and activity timelines, and performing compliance activities such as public involvement and outreach.

### Making it Work

At Raftelis, we understand that ideas are only as good as their implementation. Raftelis has repeatedly and successfully implemented fees for large and small local governments, with a variety of billing methods in communities with different concerns, varying data quality, and differing goals for funding structures and incentives. One of Raftelis' particular strengths is in developing processes and software that enable stormwater billing on legacy utility and tax billing systems.

We also work with local government counsel on the development of ordinances that authorize or update existing stormwater utility policies.

Raftelis specializes in assisting with customer and public relations during utility development, implementation, and post-go live periods with our expertise in public outreach, stakeholder facilitation, and customer service provision.



## Organization

**Utilities and public-sector organizations are constantly facing an evolving array of challenges. Demands from customers and stakeholders are also evolving and increasing. Public officials can take steps to get out in front of these challenges through proactive, effective moves.**

**From major governance or leadership changes to**

**incremental performance improvements in individual business processes, Raftelis can help your organization identify needs, plan for the future, and implement positive changes.**

### Organizational, Governance, & Operations Optimization

Stakeholders want responsive, high-performing public services, without substantial increases to rates and fees. Producing value for each dollar spent is imperative. Raftelis helps utilities and public-sector entities structure, assess, and optimize their organization and its resources to meet the often complex and sometimes conflicting desires of stakeholders.

### Organized and Optimized

Agencies with efficient practices and optimized structures have lower lifecycle asset costs, and lower operations and maintenance expenditures for the same activities. Compared with their peers, they also provide better service. There are many proven models for providing public services – from traditional municipal structures to public-private partnerships. There is an equally diverse number of management and governance approaches. Sorting through the options and making necessary changes is complex. Things can get politically and emotionally charged.

We can analyze your business processes and show you oppor-

tunities to add value and save resources. We can also show you where to innovate, and incorporate best practices from top-performing organizations. Raftelis has governance and organizational development experts that have walked in your shoes as elected and appointed officials, public organization directors, and staff in government entities. Our team evaluates every situation from multiple perspectives, applying proven approaches to identify areas for improvement and suggesting a path to optimize performance. We help implement innovative ways to operate and make them permanent so that they become a part of the way an organization does business.

### Assessing the Situation

To understand an organization's needs, it is helpful to have an outside perspective. Raftelis' team of former utility managers, operations professionals, and subject matter experts engage with organizations to learn about what makes them different, their culture and people, and their performance-limiting factors. Our team examines productivity measures, such as those associated with meeting service levels or efficiency, to determine if money is being spent wisely. We'll learn a lot about your organization through this process, and so will you. We can then leverage these opportunities and strengths to enhance organizational performance.

### Making Recommendations a Reality

Our actionable recommendations are developed based on priority, cost benefit, and ease of implementation. In addition,



methods for implementation are suggested, with consideration for change management practices and operating environment limitations (unions, budgets, service levels, etc.). We then work with clients to manage the implementation of these recommendations and to track progress towards making them a reality.

You need the buy-in of customers, employees, and other stakeholders as you adopt new approaches and begin new initiatives. They want to know what's in it for them. How you collaborate and communicate with them is critical. Raftelis can bring an array of effective approaches to engage these groups. We can help build communication pathways and form new relationships that will improve your organization. Our deliverables don't sit on shelves – they're living, working documents that effectively communicate your message to stakeholders. They will provide you with the ammunition that your organization needs to achieve the performance that it desires.

## Performance Measurement & Benchmarking

Public organizations used to be the silent servants, providing effective and vital services while keeping a low profile. Today, things are different. Stakeholders want to hear what you're doing and how you're doing it. They want to see they're getting good value for their money and that you're providing the services that they want. Raftelis can help provide the tools to showcase

your organization's accomplishments, and highlight opportunities to achieve even greater success.

### Metrics and Beyond

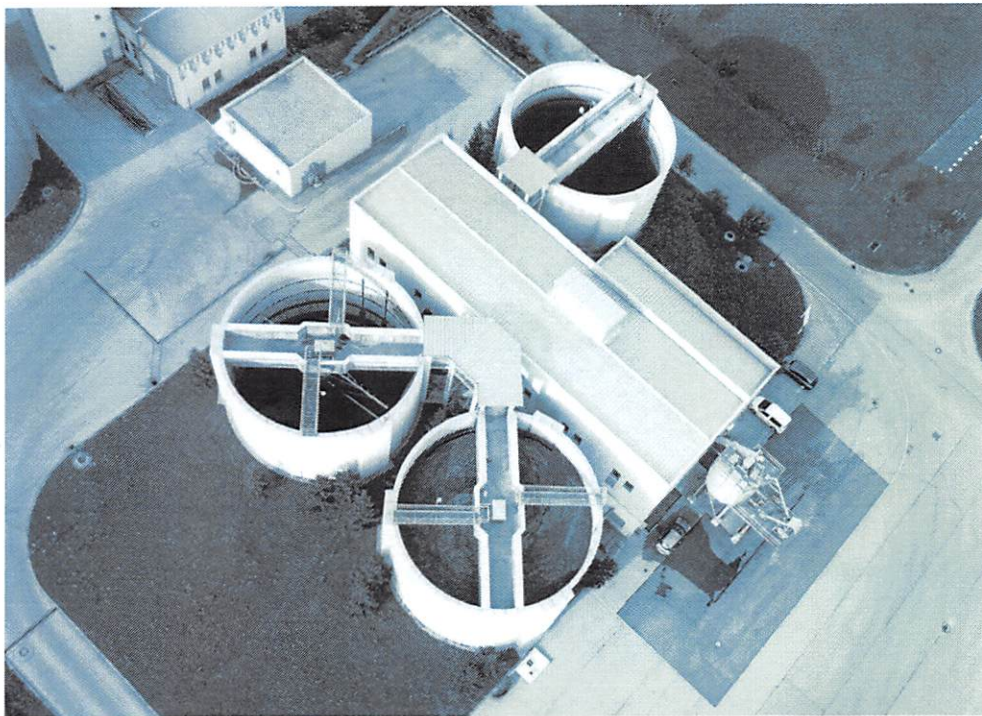
Raftelis works with hundreds of utilities and public-sector agencies across the country and helps write the industry guidance on performance management. We'll show you how your practices

and metrics compare to both neighboring peers and national benchmarks. Your organization will understand its strengths and where its greatest opportunities to enhance performance lie, as well as the practices that others employ to succeed.

Successful performance measurement means looking beyond the numbers (metrics) to the







underlying practices. Raftelis can assess your operation, and compare it to best practices and those of peer organizations. We can then help you develop enhanced practices and set appropriate goals and metrics. You will know where you are now, where you need to be, and the practices that will move you in the right direction.

### **We Have the Right Tools**

We have been involved in drafting much of the leading guidance on management and financial topics in the industry, and our solutions incorporate the latest information available. We combine the best elements of frameworks like APWA's Self-Assessment and Effective Utility Management (EUM) with recognized approaches from the business world, such as Lean Six Sigma and those of the American Society for Quality (ASQ).

Raftelis also develops applications to help our clients

measure and compare their performance. These tools help to keep track of progress towards meeting performance goals and to ensure you stay on track.

### **Performance on Display**

Why hide the good things that you're doing for your customers? Show them to gain the trust and support needed to tackle your toughest challenges. Raftelis can help you communicate effectively with customers and other stakeholders.

### **Program Planning & Support**

Today's utilities and public-sector organizations are faced with growing capital needs and increasing regulations. Raftelis develops funding strategies to address these needs and provide long-term financial sustainability for our clients. We can help you

meet and exceed expectations for organizational and operations optimization, and plan and implement effective management strategies to ensure long-term success. Our team has the skills and experience to help you develop and select an approach to achieve your goals.

### **Program Planning**

Raftelis has extensive experience and expertise in the development and implementation of stormwater management programs, solid waste programs, and other utility services. We have executed a wide range of analytical and evaluative projects, including policy development, process development, data management, and public stakeholder process implementation. For clients just starting to differentiate service delivery to those with well-established programs aiming to improve service delivery, fee structures, or customer service, our staff have helped many utilities evaluate alter-



native policies, benchmark their programs and policies, document and improve business processes, and develop and implement new programs.

### **Program Development and Support**

An important aspect of program development is defining exactly which historic and future activities are included in a particular program. For some of these programs, and stormwater in particular, services are provided in a distributed manner by different departments, unlike most other government activities, such as transportation or fire protection. For these and other challenges, such as determining appropriate levels of service for non-metered services from solid waste to stormwater, Raftelis has used a variety of approaches to help clients define these services for estimating costs and new utility development.

Raftelis also assists with regulatory compliance by supporting client interaction with regulators, developing permit-based programs and activity timelines, and performing compliance activities such as public involvement and outreach.

### **Putting Plans Into Action**

A solution is only effective as its actual implementation. Raftelis has implemented many fees and rates for large and small local governments, with a variety of billing methods in communities with different concerns, varying data quality, and differing goals for funding structures and incentives. One of our particular strengths is in developing processes and soft-

ware that will enable billing for non-metered services on legacy utility and tax billing systems.

Raftelis also specializes in assisting with customer and public relations during utility development, implementation, and post-go live periods with our expertise in public outreach, stakeholder facilitation, and customer service provision.

### **Strategic Communications & Public Outreach**

There has never been a more critical time for the public sector to communicate the value of the services it provides. Now, more than ever, meaningful, deliberate, and strategic communication efforts can make the difference between a successful infrastructure project or revenue request and a public outcry resulting in a reputational crisis.

### **Tell Your Story to Build Understanding**

Today, we can engineer and finance solutions for the ongoing needs of our community, yet success often relies on public trust and support for our efforts. People know that infrastructure investment is important – but they often don't understand how impactful and costly it is and what that will mean to them personally. Strategic communication and stakeholder engagement are the tools we use to build an informed, supportive community; making your efforts to accomplish your objectives more effective and efficient.

### **Use Best Practices and Innovative Tools**

There are endless choices when it comes to developing a strategic communication plan for your organization or project. How do you know which social media strategy or public participation technique is the best and will get the results you want? Raftelis designs the right communication solution for your unique needs, ensuring that the strategy and tactics match your organization's goals and your ability to implement the plan. Traditional public outreach approaches can easily be combined with innovative online stakeholder engagement efforts to tailor a solution that is cost-effective and manageable for staff.

### **Enhanced by Design**

In the age of endless distractions and information overload, people want information in a visual format that is quickly and easily understood. While detailed, 100-page reports may provide great detail into a topic, this is typically not the most effective way to communicate with your stakeholders. Raftelis' team of in-house graphic designers and communications experts utilize the art of design and visualization to develop concise, visually pleasing, and easily digestible materials and content to effectively communicate your message.

### **Communicating From Experience**

Raftelis has proven ability to successfully communicate and build consensus on large, complex, and often controversial projects – and we've walked in your shoes, working directly with customers, stakeholders, elected officials,

media, and environmental organizations to engage and collaborate with them. Whether your goal is to build support for a rate structure change or analyze public perceptions to effectively neutralize opposition to an infrastructure project or new program, we've been there and done it successfully.

### **Strategic Planning**

There never seems to be enough time, money, or staff to meet every need, and allocating limited resources is one of the most difficult aspects of effectively managing a public organization. Raftelis assists its clients in developing strategic plans to guide policy and operational decision making.

### **A Broad and Deep Approach**

Our strategic planning approach utilizes interviews, focus groups, workshops, Board retreats, and facilitated meetings to drive the planning process and to develop relevant goals and objectives that meet the needs of your organization.

Our approach to strategic planning involves a proven and unique process that:

- Engages internal and external stakeholders
- Links strategy to performance
- Sets up for effective implementation
- Builds on industry best practices, such as those outlined in Effective Utility Management (EUM)

A successful strategic planning process should provide the organization with sev-



eral important benefits, including:

- Well-defined strategies directed toward achieving the organization's goals
- A committed team of employees working toward a shared vision
- Enhanced Board engagement
- An effective tool for enhanced communication with external stakeholders
- Predictable performance reflecting achievement of measurable objectives

### From Plan to Action

Even the most in-depth and skilfully developed strategic plan will fall short of success if the plan is never implemented. Raftelis works with our clients after the development of the plan to ensure successful implementation on a realistic timeline. We also provide tools to track progress as the objectives and strategies of the plan come to fruition.

Strategic planning that is incorporated into the fabric of the organization is a valuable tool to help ensure that the organization is sustainable operationally, environmentally, socially, and financially.



