2010 Annual Report

Reflecting on a year of employee achievement through quality, service, and value.

Chester Water Authority

Chester Water Authority

Chester Water Authority 2010 Board of Directors

Donald F. Tonge,
Chairman

Willie M. Wells,
Vice Chairman

Norma Jean Holmes,
Treasurer

Mary Smith,
Secretary

(Not pictured)
Francis J. Catania,
Solicitor

Chester Water Authority 2010 Management Staff

(Standing, from left to right)
Robyn S. Bennett, PHR, Manager of the Human Resources Group; **Thomas A. Zetusky**, Director of the Business Office Department; **Russell C. Williams**, P.E. Executive Manager and Chief Engineer; **Sandra L. Hunt**, Executive Administrator; and **Patricia P. Stabler**, P.E., Chief of Treatment and Pumping.

(Sitting, from left to right)
David J. Krupiak, Chief of Distribution; **Brian P. MacEwen**, P.E., Director of Engineering; and **Elgin Nowoswiat**, CPA, Controller.

2010 Report to Bondholders

The Chester Water Authority continued to prosper during 2010. Our average daily pumpage increased from 31.42 MGD (million gallons per day) in 2009 to 32.42 MGD. Total Operating Revenue increased 8.8 percent from $39,839,909 to $43,334,281, while Total Operating Expenses increased by 3.1 percent from $30,435,362 to $31,369,983. Operating expenses over the period 2007-2010 increased at a relatively low annual rate of 3.6 percent. Our aggressive Uncounted-for-Water reduction program has kept the rate low at 14.2 percent, which is below the industry-acknowledged acceptable limit of 15.0 percent.

We understand that we must provide sufficient capital to provide facilities in good working order. Capital expenditures for ongoing projects totaled $11,529,000 in 2010. We are presently implementing and have completed over one-half of the planned refurbishment of our 60-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 represented by the underground mains and services, we also conducted a Water Main Rehabilitation Project in 2010 as we have done almost every year since 1974. This distribution system rehabilitation work, along with our current systematic renewal of problematic water mains and old services and hydrants, assists us in keeping the Uncounted-for-Water rate low. At the present annual rate of rehabilitation we will in essence have a new treatment plant facility in four to five years and a totally rehabilitated distribution system in eight to ten years.

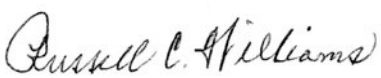
The total average daily usage of our top ten industrial and commercial customers remained about the same amount as 2009 at 11.09 MGD. The table on page 13 (top left) shows the 2010 usage of these ten customers of the Authority. Also shown is the annual average usage over the last five years for each of these customers. This amount has been relatively stable and we see no indications of it significantly changing.

Our customer growth rate stayed low at 0.3 percent as this rate is still adversely affected by the lack of residential housing construction. The Authority's indebtedness decreased from $54,850,000 in 2009 to $50,855,000 as a result of paying off bonds. We adopted a weighted average rate increase of 8.7 percent for all customers effective July 1, 2010. The new rates are still about 70 percent of the average of the rates of neighboring for-profit water companies.

We continued implementing a number of technological advancements to enable us to conduct our customer business communications in a more flexible and efficient manner. In 2010, the major improvement was the implementation of a computerized field service work order module for our meter servicemen, which eliminates paperwork and enables us to now respond to changes in work assignments very quickly. We also purchased and implemented a new telephone system in January 2011 to enable us to communicate much more effectively and monitor call backlogs much more accurately.

Finally, the Board of Directors and management appreciate the dedicated employees of the Authority who show up to work on a consistent and timely basis. Our personnel are our largest investment and the key to our continued success. We have honored them by including their photographs in this Report. In return for their work, the Authority pays fair wages and provides good working conditions. During our most recent customer survey, we received very high remarks for the courtesy and helpfulness of our employees. We think that this is a direct benefit of treating our employees fairly. The accumulation of knowledge resulting from the long-term retention of employees allows for continuity and consistency in responsiveness. This healthy dynamic allows us to successfully uphold 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

Chester Water Authority

Octoraro Treatment Plant

People optimizing the treatment process to meet—or exceed—regulatory standards

Capital Improvement Program Passes Three Milestones

In 2010, the Authority passed three milestones in the 10-year, $48-million capital improvement program for the Octoraro Treatment Plant and Susquehanna Pumping Station. For over 50 years, CWA's capital improvement and proactive maintenance of the Octoraro Treatment Plant have ensured that our finished water consistently meets or exceeds federal and state regulations.

Phase Four Improves Filtration and Process Waste Handling

CWA completed the $7.3-million Phase Four project at the Octoraro Treatment Plant, optimizing filter operations and process waste handling.

The project had two major components:

- Renovation of 12 filters, including replacement of more than 100 hydraulic valves and filter-flow controllers dating from the 1950s, with new electric valves and electronic controls; new filter media; and an automated filter backwashing system.
- Conversion of two sedimentation basins for use as settling basins or as backwash recovery basins, enabling CWA to segregate the process waste and recirculate backwash water to the beginning of the treatment process. The new electronic filter control devices are integrated into our Supervisory Control and Data Acquisition system (SCADA). SCADA enables computerized monitoring and control of the equipment and processes in our water treatment plant and collection and management of data about their operation and performance.

Phase Five Project to Improve Chemical Feed System

In November 2010, CWA began construction of new chemical feed and storage facilities for aluminum sulfate ("alum"), the first project in Phase Five (5a) at the Octoraro Treatment Plant.

