



Town of Acushnet

Department of Public Works Review

Division of Local Services / Technical Assistance Section

January 2014



January 27, 2014

Acushnet Town Hall
122 Main Street
Acushnet, Ma 02743
c/o Alan G. Coutinho

Dear Mr. Coutinho:

It is with pleasure that I transmit to you the enclosed Department of Public Works Review authored by members of the Division of Local Services Technical Assistance Section for the Town of Acushnet. In this review, we discuss the department's organizational structure, financial management practices, and operational procedures. It is our hope that the information presented in this report will assist the town as officials seek to address areas of concern and improve department operations.

As a routine practice, a copy of the report has been forwarded to the town's state senator and representative and will be posted to the DLS website.

If you have any questions or comments regarding our findings and recommendations, please feel free to contact Rick Kingsley, Bureau Chief of the DLS Municipal Data Management and Technical Assistance Bureau at 617-626-2376 or at kingsleyf@dor.state.ma.us.

Sincerely,

Robert G. Nunes
Deputy Commissioner &
Director of Municipal Affairs

cc: Senator Mark C. Montigny
Representative Robert M. Koczera

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Introduction

At the request of Acushnet's Board of Selectmen, the Division of Local Services reviewed the department of public works. The purpose of this review is to provide guidance to selectmen, the town administrator, and personnel in DPW and town hall, as authority over operations transfers from the elected five-member board of public works to the selectmen in the coming months.

In completing this review, we interviewed and received information from the town administrator, finance director, assistant town accountant, treasurer/collector, DPW director, water/sewer superintendent, and the full-time clerk in public works. We also reviewed materials including town meeting warrants, outside audit reports, the town's expired water service agreement with New Bedford, and financial, rating setting, and other budgetary and capital asset-related documentation.

In the sections that follow, we provide an overview of the department, identifying various issues impacting operations, and offer selectmen a series of recommendations. Our recommendations are designed to improve overall department operations and smooth the transition to new leadership.

Overview

At a special town meeting held on December 9, 2013, residents voted in favor of special legislation to eliminate Acushnet's elected five-member board of public works and to transfer its responsibilities to selectmen. As of mid-January, the legislation, House Bill 3834, has been reported out favorably by the Joint Committee on Municipalities and Regional Government. The act is scheduled to take effect upon passage.

This action by residents was fueled by public outcry over the board's decision to change the town's water and sewer rate structures this past September. Until that point, residents using water and/or sewer services were being charged a rate based on their level of usage, along with a small metering fee. However, to address ongoing financial constraints, particularly within the water division, the board devised a new flat delivery fee on top of the existing rate structures, which it charges to all users. Although usage based rates were reduced somewhat to compensate for the new flat delivery fee, the net impact was a substantial increase in cost for the average residential customer.

This issue over rates that led to filing legislation to dissolve the board only highlights deeper issues within DPW. Concern for the long-term financial viability of water/sewer operations, a lack of transparency, poor communication with town hall, and indecisiveness on behalf of the board of public works appear to have troubled the department for years. In the overview that follows, we provide a general description of Acushnet's DPW operations, while highlighting some of these concerns. We then offer a series of recommendations designed to ease the transition to new leadership and improve overall department operations.

