

2003 Annual Report



**People
Planning
Productivity**



PO Box 467
Chester, PA 19016-0467

Quality • Service • Value

Planning and Preparedness: The First Order of Business

Anticipating our customers' needs is the first order of business.

Most of the time, we know what's around the bend – such as a new residential development coming on line – and we **plan** for it. Sometimes we don't know what to expect – Hurricane Isabel, for example – yet we **prepare** for it.

Chester Water Authority has the right people, procedures, facilities, and back-up systems in place to ensure that we deliver **quality, service, and value** to our customers and meet our obligations to bondholders – no matter what man or Mother Nature has in mind.

Board of Directors



Donald F. Tonge
Chairman



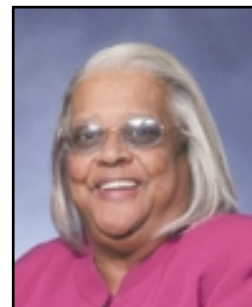
Linda A. Cartisano, Esq.
Vice Chairman



Norma Jean Holmes
Treasurer



Mary Smith
Secretary



Earline R. Mann
*Assistant Secretary/
Assistant Treasurer*



Arthur Levy, Esq.
Solicitor

2003 Report to Bondholders

In 2003, Chester Water Authority completed its 64th year of service as a municipal authority and its 136th year of service as a water provider. The Authority continued to grow, with a stable financial base that allowed for one of the highest levels of capital investment in recent history – over \$12 million was invested in new development and the expansion, rehabilitation, and reinforcement of our infrastructure. These projects provided opportunities for the Authority to welcome new customers, while continuing to deliver high levels of quality, service, and value to all customers.

One especially significant project completed this year was the acquisition of the Shangri-La Water Company in New Garden Township, Chester County, which brought us 431 new customers.

It was another year of extreme weather: not only was 2003 one of the wettest years recorded in our database, it was also preceded by the drought of record for Southeastern Pennsylvania. The Authority's operating departments successfully met the challenges posed by two consecutive years of very difficult weather conditions, delivering high levels of service while maintaining required levels of revenue.

The Authority continued to emphasize training to raise the technical competency of our employees in an increasingly technological environment.

The Authority also continued to review and enhance security procedures and capabilities with the completion of a Vulnerability Analysis and an updated Emergency Response Plan for critical areas of operation.

A 10 percent rate increase that went into effect on January 1, 2003, increased our 2003 operating revenues to \$27,062,423. Nevertheless, Chester Water Authority's rates remain approximately 53 percent of those of large neighboring private, for-profit companies.

The CWA Financial Statement for 2003 is presented in a condensed form later in this report. Complete financial statements, in conformance with Governmental Accounting Standards Board (GASB) Statements 33 and 34, are available on request.

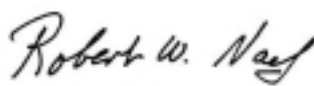
The Authority's many achievements over the years are a credit to a work force wholeheartedly dedicated to our mission of providing quality, service, and value to our customers every day. The management and Board of Directors recognize the contributions of our employees and retirees in ensuring that we accomplish this mission.

Milestones in the continued growth of Chester Water Authority:

- 136 years of service
- \$12 million invested in growth and infrastructure
- Shangri-La Water Company acquisition
- 10 percent rate increase
- Weather-related challenges met



Donald F. Tonge,
Chairman of the Board



Robert W. Naef,
Executive Manager & Chief Engineer



This new surge facility and flume at our Octoraro Treatment Plant, scheduled for completion in May 2004, will protect transmission mains from hydraulic pressure surges.

SEAMLESS GROWTH: Acquisition of Shangri-La Water Company

Purchase of Shangri-La a “Win-Win”

On July 23, 2003, Chester Water Authority finalized the \$1,108,750 purchase of Shangri-La Water Company, a well system that served 431 customers in Somerset Lakes, a residential development in New Garden Township, Southern Chester County.

Just 24 hours after settlement, we permanently switched our new customers from their former well service to our distribution system. The Authority had laid the groundwork for a seamless transition several months before settlement, installing and testing a temporary connection and valve between the two distribution systems. In the interim, the Authority used the connection to supply water to the development during power outages experienced by the Shangri-La Water Company.

The purchase is a classic “win-win” scenario. Chester Water Authority’s new customers enjoy a competitive rate, with greatly increased reliability and quality assurance. The purchase resulted in substantial expansion of our customer base, and it fits well into our plan for serving Southern Chester County.

SECURITY: A Top Priority

Updated Emergency Response Plan Enhances Security

Chester Water Authority is committed to ensuring, to the fullest extent possible, reliable delivery of safe water to our community. The events of September 11, 2001, underscored the importance of continuous improvements in security at our nation’s water utilities. In response to new regulations imposed by the Environmental Protection Agency (EPA), the Authority performed a security-vulnerability assessment of our facilities and operational procedures and reported our findings to the EPA on March 31, 2003. We used these findings to update our emer-

gency response plan, completing this process by the EPA-mandated deadline of September 30, 2003. Our emergency response plan provides an updated strategy for handling incidents at our facilities, outlining appropriate procedures, lines of communication, and general actions to be taken. The costs of the vulnerability assessment (\$79,000) and updated emergency response plan (\$29,500) were reimbursed through a grant from the EPA.