Alum is applied to raw water to coagulate and clump fine particles into larger particles that can then be removed by settling or filtering. This project will replace aging indoor tanks, increase overall alum storage capacity 70 percent, replace aging feed equipment, eliminate the need to transfer alum between tanks, eliminate outdoor heated storage tanks, move all alum storage tanks out of the flood plain, and improve spill containment.

The major components of this project are:

- Construction of a new building for indoor heated storage of alum tanks with containment
- Installation of six 10,000-gallon polyethylene storage tanks
- Installation of new feed equipment and piping, converting alum delivery to a pumped-feed system
- Installation of cameras and SCADA controls for remote monitoring and control by plant operators from control room
- Demolition/removal of existing indoor and outdoor bulk storage tanks and containments

This project is scheduled for completion in 2011 at an estimated cost of $1.6 million.

"Plant employees share a work ethic that values conscientiousness, teamwork, coordination, and communication. In 2010, this work ethic, coupled with the collective knowledge, experience, and hands-on capabilities of the plant employees, resulted in the successful balancing of two major challenges. Major construction improvements to filters and backwash system were completed, while the plant's core purpose of providing an adequate quantity of quality water on a 24/7 basis was met."

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

Design Completed for New High-Lift Pumping Station: Largest Capital Project in Recent CWA History

The Authority completed the design for a new high-lift pumping station that will supply the two 42-inch diameter transmission mains that carry treated water to the Oxford Tank Farm. This is the second project in Phase Five (5b) at the Octoraro Treatment Plant and, at a cost of $13 million, will be the largest capital project in CWA history since the source of supply was moved in 1951.

The project will construct a new pumping station that will house four new high-lift pumps, two of which are variable speed, and two new 2 MW diesel generators. It will renovate the motor control center of three high-lift pumps that are being retained and decommission the four oldest high-lift pumps. CWA will gain increased flexibility in matching pumping output to system demand and have back-up power for all seven high-lift pumps.

Bidding Power Generates Estimated Annual Savings of $480,000

Anticipating that an overall 30 percent increase in CWA electric power costs could occur with PECO Energy deregulation slated for January 1, 2011, CWA took action and bid the generation and transmission portion of their 27 largest electric accounts on the open market in September 2010. This action secured for the Authority no overall increase in power cost for the next two years, and a projected annual savings of 3.8 percent (or $86,500) based on 2009 usage.

Working with a local consulting firm specializing in the analysis of rates and tariffs for large energy users, Plant and Distribution personnel evaluated all the Authority electric accounts and their usage patterns. The 27 largest accounts were packaged into four groups to gain the most competitive rates. The Octoraro Treatment Plant was one group and the Susquehanna Pumping Station another group, due to their size and unique usage characteristics. The four booster and pumping stations served by high voltage comprised a third group. The fourth group included 17 booster pumping stations and four administrative facilities.

An advertised, online reverse auction was then conducted for each of the groups by a power auctioneer for the Authority. A total of eight large power generators participated in the online auction which was conducted on September 14, 2010. Bids for both one- and two-year periods were obtained for each group. Bidding was active and competitive and finished below consultant estimates.

Generation and transmission power rates obtained through this bidding were higher than those same charges in 2009 power bills. However, the rise in generation and transmission power charges was offset by a comparable decrease in the charges of the regulated utilities distributing the power for 2011 and 2012. The net effect was an overall annual savings for the Authority based on 2009 usage. Having been faced with the potential of spending $600,000 to $700,000 more a year on power, the overall result—power costs at slightly less than current rates—was indeed an excellent outcome.

Tainter Gate Update: Storage Solution for Floating Bulkheads Saves $130,000

In 2009, the Authority completed a five-year, $1.9-million project to refurbish the Tainter gates on the Pine Grove Dam. With the final punch-list closed out, one large task remained: where to store the large floating bulkheads used in the project?

In 2010, management and staff of the Engineering Department and Octoraro Treatment Plant came up with a cost-effective storage solution. Rather than construct a closed storage facility at an estimated cost of $150,000, CWA built a secure outdoor storage area at our fishing headquarters on the Octoraro Reservoir at a cost of $20,000.

Chester Water Authority

Engineering Department

People designing and managing construction for lasting performance

Water Main Rehabilitation Project Serves City of Chester

The Authority completed the 2010 Water Main Rehabilitation Project in the City of Chester. At a final cost of $3.0 million, this large project rehabilitated one of the oldest sections of our water distribution infrastructure to provide reliable service to our customers well into the future.

The project made the following improvements after 385 customers were placed on bypass lines providing temporary water service:

- Approximately 10,400 feet of 4-, 6-, and 8-inch-diameter cast-iron water main was rehabilitated using a cleaning and cement-lining process.
- Approximately 100 feet of 6-inch-diameter cast-iron water main was replaced with ductile-iron cement-lined water main.

The project included renewal of associated valves, water services, water meters, and fire hydrants.

Since 1974, CWA has invested $28.8 million in the rehabilitation of approximately 49.5 miles of water main as well as renewing the associated valves, service lines, meters, and fire hydrants. As a result, residual water pressures and hydrant flows increase, pipe leakage decreases, and water quality is improved.

Repainting Preserves Water and Surge Tanks

The Engineering Department completed a project to clean and repaint the exterior of steel tank #5 at our Village Green Tank Farm in Aston Township, Delaware County. The project was completed at a final cost of $570,000.