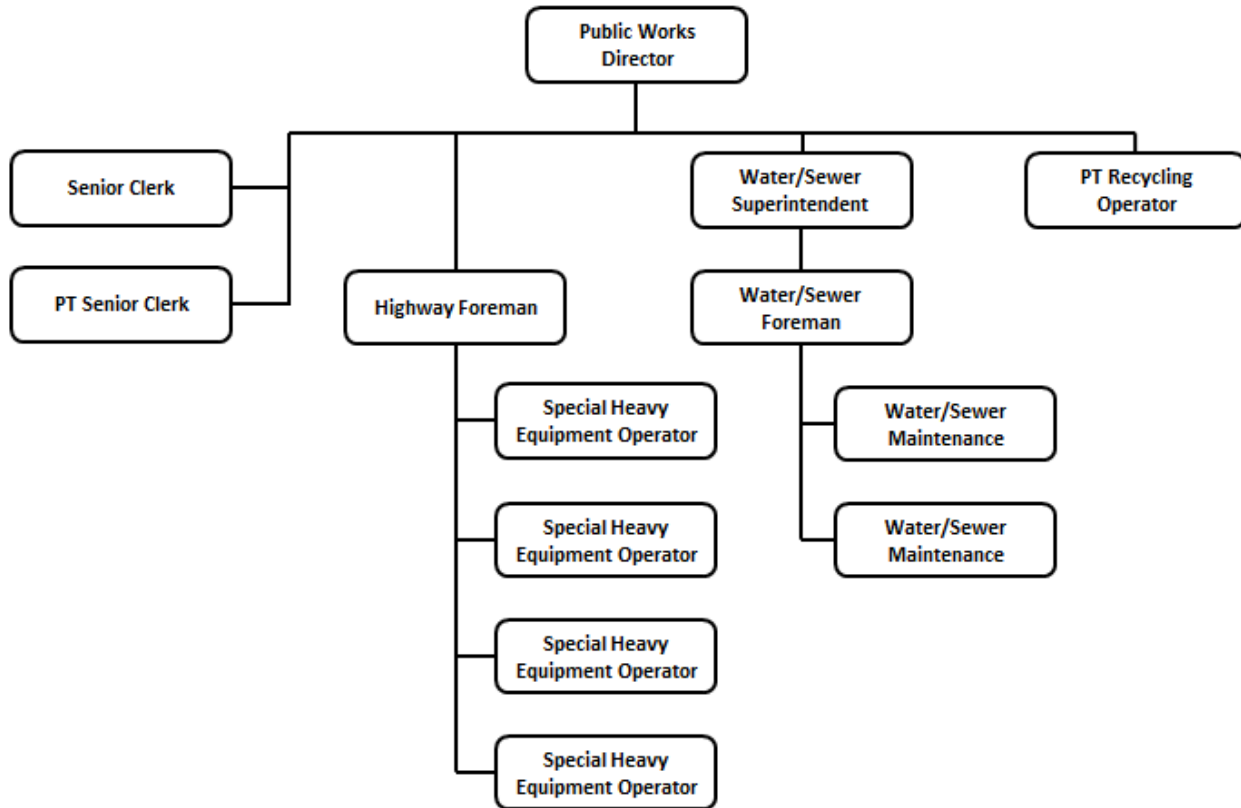
Located in southeastern Massachusetts, the Town of Acushnet (population: 10,303) is governed by an open town meeting and an elected three-member board of selectmen. Selectmen serve as the chief policymaking body for the town and employ a full-time town administrator to coordinate the daily affairs of local government under their jurisdiction. Working within a relatively centralized core administrative structure, the town administrator is assisted by a team of department heads, including a finance director. There are also several volunteer boards and committees, such as the nine-member finance committee, which serve in prominent advisory roles.

Within this framework, the town manages an array of general government functions, including a department of public works (DPW). DPW manages the construction, maintenance, and repair of public infrastructure through its three operating divisions of highway, water, and sewer. The department is supervised by an elected five-member board of public works which functions as the chief policy and goal setting body for the department. They appoint a full-time DPW

director to manage daily activities. Reporting to the DPW director is a water/sewer superintendent, highway foreman, a part-time recycling operator, and two senior clerks, one of whom is full-time. Within the highway division there are four heavy equipment operators, while the water/sewer division has two maintenance people.

Both the DPW director and water/sewer superintendent were promoted this past August, and one of the senior office clerks is new to her position. Prior to their promotions, the DPW director served as the highway superintendent and the water/sewer superintendent worked as a water/sewer foreman. The position of highway superintendent has since been combined with that of the director. Two members of the crew are also out on medical leave. An organizational chart depicting the department’s reporting relationships is included below.

