



# Town of Portland Water Operations

## Report of Examination

Period Covered:

January 1, 2014 – January 25, 2017

2017M-45



Thomas P. DiNapoli

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# State of New York Office of the State Comptroller

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## **Division of Local Government and School Accountability**

June 2017

Dear Town Officials:

A top priority of the Office of the State Comptroller is to help local government officials manage government resources efficiently and effectively and, by so doing, provide accountability for tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of local governments statewide, as well as compliance with relevant statutes and observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations and Town Board governance. Audits also can identify strategies to reduce costs and to strengthen controls intended to safeguard local government assets.

Following is a report of our audit of the Town of Portland, entitled Water Operations. This audit was conducted pursuant to Article V, Section 1 of the State Constitution and the State Comptroller's authority as set forth in Article 3 of the New York State General Municipal Law.

This audit's results and recommendations are resources for local government officials to use in effectively managing operations and in meeting the expectations of their constituents. If you have questions about this report, please feel free to contact the local regional office for your county, as listed at the end of this report.

Respectfully submitted,

*Office of the State Comptroller  
Division of Local Government  
and School Accountability*

# Introduction

## Background

The Town of Portland (Town) is located in Chautauqua County (County) and has a population of approximately 4,800 residents. The Village of Brocton (Village) is located within the Town. The Town is governed by an elected Town Board (Board) composed of the Town Supervisor (Supervisor) and four councilmembers. The Board is responsible for the general management and control of Town finances. The Supervisor is the Town's chief fiscal officer and is responsible for recording and reporting financial activity. The Town's 2017 budgeted appropriations totaled \$2.3 million, which were funded mainly from real property taxes, user fees and State aid.

The Town purchases water from the Village and provides water services to approximately 700 residential and commercial accounts in seven water districts in the Town. The water districts' expenditures for 2016 totaled approximately \$498,000, which were funded through metered water sales and real property taxes.

The water billing clerk (billing clerk) is responsible for preparing water bills based on metered water consumption and Board-established rates and ensuring that water rates and customer accounts in the billing system are updated. The Town Clerk is responsible for collecting, recording and depositing water rents. The Water Superintendent (Superintendent) is responsible for managing the water system. The Superintendent reads the individual customer meters quarterly using a handheld electronic radio reader for upgraded meters; manually reads other meters; and uses estimated readings as needed for meters that cannot be read. From the handheld meter reader, the billing clerk downloads the readings for all meter types into the billing system software for the quarterly billing. A billing summary is generated and reviewed for unusual meter readings by the Town Clerk, billing clerk and Superintendent. The Superintendent verifies any unusual meter readings and then the billing clerk generates the customer bills and mails them.

## Objective

The objective of our audit was to review the Town's water operations. Our audit addressed the following related question:

- Did Town officials properly account for water purchased and accurately bill water customers?

## Scope and Methodology

We examined the water operations for the period January 1, 2014 through January 25, 2017.

We conducted our audit in accordance with generally accepted government auditing standards (GAGAS). More information on such standards and the methodology used in performing this audit are included in Appendix B of this report. Unless otherwise indicated in this report, samples for testing were selected based on professional judgment, as it was not the intent to project the results onto the entire population. Where applicable, information is presented concerning the value and/or size of the relevant population and the sample selected for examination.

**Comments of Local Officials  
and Corrective Action**

The results of our audit and recommendations have been discussed with Town officials, and their comments, which appear in Appendix A, have been considered in preparing this report. Town officials agreed with our recommendations and indicated they planned to initiate corrective action.

The Board has the responsibility to initiate corrective action. A written corrective action plan (CAP) that addresses the findings and recommendations in this report should be prepared and forwarded to our office within 90 days, pursuant to Section 35 of General Municipal Law. For more information on preparing and filing your CAP, please refer to our brochure, *Responding to an OSC Audit Report*, which you received with the draft audit report. We encourage the Board to make this plan available for public review in the Town Clerk's office.

