



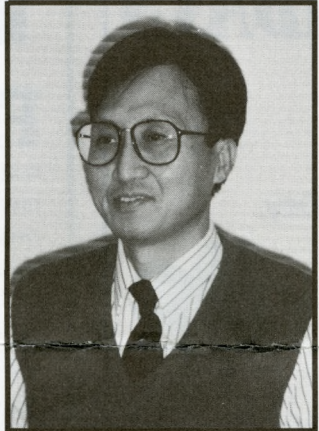
Pipeline

Produced by the Public Affairs staff of the Philadelphia Water Department. For more information, please contact Editor Joan Anne Przybylowicz at 592-4900.

Cross Connection Control Program a Success

During the past year, our Bureau of Laboratory Services began inspecting high-risk buildings as part of its Cross Connection Control Program. The program monitors buildings where cross connections can contaminate the buildings' private water supplies, as well as the public water supply system.

According to Jung Choi, acting manager of Scientific and Regulatory Affairs, a cross connection occurs when the pipe for a drinking water supply is joined improperly and illegally to pipes for other types of water supplies. The water from both systems can mix together when pressure problems, known as backflows, occur within the systems. Improper cross connections have been found in customer water service connections; home heating systems; boiler systems; and heating, ventilating and air conditioning (HVAC) systems.



Photograph: Bernie Rosenberg

Jung reports that more than half of the 32 hospitals inspected did not have proper connections or had poorly designed connections. Many of their HVAC systems did not have adequate backflow devices to protect against severe chemical and biological contamination, as well as nosocomial infections from Pseudomonas, Mycobacterium or Legionella. Most of the hospitals were unaware that their private water supply systems, as well as the public water supply system, could be contaminated by improperly installed cross connections.

Although the impact of our Cross Connection Control Program can not be measured, it has proven to be a tremendous public health benefit to the city.

Jung Choi

nosocomial - an infection that is not present or one that has not incubated before admittance to a hospital. It generally occurs 72 hours after admittance. It is usually a patient disease but hospital personnel may also acquire it.

Pseudomonas - a genus of bacteria which comprises several hundred species, including many of uncertain status. The organisms are usually found in soil, water and decomposing matter.

Mycobacterium - a genus of bacteria which contains many species, including the highly pathogenic organisms that cause tuberculosis and leprosy.

Legionella - a genus of bacteria which causes a pneumonia-like disease in humans. They normally live in lakes, streams and moist soil, and are spread by air. The organisms have been frequently isolated from cooling-tower water, evaporative condensers, soil located on the bank of a natural watercourse (river, lake or tidewater), tap water, shower heads, and treated sewage.

PWD Employee Receives "Friend of the River" Award



Ed Grusheski (center) gives a tour of the Interpretive Center at Fairmount Water Works. The wheel of the original 1851 Jonval Turbine is in the background.

Ed Grusheski, Fairmount Water Works Interpretive Center Director, is the recipient of the Schuylkill River Greenway Association's "Friend of the River" award. The award is presented to an individual who or organization which has gone beyond the call of duty to

promote and support the Schuylkill Greenway. The Association has honored Ed's efforts in developing the Fairmount Water Works Interpretive Center, a public education project of the Water Department. They have recognized Ed for providing tours of the historic Fairmount Water Works, organizing water education camps for children and participating on the Schuylkill River Heritage Park Task Force.

"Fifteen years ago, the thought of a Heritage Park would have been unrealistic due to the poor condi-

tion of the River. With the establishment of national and local wastewater standards, the health of the Schuylkill River has improved so dramatically that 40 varieties of fish have returned. Through the Water Department's Interpretive Center, we can let the public know about the importance of water pollution control."

Ed Grusheski

The Schuylkill River Greenway Association is a non-profit, environmental group that works toward preserving and promoting the environmental integrity of the Schuylkill River and its watershed. A major project of the Greenway Association is the development of a Heritage Park along the banks of the Schuylkill River throughout five counties in Pennsylvania.

Northeast Performs Treatment Triumph!

On Sunday, December 5, the Northeast Water Pollution Control Plant treated an additional 99 million gallons of wastewater, nudging the plant to an all-time high of a total of 414 million gallons treated within a 24-hour period.

