

May 2014

HILLTOWN TOWNSHIP WATER AND SEWER AUTHORITY 2013 WATER QUALITY REPORT

HTWSA WATER SYSTEM ♠ PWSID #1090117 & PWSID #1090162

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien. (This report contains very important information about your drinking water. Translate it, or speak with someone who understands it.)

HTWSA's Commitment to you: Safe & Reliable Drinking Water



Picture moving from left to right. Keith Seifert, Chief-Silverdale Fire Co., David "Butch" Erwin, Mike Aubertin, Jim Groff, HTWSA Manager

How Good is Hilltown's Water?

The Hilltown Township Water and Sewer Authority (HTWSA) has been committed to providing residents with a safe and reliable supply of high-quality drinking water since 1986. We test our water using the most current equipment and methods to ensure safe drinking water. This annual report will provide you with information regarding the source of your water; test results; and other things you should know about the water you use.

We are proud to report that the water we provide to you exceeds the water quality standards of the Pennsylvania Department of Environmental Protection and the U.S. Environmental Protection Agency. 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.

HTWSA Continues Support of Volunteer Firefighters

When duty calls, members of the Hilltown Water and Sewer Authority staff respond quickly.

It doesn't matter if it's a clogged sewer line or a leaky water pipe.

Or a building on fire.

That's right...continuing a tradition that began years ago, HTWSA workers who serve with local volunteer firefighting companies will once again be permitted to leave work when the alarm is sounded.

"It's the right thing to do," said HTWSA Manager Jim Groff. "Our volunteer fire companies perform a valuable service. It's the least we can do to allow them to help their fellow citizens in a time of need."

HTWSA currently has 2 employees who serve with the Silverdale Fire Co.; David "Butch" Erwin, Operations Manager, and Mike Aubertin, water and sewer operator. Both Butch and Mike are long term employees of HTWSA and have been involved with the local fire services for many years.

"Our Board of Directors supports these brave men who risk their own safety and well-being to help others," said Groff.

You may also visit EPA's drinking water website, www.epa.gov/safewater, for more information about drinking water standards and quality.

Drinking Water Meets and Exceeds EPA and PADEP



We routinely monitor for contaminants in your drinking water according to federal and state laws. The following table shows the results of our monitoring for the period of January 1 to December 31, 2013. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data is from prior years in accordance with the Safe Drinking water Act. The date has been noted on the sampling table results. ♦

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

DETECTED SAMPLE RESULTS

INORGANIC CONTAMINANTS

| Contaminant | Action Level (AL) | MCLG | 90 th Percentile Value | Units | # of Sites Above AL of Total Sites | Violation of TT Y/N | Sources of Contamination |
|-----------------------|-------------------|---------|-----------------------------------|-------------|------------------------------------|---------------------|---|
| Copper | 1.3 | 1.3 | 0.27 | ppm | 0 of 24 | N | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Contaminant | MCL | MCLG | Highest Level Detected | Range | Units | Violation Y/N | Sources of Contamination |
| Asbestos ¹ | 7 | 7 | ND | ND | MFL | N* | Decay of asbestos cement water mains; Erosion of natural deposits. |
| Arsenic ² | 10 | 0 | ND | ND | ppb | N | Erosion of natural deposits; runoff from orchards, runoff from glass & electronic production wastes |
| Barium (2012) | 2 | 2 | 0.063 | 0.024-0.063 | ppm | N | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride (2012) | 2 | 2 | 0.29 | 0.12-0.29 | ppm | N | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Chlorine (In System) | MRDL =4 | MRDLG=4 | 1.31 | 0.41 – 1.31 | ppm | N | Water additive used to control microbes. |

¹ Not Detected (ND). See "Other Violations Section" for information on sampling procedure violation.

² Not Detected (ND) - Four samples were tested for arsenic in 2013, all results were below the detection limit of 3 ppb.