## Water Districts

Town officials should track water usage throughout the system, compare water purchased with water billed, and determine whether there is a large volume of unaccounted-for water. Unaccounted-for water includes losses that can result from source meter errors, customer meter under-registrations, unmetered customers, illegal connections, malfunctioning distribution system controls, theft, underground leaks, flushing fire hydrants, and municipal use such as firefighting.

The United States Environmental Protection Agency (EPA) has established an industry goal of 10 percent for unaccounted-for water losses. Town officials should adopt policies and procedures to monitor and identify the cause of water loss that is greater than the industry goal.

The Town has unaccounted-for water over the past two years of approximately 38 million gallons, or 40 percent. By reducing unaccounted-for water, the Town could save money; each million gallons of water purchased costs approximately \$5,700. The annual water accountability analysis prepared by the Supervisor did not enable Town officials to monitor water loss throughout the year and take appropriate action. Although officials identified some water leaks, we found that inaccurate master meters (which measure water provided to the districts), customer meters and customer underbillings have contributed to the unaccounted-for water and to the deteriorating financial condition of the Town's water districts.

### Unaccounted-For Water

The Town purchased all of its water from the Village at \$5.71<sup>1</sup> per 1,000 gallons. Over the past two years, the Town purchased approximately 95 million gallons of water costing approximately \$540,000. Town officials should periodically prepare a reconciliation of water purchased with water billed to help detect and reduce water loss.

While the Supervisor prepared a water accountability analysis once each year, this was done after the close of the fiscal year; therefore, officials could not monitor large water losses throughout the year. Performing a water accountability analysis at least quarterly would enable the Town to monitor water loss continuously and take corrective measures in a timely manner.

<sup>1</sup> The 2016 fourth-quarter billing increased to \$5.81 per 1,000 gallons.

In February 2017, the Supervisor verbally provided the Board with his water loss analysis of 42 percent for 2016. We prepared a water accountability analysis and determined that unaccounted-for water over the past two years was approximately 38 million gallons or 40 percent of the water purchased. This exceeded the EPA goal of 10 percent by 28.5 million gallons, costing over \$160,000.

<b>Figure 1: Unaccounted-For Water</b>				
	<b>2015</b>		<b>2016</b>	
	<b>Gallons</b>	<b>Percent</b>	<b>Gallons</b>	<b>Percent</b>
Water Purchased	45,310,000	100.0%	49,680,000	100.0%
Less: Water Billed (Consumed)	26,090,000	57.6%	23,120,000	46.5%
Other Unbilled Municipal Use (Est.)	70,000	0.2%	70,000	0.2%
Unbilled to Neighboring Town <sup>2</sup> (Est.)	1,940,000	4.2%	5,620,000	11.3%
Estimated Unaccounted-For Water	17,210,000	38.0%	20,870,000	42.0%
EPA 10 Percent Water Loss Goal	4,531,000	10.0%	4,968,000	10.0%

The following factors contributed to the large amount of unaccounted-for water:

- Customer meters are not working properly. Approximately 220 residential meters throughout water districts 1 and 2 are approximately 25 to 35 years old and have not been recalibrated or replaced. The Town has been replacing residential manual-read meters with radio meters, but the process has been ongoing for six years. The Supervisor and Superintendent expect to be finished with the meter updates for all water districts by the end of 2018.
- Master meters are not working properly or have not been recently recalibrated. The Supervisor indicated that the Town’s ability to identify water losses in water districts 1, 5 and 7 is limited due to inaccurate or possibly malfunctioning master meters separating the three districts. This situation has existed for approximately 12 years and Town officials recalibrated only one of the three meters since the original installation. The cost of purchasing water in these districts is allocated based on the number of customers in each district, not on the actual water purchases that flow through the master meters. Therefore, it is unclear if the cost of water purchases, including any unaccounted-for water, is allocated fairly and equitably to these districts. The Town is also contractually required to annually recalibrate the supply master meters with the Village but has not done this in approximately three years.

