



Village of Oxford

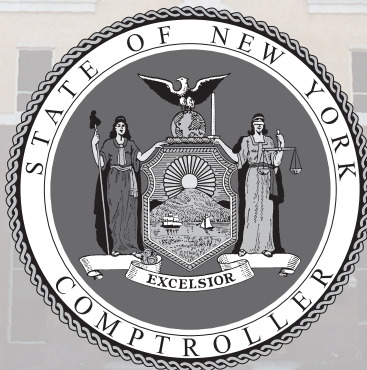
Water Accountability, Claims Audit and Information Technology

Report of Examination

Period Covered:

June 1, 2015 — February 7, 2017

2017M-79



Thomas P. DiNapoli

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State of New York Office of the State Comptroller

Division of Local Government and School Accountability

July 2017

Dear Village 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 Village 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 Village of Oxford, entitled Water Accountability, Claims Audit and Information Technology. 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*



State of New York Office of the State Comptroller

EXECUTIVE SUMMARY

The Village of Oxford (Village) is located in the Town of Oxford in Chenango County. The Village has a population of approximately 1,400. The Village is governed by an elected Board of Trustees (Board) comprising a Mayor and four Trustees. The Board is responsible for the Village's overall financial management, including auditing and approving claims. The Village does not have a designated information technology (IT) administrator. Instead, it utilizes a local IT vendor to handle Village IT issues.

The Village provides the following services to its residents: street maintenance, water, sewer, police, fire protection and Justice Court. These services are funded primarily through real property taxes, sales taxes distributed by the County, water and sewer rents, fire protection contracts and fines and fees. The Village's 2016-17 fiscal year budgeted appropriations totaled \$1,696,000.

The Village produces its own water from three wells and provides water services to approximately 540 residential and commercial accounts. The Superintendent of Public Works oversees water operations. Employees of the Department of Public Works manually read residential and commercial meters on a quarterly basis. The Clerk-Treasurer and Deputy Clerk-Treasurer enter the readings into the billing software and generate the quarterly billing. Budgeted appropriations for the water fund for the 2016-17 fiscal year totaled \$225,000.

Scope and Objectives

The objectives of our audit were to review the Village's water accountability, claims audit process and IT policies and procedures for the period June 1, 2015 through February 7, 2017. Our audit addressed the following related questions:

- Do Village officials consistently monitor the amount of water produced in comparison to the amount of water sold to control unaccounted-for water?
- Did the Board audit claims to ensure they were for proper Village purposes?
- Did the Board establish and enforce IT policies and procedures to properly safeguard Village assets?

Audit Results

Village officials did not adequately monitor or develop a plan to address the causes for the difference in water produced by the Village's water system to the amount metered. For the 2015-16 fiscal year of billing, the Village pumped 93.2 million gallons of water, but only metered use of approximately 27.5 million gallons. The Village could not account for approximately 65.7 million gallons of water, approximately 71 percent of the water pumped, valued at approximately \$42,000. To provide perspective, the average Village water user consumed approximately 12,500 gallons of water during the 2016 billing year. Considering this average usage and the amount of unaccounted-for water, the Village lost water equal to 5,286 user accounts, or 10 times more accounts than it actually has.

The Board did not sufficiently audit claims to ensure they were all for proper Village purposes. Instead, the Board only reviewed the abstract of claims and particular invoices of claims it had questions about, which is inconsistent with New York State Village Law. Village officials paid 161 claims totaling approximately \$43,000 without proper Board approval. All the claims we reviewed appeared to be for proper Village purposes and were approved by the officer or employee who gave rise to the claim. However, because the Board did not properly audit all Village claims, there is an increased risk that payments made may not be for proper Village purposes.

The Board did not adopt a comprehensive IT policy governing the Village's IT system. Although the Board established policies and procedures addressing acceptable computer use, it did not enforce these policies and did not address disaster recovery plans. As a result, there is an increased risk that computerized equipment and data could be subject to unauthorized access and potential loss.

