

2003 Annual Drinking Water Quality Report

Easton Suburban Water Authority



THE WATER WE DRINK

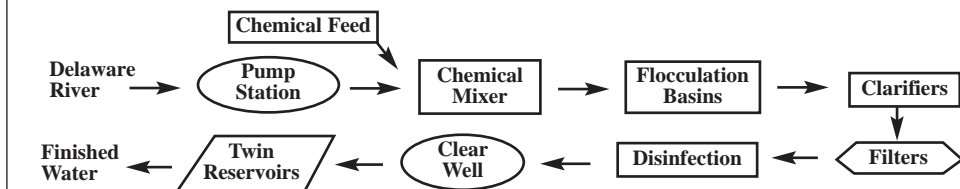
The Easton Suburban Water Authority is pleased to provide this Water Quality Report to meet Consumer Confidence Reporting requirements mandated by the Safe Drinking Water Act (SDWA). The Authority is committed to providing its customers with safe drinking water at all times.

Over the last year, the Easton Suburban Water Authority conducted thousands of tests for drinking water contaminants. Out of all the contaminants tested, 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 is contained, and how it compares to Environmental Protection Agency (EPA) and state standards. **For more information about the drinking water, please call the Authority at (610) 258-7181, or Fax (610-258-7780).**

The Board of Directors of the Easton Suburban Water Authority meets on the second Monday of each month at 3:00 P.M. at the Authority office located at 3700 Hartley Ave., Palmer Twp., Easton PA. Please feel free to attend and participate in these meetings.

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 10 MGD treatment facility originally built in 1932. Major improvements and plant upgrades were completed in 1981. The City of Easton and the Authority are currently undertaking another major plant renovation project that will increase the water plant's ability to remove contaminants and increase the plant's capacity to 16 MGD.



The diagram above 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**.

SECURITY

As a result of the September 11, 2001 attacks, the Authority has revised and expanded existing security measures to enhance protection of its water storage facilities, pumping stations and distribution system. Actions taken were consistent with recommendations of the EPA and FBI.

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.

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.

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:

UNREGULATED CONTAMINANTS - The Easton Suburban Water Authority conducted monitoring for the List 1 and 2 Unregulated Contaminants as required by the EPA in 2003. 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, including bottled 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**.

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Additional Monitoring Performed by Easton Water			
Parameter	Recommended Limits**	Maximum Detected by Easton Water	Notes
Chloride	250 ppm	See Monitoring Violations	
Color	15 Color Units	< 5 Color Units	
Corrosivity	Lower Range Upper Range	-1 Langelier Index +1 Langelier Index	-1.92
Fluoride	2.0 ppm	0.7 ppm	** Secondary Drinking Water Standards refer to recommended
Foaming Agents (ABS/LAS)	500 ppb	54 ppb	limits on compounds that might
Hardness	Lower Range Upper Range	50 ppm 250 ppm	be a nuisance to the customer. These compounds affect
Iron	300 ppb	5 ppb	aesthetic quality (appearance,
Manganese	50 ppb	31 ppb	taste and odor) and do not
Odor	3 Threshold Odor Number (TON)	<1	pose a health risk.
pH	Lower Range Upper Range	6.5 8.5	
Sulfate	250 ppm	20 ppm	
Total Dissolved Solids	500 ppm	120 ppm	
Zinc	5 ppm	0.35 ppm	

Test Results Easton Suburban

Inorganic Chemicals					
	MCLG	MCL	Maximum Detected by Easton	Likely Source of Contaminant	Notes
Fluoride	4 ppm	2 ppm	1.77 ppm	Erosion of natural deposits; Water additive which promotes strong teeth.	Easton Water adds fluoride to the treated water. Range = 0.00 - 1.77 ppm
Nitrate	10 ppm	10 ppm	0.70 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)	0.23 ppm (90th%)	Erosion of natural deposits.	*
Lead	0 ppb	15 ppb (AL)	8 ppb (90th%)	Corrosion of household plumbing systems; Erosion of natural deposits.	**

* For copper, zero (0) samples out of thirty (30) exceeded the AL. 0.459 ppm was the highest single value detected. Samples were analyzed in 2001 and are required every three years.