Another proactive maintenance project was completed in summer 2010: repainting the interiors and exteriors of the two 35,000-gallon surge tanks that protect the 42-inch transmission main running from the Susquehanna Pumping Station to the Octoraro Treatment Plant. Located at key high points along the transmission main, the surge tanks prevent costly damage to the transmission main in the event of a power outage by relieving the vacuum conditions that can occur. The project was completed at a final cost of $145,000.

Naaman's Creek Road Main Renewal Upgrades

In 2010, the Engineering Department began construction of a project to renew approximately 4,700 feet of 6-inch-diameter transite water main along Naaman's Creek Road from Larkin Road to the Pennsylvania-Delaware state line. The project will replace the old water main with new 8-inch-diameter ductile-iron water main, which meets CWA's current minimum standard for delivering fire flows.

The project was undertaken in cooperation with the Pennsylvania Department of Transportation (PennDOT), which is reconstructing this section of roadway. Through an agreement with PennDOT, the Authority will be reimbursed for 50 percent of the cost of the project, which is estimated at $1,000,000.

"Every member of the Engineering Department contributes unique capabilities, knowledge, and experience to the success of every project. Our engineers, computer-aided drafting operators, and administrative assistants work together to prepare detailed contract documents for the projects necessary to improve and maintain CWA's water infrastructure.

Our project inspectors are on the front lines inspecting CWA's water main projects to ensure that contractors construct these facilities according to our designs, and our field information coordinator tracks information about the paving repairs necessitated by CWA projects. During the construction phases, CWA works closely with local municipalities and regulatory agencies to minimize any inconveniences to the public. As individuals and as a team, our staff makes a significant contribution to our ability to fulfill the CWA mission."

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

New Garden Reinforcement Provides Two-Way Reliability

In 2010, the Engineering Department completed the design of a water main reinforcement for our distribution system in New Garden Township, Chester County, which has one pump station and one storage tank near the New Garden Airport. A new 4,500-foot long, 12-inch-diameter water main extension will connect the Mendenhall-Norway distribution system in Kennett Township with the New Garden Township distribution system, providing redundancy to the distribution systems in each township. Installation of the water main extension began in 2010 and will be completed in 2011 at a cost of approximately $550,000.

Paper Drawings Go Digital

Today, management best practices include scanning important paper documents to create digital images in an electronic information system. In 2010, the Engineering Department purchased a 42-inch document scanner to facilitate this process for the thousands of engineering drawings of CWA's treatment plant, booster stations, tanks, and other components of the water treatment and distribution system. By year's end, CWA interns had scanned 85 percent of the drawings and stored them as Adobe PDFs.

Now management and staff, including field staff, can use their desktop computers or laptops and the Authority's secure intranet to quickly access these digital images rather than handling the original drawings.

Water Quality Modeling Predicts Water Age

Building on the Authority's hydraulic model in 2010, CWA's modeling consultants created a water quality model that enables the Engineering Department to run simulations and forecast potential water quality issues in our system.

For example, CWA engineers can run a simulation of usage in a section of our distribution system to estimate the age of the water in tanks and mains. Water age (defined as the time it takes from our Treatment Plant to your faucet) affects the chlorine residual, which must be maintained at a specific level to meet regulatory requirements. As a result, the Distribution Department can take proactive steps to flush the area to ensure that the water meets regulatory standards.

The Authority depends on the computerized hydraulic model of our distribution system, which is displayed in our Geographic Information System (GIS), to make effective management decisions about extensions and renewals of the water distribution system.

Chester Water Authority

Distribution Department

People operating, maintaining, and upgrading our distribution system for reliable performance

Automated Meter Reading (AMR) Program Accelerated

In May 2010, the Authority's Business Office analyzed the progress of the AMR program and compared the costs to complete replacement of the remaining 7,200 non-AMR meters using CWA staff versus outsourcing. Their report concluded that completing the work in-house was the more cost-effective solution, and also gave CWA better control over amending the data in our Customer Information System (CIS).

CWA's Meter Services and Meter Installation Groups worked extra hours from July through December 2010, completing replacement of approximately 2,900 of the remaining 7,200 non-AMR meters still in service.

The program is scheduled for completion—and the remaining 4,300 non-AMR meters to be replaced—by the end of 2011 at an estimated total cost of $1,000,000.

CWA "COSTARS" in Purchasing Power

In 2010, CWA purchased seven new pick-up trucks, one backhoe, one 20-ton trailer, and two portable air compressors for the Distribution Department's use through the Department of General Services general procurement contract and also COSTARS, the Commonwealth of Pennsylvania's cooperative purchasing program. With discounts from list prices, the new vehicles and equipment were purchased for a total net cost of $350,000 after trade-ins.

Administered by the Department of General Services, COSTARS uses the combined purchasing power of public entities to gain more competitive pricing and choice than individual purchasers might be able to obtain on their own. Through COSTARS, the Authority also saved administrative costs that would have been incurred if the Engineering Department were to prepare a separate contract for each type of vehicle to be purchased.

Distribution Joins AWWA's Partnership for Safe Water

In 2010, the Authority's Board of Directors approved the Distribution Department's participation in a new program of the American Water Works Association (AWWA)—the Partnership for Safe Water Distribution System Optimization Program (DSOP). We are the second water utility in Pennsylvania to join this program.

The voluntary program focuses on three key components of distribution system integrity: water quality, hydraulic, and physical.

Structured like the Partnership's Water Treatment Program, the DSOP comprises several phases, including baseline and annual data collection on performance indicators; a self-assessment and report of system operation; and system optimization.

CWA joined the Partnership's program for treatment plants in 1996. In 2004, we earned the Partnership's Phase III Director's Award and, in 2009, the Partnership's Five-Year Director's Award. We plan to follow the same pattern of achievement for the DSOP.

