City of Harrisburg
Bureau of Water
2003 Water Quality Report

The City of Harrisburg, Pennsylvania, Incorporated March 19, 1860

Department of Public Works
Bureau of Water

Dear Harrisburg Water Customer,

This annual **Consumer Confidence Report** provides you with important information about our drinking water, its sources and our efforts to protect the water supply and its quality. I am again privileged to advise you that the drinking water purveyed to you by the City of Harrisburg has once again been verified as meeting the highest standards. It is the continued objective of The Harrisburg Authority and the City of Harrisburg to provide you with a high quality water at a reasonable cost.

Across the state and nation, many communities increasingly have problems of water shortages and water safety, forcing some to curb new construction of homes and businesses and creating new costs to customers. Proper long-range planning and action by the City and Authority have proactively addressed these issues by creating a supplemental water supply and state-of-the -art water filtration and treatment system.

We are a team committed to water quality and assuring a supply to meet your full needs. This City's Bureau of Water continues to accept the challenge of providing you with the highest quality potable water and customer services possible. Although we are not currently encumbered with the restrictions of a drought, we will remain vigilant of numerous man-made threats to water quantity and quality. The Bureau of Water is working with the Pennsylvania Dept. of Environmental Protection and the Susquehanna River Basin Commission in utilizing our sources of supply and potable water with the objective of conservation by reducing leaks and other forms of misappropriation. We also continue working with the EPA and the AWWA in the Partnership for Safe Water by committing to the continued improvement and innovative treatment methods that assure the highest quality water. It is with much pride that the City Water Bureau received the Partnership's prestigious Director's Award for the second consecutive year in 2003.

Thank you for your continued support as we serve you with an excellent quality of one of our most precious resources–water.

Stephen R. Reed, Mayor

Source Water

The William T. DeHart Dam and Reservoir is the City of Harrisburg's primary surface water source; the Susquehanna River is our secondary surface water source, which is utilized in case of an emergency.

The DeHart Reservoir impounds water flowing from Clark's Creek and twenty-three (23) smaller tributaries. The DeHart Reservoir collects water from a 21.62 square mile watershed and has a six (6) billion gallon storage capacity when it is completely full. The Susquehanna River Intake and Pumping Station utilizes three (3) vertical turbine pumps to transfer up to twenty (20) million gallons per day of raw water from the river intake to the water treatment facility, when needed.

As water travels over the surface of the land and through the ground it dissolves naturally occurring minerals and may collect radioactive materials and contaminants from animal and human activity. Consequently, we monitor the streams that feed the water sources for contaminants and other parameters at a minimum of once per week. Contaminants that may be present in the source waters include bacteria, salts, metals, pesticides, herbicides, radioactive materials and organic chemicals from petroleum, agricultural or industrial use.

The City of Harrisburg's state of the art water filtration and treatment plant is designed and operated to remove these contaminants and to provide you with finished water that meets or exceeds all of the Federal and State Drinking Water Regulations.

PARTNERSHIP FOR SAFE WATER

2003 Water Quality Analysis

What do these terms mean? *A list of important definitions can be found on page 5.*

Turbidity:

MCL	MCLG	Yearly Average	Highest Level Detected	Compliance Achieved	Source
Treatment Technique: 95% of all monthly samples must be less than or equal to 0.5 NTU	Less than 0.3 NTU	0.06 NTU	0.07 NTU	**YES**	Soil Erosion And Degradation Of Organic matter

Turbidity can negatively impact the aesthetics (clarity) and treatability of the water.Suspended and colloidal matter such as clay, silt, finely divided organic and inorganic matter, and plankton and other microscopic organisms can cause turbidity in water.

Contaminants measured on water at the Customer's tap:

In the past we were involved with an extensive, mandatory, lead and copper sampling and analysis program. This testing program was initiated in response to a regulatory requirement and demonstrated 100% compliance with the EPA Action Levels. In response to the excellent success of our corrosion control program, the City of Harrisburg's, Bureau of Water was granted a reduced sampling frequency in 2001 from annual to triennial. The next copper and lead study of our distribution system will be completed in 2004.

Contaminants measured on water leaving the Treatment Plant

Contaminant	MCL	MCLG	Yearly Average	Maximum Detected	Source
Radiologicals		Zero	None Detected	None Detected	Power plant, Industrial discharge or Air pollution.
Nitrate	10 MG/L	<1.0 MG.L	0.12 MG/L	0.12 MG/L	Run-off from fertilizer use, septic tanks, sewage, erosion of natural deposits.
Pentachlorophenol	0.001	Zero	None Detected	None Detected	Discharge from wood preserving factories.
Other Unregulated Synthetic Organic Compounds (SOC's)		Zero	None Detected	None Detected	Pesticide, herbicide, industrial discharge and contaminated soil run-off.
Regulated Volatile Organic Compounds		Zero	None Detected	None Detected	Disinfection by-products, industrial discharges and contaminated soil run-off.