** For lead, there was one (1) sample out of thirty (30) that exceeded the AL. 18.9 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	80 ppb	76.675 ppb	By-products of drinking water chlorination.	*
Total Haloacetic Acids	N/A	60 ppb	22.545 ppb	By-products of drinking water chlorination.	*

* Samples were taken quarterly during 2003, the results represent the highest detected quarter. No samples exceeded the MCL. THM Range = 17.0 - 77.3 ppb HAA5 Range = 2.0 - 34.0 ppb

Radionuclides

Alpha Emitters	15 pCi/l	15 pCi/l	1.02 pCi/l	Erosion of natural deposits.	Samples taken in the 2000-2003 monitoring period.
Combined Radium	5 pCi/l	5 pCi/l	0.30 pCi/l	Erosion of natural deposits.	

Turbidity

Turbidity	0	TT=1 NTU	0.60 NTU	Soil run off.	*
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* 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 0.60 NTU. NTU Range = 0.03 - 0.60 NTU

Microbiological Contaminants

Easton Water analyzes 60 samples/month. 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. No samples tested positive for fecal or total coliform or E. Coli bacteria.

Total Organic Carbon (TOC)	TT= removal ratio >=1.0	1.55	Naturally present in the environment	*
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* This is an average removal ratio for TOC. The Water Treatment Plant has to have a running annual average removal ratio of >=1.0. Range = .24 - 1.71

Volatile Organic Compounds

Easton Water performed an annual test during 2003 for a total of 21 Volatile Organic Compounds. No Volatile Organic Compounds were detected in the treated water supply.

Disinfectants

Chlorine	4 ppm	4 ppm	1.14 ppm	Water additive used to control microbes.	Easton water adds chlorine for disinfection. Range = 1.0 - 1.6 ppm
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Synthetic Organic Compounds

Easton Water performed tests during the 2003-2005 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.

Test Results Easton Suburban cont.

Monitoring Requirements Not Met

About our Chloride Monitoring 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 2003 we did not test for Chloride and therefore cannot be sure of the quality of our drinking water during that time.

The table below lists the contaminant we did not properly test for during the last year, how often we are supposed to sample for Chloride and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required Sampling Frequency	Number of Samples Taken	When All Samples Should Have Been Taken	When Samples Were or Will Be Taken
Chloride	1/year	1	2003	2/2004

Historically the levels of chloride have been determined to be 17 ppm in 2002 and in 2004 the level was 23 ppm. The recommended limits of this parameter is 250 ppm.

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 **picuries 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.

RULE VIOLATIONS

On August 19, 2003 the fluoride addition to the finished water was temporarily suspended to accommodate a study of the chemical feed system. The PaDEP was not notified of this action which is considered an interruption of a permitted or required process. The lack of fluoridation did not compromise the quality or safety of the drinking water.

In July 2003, the in-line disinfectant (chlorine) analyzer was out of service due to a system malfunction. Grab samplings and analyses were performed during the loss of continuous monitoring, however the manual monitoring time exceeded the five day period allowed before repairs and resumption of continuous monitoring was completed, in violation of reporting regulations. Grab sampling results did not indicate any reduction in water quality or inadequate disinfection during the period that the monitoring system was out of service.

On August 9, 2003 one filter out of ten exceeded the maximum allowable turbidity level of 1.0 NTU for individual filter effluent in four consecutive readings. The range of readings was 1.08 NTU to 3.35 NTU and the total time of filter non-compliance was 45 minutes. None of the other nine filters nor the combined filter effluent exceeded the maximum allowable level during the same period.

Promote water pollution prevention in your neighborhood by organizing the cleanup of a river, lake, stream or canal in your community.

