



# Village of Delhi

## Computerized Data and Assets

Report of Examination

Period Covered:

June 1, 2010 — August 16, 2011

2011M-258



Thomas P. DiNapoli

# Table of Contents

|   | <b>Page</b> |
|---|-------------|
| <b>AUTHORITY LETTER</b>   | 2           |
| <b>INTRODUCTION</b>   | 3           |
| Background  | 3           |
| Objective   | 3           |
| Scope and Methodology   | 3           |
| Comments of Local Officials and Corrective Action               | 4           |
| <b>USER ACCESS</b>  | 5           |
| Recommendations   | 6           |
| <b>APPENDIX A</b> Response From Local Officials                 | 7           |
| <b>APPENDIX B</b> Audit Methodology and Standards               | 10          |
| <b>APPENDIX C</b> How to Obtain Additional Copies of the Report | 12          |
| <b>APPENDIX D</b> Local Regional Office Listing                 | 13          |

# State of New York Office of the State Comptroller

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*Division of Local Government  
and School Accountability*

February 2012

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 Board of Trustees 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 Delhi, entitled Computerized Data and Assets. 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 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 Village of Delhi (Village) is located in the Town of Delhi in Delaware County. The Village has approximately 2,580 residents and provides various services including public safety, road maintenance and snow removal, water distribution, sewage treatment, refuse removal, and general government support. The Village's total general, sewer, and water fund expenditures for the 2010-11 fiscal year were \$2.98 million, funded mainly by real property taxes, sales taxes, water and sewer fees, and State and Federal aid.

A Board of five elected Trustees (Board) governs the Village. The Board is responsible for the general management and control of the Village's finances and operations and the protection of Village assets, including computer equipment and computerized data. The Mayor, who is a member of the Board, serves as the Village's chief executive officer. The Board-appointed Clerk-Treasurer serves as the Village's chief fiscal officer.

The Village purchases a set number of hours from an information technology (IT) consultant to handle the Village's computer maintenance, service, and support on the Village's computer system and network. The Village's administrative network comprises six workstations, one of which is also the financial software server. The Village's financial software has three modules (accounting, payroll, and utility)<sup>1</sup> which are not integrated, requiring a user to have different user accounts and passwords for each module.

## Objective

The objective of our audit was to review the internal controls over the Village's IT system. Our audit addressed the following related question:

- Did Village officials ensure computerized data and assets were properly safeguarded?

## Scope and Methodology

We examined the internal controls over the Village's IT system for the period June 1, 2010 to August 16, 2011. Our audit disclosed areas in need of improvement concerning IT controls. Because of the sensitivity of this information, certain vulnerabilities are not discussed in this report but have been communicated to Village officials so they could take corrective action.

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<sup>1</sup> The utility module is used to account for the billing and collection of water and sewer fees.

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.

**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 agree with our recommendations, and indicate that they will 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 the 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's office.

## User Access

The Village's IT system is a valuable and essential part of operations, used for accessing the Internet, communicating by email, processing and storing data, maintaining financial records, and reporting to State and Federal agencies. Therefore, it is important that employees' access to computer systems, software applications, and data is restricted based on their job description and responsibilities. Further, the proper segregation of duties requires that the system administrator of the financial software not be assigned any financial duties. A unique user account should be created and used by only that employee. Moreover, audit logs are a valuable monitoring tool that provides information such as the date and time a user accesses a program, the transaction or activity that occurred, and the time and date of the user's log-off. By maintaining and regularly reviewing audit logs within the financial software, Village officials can determine who is accessing the program and whether the transactions processed are appropriate.

We found that user access within the network and financial software was not limited based on job duties, and certain employees shared user accounts. There are seven enabled network user accounts that all have local administrator rights.<sup>2</sup> Five of these user accounts are assigned to staff; one is available for common use, and one is the network administrator account. The Clerk-Treasurer is the system administrator for the three financial software modules. In addition, the Deputy Clerk-Treasurer and Assistant Clerk all have full user access rights to the payroll and utility modules. Further, the Deputy Clerk-Treasurer uses the Clerk-Treasurer's user account to access the accounting module. We verified that employees share accounts by finding numerous instances where staff members' accounts were used on days that the staff members were on leave from work. Although the financial software tracks the date and time of the user's log-in and log-off, there is no comprehensive audit log that identifies specific transactions and times.

The Clerk-Treasurer told us that she is responsible for adding, deleting, and modifying user access, but that she has not had to do so. These user access rights were assigned prior to her appointment in October 2006, and no one else was able to explain the reasoning for the current access rights. Currently, the financial software does not have the capability to produce detailed audit logs.

Because of the excessive user rights to the network and financial

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<sup>2</sup> Local administrator rights give users the ability to download and install hardware and software onto workstations.

software, we analyzed the software and hardware inventories and the configurations on four workstations to search for inappropriate programs and conducted various other audit tests as described in Appendix B. Although we did not find any discrepancies, the failure to limit user access increases the risk that individuals could download and install malicious software, intentionally or unintentionally. In addition, users could inappropriately access and change, destroy, or manipulate financial data, especially since one of the workstations is in an isolated location and user accounts are shared. The lack of a detailed audit log prevents Village officials from detecting inappropriate transactions and identifying the users responsible.