OCTORARO TREATMENT PLANT: Ensuring Safe, Reliable Water

Automation of Filter #1 Optimizes Filtration Process

Filtration is a crucial step in the production of quality finished water. In August 2003, construction began on the automation of filter #1. Scheduled for completion in May 2004, the project will serve as the blueprint for retrofitting all 12 filters at the Octoraro Treatment Plant. Manually operated hydraulic valves on the filters will be converted to electrically operated valves with computer-based controls to improve operational efficiency, control, and monitoring capabilities. Individual flow control of each of the two filter bays, and an additional flow-control unit on the final step of the filter cleaning process (called filtering to waste), will optimize filter performance.

New Surge Facility Enhances Transmission Main Protection and Replaces Existing Facility

Hydraulic pressure surges associated with unexpected power outages create a “water hammer” effect that can severely damage water



transmission mains. In April 2003, construction began on a state-of-the-art surge valve facility designed to provide more reliable protection from such damage. The consolidated facility, which is scheduled for completion in May 2004, will contain five new, electronically controlled surge valves, and will replace three separate surge facilities, some of which were installed in 1950. In compliance with current Pennsylvania Department of Environmental Protection (PA DEP) regulations, the new facility will dechlorinate water before release to the Octoraro Creek, thereby protecting aquatic life.

Tainter Gate Rehabilitation to Be Completed in 2004

Tainter gates control the amount of water that can be released from our Octoraro Reservoir. The Federal Energy Regulatory Commission (FERC) requires all owners of dams with Tainter gates in the United States to assess the gates' structural soundness and correct any deficiencies. In 2002, the Authority completed the first step of this assessment by studying how best to bulkhead the upstream side of the Tainter gates and gain inspection access to the chains, lower seals, and upstream face of the gates. In 2003, the second step of this work was initiated with authorization of an engineering design for a floating bulkhead and for the structural repairs and maintenance work to be performed while the bulkhead is in place. This design work is ongoing and scheduled for bid in the latter part of 2004, with construction beginning in 2005.

Water Quality Monitoring Project Underway

Timely, accurate data on raw water quality is helpful to water treatment plant operators in their efforts to optimize the treatment process. In May 2003, the Authority began a review of available automated water quality monitoring devices that

Octoraro Treatment Plant Speed Increaser Refurbished

A major maintenance project was completed on the speed increaser at the Octoraro Treatment Plant. The speed increaser is a critical component of the diesel engine assembly that operates auxiliary pump #1 in the event of a power outage.

The project involved repairs to the gear box housing, and replacement of the internal gears. These gears are used to step up the speed of revolution of the diesel engine's drive shaft, in order to match the speed required by auxiliary pump #1.

could be installed at our stream-gauging stations on the two primary streams that feed the Octoraro Reservoir. The intent is to piggyback the water quality monitoring devices on automated equipment already installed at the gauging stations in 2002. Equipment selected for trial is currently being "field tested," and the Authority plans to purchase and install the devices after successful field testing in 2004.

A Compliance Plan for Public Notification Rule

The American public consistently enjoys the benefits of drinking water that meets or exceeds EPA and PA DEP standards. Despite a supplier's best efforts, sometimes contaminants in finished water exceed regulatory limits. Under the Public Notification Rule of the Safe Drinking Water Act, a water supplier has from 24 hours to one year, depending on the type of regulatory breach, to notify customers of a problem. Chester Water Authority has a plan in place to comply with the Public Notification Rule; however, we work very hard to avoid having to put that plan into action. In 2003, the Authority did not experience any situations that required public notification.

Chester Water Authority: A Partner for Safe Water

Chester Water Authority is proud to be a member of the Partnership for Safe Water. Formed in 1995, the Partnership is a voluntary cooperative effort among the Environmental Protection Agency (EPA), the American Water Works Association (AWWA) and other drinking-water organizations, and water

**Planning and Preparedness:
Chester Water Authority has
been awarded the Director's
Award by the Partnership for
Safe Water, based on its
review of our Self-Assessment
Completion Report for our
Octoraro Treatment Plant.**

suppliers across the nation. Its goal is to enhance the quality of drinking-water safety by optimizing treatment plant performance. In particular, the Partnership has adopted a more stringent goal for filtered water turbidity (suspended particles) than required by the enhanced Surface Water Treatment

Rule of the Safe Drinking Water regulations (less than 0.1 NTU versus less than 0.3 NTU).

In September 2003, Chester Water Authority submitted a Self-Assessment Completion Report for the Octoraro Treatment Plant. This report was favorably reviewed by the Partnership's Program Effectiveness Assessment Committee, which includes members from water utilities and state and federal environmental agencies. Based on this favorable review, the Authority has been awarded the Director's Award for completing Phase 3 of the Partnership Program.

