



CWA

*Our Mission Remains Clear*

Quality. Service. Value.

2009

Annual Report

 **Chester Water Authority**  
**2009 Board of Directors**



**Donald F. Tonge,**  
*Chairman*



**Linda A. Cartisano, Esq.,**  
*Vice Chairman*



**Norma Jean Holmes,**  
*Treasurer*

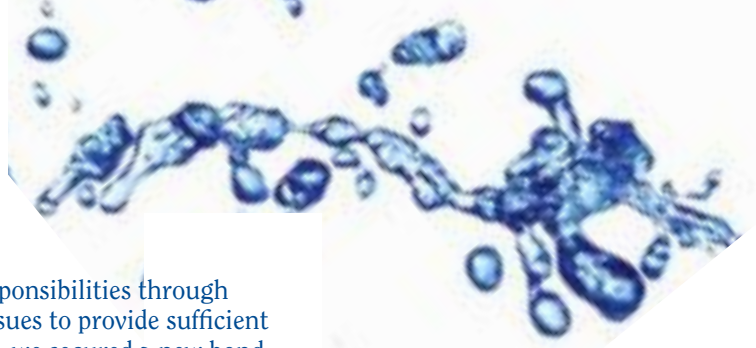


**Mary Smith,**  
*Secretary*



**Willie M. Wells,**  
*Assistant Secretary/  
Assistant Treasurer*

*(Not pictured)*  
**Francis J. Catania,**  
*Solicitor*



## 2009 Report to Bondholders

The Board of Directors and management meet our financial responsibilities through implementing a fair rate structure and procuring new bond issues to provide sufficient capital to provide facilities in good working order. Accordingly, we secured a new bond issue in the amount of \$9,500,000 in March and two refunding bond issues for a total of \$19,845,000 in December. The proceeds of the refinancing were used to refund four of the Authority's existing Water Revenue Bonds and to pay for the costs of issuing and insuring these two new refunding bond issues. The old bond issues were Series of 2003 and Series A of 2003 along with Series 2004 and 2005, which were outstanding in the principal amounts of \$4,910,000 and \$14,570,000, respectively. Our bond rating has stayed at the highest level and we have received a Moody's A1 rating. This shows the utmost confidence in our capability to pay the bond holders. The Authority's indebtedness increased from \$48,755,000 in 2008 to \$54,850,000 as a result of the new bond issue. We also met our financial responsibility by adopting an average rate increase of 7 percent for all customers effective July 1, 2009. The new rates still average only 67.5 percent of the average of the rates of neighboring for-profit water companies.

Inasmuch as our pumpage decreased from 32.93 MGD (million gallons per day) in 2008 to 31.42 MGD, Total Operating Revenue increased only 4.8 percent from \$38,013,264 in 2008 to \$39,839,909. The average demand was lower in part because total rainfall was 56 inches which is the eighth highest total in the last 46 years. The total average daily usage of our top 10 industrial and commercial customers decreased slightly from 11.7 MGD to 11.0 MGD. Total Operating Expenses increased by 1.5 percent from \$29,974,801 in 2008 to \$30,435,362. Operating expenses over the period 2003-2006 increased at an average rate of 6.3 percent annually, so the 1.3 percent average annual increase of the last three years are historic lows indicating that we have successfully found ways to lower expenses. Our aggressive Unaccounted-for Water reduction program has kept the rate very low for the second year in a row, from 12.62 percent in 2008 to 12.72 percent in 2009.

Capital expenditures for ongoing projects totaled \$10,966,000. We are presently implementing or have completed about one-half of the planned refurbishment project of our 58-year-old Treatment Plant which includes major equipment replacements and improvements to our treatment and high service pumping facilities. Inasmuch as the majority of the physical value of a water utility is the underground mains and services, we also conducted a Water Main Rehabilitation Project in 2009 as we have done almost every year since 1974. This rehabilitation work, along with our current systematic retirement of unnecessary water mains and renewal of old services, assists us in keeping the Unaccounted-for Water rate very low.

We did not experience a significant increase in the number of late bill payments during 2009. Our customer growth rate stayed low at 0.6 percent as this rate is still adversely affected by the low residential housing construction market. The new commercial construction in the City of Chester and in the rest of our system continues to produce commercial customers. The construction of the new soccer stadium in the City of Chester may eventually add new residential and commercial development nearby.

We have implemented a number of technological advancements to make our customer business communications more flexible and efficient. Our relatively new Customer Information System allows us to meet these obligations. We purchased computer software and are implementing a system to quickly notify our customers during system emergencies such as pump shutdowns or major main breaks. Inasmuch as we are using the latest technology to proactively operate and manage the Authority, we believe that we have successfully upheld our mission statement of providing our customers with "Quality. Service. Value."

  
Donald F. Tonge  
Chairman of the Board

  
Russell C. Williams  
Executive Manager & Chief Engineer



## 2009 Milestones

- Chester Water Authority (CWA) marked 142 years of service.
- The Authority supplied water to 42,360 active customers in western Delaware County and southern Chester County, as well as to water companies in Pennsylvania and Delaware.
- The average daily pumpage for the year was 31.42 million gallons per day (MGD).
- The water rate was increased by an average of 7 percent, effective as of July 1, 2009. CWA remains an excellent value at about two-thirds of the average rate of neighboring private water companies.
- CWA issued \$19.8 million of refunding water revenue bonds and \$9.5 million of water revenue bonds.
- The Authority completed a \$2.7-million upgrade at the Susquehanna Pumping Station.
- CWA completed a \$1.9-million project to refurbish the Tainter gates on the Pine Grove Dam at the Octoraro Reservoir.
- Four years into our 10-year capital improvement program for the Octoraro Treatment Plant and Susquehanna Pumping Station, CWA passed the halfway mark of the Phase Four \$6.7-million upgrade of the filtration and sedimentation components of the treatment process.