Comments of Local Officials

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

Introduction

Background

The Village of Oxford (Village) is located in the Town of Oxford in Chenango County. The Village has a population of approximately 1,400. The Village is governed by an elected Board of Trustees (Board) comprising a Mayor and four Trustees. The Board is responsible for the Village's overall financial management, including auditing and approving claims.

The Village provides the following services to its residents: street maintenance, water, sewer, police, fire protection and Justice Court. These services are funded primarily through real property taxes, sales taxes distributed by the County, water and sewer rents, fire protection contracts and fines and fees. The Village's 2016-17 fiscal year budgeted appropriations totaled \$1,696,000.

The Village produces its own water from three wells and provides water services to approximately 540 residential and commercial accounts. The Superintendent of Public Works oversees water operations, and the department's employees manually read residential and commercial meters on a quarterly basis. The Clerk-Treasurer and Deputy Clerk-Treasurer enter the readings into the billing software and generate the quarterly billings. Budgeted appropriations for the water fund for the 2016-17 fiscal year totaled \$225,000.

The Village does not have a designated information technology (IT) administrator. Instead, it utilizes a local IT vendor to handle the Village's IT needs, including the Clerk-Treasurer's and Deputy Clerk-Treasurer's computers used for daily operations.

Objectives

The objectives of our audit were to review the Village's water accountability, claims audit process and IT policies and procedures. Our audit addressed the following related questions:

- Do Village officials consistently monitor the amount of water produced in comparison to the amount of water sold to control unaccounted-for water?
- Did the Board audit claims to ensure they were for proper Village purposes?
- Did the Board establish and enforce IT policies and procedures to properly safeguard Village assets?

Scope and Methodology

We examined the Village’s water operations, claims audit process and IT policies and procedures for the period June 1, 2015 through February 7, 2017. Our audit also examined the adequacy of certain IT controls. Because of the sensitivity of some of this information, we did not discuss the results in this report, but instead communicated them confidentially to Village officials.

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

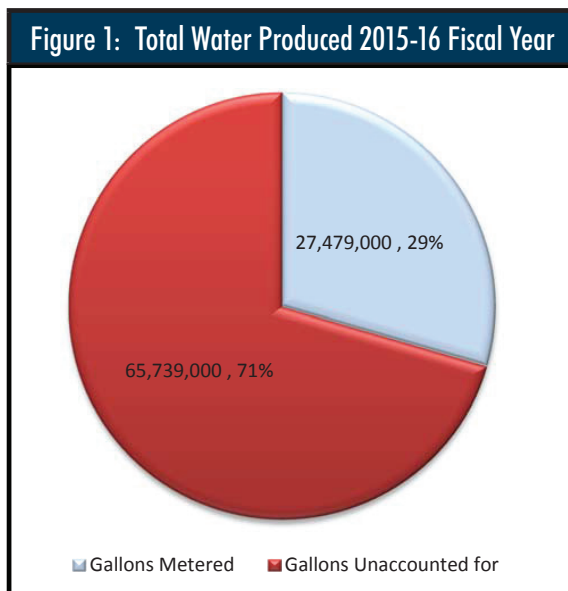
The results of our audit and recommendations have been discussed with Village officials, and their comments, which appear in Appendix A, have been considered in preparing this report. Village officials generally agreed with our recommendations and indicated they plan to initiate corrective action.

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 Clerk-Treasurer’s office.

Water Accountability

Village officials are responsible for controlling the cost of operating the Village's water system. To fulfill this responsibility, Village officials should track water use throughout the system and identify areas that need attention, particularly large volumes of unaccounted-for water. The Environmental Protection Agency has established an industry standard of 10-15 percent water loss being acceptable. Unaccounted-for water can result for various reasons, such as source meter errors, faulty customer meters, unmetered customers, accounting procedure errors, illegal connections, storage tank overflows, underground leaks and municipal use such as the flushing of fire hydrants and firefighting. Procedures should be in place to monitor and identify the cause of water loss. It is essential to perform a periodic reconciliation of water produced with water metered to provide officials with the information necessary to detect and reduce water loss. A large volume of unaccounted-for water could be a warning sign of significant infrastructure problems.