While in the Partnership Program, the Authority has made numerous improvements in its water treatment process, enabling us to meet the Partnership's stringent turbidity goal even under flood conditions in 2003 (please see "When 'What If' Becomes 'What Happened'" in the center spread of this report).

Study Completed to Augment Water Supply

Planning, preparedness, and a reliable source of supplemental raw water from the Susquehanna River enabled Chester Water Authority to provide our customers with clean, quality drinking water throughout the severe drought of 2002. Nevertheless, the Authority began a study to identify viable options to augment our source of supply so that we can continue to meet customer demands in the future. The study, which was completed in December 2003, provides the Authority with



the information required to assess the viability of various additional water sources, including surface and ground water. In 2004, the Authority will discuss the options identified in the study with the necessary regulatory agencies.

Safety Enhancement Project in Progress

Chester Water Authority uses chlorination to disinfect finished water. Proper management of this key element in our treatment process is essential to ensure safety. In August 2003, the Authority began design of a chlorine scrubber system, which will contain and neutralize a hazardous condition that could potentially occur in the unlikely event of chlorine leakage, as the result of a damaged or malfunctioning chlorine storage cylinder. This safety enhancement project will be bid and constructed in 2004.

DISTRIBUTION SYSTEM: Optimizing Performance

Phase Two of Hillendale Booster Station Upgrade Completed

The Authority progressed with an upgrade of the Hillendale Booster Station that is designed to reduce maintenance, improve reliability, reduce operating costs, and increase capacity. The station supplies water to the Artesian Water Company and a growing number of customers in New Garden Township, Chester County. The project involves replacement of the electrical service equipment, replacement of one of the four existing pumps, and retrofitting of all four pump motors with variable frequency drives.

In 2003, a pump operating at 1 million gallons per day (mgd) was replaced with a 4 mgd pump and a new drive, and a second pump was retrofitted with a new drive. The new, more efficient control units automatically adjust the speed of the pumps according to demand, optimizing performance and conserving electricity. Remote adjustments can be made using the Authority's Supervisory Control and Data Acquisition (SCADA) system. The existing general electrical service transformer and related switchgear, which were owned by the electrical utility company, were

New, more efficient control units at our Oxford Booster Station enable us to adjust the speed of the pumps according to demand, optimizing performance and conserving electricity.



Water storage and distribution are important parts of our system to bring our customers clean, safe drinking water.

replaced with high-tension service equipment owned by the Authority. The Authority anticipates a five-year payback on the initial investment for the new equipment, which will reduce the cost of electricity required to operate the booster station.

Oxford Booster Station Upgrade Completed

The Oxford service area in Chester County is also experiencing significant growth. In 2003, the Authority completed an expansion of the Oxford Booster Station and installation of new, higher-capacity pumps with variable frequency drives, which will reduce maintenance costs and provide greater capacity, redundancy, and reliability. Two pumps with capacity of 250 gallons per minute (gpm) were replaced with two 400 gpm (0.58 mgd) pumps and one 800 gpm (1.15 mgd) pump.

The new, more efficient control units enable the Authority to adjust the speed of the pumps according to demand, optimizing performance and conserving electricity. Remote adjustments can be made using the Authority's SCADA system. The project enhances our ability to meet customer demand and increases fire flows and pressures. For example, the upgraded pumps provided the fire flows needed

to fight a major fire last autumn (please see "When 'What If' Becomes 'What Happened'").

Renovations Completed on Fifth Steel Tank at Village Green

Ongoing preventive maintenance of the nine storage tanks at the Village Green Tank Farm in Delaware County preserves and protects these valuable assets. In 2003, the Authority cleaned and repainted steel tank #1, the fifth and last steel tank at Village Green to undergo this process since 1998. The Authority also began the process of cleaning, repairing, and repainting the exteriors of concrete tanks #2, #3, and #4, with completion scheduled for 2004. Exterior renovations keep these tanks in good condition, ensuring continued reliability.

Main Rehabilitation Preserves Quality, Increases Fire Flows and Pressures

Since 1974, the Authority has invested \$17.7 million in the rehabilitation of over 41 miles of water main and associated valves, service lines, and hydrants throughout our service area. These efforts preserve water quality and increase fire flows and pressures.

In the City of Chester...

In 2003, the Authority completed rehabilitation of almost 2.4 miles of 6-, 8-, and 12-inch-diameter water main, 193 associated service lines, and five hydrants at three locations in the City of Chester:

- 1,000 feet of 8-inch-diameter cast-iron water main cleaned and lined; existing check valve pit retired
- 6,800 feet of 6-inch-, 2,400 feet of 8-inch-, and 1,300 feet of 12-inch-diameter cast-iron water main rehabilitated; additional 3 feet of 2-inch-diameter galvanized-iron water main replaced with 4-inch-diameter ductile-iron cement-lined (DICL) water main
- 800-foot section of 6-inch-diameter cast-iron water main replaced with 8-inch-diameter DICL water main



At four bridge crossings...