"The members of the Distribution team view ourselves as stewards of an infrastructure that is vital to the lives and health of our community. Our vision is to preserve and improve this system so that we can one day leave it in the hands of our successors in even better condition than when we inherited it. The dependable, capable people on our team work long hours, often under harsh conditions, to realize that vision."

—David J. Krupiak, Chief of Distribution

Training Targets Safety, Effectiveness

Next time you drive past a CWA construction or service project, give 'em a "brake"... and a thumbs up.

- **In 2010, six Distribution Department employees completed training and earned Pennsylvania certification for traffic control. The state's program focuses on safely and efficiently directing motorists around job sites.**
- **A consultant provided Distribution Department employees with a day-long classroom and field training program on backhoe maintenance and operation, including safety.**

Chester Water Authority

Information Systems

People combining business knowledge with technology to build a strong management information system

"In 2010, the Business Office purchased a mobile wireless work-order module to improve the efficiency of dispatching and responding to customer service calls. The initial phase of the mobile implementation project was a big success due to the teamwork and collaboration among the Business Office, the Engineering Department, and the Meter Services Group. As a result, our customers will see improvements in the quality of service when scheduling and completing a service call."

—Thomas A. Zetusky, Sr., Director of the Business Office Department

New Exchange Server Handles Increasing E-mail Volume

Increasingly, customers and vendors request that the Authority communicate by e-mail rather than printed letters. Within CWA, effective communication also relies heavily on electronic transmission of messages and attached documents. To meet the communication needs of our customers, vendors, and colleagues, CWA replaced our existing server with a new server that has significantly increased memory.

Along with an upgrade of our Internet service connection to fiber-optic cable, the new server improves the reliability of the delivery and receipt of e-mail to and from our customers, vendors, and colleagues.

Completed in 2010, the implementation of the new server was a team effort with our colleagues in the Business Office. After regular business hours, staff transferred all e-mail accounts to the new system and tested it to ensure that it was properly sending and receiving e-mail.

Customer Service Orders Go Mobile

Using the mobile system on their laptop computers, meter service technicians receive, update, and close service orders in the field. In turn, the Customer Service Representatives (CSRs) can see the results of the visit as soon as the technician closes out the service order.

Here's how it works. CSRs enter scheduled service calls into the Customer Information System (CIS). The Meter Services Group supervisor sorts the orders by geographic area, distributes them to technicians, and checks the status after completion. If a meter service technician is diverted from scheduled service calls by an urgent service issue, the supervisor can efficiently redistribute service orders.

The system provides the CSRs with more timely information on the status of a service call if a customer calls with a question soon after a job is completed. In addition, the mobile system is a "greener" process, saving money on printer cartridges.

The mobile service order system uses additional capabilities of the CIS, which was upgraded in 2009. The vendor incorporated enhancements requested by CWA. The system went live in November 2010 for residential service, and it will be phased in for commercial and industrial accounts in 2011.

Accounting and Finance

People managing CWA's financial resources to increase value to stakeholders

"The Accounting and Finance staff and I analyzed the increasing costs associated with our existing Financial Information System and our HR/ Payroll system, comparing these with the costs and benefits of several fully integrated solutions. We worked with our colleagues in Human Resources, the Business Office, Information Systems, and the Engineering Department in a real team effort to evaluate different software providers.

At the end of the day, the team selected an integrated solution which will better meet the Authority's current and foreseeable needs and save CWA over $136,000 in the next five years."

— Elgin Nowoswiat, CPA, Controller

Integrated Financial, Payroll/HR System is a Cost-Effective Solution

The Authority has purchased an integrated Financial Information System (FIS) with Payroll/Human Resources components, replacing two separate systems that were outdated and costly to support.

The integrated FIS is designed by our vendor to meet the financial management and reporting needs of government organizations of CWA's size and scope. Unlike the existing system, the new system is built on the "Microsoft.NET" framework, which is designed for use by most new applications created for the Windows platform. Moreover, the new system will save CWA over $136,000 in annual support fees in the next five years.

In 2010, CWA purchased the new FIS, which includes new servers. The FIS is scheduled to go live in July 2011, with the HR/Payroll component scheduled to go live in January 2012. The electronic time-clock component of the existing Payroll/HR system will be retained in the foreseeable future for management reporting purposes.

Chester Water Authority

Business Office

People working with our customers to answer questions and enhance efficiences

"The vision of the Business Office Department is to use technology to enhance customer service and to improve overall work efficiencies. This vision cannot be attained without the teamwork and dedication of the entire Business Office Department."

—Thomas A. Zetusky, Sr., Director of the Business Office Department

CWA Board Approves Rate Increase in 2010; Customers Benefit from Authority's Public, Not-For-Profit Structure

Periodic rate increases contribute to the funding for the necessary investments in our community's water treatment and distribution infrastructure. In 2010, the Board of Directors approved an average rate increase of 8.7 percent, which took effect on July 1, 2010.

CWA's customers continue to benefit from the Authority's structure as a public, not-for-profit corporation and operational efficiencies. These enable CWA to provide quality water and reliable service at rates that are approximately 32 percent lower than the rates of neighboring for-profit water companies.

Customer Service Adds Live Support for Our Web-Based Scheduling System

The Business Office is continually looking for ways to improve our overall operations and to enhance the service we provide to our customers. Over the past three years, the Business Office has installed a Web scheduler for scheduling service calls, installed an online bill payment option, and installed a wireless mobile work order system.