DETECTED SAMPLE RESULTS

DISINFECTION BYPRODUCTS

| Contaminant | MCL | MCLG | Highest Level Detected | Range | Units | Violation Y/N | Sources of Contamination |
|-------------------------------|-----|------|------------------------|-----------|-------|---------------|--|
| Haloacetic acids (HAA) | 60 | n/a | 5.2 | 2.9-5.2 | ppb | N | Byproduct of drinking water disinfection |
| Total Tryhalomethanes (TTHMs) | 80 | n/a | 30.9 | 17.7-30.9 | ppb | N | Byproduct of drinking water disinfection |

RADIONUCLIDES

| Contaminant | MCL | MCLG | Highest Level Detected | Range | Units | Violation Y/N | Sources of Contamination |
|---|-----|------|------------------------|-----------|-------|---------------|---|
| Gross Alpha (2012) | 15 | 0 | 3.7 | 0.72-3.70 | pCi/L | N | Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation. |
| Uranium (2012) | 30 | 0 | 0.58 | 0.39-0.58 | pCi/L | N | Erosion of natural deposits |
| Radium 226 and Radium 228 Combined (2012) | 5 | 0 | 1.06 | 0.12-1.06 | pCi/L | N | Erosion of natural deposits |

Regulated contaminants not listed in the table were not detected in our samples.

ENTRY POINT DISINFECTION RESIDUAL

| Contaminant | Minimum Residual | Lowest Level | Range | Units | Sample Date | Violation Y/N | Sources of Contamination |
|-------------|------------------|--------------|-----------|-------|-------------|---------------|--|
| Chlorine | 0.40 | 0.48 | 0.48-2.91 | ppm | Daily 2013 | N | Water additive used to control microbes. |

Key To Tables (HTWSA & NPWA)

Maximum Contaminant Level (MCL)- The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - 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.

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

Maximum Residual Disinfectant Level (MRDL) - 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.

Maximum Residual Disinfectant Level Goal (MRDLG) - 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.

ppb = parts per billion, or micrograms per liter (µg/L), One part per billion corresponds to a single penny in \$10,000,000.

ppm = parts per million, or milligrams per liter (mg/L), One part per million corresponds to a single penny in \$10,000.

pCi/L = picocuries per liter (a measure of radioactivity)

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

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

N/A—Not Applicable

WHAT ELSE SHOULD I KNOW?

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, these include viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, these include salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, these may come from a variety of sources such as agriculture, urban storm water run off, and residential uses.

Organic chemical contaminants, these include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Information about Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. HTWSA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Information about Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Other Contaminants Tested But Not Detected: Inorganic Compounds such as Nitrate and Nitrite; Regulated Volatile Contaminants, such as Benzene, Styrene, Toluene and Xylenes; Synthetic Organic Contaminants, such as Atrazine, Hexachlorobenzene, Dieldrin, Pentachlorophenol and Carbofuran.

Radioactive contaminants, these can be naturally occurring or be the result of oil and gas production and mining activities.

In order to assure that tap water is safe to drink, EPA and DEP prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP 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 and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline. ♦

SAMPLING AND TESTING

Hilltown Township Water and Sewer Authority routinely monitors for constituents in your drinking water according to the Federal and State laws. 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 systems. HTWSA has met or exceeded all standards set forth for quality and safety.

During 2012, samples were tested at Hydrodyne Analysis, Inc., Silverdale, PA (215) 257-7542 and Analytical Laboratories, Inc. Chalfont, PA (215) 723-6466. More information about contaminant and potential health effects can be obtained by calling the Environmental Protection Agency.

**Safe Drinking Water Hotline
1-800-426-4791**

Information about Arsenic: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

OTHER VIOLATIONS: While asbestos results were below the MCL, the sampling and testing were performed out of sequence.

Where Does Your Water Come From?

In 2013, two municipal wells and an interconnection with North Penn Water System fulfill the needs of HTWSA's customers. Well No. 2, located on South Perkasio Road, supplied groundwater, from the Pleasant Creek Watershed. Well No.1, located off Thistle Lane, supplying groundwater from the East Branch Perkiomen Creek Watershed. Water drawn for these wells undergoes treatment for iron, manganese and arsenic, and chlorine is added as a disinfectant to kill any bacteria. Well No. 5, located on Route 152, was taken offline in 2010 when arsenic was detected. A copy of the Source Water Assessment is available for viewing at the HTWSA Office.

HTWSA has two interconnects with North Penn Water Authority (NPWA). The southern connection is the sole source for the Ridge and Reserve at Hilltown. The northern interconnect is a supplementary water source for the central distribution system. ♦

THINGS YOU SHOULD KNOW ABOUT NPWA'S WATER QUALITY TESTING

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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 advice from your health care provider.

