

# Village of Dansville

## Water and Sewer Operations

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**APRIL 2018**

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OFFICE OF THE NEW YORK STATE COMPTROLLER  
**Thomas P. DiNapoli, State Comptroller**

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# Report Highlights

## Village of Dansville

### Audit Objective

Determine whether the Village Board effectively managed water and sewer operations.

### Key Findings

- The Board has not provided adequate oversight of water and sewer operations.
- The Board did not monitor water losses.
- The Board has not developed a multiyear financial and capital plan.

### Key Recommendations

- The Board should develop policies and procedures related to the water and sewer billing and collection process that ensure an adequate segregation of duties or provide for mitigating controls.
- The Board should investigate and correct the causes of water loss due to leaks if it is cost-effective to do so.
- The water clerk should maintain supporting documentation for all adjustments.
- The Board should develop a multiyear financial and capital plan.

Village officials agreed with our findings and recommendations and indicated they have taken, or plan to take, corrective action.

### Background

The Village of Dansville (Village) is located in the Town of North Dansville in Livingston County (County).

The Village is governed by an elected Board (Board) consisting of four Trustees and a Mayor. The Board is responsible for the general management and control of the Village's finances and operations. The Clerk-Treasurer is the Village's chief fiscal officer and responsible for the custody of all Village money, maintaining accounting records and preparing monthly and annual financial reports.

The Department of Public Works (DPW) Supervisor oversees the water and sewer departments and is responsible for day-to-day operations. The Water Clerk is responsible for billing, collecting and recording water and sewer user charges.

#### Quick Facts

Population	4,700
Water/Sewer Customers	2,300
2017-18 Water and Sewer Appropriations	\$1.3 million (water) \$1.2 million (sewer)

### Audit Period

June 1, 2013 – November 8, 2017

# Water and Sewer Operations

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## How Should a Village Board Effectively Manage Water and Sewer Operations?

To effectively manage water and sewer operations the Board is responsible for providing guidance through the adoption of written policies and procedures, fee schedules and resolutions approving special billing situations. This guidance should clearly outline all billing rates and special billing situations and ensure that no one individual handles all aspects of a transaction. When it is neither practical nor cost-effective to segregate incompatible duties,<sup>1</sup> it is critical to implement compensating controls, such as review and approval of billings and adjustments.

Village officials should also enter into contracts with its customers located outside the Village to clearly define the rights and responsibilities of both parties, including the Village's right to enforce payment. For example, the contract could make provisions for shutoff fees and penalties for late payment, and/or require the outside-Village users to pay a deposit, make a minimum payment in advance, or pay a reasonable collection charge to cover Village costs that may be incurred by a civil suit to collect charges.

Additionally, Village officials are responsible for controlling the cost of operating the Village's water and sewer system and protecting public health by reducing potential entry points for disease-causing pathogens. Accordingly, Village officials should monitor and manage water loss by identifying leaks and developing a plan to reduce them. A multiyear financial plan can help the Village prioritize financial needs necessary to implement the water loss reduction plan. Finally, reserves can be an important component of a multiyear plan. The procedures for establishing and expending moneys from a capital reserve fund vary depending on whether the fund is established to finance the cost of a specific capital improvement or a type of capital improvement.<sup>2</sup>

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1 Incompatible duties include custody of assets, authorization or approval of transactions affecting those assets and recording or reporting of related transactions.

2 When a village establishes a capital reserve fund to finance a specific capital improvement, the creation of the fund may be subject to permissive referendum requirements, but expenditures from the fund are not subject to referendum. However, when a village establishes a capital reserve fund to finance a type of capital improvement, the creation of the fund is not subject to a referendum, but expenditures from the fund may be subject to permissive referendum requirements.

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## The Board Did Not Provide Adequate Oversight of Water and Sewer Operations

The Board did not adopt written policies and procedures, adequately segregate the water and sewer billing and collection process, or implement mitigating controls. The water clerk prepares water and sewer bills, collects and deposits customer payments, records all transactions in the computerized software, determines the need for and prepares shutoff notices, and makes adjustments to meter readings, billings, penalties, payments and customer accounts with no review or approval. The water clerk also determines unpaid water and sewer accounts eligible for levy on Village taxes. The water clerk has extensive experience and operational knowledge which makes her a key component of the water and sewer operations. Accordingly, it is a concern that the Board has not developed a succession plan for her pending retirement.