Organizational Chart of Acushnet's Department of Public Works

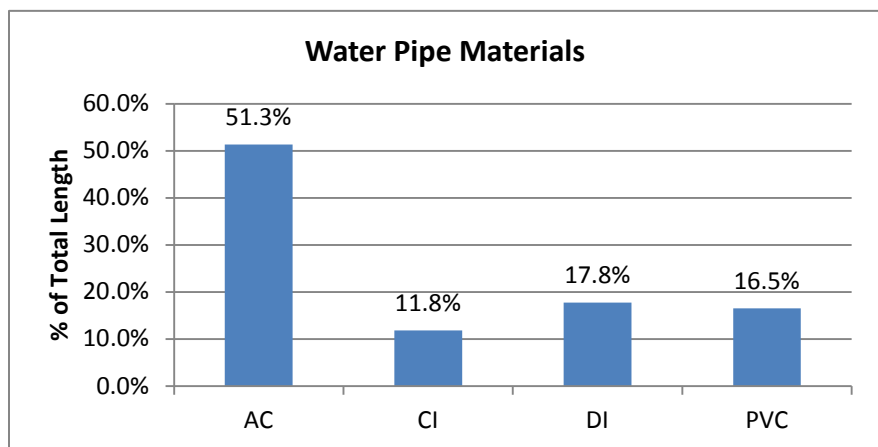
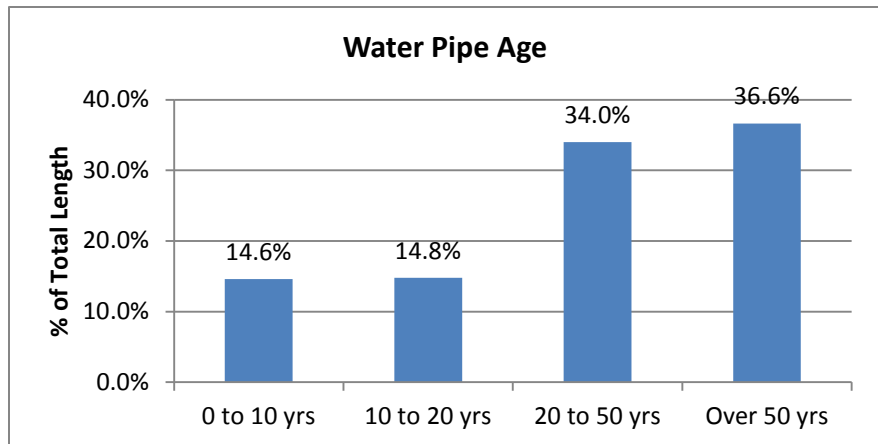


Water Division – The water division’s origins date back to the 1920’s when a district was formed to supply public water to residents of southwest Acushnet. That initial legislation creating the district was replaced by Chapter 35 of the Acts of 1945 when the town took over the district’s assets and assumed its obligations. To date, the water division services a population of about 7,000 residents with water supplied by the City of New Bedford through an expired intermunicipal agreement.

Water from the City of New Bedford is sourced from a surface supply and treated at the Quittacas water treatment plant, which annually processes over four billion gallons of drinking water for the region. The principal surface storage area for the city’s water is the Little Quittacas Pond located in the Town of Rochester, but other ponds include the Great Quittacas, Pocksha, Assawompset, and Long Pond located in the towns of Freetown, Lakeville, and Middleboro. Once treated, water is metered and distributed through Acushnet’s looped system of water mains.

Containing about 50 miles of pipes, the town’s system of water mains is constructed from various materials including asbestos cement (AC), cast iron (CI), ductile iron (DI), and polyvinyl chloride (PVC). Depending on the material, these water mains can have a service life of between 70-100 years, but tend to have increased failure rates at around 47 years, according to national statistics.

Depicted in the graphs to the right, almost 40 percent of the pipes in Acushnet are over 50 years old, with some dating as far back as the 1920’s. Additionally, over 50 percent of the system is constructed of asbestos cement, which, depending on a number of factors, has a short service life relative to other materials. It is also one of the more expensive to replace due to the hazardous nature of the material. Repair work is typically handled on an ad hoc basis as the division lacks a comprehensive capital improvement plan.