In our unregulated contaminant assessment monitoring performed March 2009 - April 2010, metolachlor ESA was detected in 1 out of 15 wells that were monitored. It was not detected in any of the four samples collected at the Forest Park Water Treatment Plant. Metolachlor ESA is a degradation product of metolachlor, which is a broad spectrum herbicide used for general weed control in non-crop areas. It is also widely used on crops such as corn, cotton, peanuts, grass for seed production, nurseries, hedgerows/fencerows, and landscape plantings. N-nitrosodiethylamine (NDEA) was detected in 1 out of 4 samples collected at the Forest Park Water Treatment Plant. Nitrosamines can form as intermediates and byproducts in chemical synthesis and manufacture of rubber, leather, and plastics. Food such as bacon and malt beverages can contain nitrosamines and there is evidence that they can form in the upper GI tract. Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. The next round of unregulated contaminant assessment monitoring (UCMR 3) began at the Forest Park Water Treatment Plant in February 2014 and will continue through 2015. Monitoring at NPWA wells will begin in January 2015. If you would like to obtain a copy of the results prior to the mailing of our 2014 Annual Water Quality Report, please contact Marianne Morgan, Community Relations Coordinator, at (215) 855-3617.

Giardia and Cryptosporidium are microbial pathogens found in surface water throughout the US. Monitoring of our source water (before treatment) at Forest Park Water (FPW) indicated the presence of Giardia in 1 out of 11 samples collected. Cryptosporidium was not detected in any of the 11 samples collected. FPW treatment processes are designed to remove or inactivate Giardia and Cryptosporidium cysts with a high level of certainty. Current available test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. NPWA encourages immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Giardia and Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Source Water Information

In 2013, approximately 85% of the water that NPWA delivered to its customers was treated surface water from the Forest Park Water Treatment Plant located in Chalfont. NPWA operated 12 groundwater wells located throughout the service territory, in Bucks and Montgomery Counties.

The source of water that is treated at Forest Park Water, which is jointly owned by North Penn and North Wales Water Authorities, is the North Branch Neshaminy Creek. The North Branch Neshaminy Creek originates as a small stream near Route 413 in Central Bucks County. The creek flows into Lake Galena, which is the reservoir for Forest Park Water. Water released from the Lake Galena flows down the Neshaminy Creek to where it is drawn into the Forest Park Water Plant, in Chalfont, PA. In the summer months and times of low flow, water is pumped from the Delaware River at Point Pleasant and diverted into the North Branch Neshaminy Creek near Gardenville, PA. This diversion controls the level of Lake Galena for recreational purposes, ensures a sufficient drinking water supply, and maintains baseflow in the stream.

The following pages contain important information about water quality monitoring of the NPWA distribution system.

| SUMMARY OF NPWA WATER QUALITY DATA | | | | | | |
|---|------------------|------------------------|-------------------|-----------|----------|---|
| Contaminant (Unit of Measurement) | Violation Y/N | Avg. Level Detected | Range Detected | MCLG | MCL | Sources of Contamination |
| REGULATED AT THE WELLS OR TREATMENT PLANT | | | | | | |
| Inorganic Contaminants (2012 - 2013) | | | | | | |
| Arsenic (ppb) | N | 1.0 | 0-5.0 | 0 | 10 | Erosion of natural deposits; runoff from orchards; glass and electronics production waste |
| Barium (ppm) | N | 0.2 | 0-0.4 | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Flouride (ppm) ¹ | N | 0 | 0-0.12 | 2 | 2 | Erosion of natural deposits; discharge from fertilizer and aluminum factories |
| Nitrate (ppm) | N | 1.5 | 0.4-4.1 | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits |
| SYNTHETIC ORGANIC CONTAMINANTS (2011 - 2013) | | | | | | |
| Atrazine (ppb) | N | 0 | 0-0.2 | 3 | 3 | Runoff from herbicide used on row crops. |
| Di(2-ethylhexyl) adipate (ppb) | N | 0 | 0-0.6 | 400 | 400 | Discharge from chemical factories. |
| VOLATILE ORGANIC CONTAMINANTS | | | | | | |
| Tetrachloroethylene (ppb) | N | 0 | 0-0.6 | 0 | 5 | Discharge from factories and dry cleaners. |
| RADIONUCLIDES | | | | | | |
| Alpha Emitters (pCi/L) ¹ (2011) | N | 4.3 | 1.0-8.5 | 0 | 15 | Erosion of natural deposits |
| Uranium (µg/L) (2011) | N | 4.7 | 1.5-10.4 | 0 | 30 | Erosion of natural deposits |
| DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCTS (DBPs) | | | | | | |
| Chlorine (leaving treatment plant) (ppm) | N | 1.15 | 0.94-.24 | MRDLG = 4 | MRDL = 4 | Water additives used to control microbes |
| Chlorine (leaving the wells) (ppm) | N | 0.95 | 0-2.0 | MRDLG = 4 | MRDL = 4 | Water additives used to control microbes |
| Bromate (ppb) | N | 1.4 | 1.0-1.6 | 0 | 10 | By-product of drinking water disinfection |
| PERFORMANCE MONITORING | | | | | | |
| Turbidity (NTU) ² | N | 0.03 | 0.02-0.05 | N/A | TT | Soil runoff |
| CONTAMINANTS TESTED THROUGHOUT THE DISTRIBUTION SYSTEM | | | | | | |
| DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCTS (DBPs) | | | | | | |
| Chlorine (ppm) | N | 0.68 | 0.53-0.83 | MRDLG = 4 | MRDL = 4 | Water additives used to control microbes |
| Haloacetic Acids (ppb) | N | 6.7 | 2.0-14.2 | N/A | 60 | By-product of drinking water disinfection |
| Total Trihalomethanes (ppb) | N | 23.0 | 6.7-41.1 | N/A | 80 | By-product of drinking water disinfection |