# Octoraro Treatment Plant

## Four Years Into Our Capital Improvement Program

**C**hester Water Authority has made progress on our 10-year, \$48 million capital improvement program for the Octoraro Treatment Plant and the Susquehanna Pumping Station, reaching a milestone in the \$6.7-million project at the treatment plant and completing the \$2.7-million upgrade at the raw water pumping station.

### **\$6.7-Million Phase Four Project Passes Milestone**

In 2009, the Authority completed approximately half of the work involved in the \$6.7-million Phase Four project at the Octoraro Treatment Plant which is scheduled for completion in spring, 2010.

There are two major components of this project:

- Renovation of 12 filters to improve filter operation and control, including replacement of more than 100 existing hydraulic valves and controls installed in the 1950s, with electric valves. This also includes replacement of hydraulic filter flow controllers with electronic meter controls.
- Conversion of two existing basins for use either as settling basins or as backwash water recovery basins to improve handling of process waste.

Each filter is receiving all new electronic controls that will be integrated into the plant Supervisory Control and Data Acquisition System (SCADA), which enables real-time monitoring and control of treatment plant operations and review and management of process data collected.

The filter upgrade includes new filter media and an automated filter backwashing system that will help optimize filter performance.

### **Susquehanna Pumping Station Improvements Enhance Flexibility**

In 2009, the Authority completed improvements to the Susquehanna Pumping Station at a final cost of \$2.7 million. These improvements include replacement of the 42-inch flow meter in the Susquehanna transmission main, installation of a new variable-speed pump #4, and a new river-intake protection system.

The new pump was initially started and tested in March, and was brought online in April. The energy-efficient 800-horsepower (HP) pump has a variable-flow capacity of 5.0 to 8.6 million gallons per day (MGD) which provides additional flexibility in the pumping rate of raw water from the Susquehanna River to the Octoraro Treatment Plant. The existing 1,500-HP pumps at the Susquehanna Pumping Station have a capacity of 15 MGD each, allowing delivery of either 15 MGD or 30 MGD to the treatment plant.

The additional flexibility has enabled the treatment plant to match pumping volume to operational need for blending raw water. This reduces power consumption and pumping costs.

## Gates Closed!

On August 24, 2009, the Authority completed a five-year, \$1.9-million project to refurbish the Tainter gates on the Pine Grove Dam. These two gates have been in continuous service since the Octoraro Reservoir was filled in 1951. Their primary function is to reduce the rise in reservoir level by releasing water from the reservoir during flood events. They are normally closed and raised only as needed.

The Tainter gate project was designed to satisfy Federal Energy Regulatory Commission (FERC) regulations, which require that all owners of dams with Tainter gates that produce hydroelectric energy periodically inspect the gates for structural soundness and correct any deficiencies.

The project got underway in 2004, when the Authority's engineering consultant completed the analysis and design of a floating bulkhead to be used for the full inspection and refurbishment of the Tainter gates. Sized to match the exact dimensions of the dam structure upstream of the gates, the bulkhead enables CWA to retain the water in the Octoraro Reservoir while completely dewatering the upstream side of the Tainter gates for the refurbishment work. From 2005 to 2007, CWA's contractor proceeded with construction and testing of the floating bulkhead and supports.

By the end of 2009, each of the two Tainter gates was completely refurbished, which included repainting of the upstream faces; replacement of lifting chains, chain guards, side seals, and gate rollers; and repair of the bottom seal. In addition, steel plates were welded on the sides of the Tainter gate beams to meet FERC requirements. Each gate was tested with a full 30-foot opening near the conclusion of the work.

Completion of this project extends the life of this important element of the Authority's infrastructure. As required by FERC, CWA will retest the gates every 5-10 years with a full 30-foot opening.

## CWA Earns Partnership for Safe Water Award

The Authority's Octoraro Treatment Plant was awarded the Five-Year Director's Award from the American Water Works Association's (AWWA) Partnership in recognition of CWA's "commitment to superior water quality." The award was presented at the June 2009 national meeting of the AWWA.

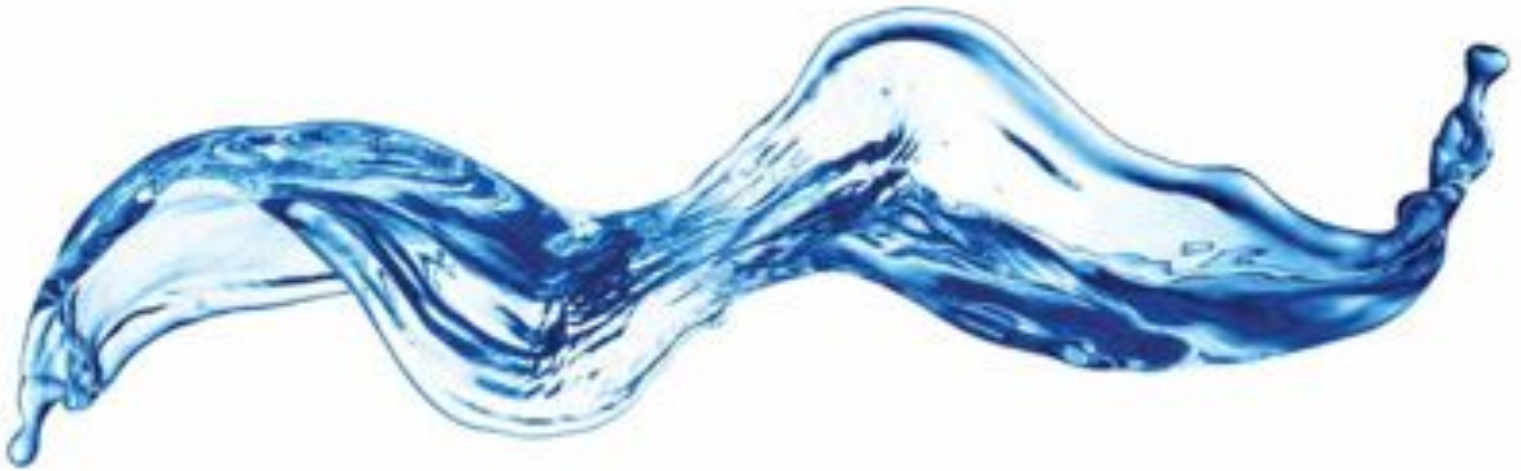
This award recognizes CWA's achievements in optimizing plant operation and performance since receipt of the Partnership Phase III Director's Award in 2004. It is earned by maintaining compliance with all drinking water regulations, by optimizing operations to achieve Partnership voluntary performance goals, and by submitting an annual report for peer review that documents improvements made and performance achieved.