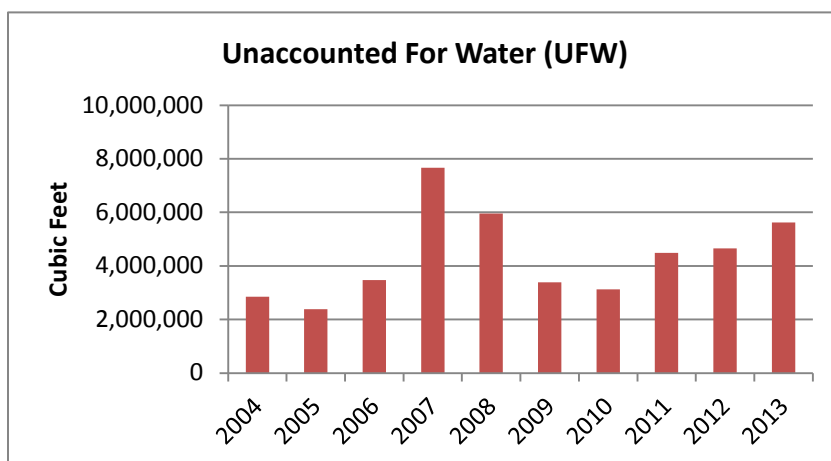
The water division is structured financially as a special revenue fund, which earmarks revenues and limits expenses to specific water related purposes. In FY2013, the division generated about \$1.2 million in total operating revenue and had a year-end fund balance of \$157,070. Over the last five years the division’s year-end fund balance has declined by almost 68 percent. On September 9, 2013, in a move to generate new revenue and offset this declining fund balance, the

elected board of public works voted unanimously to adjust this year’s rates. These new rates not only reflect a shift from the old rate structure methodology, but also appear to be a disincentive to conserve water. A spreadsheet depicting the division’s finances over the last five years is presented below.

Water Division Fund Balance FY2009 - FY2013

	FY2009	FY2010	FY2011	FY2012	FY2013
<u>REVENUES</u>					
Charges for Services	\$901,052	\$961,190	\$1,085,649	\$1,111,915	\$1,220,184
TOTAL REVENUES	901,052	961,190	1,085,649	1,111,915	1,220,184
<u>EXPENDITURES</u>					
Public Works: Water Div.	739,990	891,111	1,005,072	928,888	1,013,552
Debt Service:					
Principal	49,235	45,565	48,732	50,793	52,940
Interest	157,756	161,426	158,259	156,198	154,051
TOTAL EXPENDITURES	946,981	1,098,102	1,212,063	1,135,879	1,220,543
EXCESS (DEFICIENCY) OF REVENUES OVER (UNDER) EXPENDITURES	(45,929)	(136,912)	(126,414)	(23,964)	(359)
FUND BALANCE BEGINNING OF YEAR	490,648	444,719	307,807	181,393	157,429
FUND BALANCE END OF YEAR	\$444,719	\$307,807	\$181,393	\$157,429	\$157,070

