

# 2002 Annual Drinking Water Quality Report

## Easton Suburban Water Authority



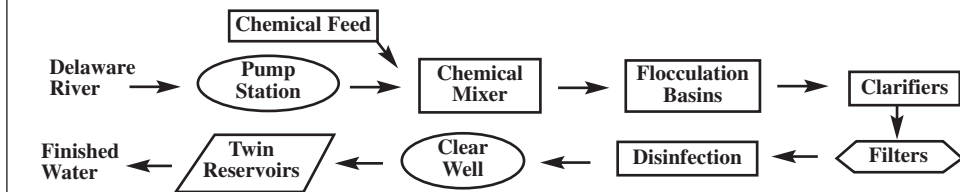
### THE WATER WE DRINK

The Easton Suburban Water Authority is pleased to provide this Water Quality Report to meet Consumer Confidence Reporting requirements mandated by the Safe Drinking Water Act (SDWA). The Authority is committed to providing its customers with safe drinking water at all times.

Over the last year, the Easton Suburban Water Authority conducted thousands of tests for drinking water contaminants. Only eight contaminants were detected, and none were found at a level higher than the state allows. This report is a snapshot of the quality of the water provided last year. Included are details about where the water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. **For more information about the drinking water, please call the Easton Suburban Water Authority at (610) 258-7181, or Fax (610) 258-7780.**

### WHERE DOES YOUR WATER COME FROM?

The source of the water supply that is treated by Easton Water is the Delaware River. The Easton Water Treatment Plant is a 12 MGD treatment facility originally built in 1932. Major improvements and plant upgrades were completed in 1981. The diagram below describes the treatment process at the water plant.



A source water assessment has been completed. The U.S. Environmental Protection Agency established a new requirement under Section 1453 of the 1996 Safe Drinking Water Act. The Act requires each state to evaluate all drinking water sources that service public drinking supplies and provide a mechanism for development of local protection programs. In accordance with the Pennsylvania Department of Environmental Protection's Source Water Assessment and Protection Program (SWAP), the City of Easton's Water Treatment Plant was evaluated. The potential sources of contamination for this surface water source include point sources of pollution, and non-point sources. The Delaware River Basin Commission, USGS and USEPA are resources for information on the flows, water quality, and planning issues for the Delaware River and its basin. SWAP programs from both Pennsylvania and New Jersey DEP affect the surface water intake at the City of Easton. The complete assessment is available for public review at the regional DEP office. With proper credentials and purpose, anyone can request a file review of the report. A Public Summary of the assessment will be sent to the Public Library and will soon be available on the DEP's website. Any questions regarding this program or assessment should be addressed to Joe Hebelka, DEP Central Office (717) 772-4014.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800) 426-4791.

### SECURITY

As a result of the September 11, 2001 attacks, Easton Suburban Water Authority has revised and expanded existing security measures to help protect both the source and finished water storage and treatment facilities. Actions taken were consistent with recommendations of the EPA and FBI.

### LEGEND:

- AL** **Action Level** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- MCL** **Maximum Contaminant Level** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- MCLG** **Maximum Contaminant Level Goal** - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- NTU** **Nephelometric Turbidity Units** - A measure of water clarity.
- pCi/l** **Picoruries per liter** - A measure of radioactivity.
- ppm** **parts per million or milligrams per liter (mg/L)** - One part per million equals about: One minute in two years, or one inch in 16 miles.
- ppb** **parts per billion or micrograms per liter (ug/L)** - One part per billion equals about: One second in 32 years, or one inch in 16,000 miles.
- TT** **Treatment Technique** - A required process intended to reduce the level of a contaminant in drinking water.
- MRDL** **Maximum Residual Disinfectant Level** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- MRDLG** **Maximum Residual Disinfectant Level Goal** - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

### CONTAMINANTS THAT MAY BE PRESENT IN SOME SOURCE WATER INCLUDE:

- Inorganic Contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas productions, mining, or farming.
- Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive Contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

### ADDITIONAL WATER INFO:

- NITRATE** - Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.
- LEAD** - Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home plumbing. If you are concerned about elevated lead levels in your home water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the **Safe Drinking Water Hotline (800) 426-4791**.
- UNREGULATED CONTAMINANTS** - The Easton Suburban Water Authority conducted monitoring for the List 1 and 2 Unregulated Contaminants as required by the EPA in 2002. No detections of any unregulated contaminant were made. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Drinking water may reasonably be expected to contain at least small amounts of some contaminants. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791**.