Disinfection/Disinfection Byproduct Contaminants in the Distribution system

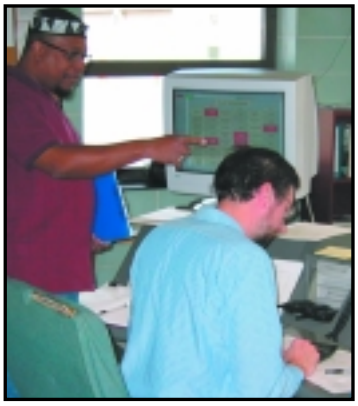
Contaminant	MCL	MCLG	Highest Quarterly Average	Annual Average	Compliance Achieved	Source
Total Trihalomethanes	Average of the last 4 consecutive quarterly samples must be less than or equal to 80 ppb	0 ppb	49 ppb	34.5 ppb	**YES**	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)	Average of four Quarterly samples must be less than 60.0 PPB	0 ppb	51 ppb	37.2 ppb	**YES**	By-product of drinking water disinfection.

The Treatment Process

As raw water enters the City's Treatment facility, lime and alum are added, which acts as a coagulant that enables minute particles to adhere together. The coagulation process promotes the formation of suspended and colloidal particles that will increase to a sufficient size and density where they settle in a sedimentation basin. After sedimentation, the water is filtered to remove any remaining particulate matter. Chlorine is added for disinfection and removal of pathogenic (disease producing) organisms. Soda Ash and Caustic Soda are added for pH and alkalinity control and zinc orthophosphate is added for corrosion control. This has been successful in preventing excessive metals leaching from the consumers plumbing into their drinking water. The treated water is pumped to three finished water storage reservoirs from which the potable water is gravity fed to your homes and businesses.

Further, fluoride is added, as recommended by the American Dental Society, for the purpose of thwarting tooth decay. The yearly average concentration of fluoride was 0.85 mg/l, with the monthly maximum detected at 0.94 mg/l. The fluoride concentrations were well below the Maximum Contaminate Level (MCL) of 2.0 mg/l.

Water Quality Information



The U.S. Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (DEP) have promulgated Regulations under the Safe Drinking Act that limit specific contaminants in water supplied by public water systems. Also, the Food and Drug Administration (FDA) Regulations establish limits for contaminant levels in bottled water and those facilities associated with the production or the modification of food, beverages or pharmaceuticals. The Bureau of Water takes the responsibility of meeting these maximum contaminant levels (MCL) very seriously. We have successfully provided you with a quality potable water during 2003 that was in compliance with all of the standards and contaminant levels established by the respective regulatory agencies.

The presence of contaminants, however, does not necessarily indicate that the affected water poses a health risk. More information regarding contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline at 800-426-4791.

Microbiological Sampling & Analysis

The Bureau's Water Quality Laboratory collects and analyzes over 80 drinking water samples each month from the distribution system to test for total coliform and E.coli bacteria, which are naturally present in the environment. Their presence is an indicator that other potentially harmful pathogens may be present. The maximum contaminant level (MCL) for coliform bacteria is less than 5% positive samples; our maximum contaminate level goal (MCLG) is zero. We are pleased to report that all bacteriological samples collected and analyzed during 2003 and the three (3) previous years demonstrated the absence of coliform bacteria contamination within our potable water distribution system.

Important Definitions

Action Level: The concentration of a contaminant, which triggers a treatment, or other requirement, which a water system must follow.

Maximum contaminant level goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health.

Maximum contaminant level (MCL): The highest level of a contaminant that is allowed in drinking water.

NTU: Nephelometric turbidity unit; a measure of the particulate matter in the water.

Parts per Billion (ppb) or Micrograms per liter: One part per billion corresponds to a single penny in $10,000,000.00.

Parts per Million (ppm) or Milligrams per liter: One part per million corresponds to a single penny in $10,000.

Picocurie per liter (pCi/L): A curie is the amount of radioactivity in a gram of radium. A picocurie is one trillionth of a curie.

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population.

- Immuno-compromised persons such as persons with cancer undergoing chemotherapy
- Persons who have undergone organ transplants
- People with HIV/AIDS or other immune system disorders
- Some elderly and infants can be particularly at risk from infections

Such persons should seek advice about drinking water from their health care providers.

About the Harrisburg Water System

- The William T. DeHart Dam was built to completion on July 1, 1940.
- Average daily water consumption for 2003 was 8.95 million gallons per day.
- Total water distributed in 2003 was 3.27 billion gallons.
- The distribution system is comprised of 250 miles of pipe.
- There are three finished water storage reservoirs in Reservoir Park with a combined capacity of 40 million gallons.
- The average person uses 80-100 gallons of water per day.
- The average leaking faucet wastes approximately 15 gallons per day.
- The average leaking toilet wastes approximately 200 gallons per day.

Customer Views Are Welcome

If you are interested in learning more about the City of Harrisburg's, Bureau of Water please call us at 238-8725. We encourage public interest and participation in our community's decisions affecting drinking water. Further, Regular City Council meetings occur on the 2nd and 4th Tuesday of each month at 6:00 PM in the Martin Luther King, Jr. City Government Center. The public is always welcome. Every effort will be made to accommodate those customers and consumers who are not comfortable speaking English.

City of Harrisburg, Bureau of Water

Billing Information:	**255-6514**
24 Hour Water Emergencies:	**255-3131**
Meter Readings:	**238-8566**
Bureau of Water Office:	**238-8725**