## Technology

**Utilities are embracing technology as a means to better connect with customers, increase the accuracy of customer and financial information, and improve organizational performance. Raftelis staff are trusted advi-**

**sors who can assist utilities in planning information technology improvements, gathering the best information available from their data and systems, improving information processes, and building custom tools to increase effectiveness across the organization.**

**Raftelis can assist utilities in planning IT improvements, gathering the best information available from their data and systems, improving information processes, and building custom tools to increase effectiveness across the organization.**

### Billing, Permitting, & Customer Information Audits

Are your staff losing confidence in the numbers being reported from your key information systems? We can help you confirm the source of data management or reporting errors that may be casting doubts across your operations, and improve your processes to provide more accurate data in the future.

### Forensic Data Analysis

Our staff have analyzed customer, financial, and regulatory systems using "Forensic Data Analysis" concepts to identify opportunities for data cleansing, process improvements, and system upgrades that can restore confidence in the organization's information. We have successfully identified system configuration errors resulting in millions of dollars in annual losses, have uncovered unallowable behaviors by temporary utility staff resulting in the prevention of collections enforcement, and have

identified billable customers not receiving bills for services. We work to pair audit findings with recommendations that can be rapidly implemented to prevent further financial losses.

### Accurate Reporting

In many cases, doubts relating to information originating from key utility systems are not caused by the source data, but rather by the reporting mechanisms employed to extract the information. Raftelis staff have the ability to review reporting logic in a variety of programming languages and systems to ensure that the results of reports reflect the desires of utility decision makers. We have rewritten reporting logic for metrics as seemingly simple as the number of billable accounts, to complex financial reports used to support bond purchases or regulatory requirements. Our staff have also created data warehouses to support performance metrics and reporting needs that are not natively supported by a utility's standard information systems. We can help restore staff confidence by providing objective analysis of your key reports and information systems.

### Business Process Development

Are your staff members putting the technology that you have available to its best use? We can help you take a step back and assess how effectively your operations are employing their information resources and if there are more efficient paths leading to the same or improved results.



Our team can help encourage improved communication between teams and develop transparent procedures for achieving business goals. We can teach staff how to better use their tools and provide targeted support that combines technical knowledge with subject matter expertise.

### Process Mapping

A great deal of value can be uncovered by mapping current business processes as they exist within the utility organization and comparing these processes to industry best practices. Process maps can uncover minor disconnects in communication or understanding that may result in lost time or revenue. Raftelis staff have worked closely with utility staff at all levels of an organization to understand how jobs are performed on a daily and annual basis. By interviewing staff and understanding their needs and challenges, we can suggest holistic modifications to processes to improve individual and organizational effectiveness.

### Data Management, Analytics, & Visualization

You already collect a vast array of information about your customers and finances, but how do you put that data to work? Our team can help you ask and answer critical operational questions using the data that you already have on hand.

#### Understanding Through Data

We understand how to translate plain English questions into analytics that can be gath-

ered and put to use in planning where your business is headed. Our team speaks the language of dozens of customer and financial systems and can assist with making key quantitative business metrics available to your decision making. Access the data that you already have and combine it with other available data sources to learn the most about where you stand.

#### Data Visualization

To create an even more compelling message, utilities' data can be presented visually in a way that can be understood by audiences from ranging from executives, to customers, to technical staff. Utility data can be combined with geographic data to create maps to highlight parts of the service area that show high or low consumption, areas that could benefit from increased outreach on affordability, or have longstanding work order requests that are interrupting billing. Beyond mapping, Raftelis staff have provided

visualizations of customer and financial data time series to show trends over time that could assist with future projections or forecasting. Visualizations help utilities reach a broader audience and can facilitate the communication of complex information in a concise medium.

### Software Solutions

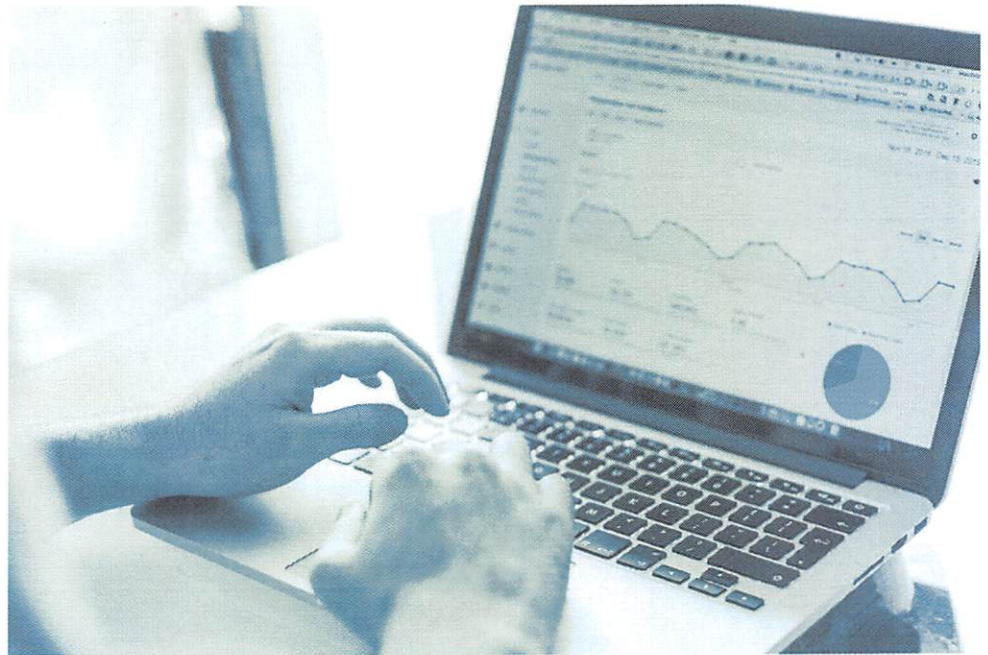
Custom software empowers you to interact with your data and customers in a more accessible way. Our application development staff have designed and implemented customer service, billing, GIS, financial, performance, and other applications across web, mobile, and desktop platforms to help support a variety of business objectives.

#### Tools of the Trade

Custom software helps users to be more efficient during their daily work, have greater access to the data that matter

to them, and have greater connectivity with their stakeholders and customers. Our staff are able to combine in-depth knowledge of utilities, government, and finance with strong technology skills to provide a tailored solution to meet your technology needs.

Raftelis have successfully implemented software solutions for utilities using a methodology that limits risk and ensures that the final product blends the desired functionality with ease of use. Our products are used to bill hundreds of millions of dollars of utility charges and fees annually, intake tens of thousands of affordability program applications, and communicate organizational performance metrics both internally and to the public. Our software has empowered our clients to be more responsive, more transparent, and more accurate across administrative and operational functions.

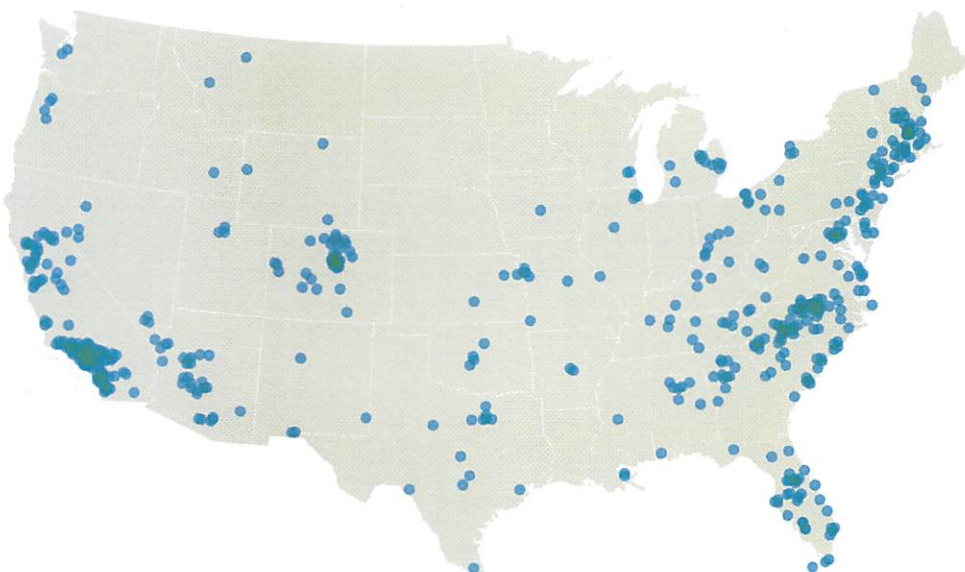




# Experience

**RAFTELIS HAS THE MOST  
EXPERIENCED UTILITY FINANCIAL  
AND MANAGEMENT CONSULTING  
PRACTICE IN THE NATION.**

Our staff have assisted more than 1,000 utilities across the U.S., including some of the largest and most complex agencies in the nation. In the past year alone, Raftelis worked on more than 600 financial/organizational/technology consulting projects for over 400 water, wastewater, and/or stormwater utilities in 40 states, the District of Columbia, and Canada.



**Raftelis has provided  
financial/organizational/  
technology assistance to  
utilities serving more than**

# 25%

**of the U.S. population.**

This map shows some of the utility clients that we have assisted.



This matrix shows a sample of some of the water, wastewater, and/or stormwater utility clients across the country that we've assisted with financial, organizational, or technology engagements.

Client		AF	Pr	Ca	Pl	De	Ec	Fin	Ra	St	De	Or	&	Pe	&	Pr	St	&	St	Bl	C	Bl	D	&	S
AL	Birmingham Water Works Board	•		•		•		•	•					•			•	•						•	
AR	Central Arkansas Water			•				•	•			•						•							
AR	Little Rock Wastewater Utility							•	•					•			•								
AZ	Phoenix, City of	•		•		•		•						•											
AZ	Pima County			•				•	•																
AZ	Tucson Water			•				•	•								•								
CA	Alameda County Water District			•		•		•	•																
CA	Anaheim, City of			•				•	•																
CA	Central Contra Costa Sanitation District			•				•	•			•		•											
CA	East Bay Municipal Utility District	•		•				•	•																
CA	Long Beach, City of	•				•		•	•																
CA	Los Angeles, City of							•	•																
CA	Metropolitan Water District of Southern California							•	•					•						•					
CA	Palo Alto, City of			•				•	•																
CA	San Diego, City of			•				•	•																
CA	San Juan Capistrano, City of			•				•	•																
CA	Santa Cruz, City of			•				•	•																
CA	Thousand Oaks, City of	•		•				•	•																
CA	Ventura, City of							•	•								•								
CO	Boulder, City of			•				•	•	•															
CO	Denver Wastewater Management Division					•			•			•		•			•								
CO	Denver Water								•															•	
CO	Greeley, City of			•		•	•	•	•	•	•														
CO	Metro Wastewater Reclamation District																	•							
CT	Groton, City of			•			•	•	•			•				•	•					•	•		
DC	DC Water			•				•	•			•		•				•						•	
DE	Wilmington, City of											•						•							
FL	Emerald Coast Utilities Authority			•		•		•																	
FL	Florida Keys Aqueduct Authority			•		•		•	•											•					
FL	Pompano Beach, City of			•				•	•			•													
FL	St. Johns County			•		•		•	•																
GA	Augusta, City of			•				•	•																
GA	Columbus Water Works			•		•		•	•																
GA	Paulding County			•		•	•	•																	
HI	Honolulu ENV, City and County of			•				•	•																
IL	Bloomington, City of			•				•	•																
IL	City of Naperville			•				•	•																
KS	Topeka, City of			•				•	•																
KS	Wichita, City of			•				•	•																
KY	Hardin County Water District #1			•				•	•																
LA	New Orleans, Sewerage & Water Board of			•		•		•	•	•				•			•			•			•		
MA	Boston Water & Sewer Commission			•				•	•	•	•	•				•	•						•	•	
MA	Northampton, City of	•						•	•								•								
MD	Baltimore, City of	•		•				•	•	•	•						•	•	•	•			•	•	
ME	Portland Water District							•	•																
MI	Detroit Water and Sewerage Department							•	•																
MI	Flint, City of							•	•											•			•		