The Authority also completed main renewals at four bridge crossings. In Upper Chichester Township, a new 6-inch-diameter main was attached to the bridge on Meetinghouse Road over Naamans Creek, and a new 6-inch-diameter main was attached to the railroad bridge on Chichester Avenue.

In Nether Providence Township, a new 12-inch-diameter main was attached to the bridge on Brookhaven Road, and a new 6-inch-diameter main was attached to the bridge on Chestnut Parkway; both bridges cross Ridley Creek. Maintenance of the Meetinghouse Road and Brookhaven Road mains had been a problem because these pipes were installed in the creek beds. Replacement of the Chichester Avenue main substantially improved the reliability of its structural support system, and the main renewal on Chestnut Parkway significantly increased the main's flow capacity.

Along Route 291...

The Authority substantially completed renewal of 3,650 feet of 20-inch-diameter cast-iron water main and hydrants associated with the Pennsylvania Department of Transportation's (PENNDOT) Route 291 Phase 2 highway reconstruction project in the City of Chester. The Phase 2 highway reconstruction project will make Second Street from Franklin to Trainer Streets a five-lane highway by widening it from two to four lanes, plus a center turning lane. The Route 291 PENNDOT project is an integral part of the public infrastructure improvement plan for the City of Chester's waterfront area and an important contributor to Chester's overall revitalization. Paid for through a cost-sharing agreement between the Authority and PENNDOT, this \$2.8 million water main renewal project represents the single largest water main renewal and relocation project undertaken by the Authority.

Updated Hydraulic Models Support Service Commitments

In 2001, Chester Water Authority began developing upgrades to the hydraulic models of the Authority's water distribution system in Western Delaware County and the Toughkenamon system in Southern Chester County to support the continuation of excellent service to the communities in our growing service area. A mathematical representation of the distribution system, an accurate

Proactive and planned preventive maintenance are part of our ongoing capital improvements.



What If...
agricultural fertilizer run-off were to cause spikes in water nitrate levels?

What happened...

In January and February 2003, nitrates in raw water from the Octoraro Creek

peaked at a record 10 parts per million (ppm), the maximum allowable level under federal drinking-water standards. The cause was agricultural fertilizer run-off aggravated by cold water temperature and higher stream flows, which reduced natural biological activity that normally removes nitrates. Conventional drinking-water treatment processes do not remove nitrates, and a neighboring water utility on the west branch of the creek was required to shut down.

However, thanks to the pipeline we installed in 1989, CWA was able to draw raw water from our secondary raw water source, the Susquehanna River, directly to the Octoraro Treatment Plant, blending our raw water to reduce overall nitrate levels.

As a result... CWA's finished water continued to meet regulatory standards during this period.

When

“What If”

Becomes

“What Happened”

What If... a flood event were to have an adverse effect on raw water quality?

What happened... Heavy rains associated with the advance of Hurricane Isabel caused dramatic increases in the turbidity, or amount of suspended particles, in raw water entering the Octoraro Treatment Plant; this, in turn, can affect the quality of treated water. As a member of the Partnership for Safe Water, a voluntary cooperative effort among the Environmental Protection Agency (EPA), the American Water Works Association (AWWA), and other water suppliers, the Authority has made numerous improvements in our water treatment process to enhance the quality of the water we provide to customers.

As a result... We continued to meet the Partnership's water-quality goal of less than 0.1 NTU (a turbidity measurement), despite the turbidity increase from an average of 10 NTU to 350 NTU in our raw water brought on by the flood waters.



What If... a major fire were to tax the pumping capacity of one of CWA's booster stations?

What happened... Last autumn, two major fires occurred over the same weekend, one in Oxford and another in Jennersville. As part of our ongoing program to upgrade our water distribution facilities, CWA had recently completed an upgrade of the Oxford Booster Station, replacing three 250-gallon-per-minute (gpm) pumps with two

400 gpm pumps and one 800 gpm pump and new control units. In 2001, we completed construction of a new 450,000-gallon water storage tank and pumping station at Jennersville.

As a result... The Oxford Booster Station, in the first case, and the combined capabilities of our Creek Road Booster Station and Jennersville Booster Station and storage tank, in the second case, provided the fire flow capabilities required by firefighters, while maintaining normal service to residential and business customers. A similar upgrade is underway at the Hillendale Booster Station.

When “what if” becomes “what happened,” Chester Water Authority is prepared.

Anticipating problems, whether man-made or natural disasters, is an important part of our planning process. Our philosophy of preparedness ensures that adequate facilities are in place to avoid disruptions caused by occurrences such as hurricanes, droughts, ice storms, electrical blackouts, and fires. We have the right people, procedures, equipment, and back-up systems in place to ensure that our customers have a dependable supply of quality water.