SUMMARY OF NPWA WATER QUALITY DATA

BACTERIA IN TAP WATER—TESTED THROUGHOUT THE DISTRIBUTION SYSTEM

| Contaminant (Unit of measurement) | Violation Y/N | Highest % of Positive Samples | Monthly Range of Positive Samples | MCLG | MCL | Sources of Contamination |
|--------------------------------------|------------------|--|--|------|---|---------------------------------------|
| Total Coliform Bacteria | N | 0.93 | 0-0.93 | 0 | 5% of monthly samples are positive | Naturally present in the environment. |

REGULATED AT THE CUSTOMER'S TAP

| Contaminant (Unit of measurement) | Violation Y/N | 90thPer- centile Result | Action Level (AL) | MCLG | # Sites above AL of total | Sources of Contamination |
|--------------------------------------|------------------|-------------------------------|-------------------------|------|------------------------------|--|
| Copper ³ (ppm) | N | 0.590 | 1.3 | 1.3 | 0 out of 33 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead ³ (ppb) | N | 3.9 | 15 | 0 | 0 out of 33 | Corrosion of household plumbing systems; erosion of natural deposits |

¹ The results for Alpha Emitters in this table represents data from wells that were in service in 2013. The one well that had higher results reported in 2011 was shut down permanently and was not used in 2011.

² Turbidity is a measure of the cloudiness of the water and is a good indicator of the effectiveness of the NPWA filtration system. 100% of all samples were <0.1 NTU. As a member of the partnership for Safe Drinking Water, NPWA's goal is to achieve <0.1 NTU. This goal was accomplished in 2013.

³ Lead and copper are sampled at the customer's tap. The detected values indicate the 90th percentile of homes sampled in accordance with the federal regulations.

CONTAMINANTS TESTED BUT NOT DETECTED

Microbiological Contaminants

E. Coli
Cryptosporidium

Regulated Volatile Organic Contaminants

1,1,1-Trichlorethane
1,1,2-Trichloroethane
1,1-Dichloroethylene
1,1,2-Trichlorethane
1,2,4-Trichlorobenzene
1,2-Dichloroethane
1,2-Dichloropropane
Benzene
Carbon tetrachloride
Chlorobenzene
Dichloromethane
Ethylbenzene

Regulated Volatile Organic Contaminants

(continued)
O-Dichlorobenzene
P-Dichlorobenzene
Styrene
Toulene
trans-1,2-Dichlorethylene
Vinyl Chloride
Xylenes, total

Synthetic Organic Contaminants

Di(2-ethylhexyl)phthalate
Pentachlorophenol
Simazine

Inorganic Contaminants

Asbestos
Antimony
Beryllium
Cadmium
Chromium
Cyanide
Mercury
Nickel
Nitrite
Selenium
Thallium

HILLTOWN TOWNSHIP WATER AND SEWER AUTHORITY

Hilltown Township Water and Sewer
Authority
P.O. Box 365
Sellersville, PA 18960

Regular Hilltown Water and Sewer Authority Meetings are held on the second Wednesday of every month at 7:30 p.m. at the Authority Office.

316 Highland Park Road
Hilltown Township

Customer Service: (215) 453-6065

Emergency After-Hours (215) 453-6065

EPA Safe Drinking Water Hotline (800) 426-4791

Contact Authority Manager James C. Groff if you have any questions concerning this report. Hilltown Water and Sewer Authority is a member of the Pennsylvania Rural Water Association and the American Water Works Association.



WE'RE ON THE WEB!!

WWW.HTWSA.ORG