Client		Finance								Organization					Technology		
		Affordability Analysis & Program Development	Capital Improvements Planning/Prioritization	Debt Issuance Support	Economic & Financial Evaluations	Financial Planning & Modeling	Rate, Charge, & Fee Studies	Stormwater Utility Development & Support	Organizational Governance, & Operations Optimization	Performance Measurement & Benchmarking	Program Planning & Support	Strategic Communications & Public Outreach	Strategic Planning	Billing, pPrmitting, & Customer Information Audits	Business Process Development	Data Management, Analytics, & Visualization	Software Solutions
MI	Saginaw, City of																
MO	Metropolitan St. Louis Sewer District																
MS	Jackson, City of																
NC	Asheville, City of																
NC	Charlotte Water																
NC	Durham, City of																
NC	Fayetteville, City of																
NC	Raleigh, City of																
NH	Concord, City of																
NJ	Brick Township Municipal Utilities Authority																
NJ	Jersey City Municipal Utilities Authority																
NV	Henderson, City of																
NY	Erie County Water Authority																
NY	New York City Water Board																
OH	Akron, City of																
OH	Franklin County																
OH	Montgomery County Environmental Services																
OH	Northeast Ohio Regional Sewer District																
OK	Chickasha, City of																
OK	Stillwater Utilities Authority																
OR	Portland Bureau of Water, City of																
PA	Capital Region Water																
PA	Philadelphia Water Department																
PA	Pittsburgh Water and Sewer Authority																
RI	Newport, City of																
RI	Providence Water Supply Board																
SC	Greenville Water																
SC	Mount Pleasant Waterworks																
TN	Johnson City, City of																
TN	Metro Water Services of Nashville and Davidson County																
TX	Austin, City of																
TX	Dallas, City of																
TX	El Paso Water Utilities																
TX	North Texas Municipal Water District																
TX	Round Rock, City of																
TX	San Antonio Water System																
UT	Salt Lake City																
VA	Newport News Department of Public Utilities, City of																
VA	Richmond Department of Public Utilities																
VA	Suffolk, City of																
VT	Burlington, City of																
WA	Tacoma, City of																
WI	Milwaukee Metropolitan Sewerage District																
WI	Milwaukee Water Works																
WV	Charleston Sanitary Board																
Can	Calgary, City of																
PR	Puerto Rico Aqueduct and Sewer Authority																



29-0354-4-035  
 October 29, 2019  
 Revised November 7, 2019

Rebecca McEnroe, Interim Superintendent  
 Townsend Water Department  
 540 Main Street  
 West Townsend, MA 01474

Re: **Proposal for Professional Engineering Services  
 Water System Master Plan**

Dear Becky:

Tighe & Bond is pleased to provide the Townsend Water Department (Water Department) with this proposal to complete a Water System Master Plan. It is our understanding that the previous Master Plan was completed approximately 25-years ago and is no longer representative of the needs of the Water Department.

## Scope of Services

We have developed the following proposed Scope of Services that will assist the Water Department in developing a planning tool for the operation and management of the water system for the next twenty years.

### Task 1: Kick-Off Meeting and Evaluation of Existing Facilities

Based on existing conditions and information made available by Water Department staff, Tighe & Bond will develop an inventory of the Water Department facilities and provide a description of the existing conditions and operation of the water system. This will include a description of the following:

- Water Supply Sources
- Storage facilities
- Pumping stations
- Water distribution system assets (piping, valves, hydrants, and meters)
- System operations
- Water quality
- Current water conservation and demand management practices

As part of this task, Tighe & Bond will conduct a Kick-Off meeting with the Water Department staff to discuss the goals and objectives for this study, interview key staff regarding the operation of the system, discuss our approach to the Scope of Work, and obtain up-to-date information including relevant reports and data.

With the assistance of Water Department staff, we will visit and document the condition of each facility and the operational parameters. We will visit the following:

1. **Well Pumping Stations:** Main Street, Cross Street, Harbor Trace, and Witch's Brook 1 and 2
2. **Booster Pumping Station:** West Meadow
3. **Storage Facilities:** Highland Street, and Fitchburg Road

Please note that these visits will not include completing comprehensive detailed condition assessments of the facilities.



## **Task 2: Develop Water Supply Requirements**

We will develop the estimated water supply requirements for the Water Department utilizing historical water consumption records and project future water demand requirements for a 20-year (through 2038) planning period. We will evaluate the following:

- Population trends
  - Historical population
  - Population served
  - Future population for 20-year planning period (based on Mass DCR projections for Water Management Act permit and Town Census)
- Water Demand Trends
  - Historical trends in residential, commercial, industrial, public, and non-revenue water consumption (including use per service connection)
  - Historical maximum month and maximum day peaking factors
  - Consumption trends by category
  - Unaccounted for water historical data
  - Estimate future average day, maximum month, and maximum day demands for the planning period (based on population and proposed developments)
  - Distribution storage capacity and future storage needs
  - Compare actual demands for the system and updated demand projections from the previous Water System Master Plan (if applicable) and Mass DCR projections.

## **Task 3: Review Adequacy of Existing Supplies**

Tighe & Bond will review the water supply capacity, adequacy, and quality based on information provided by the Water Department along with any recent water quality analysis. The goal of this task is to determine the adequacy of existing groundwater supplies to meet existing and future demands, Federal and State Drinking Water Regulations, and the Water Department's Water Management Act Permit.

Under this task, we will complete an evaluation of the following:

- Capacity of all five existing supplies
- Adequacy of existing supplies to meet existing and future (2038) demands
- Water quality of existing supplies
- Review proposed future water quality regulations, both Federal and State, to determine treatment facilities ability to meet regulations that may impact existing sources
- Confirm existing source status (active, inactive or emergency), source description data, and approved withdrawal amounts (registered and permitted)
- Review current Water Management Act Permit and potential impacts by projected water demands
- Review potential future sources of supply and interconnections with neighboring water systems

## **Task 4: Capital Improvement Plan**

Tighe & Bond will prepare a Capital Improvement Plan (CIP) that will provide the Water Department with a plan to budget, fund, and implement improvements in a prioritized manner. The CIP will identify short and long-term capital improvement needs and budgets, priority of projects (high, medium, low), and a recommended schedule for project



implementation. In order to implement the capital improvements in an affordable, phased program, Tighe & Bond will prepare a Five-Year CIP. This plan will consider the Water Department's ability to fund the projects, impacts of grouping projects, grant funding, and bonding. Please note that this Task does not include an analysis of Water Department's rate structure to determine the adequacy to fund the CIP.

Deliverables: We will prepare a draft memorandum summarizing the proposed complete CIP and Five-Year CIP, table of projects, prioritization, schedule, and associated costs, and a map identifying location of proposed improvements. We will solicit Water Department staff input on the draft CIP and Five-Year CIP. Upon receipt of comments, we will revise the CIP accordingly for inclusion in the final Master Plan Report.

### **Task 5: Develop Water System Hydraulic Model**

Tighe & Bond will use information available from the existing water distribution system mapping provided by the Water Department to develop and calibrate a hydraulic model. We will complete the following services under this task:

#### Model Development and Calibration

- Review system operations data, including source controls and tank operating data.
- Prepare water system data for integration with modeling software, including pipe characteristics, node elevations, allocation of demands, and development of diurnal demand patterns.
- Create a hydraulic model to include any large water mains (i.e. 4-inches or greater) from GIS mapping previously completed by Tighe & Bond. We will create the computer model using InfoWater software.
- Review any recent Insurance Services Organization (ISO) hydrant flow test data to determine adequacy for calibration.
- Calibrate model using existing ISO data and any other recent flow test information provided by the Water Department.
- Develop and implement a hydrant flow testing program to complete up to 10 additional flow tests to obtain supplemental data for use in calibrating the hydraulic model. We have included one day of hydrant flow testing to be conducted by one Tighe & Bond staff member with assistance by Water Department staff. We will provide flow measuring instrument and pressure gauges. We assume flow tests will be conducted during the day.

#### Update Model Demand Allocation

- Prepare diurnal demand patterns for use in extended period simulations based on operating data provided by the Water Department.
- Perform a storage capacity evaluation examining:
  - Unusable storage
  - Available emergency storage
  - Available equalization storage
- Provide updated/revised water system GIS layers to the Water Department. The overall intention is to create a model that will mirror the GIS system.

#### Hydraulic Analysis of Distribution System

- Perform system-wide analyses for existing and 20-year conditions (after improvements completed) for the following demand conditions:



- Average day
  - Maximum day
  - Peak hour
- Analyze distribution system pressures. In addition to high (>80 psi) and low (<35 psi) pressure, the system will also be analyzed for high pipe velocities (> 5 fps) and head losses (>10 ft/1,000 ft).
  - Identify system hydraulic deficiencies and vulnerable areas due to lack of redundancy.
  - Identify specific water main improvements to address transmission “bottlenecks”, sections of pipeline that exhibit high head loss, as well as low fire flow, low pressure and other operating deficiencies.
  - Determine available fire flows at selected locations in the model under maximum day demands assuming sources of supply and pumps are operating and tanks are at the bottom of the normal operating range. Fire flows will be defined as the flow available at a residual pressure of 20 psi without reducing the pressure at any point in the distribution system below 20 psi.
  - Compare the results of flows from the model with the most recent fire flow report conducted by ISO in Town (if available).

#### **Task 5: Prepare Report**

Tighe & Bond will prepare draft Water System Master Plan report summarizing the results of the evaluations completed under Tasks 1 through 4. We will provide the Water Department with three hard copies of the draft report for review. We will meet with Water Department staff to present the results of the report and provide a summary of the recommendations.

Based on comments received from the Water Department, we will revise the report and prepare a Final Water System Master Plan Report. Tighe & Bond will provide three bound hard copies of the report and one electronic copy in .pdf format.

#### **Exclusions**

As a part of the hydraulic model task, we have not included development of a GIS layer that includes geo-referenced customer service locations and annual average water usage from the most recent available billing data. Therefore, demands to model nodes will be allocated equally throughout the model, rather than based on water usage.

#### **Fee**

Tighe & Bond will perform the services listed herein for a lump sum fee of **\$50,000** invoiced monthly based on percentage complete. In the event that the scope of work is increased for any reason, the lump sum fee to complete the work shall be mutually revised by written amendment. Our attached Terms and Conditions is part of this letter agreement.

For information purposes, the following fee summary provides the anticipated break out of the agreement. The summary is presented to provide the Water Department with a better understanding of the how the fee budget was developed. Invoices will be submitted based on the total project fee and not individual line item budgets.



**Engineering Fee Summary**

<b><u>Task</u></b>	<b><u>Description</u></b>	<b><u>Budget</u></b>
<b>1</b>	Kick-off Meeting/Evaluation of Existing Facilities	\$5,000
<b>2</b>	Develop Water Supply Requirements	\$3,500
<b>3</b>	Review Adequacy of Supplies	\$4,200
<b>4</b>	Capital Improvement Plan	\$4,300
<b>5</b>	Develop Water System Computer Model	\$18,000
<b>6</b>	Prepare Report	\$15,000
<b>TOTAL FEE</b>		<b>\$50,000</b>

**Schedule**

Tighe & Bond is prepared to begin work immediately on this study. We will complete the above listed services and provide a draft copy of the Water System Master Plan Report to the Water Department within four (4) months of receipt of authorization to proceed. This scheduled is weather dependent and assumes that hydrant flow tests can be conducted this year during favorable weather conditions.

Thank you for the opportunity to provide this proposal to develop an important planning tool for the Townsend Water Department. If this proposal is acceptable, please sign below and return one signed copy to our office. If you have any questions or need any additional information, please contact me or Lou Soracco at our office.

Very truly yours,

**TIGHE & BOND, INC.**



Thomas J. Mahanna, P.E.  
Vice President  
[tjmahanna@tighebond.com](mailto:tjmahanna@tighebond.com)



Louis A. Soracco, PE  
Senior Project Manager  
[lasoracco@tighebond.com](mailto:lasoracco@tighebond.com)

Enclosure: Terms and Conditions

**Acceptance:**

On behalf of the Townsend Water Department, the scope, fee, and terms of this proposal are hereby accepted.

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Date

J:\T\T0354 Townsend Water Department\Proposal\Master Plan\Townsend Water Dept.\_Water System Master Plan Proposal (revised).doc

**Board of Selectmen:**

\_\_\_\_\_  
Sue Lisio, Chairman

\_\_\_\_\_  
Date

\_\_\_\_\_  
Wayne Miller, Vice Chairman

\_\_\_\_\_  
Date

\_\_\_\_\_  
Don Klein, Clerk

\_\_\_\_\_  
Date



**"CLIENT" is defined in the acceptance line of the accompanying proposal letter or the name the proposal is issued to; Tighe & Bond, Inc. is hereby referenced as "ENGINEER".**

#### **1. SCHEDULE OF PAYMENTS**

**1.1** Invoices will generally be submitted once a month for services performed during the previous month. Payment will be due within 30 days of invoice date. Monthly payments to ENGINEER shall be made on the basis of invoices submitted by ENGINEER and approved by CLIENT. If requested by CLIENT, monthly invoices may be supplemented with such supporting data as reasonably requested to substantiate them.