The Partnership is a voluntary program initiated in 1995. It presently has approximately 220 utility members representing 400 drinking water treatment plants nationwide, of which 158 plants have received the Five-Year Director's Award.

"The Partnership's mission is to improve the quality of drinking water delivered to customers of public water supplies by optimizing system operations," according to AWWA. The 2010 Partnership Annual Report indicates that "data submitted by participating utilities provides undeniable evidence that the program results in measurable treatment plant performance improvement."







## Engineering Department

### Providing Expertise in Design and Construction

#### **Water Main Rehabilitation: Past, Present, and Future**

The Authority completed the 2009 Water Main Rehabilitation Project in Nether Providence Township and prepared a five-year plan to complete the rehabilitation of most of the older water mains in the remaining areas of our distribution system.

The 2009 project in Nether Providence Township completed the following improvements to our water distribution infrastructure:

- Approximately 6,000 feet of 4-, 6-, 8-, and 12-inch-diameter cast-iron water main was rehabilitated using a cleaning and cement lining process that has proved successful in the water industry.
- Approximately 500 feet of 4-inch-diameter cast-iron water main was replaced with ductile-iron cement-lined water main.

The \$1.3-million project also involved renewal of associated valves, water services, meters, and one fire hydrant.

Since 1974, CWA has invested \$21.7 million in the rehabilitation of approximately 47.2 miles of water main as well as the associated valves, service lines, meters, and fire hydrants. As a result of our rehabilitation projects, residual water pressures and hydrant flows increase, pipe leakage decreases, and water quality is maintained.

#### **Corrosion Study Concludes with Good News**

In 2009, the Engineering Department completed a corrosion study to identify sources of potential corrosion of our water distribution infrastructure, receiving good news from our consultant. Based on the results of soil sampling and monitoring for stray electrical currents in the six study areas, there is no evidence of substantial corrosion occurring in our underground infrastructure.

#### **On the Waterfront**

As part of the continued revitalization of the City of Chester, the Pennsylvania Department of Transportation (PennDOT) is constructing bridge ramps and roadways to improve traffic conditions in and around the Commodore Barry Bridge, Interstate 95, and State Route 291. The project is funded and administered by PennDOT and the Federal Highway Administration.

In 2009, CWA relocated a 20-inch main along Front Street to enable future access without interfering with a new bridge ramp. In accordance with the Engineering Department's design, the contractor drilled a tunnel approximately 120 feet long and 20 feet below street level under the bridge ramp and inserted a 36-inch casing pipe; then, the contractor slid a new 20-inch main through the casing pipe and reconnected it to the existing 20-inch main. If this section of the water main needs to be repaired in the future, it can be pulled out of the casing pipe without affecting the bridge ramp traffic.



In addition to the design, the Engineering Department was responsible for project management and inspection. The project team met the challenges associated with a complicated network of underground utility infrastructure in the project area. Through an agreement with PennDOT, the Authority will receive reimbursement of 90 percent of the cost of the project.

The Engineering Department completed another design project on the waterfront. The developer's contractor installed approximately 300 feet of 12-inch main, 260 feet of 8-inch main, and two water service supply points for the new soccer stadium under construction along the Chester riverfront.

### **Repainting Preserves Water Tanks**

The Engineering Department completed design of a project to repaint the interiors and exteriors of two 35,000-gallon surge tanks that protect the 42-inch transmission main that runs from the Susquehanna Pumping Station to the Octoraro Treatment Plant.

The two surge tanks, which are located along the transmission main at key high points, protect the transmission main from costly damage that may occur as a result of unexpected power outages. The surge tanks prevent damage to the transmission main by relieving the vacuum conditions that can occur if power is lost while a pump is operating. The project will be bid and work completed in 2010 at an estimated cost of \$150,000.

The Engineering Department completed design of a project to clean and repaint the exterior of steel tank #5 at our Village Green Tank Farm in Delaware County. The tank was taken out of service in October 2009 for a full inspection and will remain out of service until the project is completed. Anticipated completion is in fall 2010. The cost for this project is estimated at \$750,000.





## Distribution Department

### Maintaining Reliable Service From Plant to Tap

#### Safely Crossing I-95

When a leak developed in the 20-inch-diameter steel water main attached to the Edgmont Avenue bridge that crosses I-95 and the CSX Railroad, CWA studied the risks and costs of performing a conventional repair over this busy transportation corridor — including the potential costs of future repairs on this 45-year-old water main.