In addition, the Board-adopted fee schedule does not conform with the Village water code which requires the use of multipliers to base-rate charges for units with larger-diameter water lines. The Board also did not enter into a written contract with a customer for a unique credit meter<sup>3</sup> arrangement or formalize this arrangement via policy or other Board action. Further, the Board did not enter into written agreements establishing terms for the recovery of unpaid water bills from the 283 customers and unpaid sewer bills from the 95 customers who are within the Town of North Dansville but outside the Village. The Village cannot levy arrears balances for these customers onto their property tax bills because they are not on Village tax rolls.<sup>4</sup>

Finally, Village officials<sup>5</sup> were unaware of the fees charged for recouping infrastructure expenses related to the Dansville-Sparta Industrial Park and were unable to locate a copy of the agreement with the County authorizing these fees. We obtained the agreement from the Livingston County Industrial Development Agency and provided it to Village officials.

We reviewed and recalculated water and sewer billings and verified unpaid amounts levied onto the Village property tax bills. Although the error rates were not significant, the control weaknesses in the Village's water and sewer operations could allow significant errors to occur and not be discovered.

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3 This credit meter is meant to credit the customer for sewer charges for the customer's sprinkler system, as this water does not go directly back into the sewer system for treatment.

4 The Village has a written agreement with the Town of West Sparta for provision of services to 22 customers outside the Village.

5 With the exception of the water clerk

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- We analyzed meter readings<sup>6</sup> recorded in the computerized billing software for 34,745 bills from 2,363 customer accounts for the period July 1, 2013 through January 1, 2017. We found readings were generally consistent with previous readings or had reasonable explanations, such as the issuance of final bills for a change in customer, new meter installations, abatements (service discontinued) or property vacancy. Fifty-four inconsistencies (1 percent) lacked sufficient documentation to determine if they were appropriate.
  - We tested five billing cycles containing 11,616 bills. After recalculating the bills and completing an in-depth review of documentation supporting various billing arrangements and adjustments, we identified only three bills with minor errors that we brought to the water clerk's attention for correction. The Clerk made corrections to the customer accounts for the errors identified while we were onsite.
  - We verified the unpaid water and sewer charges levied on the 2016 and 2017 Village real property tax bills and found they were properly prepared for the 2016 levy and four minor miscalculations for 2017. The unpaid balances for these accounts will be added to the next year's tax bill.

The lack of adequate Board guidance through policies and procedures and comprehensive fee schedules has allowed the water clerk to develop her own procedures for water and sewer billing and collections that only she is familiar with. This concentration of key duties with one individual without sufficient oversight significantly increases the risk of errors and irregularities occurring and going undetected and uncorrected.

Finally, the Board's lack of contracts for special arrangements and all customers outside the Village compromises the Village's ability to collect unpaid charges. The absence of such contracts could lead to misunderstandings between the Village and its water customers, and could complicate and add costs to collection efforts. Since the Village cannot levy unpaid charges on its tax roll for customers that are outside the Village, it would have to go to civil court to collect delinquent payments without contractual alternatives.

