# WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY (The W.T.M.U.A.)

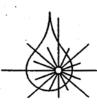
Annual Water Quality Report

January 2006 through December 2006

for the

# HAGER (1438003) AND SCHOOLEY'S MOUNTAIN (1438004) WATER SYSTEMS

As a customer of the W.T.M.U.A., you can be sure that the water we provide meets all standards for safety and quality set by the State and Federal Safe Drinking Water Acts. This annual water quality report provides general information, as well as laboratory test results for the 2006 calender year.



# WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

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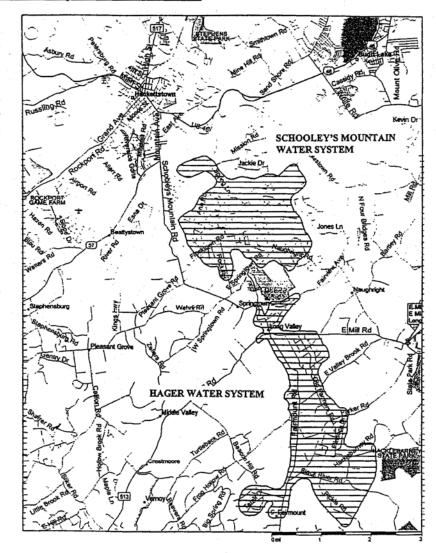
# Annual Drinking Water Quality Report 2007

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water.

We are pleased to report that our drinking water is safe and meets federal and state requirements.

# Where does my water come from?

The Washington Township MUA operates two separate water systems which supply water to portions of the township. The map illustrates the location of the water systems that are operated by the MUA. All of the water supplied to our customers currently come from a total of fourteen wells. The wells draw their water from Precambrian Rock and are between 100 to 450 feet deep. Wells supplying the Hager water system are: well H2 located on Schooley's Mountain Road, well H3 located on Fairmount Road. well H5 located on Douglas Drive, and wells H7 and H8 located on Fairmount Road. Wells supplying the Schooley's Mountain water system are: well SM3 located on Naughright Road, well SM4 located on Naughright Road, well SM5 located on Dogwood Drive, well SM7 located on Flocktown Road, well SM10 located off Spring Lane, well SM 11 located off Sylvan Circle, well SM17 located on Naughright Road, well SM18 located on Bristol Terrace, and well SM 19 located on Spring Lane.



### **Definitions**

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

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

<u>Parts per million</u> (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.

<u>Parts per billion</u> (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

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

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

<u>Treatment Technique</u> (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

<u>Maximum Contaminant Level</u> - 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.

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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for seventy years to have a one-in-a-million chance of having the described health effect.

# Monitoring of the Water

The Washington Township MUA routinely monitors for constituents in your drinking water according to Federal and State laws. The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received a monitoring waiver for asbestos.

Special Considerations 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 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.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

# Substances to be Expected in Drinking Water

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.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas projection, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- 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 storm water runoff, and septic systems.
- Radioactive contaminants which can be naturally occurring or be the result of oil and gas production and mining activities.

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. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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.

#### **Additional Treatment**

To ensure the continued quality of our water we treat it in several ways. All water sources are treated with chemicals to adjust the natural pH of the water and provide disinfection of the source water. We also treat the water supplied to a portion of the Schooley's Mountain water system with polyphosphate to sequester iron and manganese to prevent dirty water and staining of laundry.

#### Radon

In addition to monitoring for the constituents required by federal and state regulations, we monitored for radon in our source water supplies during 2000. We detected radon in the finished water supply at all but one of our source water supplies. The results are included in the Table of Non-Regulated Substances. There is no federal regulation for radon levels in drinking water. Of greater concern than the radon in the concentrations detected in the MUA's source water supplies is the radon detected in indoor air. Radon entering the home through tap water will in most cases be a small source of radon in indoor air. Exposure to air transmitted radon over a long period of time may cause adverse health effects. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. The Washington Township Health Department has radon test kit for purchase. You can contact them at 908-876-3650. For additional information, call the EPA's Radon Hotline (800-SOS-RADON) or NJDEP Radon Section (800-648-0394).

#### **Questions?**

We want our valued customers to be informed about their water utility. If you have any questions about this report or concerning your water utility, please contact the MUA at 908-876-3145. If you want to learn more, please attend any of our regularly scheduled MUA meetings at 46 East Mill Road, Long Valley. Meetings are held on the first Wednesday of each month at 7:30 p.m.

#### What's in My Water

This table shows the results of our monitoring for the period of January 1st to December 31st, 2006. As you can see, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water is safe at these levels.

