



Wayland-Cohocton Central School District

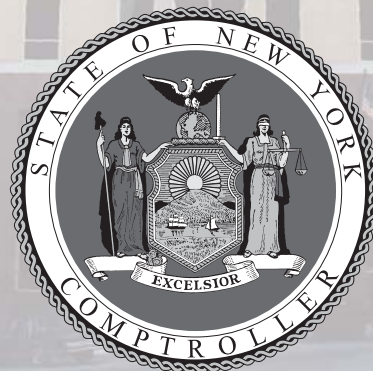
Energy Management

Report of Examination

Period Covered:

July 1, 2008 — June 30, 2010

2011M-10



Thomas P. DiNapoli

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State of New York Office of the State Comptroller

Division of Local Government and School Accountability

March 2010

Dear School District Officials:

A top priority of the Office of the State Comptroller is to help school district officials manage their districts efficiently and effectively and, by so doing, provide accountability for tax dollars spent to support district operations. The Comptroller oversees the fiscal affairs of districts statewide, as well as districts' 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 district operations and Board of Education governance. Audits also can identify strategies to reduce district costs and to strengthen controls intended to safeguard district assets.

Following is a report of our audit of the Wayland-Cohocton Central School District, entitled Energy Management. 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 are resources for district 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 Wayland-Cohocton Central School District (District) serves the Towns of Conesus, Sparta, Springwater, and Dansville in Livingston County, the towns of Canadice and Naples in Ontario County and the towns of Avoca, Cohocton, Fremont, Prattsburg and Wayland in Steuben County. The District is governed by the Board of Education (Board) which comprises seven elected members. The Board is responsible for the general management and control of the District's financial and educational affairs. The Superintendent of Schools (Superintendent) is the chief executive officer of the District and is responsible, along with other administrative staff, for the day-to-day management of the District under the direction of the Board.

There are four schools in operation within the District, with approximately 1,575 students and 415 employees. The District's budgeted expenditures for the 2010-2011 fiscal year were \$28 million, which were funded primarily with State aid and real property taxes.

The Board is responsible for minimizing District costs, including utility expenditures, while providing a safe, comfortable learning environment for students. For fiscal year 2009-2010, the District spent approximately \$156,000 on natural gas and electricity.

Objective

The objective of our audit was to determine if the Board of Education and District management were effectively managing and reducing energy consumption. Specifically, we answered the following question:

- Has the District taken steps to identify cost savings measures to address the rising cost of utilities (gas and electric)?

Scope and Methodology

We examined policies, practices, and procedures related to energy savings of the Wayland-Cohocton Central School District for the period July 1, 2008 to June 30, 2010. For the purposes of comparing energy costs to a base year prior to implementation of most of the energy savings initiatives, we extended our scope to July 1, 2004 solely to quantify the costs of electricity and gas purchases for the 2004-05 fiscal year.

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 is included in Appendix B of this report.

**Comments of District
Officials**

The results of our audit have been discussed with District officials and their comments, which appear in Appendix A, have been considered in preparing this report.

Energy Management

School districts have a responsibility to provide services in a cost-efficient manner to ensure tax dollars are spent wisely. To meet that responsibility, the Board should seek opportunities to identify efficiencies which may minimize utility expenditures. One way the District can do this is by reducing non-essential energy usage, replacing outdated and inefficient equipment with higher-efficiency equipment, and instituting energy-saving procedures.

District administration and management have taken a number of steps to reduce utility expenditures in the District's three main buildings. These include installing more efficient light bulbs in classrooms and administrative offices; reducing day time and night time building temperatures; barring the use of personal appliances including refrigerators, coffee pots, and microwaves in classrooms; installing more efficient boilers; and undertaking new tile and carpet cleaning processes. These actions have resulted in a reduction in the kilowatt hours (kWh) and therms¹ used to facilitate normal day to day operations. The District's reduction of energy consumption also reduced total utility expenditures, despite the fact that, according to the New York State Energy Research and Development Authority (NYSERDA), since 2003, the price of natural gas has increased by 123 percent and the price of electricity has increased by 32 percent.