Concluding that these issues were significant, the Distribution and Engineering Departments devised an alternative solution: insertion of a new 16-inch-diameter high-density polyethylene pipe inside the existing water main — the same method that is used today to attach utilities to a bridge. The smaller-

diameter main will not affect service to customers in the City of Chester because the main is located in an area that already required a pressure reduction.

CWA coordinated the project with the Pennsylvania Department of Transportation (PennDOT) and CSX Railroad. A contractor used directional drilling equipment to pull the new pipe through the existing main, completing the \$70,000 project without affecting highway or railway operations. Although the new water main should provide many years of uninterrupted service, future repairs, if necessary, will be easier since the water main is now in a casing pipe.

Following completion of this project, the Engineering Department conducted a proactive inspection of three other I-95 bridge crossings, with rehabilitation of all these crossings to be included in a future rehabilitation project.



## Inactive Mains Retired

The Distribution and Engineering Departments have started a new program to retire small-diameter water mains — typically 1 inch or 2 inches in diameter — that are no longer connected to active service lines. Many of these pipes are made of galvanized iron, and they are prone to developing leaks that contribute to a water utility's uncounted-for water rate.

After the Engineering Department identifies the locations of inactive service pipes, the Distribution Department cuts and caps each service pipe where it is attached to the larger distribution main.

## Distribution System Project Statistics at a Glance

### Leak Detection Survey:

- 251 miles of water main surveyed in the City of Chester; Brookhaven, Nether Providence, Parkside, and Upland Boroughs in Delaware County; New Garden Township in Chester County; Chester Heights Borough, Western Delaware County; and Concord, Chadds Ford, and Thornbury Townships, Western Delaware County.
- 37 leaks identified and repaired.
- Nearly 260 million gallons of water per year saved.
- Approximate cost of survey: \$70,000.
- Approximately \$260,000 per year saved (i.e., total cost of water treatment) — more than three times the cost of the survey — with additional savings from prevention of main breaks and resulting damage, emergency repairs, and insurance claims.

### Automated Meter Reading (AMR) Program

- 1,953 AMR devices installed (2009).
- 34,970 AMR devices installed (total through 2009) — representing greater than 85 percent system coverage.

A dynamic background of blue water splashing and bubbling, creating a sense of movement and freshness. The water droplets and splashes are scattered across the page, with some larger, more defined splashes near the top and bottom edges.

# Information Systems

## Applying Technology to Manage Our Business



### In Case of Emergency...

In the past, if CWA needed to deliver an urgent message to customers about a situation that might affect their water service, our Customer Service representatives would begin telephoning individual customers while field employees would hit the streets to post notices on customers' doors. Needless to say, it was a time-consuming and costly process. In 2010, we will be able to use the World Wide Web to deliver automated messages by telephone, e-mail, and/or text message to one, hundreds, or thousands of customers at once.

In 2009, Information Systems began work on a specialized Web-based mass-notification service. The system complies with a new regulation issued by the Pennsylvania State Department of Environmental Protection (DEP) that requires every public utility to implement an emergency notification system.

The system will enable CWA to select customers by geographic location, type of service, or medical needs. Not only is the system an efficient way to deliver an urgent message, it also will enable us to contact our customers about routine business matters such as service calls.

Information Systems worked with the vendor to customize the system for CWA's needs and develop a schedule for installation and testing. Customer Service prepared a mailer to be included in water bills requesting that customers verify their contact information. The system is scheduled to go live in spring 2010.





# Accounting and Finance

## Managing Our Financial Resources

### Successful Bond Issue Contributes to Capital Improvements

In March 2009, the Authority issued \$9.5 million of water revenue bonds. The proceeds from the sale will contribute to funding CWA's capital improvement program, including:

- The Water Main Rehabilitation Program;
- Design and construction of upgrades to the Authority's water distribution system and Octoraro Treatment Plant; and
- The purchase of new equipment.

In December, the Authority issued \$19.8 million of refunding water revenue bonds. The proceeds will be used to refund outstanding principal of earlier issues of bonds, and pay the costs and expenses associated with the refunding bonds.

### Board Approves Rate Increase

Periodic rate increases contribute to the funding for the necessary investments in our community's water treatment and distribution infrastructure. In 2009, the Board of Directors approved an average rate increase of 7 percent, which took effect on July 1, 2009. Our rates are 30 percent lower than the rates of major neighboring for-profit water utilities.

# HR

## Human Resources Integrating Work and Pay

### Taking the “Punch” Out of Time Clocks

In 2004, CWA completed the purchase, testing, and implementation of a Web-based integrated Human Resources/Payroll system. The new system provided for enhanced technical support, future upgrades, and the flexibility and power of Web-based technology.

In the five years since the system went live, the Human Resources (HR) Department has implemented two full upgrades — the latest in 2009 — and used the system’s capabilities to improve financial management and operational efficiency.

In 2009, Human Resources launched a secure, self-service, electronic employee

time sheet, eliminating paper time sheets and associated clerical work. It also enables employees to track their vacation and sick time online.

In addition, electronic time clocks were installed in the Distribution Department, replacing the outmoded manual time clocks used by our union employees. The system uses an electronic fingerprint reader, which reduces the potential for errors. Because it is integrated into the HR/Payroll database, it also helps ensure that union employees’ paychecks accurately reflect their hours worked, including overtime.

The new system will be installed in our Treatment Plant at a later date.





## Business Office

### Increasing Our Value to Customers

#### Online Bill Payment Goes Live

Following a successful pilot program in 2008, CWA customers now have a new bill payment option — online, using credit cards, debit cards, or e-checks — through CWA's Web site.