What If... a flood event were to occur in the watershed, requiring critical timing of dam operations at the Octoraro Reservoir?

What happened... Several flood events in 2003 — including a high-intensity storm with localized heavy rainfall associated with the advance of Hurricane Isabel — tested CWA’s new automated rain gauge system. In 2002, the Authority completed automation of the stream- and rain-gauging stations throughout our 140-square-mile watershed, providing up-to-the-minute data on water flows into the reservoir. Data is automatically downloaded into the plant’s computer system, enabling personnel at the Octoraro Treatment Plant to better control dam operations.

As a result... A well-timed decision to open one of the Tainter gates at the reservoir optimized plant operations, enabling CWA to maintain consistent service to our customers.



What If... a power outage occurs?

What happened... Hurricane Isabel downed trees and electric wires, resulting in widespread power outages throughout the region. The Authority’s ongoing system-wide capital improvement and proactive maintenance programs avoided a crisis. At the first dip in power at the Octoraro Treatment Plant that evening, CWA activated two diesel-powered pumps, which remained on until the plant regained full power the following afternoon. Similarly, back-up generators kicked in at booster stations, some operating well over 24 hours before power was restored to the area.

As a result... CWA was able to maintain reliable service to all of our customers throughout the power outage.



What If... a severe winter were to place strain on water mains and other elements of our water distribution system?

What happened... The harsh winter of 2003 piled almost 43 inches of snow and ice on our area, straining the elements that make up our water distribution system.* Since 1974, the Authority has made an ongoing invest-

ment in preserving the valuable assets throughout our distribution system, including water mains and associated valves, service lines, and hydrants.

As a result... CWA experienced no increase in weather-related damage to our distribution system during the winter of 2003, and our customers continued to receive reliable service.

* Source: National Oceanic and Atmospheric Administration

Our Geographic Information System easily generates detailed maps for all of our service areas.



hydraulic model provides the Authority with information essential to making effective decisions about extensions and renewals of the water distribution system.

In 2002, the Authority completed models in the Concord-Birmingham boosted district of Western Delaware County and the Newark area of Southern Chester County. In 2003, the Authority substantially completed models for the remainder of the boosted districts. We are also in the process of updating the first two models to reflect population growth in these areas.

Our engineers are using the Authority's Geographic Information System (GIS) to develop, map, and display the results of the models, replacing hand-plotted model results. This improves the efficiency of the process and enhances information sharing among our departments. Implemented in 1998, the GIS provides detailed electronic maps of the Authority's service areas, including land topography, roads, and water-distribution infrastructure.

INFORMATION TECHNOLOGY: Staying on the Cutting Edge

IT Advances in Four Areas

Chester Water Authority depends on reliable, effective, and integrated information technology (IT) systems to fulfill our mission. In 2003, the Authority continued to move ahead in four important areas: utilizing more capabilities of our IT systems; upgrading and enhancing our IT hardware, firmware, and software; expanding information access and sharing throughout our organization and extending secure access to other key service providers in our community; and modifying systems and procedures to meet changing needs and challenges.

Utilizing more capabilities of our systems...

- Upgraded our Customer Information System to enhance the efficiency of customer service representatives
- Upgraded our Database Management System, enabling it to share information with our Financial Information System (FIS)
- Deployed the purchasing module of our FIS in all departments, enhancing the efficiency and accuracy of the purchase order process
- Deployed the fixed-assets module of our FIS, which provides electronic valuation and depreciation information, as well as other data needed to meet financial reporting requirements
- Initiated a program for the scanning and electronic retrieval of historical documents currently stored in paper form and referenced on a regular basis

Upgrading and enhancing hardware, firmware, and software...

- Replaced 39 PCs and upgraded 17 others to current standards
- Replaced two obsolete file servers with current models that include expanded data-storage capability
- Added a test file server for the Octoraro Treatment Plant, enabling personnel to test modifications and new applications without affecting production
- Upgraded our network switch firmware and control software to improve network control and monitoring capability

Expanding information access and sharing...

- Provided remote access to our distribution Supervisory Control and Data Acquisition (SCADA) system for on-call and management personnel on laptop computers, enabling them to check the status of the distribution system and respond to alarms without having to go into the office
- Provided distribution supervisors with access to electronic maps of our distribution system on laptops, replacing the often obsolete paper maps carried in trucks
- Provided the Delaware County Regional Water Quality Control Authority (DELCORA), the county's wastewater treatment authority, with secure electronic access to information related to its sanitary sewer customers' water consumption using workstations in the DELCORA offices

Modifying systems and procedures...

- Modified systems and procedures to ensure that the 2003 financial statement meets GASB Statement 34 requirements (please see "New GASB Accounting Standard Affects Financial Statement" on the next page)
- Developed and implemented Information Systems Business Continuity Plan to ensure "business as usual" in the event of a loss of information-processing capability at one of our facilities

Property Management System under Development

Chester Water Authority also has a number of IT systems projects under development, including an automated property-management system for the information and documents we maintain on approximately 125 parcels of property. A pilot project was begun in May 2003 to enter information on six parcels — including tax and zoning data, as well as maps, deeds, aerial photographs, and other documents — into an arm of our existing Geographic Information System (GIS). As additional property data is entered over the next few years, the Authority will use our sophisticated GIS capabilities to manage this growing information resource.