In 2010, the Business Office created the position of Customer Service Overflow Receptionist. This position is designed to support our Customer Service Representatives in handling incoming customer calls and the scheduling of appointments from our Web scheduler.

Human Resources

"Our employees set CWA apart by providing unparalleled service, setting the standard of excellence to which other utilities are compared." —Robyn S. Bennett, PHR, Manager of the Human Resources Group

People supporting CWA's most important resources—our employees

CWA Employees Make a Difference in the Community

Chester Water Authority's employees make a difference in our community. As in previous years, they gave generously to United Way of Southeastern Pennsylvania, donating over $30,000 to CWA's workplace campaign in 2010. CWA employees also gave their financial support to the Boys and Girls Club of Chester, which has provided mentoring, educational support, recreation, and leadership opportunities to youth in the City of Chester for over a half-century. In May 2010, the club opened the doors to its new facility: the *George C. Carter Recreation Center.* The Authority's staff has a history of personal service to the Boys and Girls Club of Chester, including sharing its professional expertise with the club through service on the Board of Directors.

Investing in Workplace Safety Yields Returns

CWA employees also make a difference in the safety of our working environment through their participation on our Workplace Safety Committee and their attention to safety on the job. Comprised of managers and staff from all departments and levels of the organization, the committee meets monthly to discuss safety issues and opportunities for improvement. In 2010, CWA held our first annual Workplace Safety Week, featuring presentations on safety risks and injury prevention. From 2009 to 2010, CWA's employee injury rate decreased by half, and no injuries necessitated more than five days lost from work. In addition, routine drug testing following every injury showed no evidence of drug or alcohol use as a contributing factor in the incident.

Beyond the immeasurable human benefits of reducing the number and severity of employee injuries, CWA realized direct financial benefits—in particular, a five percent discount on our Worker's Compensation insurance.

Health and Wellness Are Key to CWA's Mission

CWA's contribution to employee health and wellness through our competitive employee benefits package is another investment in our mission.

The Authority is proactive in informing employees about the wellness benefits associated with their healthcare plan, including partial reimbursement for regular participation at a fitness facility. Our annual health fair featured health and wellness information and health screenings, including screenings for blood glucose and cholesterol levels and skin cancer. In 2010, CWA also hosted a seminar presented by physicians from the Crozer Sleep Center focusing on common sleep disorders and their potential impact on health, employee absenteeism, and workplace safety.

Chester Water Authority

Executive Office

Leading CWA's people in fulfilling our mission of Quality, Service, and Value

"At Chester Water Authority, we fulfill our mission by selecting the right people, placing them in positions where they can be most successful, and giving them the tools and training they need to excel. Through their talent, dedication, and hard work, our employees achieve our high expectations for Quality, Service, and Value—increasing CWA's overall value to our stakeholders."
—Russell C. Williams, P.E., Executive Manager and Chief Engineer

An Investment in Our Mission

The Chester Water Authority has historically invested significant amounts of money to preserve, improve, and extend our infrastructure, maintain compliance with changing regulations, and improve our operational efficiency. Among our significant accomplishments in 2010, we completed a $7.3-million project to improve filter operations and process treatment sludge handling at the Octoraro Treatment Plant. We also began construction on new chemical feed and storage facilities for aluminum sulfate. Our Engineering consultant also completed design for a new high-lift pumping station to supply the two 42-inch diameter transmission mains that carry treated water to the Oxford Tank Farm. At a total contract cost of $13 million dollars, it will be our largest capital project since the source of supply was moved to the Octoraro Creek in 1951.

While the Authority's physical plant is vital to fulfilling our mission for our stakeholders, our employees make a significant contribution, applying their talent and dedication to achieve our high expectations to meet our motto of Quality, Service, and Value.

The Executive Office and management have focused on selecting the right people and placing them in positions where they can be most successful. We prefer to cultivate talent and promote from within CWA. We see the value in giving our employees the tools they need to excel at their work, including professional training and tuition reimbursement for continuing education. We also recognize the long-term value of competitive compensation and benefits for a job well done. We believe that this approach has contributed to our overall low turnover rate and long tenure of many of our employees. In turn, they contribute to increasing the Authority's value to our stakeholders.

A History of Going for "Green"

Water utilities must use significant electric power to run treatment and pumping facilities. Chester Water Authority has a history of seeking effective solutions to manage electric consumption and associated costs.

In 1985, during the tenure of Executive Manager and Chief Engineer Peter K. Mac Ewen, P.E., the Authority constructed a 520 MW hydroelectric facility at the Octoraro Treatment Plant to generate a portion of the electricity required to operate the Plant. An idea that was ahead of its time, the facility has generated modest savings on electricity costs over the past 25 years. Now that the electric utility market no longer offers step rates—lower rates per kilowatt hour above certain usage levels—the power generated by the facility has become much more valuable.

Over the years, the Authority has continued to seek efficiencies in all areas of our operations. The installation of a small pump in the Susquehanna Pumping Station in 2008 increased our operational efficiency by supplying a means to provide only relatively small pumpage rates when needed. In 2010, we awarded a contract to replace twenty-year-old air conditioning equipment in the 1990 Main Office building addition with much more energy efficient equipment. The hi-lift pumping design includes energy efficient pumps and motors.

Anticipating a rate increase of as much as 30 percent after January 1, 2011, when PECO Energy's power generation and transmission rate became deregulated, CWA bid our largest electric utility accounts on the open market in September 2010. As a result, the Authority will save a projected total of $480,000 annually—including $350,000 on the Octoraro Treatment Plant alone—on a two-year contract with Exelon Energy. (Please see page 3 for details.)