Here's how it works:

- When customers visit CWA's Web site and click on "Pay Bill Online," they are linked directly to the vendor's secure Web site where they enter their CWA account number, amount of payment, their credit/debit card number, or checking account and bank routing numbers.
- Each transaction incurs a \$2.95 convenience fee, which is assessed directly to the customer by the vendor at the time of the transaction; there is a \$500 limit per transaction.

In addition to routine bill payment, customers who have had service terminated due to a delinquent bill now have an efficient alternative to paying outstanding fees in person with a bank check, money order, or cash.

#### Introducing "CWA Appointment Scheduler"

We know that customers hate to be put on hold when they telephone our Customer Service Department to schedule a service appointment. Yet there are times of the day when high call volumes make it inevitable.

Now, our customers have an instant option: using the "CWA Appointment Scheduler" on our Web site. Using their computers, they can request a service appointment and receive our assurance that a Customer Service Representative will contact them — by telephone or e-mail, as they choose — within two business days to schedule an appointment.

The Business Office partnered with Information Systems to create a behind-the-scenes access database that make it possible. The online form makes it fast and easy.

Customers enter just a few pieces of required information:

- Name;
- Service address;
- Contact telephone number; and
- Preferred appointment time (morning, afternoon, or evening).

Customers have options to enter their e-mail address, customer number, account number, and additional information — and that's it! We believe this option will result in higher customer satisfaction. CWA is also using the database to update customer information for the new emergency notification system.

#### CIS Upgrade is Industry News

The Business Office upgraded our Customer Information System (CIS) on time and under budget thanks to expert planning and teamwork. In particular, the Business Office developed a detailed schedule and a critical issues form for each major phase of the three-month-long project. These tools enabled CWA and the vendor to see what needed to be resolved to remain on schedule. The result was an exceptionally smooth implementation, completed in June 2009.

The upgraded CIS is delivering improved performance, including faster system speed, streamlined account setup, customizable screen views that increase speed and ease of use, and a more stable database platform that eliminates routine maintenance. The system's management reporting capabilities have increased the efficiency of monthly and annual processing. In addition, managers have greater control over access to the system and distribution of financial information.





## Executive Office

### On the Leading Edge

#### Investing in Quality, Service, and Value

**T**he major physical operational facilities that the Chester Water Authority owns are our Source of Supply, Treatment, Pumping, Transmission, Booster Station, Storage, and Distribution Facilities. We have recently spent a great deal of money to upgrade and rehabilitate our source of supply facilities, and plan to finalize this restoration by cleaning and painting our two surge tanks on the Susquehanna raw water transmission main this year. We have published our high capital expenditures for renovating the Treatment Plant in recent Annual Reports. We are also spending significant funds on the replacement and rehabilitation of our transmission, storage, and distribution system facilities.

The Authority has invested approximately \$80 million over the past 10 years in capital construction to rehabilitate aging structures, remain in compliance with regulatory changes, and provide improvements to our operational efficiency. This expenditure amounts to approximately \$2,000 per customer. Inasmuch as these capital improvements will also enrich the lives of future generations of customers, the payment of the bond issues spread over many years is a fair way to allot the payment of capital improvement cost.

While the physical plant is extremely important to our industry, we cannot progress as an organization without the dedication of our employees. In 2009 we spent thousands of dollars in training our upper-level management to do even better jobs. In addition we began a study to establish current salary wage rates in order to make sure that we have competitive salaries. We value our employees highly, and this is reflected in the low personnel turnover rate of the Authority. We think that this money is well spent to continue to provide “Quality, Service, and Value” to our customers.

**Our investments in infrastructure, capital improvements, business systems, and our employees benefit our customers.**



# Management Staff



Russell C. Williams, P.E.  
*Executive Manager  
and Chief Engineer*



Brian P. MacEwen, P.E.  
*Director of  
Engineering*



Elgin Nowoswiat, CPA  
*Controller*



David J. Krupiak,  
*Chief of  
Distribution*



Patricia P. Stabler, P.E.  
*Chief of Treatment  
and Pumping*



Mitchell A. Kaplan,  
*Director of  
Information Systems*



Thomas A. Zetusky,  
*Manager of  
Business Office Group*



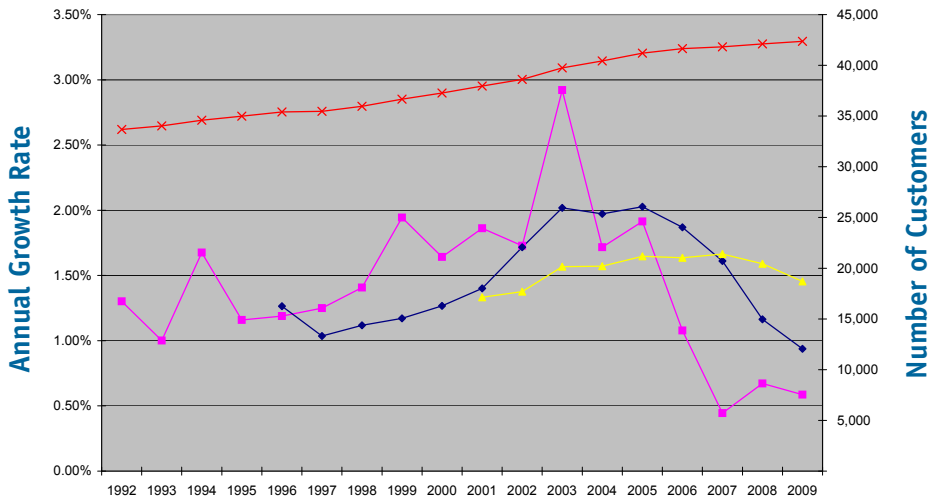
Robyn S. Bennett, PHR  
*Assistant Director of  
Human Resources*



Sandra L. Hunt,  
*Executive  
Administrator*

### Customer Growth Rate (as of 12-31-2009)

- Annual Growth Rate
- ◆ 5 Year Annualized Growth Rate
- ▲ 10 Year Annualized Growth Rate
- × Number of Customers



This section presents management's analysis of the Authority's financial condition and activities for the year. This information should be read in conjunction with the financial statements.