The unusually high wastewater flows coming into the plant resulted from two consecutive weekends of high rainfall. The last weekend of November and the first weekend of December poured approximately 2 1/2" to 3" of rain into the northeast.

Northeast plant employees are proud of the plant's performance, noting that the plant is permitted by the EPA to treat a maximum of 315 million gallons of wastewater daily. To the credit of the Northeast staff, the plant was able to accommodate the additional 99 million gallons without any detrimental effects upon its treatment operation, achieving an effluent well below pollution levels.

The Northeast Plant is still undergoing some modifications to its primary and final tank treatment components. The plant's ability to handle this recent "treatment challenge" proves that the investments made in upgrading the plant are paying off.

Do you know that PWD's origins can be traced to the 1793 Yellow Fever Epidemic? See reverse for more details!

THE MAKING OF A WATER UTILITY

Two hundred and one years ago, Philadelphia was caught in a state of despair as thousands of citizens died of Yellow Fever. It was the summer of 1793 when the epidemic first struck the city. Between August and October that year, one-tenth of the city's population (5,000 people) died of the fever. Those who could afford to leave, did so. Almost one-half of the capital's population (25,000 people) fled, including President George Washington and Pennsylvania Governor Thomas Mifflin. Miraculously, the epidemic subsided as the weather grew colder. However, the fever mysteriously returned with the onset of summer.

Prominent physicians of the day were at a loss as to the cause of the disease. Some believed that the fever was imported from the West Indies, where there was also a Yellow Fever epidemic. Others thought that poisoned or corrupted air, called miasma, was to blame. Miasmas were believed to be caused by toxic fumes from rotting animals and vegetable

matter. Still others including Dr. Benjamin Rush, thought that the contamination of underground wells, which were Philadelphia's source of drinking water, was to blame. The actual cause of Yellow

Fever would not be discovered until 1902 when Walter Reed's commission in Cuba identified that the deadly virus was transmitted by mosquitoes.

By 1798, the fifth visitation of the epidemic struck the city. This time, three-quarters of

the city's population fled. Hoping to prevent the spread of the epidemic, the City Councils crusaded for a major clean up effort throughout Philadelphia. That same year, they established a Joint Watering Committee to provide a safe, sufficient water supply. The Watering Committee commissioned Benjamin Latrobe to design and build the city's first water delivery system.

*Hot, dry wind forever blowing
Dead men to the grave-yards going;
Constant hearses, funeral verses,
Oh what plagues — there is no knowing.
Nature's poisons here collected
Water, earth and air infected —
O, what pity such a city
Was in such a place erected!*

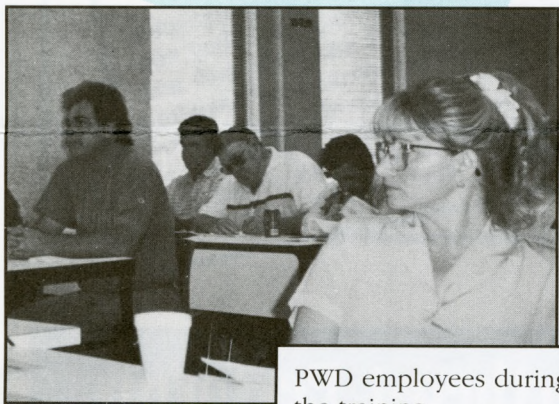
Philip Freneau, poet and editor



Painting: *Fourth of July in Centre Square*, by John Lewis Krimmel, 1812. Courtesy of The Pennsylvania Academy of the Fine Arts.

The first pumping station, equipped with machinery to supply Philadelphia with river water was completed in January 1801. It was built on the Schuylkill River at Chestnut Street. The water was pumped from this station through a brick tunnel to Centre Square at Broad and High streets, where City Hall now stands.

THE THREE C'S: COORDINATE, COMMUNICATE, COOPERATE



Photograph: Bernie Rosenberg

PWD employees during the training.

