



Hi! I'm the Water Wizard, the official mascot of the North Wales Water Authority, and I'm here to share with you some important information about your drinking water.

At the North Wales Water Authority, we take great pride in the water that we deliver to our 24,000 plus customers. Our staff of dedicated employees work to bring you the finest drinking water available by producing water that meets or significantly exceeds all current

Forest Park Water Treatment Plant produces water that significantly exceeds all current standards.

Water Quality

Since the Authority operates its own distribution system, as well as being a part owner of the Forest Park Water facilities, sampling under the SDWA (Safe Drinking Water Act) is conducted independently by both units in accordance with appropriate requirements. This ensures that the Authority takes all distribution samples for which it is responsible and Forest Park Water takes all samples related to a surface water treatment facility. To some extent, this arrangement results in duplication of testing. but ensures an added measure of quality control.

> The Forest Park Water Treatment Plant currently exists as one of the most technologically advanced water treatment plant in the United States.

The Forest Park Water Treatment Plant utilizes ozone as both a pretreatment and post-treatment oxidant to replace chlorine in the process. Forest Park Water is one of only a handful of ozone plants currently in operation in the United States. In addition to the use of ozone and the normal treatment train of flocculation, sedimentation and filtration, Forest Park Water was constructed with granular activated carbon (GAC) contactors after the filtration train. These contactors, in combination with the use of ozone, are designed to be biologically active. This extra "polishing step" in the process ensures that any remaining organics or taste and odor compounds are removed before the water leaves the treatment plant. As a result of this process, minor amounts of organic contaminants that may find their way into the raw water source as a result of run-off are effectively dealt with automatically in the process.

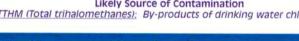
This treatment process ensures that customers of the NWWA are receiving the finest quality drinking water available today from any surface water reatment plant in the United States.

The North Wales Water Authority routinely monitors for constituents in our drinking water according to Federal and State laws. These tables show the results of our monitoring for the period of January 1st to December 31st. 1998. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's mportant to remember that the presence of these constituents does not necessarily pose a health risk.

Contaminant (Unit of Measurement)	Violation Yes/No	NWWA Level Detected	Range	MCLG Goal	Acceptable Level MCL	NWWA Grade
TTHM [Total trihalomethanes] (ppb)	No	11	1-28	0	100	A+
Benzene (ppb)	No	ND	N/A	0	5	A+
Carbon tetrachloride (ppb)	No	ND	N/A	0	5	A+
Chlorobenzene (ppb)	No	ND	N/A	100	100	A+
o-Dichlorobenzene (ppb)	No	ND	N/A	600	600	A+
p-Dichlorobenzene (ppb)	No	ND	N/A	75	75	A+
1,2 - Dichloroethane (ppb)	No	ND	N/A	0	5	A+
1,1 - Dichloroethylene (ppb)	No	ND	N/A	7	7	A+
cis-1,2-Dichloroethylene (ppb)	No	ND	N/A	70	70	A+
trans-1,2-Dichloroethylene (ppb)	No	ND	N/A	100	100	A+
Dichloromethane (ppb)	No	ND	N/A	0	5	A+
1,2-Dichloropropane (ppb)	No	ND	N/A	0	5	A+
Ethylbenzene (ppb)	No	ND	N/A	700	700	A+
Styrene (ppb)	No	ND	N/A	100	100	A+
Tetrachloroethylene (ppb)	No	ND	N/A	0	5	A+
1,2,4-Trichlorobenzene (ppb)	No	ND	N/A	70	70	A+
1,1,1 - Trichloroethane (ppb)	No	ND	N/A	200	200	A+
1,1,2 -Trichloroethane (ppb)	No	ND	N/A	3	5	A+
Trichloroethylene (ppb)	No	ND	N/A	0	5	A+
Toluene (ppm)	No	ND	N/A	1	1	A+
Vinyl Chloride (ppb)	No	ND	N/A	0	2	A+
Xylenes (ppm)	No	ND	N/A	10	10	A+

regulations of the Pennsylvania Department of Environmental Protection. VOC testing was last performed 1/98. TTHM monitoring was performed on a quarterly basis throughout 1998.