Village officials do not consistently monitor the amount of water produced in comparison to the amount of water sold to control unaccounted-for water. For the 2015-16 fiscal year of billing, the Village pumped 93.2 million gallons of water, but only metered use of approximately 27.5 million gallons. The Village could not account for approximately 65.7 million gallons of water or approximately 71 percent of the water pumped (Figure 1). To provide perspective, the average Village water user consumed approximately 12,500 gallons of water during the 2016 billing year. Considering this average usage and the amount of unaccounted-for water, the Village lost water equal to 5,286 user accounts or 10 times more accounts than it actually has.



We calculated the cost for the estimated 65.7 million gallons of water lost to be approximately \$42,000 per year. Village officials could not tell us whether the water lost was a result of slow meters or leaks in the distribution system because they do not reconcile the amount of water produced to the water metered. While the Board and Superintendent of Public Works (SPW) knew there was significant water loss, they have not taken steps to reduce the amount of unaccounted-for water within the Village's system.

The SPW stated the water system infrastructure is over 100 years old, and he believes the infrastructure leaks due to the system's age. He also told us of an existing leak at a home in the Village that may be contributing to the high amount of unaccounted-for water. We observed this leak – which constituted water bubbling out of the sidewalk in front of the house – and found it to be minimal compared to the amount unaccounted for during the 2015-16 fiscal year. The Mayor provided us with an engineering report outlining several options to upgrade the Village's water system with costs ranging from approximately \$273,000 to \$7.1 million. The Mayor said the Village is currently attempting to secure grant money to address much needed capital improvements to the water system.

All water operations can benefit from comparing water produced with water metered. This analysis can help Village officials determine waste that may be occurring from system leaks, or issues with the water meters used to determine customer consumption. Leaks of treated water are a waste of the cost to treat that water and introduce treatment chemicals into the environment. Because leaks will only expand without repair, those wasted costs will continue to increase. Inaccurate customer meters can result in customers not being billed for the water they consume, creating a potential inequity in bearing the overall cost of the water system.

Recommendations

The Board and SPW should:

1. Develop procedures to perform periodic reconciliations of water produced with amounts metered and identify the causes of significant unaccounted-for water and monitor for increases in lost water that could indicate further deterioration in the system.
2. Determine the reason(s) for the significant unaccounted-for water and develop a plan to address the causes.

Claims Audit

The audit and approval of claims is a critical element of a governing board's duties and responsibilities. Pursuant to Village Law, all claims must be audited by the entire Board. The Board is responsible for ensuring that every claim is subject to an independent, thorough and deliberate review and should document its approval, by resolution, in the Board minutes. The Board can also establish the Office of Claims Auditor and appoint an individual not involved in the disbursements process to audit claims on its behalf. A proper audit ensures that each claim is itemized and accompanied by an invoice or receipt and that each claim is a proper and valid charge against the Village. Additionally, such an audit should also determine whether the officer or employee who gave rise to a claim approved it, usually by signing the claim attesting that goods and services were received and that the charges are correct.

While the Board, by resolution, approved an abstract of claims, it did not perform an effective claims audit to ensure that transactions were properly authorized and approved or that claims were for proper Village purposes. Instead, the Board reviewed the abstract of claims and, on occasion, invoices of claims if questions arose. This practice is inconsistent with Village Law.

The Board was aware of the requirements for a claims audit and believed it was properly complying with Village Law requirements. However, the Mayor's extended absence during the year¹ does not allow him to properly participate in the claims audit process. Furthermore, a Board member is not available for extended periods of time due to work requirements that take him out of the State. Therefore, not only is a proper claims audit not completed but, during certain months of the year, the entire Board is unable to audit claims due to the geographic locations of some members.