In 2011, the Authority also plans to replace existing single-pane windows at the Octoraro Treatment Plant with insulated, double-pane windows to reduce heating and cooling costs. CWA is also assessing energy-efficient lighting alternatives to incandescent and fluorescent fixtures and lamps in our Main Office and Distribution facilities. CWA will continue to examine all opportunities to save energy in an effort to maintain our water rates at an affordable level.

A LOOK AT CHESTER WATER AUTHORITY IN 2010

AVERAGE DAILY CONSUMPTION (Millions of Gallons)

TOP TEN COMMERCIAL & INDUSTRIAL CUSTOMERS	2010	2005-2009
Conoco Phillips	4.00	3.87
Sunoco	2.30	2.76
American Ref-Fuel	1.68	1.62
PQ Corp.	1.10	1.13
Kimberly Clark	0.75	0.86
Epsilon Products	0.35	0.42
Concord Beverage Co.	0.29	0.28
PA Dept. of Corrections	0.21	0.19
Crozer-Chester Medical Center	0.21	0.24
George W. Hill Correctional Institution	0.20	0.21
TOTALS	**11.09**	**11.58**

Automated Meter Reading (AMR) Program

2,900 AMR devices installed (2010)

37,870 AMR devices installed (total through 2010)

4,300 remaining non-AMR meters scheduled for replacement and completion of program (2011)

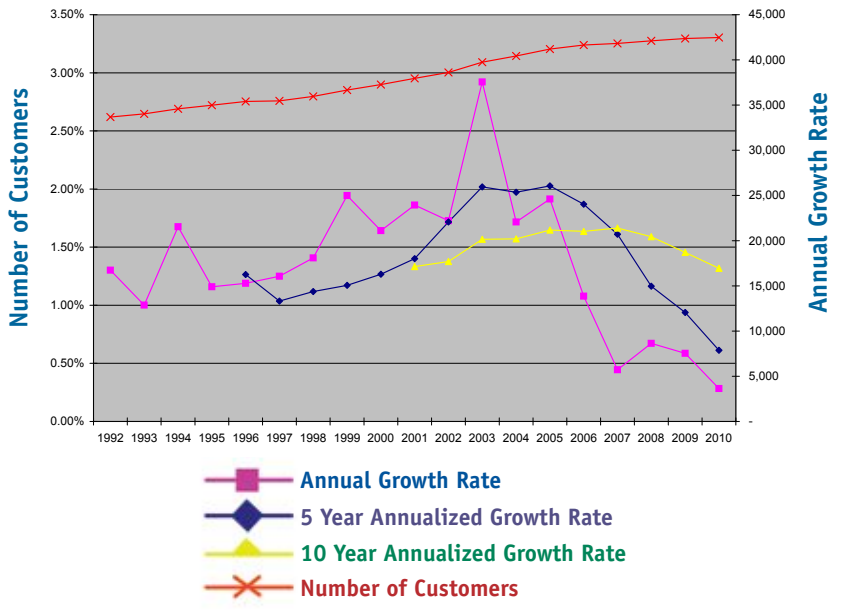
2010 Milestones

- CWA marked 143 years of service.
- The Authority supplied water to 42,478 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 32.42 million gallons per day (MGD).
- The Authority passed several major milestones in our 10-year, $48-million capital improvement program for the Octoraro Treatment Plant and Susquehanna Pumping Station, including completing design for a new high-lift pumping station to supply the two 42-inch transmission mains that carry treated water to the Oxford Tank Farm. At a cost of $13 million, it will be the largest capital project in recent CWA history.

2010

Average Daily Pumpage: (in gallons)	32,410,000
Total Customers:	42,478
Distribution Main (in miles):	654.00
Total Operating Revenue:	$ 43,334,281
Average Annual Residential Bill:	$ 416.00
Total Operating Expenses:	$ 31,369,983
Bonds Payable Long Term:	$ 50,855,000
Total Net Assets:	$190,657,013

CUSTOMER GROWTH RATE (as of 12-31-2010)



MANAGEMENT'S DISCUSSION AND ANALYSIS FOR 2010

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

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 2010:

- The Authority adopted an overall rate increase of eight percent for East and 10 percent for West customers. The rate increase was effective July 1, 2010, to support an active Capital Construction Program and continue with the traditional on-going proactive maintenance program.
- At December 31, 2010 and 2009, total assets were $245,224,000 and $237,813,473, respectively; total liabilities were $54,566,987 and $58,824,153, respectively; and net assets were $190,657,013 and $178,989,320, respectively.
- For the year 2010, the Authority sold 9.830 billion gallons of water, compared to 9.720 billion gallons of water in 2009. The year 2010 provided 44.64 inches of rain compared to 55.98 inches in 2009.
- Operating income for the year was $11,964,298 representing a $2,559,751 increase over 2009. Change in net assets was $11,667,693 for the year ended December 31, 2010, which includes $1,108,874 of developer contributions.
- The operating ratio (operating revenues divided by operating expenses less depreciation) was 1.74 in 2010 versus 1.64 in 2009.

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. 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 accrual basis accounting methods, except as noted in Note 2 to the financial statements, which is similar to accounting used by private sector businesses. 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 an accrual 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, 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.

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, and 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 33 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 developers, and customer revenues.