**1.2** In the event of a disagreement as to billing, the CLIENT shall pay the agreed portion.

**1.3** Interest will be added to accounts in arrears at the rate of one and one-half (1.5) percent per month (18 percent per annum) or the maximum rate allowed by law, whichever is less, of the outstanding balance. In the event counsel is retained to obtain payment of an outstanding balance, CLIENT will reimburse ENGINEER for all reasonable attorney's fees and court costs.

**1.4** If CLIENT fails to make payment in full within 30 days of the date due for any undisputed billing, ENGINEER may, after giving seven days' written notice to CLIENT, suspend services and retain work product until paid in full, including interest. In the event of suspension of services, ENGINEER will have no liability to CLIENT for delays or damages caused by such suspension.

#### **2. SUCCESSORS AND ASSIGNS**

**2.1** CLIENT and ENGINEER each binds itself, its partners, successors, assigns and legal representatives to the other parties to this Agreement and to the partners, successors, assigns and legal representatives of such other parties with respect to all covenants of this Agreement. ENGINEER shall not assign, sublet or transfer its interest in this Agreement without the written consent of CLIENT, which consent shall not be unreasonably withheld.

**2.2** This Agreement represents the entire and integrated Agreement between CLIENT and ENGINEER and supersedes all prior negotiations, representations or Agreements, whether written or oral. This Agreement may be amended only by written instrument signed by both CLIENT and ENGINEER.

**2.3** Nothing contained in this Agreement shall create a contractual relationship or cause of action in favor of a third party against CLIENT or against ENGINEER.

#### **3. STANDARD OF CARE**

**3.1** In performing professional services, ENGINEER will use that degree of care and skill ordinarily exercised under similar circumstances by members of the profession practicing in the same or similar locality.

#### **4. TERMINATION**

**4.1** This Agreement may be terminated by either party upon seven days' written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In addition, CLIENT may terminate this Agreement for its convenience at any time by giving written notice to ENGINEER. In the event of any termination, CLIENT will pay ENGINEER for all services rendered and reimbursable expenses incurred under the Agreement to the date of termination and all services and expenses related to the orderly termination of this Agreement.

#### **5. RECORD RETENTION**

**5.1** ENGINEER will retain pertinent records relating to the services performed for the time required by law, during which period the records will be made available upon reasonable request and upon reimbursement for any applicable retrieval/copying charges.

**5.2** Samples - All soil, rock and water samples will be discarded 30 days after submission of ENGINEER's report, unless mutually agreed otherwise or unless ENGINEER's customary practice is to retain for a longer period of time for the specific type of services which ENGINEER has agreed to perform. Upon request and mutual agreement regarding applicable charges, ENGINEER will ship, deliver and/or store samples for CLIENT.

#### **6. OWNERSHIP OF DOCUMENTS**

**6.1** All reports, drawings, specifications, computer files, field data, notes, and other documents, whether in paper or electronic format or otherwise ("documents"), are instruments of service and shall remain the property of ENGINEER, which shall retain all common law, statutory and other reserved rights including, without limitation, the copyright thereto. CLIENT's payment to ENGINEER of the compensation set forth in the Agreement shall be a condition precedent to the CLIENT's right to use documents prepared by ENGINEER.

**6.2** Documents provided by ENGINEER are not intended or represented to be suitable for reuse by CLIENT or others on any extension or modification of this project or for any other projects or sites. Documents provided by ENGINEER on this project shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party, other than regulatory agencies, without the prior written consent of ENGINEER. Reuse of documents by CLIENT or others on extensions or modifications of this project or on other sites or use by others on this project, without ENGINEER's written permission and mutual agreement as to scope of use and as to compensation, if applicable, shall be at the user's sole risk, without liability on ENGINEER's part, and CLIENT agrees to indemnify and hold ENGINEER harmless from all claims, damages, and expenses, including attorney's fees, arising out of such unauthorized use or reuse.

**6.3** Electronic Documents - ENGINEER cannot guarantee the authenticity, integrity or completeness of data files supplied in electronic format. If ENGINEER provides documents in electronic format for CLIENT's convenience, CLIENT agrees to waive any and all claims against ENGINEER resulting in any way from the unauthorized use, alteration, misuse or reuse of the electronic documents, and to defend, indemnify, and hold ENGINEER harmless from any claims, losses, damages, or costs, including attorney's fees, arising out of the unauthorized use, alteration, misuse or reuse of any electronic documents provided to CLIENT.

**6.4** Electronic Data Bases - In the event that ENGINEER prepares electronic data bases, geographical information system (GIS) deliverables, or similar electronic documents, it is acknowledged by CLIENT and ENGINEER that such project deliverables will be used and perhaps modified by CLIENT and that ENGINEER's obligations are limited to the deliverables and not to any subsequent modifications thereof. Once CLIENT accepts the delivery of maps, databases, or similar documents developed by ENGINEER, ownership is passed to CLIENT. ENGINEER will retain the right to use the developed data and will archive the data for a period of three years from the date of project completion.



**7. INSURANCE**

**7.1** ENGINEER will retain Workmen's Compensation Insurance, Professional Liability Insurance with respect to liabilities arising from negligent errors and omissions, Commercial General Liability Insurance, Excess Liability, and Automobile Liability during this project. ENGINEER will furnish certificates at CLIENT's request.

**7.2** Risk Allocation - For any claim, loss, damage, or liability resulting from error, omission, or other professional negligence in the performance of services, the liability of ENGINEER to all claimants with respect to this project will be limited to an aggregate sum not to exceed \$50,000 or ENGINEER's compensation for consulting services, whichever is greater.

**7.3** Damages - Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither CLIENT nor ENGINEER, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the project or to this Agreement. This mutual waiver of certain damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation and any other consequential damages that may be incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both CLIENT and ENGINEER shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in this project.

**8. INDEMNIFICATION AND DISPUTE RESOLUTION**

**8.1** ENGINEER agrees, to the fullest extent permitted by law, to indemnify and hold CLIENT harmless from any damage, liability or cost to the extent caused by ENGINEER's negligent acts, errors or omissions in the performance of professional services under this Agreement and those of its subconsultants or anyone for whom ENGINEER is legally liable. ENGINEER is not obligated to indemnify CLIENT in any manner whatsoever for CLIENT's own negligence.

**8.2** CLIENT agrees, to the fullest extent permitted by law, to indemnify and hold ENGINEER harmless from any damage, liability or cost to the extent caused by CLIENT's negligent acts, errors or omissions in the performance of this Agreement or anyone for whom CLIENT is legally liable. CLIENT is not obligated to indemnify ENGINEER in any manner whatsoever for ENGINEER's own negligence.

**8.3** CLIENT agrees that any and all limitations of ENGINEER's liability, waivers of damages by CLIENT to ENGINEER shall include and extend to those individuals and entities ENGINEER retains for performance of the services under this Agreement, including but not limited to ENGINEER's officers, partners, and employees and their heirs and assigns, as well as ENGINEER's subconsultants and their officers, employees, and heirs and assigns.

**8.4** In the event of a disagreement arising out of or relating to this Agreement or the services provided hereunder, CLIENT and ENGINEER agree to attempt to resolve any such disagreement through direct negotiations between senior, authorized representatives of each party. If any disagreement is not resolved by such direct negotiations, CLIENT and ENGINEER further agree to consider using mutually acceptable non-binding mediation service in order to resolve any disagreement without litigation.

**9. SITE ACCESS**

**9.1** Right of Entry - Unless otherwise agreed, CLIENT will furnish right-of-entry on the land for ENGINEER to make any surveys, borings, explorations, tests or similar field investigations. ENGINEER will take reasonable precautions to limit damage to the land from use of equipment, but the cost for restoration of any damage that may result from such field investigations is not included in the agreed compensation for ENGINEER. If restoration of the land is required to its former condition, upon mutual agreement this may be accomplished as a reimbursable additional service at cost plus ten percent.

**9.2** Damage to Underground Structures - Reasonable care will be exercised in locating underground structures in the vicinity of proposed subsurface explorations. This may include contact with the local agency coordinating subsurface utility information and/or a review of plans provided by CLIENT or CLIENT representatives for the site to be investigated. ENGINEER shall be entitled to rely upon any information or plans prepared or made available by others. In the absence of confirmed underground structure locations, CLIENT agrees to accept the risk of damage and costs associated with repair and restoration of damage resulting from the exploration work.

**10. OIL AND HAZARDOUS MATERIALS**

**10.1** If, at any time, evidence of the existence or possible existence of asbestos, oil, or other hazardous materials or substances is discovered, ENGINEER reserves the right to renegotiate the terms and conditions of this Agreement, the fees for ENGINEER's services and ENGINEER's continued involvement in the project. ENGINEER will notify CLIENT as soon as practical if evidence of the existence or possible existence of such hazardous materials or substances is discovered.

**10.2** The discovery of the existence or possible existence of hazardous materials or substances may make it necessary for ENGINEER to take accelerated action to protect human health and safety, and/or the environment. CLIENT agrees to compensate ENGINEER for the cost of any and all measures that in its professional opinion are appropriate to preserve and/or protect the health and safety of the public, the environment, and/or ENGINEER's personnel. To the full extent permitted by law, CLIENT waives any claims against ENGINEER and agrees to indemnify, defend and hold harmless ENGINEER from any and all claims, losses, damages, liability, and costs, including but not limited to cost of defense, arising out of or in any way connected with the existence or possible existence of such hazardous materials substances at the site.

**11. SUBSURFACE INVESTIGATIONS**

**11.1** In soils, groundwater, and other subsurface investigations, conditions may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the variability of conditions and the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that may affect overall project costs and/or execution. These variable conditions and related impacts on cost and project execution are not the responsibility of ENGINEER.

**12. FEDERAL AND STATE REGULATORY AGENCY AUDITS**

**12.1** For certain services rendered by ENGINEER, documents filed with federal and state regulatory agencies may be audited after the date of filing. In the event that CLIENT's project is selected for an audit, CLIENT agrees to compensate ENGINEER for time spent preparing for and complying with an



agency request for information or interviews in conjunction with such audit. CLIENT will be notified at the time of any such request by an agency, and ENGINEER will invoice CLIENT based on its standard billing rates in effect at the time of the audit.

### **13. CLIENT's RESPONSIBILITIES**

**13.1** Unless otherwise stated in the Agreement, CLIENT will obtain, arrange, and pay for all notices, permits, and licenses required by local, state, or federal authorities; and CLIENT will make available the land, easements, rights-of-way, and access necessary for ENGINEER's services or project implementation.

**13.2** CLIENT will examine ENGINEER's studies, reports, sketches, drawings, specifications, proposals, and other documents and communicate promptly to ENGINEER in the event of disagreement regarding the contents of any of the foregoing. CLIENT, at its own cost, will obtain advice of an attorney, insurance counselor, accountant, auditor, bond and financial advisors, and other consultants as CLIENT deems appropriate; and render in writing decisions required by CLIENT in a timely manner.

### **14. OPINIONS OF COST, FINANCIAL ANALYSES, ECONOMIC FEASIBILITY PROJECTIONS, AND SCHEDULES**

**14.1** ENGINEER has no control over cost or price of labor and materials required to implement CLIENT's project, unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs, competitive bidding procedures and market conditions, time or quality of performance by operating personnel or third parties, and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, ENGINEER makes no warranty, expressed or implied, that CLIENT's actual project costs, financial aspects, economic feasibility, or schedules will not vary from any opinions, analyses, projections, or estimates which may be provided by ENGINEER. If CLIENT wishes additional information as to any element of project cost, feasibility, or schedule, CLIENT at its own cost will employ an independent cost estimator, contractor, or other appropriate advisor.

### **15. CONSTRUCTION PHASE PROVISIONS**

The following provisions shall be applicable should the ENGINEER be retained to provide Construction Phase Services in connection with the Project:

**15.1** CLIENT and Contractor - The presence of ENGINEER's personnel at a construction site, whether as onsite representatives or otherwise, does not make ENGINEER or ENGINEER's personnel in any way responsible for the obligations, duties, and responsibilities of the CLIENT and/or the construction contractors or other entities, and does not relieve the construction contractors or any other entity of their respective obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction contract documents and for providing and/or enforcing all health and safety precautions required for such construction work.

**15.2** Contractor Control - ENGINEER and ENGINEER's personnel have no authority or obligation to monitor, to inspect, to supervise, or to exercise any control over any construction contractor or other entity or their employees in connection with their work or the health and safety precautions for the construction work and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the construction contractor(s) or other entity or any other persons at the site except ENGINEER's own personnel.

**15.3** On-site Responsibility - The presence of ENGINEER's personnel at a construction site is for the purpose of providing to CLIENT an increased degree of confidence that the completed construction work will conform generally to the construction documents and that the design concept as reflected in the construction documents generally has been implemented and preserved by the construction contractor(s). ENGINEER neither guarantees the performance of the construction contractor(s) nor assumes responsibility for construction contractor's failure to perform work in accordance with the construction documents.