			REGUI	LATED SUE	STANC	ES	
Substance				y's Mountain		lager	
Substance			Amount	r system Range	Amount	r system Range	Typical Source
(units)	MCL	MCLG		Low-High	Detected	Low-High	
Alpha emitters (pCi/L)	15	0	0.59	0.17-4.92	2.02	0.10-10	Erosion of natural deposits
Radium (pCi/L)	5	0	0.074	-0.1743	0.3	0.0583	Erosion of natural deposits
Barium (ppm)	2	2	0.012	.004-0.040	0.03	.013-0.058	Discharge of drilling wastes; discharge from metal refineries; erosion of natrual deposits
Copper (ppm)	1.3(AL)	1.3	90th percentile 284	No samples exceeded the action level	90th percentile 0184	No samples exceeded the action level	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppm)	15(AL)	0	90th percentile 0021	No samples exceeded the action level	90th percentile 0037	No samples exceeded the action level	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate (ppm)	10	10	2.05	<0.5-5.86	1.7	0.68-3.51	leaching from septic tanks, sewage; erosion of natural deposits
Mercury (ppb)	50	50	0.1	ND3	None	Detected	Discharge from refineries and factories; runoff from landfills; runoff from cropland; erosion of natrual deposits
Selenium (ppm)	50	50	1.3	ND-2.5	1.6	ND-2.4	metal refineries; erosion of natrual deposits; discharge from mines
Total trihalomethanes (TTHM) (ppb)	80	N/A	2.84	<0.40-6.36	None	Detected	By-product of drinking water chlorination
Chloroform (ppb)	N/A	N/A	1.15	<0.26-4.21	None	Detected	By-product of drinking water chlorination
Bromodichloromethane (ppb)	N/A	0	1.21	<0.31-3.97	None	Detected	By-product of drinking water chlorination
Dibromodichloromethane (ppb)	N/A	60	1.25	<0.31-2.95	None	Detected	By-product of drinking water chlorination
Bromoform (ppb)	N/A	0	0.45	<0.39-1.38	None	Detected	By-product of drinking water chlorination
Dibromochloromethane (ppb)	N/A	0	0.24	<0.3078	None	Detected	By-product of drinking water chlorination

#### **NON-REGULATED SUBSTANCES**

Radon (pCi/L)	-/-	-1-	073	202 4720	1 000	NID OCCO	Canadan of makenal damasta
	n/a	n/a	973	392-1728	900	ND-2320	Erosion of natural deposits

#### SECONDARY CONTAMINANTS

Substance							Recommended Upper Limit
tron (ppm)	n/a	n/a	0.194	ND-1.09	None	Detected	0.3
Manganese (ppm)	n/a	n/a	0.0148	ND063	None	Detected	0.05
Sodium (ppm)	n/a	n/a	33	9.0- 59.2	36.4	10.5- 53.2	50

Note: All results are from 2006 with the exception of Radon which is from 2000.

The recommended upper limit for iron is based on unpleasant taste of the water and staining of the laundry. Iron is an essential nutrient, but some people who drink water with iron well above the recommended upper limit could develop deposits of iron in a number of organs in the body.

The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.

For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be of concern to individuals on sodium restricted diet.

#### **Protection of Water Sources**

The New Jersey Department of Environmental Protection has completed and issued the Source Water Assessment Reports and Summaries for these public water systems, which are available at <a href="https://www.state.nj.us/dep/swap">www.state.nj.us/dep/swap</a> or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. The source water assessment performed on our sources determined the following which is illustrated in the table below. This table shows the susceptibility ratings for the seven contaminant categories (and radon) for each source in our systems. The table provides the number of wells that rated high (H), medium (M), or low(L) for each contaminant category. The seven contaminant categories are defined below the tables.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels.

#### SCHOOLEY'S MOUNTAIN WATER SYSTEM

	Pa	thoge	ens	N	utrier	ıts	P	esticid	les	(	/olatil )rgani mpou	ic	In	organ	ics	ı	Radio		1	Rador		Ву	infect produ	uct
Sources	Н	M	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L
Wells - 10	1	1	6	6	1	1		3	5			8			8	1	6	1	7	1			8	-
GUDI - 0			1														1							-
Surface water intakes - 0																								

#### HAGAR WATER SYSTEM

	Pa	thoge	ns	N	utrier	ıts	P	esticid	les	0	Volatii Organ mpou	ic	In	organ	ics		Radio			Rador	1	В	infect produce	uct
Sources	Н	М	L	н	M	L	Н	M	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L	Н	М	L
Wells - 7	1	5		4	2			2	4			6			6	2	4		6			2	4	
GUDI - 0																								
Surface water intakes - 0																								

- Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.
- Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.
- Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.
- Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.
- Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.
- Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.
- Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <a href="http://www.nj.gov/dep/rpp/radon/index.htm">http://www.nj.gov/dep/rpp/radon/index.htm</a> or call (800) 648-0394.
- Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

NJDEP found the following potential contaminant sources within the source water assessment areas for our sources in the MUA's Hager Water System.