TTHM (Total trihalomethanes): By-products of drinking water chlorination



ncluding Pesticides & Herbicide

Contaminant (Unit of Measurement)	Violation Yes/No	NWWA Level Detected	Range	MCLG Goal	Acceptable Level MCL	NWWA Grade
2,4-D (ppb)	No	ND	N/A	70	70	A+
2,4,5-TP (Silvex) (ppb)	No	ND	N/A	50	50	A+
Alachlor (ppb)	No	ND	N/A	0	2	A+
Atrazine (ppb)	No	ND	N/A	3	3	A+
Benzo(a)pyrene (PAH) (nanograms/l)	No	ND	N/A	0	200	A+
Chlordane (ppb)	No	ND	N/A	0	2	A+
Dalapon (ppb)	No	ND	N/A	200	200	A+
Di(2-ethylhexyl) adipate (ppb)	No	ND	N/A	400	400	A+
Di(2-ethylhexyl) phthalate (ppb)	No	ND	N/A	0	6	A+
Dinoseb (ppb)	No	ND	N/A	7	7	A+
Endrin (ppb)	No	ND	N/A	2	2	A+
Heptachlor (nanograms/I)	No	ND	N/A	0	400	A+
Heptachlor epoxide (nanograms/l)	No	ND	N/A	0	200	A+
Hexachlorobenzene (ppb)	No	ND	N/A	0	1	A+
Hexachlorocyclo-pentadiene (ppb)	No	ND	N/A	50	50	A+
Lindane (nanograms/I)	No	ND	N/A	200	200	A+
Methoxychlor (ppb)	No	ND	N/A	40	40	A+
Pentachlorophenol (ppb)	No	ND	N/A	0	1	A+
Picloram (ppb)	No	ND	N/A	500	500	A+
Simazine (ppb)	No	ND	N/A	4	4	A+
Toxaphene (ppb)	No	ND	N/A	0	3	A+

Data presented in the above table is from the most recent testing done in accordance with the regulations of the Pennsylvania Department of Environmental Protection SOC testing was last performed 8/97.

tile Organic (Cont	aminan	s			
	Violation Yes/No	NWWA Level Detected	Range	MCLG Goal	Acceptable Level MCL	NWWA Grade
otal trihalomethanes] (ppb)) No	11	1-28	0	100	A+
e (ppb)	No	ND	N/A	0	5	A+
tetrachloride (ppb)	No	ND	N/A	0	5	A+
enzene (ppb)	No	ND	N/A	100	100	A+
robenzene (ppb)	No	ND	N/A	600	600	A+
robenzene (ppb)	No	ND	N/A	75	75	A+
nloroethane (ppb)	No	ND	N/A	0	5	A+
nloroethylene (ppb)	No	ND	N/A	7	7	A+
ichloroethylene (ppb)	No	ND	N/A	70	70	A+
2-Dichloroethylene (ppb)	No	ND	N/A	100	100	A+
methane (ppb)	No	ND	N/A	00	5	A+
oropropane (ppb)	No	ND	N/A	0	5	A+
nzene (ppb)	No	ND	N/A	700	700	A+
(ppb)	No	ND	N/A	100	100	A+
proethylene (ppb)	No	ND	N/A	0	5	A+
hlorobenzene (ppb)	No	ND	N/A	70	70	A+
ichloroethane (ppb)	No	ND	N/A	200	200	A+
chloroethane (ppb)	No	ND	N/A	3	5	A+
ethylene (ppb)	No	ND	N/A	0	5	A+
(ppm)	No	ND	N/A	1	1	A+
oride (ppb)	No	ND	N/A	0	2	A+
diameter 1						

Data presented in the above table is from the most recent testing done in accordance with the Asbestos (MFL) Barium (ppm) Beryllium (ppb) N/A Likely Source of Contamination Cadmium (ppb) Chromium (ppb) N/A Fluoride (ppm) **Synthetic Organic Contaminants** Mercury (inorganic) (ppb)

> Data presented in the above table is from the most recent testing done in accordance with the regulations of the Pennsylvania Department of Environmental Protection. Unless otherwise noted, IOC testing was last performed 2/97.