FINANCE: Meeting Our Responsibilities

Bond Refinancing Yields Savings

In 2003, the Authority refinanced outstanding debt on bond issues from 1998 and 1999, with projected interest savings of over \$477,000. These savings help us hold down the cost of service to our customers.

New GASB Accounting Standard Affects Financial Statement

In July 1999, the Governmental Accounting Standards Board (GASB) issued a new reporting standard (GASB Statement 34) for state and local governments. Under the new standard, government entities must depreciate fixed assets each year and report total asset value less accumulated depreciation (i.e., net asset value) on their financial statements. GASB Statement 34 holds government entities to the same asset-depreciation reporting requirements as private industries.

Chester Water Authority was required to review asset records dating back to 1983 and report an estimate of net asset value on our 2003 financial statement. By the end of 2004, the Authority will have completed an accounting of each type of asset, adjusting the estimate accordingly. We are using the fixed-assets module of our Financial Information System (FIS) to track depreciation going forward.

LEADERSHIP: Change and Succession

CWA Key Retirements and Succession Planning

James Aldridge and Leo Holmes retired from the Chester Water Authority Board of Directors at the end of 2002. Mr. Aldridge began his board membership 25 years ago as Assistant Secretary/Assistant Treasurer, and retired as Chairman Emeritus. Mr. Holmes joined the board in 1990 as Assistant Secretary/Assistant Treasurer, and retired as Vice Chairman. Earline R. Mann and Norma Jean Holmes were appointed to the Board effective January 1, 2003.



William Miller retired as Director of Information Systems after 10 years of service to CWA. He was succeeded by Mitchell Kaplan, formerly Assistant Information Services Manager, who has been with CWA since 1983.

Mitchell Kaplan



William Atlee is scheduled to retire as Controller in August 2004. Mr. Atlee will be succeeded by Assistant Controller Elizabeth McGoldrick. Ms. McGoldrick has been with CWA for more than 20 years.

Elizabeth McGoldrick



As part of Mr. Atlee's planned retirement, Diane Shull has been promoted from Office Manager to Director of the Business Office Group, a newly created department-level position. She has been with CWA for more than 40 years.

Diane Shull

Management Staff



Robert W. Naef, P.E.
*Executive Manager and
Chief Engineer*



William A. Atlee, Jr.
*Controller/Assistant Executive
Manager, Administration*



Russell C. Williams, P.E.
*Director, Engineering/
Assistant Executive Manager,
Operations*



David J. Krupiak
Chief of Distribution



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



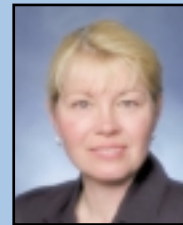
Brian P. MacEwen, P.E.
Director, Capital Programs



**Theodore J. Pawlik,
S.P.H.R.**
*Director, Human Resources/
Public Information*



**William D. Miller,
C.D.P., C.P.I.M.**
*Director,
Information Systems*



Sandra Hunt
Executive Administrator

2003

Average Daily Pumpage (gal.)	33.7 million
Total Customers	39,745
Distribution Main (miles)	584
Total Operating Revenue	\$27,062,423
Average Annual Domestic Bill	\$267.97
Total Assets	\$169,181,308
Funded Debt, net	\$39,278,749
Total Operating Expenses	\$23,180,046



MANAGEMENT'S DISCUSSION AND ANALYSIS

Effective January 1, 2003, the Board of Directors of the Chester Water Authority adopted Governmental Accounting Standards Board ("GASB") Statement No 34. 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.

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:

- The Authority issued \$9,995,000 of refunding water revenue bonds in September 2003 and \$4,075,000 of refunding water revenue bonds in October 2003, saving the Authority approximately \$475,000 in interest over the life of the issues.
- The Authority adopted a general rate increase of 10.0% for all consumers effective January 1, 2003. It is anticipated that the rates will remain at the same level through 2005. The goal of the rate increase is to enable the Authority to optimize efficiencies, support an active capital construction program and continue with traditional ongoing preventive and proactive maintenance policies.
- At December 31, 2003, total assets were \$169,181,308, total liabilities were \$42,283,557, and net assets were \$126,897,751.
- For the year 2003, the Authority delivered 10.486 billion gallons of water, compared to 10.751 billion gallons of water in 2002. The year 2003 was one of the wettest years on record with 63.64 inches of rain, compared to 2002, which was one of the driest years with 37.12 inches of rain.
- Operating revenues were \$27,062,423, an increase over year 2002 of \$2,247,700, or 9.1%, primarily caused by the 10% rate increase.
- Operating expenses increased \$785,624 or 3.5% from 2002, of which \$272,845 resulted from an increase in depreciation.
- Operating income for the year was \$3,882,377, representing a \$1,462,076 increase over 2002 primarily caused by the 10% rate increase. Net assets increased \$5,545,382, which includes \$2,982,108 of developer contributions.
- Capacity fees were \$373,373, a decrease of \$149,890, or 28.6%, compared to year 2002. Because the Authority does utilize capital fees to subsidize operations, these contributions do impact operating income.
- The operating ratio (operating revenues divided by operating expenses less depreciation) was 1.46 in 2003 versus 1.38 in 2002.
- The Authority acquired the fixed assets of the Shangri-La Water Company as of July 23, 2003, for a purchase price of \$1,108,750. The Authority gained 431 customers as a result of the purchase.