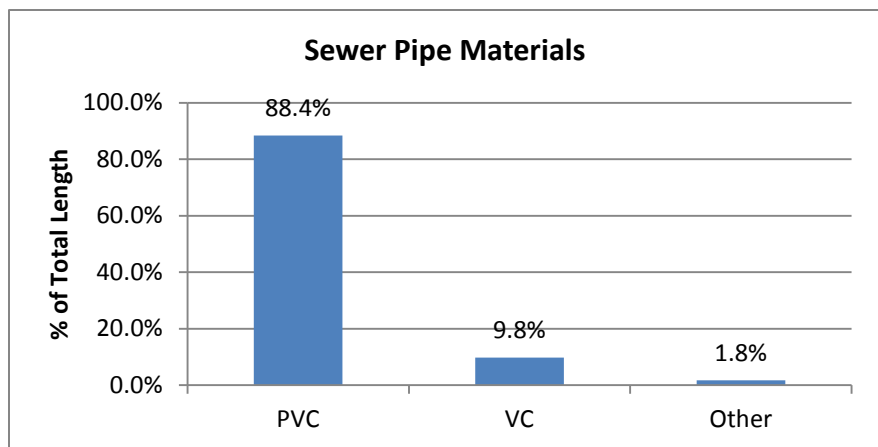
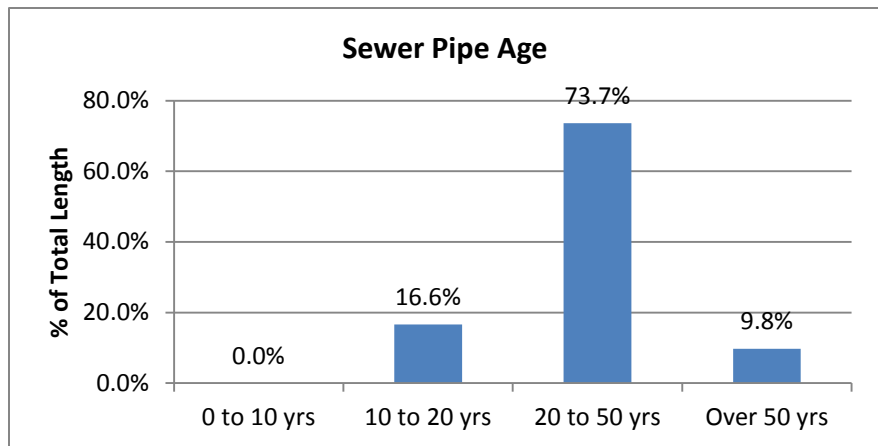
There is also concern among local officials for the difference in the amount of water being supplied from the City of New Bedford verses metered in Acushnet. Known as unaccounted for water (UFW), this variance generally has three primary components: physical losses due to pipe leakage, losses due to illegal connections, and losses due to water meter inaccuracy. Illustrated in the graph below, it was reported last fiscal year that over 5.6 million cubic feet or almost 20 percent of water supplied by the City of New Bedford to Acushnet was unaccounted for. While this volume is not unusual when compared to national averages, it is costing the system about \$150,000 annually. The graph to the right illustrates the system’s UFW over the last five years.



It is thought that a significant portion of the system’s UFW is the result of its aging meters. Water meters generally have an optimum service life of about 10 years at which point their capacity to accurately measure flow begins to deteriorate. Despite continuing efforts to replace old meters due to failure, a growing portion of system’s residential water meters are at or beyond their expected service life.

Sewer Division – Similar to the water division, Acushnet’s sewer system dates back to the 1920’s when the town reached an agreement with the City of New Bedford to develop an interconnecting system of sewer drains to take advantage of the area’s natural topography. Today, this drain pipe system is divided between two distinct sections of town. In each case, however, sewage is transported to the New Bedford Wastewater Treatment Plant where physical, chemical and biological contaminants are removed. Servicing a combined 900 homes, the northern system is a conventional gravity fed sewer, while the southern is a low pressure system designed to transport sewage by means of pumping stations.

Containing a little more than five miles of pipe, the entire system is constructed primarily from PVC and vitrified clay pipe (VC), which have an expected service life of about 100 years. Depicted in the graphs to the right, the vast majority of the system’s pipes are between 20 to 50 years in age, with only about 10 percent dating back to the 1920’s. At the same time, almost 90 percent of the pipes are constructed of PVC, having been installed during the mid to late 80’s and 90’s. Similar to the water division and DPW as a whole, the sewer division also lacks a comprehensive capital improvement plan.



The sewer division’s finances are structured as an enterprise fund. Enterprise fund accounting under M.G.L. c. 44, 53F½ is a method that allows the town to demonstrate the full cost of

providing these services; to recover those costs through user fees instead of relying on the tax levy; and to preserve any surplus revenue as retained earnings that can be used to cover operating, capital, or debt service costs. Based on the figures reported by the outside auditor over the last five years, the sewer division's finances have remained relatively stable in comparison to the water division. Still, concerns over how sewage is metered and charges are assessed by the City of New Bedford were raised by local officials.