During our audit period, the Village paid 1,179 claims totaling approximately \$2.7 million. We reviewed 161 claims² totaling approximately \$43,000, along with the related abstracts and Board minutes, and found that the entire Board did not audit any of these claims. All the claims we reviewed appeared to be for proper Village purposes and were approved by the officer or employee who gave rise to the claim. However, because the Board did not properly audit all

¹ The Mayor lives in Florida for two to three months during the winter and skypes in for monthly Board meetings during this time.

² See Appendix B for more information on our sample selection.

Village claims, there is an increased risk that payments made may not be for proper Village purposes.

Recommendation

3. The entire Board should conduct a thorough and deliberate audit of all Village claims, or establish the Office of the Claims Auditor and appoint an individual who is not involved with the disbursements process, as required by Village Law.

Information Technology

Computerized data is a valuable resource that Village officials rely on to make financial decisions and report to State agencies. If the computers on which this data is stored fail or the data is lost or altered, either intentionally or unintentionally, the results could range from inconvenient to catastrophic. Even small disruptions can require extensive time, effort and expense to evaluate and repair. Therefore, it is important that Village officials ensure training is provided so that information technology (IT) systems are used for their intended purposes. The Board is responsible for establishing policies and procedures to protect the Village's computer equipment and data against the risk of loss, misuse or improper disclosure of sensitive data; these should address crucial security areas such as acceptable computer use, breach notifications and disaster recovery.

While the Board established policies and procedures addressing acceptable computer use, it did not enforce them and did not provide adequate training to Village IT users. Furthermore, the Board did not establish policies and procedures regarding breach notifications and disaster recovery plans. As a result, there is an increased risk that computerized equipment and data could be subject to unauthorized access and potential loss.

Security Awareness Training An important way to communicate IT security expectations to network users is by providing IT security awareness training. This will assist individuals with recognizing security concerns and then responding appropriately. Creating security awareness through training also helps to ensure that everyone understands his or her individual responsibilities.

Village employees were not provided with IT security awareness training to ensure they understood security measures designed to protect the Village's network. Officials were not aware that this training could help protect the Village's IT security. Employees' lack of training makes the Village's IT assets more vulnerable to loss and misuse.

Acceptable Use Policy Due to the global nature of the Internet, municipalities find that it is a nearly indispensable resource for conducting business activities. However, even experienced users have been susceptible to significant threats from cybercriminals who exploit the vulnerabilities of systems and software to gain unauthorized access to sensitive data. An effective process for safeguarding the Village's IT system includes an acceptable computer use policy, which defines the procedures for

computer, Internet and e-mail use, and holds users accountable for properly using and protecting Village resources.

The Village has a computer use policy that addresses the terms and conditions for Internet and e-mail use. However, the Board does not monitor for nor enforce violations of the policy. We found breaches of the policy including inappropriate activity such as use of social media and couponing software on Village computers. When employees download software or access websites for nonbusiness or inappropriate purposes through the Village's network, productivity is reduced and there is an increased risk that Village assets and users' information could be at risk of compromise through malicious software infections.

Breach Notification Policy

An individual's private and financial information, along with confidential business information, could be severely impacted if the Village's computer security is breached or data is improperly disclosed. New York State Technology Law requires the Village to establish an information breach notification policy. Such a policy should detail how the Village would notify individuals whose private information was, or is reasonably believed to have been, acquired by a person without a valid authorization. It is important for the disclosure to be made in the most expedient time possible and without unreasonable delay, consistent with the legitimate needs of law enforcement or any measures necessary to determine the scope of the breach and restore the reasonable integrity of the data system.

The Board was not aware it needed a breach notification policy. By failing to adopt an information breach notification policy, in the event that private information is compromised, Village officials and employees may not understand or be prepared to fulfill their legal obligation to notify affected individuals.

Disaster Recovery Plan

It is essential that Village officials develop a formal disaster recovery plan that addresses the range of threats to its computerized system. The plan should focus on sustaining the Village's critical business functions during and after service disruption. It is important that Village officials analyze data and operations to determine which are the most critical, as well as the resources needed to recover and support operations in the event of an emergency. Once the disaster recovery plan is finalized, Village officials should distribute it to all responsible parties, periodically test procedures to make sure they work as intended and update the plan as needed.