<sup>2</sup> See Financial Condition section.

- The Town is not billing all customers for water use. Four out of 83 customer accounts listed as inactive were receiving water and not being billed. We estimate that the Town lost water rent revenue of approximately \$1,000<sup>3</sup> annually. Town officials were reviewing the inactive account list to determine if additional accounts were receiving water and not being properly billed.

The Supervisor attributes water loss to aging infrastructure in water districts 1 and 2. In 2015, the Town attempted to locate possible leaks by obtaining onsite technical assistance from the New York Rural Water Association. The Supervisor was unable to produce a report from the testing but stated one customer service leak was detected. Additionally, Town officials have access to a correlator<sup>4</sup> to assist in leak detection. For leak detection to occur, the device must be used periodically. The Superintendent stated he used the device five times in the audit period and found one customer service leak in 2015.

Town officials do not have written policies or procedures in place for periodically preparing a written water accountability analysis on a frequent basis — at least quarterly — to measure the water loss, and reporting that information to the Board. Preparing formal reconciliations quarterly would help Town officials to identify and address emerging problems.

If the Town could reduce unaccounted-for water, it could save approximately \$5,700 for every million gallons of water it does not need to purchase.

## Water Billings

For each water district, the Board should establish a clear schedule of water rates and periodically review the billing register to assess whether it is complete and accurate. The review could include comparing the total amount billed with prior billing amounts, comparing water purchases with consumption levels billed and comparing the number of bills with the customer accounts list.

For 2015 and the first three billing cycles of 2016, the Town billed all users a minimum charge of \$63 for the first 5,000 gallons consumed. For water districts 1, 3, 5, 6 and 7, the rate beyond minimum consumption was \$6.60 for each 1,000 gallons consumed, and for water districts 2 and 4, the rate beyond minimum consumption was \$4.43 for each 1,000 gallons consumed. In December 2016, the Board

<sup>3</sup> In the absence of meter readings, we based our estimate on the Town's minimum billing of \$63 per quarter per customer

<sup>4</sup> A device used to assist in leak detection of water systems, shared by nine municipalities in the area.

approved a uniform water rate structure for all districts: \$63 for the first 5,000 gallons and \$6.80 for each 1,000 gallons of consumption over 5,000 gallons.

Our audit testing determined that, in total, 39 water customers were underbilled by approximately \$1,000 in December 2016. We initially compared 25 customer bills from the December 2016 water billing<sup>5</sup> with the Board-approved rates and found that eight accounts were underbilled by a total of \$163, in water districts 2 and 4. We then expanded our testing to include all 667 customer bills from all water districts for the December 2016 billing register, and found that an additional 25 customers in water districts 2 and 4 were underbilled a total of \$431. Also, six customers in water districts 1, 5 and 7 were not billed the minimum charge of \$63.

These errors occurred because the billing software for customers in water districts 2 and 4 was not updated with the Board-approved water rates as of December 2016. The errors in water districts 1, 5 and 7 occurred from the incorrect setup of customer accounts; the billing clerk did not correctly add and modify customer accounts in the software program to produce accurate billings. Furthermore, the Board did not review the water billing registers and therefore had no means to ensure that customers were accurately billed.

The billing clerk, Town Clerk and Supervisor indicated that they were unsure of the approved rates for water districts 2 and 4 in 2015 and the first three quarters of 2016. Board resolutions generally noted only the amount of the increase without stating what the rates were after the increase. A clear explanation of the Board-approved rates in the minutes would help Town staff to process water billings correctly.

## **Financial Condition**

Each water district is a separate entity and should be financially self-sufficient. Water rents, penalties and other revenues should cover the cost of operation and maintenance for each district. New York State General Municipal Law (GML) requires that any money temporarily advanced from one fund to another is required to be repaid to the fund from which it was advanced as soon as available but in no event later than the close of the fiscal year in which the advance was made.