**15.4** Payment Recommendations - Recommendations by ENGINEER to CLIENT for periodic construction progress payments to the construction contractor(s) are based on ENGINEER's knowledge, information, and belief from selective observation that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by ENGINEER to ascertain that the construction contractor(s) have completed the work in exact accordance with the construction documents; that the final work will be acceptable in all respects; that ENGINEER has made an examination to ascertain how or for what purpose the construction contractor(s) have used the moneys paid; that title to any of the work, materials, or equipment has passed to CLIENT free and clear of liens, claims, security interests, or encumbrances; or that there are no other matters at issue between CLIENT and the construction contractors that affect the amount that should be paid.

**15.5** Record Drawings - Record drawings, if required as part of ENGINEER's agreed scope of work, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the project was finally constructed. ENGINEER is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

### **16. DESIGN WITHOUT CONSTRUCTION PHASE SERVICES**

The following provisions shall be applicable should the ENGINEER be retained to provide design services but not be retained to provide Construction Phase Services in connection with the Project:

**16.1** It is understood and agreed that the ENGINEER's Scope of Services under this proposal does not include project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided by the CLIENT or others. The CLIENT assumes all responsibility for interpretation of the Contract Documents and for construction observation, and the CLIENT waives any claims against the ENGINEER that may be in any way connected thereto.

**16.2** In addition, the client agrees, to the fullest extent permitted by law, to indemnify and hold harmless the ENGINEER, its officers, directors, employees and subconsultants (collectively, ENGINEER) against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or in any way connected with the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of the ENGINEER.

The Board of Water Commissioners  
540 Main Street  
West Townsend, MA, 01474

November 11th, 2019

Paul Rafuse  
344 Elm Street Unit 35  
Milford, NH, 03055

Dear Board of Water Commissioners,

It is with great regret that after 39 years of service to the Townsend Water Department that I am officially giving my notice of retirement.

I will be returning to work on November 25, 2019 to fulfill my obligation in accordance with FMLA provisions and then I will take 4 days of personal time 11-26-2019, 11-27-2019 and 12-2-2019 12-3-2019. I will then take 1 day of sick time on 12-4-2019 in order to use up some of my earned time. My official retirement date will be December 4, 2019.

I want to thank the Water Commissioners for their efforts and the Water Department in general for giving me the opportunity to fulfill a satisfying career in the water supply industry as well as the belief in me to be the Superintendent for the last 24 years. I have met and worked alongside a lot of wonderful people over the years and for that I am eternally grateful.

I've always wanted and will continue to want only the best for the Townsend Water Department and the employees. I am proud of the many accomplishments we've made during my tenure as Superintendent - from water main extensions and replacements to the construction of the Harbor Trace well and pump station, the acquisition of the Timberlee Park water system including two wells and pump stations, and two total rehabilitation projects of the Fitchburg Road storage tank, to name a few. My biggest regret is not being able to fulfill my goal to make the Water Department a separate entity to operate as effectively and efficiently as possible.

I had fully intended to stay with the water department until I turned 65, however due to the well documented mistreatment, lack of respect, lack of support, lack of cooperation and harassment by the Board of Selectmen and Town Administrator over the past 5 years I don't feel I can do that. This treatment affected my physical and emotional well-being to the point I needed to go out on FMLA. While out on FMLA I became aware that the environment within and supported by the Board of Selectmen and Town Administrator had not changed and remains hostile. This was made evident by several other long term employees resigning and or going out on FMLA. Although my passion and dedication for my job would not waiver, I have been made to feel that my presence is not what is best for the Water Department. This is unfortunate due to my knowledge and years of experience. For these reasons it is in my best interest to retire. It saddens



me to see other department heads including myself with 75+ years of knowledge and dedication feel the need to retire or resign and go elsewhere.

I have not reached this decision easily nor am I taking it lightly. It has come with a lot of stress and a lot of thought. I have dedicated the last 39 years to the water department and I will retire knowing in my heart that I did the best I could do and I kept the water takers and systems safe to the very best of my ability.

However, there has been so much interference in my day to day operations that it has severely restricted my ability to effectively run the water department.

Over the years my goal was always to find the most cost effective way to operate, maintain and improve the water system.

I am requesting my six weeks vacation time to be paid to me upon my retirement on December 4, 2019.

A special thank you to Brenda Boudreau for all of her endless support and tireless hard work for the last 18 years and Terri Walsh for all of their loyalty and dedication to me and the department. They are a very valuable asset to the Water Department and I feel lucky to have had them work with me.

Respectfully

Paul Rafuse

A handwritten signature in blue ink that reads "Paul Rafuse". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

## **Massachusetts Water/ Wastewater Agency Response Network (WARN)**

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### **AGREEMENT**

This Agreement is made and entered into by Massachusetts water and wastewater provider agencies (in accordance with MGL c40, s. 4a), that have, by the execution of this Agreement, manifested their intent to participate in an Intrastate Water/Wastewater Agency Response Network (WARN).

### **ARTICLE I. PURPOSE**

The mission of the signatories is to support and promote statewide emergency planning, preparedness, disaster response, and mutual assistance among water and wastewater utilities during emergencies.

Recognizing that emergencies may require assistance in the form of personnel, equipment, and supplies from outside the area of impact, the signatory utilities hereby establish the Massachusetts WARN. Through the Massachusetts WARN, Members coordinate response activities and share resources during emergencies. This Agreement sets forth the procedures and standards for the administration of the Intrastate WARN.

### **ARTICLE II. DEFINITIONS**

A. Emergency—Any event that is beyond the control of the services, personnel, equipment, and facilities of an individual member utility that signs the Massachusetts WARN and that is declared an emergency by the utility's chief municipal officer or equivalent.

B. Member—Any public Water or Wastewater Utility that manifests intent to participate in the Massachusetts WARN by becoming a signatory to this Agreement.

C. Authorized Official—An employee of a Member that is authorized by the Member's governing board or management to request assistance or offer assistance under this Agreement.

D. Requesting Member—A Member who requests assistance under the Massachusetts WARN.

E. Assisting Member—A Member that responds to a request for assistance under the Massachusetts WARN.

F. Period of Assistance—A specified period of time when an Assisting Member assists a Requesting Member. The period commences when personnel, equipment, or supplies depart



from an Assisting Member's facility and ends when the resources return to their facility (portal to portal). All protections identified in the agreement apply during this period. The specified Period of Assistance may occur during response to or recovery from an emergency, as previously defined.

G. National Incident Management System (NIMS)—A national, standardized approach to incident management and response that sets uniform processes and procedures for emergency response operations.

### **ARTICLE III.** **COORDINATION**

The Massachusetts WARN shall be administered through a Leadership Committee made up of authorized representatives designated by each Member.

The members shall annually elect a chair, vice-chair, and a secretary to assist in establishing plans and procedures. The Leadership Committee will provide planning and coordination before, during, and after an emergency. The Leadership Committee, under the leadership of the elected Chairperson, shall meet at least annually to address Massachusetts WARN issues and to review emergency preparedness and response procedures. A quorum shall be an absolute majority of its voting members. In addition to representing the interests of the Members, the Leadership Committee may include ex-officio, non-voting representatives from other agencies such as public health, public safety, and associations.

### **ARTICLE IV.** **PROCEDURES**

In coordination with the Massachusetts Emergency Management Agency, the Leadership Committee shall develop operational and planning procedures for the Massachusetts WARN. These procedures shall be reviewed and/or updated at least annually.

### **ARTICLE V.** **REQUESTS FOR ASSISTANCE**

*Member Responsibility:* Members shall identify an Authorized Official and alternates; provide contact information including 24-hour access; and maintain and update annually resource information made available by the utility for mutual aid and assistance response.

In the event of an Emergency, a Member's Authorized Official may request mutual aid and assistance from participating Members. Requests for assistance can be made orally or in writing. When made orally, the request for personnel, equipment, and supplies shall be prepared in writing as soon as practicable. Requests for assistance shall be directed to the Authorized Official(s) of the participating Member(s). Specific protocols for requesting aid shall be developed by the Leadership Committee.

*Response to a Request for Assistance:* After a Member receives a request for assistance, the Authorized Official evaluates whether resources are available to respond to the request for assistance. Following the evaluation, the Authorized Representative shall inform, as soon as possible, the Requesting Member whether it has the resources to respond. If the Member is willing and able to provide assistance, the Member shall inform the Requesting Member about the type of available resources and the approximate arrival time of such assistance.

*Discretion of Assisting Member's Authorized Official:* Execution of this Agreement does not create any duty to respond to a request for assistance. When a Member receives a request for assistance, the Authorized Official shall have absolute discretion as to the availability of resources. An Authorized Member's decisions on the availability of resources shall be final.

## **ARTICLE VI.**

### **RESPONDING MEMBER PERSONNEL**

*National Incident Management System:* Operations shall be conducted using the National Incident Management System.

*Control:* Assisting Member personnel shall remain under the direction and control of the Assisting Member and their on-scene supervisor, who shall report to the Requesting Member using the principles of the Incident Command System. The Requesting Member's Authorized Official shall coordinate response activities with the designated supervisor(s) of the Assisting Member(s).

*Food and Shelter:* The Requesting Member shall supply reasonable food and shelter for Assisting Member personnel. If the Requesting Member fails to provide food and shelter for assisting personnel, the Assisting Member's designated supervisor is authorized to secure the resources necessary to meet the needs of its personnel. The cost for such resources must not exceed the Assisting Member's per diem rates. The Requesting Member remains responsible for reimbursing the Assisting Member for all costs associated with providing food and shelter, if such resources are not provided.

*Communication:* The Requesting Member shall provide Assisting Member personnel with means of communication, as available.

*Status:* Unless otherwise provided by law, the Assisting Member's officers and employees retain the same privileges, immunities, rights, duties, permits, licenses, certificates, and benefits as provided in their respective jurisdictions.

*Right to Withdraw:* The Assisting Member's Authorized Official retains the right to withdraw some or all of its resources at any time. Notice of intention to withdraw must be communicated to the Requesting Member's Authorized Official as soon as possible.



## **ARTICLE VII.**

### **COST REIMBURSEMENT**

Unless otherwise mutually agreed in whole or in part, the Requesting Member shall reimburse the Assisting Member for each of the following categories of costs incurred while providing aid and assistance during the specified Period of Assistance.

*Personnel:* Assisting Member personnel are to be paid for work completed during a specified Period of Assistance according to the terms provided in their current pay rate structure or employment contracts or other conditions of employment. The Assisting Member designated supervisor(s) must keep accurate records of work performed by personnel during the specified Period of Assistance. Requesting Member reimbursement to the Assisting Member must consider all personnel costs, including salaries or hourly wages, costs for fringe benefits, indirect costs, overtime, travel expenses, food & shelter, and clothing. Note that these rates will vary from Member to Member.

*Equipment:* The Requesting Member shall reimburse the Assisting Member for the use of equipment during a specified Period of Assistance. At a minimum, rates for equipment use must be based on the Federal Emergency Management Agency's (FEMA) Schedule of Equipment Rates. The Assisting Member must not charge direct fees or rental charges to the Requesting Member for other supplies and reusable items that are returned to the Assisting Member in a clean, damage-free condition. An Assisting Member may choose to waive any and all reimbursement fees.

*Materials and Supplies:* The Requesting Member must reimburse the Assisting Member in kind or at actual replacement cost, plus handling charges, for use of expendable or non-returnable supplies. Reusable supplies that are returned to the Assisting Member with damage must be treated as expendable supplies for purposes of cost reimbursement.

*Payment Period:* The Assisting Member must provide an itemized bill to the Requesting Member for all expenses it incurred as a result of providing assistance under this Agreement. The Assisting Member must send the itemized bill not later than ninety (90) days following the end of the Period of Assistance.

## **ARTICLE VIII.**

### **DISPUTES**

Parties shall settle disputes via a court of competent jurisdiction in the superior court of the county of the Requesting Member's community. However, if all parties to a dispute agree in writing, they may opt to submit the dispute to an arbitration proceeding in accordance with the Rules of the American Arbitration Association.

**ARTICLE IX.**  
**WORKER'S COMPENSATION CLAIMS**

Members are responsible for providing their own worker's compensation benefits and administering worker's compensation.

**ARTICLE X.**  
**NOTICE**

A Member who becomes aware of a claim or suit that in any way, directly or indirectly, contingently or otherwise, affects or might affect other Members of this Agreement shall provide prompt and timely notice to the Members who may be affected by the suit or claim. Each Member reserves the right to participate in the defense of such claims or suits as necessary to protect its own interests.