Sewer Division Fund Balance FY2009 - FY2013

	FY2009	FY2010	FY2011	FY2012	FY2013
REVENUES					
Charges for Services	\$405,316	\$391,450	\$434,401	\$484,031	\$481,014
Misc. Revenue	43,181	13,194	9,404	10,401	16,919
Earnings On Investments	3,469	1,171	527	364	313
TOTAL REVENUES	451,966	405,815	444,332	494,796	498,246
EXPENDITURES					
Salary & Wages	37,330	41,456	43,473	50,394	44,931
Expenditures	342,089	476,087	355,510	410,620	396,245
Capital Outlay	183		55,134	510	771
Debt Service					
TOTAL EXPENDITURES	379,602	517,543	454,117	461,524	441,947
EXCESS (DEFICIENCY) OF REVENUES OVER (UNDER) EXPENDITURES	72,364	(111,728)	(9,785)	33,272	56,299
FUND BALANCE BEGINNING OF YEAR	229,456	301,820	190,092	180,307	213,579
FUND BALANCE END OF YEAR	\$301,820	\$190,092	\$180,307	\$213,579	\$269,878

Highway Division – Acushnet's highway division maintains over 90 miles of roadway throughout town. This involves, among other responsibilities, roadway resurfacing, patching, grading, profiling, line painting, along with drainage improvements, retention pond clearing, catch basin and manhole repair, brush cutting, mowing, and snowplowing. Unlike the water and sewer divisions which are characterized as businesslike activities with operating costs offset by user fees, the highway division is financed through a general fund appropriation. The department also oversees the use of Chapter 90 highway funds from the state, which is a grant program that reimburses the town for costs associated with maintaining local roads. The amount apportioned is primarily based on the number of road miles in each community. Depicted on the following page, the division's budget over the last five years remains relatively unchanged, based on data reported to the state.

Acushnet's DPW General Fund Appropriation FY2009 - FY2013

Fiscal Year	Public Works General Fund Appropriation	As a % of Total General Fund Expenditures
2009	\$1,319,953	6.16
2010	1,151,348	5.27
2011	1,180,660	5.37
2012	1,194,336	5.32
2013	1,239,555	5.38

Conclusion – In light of the department's leadership and other financial management shortcomings, we support the decision by residents to bring DPW operations under the authority of the board of selectmen and the town administrator. This reflects our view favoring a more centralized organizational structure. Overtime, we have found that a single management presence has emerged as the best vehicle to promote clear lines of authority and accountability across all departments in government. Although still pending before the state legislature, this change, coupled with turnover in several of the department's key personnel, presents an opportunity to reexamine operations and to develop goals. This report is one step toward achieving that objective.

The department's long expired intermunicipal agreement with the City of New Bedford, unresolved labor contracts, and the absence of a capital improvement plan, along with the water/sewer rate setting issue, all point to uncertain leadership and a lack of accountability and transparency on behalf of the board of public works. The department also appears to be short-handed, operating with only a minimal crew. It is without two individuals for medical reasons and the position of highway superintendent was merged with the promotion of the DPW director. Only one of the department's two administrative support personnel is full-time. The DPW director's skill sets are also such that he is best utilized in the field, rather than the office. Concerns regarding the need for engineering services and management of water/sewer operations also persist.

By shifting authority over DPW operations to the board of selectmen, the authority to resolve these matters will be more squarely placed in the hands of the town administrator. In doing so, he will be able to supervise the department, coordinate goal setting efforts, and make all employees accountable in the performance of their duties. He is also in the best position to implement many of the recommendations contained within this report. Together with the town's finance director, the town administrator will oversee the department's budget, capital planning, rate setting, purchasing, and other financial management-related activities. The town administrator's prior experience in construction is also an asset.