Test Results		Easton Suburban			
Inorganic Chemicals					
Contaminant	MCLG	MCL	Maximum Detected by Easton	Likely Source of Contaminant	Notes
Fluoride	4 ppm	4 ppm	1.34 ppm	Erosion of natural deposits; Water additive which promotes strong teeth.	Easton Water adds fluoride to the treated water. Range = 0.00 - 1.34 ppm
Nitrate	10 ppm	10 ppm	0.64 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural products.	The analytical result was well below the levels of concern for Nitrate.
Copper	1.3 ppm	1.3 ppm (AL)	0.36 ppm (90th%)	Erosion of natural deposits.	*
Lead	0 ppb	15 ppb (AL)	5.8 ppb (90th%)	Corrosion of household plumbing systems; Erosion of natural deposits.	**
* For copper, zero (0) samples out of thirty (30) exceeded the AL. 0.54 ppm was the highest single value detected. Samples were analyzed in 2001 and are required every three years.					
** For lead, there were two (2) samples out of thirty (30) that exceeded the AL. 37.4 ppb was the highest single value detected. Samples were analyzed in 2001, and are required every three years.					
Disinfection By-Products					
Total Trihalomethanes	n/a	100 ppb	65.9 ppb	By-products of drinking water chlorination.	*
Total Haloacetic Acids	n/a	80 ppb	26.0 ppb	By-products of drinking water chlorination.	*
* Samples were taken quarterly during 2002, the results represent the highest detected quarter. No samples exceeded the MCL. THM Range = 28.7 - 80.1 ppb HAA5 Range = 9 - 34 ppb					
Radionuclides					
Alpha Emitters	15 pCi/l	15 pCi/l	0.647 pCi/l	Erosion of natural deposits.	Samples taken in the 2000-2003 monitoring period.
Combined Radium	5 pCi/l	5 pCi/l	0.814 pCi/l	Erosion of natural deposits.	
Turbidity					
Turbidity	0	TT=1 NTU	0.44 NTU	Soil run off.	*
TT=% Of samples <0.3 NTU					
* Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Samples are monitored continuously. The single highest value was 0.44 NTU NTU Range = 0.03 - 0.44 NTU					
Volatile Organic Compounds					
Easton Water performed an annual test during 2002 for a total of 21 Volatile Organic Compounds. No Volatile Organic Compounds were detected in the treated water supply.					
Volatile Organic Contaminants					
Chlorine	4 ppm	4 ppm	1.7 ppm	Water additive used to control microbes.	Easton water adds chlorine for disinfection. Range = 0.7 - 1.7 ppm
MRDLG MRDL					
Synthetic Organic Compounds					
Easton Water performed tests during the 2000-2002 compliance period for Synthetic Organic Compounds. No synthetic Organic Compounds were detected in the treated water supply. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.					
Microbiological Contaminants					
Easton Suburban Water analyzes 50 samples/month. Naturally present in the environment. No samples tested positive for fecal or total coliform or E. Coli bacteria.					
Regulation calls for reporting of the highest monthly number of positive samples for total coliform. No sample can test positive for fecal coliform or E. Coli Bacteria.					
Total Organic Carbon (TOC)	TT	1.32		Naturally present in the environment.	*
* This is an average % removal calculation for TOC. The Water Treatment Plant has to average >1% removal over a 12 month period.					
Surface Water Treatment Rule (SWTR) and Interim Enhanced Surface Water Treatment Rule (IESWTR)					
Heterotrophic Plate Count (HPC) Bacteria	Zero	TT	Violation	Naturally present in the environment.	*
* Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.					

Test Results		Easton Suburban	
Additional Monitoring Performed by Easton Water			
Parameter	Recommended Limits**	Maximum Detected by Easton Water	Notes
Chloride	250 ppm	17 ppm	
Color	10 Color Units	< 5 Color Units	
Corrosivity	Lower Range Upper Range	-1 Langelier Index +1 Langelier Index	-1.31
Fluoride	Lower Range Upper Range	1.2 ppm 4.0 ppm	0.5 ppm
Foaming Agents (ABS/LAS)	500 ppb	61 ppb	
Hardness	Lower Range Upper Range	50 ppm 250 ppm	90 ppm
Iron	300 ppb	11 ppb	
Manganese	50 ppb	18 ppb	
Odor	3 Threshold Odor Number (TON)	<1	
pH	Lower Range Upper Range	6.5 8.5	7.5
Sulfate	250 ppm	20 ppm	
Total Dissolved Solids	500 ppm	100 ppm	
Zinc	5 ppm	0.11 ppm	

### RULE VIOLATIONS

**About our Heterotrophic Plate Count (HPC) Violation**, we are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During January 2002 we did not monitor for HPC bacteria when the result of three distribution samples out of fifty for chlorine residual was below 0.02 mg/L total and therefore cannot be sure of the quality of our drinking water during that time at the location in question. At no time did the results of coliform bacteria come up positive.

**Reporting of Compliance Data**, during the May 2002 reporting period the system failed to submit the required report for monthly filter plant performance on time as required. Submission of the form was missed when the rest of the required forms were mailed. This violation has no impact on the quality of the water our customers received and it posed no risk to public health. We have established a report tracking file to ensure that all reporting requirements are met in the future.

**Reporting of Compliance Data**, during the April 2002 through June 2002 reporting period the system failed to submit the required report for Alkalinity and Total Organic Carbon (TOC) on a timely basis as required. Submission of the form was delayed while awaiting sample test results from June 2002. This violation has no impact on the quality of the water our customers received and it posed no risk to public health. We have established a report tracking file to ensure that all reporting requirements are met in the future.

### SPECIAL CONSIDERATION

#### REGARDING CHILDREN, PREGNANT WOMEN, NURSING MOTHERS, AND OTHERS:

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

### SPECIAL WARNING

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. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.