**ARTICLE XI.**  
**EFFECTIVE DATE**

This Agreement shall be effective after the Water and Wastewater Utility's authorized representatives execute the agreement.

**ARTICLE XII.**  
**WITHDRAWAL**

A Member may withdraw from this Agreement by providing written notice of its intent to withdraw to the Leadership Committee Chair. Withdrawal will take effect 60 days after the appropriate officials receive notice.

**ARTICLE XIII.**  
**MODIFICATION**

No provision of this Agreement may be modified, altered, or rescinded by individual parties to the Agreement. Modifications to this Agreement may be due to programmatic operational changes to support the agreement. Modifications require an absolute majority vote of the Members.

**ARTICLE XIV.**  
**PROHIBITION ON THIRD PARTIES AND ASSIGNMENT OF RIGHTS/DUTIES**

This Agreement is for the sole benefit of the Members and no person or entity must have any rights under this Agreement as a third-party beneficiary. Assignments of benefits and delegations of duties created by this Agreement are prohibited and must be without effect.



By:\_\_\_\_\_

Title:\_\_\_\_\_

\_\_\_\_\_  
Please Print Name

By:\_\_\_\_\_

Title\_\_\_\_\_

\_\_\_\_\_  
Please Print Name

By:\_\_\_\_\_

Title:\_\_\_\_\_

\_\_\_\_\_  
Please Print Name

By:\_\_\_\_\_

Title\_\_\_\_\_

\_\_\_\_\_  
Please Print Name

By:\_\_\_\_\_

Title:\_\_\_\_\_

\_\_\_\_\_  
Please Print Name

By:\_\_\_\_\_

Title\_\_\_\_\_

\_\_\_\_\_  
Please Print Name

Date: \_\_\_\_\_

Utility Name and Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Contact Person: \_\_\_\_\_

E-mail: \_\_\_\_\_

Phone: \_\_\_\_\_



TOWN OF TOWNSEND  
BOARD OF WATER COMMISSIONERS  
APPLICATION TO ABATE OR ADJUST CHARGES

Name: Anthony DeLore Account # 60915A

Address: 230 Main St.

Phone # \_\_\_\_\_ Email Address \_\_\_\_\_

Billing date 10/17/19

AMOUNT: 116.50 ABATEMENT [ ] ADJUSTMENT [ ] (check one)

REQUESTED BY: CUSTOMER [ ] OFFICE [ ] OTHER [ ] - if other please explain below:

Reasons: (please attached supporting documentation if applicable)

Final Bill was paid TWICE

APPROVED [ ] DENIED [ ] (check one)

DATE: \_\_\_\_\_

TOWNSEND BOARD OF WATER COMMISSIONERS

[Signature]

[Signature]

116.50 48cr  
4216.

BOX 2070  
Corrigan NH  
03818

116.188.46 ✓



<u>Search</u>		<u>History</u>		<u>Balances</u>		<u>Readings</u>		<u>Previous</u>		<u>Next</u>		<u>Print</u>																																									
Acct. Number		60915A		<input type="checkbox"/> Active		<input type="checkbox"/> Member		<input type="checkbox"/> Private		Deposit		\$0.00																																									
FID		DLN		Gender		UNK		Ethn		UNK		Race																																									
First, Middle, Last Name		ANTHONY		DeTORE		<input type="checkbox"/> Online Bill																																															
<input type="checkbox"/> Company Name				Home Ph.		(978) 609-8032																																															
Bill Address		COURTNEY DETORE		Fax/Cell Ph.																																																	
<input checked="" type="checkbox"/> Bill Here		P.O. BOX 6		Work/Cell Ph.																																																	
City, ST, Zip		TOWNSEND		MA		01469		E-mail		detoredesign@gmail.com																																											
Service Location Information								Add <input type="checkbox"/> Other Service Locations																																													
ID		60915A-609		Route		99		Seq #		970		Access Lat. and Long. in grid below...																																									
Service Address				Dates																																																	
<input type="checkbox"/> Bill Here		230 MAIN STREET		In*		1/1/1980		Out		9/25/2019																																											
City, ST, Zip		TOWNSEND		MA		01469		<input type="checkbox"/> Minimum Bill		<input type="checkbox"/> Late Chg Exempt																																											
MAP		County		Beat/District				<input type="checkbox"/> Cutoff Exempt		<input type="checkbox"/> Currently In Use																																											
Comment		+ Badger 9 Read		Well																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="8">Service Transaction Codes for This Location</th> </tr> <tr> <th></th> <th>Code</th> <th>Start Date</th> <th>Multiplier</th> <th>Initial Reading</th> <th>Serial/Unit</th> <th>Machine</th> <th>Consta</th> </tr> <tr> <td>▶</td> <td>W01</td> <td>06/01/2015</td> <td>100</td> <td>0</td> <td>47465961</td> <td>68207648--0</td> <td>1</td> </tr> <tr> <td></td> <td>WR</td> <td>07/01/2010</td> <td>1</td> <td>0</td> <td>0</td> <td></td> <td>1</td> </tr> <tr> <td>*</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>														Service Transaction Codes for This Location									Code	Start Date	Multiplier	Initial Reading	Serial/Unit	Machine	Consta	▶	W01	06/01/2015	100	0	47465961	68207648--0	1		WR	07/01/2010	1	0	0		1	*							
Service Transaction Codes for This Location																																																					
	Code	Start Date	Multiplier	Initial Reading	Serial/Unit	Machine	Consta																																														
▶	W01	06/01/2015	100	0	47465961	68207648--0	1																																														
	WR	07/01/2010	1	0	0		1																																														
*																																																					
<u>Update</u>				<u>Delete</u>				<u>Memo</u>				<u>Save</u>				<u>Exit</u>																																					

pd 10/8

pd 10/17.

(116.50)

**Townsend Water Department**

10/21/2019

PO Box 321 Medford MA 02155-0004 PH: 978-597-2212

5

**CUSTOMER HISTORY 03/12/2007 to 10/17/2019**

**Acct: 60915A DeTORE ANTHONY Home:(978) 609-8032**  
**COURTNEY DETORE P.O. BOX 6 TOWNSEND MA 01469 Current Balance: -\$116.50 INACTIVE**  
**Loc ID: 60915A-609 @ 230 MAIN STREET TOWNSEND**  
**Rte: 99 Seq.# 970 Mtr S/N: 47465961 Dep:\$0.00**

Date	Code	Description	Previous	Present	Used	Charge	Payment	Balance
4/1/2018	WR	Unit Charge				37.50		103.50
4/23/2018	WR	LOCKBOX For \$103.50					37.50	66.00
4/23/2018	W01	LOCKBOX For \$103.50					66.00	0.00
7/1/2018	W01	Read on 06/05/2018 (X100) RemMR	172	191	19	57.00		57.00
7/1/2018	WR	Unit Charge				37.50		94.50
7/23/2018	W01	LOCKBOX For \$94.50					57.00	37.50
7/23/2018	WR	LOCKBOX For \$94.50					37.50	0.00
10/1/2018	W01	Read on 08/30/2018 (X100) RemMR	191	208	17	51.00		51.00
10/1/2018	WR	Unit Charge				37.50		88.50
10/22/2018	WR	LOCKBOX For \$88.50					37.50	51.00
10/22/2018	W01	LOCKBOX For \$88.50					51.00	0.00
1/1/2019	W01	Read on 12/06/2018 (X100) RemMR	208	230	22	66.00		66.00
1/1/2019	WR	Unit Charge				37.50		103.50
1/28/2019	WR	LOCKBOX For \$103.50					37.50	66.00
1/28/2019	W01	LOCKBOX For \$103.50					66.00	0.00
4/1/2019	W01	Read on 03/07/2019 (X100) RemMR	230	250	20	60.00		60.00
4/1/2019	WR	Unit Charge				37.50		97.50
4/29/2019	WR	LOCKBOX For \$97.50					37.50	60.00
4/29/2019	W01	LOCKBOX For \$97.50					60.00	0.00
7/1/2019	W01	Read on 06/11/2019 (X100) RemMR	250	271	21	63.00		63.00
7/1/2019	WR	Unit Charge				37.50		100.50
7/11/2019	WR	LOCKBOX For \$100.50					37.50	63.00
7/11/2019	W01	LOCKBOX For \$100.50					63.00	0.00
9/25/2019	W01	Read on 09/25/2019 (X100) KeyedIn	271	289	18	54.00		54.00
9/25/2019	WR	Final Bill				37.50		91.50
9/25/2019	SERV	SERVICE CHARGES Final Reading Charge Added as Other Single Charge				25.00		116.50
10/8/2019	W01	LOCKBOX For \$116.50					54.00	62.50
10/8/2019	WR	LOCKBOX For \$116.50					37.50	25.00
10/8/2019	SERV	LOCKBOX For \$116.50					25.00	0.00
10/17/2019	W01	Rec from Treasurer For \$116.50					116.50	-116.50



## Master Activity Report Summary

## Townsend Water Department

07/01/2019 through 11/13/2019 INCLUDES ALL ACCOUNTS FROM 0001 TO 70000

Code	Count	Used	Start Balance	Count	Charges	Count	Payments	Count	Ajustments	End Balance
<b>Water</b>										
W01 Water (Residential)	1,449	5,933,700	35,731.94	1448	178,017.00	1256	143,583.89	20	2,411.16	72,576.21
W02 Water (Municipal)	12	53,100	-275.44	12	1,593.00	10	1,447.23	0	0.00	-129.67
W03 Water (Commercial)	30	183,700	-576.81	30	5,688.00	26	3,813.36	0	0.00	1,297.83
W04 Water (Agricultural)	3	154,800	0.00	3	4,644.00	3	4,644.00	0	0.00	0.00
W06 Water (Restaurant)	12	362,400	-278.44	12	10,872.00	11	9,541.50	0	0.00	1,052.06
W07 Water (Retail)	16	82,000	57.56	16	2,480.00	15	2,283.56	0	0.00	234.00
W08 Water (Schools)	7	82,800	0.56	7	2,484.00	6	3,180.56	0	0.00	-696.00
W09 Water (Condo)	15	524,500	112.12	15	15,735.00	14	12,093.57	0	0.00	3,753.55
W10 Water (Service Station)	2	6,400	0.00	2	192.00	2	192.00	0	0.00	0.00
W11 Water (Industrial)	8	828,900	45.00	8	24,867.00	7	24,909.00	0	0.00	3.00
W12 Water (Church)	4	7,700	0.74	4	231.00	4	231.74	0	0.00	0.00
W13 Water (Day Care)	2	12,900	0.00	2	387.00	2	387.00	0	0.00	0.00
WATR Water-Res. (Witches Brc	497	19,965,000	16,211.06	497	79,560.00	435	61,645.19	0	0.00	34,125.87
WR Unit Charge		0	27,467.74	2070	189,512.50	1813	162,683.63	13	-325.00	53,971.61
<b>Group Totals</b>	<b>2,057</b>	<b>28,197,900</b>	<b>78,498.03</b>	<b>4,126</b>	<b>516,242.50</b>	<b>3,604</b>	<b>430,636.23</b>	<b>33</b>	<b>2,086.16</b>	<b>166,188.46</b>
<b>Miscellaneous</b>										
CONN CONNECTION CHARGE		0	0.00	3	6,000.00	3	6,000.00	0	0.00	0.00
<b>Group Totals</b>			<b>0.00</b>	<b>3</b>	<b>6,000.00</b>	<b>3</b>	<b>6,000.00</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>
<b>Late Charges</b>										
LAT Late Charge		0	7,262.80	858	9,903.28	487	4,988.01	1	3.30	12,181.37
<b>Group Totals</b>			<b>7,262.80</b>	<b>858</b>	<b>9,903.28</b>	<b>487</b>	<b>4,988.01</b>	<b>1</b>	<b>3.30</b>	<b>12,181.37</b>
<b>Backflow</b>										
BKF21 BACKFLOW TESTING			0.00	1	1,050.00	1	1,050.00	0	0.00	0.00
BKFL1 BACKFLOW DEVICE		0	112.69	21	1,050.00	19	914.24	0	0.00	248.45
BKFL2 BACKFLOW DEVICE		0	100.00	7	700.00	8	800.00	0	0.00	0.00
BKFL3 BACKFLOW DEVICE		0	0.00	4	600.00	4	600.00	0	0.00	0.00
BKFL5 BACKFLOW DEVICE		0	0.00	2	500.00	2	500.00	0	0.00	0.00
BKFL7 BACKFLOW DEVICE		0	0.00	2	700.00	2	490.00	0	0.00	210.00
BKFL8 BACKFLOW DEVICE		0	400.00	0	0.00	1	400.00	0	0.00	0.00
<b>Group Totals</b>			<b>612.69</b>	<b>37</b>	<b>4,600.00</b>	<b>37</b>	<b>4,754.24</b>	<b>0</b>	<b>0.00</b>	<b>458.45</b>