The large amount of unaccounted-for water, combined with billing deficiencies, contributed to the poor financial condition of water districts 1, 3 and 7, which reported deficit fund balances as of December 31, 2016 (Figure 2). In addition, all but two water districts realized operating deficits in 2016.

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<sup>5</sup> See Appendix B for detail on our sample selection.

**Figure 2: 2016 Operating Results for the Town's Water Districts**

	District 1	District 2	District 3	District 4	District 5	District 6	District 7	Total
Revenues	\$92,080	\$87,640	\$14,095	\$2,269	\$94,237	\$32,868	\$80,895	<b>\$404,084</b>
Expenditures	\$109,283	\$159,411	\$17,332	\$2,968	\$93,809	\$29,340	\$85,680	<b>\$497,823</b>
Operating Surplus/(Deficit)	(\$17,203)	(\$71,771)	(\$3,237)	(\$699)	\$428	\$3,528	(\$4,785)	<b>(\$93,739)</b>
Beginning Fund Balance/(Deficit)	(\$140,838)	\$138,454	(\$29,685)	\$11,065	\$10,227	\$22,388	(\$98,928)	<b>(\$87,317)</b>
Ending Fund Balance/(Deficit)	(\$158,041)	\$66,683	(\$32,922)	\$10,366	\$10,655	\$25,916	(\$103,713)	<b>(\$181,056)</b>

The deficit fund balance in water district 1 partially resulted from providing water to a neighboring town<sup>6</sup> during 2015 and 2016. However, as of January 25, 2017, the neighboring town had not agreed to pay the Town for the water, and the Board is negotiating with the neighboring town to obtain payment for the water provided. Although the Supervisor told us the unbilled water equates to approximately \$42,000, only \$32,000 was recorded as a receivable in the water district 1 general ledger.

The water districts have also been experiencing cash flow problems. As of December 31, 2016, total unrestricted (available) cash for all seven water districts was recorded as \$14,655, with negative cash balances recorded in water districts 1, 3 and 5.

We reviewed the 2016 interfund activity for the water districts. As of December 31, 2016, interfund payables for all water districts totaled \$305,435, while interfund receivables for all water districts totaled \$112,965. Some of the interfund activity occurred between water districts. For example, \$112,965 of interfund activity was recorded to reallocate year-end water costs in water districts 1, 2, 4, 5 and 7. However, as previously noted, such reallocation does not take into account infrastructure issues related to unaccounted-for water. Furthermore, it appears that the general fund made interfund advances to the water districts, much of it in prior fiscal years. However, Town officials could not provide us with adequate documentation to allow us to determine the details of the cash advances from the general fund. In addition, there was no evidence these advances were approved by the Board and the records did not indicate that any advances had been repaid by the close of the fiscal year as required by GML.

If Town officials do not reduce unaccounted-for water, correct billing errors, or closely monitor water district finances, the districts' financial condition will continue to deteriorate.

<sup>6</sup> In November 2014, the neighboring town switched water suppliers due to a malfunctioning pump system. A connection through the towns from the prior supplier remained for emergency purposes.

## Recommendations

The Board should:

1. Adopt written policies and procedures for periodically measuring the water loss in the water system. These policies should require that a reconciliation, comparing water purchased with water billed, is completed on a quarterly basis and reported to the Board.
2. Investigate and correct the causes of unaccounted-for water if it is cost-effective to do so.
3. Ensure that water customer meters are working properly and that master meters are working properly and are recalibrated as needed.
4. Ensure that the Town is billing all active customers for water use.
5. Periodically review billing registers for completeness and accuracy.
6. Ensure that approved water rates are properly documented in the Board minutes and communicated to the appropriate personnel.
7. Ensure that water rents, penalties and other revenues cover the cost of operation and maintenance for each water district.
8. Obtain a written agreement for the water services provided to the neighboring town and secure payment.
9. Ensure that operating costs have been allocated fairly and equitably to each water district.
10. Approve interfund advances, if appropriate, and ensure they are repaid by the close of the fiscal year as required.