The Board was unaware of a need to develop a formal disaster recovery plan to address potential disasters. Consequently, in the event of a disaster, Village personnel have no guidelines to minimize or prevent

the loss of equipment and data or to appropriately recover data. Without a disaster recovery plan, the Village could lose important financial data and suffer a serious interruption to Village operations, such as being able to process checks to pay vendors or employees.

Recommendations

The Board should:

4. Ensure all network users receive IT security awareness training. Officials can refer to <http://www.osc.state.ny.us/localgov/pubs/lgmg/itgovernance.pdf> for further guidance.
5. Review, update and enforce the acceptable use policy currently in place.
6. Annually review and update the Village's comprehensive IT policy. This should include creating and adopting policies and procedures related to:
 - a. Breach notification
 - b. Disaster recovery.

APPENDIX A

RESPONSE FROM LOCAL OFFICIALS

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



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June 27, 2017

Mr. H. Todd Eames
Principal Examiner – Division of Local Government
Binghamton Office of the State Comptroller
44 Hawley Street – Room 1702
Binghamton, NY, 13901-4417

RE: Village of Oxford Water Accountability, Claims Audit, and Information Technology
Report of Examination
Draft Audit Report – 2017M-079
Period – June 1, 2015 – February 7, 2017

Dear Mr. Eames,

Following a Village Board review on June 27th of the Draft Audit Report submitted to the Village at an exit discussion on June 16th, 2017, the Oxford Village Board of Trustees agrees with the findings of the Report and the resulting recommendations.

A Corrective Action Plan (CAP) will be developed and submitted within ninety (90) days following the release and receipt of the final Audit Report. The CAP will address policy and procedures recommended to strengthen the operations of the Village of Oxford in all areas included in the examination.

Sincerely,

Mayor Terry Stark
Village of Oxford

CC: Village Board of Trustees
Village Clerks/Treasurer

APPENDIX B

AUDIT METHODOLOGY AND STANDARDS

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

- We interviewed Village officials and employees to gain an understanding of water system operations and procedures, including water reconciliations, leak tests and explanations for unaccounted-for water.
- We compared water produced based on meter readings for the three Village wells to residential and commercial meter readings to determine the amount of unaccounted-for water.
- We compared the amount of unaccounted-for water to industry standards to determine whether the amount of water loss was reasonable.
- We reviewed billing summaries and meter readings to determine whether key Village officials were billed for water and reviewed billing summaries to ensure that bills were accurate and based on actual meter readings.
- We reviewed meter readings and billing summaries to determine whether bills were accurately calculated.
- We reviewed variable costs associated with water production from the Village's accounting records and computed a cost per 1,000 gallons of water. We then computed a cost for the Village's 2015-16 fiscal year unaccounted-for water.
- We interviewed Village officials and key personnel to determine the procedures for the audit, approval and payment of claims.
- We selected all payments to the Clerk-Treasurer and Deputy Clerk-Treasurer totaling approximately \$1,000 and a judgmental sample of four months of utility payments totaling approximately \$29,000. We also selected a judgmental sample of 20 disbursements from the printed check report generated from the Village's accounting software totaling approximately \$13,000. We selected this sample by excluding those payments previously tested. We traced these disbursements from various supporting documents including the claim voucher, invoice, Board approved abstract, accounting records and then to the bank statements and canceled check images to determine whether the payee, amount and date matched, and whether they appeared to be for legitimate Village purposes.
- We interviewed Village officials and employees to gain an understanding of the Village's IT structure and what online activities they perform.
- We reviewed the Village's employee handbook and Village code to determine what policies and procedures were in place governing IT.

- We obtained computerized data from the Clerk-Treasurer and Deputy Clerk-Treasurer's computer on February 7, 2017 to determine what software is installed and what Internet sites were visited on each computer.

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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

APPENDIX C

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