## CWA's Mission

*The mission of Chester Water Authority is to provide quality water to all of our customers, when they need it, at a reasonable cost.*

### 2009

**Average Daily Pumpage:**  
(in gallons) 31,420,000

**Total Customers:** 42,360

**Distribution Main (in miles):**  
652.28

**Total Operating Revenue:**  
\$ 39,839,909

**Average Annual Residential Bill:** \$383.04

**Total Operating Expenses:**  
\$ 30,435,362

**Bonds Payable Long Term:**  
\$ 50,855,000

**Total Assets:** \$237,813,473

## Financial Highlights

Management believes the Authority's financial condition is strong. The Authority is well within its debt covenants and the more stringent financial policies and guidelines set by the Board and management. The following are key financial highlights for 2009:

- The Authority adopted an overall rate increase of 6% for East and 8% for West customers. The rate increase was effective July 1, 2009 to support an active Capital Construction Program and continue with the traditional on-going proactive maintenance program.
- At December 31, 2009 and 2008, total assets were \$237,813,473 and \$221,057,377 respectively; total liabilities were \$58,824,153 and \$52,579,949 respectively; and net assets were \$178,989,320 and \$168,447,428 respectively.
- For the year 2009, the Authority sold 9.720 billion gallons of water, compared to 10.241 billion gallons of water in 2008. The year 2009 provided 55.98 inches of rain compared to 45.57 inches in 2008.
- Operating income for the year was \$9,404,547, representing a \$1,366,084 increase over 2008. Changes in net assets were \$10,511,892 for the year ended December 31, 2009, which includes \$2,899,792 of developer contributions.
- The operating ratio (operating revenues divided by operating expenses less depreciation) was 1.64 in 2009 versus 1.57 in 2008.

## Overview of Annual Financial Report

Management's Discussion and Analysis (MD&A) serves as an introduction to, and should be read in conjunction with, the basic audited financial statements and supplementary information. The MD&A represents management's examination and analysis of the Authority's financial condition and performance. Summary financial statement data, key financial and operational indicators used in the Authority's strategic plan, budget, bond resolutions and other management tools were used for this analysis.

The financial statements report information about the Authority using full accrual accounting methods, except as noted in Note 2 to the financial statements, as utilized by similar business activities in the private sector. However, rate-regulated accounting principles applicable to private sector utilities are not used by most governmental utilities. The financial statements include statements of net assets; statements of revenues, expenses, and changes in net assets; statements of cash flows; and notes to financial statements.

The *statement of net assets* presents the financial position of the Authority on a full accrual historical cost basis. The *statement of net assets* presents information on all of the Authority's assets and liabilities, with the difference reported as net assets. Over time, increases and decreases in net assets are one indicator of whether the financial position of the Authority is improving or deteriorating.

While the *statement of net assets* provides information about the nature and amount of resources and obligations at year-end, the *statement of revenues, expenses, and changes in net assets* presents the results of the business activities over the course of the fiscal year and information as to how the net assets changed during the year. All changes in net assets are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of the related cash flows. This statement also provides certain information about the Authority's recovery of its costs. Rate-setting studies use revenue requirements and cost allocation methods in order to generate sufficient revenues to recover the Authority's operation and maintenance expenses, as well as set the provisions for renewals, replacements, reserve operations and debt service requirements.

The *statement of cash flows* presents changes in cash and cash equivalents resulting from operational, financing, and investing activities. The statement presents cash receipts and cash disbursement information, without consideration of the earnings event, when an obligation arises, or depreciation of capital assets.



## FINANCIAL ANALYSIS

The *notes to financial statements* provide required disclosures and other information that are essential to a full understanding of material data provided in the financial statements. The notes present information about the Authority's accounting policies, significant account balances and activities, material risks, obligations, commitments, contingencies and subsequent events, if any.

The financial statements were prepared by the Authority's staff from the detailed books and records of the Authority. The financial statements were audited and adjusted, if material, during the independent external audit process.

### Summary of Organization and Business

The Authority was created under the Pennsylvania Municipality Authorities Act of 1935, being the Act of June 28, 1935, P.L. 463, as amended by the Act of May 20, 1937, P.L. 739, as amended by Act 85, approved May 17, 1939, as a public, nonprofit corporation to acquire and distribute supplies of fresh water for industrial and domestic purposes within its service area. The Authority was incorporated on July 6, 1939; it is now governed by the Act and a Board that consists of five members who are appointed by the City of Chester, Delaware County, Pennsylvania, and now supplies water in a service area which includes portions of 39 municipalities in Delaware and Chester Counties, Pennsylvania.

The Authority has no taxing power. Operational and maintenance costs are funded from customer fees and charges. The acquisition and construction of capital assets are funded by the issuance of municipal bonds, capital contributions from customers, including other utilities and developers, and customer revenues.