**TOWN OF TOWNSEND  
BOARD OF WATER COMMISSIONERS  
APPLICATION TO ABATE OR ADJUST CHARGES**

Name: Bapugi Account # 60039

Address: 440 Main St (old Brick Store)

Phone # \_\_\_\_\_ Email Address \_\_\_\_\_

Billing date \_\_\_\_\_

AMOUNT: 37.50 ABATEMENT ☒ ADJUSTMENT ☒ (check one)

REQUESTED BY: CUSTOMER ☒ OFFICE ☐ OTHER ☐ - if other please explain below:

Reasons: (please attached supporting documentation if applicable)

Abate 37.50 unit charge

Inspected 1st Floor - Business

2nd Floor - Kitchen

3rd Floor - EMPTY (No Kitchen)

APPROVED ☐ DENIED ☐ (check one)

DATE: \_\_\_\_\_

TOWNSEND BOARD OF WATER COMMISSIONERS

[Signature]

[Signature]



# WORKORDER

# 20180174

Townsend Water Department

Issued 10/07/2019 By Brenda

To Water Tech

Projected Completion Date NOT SET

Customer 60039 (A) BAPUGI INC

Location 440 MAIN STREET Rte:99 Seq:2245

Meter S/N S/N: 0 RADIO ID: 35358590---02 LAST READING: 1818

Phone No Phone Listed

## Description

Comment INSPECT UNITS..BEING CHARGED FOR 3 UNITS-

978-597-6384

Requested By

Inspected By

Approved By

Job Code Description

Inspected building complex, \$0.00  
bathroom and 2 sinks on first  
floor, Second floor has 1 Kitchen.  
3rd floor unfinished

Meter Reading \_\_\_\_\_

Meter Make \_\_\_\_\_

Meter S/N \_\_\_\_\_

Meter Size \_\_\_\_\_

Machine # \_\_\_\_\_

A.G. 10.8.19

- ① 1st unit store
- ② inspect for kitchens -
- ③

Changed  
2 → 2 units  
from ③

18

110 kitchen

2<sup>nd</sup> + 3<sup>rd</sup>

Floor

~~no~~

no change

So

3

units, only

1

\$37.

to

per

unit



**Townsend Water Department**

10/15/2019

PO Box 321 Medford MA 02155-0004 PH: 978-597-2212

3

**CUSTOMER HISTORY 01/01/2016 to 10/09/2019**

Acct: 60039 BAPUGI INC  
 440 MAIN STREET W TOWNSEND MA 01474 Current Balance: \$0.00 ACTIVE  
 Loc ID: 60039 @ 440 MAIN STREET W TOWNSEND  
 Rte: 99 Seq.# 2245 Dep:\$0.00

Date	Code	Description	Previous	Present	Used	Charge	Payment	Balance
1/30/2019	W07	Rec fromTreasurer For \$118.50					6.00	0.00
4/1/2019	W07	Read on 03/07/2019 (X100) (3 Tenants) RemMR	1,814	1,816	2	6.00		6.00
4/1/2019	WR	Unit Charge				112.50		118.50
5/3/2019	LAT	Added on 5/3/2019				1.78		120.28
6/4/2019	LAT	Added on 6/4/2019				1.78		122.06
7/1/2019	W07	Read on 06/11/2019 (X100) (3 Tenants) RemMR	1,816	1,817	1	3.00		125.06
7/1/2019	WR	Unit Charge				112.50		237.56
7/3/2019	LAT	Added on 7/3/2019				1.78		239.34
7/31/2019	W07	Rec fromTreasurer For \$237.56					7.22	232.12
7/31/2019	WR	Rec fromTreasurer For \$237.56					225.00	7.12
7/31/2019	LAT	Rec fromTreasurer For \$237.56					5.34	1.78
10/1/2019	W07	Read on 09/04/2019 (X100) (3 Tenants) RemMR	1,817	1,818	1	3.00		4.78
10/1/2019	WR	Unit Charge				112.50		117.28
10/7/2019	WorkOrd	20180174 INSPECT UNITS..BEING CHARGED FOR 3 uNITS						117.28
10/9/2019	W07	Rec fromTreasurer For \$117.28					4.78	112.50
10/9/2019	WR	Rec fromTreasurer For \$117.28					112.50	0.00

S/B 7500.

## Master Activity Report Summary

## Townsend Water Department

07/01/2019 through 11/13/2019 INCLUDES ALL ACCOUNTS FROM 0001 TO 70000

Code	Count	Used	Start Balance	Count	Charges	Count	Payments	Count	Ajustments	End Balance
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W03 Water (Commercial)	30	183,700	-576.81	30	5,688.00	26	3,813.36	0	0.00	1,297.83
W04 Water (Agricultural)	3	154,800	0.00	3	4,644.00	3	4,644.00	0	0.00	0.00
W06 Water (Restaurant)	12	362,400	-278.44	12	10,872.00	11	9,541.50	0	0.00	1,052.06
W07 Water (Retail)	16	82,000	57.56	16	2,460.00	15	2,283.56	0	0.00	234.00
W08 Water (Schools)	7	82,800	0.56	7	2,484.00	6	3,180.56	0	0.00	-696.00
W09 Water (Condo)	15	524,500	112.12	15	15,735.00	14	12,093.57	0	0.00	3,753.55
W10 Water (Service Station)	2	6,400	0.00	2	192.00	2	192.00	0	0.00	0.00
W11 Water (Industrial)	8	828,900	45.00	8	24,867.00	7	24,909.00	0	0.00	3.00
W12 Water (Church)	4	7,700	0.74	4	231.00	4	231.74	0	0.00	0.00
W13 Water (Day Care)	2	12,900	0.00	2	387.00	2	387.00	0	0.00	0.00
WATR Water-Res. (Witches Brc	497	19,965,000	16,211.06	497	79,560.00	435	61,645.19	0	0.00	34,125.87
WR Unit Charge		0	27,467.74	2070	189,512.50	1813	162,683.63	13	-325.00	53,971.61
<b>Group Totals</b>	<b>2,057</b>	<b>28,197,900</b>	<b>78,498.03</b>	<b>4,126</b>	<b>516,242.50</b>	<b>3,604</b>	<b>430,636.23</b>	<b>33</b>	<b>2,086.16</b>	<b>166,188.46</b>
<b>Miscellaneous</b>										
CONN CONNECTION CHARGE		0	0.00	3	6,000.00	3	6,000.00	0	0.00	0.00
<b>Group Totals</b>			<b>0.00</b>	<b>3</b>	<b>6,000.00</b>	<b>3</b>	<b>6,000.00</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>
<b>Late Charges</b>										
LAT Late Charge		0	7,262.80	858	9,903.28	487	4,988.01	1	3.30	12,181.37
<b>Group Totals</b>			<b>7,262.80</b>	<b>858</b>	<b>9,903.28</b>	<b>487</b>	<b>4,988.01</b>	<b>1</b>	<b>3.30</b>	<b>12,181.37</b>
<b>Backflow</b>										
BKF21 BACKFLOW TESTING			0.00	1	1,050.00	1	1,050.00	0	0.00	0.00
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BKFL3 BACKFLOW DEVICE		0	0.00	4	600.00	4	600.00	0	0.00	0.00
BKFL5 BACKFLOW DEVICE		0	0.00	2	500.00	2	500.00	0	0.00	0.00
BKFL7 BACKFLOW DEVICE		0	0.00	2	700.00	2	490.00	0	0.00	210.00
BKFL8 BACKFLOW DEVICE		0	400.00	0	0.00	1	400.00	0	0.00	0.00
<b>Group Totals</b>			<b>612.69</b>	<b>37</b>	<b>4,600.00</b>	<b>37</b>	<b>4,754.24</b>	<b>0</b>	<b>0.00</b>	<b>458.45</b>



TOWN OF TOWNSEND  
WATER DEPARTMENT

NO. 20-04

10/31/2019

SCHEDULE OF BILLS RECEIVABLE

To the Accountant: Lauri Plourde

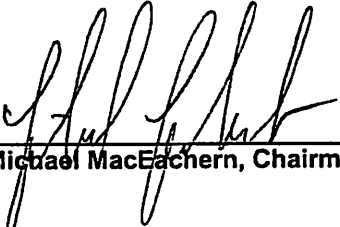
The following bills, amounting in the aggregate to

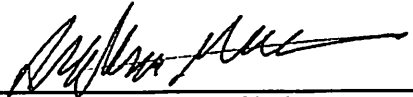
THREE HUNDRED NINETY EIGHT DOLLARS AND 00/100


are herewith committed for collection.

<u>DATE</u>	<u>USER CHARGES</u>	<u>SERVICE CHARGES</u>	<u>CONN CHARGES</u>	<u>BACK FLOW</u>	<u>TOTAL</u>
10/31//2019	288,346.50	5,510.00	-	4,600.00	298,456.50

BOARD OF WATER COMMISSIONERS

  
Michael MacEachern, Chairman

  
Nathan Mattila, Vice-Chairman

  
Todd Melanson, Clerk

**FISCAL YEAR 20 SUMMARY**  
**TOWNSEND WATER DEPARTMENT - ACCOUNTS RECEIVABLE**  
**October 30, 2019**

UNCOLLECTED FROM JUNE 30, 2019

\$ 89,610.77

<u>CHARGED</u>	<u>07/01/19</u>	<u>10/31/19</u>	<u>10/31/2019</u>	<u>Previous Balance</u>	<u>Total</u>	
USER CHARGES			288,346.50	227,807.50	516,154.00	
SERVICE CHARGES			5,510.00	6,897.73	12,407.73	
CONNECTION CHARGES			0.00	6,000.00	6,000.00	
LATE CHARGES			1,784.09	5,567.01	7,351.10	
BACKFLOW			4,600.00	0.00	4,600.00	
SUBTOTAL			<b>300,240.59</b>			
TOTAL CHARGES						<u><u>546,512.83</u></u> <u><u>636,123.60</u></u>

<u>RECEIVED</u>	<u>09/30/19</u>	<u>10/31/19</u>	<u>10/31/2019</u>			
USER CHARGES			215,408.38	215,227.85	430,636.23	
SERVICE CHARGES			6,092.94	7,546.40	13,639.34	
CONNECTION CHARGES			422.83	5,577.17	6,000.00	
LATE CHARGES			1,940.40	3,047.61	4,988.01	
BACKFLOW			4,251.45	502.79	4,754.24	
SUBTOTAL			<b>228,116.00</b>			
TOTAL RECEIPTS						460,017.82

SENT TO LIEN						
LIENS COLLECTED						
ABATEMENTS						
ADJUSTMENTS						-2,010.46
AJD TO MASTER						
UNCOLLECTED						<u><u>178,116.24</u></u>
						\$ <u><u>636,123.60</u></u>

<u>OUTSTANDING:</u>			
USER CHARGES	\$	166,020.96	
SERVICE CHARGES		2,007.64	
CONNECTION CHARGES		0.00	
LATE CHARGES		9,629.19	
BACKFLOW		458.45	
TOTAL OUTSTANDING	\$	178,116.24	