Approximately 120 employees recently participated in training for water main shutdown and startup procedures as part of PWD's capital improvements program. The employees learned the proper procedures they should take to efficiently handle water main rehabilitation (rehab) work. The training emphasized the importance of minimizing inconvenience to our customers by ensuring the quantity and quality of water supplied during the rehab work.

Water main rehab projects require an enormous amount of coordination, communication and cooperation among several PWD units:

Administration of Capital Improvement Projects

Planning & Engineering Division: Water & Sewer Systems Planning, Design, Projects Control

Water Main Construction Work

Planning & Engineering Division: Construction and Independent Contractors

Operation and Maintenance of Water Main System

Operations Division: Load Control, Emergency & Support Services, Distribution

Customer Relations Functions

Public Affairs Division: Customer Information
Operations Division: Customer Services

"These new water main shutdown procedures will help us minimize any inconvenience to our customers. When we improve our performance, we will improve the quality of service delivered to our customers."

Construction Division Engineer Al Horn

1994 HOLIDAYS

New Year's Day,
Saturday, January 1

Martin Luther King, Jr. Day,
Monday, January 17

Washington's Birthday,
Monday, February 21

Good Friday, April 1

Memorial Day, Monday, May 30

Independence Day,
Monday, July 4

Labor Day, Monday, September 5

Columbus Day,
Monday, October 10

Thanksgiving Day,
Thursday, November 24

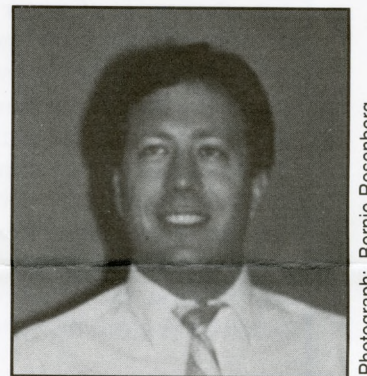
Christmas Holiday,
Monday, December 26

TASTES GREAT, LESS FILLING?!

For years, water utilities have tried to produce clean, healthy water that tastes and smells good.

Gary Burlingame, a Water Laboratory Program Scientist at our Bureau of Laboratory Sciences (BLS), was the primary author for the American Water Works Association's new manual *Flavor Profile Analysis: Screening and Training of Panelists*. It's a comprehensive, step-by-step guide to help water utilities evaluate the sensory characteristics of water.

The guide was based on our Lab's *Manual on Methods for Sensory Analysis* and the Lab's successful Flavor Profile Analysis program. Gary serves on AWWA's Taste and Odor Committee which has conducted extensive research on standardizing national methods used to analyze the tastes and smells of water.



Photograph: Bernie Rosenberg

Letters from our Customers

Dear Mr. Cook:

Recently, there was a water main break on our block. This letter is to inform you of the remarkable job that was done by the men who repaired it.

On behalf of all my neighbors, we feel that these caring, hard working men should be commended. Their names are:

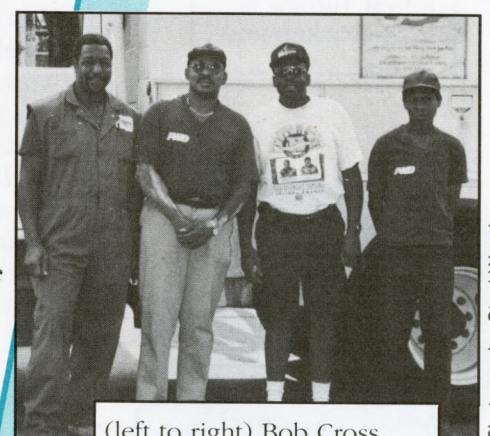
Bobby Johnson, Foreman
John Bevan
Randall Grove
James Bettis

James Gleaton
Gregory Pugh
Robert Kennedy
Bob Cross

In spite of the extreme weather and seemingly unending obstacles, they were diligent and persistent. Please know that these men are professional, courteous and they get the job done. We will never forget them.

With gratitude and thanks,
Louise C. and residents of
1100 block of Divinity Place

Bobby Johnson and his crew work in our Distribution Unit.



(left to right) Bob Cross, James Gleaton, Randall Grove and Robert Kennedy

Photograph: Staci Woerle