We compared the District's energy consumption for the 2004-05 base year, which was prior to implementation of many of the energy savings initiatives, to its 2008-09 energy consumption and found that the District used considerably less energy in 2008-09. Overall, the electricity used for the three District buildings decreased by 257,625 kWh, while natural gas consumption decreased by 9,793 therms. Comparing energy costs for the same time periods, the total dollars spent on electricity has decreased by \$42,668 while the total dollars spent on gas has only increased by \$5,520, despite the significant rate increases.

Light Bulb Efficiency

The use of efficient fluorescent light bulbs is a major contributor to the District's overall energy savings. During the past five fiscal years, the District switched over to T-8 bulbs from T-12 bulbs due to gains in energy efficiency, which far outweighs the extra cost of 30 cents per T-8 bulb. The District has implemented this change in the Wayland and Cohocton Main Buildings, which comprise four schools. With the assistance of NYSERDA, we calculated an average savings from

¹ Kilowatt hours (kWh) and therms are used to measure the consumption of electricity and natural gas, respectively.

this conversion to T-8 bulbs. Assuming a similar historic kWh charge, we estimated the District's cost savings to be \$1.92 per each two-bulb light fixture. The District has converted approximately 9,600 or 80 percent of the bulbs in the Wayland building, and 1,140 or 95 percent of the bulbs in the Cohocton building to T-8 bulbs. This translates to an annual energy savings of approximately \$10,310, which far outweighs the approximate additional cost of \$3,222 (30 cents per bulb), with a net savings of \$7,088.

Other Energy Savings Initiatives

It can be difficult, in many cases, to attach an itemized cost savings to a specific initiative, particularly when multiple positive energy savings initiatives were implemented within the same time period, as was done by the District. However, we concur with the District that each of its numerous initiatives played a vital role in keeping energy consumption down, to contrast rising utility rates, as well as other increasing costs of the District. When we began our audit fieldwork, District officials provided us a list of 24 energy related cost savings initiatives that had been implemented within the last five years. Some of these initiatives were small in scale while others were larger undertakings, and were included in the District's recent capital projects. Below is a brief summary of a few more of those initiatives:

- **Building Temperature Reduction:** The District has reduced the day-time temperature in its buildings to 68 degrees (the lowest temperature allowed by NYSED) and the night time temperature to 62 degrees.
- **Personal Appliances in Classrooms:** The District stopped allowing the use of small appliances in classrooms and removed approximately 130 personal refrigerators from the buildings.
- **Efficient Boilers:** Recent capital projects included the replacement of outdated and inefficient boilers with high efficiency boilers expected to significantly reduce energy consumption. A notable component of this project was the installation of a separate high-efficiency boiler for the new pool, which eliminated the need to generate heat to the entire building when heating the pool for summer use. District officials expect to recognize significant savings in the coming years, as the entire project will have been completed and all new systems in place shortly after the summer of 2010.
- **New Tile Cleaning Process:** The District has instituted a new tile cleaning process which is expected to reduce energy costs, and also generate significant savings on cleaning chemical and labor costs. The new process is best described as a "wet

look” floor finish system and is supposed to only necessitate the “stripping” of classroom and hallway floors once every 8 to 12 years. This will generate significant time and cost savings over the traditional process of annually stripping the floors and applying a new finish coat. The District achieves energy savings by eliminating the need to heat water for an annual stripping process, eliminates the cost of the stripping chemicals and fresh finish that were used each year, and frees up a sizeable amount of custodial staff time by eliminating this annual process.

- **Dry Extraction Carpet Cleaning System:** The District has instituted a new carpet cleaning system which achieves not only energy savings but significant time efficiency and health and environmental benefits as well. The dry extraction carpet cleaning system uses a specialized vacuum cleaner with unique brushes that pile lift and dislodge dirt, and a specially formulated dry carpet cleaner which dissolves, traps, and removes spots, spills and dirt. According to District officials there are several benefits to the new cleaning process and products, including elimination of drying time and the need to heat and use water, improved indoor environmental quality, and the use of Green Seal Certified² products.

Because the 2009-10 fiscal year was finalized after we completed our fieldwork but prior to the issuance of this report, we requested 2009-10 energy consumption and cost data for the three District buildings. Not unexpectedly, the District’s utility costs increased somewhat from 2008-09. Electricity consumption increased by 211,937 kWh (total cost increase of \$9,142) which was anticipated as a result of the new pool installation and other sizeable capital projects, as well as the increased use of Smart Boards³ in the classrooms. While the District spent \$11,119 more for natural gas in 2009-10, its consumption actually decreased by 17,830 therms due, in part, to the District’s installation of high-efficiency boilers. Thus, the District successfully used its various cost savings measures to control the increase in its utility costs for 2009-10, by decreasing electricity consumption where possible to offset those endeavors which required additional consumption, and by decreasing gas consumption to help offset continually rising gas rates.