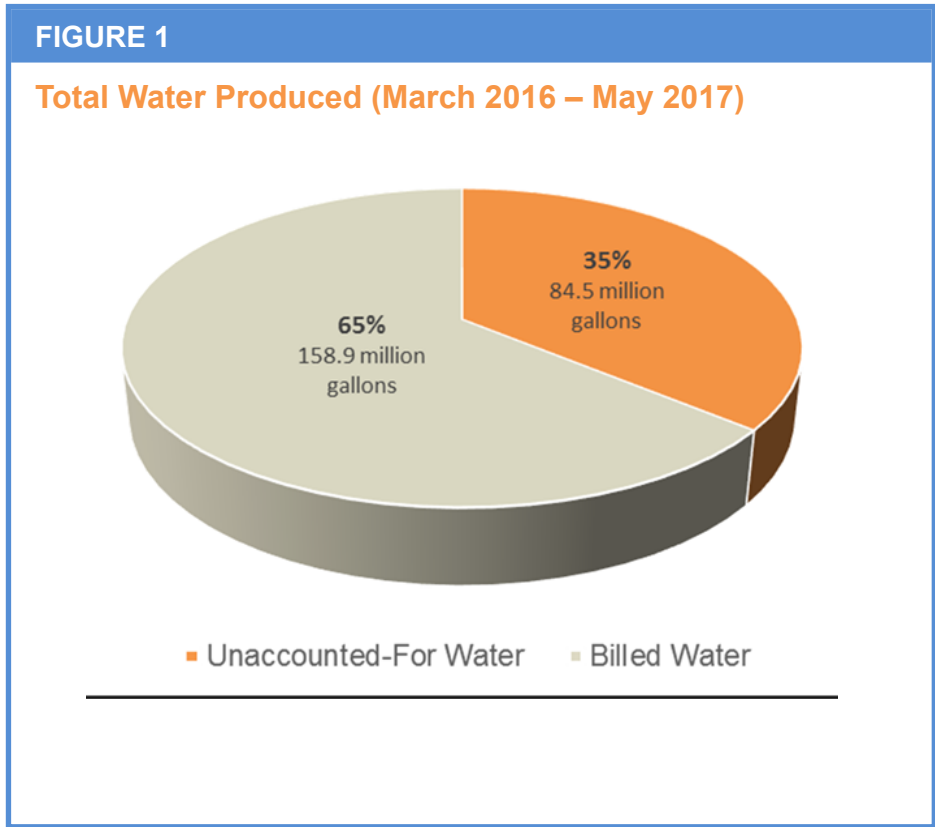
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<sup>6</sup> See Appendix B, Audit Methodology and Standards, for details on our computer-assisted analysis.

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## The Board Did Not Monitor Water Losses

According to the Environmental Protection Agency, the drinking water infrastructure in the United States is aging and can be a significant source of water loss through leaks. Besides leaks, water can be lost through theft, administrative errors, data handling errors and metering inaccuracies or failure. Average water loss in a system is 16 percent, and up to 75 percent of that lost water is recoverable. “Real” losses represent costs to a water system through the additional energy and chemical usage required to treat the lost water. “Apparent” losses represent a loss of revenue because the water is consumed but not accounted for (unmetered) and thus not billed.<sup>7</sup> Once Village officials identify these real and apparent losses, they can implement controls to reduce them.



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<sup>7</sup> “Water Audits and Water Loss Control For Public Water Systems,” United States Environmental Protection Agency: Office of Water publication EPA 816-F-13-002 (July 2013)

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We performed a reconciliation between the amount of water produced and billed quarterly by the Village from March 2016 through May 2017<sup>8</sup> and determined that an average of 35 percent of the water produced at the water plant is unaccounted for, or not billed (Figure 1). Although the DPW Supervisor was aware of and reported this loss to the Department of Health, Village officials have not determined how much is apparent loss (unmetered) versus real water loss due to leaks in the system or theft. Further, the Mayor was the only Board member aware of the water loss percentage, and the Board has not addressed the issue. The Mayor said that the loss was much higher in the past.

Although the Village's sewer plant has a meter, water usage is not documented. In addition, Village officials allowed the Dansville Central School (School) to water the School's playing fields during the summer from unmetered hydrants. Also, the Village does not meter the water used by local emergency service providers. Revenue is lost by providing water to the School and these agencies without charge. Further, the School's tax base extends far beyond the Village and, as a result, Village customers are subsidizing this other tax base.<sup>9</sup> Village officials believe that these apparent losses are a large portion of the unaccounted-for water.

Based on quarterly averages for unaccounted-for water and the DPW Superintendent's calculation of the variable costs to produce 1,000 gallons of water, we estimate the production cost of the unaccounted-for water was approximately \$12,900 annually. Further, unrepaired leaks in the water system increase the risk of exposure to contaminants.