The Authority provides reliable high quality supplies of potable water used for drinking, irrigation, fire protection and other purposes. The Octoraro Treatment Plant is the sole treatment facility, using the

*(continued on page 16)*

### Condensed Statements of Net Assets

	December 31, 2009	December 31, 2008
Current assets	\$ 20,974,601	\$ 14,446,772
Restricted cash and investments, and deferred expenses	22,017,479	18,745,339
Capital assets – net of accumulated depreciation	194,821,393	187,865,266
Total assets	<u>237,813,473</u>	<u>221,057,377</u>
Current liabilities	6,574,418	6,760,624
Noncurrent liabilities	52,249,735	45,819,325
Total liabilities	<u>58,824,153</u>	<u>52,579,949</u>
Net assets:		
Invested in capital assets – net of related debt	139,971,393	139,110,266
Restricted	20,843,946	17,774,163
Unrestricted	18,173,981	11,592,999
Total net assets	<u>\$178,989,320</u>	<u>168,477,428</u>

### Condensed Statements of Revenues, Expenses, and Changes in Net Assets

	Year Ended December 31, 2009	Year Ended December 31, 2008
Operating revenues	\$ 39,839,909	\$ 38,013,264
Operating expenses	30,435,362	29,974,801
Operating income	<u>9,404,547</u>	<u>8,038,463</u>
Non-operating income:		
Interest income	558,669	979,459
Other	247,090	259,851
Total non-operating income	<u>805,759</u>	<u>1,239,310</u>
Total non-operating expenses	<u>2,598,206</u>	<u>2,411,434</u>
Income before contributions	7,612,100	6,866,339
Capital contributions	2,899,792	3,614,179
Increase in net assets	<u>\$ 10,511,892</u>	<u>\$ 10,480,518</u>

### Selected Statistical Information

	2009	2008	CHANGE	
			Amount	%
Full-time positions at year-end	144	143	1	0.7
Average full-time employees	143.5	141.9	1.6	1.1
Water customers at year-end:				
Residential	39,603	39,380	223	0.6
Commercial	2,208	2,197	11	0.5
Industrial	57	59	(2)	(3.4)
Fire protection	482	465	17	3.7
Other water utilities	10	10	0	0.0
Total	<u>42,360</u>	<u>42,111</u>	<u>249</u>	<u>0.6</u>
Average residential bill	<u>\$ 383.04</u>	<u>\$ 364.49</u>	<u>\$ 18.55</u>	<u>5.1</u>
Water consumption (millions of gallons):				
Residential and commercial	3,714.8	3,911.0	(196.2)	(5.0)
Industrial	3,944.9	4,215.3	(270.4)	(6.4)
Other water utilities	2,047.5	2,105.4	(57.9)	(2.8)
Fire protection	12.0	9.5	2.5	26.3
Total	<u>9,719.2</u>	<u>10,241.2</u>	<u>(522.0)</u>	<u>(5.1)</u>
Operating Revenue per 1,000 gallons consumed	<u>\$ 4.10</u>	<u>\$ 3.71</u>	<u>\$ 0.39</u>	<u>10.5</u>
Operating Expenses per 1,000 gallons consumed	<u>\$ 3.13</u>	<u>\$ 2.93</u>	<u>\$ 0.20</u>	<u>6.8</u>

# MANAGEMENT'S DISCUSSION AND ANALYSIS FOR 2009

(continued from page 15)

Octoraro Creek and the Susquehanna River as its sources of supply. The Authority has the ability to withdraw 60 million gallons per day (MGD) from these sources. The capacity of the filters at the treatment plant is approximately 75 MGD. The Authority has constructed a chemical storage building having capacity for storing a 10- to 14-day supply of chemicals (based on 60 MGD operating rate). The level of treatment complies with the current regulations under the Federal Safe Drinking Water Act. The Authority has covered storage facilities with an aggregate capacity of 105.5 million gallons of treated water representing a supply for approximately three days average use. The distribution system, including transmission main, comprises approximately 650 miles of pipelines varying in diameter from 48-inch down to ¾-inch.

## Water Rate Covenant

The Authority covenants in the Bond Resolution that it will fix and charge water rates and charges upon the users of the Water System, which will be sufficient to provide for:

1. The reasonable expenses for the Authority for operating, maintaining and repairing the Water System; and
2. A debt service fund sufficient for the payment of interest on the outstanding Bonds and principal thereof at maturity.

The Authority has met all covenants of the bond resolution in each year, including 2009.

## Financial Analysis

The comparative condensed financial statements and other selected information (see tables on page 15) serve as the key financial data and indicators of management, monitoring and planning. The Authority is reporting in compliance with GASB 33 and 34.

## General Trends and Significant Events

The population growth rate in Delaware and Chester Counties over the last five years has been approximately 0.6% and 8.8%, respectively. Total customer accounts increased 0.6% from 2008 to a total of 42,360 in 2009.

Weather temperatures during 2009 remained consistent with historical averages. The average rainfall for the area is 44.64 inches per year. Rainfall recorded at the water treatment plant for 2009 was 55.98 inches.

The volume of water sold in the year 2009 was approximately 9.720 billion gallons, a decrease

of 5.1% from the year 2008. Retail water customers (Residential/Commercial) accounted for 38.2% in 2009 as compared to 38.1% in 2008 of the volume sold, and 52.6% in 2009 as compared to 52.2% in 2008 of the revenue earned on water sales.

## Financial Condition

The Authority's financial condition remained strong at year-end with adequate liquid assets and unrestricted net assets. Management believes that the current financial condition, technical support staff capabilities, and operating and expansion plans to meet anticipated customer needs are well balanced and under control.

Total assets grew \$16,756,096 from 2008, or 7.58%. This balance sheet increase was primarily related to a) issuance of 2009 water revenue bonds in the amount of \$9,500,000 (net proceeds \$8,515,641), b) additions to property, plant, and equipment, net of accumulated depreciation of \$6,956,127, and c) increase in unbilled revenue and accounts receivable of \$859,915 due to an overall rate increase of 6% for East customers and 8% for West customers.