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 N. 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 and operates in a service area which includes portions of 39 municipalities in Delaware, Lancaster, 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 tax exempt 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 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 from these sources.

Financial Analysis

The following comparative condensed financial statements and other selected information serve as the key financial data and indicators of management, monitoring and planning. The 2002 balances have been reclassified to conform to the GASB 34 presentation. As such, there may be differences from the previously published 2002 audited financial statements.



Condensed Statement of Net Assets

	December 31, 2003	December 31, 2002
Current and other assets	\$ 23,311,054	\$ 31,641,139
Capital assets—net of accumulated depreciation	<u>145,870,254</u>	<u>134,042,499</u>
Total assets	169,181,308	165,683,638
Current and other liabilities	<u>42,283,557</u>	<u>44,331,269</u>
Net assets	<u>\$ 126,897,751</u>	<u>\$ 121,352,369</u>

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

	Year Ended December 31, 2003	Year Ended December 31, 2002
Operating revenues	\$ 27,062,423	\$ 24,814,723
Operating expenses	<u>23,180,046</u>	<u>22,394,422</u>
Operating income	<u>3,882,377</u>	<u>2,420,301</u>
Nonoperating income:		
Capital contributions	2,982,108	2,195,504
Interest income	642,312	643,199
Other	<u>21,840</u>	<u>433,030</u>
Total nonoperating income	<u>3,646,260</u>	<u>3,271,733</u>
Total nonoperating expenses	<u>1,983,255</u>	<u>1,939,891</u>
Increase (decrease) in net assets	<u>\$ 5,545,382</u>	<u>\$ 3,752,143</u>

Selected Statistical Information

	2003	2002	Change Amount	%
Employees at year-end	151	149	2	1.3
Average employees	150	149.75	0.5	0.3
Water customers at year-end:				
Residential	37,190	36,103	1,087	3.0
Commercial	2,113	2,084	29	1.4
Industrial	59	59	-	-
Fire protection	372	360	12	3.3
Other water utilities	<u>11</u>	<u>11</u>	<u>-</u>	0.0
Total	<u>39,745</u>	<u>38,617</u>	<u>1,128</u>	2.9
Average Residential Bill	<u>\$ 267.97</u>	<u>\$ 249.62</u>	<u>\$ 20.35</u>	8.2
Water consumption (millions of gallons):				
Residential & commercial	3,806.6	3,810.4	(3.8)	0.1
Industrial	4,613.5	5,092.2	(478.7)	9.4
Other water utilities	2,039.9	1,825.4	215	11.8
Fire Protection	<u>25.5</u>	<u>22.7</u>	<u>2.8</u>	12.3
Total	<u>10,485.5</u>	<u>10,750.7</u>	<u>(265.2)</u>	(2.5)
Revenues per 1,000 gallons consumed	<u>\$ 2.58</u>	<u>\$ 2.31</u>	<u>\$ 0.27</u>	11.7
Expenses per 1,000 gallons consumed	<u>\$ 2.21</u>	<u>\$ 2.08</u>	<u>\$ 0.13</u>	6.3



General Trends and Significant Events

The population growth rate in Delaware and Chester counties over the last decade has been approximately 0.6% and 15.2% respectively. Total customer accounts increased 2.9% from 2002 to 2003.

Weather temperatures during 2003 remained consistent with historical averages, but rainfall increased significantly for the year. The average rainfall for the area is 43.9 inches per year. Rainfall recorded at the water treatment plant for the year was 63.6 inches, 19.7 inches more than the historical average and 26.5 inches more than the previous year.

The volume of water sold in the year 2003 was approximately 10.486 billion gallons, a decrease of 2.5% from the year 2002. Although the Authority's service area continues to experience growth, customer response to the previous year's water conservation messages and increased rainfall resulted in lower demand. Retail water customers (Residential/Commercial) accounted for 36% of the volume sold, and 51% of the revenue earned on water sales.

The Authority acquired the fixed assets of the Shangri-La Water Company as of July 23, 2003, for a purchase price of \$1,108,750. The Authority gained 431 customers as a result of the purchase.