### **The Board Did Not Develop a Multiyear Financial and Capital Plan**

Although the Board has developed a strategic plan, it does not contain sufficient details about revenues, expenditures and capital improvements over the next several years. An effective multiyear financial plan projects operating and capital needs and financing sources over a three- to five-year period and enables the Board to identify developing revenue and expenditure trends, set long-term priorities and goals, consider the impact of budgeting decisions on future fiscal years and avoid large fluctuations in water and sewer rates.

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<sup>8</sup> For the last three quarters of 2016 and the first two quarters of 2017

<sup>9</sup> The School extends into seven towns including the portion of the Town of North Dansville outside the Village.



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Multiyear plans also allow Village officials to assess the effect and merits of alternative approaches to address financial issues, such as using fund balance to finance operations and accumulate money in reserve funds. Long-term financial plans work in conjunction with Board-adopted policies and procedures to provide necessary guidance to employees on the Board's financial priorities and goals. The plan can also be used to inform the public of the Board's intentions and reasoning.

The Board has not set long-term priorities and goals, projected equipment replacement costs and needs, or addressed the impact of aging infrastructure on its unaccounted-for water. While the Board recently created capital reserves in the general and sewer funds, the resolution establishing these reserves did not specify whether they were established for a specific improvement or a type of improvement. In fact, the resolution was so vague it did not state any purpose for the reserves. Further, Village officials could not explain their procedures for establishing the funds, or the purpose of the funds.

### **What Do We Recommend?**

The Board should:

1. Develop policies and procedures for water and sewer billing and collection that ensure an adequate segregation of duties or provide for mitigating controls.
2. Consider cross-training individuals and developing a succession plan for the water clerk's duties.
3. Review its fee schedule and revise it to include all billing fees and rates.
4. Formalize agreements with customers outside the Village and those with special billing and fee arrangements.
5. Meter and bill for all water usage where possible and charge reasonable fees for other use.
6. Investigate the causes of water loss due to leaks and correct them if it is cost-effective to do so.
7. Develop and adopt a multiyear financial and capital plan.

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8. Review the establishment of the general and sewer reserves to determine the need for the reserves and ensure all statutory requirements are met.

The water clerk should:

9. Maintain supporting documentation for all adjustments.

# Appendix A: Response From Village Officials

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Dan Rittenhouse  
*Trustee & Deputy  
Mayor*  
Robin Humphrey  
*Trustee*



## VILLAGE OF DANSVILLE

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Mike Nagle  
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March 26, 2018

Edward V. Grant Jr. Chief Examiner  
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16 West Main Street, Suite 522  
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Sir:

Per the instructions provided in your letter of Feb. 18, 2018, this letter is submitted as the Village of Dansville's response to the draft audit. While the Board of Trustees (Board) has been working to correct deficiencies in the water and sewer divisions, the efforts have been incomplete and the findings adequately describe the shortfalls. Accordingly, the Board concurs with the findings and accepts the recommendations.

Numerous efforts intended to correct the findings are currently underway. A request for proposals is being drafted to seek bids to prepare a capital improvement plan (CIP). The Board is entertaining an engineering proposal to study its water distribution system for leaks. An engineering study of sewage collection system for inflow and infiltration (I&I) problems is about to begin. Additionally, the superintendent of public works has been directed to ensure all users are being metered and metered accurately. This includes the school district's irrigation systems. The Board will also receive a report (at least quarterly) showing the amount of water treated at the filtration plant and the amount metered in order to monitor efforts to reduce unmetered water.

On the administrative front, the water and sewer clerk position is being reviewed in depth. In the short-term, the duties will be assumed by the village clerk's office. Both the clerk and deputy clerk are generally familiar with the software system and have received further training from the software manufacturer.

As for the lack of agreements with water and sewer users outside the village, they exist, at least in part, but were located after the audit. That being said, all were signed off in the 1970s, and while they carry over with the transfer of property, it is quite likely many owners do not realize they exist. Moreover, owners of new construction most likely do not have them. Even where they exist, they need to be reviewed by the Village's attorney to determine if they meet today's legal standards.