Source of Supply/Water Treatment Facilities

The Authority provides reliable high quality supplies of potable water used for drinking, irrigation, fire protection, and other purposes. The Authority has an adequate source

of water supply, pursuant to an agreement and permits, which authorize it to withdraw a total of 30 million gallons per day ("MGD") from the Susquehanna River at a point approximately 50 miles west of the City of Chester. This source of supply, together with the 30 MGD that the Authority may withdraw from its raw water reservoir on Octoraro Creek, which is the boundary between Lancaster and Chester Counties, Pennsylvania, will provide the Authority with an adequate quantity of water. The Water System of the Authority includes a Treatment Plant located near the Octoraro Reservoir. The Octoraro surface water plant is the sole treatment facility, using the 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 a chemical storage building having a capacity for a 10-14 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.

Transmission Facilities

The capacity of treated-water pumps at the Treatment Plant is 54 MGD (not including 35 MGD in standby facilities). The treated water is pumped from the Treatment Plant to the three Oxford Summit storage tanks five miles from the Treatment Plant. From the storage tanks, water flows by gravity 34 miles to the demand center in Delaware County, Pennsylvania. This gravity transmission main originally had a capacity of 37 MGD. In order to increase the capacity, the Authority constructed two pumping stations (Rosedale and Kelton-Pennock Pumping Stations), which increased the capacity of transmission main to approximately 44 MGD to 54 MGD.

The table at the top of page 16 illustrates the stable trends of average daily pumpage for the Water System over the past ten years:

(continued on page 16)

FINANCIAL ANALYSIS

Condensed Statements of Net Assets

	December 31, 2010	December 31, 2009
Current assets	$ 15,235,544	$ 20,974,601
Restricted cash and investments, and deferred expenses	29,238,478	22,017,479
Capital assets – net of accumulated depreciation	200,749,978	194,821,393
Total assets	245,224,000	237,813,473
Current liabilities	6,118,767	6,574,418
Noncurrent liabilities	48,448,220	52,249,735
Total liabilities	54,566,987	58,824,153
Net assets:		
Invested in capital assets – net of related debt	149,894,978	139,971,393
Restricted	28,139,533	20,843,946
Unrestricted	12,622,502	18,173,981
Total net assets	$ 190,657,013	$ 178,989,320

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

	Year Ended December 31, 2010	Year Ended December 31, 2009
Operating revenues	$ 43,334,281	$ 39,839,909
Operating expenses	31,369,983	30,435,362
Operating income	11,964,298	9,404,547
Non-operating income:		
Interest income	248,713	558,669
Other	331,397	247,090
Total non-operating income	580,110	805,759
Total non-operating expenses	1,985,589	2,598,206
Income before contributions	10,558,819	7,612,100
Capital contributions	1,108,874	2,899,792
Increase in net assets	$ 11,667,693	$ 10,511,892

Selected Statistical Information

	2010	2009	CHANGE Amount	CHANGE %
Full-time positions at year-end	146	144	2	1.4
Average full-time employees	145	143.5	1.5	1.0
Water customers at year-end:				
Residential	39,676	39,603	73	0.18
Commercial	2,231	2,208	23	1.04
Industrial	55	57	(2)	(3.51)
Fire protection	506	482	24	4.98
Other water utilities	10	10	0	0.0
Total	42,478	42,360	118	0.28
Average residential bill	$ 416.00	$ 383.04	$ 32.96	8.6
Water consumption (millions of gallons):				
Residential and commercial	3,844.0	3,714.8	129.20	3.5
Industrial	3,950.6	3,944.9	5.70	0.1
Other water utilities	2,026.5	2,047.5	(21.00)	(1.0)
Fire protection	9.1	12.0	(2.90)	(24.2)
Total	9,830.2	9,719.2	111	1.1
Operating Revenue per 1,000 gallons consumed	$ 4.41	$ 4.10	$ 0.31	7.5
Operating Expenses per 1,000 gallons consumed	$ 3.19	$ 3.13	$ 0.06	1.9

MANAGEMENT'S DISCUSSION AND ANALYSIS FOR 2010

(continued from page 15)

Years*	Average Daily Pumpage for the Year MGD
2001	35.64
2002	33.98
2003	33.71
2004	33.71
2005	34.20
2006	34.21
2007	33.99
2008	32.93
2009	31.43
2010	32.42

**As of December 31st*

Storage Facilities and Distribution System

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 653 miles of pipelines varying in diameter from 48-inch down to ¾-inch. The following table presents the Authority's storage facilities:

Storage Facilities	Million Gallons
Village Green Tanks	87.70
Oxford Summit Tanks	9.00
Harrison Hill Tank	4.00
Brinton Lake Tank	2.50
Norway Tank	1.00
Jennersville Tank	0.45
Newark Road Tank	0.25
Broadmeadows Tank	0.30
Bethel Tank	0.30
TOTAL	105.50

The Service Area

The Authority delivers public water supply in the City of Chester, Western Delaware County, and Southern Chester County. The population served directly or indirectly is estimated to be 200,000.

In addition to the above population, the Authority supplies water service to the following seven water utilities and municipalities on a wholesale contract basis: Borough of Oxford; Borough of Kennett Square; London Grove Township Municipal Authority; United Water Company-Bethel; Aqua PA; Artesian Water Company; and United Water Company, Delaware.

Employees

The Authority now has 146 full time employees, 70 of which belong to the Service Employees International Union Local 32 BJ, Mid-Atlantic District. The current union contract expires December 31, 2011.

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 2010.