Financial Condition

The Authority's financial condition remained strong at year-end with adequate liquid assets, a reliable plant and system to meet demand and a reasonable level of unrestricted net assets. 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 \$3,497,670 from 2002 or 2.1%. This increase was primarily related to the addition of capital assets, including work on year 2003 capital improvement program, developer contributions, and other asset acquisitions. Accounts receivable at year-end were \$189,318 more than year-end 2002. The primary reason for the increase is the 10% rate increase from prior year.

Results of Operations

Operating Revenues: Revenues from operations fall into water service 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.

The Authority adopted a rate increase effective January 1, 2003. New rates reflect an average increase of 10.0%. However, the rate increase and customer growth was offset by the consumption decreases due to higher than normal rainfall in the service area.

The average realized rate from wholesale water sales to other water utilities increased 8.3% from \$2.05 in 2002 to \$2.22 per thousand gallons from in 2003. Actual consumption for wholesale customers was 4.6% less than projected due to increased rainfall and the resulting decline in demand.

The average realized rate from industrial water sales was \$1.36 per thousand gallons in 2003 and \$1.24 per thousand gallons in 2002, an increase of 9.7%. Actual consumption for industrial customer was 6.3% less than projected due to increased rainfall and the resulting decline in demand.

The average realized rate from residential and commercial water sales was \$3.28 per thousand gallons in 2002 versus \$3.60 in 2003, an increase of 9.8%. As a result of an increase of 1,087 customers in this class, actual consumption was within 1.6% of projected sales.

Actual sales for fire protection customers were 8.5% greater than projected, a direct result of the installation of public fire hydrants to serve many new housing developments.

Capital Contributions and Grants: 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 charges capacity fees at 15% of the calculated allowable fee.

The Authority also receives additions to its distribution system from developers. Prior to GASB 33 and 34 implementation, the money and system assets received were recorded as direct contributions to the Authority's equity. GASB 33 and 34 define these fees as nonoperating revenues and requires reporting the amounts through the Statement of Revenues, Expenses, and Changes in Net Assets.

The Authority recognized a reimbursement grant of \$108,500 from the United States Environmental Protection Agency to perform a vulnerability assessment and establish an emergency response plan in compliance with EPA regulations related to increased security.

Developers convey residential systems and extensions to the Authority upon completion of jobs in accordance with plans and specifications approved by the Authority. In 2003, developers contributed \$2,982,108 in system extensions, of which \$642,281 was received in cash to reimburse the Authority for its

capital outlays. These contributions are not budgeted as they are generally non-cash, 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 treatment plant.

Total operating expenses of the Authority increased \$785,624 and operating revenues increased \$2,247,700. Operating income was \$3,882,377 for 2003 compared to \$2,420,301 for 2002, an increase in operating margin of \$1,462,076. Operating expenses, including depreciation, for 2003 and 2002 were \$23,180,046 and \$22,394,422, respectively.

While depreciation was a significant factor in the overall 3.5% operating expense increase, other operational expenses also increased for the year. Wages and fringes increased 4.75% from 2002 to 2003. The Authority granted approximately a 3% cost of living wage increase at the beginning of the year for non-union personnel and, effective March 1st, a similar increase for union personnel. The average number of employees increased from 2002 to 2003 by two.

Consumption declined during the year due to high precipitation causing the operating cost per thousand gallons to increase. The average total operating cost per thousand gallons increased from \$2.08 in 2002 to \$2.21 in 2003, or 6.3%. Excluding depreciation, the average increased from \$1.67 in 2002 to \$1.77 in 2003, or 6.0% indicating that the majority of the cost to produce and sell water, such as employees, base electrical costs, and system maintenance, is largely fixed and, therefore, is not necessarily proportional to consumption.

Cash Flow Activity

The following table shows the Authority's ability to generate net operating cash. Net cash provided by operating activities is shown both in total dollars and as a percentage of operating revenues.

	2003	2002	Variance
Total operating revenues	\$ 27,062,423	\$ 24,814,723	\$ 2,247,700
Net cash provided by operations	8,573,306	7,904,155	669,151
Net operating cash as a percent of operating revenues	31.5%	31.9%	

Capital Assets and Debt Administration

The investment in plant and equipment, net of related debt, grew \$11,827,755 during 2003. Property, plant and equipment in service, excluding depreciation, increased \$16,085,313 with \$5,818,692 funded by bond proceeds, \$2,982,108 from developer contributions, \$373,373 funded by capacity fees and the remaining from surplus revenues. General equipment purchases were \$203,687, primarily for vehicles and other general operating equipment, and \$200,758 for information technology equipment. The following projects were completed: the approach mains for Elk Creek, London Bridge Farms and School House Road Townhouses, installation of a 250,000 gallon wash water tank, replacing meters with remote read meters, water main system rehabilitation, and the purchase of the fixed assets of Shangri La Water Company.

Financial Statements

The audited financial statements of Chester Water Authority as of December 31, 2003 are available upon request at the Authority's office.

The following employees appeared in this annual report:

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(top photo):

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