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A complete corrective action plan will be provided once the final report has been released.

Respectfully, \_\_\_\_\_

Peter R. Vogt  
Mayor

## Appendix B: Audit Methodology and Standards

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We conducted this audit 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. To achieve the audit objective and obtain valid audit evidence, our audit procedures included the following:

- We interviewed Village officials and employees to gain an understanding of water and sewer operations, billing and Board oversight of the funds including policies and procedures, reserves and long term planning.
- We analyzed meter readings for 34,745 billings from 2,363 customer accounts for the period July 1, 2013 through January 1, 2017 identifying 3,918 inconsistencies and following up with the Water Clerk, customer record notes and other documentation to identify valid reasons for these inconsistencies.
- We tested the five most recent billing cycles (January 1, 2016 through January 1, 2017) containing 11,616 billings, recalculating bills and late charges. We completed an in-depth review of documentation supporting various billing arrangements and adjustments. We then discussed errors with the water clerk.
- We tested amounts levied on both the 2016 and 2017 Village tax bills.
- For the period March 2016 through May 2017, we compared water production as entered on Department of Health required water system operation reports to total water billed to determine whether the Village properly accounted for water produced. We then compared the amount of unaccounted-for water to Environment Protection Agency standards to determine whether the amount of the water loss was reasonable.
- To determine the cost for the gallons of water that were produced but not included in billing, we determined the average gallons of water lost per quarter, divided this by 1,000 and multiplied this by the variable cost to produce 1,000 gallons of water. This variable cost was calculated by the DPW Superintendent after discussion and agreement with OSC staff on what variable costs should be included.

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

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.

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A written corrective action plan (CAP) that addresses the findings and recommendations in this report should be prepared and provided 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 the CAP available for public review in the Clerk's office.

## Appendix C: Resources and Services

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### **Regional Office Directory**

[www.osc.state.ny.us/localgov/regional\\_directory.pdf](http://www.osc.state.ny.us/localgov/regional_directory.pdf)

### **Cost-Saving Ideas** – Resources, advice and assistance on cost-saving ideas

[www.osc.state.ny.us/localgov/costsavings/index.htm](http://www.osc.state.ny.us/localgov/costsavings/index.htm)

### **Fiscal Stress Monitoring** – Resources for local government officials experiencing fiscal problems

[www.osc.state.ny.us/localgov/fiscalmonitoring/index.htm](http://www.osc.state.ny.us/localgov/fiscalmonitoring/index.htm)

### **Local Government Management Guides** – Series of publications that include technical information and suggested practices for local government management

[www.osc.state.ny.us/localgov/pubs/listacctg.htm#lgmg](http://www.osc.state.ny.us/localgov/pubs/listacctg.htm#lgmg)

### **Planning and Budgeting Guides** – Resources for developing multiyear financial, capital, strategic and other plans

[www.osc.state.ny.us/localgov/planbudget/index.htm](http://www.osc.state.ny.us/localgov/planbudget/index.htm)

### **Protecting Sensitive Data and Other Local Government Assets** – A non-technical cybersecurity guide for local government leaders

[www.osc.state.ny.us/localgov/lgli/pdf/cybersecurityguide.pdf](http://www.osc.state.ny.us/localgov/lgli/pdf/cybersecurityguide.pdf)

### **Required Reporting** – Information and resources for reports and forms that are filed with the Office of the State Comptroller

[www.osc.state.ny.us/localgov/finreporting/index.htm](http://www.osc.state.ny.us/localgov/finreporting/index.htm)

### **Research Reports/Publications** – Reports on major policy issues facing local governments and State policy-makers

[www.osc.state.ny.us/localgov/researchpubs/index.htm](http://www.osc.state.ny.us/localgov/researchpubs/index.htm)

### **Training** – Resources for local government officials on in-person and online training opportunities on a wide range of topics

[www.osc.state.ny.us/localgov/academy/index.htm](http://www.osc.state.ny.us/localgov/academy/index.htm)

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