Microbiological Contaminants

N/A

Data presented in the above table is from the most recent monitoring done in accordance with the

monitored on a continuous basis

Likely Sources of Contamination: <u>Turbidity</u>: Soil runoff

Level Detected

regulations of the Pennsylvania Department of Environmental Protection. Bacteria and turbidity are

0.04-0.08 N/A TT

0-10

0-3.2

N/A

N/A

0.5

Level MCL

in 5% of monthly samples

a routine sample and repeat

presence of coliform bacteria

sample E.coli Bacteria are total A+

Level MCI

AL=1.3

AL=15

10

A+

coliform positive, and one is also

fecal coliform or E. coli positive

(Unit of Measurement) Yes/No Level Detected Range

Inorganic Contaminants

Total Coliform Bacteria No.

Fecal Coliform and No

Turbidity (NTII) No.

E. coli Bacteria

Arsenic (ppb)

Copper* (ppm) 9/98

Nitrate (as Nitrogen) (ppm) No

Cyanide (ppb) 5/97

Lead* (ppb) 9/98

Selenium (ppb)

Thallium (ppb)

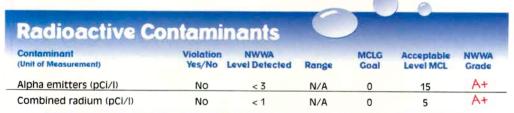
Naturally occurring levels of lead and copper in the source water are non-detectable. This table represents the level detected in the 90th percentile of homes monitored in accordance with the US-EPA Lead and Copper Rule. None of the homes monitored for these contaminants exceeded the Action Level.

> Likely Source of Contamination Arsenic: Erosion of natural deposits: runoff from orchards:

runoff from glass and electronics production wastes Copper: Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Cyanide: Discharge from steel/metal factories; discharge from plastic and fertilizer factories Lead: Corrosion of household plumbing; erosion of natural deposits

Nitrate (as Nitrogen): Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits



Data presented in the above table is from the most recent monitoring done in accordance with the regulations of the Pennsylvania Department of Environmental Protection. Radiological testing was last performed 7/96.

> Likely Source of Contamination Alpha emitters and Combined radium: Erosion of natural deposits

Monitoring Your Water

We constantly monitor the water supply for various constituents. We have defected cryptosporidium in the source water. Studies have suggested that 65 to 97 percent of source waters contain cryptosporidium oocysts. We detected this constifuent in 1 out of 12 samples tested however, we have not detected any crytosporidium in the finished water that we supply to our customers.

Our technologically advanced treatment plant at Forest Park Water is designed to offer superior multiple barrier protection against cryptosporidium in the finished water. Our filtration process along with our pre and post ozonation assures us that constituents such as cryptosporidium do not get past our barriers.

We believe it is important for you to know that cryptosporidum, in the finished water, may cause serious illness in 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. These people should seek advice from their health care providers.

All sources of drinking water are subject to potential contamination by constants that are naturally occurring or man made. Those constituents can be microbes. organic or inorganic chemicals, or radioactive materials. All 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 the 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 1-800-426-4791.

> To arrange a group tour of our water treatment facility. please call our public relations department.

In these tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present. Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

> Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. AL - Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

TT - Treatment Technique - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

MCL - Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 "Goal" (MCLG) is 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.

We hope you have taken the time to read this report and that you have a better understanding of the superior quality of water that you receive.





NORTH WALES WATER AUTHORITY

Pure water, quality service. . . naturally

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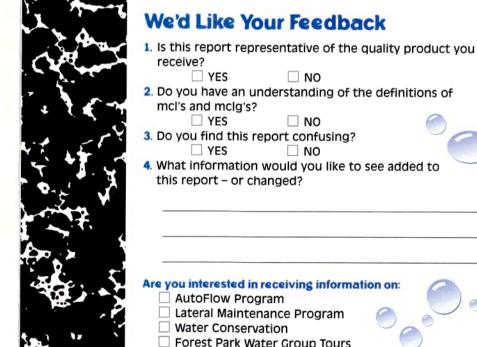
Ne'd Like Your Feedback

receive?

mcl's and mclg's?

YES

this report - or changed?



e you interested in receiving information on: AutoFlow Program

Lateral Maintenance Program Water Conservation Forest Park Water Group Tours

Customer	Number	

our regularly	
eduled public	
neetings are	
eld at 7:00 pm	
n the 1st and	1

3rd Wednesday of the month at

**NOTE: Kindly take the time to complete this brief questionnaire. Your information will help us to respond to state and federal issues regarding your desires for future water quality reports.