## Results of Operations

**Operating Revenues:** Revenues from operations fall into water services and ancillary charges. Ancillary charges include tapping fees, delinquency turnoff fees, engineering and inspection services and charges for other miscellaneous services. The Authority has five classes of water customers: residential, commercial, industrial, fire protection, and other water utilities.

### Operating Revenue from Water Services and Other Fees:

	2009	2008	Change	%
Residential	\$ 15,169,409	\$ 14,353,603	\$ 815,806	5.7
Commercial	5,789,495	5,488,418	301,077	5.5
Industrial	8,834,624	8,337,786	496,838	6.0
Fire Protection	2,890,971	2,736,485	154,486	5.6
Other Water Utilities	5,902,086	5,600,606	301,480	5.4
Capacity, Flat Fees and Late Fees	<u>1,253,324</u>	<u>1,496,366</u>	<u>(243,042)</u>	<u>(16.2)</u>
<b>Total</b>	<b><u>\$ 39,839,909</u></b>	<b><u>\$ 38,013,264</u></b>	<b><u>\$ 1,826,645</u></b>	<b>4.8</b>

The 2009 overall rate increase of 6% for East customers and 8% for West customers resulted in 4.8% operating revenue increase compared to 2008 results.

Capacity, flat and late fees are decreased by \$243,042 or 16.2% mainly due to capacity charges decreasing from \$476,129 in 2008 to \$266,780 in 2009 as a result of decrease in new real estate developments and new housing downturn in our service footprints due to the economy.

**Annual Budget:** The Authority prepares an annual budget that is presented to the Authority Board. The budgeted revenues and expenses and changes in net assets for 2009 did not materially vary from the actual results.

**Capital Contributions:** The Authority collects water capacity fees in order to ensure that current customers do not bear the entire burden of growth. These fees are paid by new customers and represent, on a residential equivalent unit basis, the cost of the water capacity represented by the new account. Most of these fees are paid for units of capacity purchased by residential and commercial real estate developers.

The Authority also receives and records additions to its distribution system from developers. Prior to GASB 33 and 34 implementation, the money and system assets received from the developers were recorded as direct contributions to the



Authority's equity. GASB 33 and 34 require reporting the amounts through the statement of revenues, expenses, and changes in net assets.

Developers convey these residential systems and extensions to the Authority upon completion of projects in accordance with plans and specifications approved by the Authority. In 2009, developers contributed \$2,899,792 in system extensions, of which \$741,635 was received in cash to reimburse the Authority for its capital outlays. These contributions are not budgeted as they are of limited relevance to rate setting and the timing is not subject to Authority control.

**Expenses:** The Authority operates and maintains a potable water treatment and delivery system. All of the water production occurs at its 60 million gallons per day conventional surface water Octoraro Treatment Plant.

Operating expenses increased by \$460,560 and 1.5% in 2009 compared to 2008. The increases were mainly due to the following: a) regular, overtime and fringe wages increased by \$325,157 as a result of a 3% union and non-union wage increase, b) bad debt expense, net of collections increased by \$232,978 as a result of increase in bankruptcies due to economic downturn, c) purification chemical expenses increased, for example: Alum increased by \$76,237, Carbon increased by \$123,445, Fluoride increased by \$26,285, Polyaluminum Chloride increased by \$50,573, and Ammonia increased by \$19,552 and d) Susquehanna River Basin Commission's water withdrawal fee from the Susquehanna River increased by \$137,231. Some of the major savings of our operating expense which offset some of the increases mentioned above were as follows: a) paving expense decreased by \$151,963 and construction equipment rental expense decreased by \$241,201 and repairs and maintenance expense decreased by \$64,921 due to decrease in total number of main breaks. The Authority had a total of 90 breaks in 2008 compared to 86 breaks in 2009. In 2008, more than 50% of the main breaks were 8 inches or more in diameter.

## Cash Flow Activity

The following table shows the Authority's ability to generate operating cash and the use of that cash in the Authority's capital spending program. Amounts are shown both in total dollars and as a percentage of operating revenues.

	2009		2008	
Total operating revenues	<u>\$39,839,909</u>	100.0%	<u>\$38,013,264</u>	100.0%
Net cash provided by operations	\$13,888,811	34.9%	\$12,700,215	33.4%
Operating cash used for acquisition of property, plant and equipment(*)	<u>(4,145,653)</u>	(10.4%)	<u>(3,907,553)</u>	(10.3%)
Net operating cash available for other purposes(*)	<u>\$ 9,743,158</u>	24.5%	<u>\$ 8,792,662</u>	23.1%

(\*): A non-GAAP Measure.

## Changes in Property, Plant and Equipment Cost Value


Property, plant, and equipment cost value, excluding depreciation, increased by \$12,734,000 net of disposals of which \$5,689,000 was funded by bond proceeds and \$2,900,000 was funded from developer contributions (excluding tapping fees). The Authority's major capital asset additions during 2009 were as follows: a) \$5,096,000 new mains and existing mains' rehabilitation, b) \$4,651,000 for general plant and equipment including Tainter Gate Rehabilitation and Susquehanna Raw Water Pumping Upgrades jobs closed out, c) \$1,093,000 for service renewals and new additions, d) \$807,000 for distribution and purification structures including Harrison Hill and Oxford Tank Paintings jobs closed out, and e) \$625,000 for residential meter renewals.



**Quality.**

**Service.**

**Value.**

A large, dynamic splash of water in shades of blue and white, set against a white background. The splash is captured in mid-air, with numerous droplets and ripples, creating a sense of movement and freshness. The water is reflected on a surface below, creating a complex pattern of ripples and reflections.

**Chester Water Authority**  
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