The water billing clerk should:

11. Ensure that billing and rate information is properly entering into the billing system.
12. Take training in the use of the water billing software.

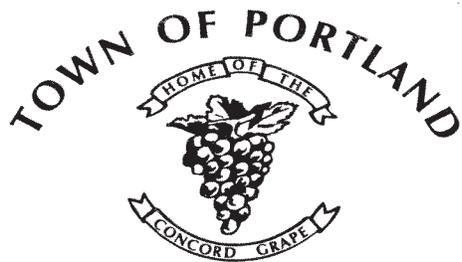
The Supervisor should:

13. Ensure that water rent receivables are properly recorded.
14. Determine the composition of the interfund payables and receivables.

**APPENDIX A**  
**RESPONSE FROM LOCAL OFFICIALS**

The local officials' response to this audit can be found on the following page.

Daniel F. Schrantz  
Supervisor  
716-792-9613  
Roxane Sobeckj  
Town Clerk  
716-792-9614



87 West Main Street  
Brocton, New York 14716  
Fax: 716-792-9610

June 6, 2017

Buffalo Regional Office  
Jeffrey D. Mazula-Chief Examiner  
295 Main Street, Suite 1032  
Buffalo, NY 14203-2510

Dear Mr. Mazula,

This is in response to the Town of Portland's draft audit of Water Operations for the period covered January 1, 2014 to January 25, 2017. We agree with the findings in the report. We are currently in the process of reviewing the recommendations (some have already been implemented) and preparing our Corrective Action Plan. The recommendations and findings will be used as a tool to better manage are water department.

The Town Board and I wish to thank the auditor for his assistance throughout the audit process. He was professional and pleasant to work with, taking the time to explain how to improve our operations.

Sincerely,

Daniel F. Schrantz  
Portland Supervisor

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## APPENDIX B

### AUDIT METHODOLOGY AND STANDARDS

To achieve our audit objective and obtain valid evidence, we performed the following procedures:

- We interviewed appropriate Town officials, Board members and employees to gain an understanding of water operations and the causes for unaccounted-for water.
- We reviewed Board minutes for resolutions pertaining to water rates and interfund advances.
- We reviewed the municipal water supply agreement between the Town and the Village.
- We reviewed a list of meters by water district.
- We reviewed the reconciliations prepared by the Supervisor and recalculated unaccounted-for water using invoices received by the Town for water purchases and quarterly billing summaries for water customers. Because of timing differences between the billing dates for the water purchased and the Town's quarterly customer water billings, we estimated some of the water purchases used in our analysis.
- We calculated the amount of unaccounted-for water in 2015 and 2016 and compared our results to the Supervisor's calculation and to the EPA industry goal.
- We reviewed the Town's methodology for measuring and accounting for other municipal uses for water (unbilled) for reasonableness.
- We used a computerized random number sampling function to select 10 parcels located in the water districts to determine whether these customers have a water account.
- We reviewed 83 inactive customer accounts that were not receiving water bills and discussed the list with Town officials.
- Using a spreadsheet random number generator, we selected a sample of four accounts per water district (where possible) with consumption of more than 5,000 gallons, on the 2016 fourth-quarter billing summary register and reviewed them for accuracy. We tested a total of 25 accounts (four accounts in each of six water districts and the only account in water district 6). After discussing inaccuracies with Town officials, we expanded our testing to include all the accounts and recalculated the billings for that billing quarter.
- We reviewed the 2015 and 2016 general ledgers for the Town's seven water districts including interfund activity.

We conducted this performance audit in accordance with GAGAS. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

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Andrew A. SanFilippo, Executive Deputy Comptroller  
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