We applaud the District for both the large and small initiatives it has undertaken to help reduce energy costs, and we encourage District officials to continue seeking out new energy saving opportunities.

² Green Seal Certified products promote a cleaner and healthier environment, are nontoxic and nonirritating to the skin or eyes, and contain readily biodegradable organic ingredients.

³ Interactive white board designed to help students learn and retain information

APPENDIX A

RESPONSE FROM DISTRICT OFFICIALS

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

WAYLAND COHOCTON CENTRAL SCHOOL

David F. Wallace
President, Board of Education

William F. Whyte, Jr. High School Principal
Eileen M. Feinman Middle School Principal
Todd Campbell Elementary School Principal
Kelly Ann Murray Principal/Cohocton
David I. Mastin Business Manager

Michael J. Wetherbee
Superintendent

March 7, 2011

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728.2212

Bus Garage
728.2213

Counseling Office
728.2214

CSE/CPSE
728.9547

High School Office
728.2366

High School Nurse
728.2796

Middle School Office
728.2551

Middle School Nurse
728.3006

Elementary Office
728.3547

Elementary Nurse
728.2091

[REDACTED]
Office of the State Comptroller
The Powers Building
16 W. Main Street, Suite 522
Rochester, NY 14614

Dear [REDACTED] and Wayland-Cohocton Taxpayers:

On behalf of the Wayland-Cohocton Central School district, I am submitting this letter in response to the Energy Management Report of Examination completed by the Office of the State Comptroller, for the period of July 1, 2008 – June 30, 2010.

I am pleased that the examination highlighted the many areas where the District has implemented savings measures and concluded that the district's efforts have been successful. As discussed in the exit interview, the district will not be submitting a corrective action plan as there were no findings that require a plan.

Finally I would like to thank the Office of the State Comptroller for the polite and professional manner in which the auditors assigned to our district conducted themselves.

Sincerely,



Michael J. Wetherbee
Superintendent of Schools

2350 Route 63, Wayland, N.Y. 14572-9404
Fax: 585/728-3566
www.wccsk12.org

APPENDIX B

AUDIT METHODOLOGY AND STANDARDS

Our overall goal was to determine if the Board and District officials were effectively managing and reducing energy consumption and costs. To accomplish our objectives and to obtain appropriate audit evidence, we interviewed appropriate District officials and employees and reviewed pertinent records and documents for the period July 1, 2004 to June 30, 2010.

Our procedures included the following:

- We interviewed District officials to gain an understanding of the District's existing energy management practices and planned energy efficiency improvements.
- We reviewed District prepared schedules of gas and electric consumption and cost, by month, for the 2004-05 base year, and the 2008-09 audit year. To verify reliability, we selected a sample of monthly totals to trace and compare to the supporting utility bills, with no exception.
- After we completed fieldwork, we requested 2009-10 energy consumption and cost data, and compared it to the 2008-09 data, to determine if identified trends were continuing.
- To determine the price the District pays for electricity and natural gas, we reviewed several of the District's utility bills for the 2008-2009 fiscal year.
- We contacted NYSERDA for assistance in computing the cost savings of switching to more energy efficient light bulbs. Assuming a similar historic kWh charge, we estimated the District's cost savings to be \$1.92 per two bulb fixture. This savings figure was calculated by subtracting the 64 watts used by two T-8 bulbs from the 80 watts used by two T-12 bulbs for a 16 watt reduction per fixture. Using an annual usage estimate of 3,000 hours per bulb (recommended by NYSERDA, and assuming eight hours of daily usage per bulb) at 16 watts per hour, and dividing by 1,000 to convert to kilowatts, we estimated a 48 kWh savings per fixture per year. To convert this into dollars saved, we calculated the average kWh rate charged to the District during the 2008-2009 fiscal year to be \$.04 per kWh, and multiplied that by the 48 kWh reduction, for an annual cost savings of \$1.92 per two bulb light fixture.

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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Steven J. Hancox, Deputy Comptroller

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