Financial Analysis

The comparative condensed financial statements and other selected information (see tables on page 15) serve as the key financial data and indicators management uses in 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 has been estimated by US Census Bureau from April 1, 2000, to July 1, 2010, at approximately 1.62 percent and 15.75 percent, respectively. (Source: US Census Bureau-Population Division)

The Authority's total customer accounts increased 0.28 percent from 2009 to a total of 42,478 in 2010.

Weather temperatures during 2010 remained consistent with historical averages. The average rainfall for the water treatment plant area is 44.87 inches per year. Rainfall recorded at the water treatment plant for 2010 was 44.64 inches.

The volume of water sold in the year 2010 was approximately 9.830 billion gallons, an increase of 1.1 percent from the year 2009. Retail water customers (Residential/Commercial) accounted for 39.1 percent in 2010 as compared to 38.2 percent in 2009 of the volume sold, and 53.0 percent in 2010 as compared to 52.6 percent in 2009 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 $7,410,527 from 2009 or 3.11 percent. This balance sheet increase was primarily related to a) additions to property, plant and equipment, net of accumulated depreciation of $5,928,585, and b) increase in unbilled revenue and accounts receivable of $1,391,883 partly due to an overall rate increase of eight percent for East customers and 10 percent 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.

At December 31, 2010, the Village Green East Service Area served 29,016 customers or 68 percent of total customer base, and the Village Green West Service Area served 13,462 customers or 32 percent of total customer base, respectively.

Operating Revenue from Water Services and Other Fees:

	2010	2009	Change	%
Residential	$ 16,505,313	$ 15,169,409	$ 1,335,904	8.8
Commercial	6,443,829	5,789,495	654,334	11.3
Industrial	9,329,564	8,834,624	494,940	5.6
Fire Protection	3,326,281	2,890,971	435,310	15.1
Other Water Utilities	6,565,069	5,902,086	662,983	11.2
Capacity, Flat Fees, and Late Fees	1,164,225	1,253,324	(89,099)	(7.1)
Total	$ 43,334,281	$ 39,839,909	$ 3,494,372	8.8

The 2010 overall rate increase of eight percent for East customers and 10 percent for West customers resulted in 8.8 percent operating revenue increase compared to 2009 results.

Capacity, flat, and late fees are decreased by $89,099 or 7.1 percent mainly due to capacity charges decreasing from $266,780 in 2009 to $229,649 in 2010 as a result of decrease in new real estate developments and new housing down turn in our service area footprints due to economy.

Top Ten Customers: The top ten largest and industrial customers (excludes other water utilities) account for approximately 21.57 percent of total operating revenues, of which the largest user represents 7.55 percent of 2010 total operating revenues.

Total annual billing to top ten largest customers as of December 31, 2010, 2009, and 2008 were $9,347,320, $8,454,526, and $8,338,026, respectively.

Annual Budget: The Authority prepares an annual budget which is presented to the Authority Board. The budgeted revenues and expenses and changes in net assets for 2010 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 related to 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 2010, developers contributed $1,108,874 in system extensions, of which $269,302 was received in cash to reimburse the Authority for its capital outlays. Developer-contributed system extensions were $2,899,792 in 2009; $3,614,179 in 2008; $6,704,948 in 2007; and $3,736,565 in 2006. 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 $934,621 and 3.07% in 2010 compared to 2009. The increases were mainly due to the following: a) regular, overtime, and fringe wages increased by $137,668 as a result of a three percent union and non-union wage increase; b) Susquehanna River Basin Commission's water withdrawal fee from Susquehanna River increased by $123,229; c) the Authority's pension contribution according to Act 205 was increased by $696,608 and the Authority's Trust for its retiree health care benefits contribution was increased by $26,211; d) employee health care costs were increased by $280,180; e) the Authority provided $100,000 grant to the City of Chester to support City Government's Public Safety efforts; and f) depreciation expense was increased by $315,794. Some of the major savings of our operating expenses which offset some of the increases mentioned above were as follows: a) purification chemical expenses were decreased due to less usage and better pricing obtained from vendors, for example: Carbon decreased by $200,315, Chlorine decreased by $86,164, and Polyaluminum Chloride decreased by $88,421; and b) paving expense decreased by $179,311 and construction equipment rental expense decreased by $51,486, due to decrease in total number of main breaks and better pricing obtained from vendors. The Authority had a total of 77 breaks in 2010 compared to 86 breaks in 2009. In 2010, more than 87 percent of the main breaks were on pipes of six 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.

	2010		2009	
Total operating revenues	$43,334,281	100.0%	$39,839,909	100.0%
Net cash provided by operations	$16,504,351	38.1%	$13,888,811	34.9%
Operating cash used for acquisition of property, plant and equipment(*)	(7,720,827)	(17.8%)	(4,145,653)	(10.4%)
Net operating cash available for other purposes(*)	$ 8,783,524	20.3%	$ 9,743,158	24.5%

(*): A non-GAAP measure.

Changes in Property, Plant, and Equipment Cost Value

Property, plant, and equipment cost value, excluding depreciation, increased by $12,007,000 net of disposals, of which $3,176,000 was funded by bond proceeds and $1,109,000 was fixed assets received from developer contribution (excluding capacity charges and tapping fees). The Authority's major capital asset additions during 2010 were as follows: a) $6,875,000 for new mains and existing mains' rehabilitation; b) $1,248,000 for new installations and renewals of residential meters; c) $937,000 for service renewals and new additions; d) $412,000 for permanent fixture replacements at the main office, distribution, and purification facilities; and e) $331,000 for plant and distribution equipment and vehicle purchases.

Chester Water Authority

Chester Water Authority
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Quality.

Service.

Value.