On the pages that follow, we include our recommendations for improving operations. Among them, we feel local officials should reevaluate the methodology behind the town's current water/sewer rate structure and establish a capital improvement program. Water/sewer rates should not only reflect the true cost of providing the service, but also be equitable in a tiered approach that encourages conservation. A capital intensive operation like DPW also cannot operate without a long-term plan for funding its ongoing maintenance, repair, and improvement needs. Our recommendation, therefore, lays out an approach for developing a capital improvement program, including how to identify and prioritize various equipment purchases and projects.

Next, local officials need to reach agreement on the town's labor contract with DPW personnel and renegotiate a new water purchase agreement with the City of New Bedford. The longer collective bargaining efforts linger, the greater the impact on morale and town's financial flexibility. Working from an expired intermunicipal service agreement is also not ideal. Local officials also need to evaluate how they will address the level of unaccounted for water in town. If related to older meters, it represents both a detrimental impact on revenues and creates equity issues among ratepayers. In the recommendations that follow, we also include suggestions for implementing a new work order system, encouraging the use of alternative payment methods, and adopting enterprise fund accounting for water services.

Recommendations

1. Revisit Water/Sewer Rate Structure:

We recommend that local officials review the town’s current water and sewer rate structures. Based on our conversations with staff, it appears that the methodology behind the current structures was simply to balance the operation’s books. Preferable is that the rates reflect expenses and cover the true cost of providing these services. The town should also strive for fair and consistent rates that can be appropriately justified. For example, we often see a tier/step approach where users are charged more for excessive use and incentives are created to encourage conservation. To do so, local officials may want to request the services of an outside consultant. A consultant can evaluate the operation’s finances, review previous rate structures, compare them against other communities, and determine the most appropriate schedule for the town. The consultant would also enable a “fresh start” for rate determination. Once the new schedule is defined, DPW staff in consultation with the finance director would be in the best position to present recommended annual adjustments to the board of selectmen.

FY2014 Water & Sewer Rates		
Water	Delivery Fee (Quarterly)	\$42.07
	Residential Usage (Per 100 CF)	3.42
	Commercial Usage (Per 100 CF)	3.57
	Meter Fee	5.00
Sewer	Delivery Fee (Quarterly)	\$45.80
	Residential Usage (Per 100 CF)	4.24
	Commercial Usage (Per 100 CF)	4.39

2. Establish a Capital Improvement Program:

Based on our conversations with local officials, the town tends to address its capital needs on an ad hoc basis. We recommend instead the implementation of a capital planning program shaped by clear, consistent standards and spending priorities. A thoughtful plan will allow the town to effectively direct funds to identified needs and make strategic decisions based on explicit long-term goals.

As a first step, local officials should develop a complete inventory of all capital assets. The finance director’s list of fixed assets can serve as a good starting point, although the list should be expanded to include current conditions and proposed or scheduled dates for replacement or expansion, as appropriate. Next, the finance committee and selectmen should agree to standard criteria for identifying and prioritizing capital items. Most commonly, these are based on two factors: minimum useful life (e.g., five years) and minimum dollar expense (e.g., \$5,000). Policy should dictate that any projects or purchases that fail to meet either threshold must be funded through departmental budget line items. To arrive at an objective means to compare project urgency, proposed capital projects or purchases should be scored and ranked based on whether it

is necessary to address public safety, is legally required, involves a timing issue, has matching funds or grants available, impacts future operating costs, or addresses deferred maintenance.

Once the above standards have been established, the capital review process should parallel the annual budget process. In the early fall of each year, department heads would submit their capital needs to the town administrator. Using the above standards, the town administrator then evaluates the requests and presents recommendations to the selectmen. The selectmen analyze and deliberate on the proposals before passing their recommendations on to the finance committee for final consideration.

3. Complete Labor Negotiations:

We recommend that the board of selectmen make it a priority to complete labor negotiations. The town's labor contract with its DPW employees expired more than 18 months ago on June 30, 2012. Allowing this lapse represents poor public policy. The longer contract negotiations linger, the greater the impact on employee morale. The town's financial burden also increases due to retroactive payments. With the involvement of the town administrator in these negotiations, the town is in a better position to ensure affordable and equitable contract settlements.