## **Recommendations**

1. Village officials should ensure that the user access rights within the network and financial modules are limited to only those functions that are necessary for employees to complete their job duties.
2. Village officials should reassign the responsibilities of financial software system administrator to someone who is not assigned any financial duties.
3. The administrator of the financial software system should set up one unique user account for each employee within each of the financial modules as necessary. Users should use only their unique user accounts when accessing the financial software.
4. Village officials should work with their financial software vendor to produce comprehensive audit logs for Village officials to review and maintain.

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

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

Incorporated 1821



2011m-25  
Re-Incorporated 1897

**VILLAGE OF DELHI**  
P.O. Box 328 - 9 Court Street  
Delhi, New York 13753  
(607) 746-2258 · FAX (607) 746-6771

TDD -1-800-662-1220

February 6, 2012

Office of the State Comptroller  
Division of Local Government & School Accountability  
PSU-CAP Submission  
110 State Street, 12<sup>th</sup> Floor  
Albany, NY 12236

Dear Sir/Madam:

We have received the Report of Examination from the audit of our Computerized Data and Assets for the period June 1, 2010 through August 16, 2011. We have reviewed the Report and agree with information reported and the recommendations therein. Please note that this response is also serving as the Corrective Action Plan. I will address the recommendations as numbered in the Report.

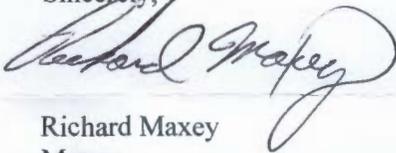
1. *Village officials should ensure that the user access rights within the network and financial modules are limited to only those functions that are necessary for employees to complete their job duties. The Village Clerk will review the levels of access rights within each module (payroll, water/sewer and accounting) to ensure that each employee has access only to those areas vital to completing their jobs and adjust their access accordingly. The Village will be working on developing a policy regarding computerized data and assets.*
2. *Village officials should reassign the responsibilities of financial software system administrator to someone who is not assigned any financial duties. The Mayor has been assigned the duty of Financial Software System Administrator, and will oversee the assignments of user access. The Mayor will also require each user to create unique, strong passwords that have at least eight characters and contain upper- and lower-case letters, require employees to change their passwords every 30 – 90 days and work with the Village's IT company to create a way to lock users out of the system after a set number of log-in attempts and require the password to be reset.*
3. *The administrator of the financial software system should set up one unique user account for each employee within each of the financial modules as necessary. Users should use only their unique user accounts when accessing the financial software. Each employee in the Clerk's office has been assigned their own user account and password for each module in the financial software system by the system administrator.*

The Village of Delhi is an equal opportunity employer and provider. To file a complaint of discrimination, write: USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W. Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD).

4. *Village officials should work with their financial software vendor to produce comprehensive audit logs for Village officials to review and maintain.* Our software currently has the ability to report what user had logged into each module and at what time they were logged in. However, it does not have the ability to report which user made changes to accounts or vendor information. We have made the suggestion to our software company that this would be a useful tool and they will take it into consideration for their next update. The software company will not design reports for individual consumers, because their software updates are consumer-wide and any reports unique to us will be wiped out with a consumer-wide update.

The above responses have been reviewed by the Village Board of the Village of Delhi and were approved to be included in this letter at a Village of Delhi Board meeting on February 6, 2012.

Sincerely,



Richard Maxey  
Mayor

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## APPENDIX B

### AUDIT METHODOLOGY AND STANDARDS

Our overall goal was to assess the adequacy of the internal controls put in place by officials to safeguard the Village's computerized data and assets. In order to accomplish this, we performed an initial assessment of IT internal controls so that we could design our audit to focus on those areas most at risk. After reviewing the information gathered during our initial assessment, we determined where weaknesses existed and evaluated those weaknesses for the risk of potential fraud, theft, and/or professional misconduct. We then decided upon the reported objective and scope by selecting for audit those areas most at risk. Our audit included the following steps:

- We interviewed Village officials, employees, and the Village's IT consultant about existing internal controls over the Village's IT system.
- Using an IT audit tool, we judgmentally selected four of the six workstations (one of which was also the server, and the other three used primarily by the Treasurer's office) that were connected to the administrative network to inventory the software, hardware, and configurations. We reviewed these results for inappropriately installed software.
- We obtained the user access accounts and rights for the administrative network by using an IT audit tool. We reviewed the user access rights within the administrative network to determine if any users had excessive access.
- We reviewed the user access rights within the financial software to determine if they corresponded with users' job responsibilities.
- We compared the leave from the time cards for the Clerk-Treasurer, Deputy Clerk-Treasurer, and Assistant Clerk to the log-in reports from the financial software for the period of June 1, 2010 to August 16, 2011 to determine if the user accounts were being logged in while employees were not working.
- We scanned through the bank account statements from June 2010 to July 2011 for unusual canceled check images and withdrawals for 24 bank accounts. We selected all 12 canceled check images totaling approximately \$3,200 that were made out to the Clerk-Treasurer, Deputy Clerk-Treasurer, and Assistant Clerk. We traced all 12 canceled checks to a voucher package which included support to ensure that users with excessive access rights did not receive inappropriate payments.
- We also examined all 14 withdrawals for the period June 2010 to July 2011 totaling \$1.63 million and traced them to supporting documents and records to ensure that they were authorized and appropriate.
- We compared the Clerk-Treasurer's, Deputy Clerk-Treasurer's, and Assistant Clerk's 2010 W-2 forms to the payroll journals and authorized pay rates to ensure that these individuals were paid the approved amount.

We conducted this performance audit in accordance with generally accepted government auditing standards (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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