**Group as:** \*\*\*\_\*\*\_\*\*\*\_\*\*\*\*\_\*\*\*\*\_\*\*\*

Parameters: Fiscal Year: 2020      Start Date: 10/01/2019      end: 11/07/2019

## Town of

### Expense Control Report - Expenditure Ledger

Account Number		Curr. Month Total Expended	Original Budget	YTD Adjusted Budget	YTD Actual Expended	YTD Unexpended Balance	% Var.
<b>Group 1: Segment 3: Department</b>		<b>Code: 000 - General</b>					
<b>Personnel</b>							
061-04-000-5100-0000-000	WATER - SALARY - SUPERINTENDENT	-9,033.60	89,129.00	89,129.00	-27,100.80	62,028.20	30.41
061-04-000-5110-0000-000	WATER - WAGES-OPER STAFF	-18,715.20	175,227.00	175,227.00	-53,613.64	121,613.36	30.60
061-04-000-5112-0000-000	WATER - WAGES-SUPPORT STAFF	-6,663.12	63,821.00	63,821.00	-20,063.02	43,757.98	31.44
061-04-000-5130-0000-000	WATER - ADDITIONAL GROSS - OVERTI	-2,096.97	14,240.00	14,240.00	-6,602.36	7,637.64	46.36
061-04-000-5134-0000-000	WATER - ADDITIONAL GROSS - REG & S	-1,575.00	19,770.00	19,770.00	-4,725.00	15,045.00	23.90
061-04-000-5190-0000-000	WATER - OTHER - STIPEND - LONGEVIT	0.00	2,700.00	2,700.00	-1,600.00	1,100.00	59.26
061-04-000-5191-0000-000	WATER - OTHER - STIPENDS - BOARD O	0.00	3.00	3.00	0.00	3.00	0.00
061-04-000-5192-0000-000	WATER - OTHER-STIPENDS - LICENSE &	0.00	1,500.00	1,500.00	0.00	1,500.00	0.00
061-04-000-5193-0000-000	WATER - OTHER - RETIREMENT BENEFI	0.00	2,000.00	2,000.00	0.00	2,000.00	0.00
061-04-000-5195-0000-000	WATER - OTHER - CLOTHING ALLOWAN	0.00	600.00	600.00	-600.00	0.00	100.00
061-04-000-5197-0000-000	WATER- VEHICLE ALLOWANCE	0.00	6,000.00	6,000.00	0.00	6,000.00	0.00
061-04-000-5198-0000-000	WATER- OTHER STIPEND- SNOW STOR	0.00	4,000.00	4,000.00	0.00	4,000.00	0.00
<b>Total Group 3: Personnel</b>		<b>-38,083.89</b>	<b>378,990.00</b>	<b>378,990.00</b>	<b>-114,304.82</b>	<b>264,685.18</b>	<b>30.16</b>
<b>Expenses</b>							
061-04-000-5210-0000-000	WATER - ENERGY	-5,826.10	70,000.00	70,000.00	-19,253.27	50,746.73	27.50
061-04-000-5240-0000-000	WATER - REPAIR & MAINT BUILDING	-167.48	5,000.00	5,000.00	-3,667.48	1,332.52	73.35
061-04-000-5245-0000-000	WATER - REPAIR & MAINT EQUIPMENT	-4,255.42	20,000.00	20,000.00	-7,793.86	12,206.14	38.97
061-04-000-5245-0006-000	WATER - REPAIR & MAINTAIN - SCADA S	0.00	10,000.00	10,000.00	-5,707.50	4,292.50	57.08
061-04-000-5245-0007-000	WATER - REPAIR & MAINTAIN-DISTRIBU	-26,800.00	0.00	0.00	-26,800.00	-26,800.00	0.00
061-04-000-5270-0000-000	WATER - RENTALS	0.00	1,000.00	1,000.00	-315.00	685.00	31.50
061-04-000-5300-0000-000	WATER - PROFESSIONAL SERVICES	-7,901.55	60,000.00	60,000.00	-16,108.01	43,891.99	26.85
061-04-000-5300-0001-000	WATER - PROF SVS - BACKFLOW SURV	0.00	6,000.00	6,000.00	-4,600.00	1,400.00	76.67
061-04-000-5307-0000-000	WATER- PROF & TECH - LEGAL	0.00	12,000.00	12,000.00	0.00	12,000.00	0.00
061-04-000-5340-0000-000	WATER - COMMUNICATION	-2,619.93	17,600.00	17,600.00	-4,912.01	12,687.99	27.91
061-04-000-5380-0000-000	WATER - OTHER SERVICES	0.00	2,600.00	2,600.00	0.00	2,600.00	0.00
061-04-000-5420-0000-000	WATER - OFFICE SUPPLIES	-373.12	5,000.00	5,000.00	-841.16	4,158.84	16.82
061-04-000-5430-0000-000	WATER - BUILDING SUPPLIES	0.00	1,500.00	1,500.00	0.00	1,500.00	0.00
061-04-000-5435-0000-000	WATER - EQUIPMENT MAINT SUPPLIES	0.00	1,500.00	1,500.00	0.00	1,500.00	0.00
061-04-000-5460-0000-000	WATER - GROUNDSKEEPING SUPPLIES	-12.75	500.00	500.00	-125.94	374.06	25.19
061-04-000-5480-0000-000	WATER - VEHICULAR SUPPLIES	-1,232.72	8,000.00	8,000.00	-2,295.04	5,704.96	28.69

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Group as: \*\*\*-\*\*-\*\*\*\*-\*\*\*\*-\*\*\*\*

Parameters: Fiscal Year: 2020 Start Date: 10/01/2019 end: 11/07/2019

## Town of

### Expense Control Report - Expenditure Ledger

Account Number		Curr. Month Total Expended	Original Budget	YTD Adjusted Budget	YTD Actual Expended	YTD Unexpended Balance	% Var.
061-04-000-5530-0000-000	WATER - PUBLIC WORKS SUPPLIES	-995.91	35,000.00	35,000.00	-14,837.89	20,162.11	42.39
061-04-000-5530-0001-000	WATER - PUBLIC WORKS SUPPLIES - C	-107.60	23,000.00	23,000.00	-5,467.99	17,532.01	23.77
061-04-000-5580-0000-000	WATER - OTHER SUPPLIES	0.00	1,000.00	1,000.00	0.00	1,000.00	0.00
061-04-000-5585-0000-000	WATER- UNIFORM ALLOWANCE	-460.50	5,000.00	5,000.00	-460.50	4,539.50	9.21
061-04-000-5710-0000-000	WATER - TRAVEL/MILEAGE-IN STATE	-133.40	1,100.00	1,100.00	-133.40	966.60	12.13
061-04-000-5720-0000-000	WATER - OUT OF STATE TRAVEL	0.00	100.00	100.00	0.00	100.00	0.00
061-04-000-5730-0000-000	WATER - DUES & MEMBERSHIPS	0.00	2,000.00	2,000.00	-5,143.00	-3,143.00	257.15
061-04-000-5780-0000-000	WATER - OTHER CHARGES	0.00	500.00	500.00	0.00	500.00	0.00
061-04-000-5785-0000-000	WATER - ASSESSMENT D.E.P.	0.00	2,000.00	2,000.00	0.00	2,000.00	0.00
061-04-000-5850-0000-000	WATER - NEW EQUIPMENT	0.00	10,000.00	10,000.00	-6,429.80	3,570.20	64.30
061-04-000-5910-0000-000	WATER - LT DEBT SERVICE - MWPAT - E	0.00	37,210.00	37,210.00	-37,210.00	0.00	100.00
061-04-000-5910-0001-000	WATER - LT DEBT SERVICE - MWPAT EA	0.00	53,008.00	53,008.00	-53,007.31	0.69	100.00
061-04-000-5920-0000-000	WATER - LT INTEREST - MWPAT - EAST	0.00	5,163.86	5,163.86	-2,767.98	2,395.88	53.60
061-04-000-5920-0001-000	WATER - LT INTEREST - MWPAT - EAST	0.00	8,575.67	8,575.67	-4,552.87	4,022.80	53.09
061-04-000-5925-0000-000	WATER-INT ON ST LOANS/ISSUANCE CO	0.00	23,300.27	23,300.27	0.00	23,300.27	0.00
<b>Total Group 3: Expenses</b>		<b>-50,886.48</b>	<b>427,657.80</b>	<b>427,657.80</b>	<b>-222,430.01</b>	<b>205,227.79</b>	<b>52.01</b>
		<b>-88,970.37</b>	<b>806,647.80</b>	<b>806,647.80</b>	<b>-336,734.83</b>	<b>469,912.97</b>	<b>41.74</b>
<b>Total Group 1: Segment 3: Department</b> Code: 000 - General		<b>-88,970.37</b>	<b>806,647.80</b>	<b>806,647.80</b>	<b>-336,734.83</b>	<b>469,912.97</b>	<b>41.74</b>
<b>Group 1: Segment 3: Department</b> Code: 400 - Water Construction Projects							
<b>Special</b>							
061-04-400-5012-0000-000	SYSTEM ENHANCEMENTS	-15,530.56	144,328.64	144,328.64	-19,195.80	125,132.84	13.30
<b>Total Group 3: Special</b>		<b>-15,530.56</b>	<b>144,328.64</b>	<b>144,328.64</b>	<b>-19,195.80</b>	<b>125,132.84</b>	<b>13.30</b>
<b>Expenses</b>							
061-04-400-5805-2018-000	WATER ENT- A14 ATM05/07/17 MEADOW	-8,515.88	198,400.00	198,400.00	-13,595.88	184,804.12	6.85
061-04-400-5895-2018-000	WATER ENT- A14 ATM05/07/17 MAIN LIN	0.00	60,000.00	60,000.00	0.00	60,000.00	0.00
061-04-400-5902-2018-000	WATER ENT- MAIN ST CLEANING	0.00	50,000.00	50,000.00	0.00	50,000.00	0.00
063-04-400-5895-0000-000	WATER ENT-INFRASTRUCTURE IMPROV	-311,564.47	0.00	0.00	-347,239.47	-347,239.47	0.00
<b>Total Group 3: Expenses</b>		<b>-320,080.35</b>	<b>308,400.00</b>	<b>308,400.00</b>	<b>-360,835.35</b>	<b>-52,435.35</b>	<b>117.00</b>
		<b>-335,610.91</b>	<b>452,728.64</b>	<b>452,728.64</b>	<b>-380,031.15</b>	<b>72,697.49</b>	<b>83.94</b>
<b>Total Group 1: Segment 3: Department</b> Code: 400 - Water Construction		<b>-335,610.91</b>	<b>452,728.64</b>	<b>452,728.64</b>	<b>-380,031.15</b>	<b>72,697.49</b>	<b>83.94</b>

Group as: \*\*\*\_\*\*\_\*\*\*\_\*\*\*\*\_\*\*\*\*\_\*\*\*

Parameters: Fiscal Year: 2020

Start Date: 10/01/2019

end: 11/07/2019

# Town of

## Expense Control Report - Expenditure Ledger

Account Number		Curr. Month Total Expended	Original Budget	YTD Adjusted Budget	YTD Actual Expended	YTD Unexpended Balance	% Var.
<b>Group 1: Segment 3: Department</b>		<b>Code: 500 - Water Special Articles</b>					
<b>Special</b>							
061-04-500-5000-0000-000	WATER OPER 000 EMERGENCY RESERV	0.00	20,000.00	20,000.00	0.00	20,000.00	0.00
061-04-500-5005-2018-000	WATER ENT- A14ATM05/07/17 UPDATE M	0.00	50,000.00	50,000.00	0.00	50,000.00	0.00
<b>Total Group 3: Special</b>		<b>0.00</b>	<b>70,000.00</b>	<b>70,000.00</b>	<b>0.00</b>	<b>70,000.00</b>	<b>0.00</b>
<b>Expenses</b>							
061-04-500-5245-2006-000	STORAGE TANK MAINT FUND ATM 5/06 A	-8,685.00	13,883.40	13,883.40	-8,685.00	5,198.40	62.56
061-04-500-5640-0000-100	WATER OPER 000 PRIOR YEAR ENCUMB	0.00	0.00	11,611.30	-5,815.48	5,795.82	50.08
061-04-500-5803-2019-000	WATER-ATM 05/01/18 ART8 GENERATOR	0.00	30,000.00	30,000.00	0.00	30,000.00	0.00
061-04-500-5804-2016-251	WATER-A28ATM5/15 - WITCHS BROOK R	0.00	40,000.00	40,000.00	0.00	40,000.00	0.00
061-04-500-5806-2020-320	ATM 05/07/19 ART 9 1TON DUMP TRUCK	0.00	50,000.00	50,000.00	0.00	50,000.00	0.00
061-04-500-5809-2017-002	WATER-A18ATM5/3/16-HIGHLAND ST ST	0.00	75,000.00	75,000.00	0.00	75,000.00	0.00
061-04-500-5902-2018-000	WATER-STM 05/01/18 ART 3 UTILITY BILL	0.00	18,000.00	18,000.00	0.00	18,000.00	0.00
<b>Total Group 3: Expenses</b>		<b>-8,685.00</b>	<b>226,883.40</b>	<b>238,494.70</b>	<b>-14,500.48</b>	<b>223,994.22</b>	<b>6.08</b>
		<b>-8,685.00</b>	<b>296,883.40</b>	<b>308,494.70</b>	<b>-14,500.48</b>	<b>293,994.22</b>	<b>4.70</b>
<b>Total Group 1: Segment 3: Department</b>		<b>-8,685.00</b>	<b>296,883.40</b>	<b>308,494.70</b>	<b>-14,500.48</b>	<b>293,994.22</b>	<b>4.70</b>
<b>57 Account(s) totaling:</b>		<b>-433,266.28</b>	<b>1,556,259.84</b>	<b>1,567,871.14</b>	<b>-731,266.46</b>	<b>836,604.68</b>	<b>46.64</b>