4. Renew Water Purchase Agreement:

We recommend that Acushnet formally renew its water supply contract with the City of New Bedford. Acushnet purchases its supply of water from the City of New Bedford through an intermunicipal agreement. Now expired, that contract lays out the terms and conditions under which the City of New Bedford agrees to sell and supply water to the Town of Acushnet, including payment for services. Originally signed on February 15, 2005, the agreement was for five-years. In June 2010, New Bedford sent a letter to Acushnet's previous DPW director looking to renew the agreement, but the board of public works never acted. Today, the sale and supply of water from New Bedford operates through an informal oral agreement. In renegotiating a new contract, local officials should not only be conscious of the wholesale price of water, but also of what administrative or technical services the City might be willing to offer to support operations.

5. Address Unaccounted for Water (UFW):

Local officials speculate that a significant portion of the town's nearly 20 percent annual loss of water is due to the system's aging water meters (See table below). While this is not uncommon, it does represent about \$150,000 in annual loss of revenue and an elevated usage rate for a small system that is struggling financially. Experience in other utilities suggests that by implementing

an aggressive water meter replacement program, addressing un-metered use, and continuing efforts to find and repair leaks, that the town can reduce its UFW to a more acceptable target level of around 10 percent.

Acushnet's Unaccounted For Water (UFW) in Cubic Feet

Fiscal Year	Purchased	Metered	Variance	% of Loss
2009	27,855,410	24,466,121	3,389,289	12.17%
2010	23,746,970	20,625,064	3,121,906	13.15%
2011	26,776,500	22,284,173	4,492,327	16.78%
2012	26,808,400	22,152,160	4,656,240	17.37%
2013	28,518,000	22,899,432	5,618,568	19.70%
Total:	133,705,280	112,426,950	21,278,330	15.91%
Average:	26,741,056	22,485,390	4,255,666	15.91%

6. Implement Automated Work Order System:

We recommend that DPW invest in Geographic Information System (GIS) based work order technology. GIS is a powerful computer-based tool that can provide the department with an effective way to record and extract work order data relative to the town's infrastructure. With the ability to manage a high volume of data, GIS can assist the DPW director in streamlining workflow by tracking maintenance and repair work and documenting various project milestones and customer service inquiries. The system not only consolidates related statistics, but also provides for better data quality analysis and year-end reporting. Moreover, maps maintained as part of GIS can be updated, organized and shared across various departments for planning and project management purposes. GIS information can also be made available to the public through the town's website to reduce foot-traffic in the office.

7. Encourage Lockbox and Online Payment Methods:

We recommend that the town promote their lockbox and online payment options as ways to save time and money. Water and sewer bills in Acushnet can be paid in one of four ways—either through a lockbox, online, in person, or by mail. In each instance, there is a specific cost to the town for providing these services which is passed on to ratepayers. In general, payments made at town hall tend to be more costly because of the labor involved with opening and posting each individual payment. On the other hand, payments made via lockbox or online save time and money as the process is largely automated. In our experience, communities with lockbox and online payment services that market them aggressively experience significant declines in the number of manual postings. Some communities have even gone so far as to calculate the cost per payment method and included this information on bill inserts.

8. Adopt Enterprise Fund Accounting:

We recommend that Acushnet adopt enterprise fund accounting for its water operations. Currently used by the sewer division, an enterprise fund would enable the town to account separately for all water related revenues and to identify fully all direct, indirect, and capital costs associated with providing the service. Under enterprise fund accounting, the division also retains any surplus certified by the DOR director of accounts to cover operating, capital, or debt service costs. Additional information on enterprise funds may be found in the Division of Local Services' [Enterprise Fund Manual](#).

Acknowledgments

This report was prepared by the Department of Revenue, Division of Local Services:

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In preparing this review, DLS staff interviewed the following individuals:

Alan Coutinho, Town Administrator

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Daniel Menard, DPW Director

John Westgate, Water/Sewer Superintendent

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