# **SOURCE LV 3**

Tier: 2

PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address	Site Municipality	Site County
Currently Known Extents		Combe Fill South Landfill		Chester Twp.	Morris

Tier: 3

PCSI NJDEP Program: New Jersey Pollutant Discharge Elimination System

PCSI Type Program ID Site Name Site Address Site Municipality Site County

Discharge to Ground Water NJ0077691 Permits

PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address	Site Municipality	
Currently Known Extents		Combe Fill South Landfill		Chester Twp.	Morris
Underground Storage Tar	nk	WASHINGTON TWP BD OF	51 OLD FARMERS RD	LONG VALLEY	
Permits		ED OLD FA			

# **SOURCE LV 5**

Tier: 1

PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address		Site County
Currently Known Extents		Combe Fill South Landfill		Chester Twp.	Morris

Tier: 2

PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address	Site Municipality	
Currently Known Extents		Cleaveland Industrial Cen		Tewksbury Twp.	Hunterdon
Currently Known Extents					
Currently Known Extents		Combo Eill South Landfill		Chaetar Tue	Marria

Tier: 3

PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address	Site Municipality	Site County
Currently Known Extents		Cleaveland Industrial Cen		Tewksbury Twp.	Hunterdon
Currently Known Extents		Combe Fill South Landfill		Chester Twp.	Morris
Currently Known Extents					
Known Contaminated Sites List (2001)	NJL800575359	240 PARKER RD	240 PARKER RD	WASHINGTON TO	MORRIS
Underground Storage Tank Permits		MAIER BROS PINE BROOK FARMS IN	193 PARKER RD	LONG VALLEY	

# SOURCE LV 7

Tier: 1

PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address	Site Municipality Site County
Known Contaminated Sites List (2001)	NJL000051698	21 MOUNTAIN VIEW AVENUE	21 MOUNTAIN VIEW AVE	WASHINGTON TO MORRIS

Tier: 3

PCSI NJDEP Program: New Jersey Pollutant Discharge Elimination System

PCSI Type	Program ID	Site Name	Site Address	Site Municipality Site County	
Discharge to Ground Water	NJ0077691				
Permits	•				

PCSI NJDEP Program: Site Remediation Program

PCSI NJDEP Program: Site Remediation Program						
PCSI Type	Program ID	Site Name	Site Address	Site Municipality	Site County	
Known Contaminated Sites List (2001)	NJL600209902	SUNOCO SERVICE STATION WASHING	RTE 24 & MOUNTAIN VIEW	WASHINGTON TO	MORRIS	
Underground Storage Tank Permits		WASHINGTON TWP LONG VALLEY 1ST	70 E MILL RD	LONG VALLEY		
Underground Storage Tank Permits		WASHINGTON TWP MUA LONG VALLEY	46 E MILL RD	LONG VALLEY		
Underground Storage Tank Permits		LONG VALLEY MOBIL SERVICE STAT	RT 24 & OLD FARMER RD	WASHINGTON TW		
Underground Storage Tank Permits		LONG VALLEY SUNOCO SERVICE STA	RT 24 & MT VIEW AVE	WASHINGTON TW		

NJDEP found the following potential contaminant sources within the source water assessment areas for our sources in the MUA's Schooley's Mountain Water System.

#### SOURCE SM 7

Tier: 1 PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address	Site Municipality	Site County
Known Contaminated Sites List (2001)	NJL000070433	FLOCKTOWN ROAD SCHOOL	90 FLOCKTOWN RD	WASHINGTON TO	MORRIS
Underground Storage Tank Permits		WASHINGTON TWP BD OF ED KOSSMA	90 FLOCKTOWN RD	LONG VALLEY	
Underground Storage Tank Permits		WASHINGTON TWP BD OF ED	90 FLOCKTOWN RD	WASHINGTON TW	
Underground Storage Tank Permits		WASHINGTON TWP LONG VALLEY 1ST	119 FLOCKTOWN RD	WASHINGTON TW	
Tier: 3					
PCSI NJDEP Program: S	ite Remediation Pr	ogram			

PCSI Type	Program ID	Site Name	Site Address	Site Municipality Site County
Underground Storage Tank Permits	3.7	WASHINGTON TWP DPW GARAGE	54 ROCK RD	LONG VALLEY

#### SOURCE SM 19

Tier: 3 PCSI NJDEP Program: Site Remediation Program

PCSI Type	Program ID	Site Name	Site Address	Site Municipality	Site County
Known Contaminated Sites	NJL800465767	14 MARJORIE DRIVE	14 MARJORIE DR	WASHINGTON TO	MORRIS
List (2001)					

If you have questions regarding the source water assessment reports or summaries, please contact the Bureau of Safe Drinking Water at swap@dep.state.nj.us or (609) 292-5550. You may also contact the MUA at (908) 876-3145 during business hours.

We at the Washington Township MUA work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.