



NORTH PENN WATER AUTHORITY

2011 ANNUAL DRINKING WATER QUALITY REPORT

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.

Owners of multiple family dwellings, commercial businesses, public housing, or similar situations, are encouraged to post and/or distribute this report. Additional copies are available and can be obtained at North Penn Water Authority's operations center or by calling (215) 855-3617.

This report is also available online at www.northpennwater.org.

North Penn Water Authority (NPWA) is pleased to present to you this year's Annual Drinking Water Quality Report. This brochure is a snapshot of last year's water

safe

quality

tested

economical

quality. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental Protection (PA DEP) state standards. We are committed to providing you with information because informed customers are our best allies. The Authority's staff of professionals is dedicated to

ensuring that our customers receive a safe, economical, and continuous supply of water.

From January until the beginning of July, 2011, there were four sources of water for Sellersville Borough; three groundwater wells (Wells 4, 5 and 6) and a raw water catchment basin which supplied the Sellersville Water Treatment Plant in West Rockhill Township. Two of the wells are located within Sellersville and one well is located in West Rockhill Township. Due to high levels of arsenic, Well 5, one of the two wells located within Sellersville, was shut down as soon as NPWA took ownership of the system in May. Well 4, the other groundwater well, which did have an arsenic treatment system on it, was operated at a reduced level from previous years during the summer and was permanently shut off in late August. In July 2011, the Sellersville Water Treatment Plant was shut down.

Starting in July 2011, the primary source of water for Sellersville Borough was treated surface water from the Forest Park Water Treatment Plant (FPW) located in Chalfont. As the water leaves FPW and travels through the distribution system, a small percentage of groundwater from wells located within Hilltown at times can also contribute to the source of water that serves Sellersville. Well 6, the well located in West Rockhill Township, still continues to supply water to the Borough. This well has had no water quality problems and meets

all Federal and State drinking water regulations.

All groundwater wells with arsenic concerns have been permanently shut down and are no longer being used. Please see the section entitled, "How NPWA is Improving the Quality of the Water You Drink" for information concerning improvements made by NPWA to the Sellersville system.



NPWA routinely monitors for constituents in your drinking water according to Federal and State laws. The tables on the following pages show the results of our monitoring for the period of **January 1 to December 31, 2011. These tables contain the most recent data used to assure compliance with Federal and State laws. All data is from 2011 unless otherwise indicated.**

While NPWA tests for over 100 contaminants to ensure water quality, only detected values of contaminants are included in the tables of this report. A list of contaminants that NPWA monitors for but were not detected is in a separate portion of this report. 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, though representative, are more than one year old.

It is important for our valued customers to be informed about their water quality. If you have any questions about this report or regarding your water utility, please contact Marianne Morgan, Community Relations Coordinator, at (215) 855-3617 or visit our website at www.northpennwater.org. If you want to learn more about NPWA, please attend any of our regularly scheduled Board of Directors meetings. Meetings are held on **the fourth Tuesday of every month at the Authority's operations center located near the intersection of Forty Foot and Allentown Roads, in Towamencin Township. Meetings begin at 7:30 p.m.**

HOW NPWA IS IMPROVING THE QUALITY OF THE WATER YOU DRINK



Since acquiring the Sellersville system in May 2011, NPWA has been working diligently to improve the quality of water that we deliver to our customers in Sellersville. In 2011, new water main along with an interconnection was installed along Diamond Street from East Ridge Avenue to the five points

intersection at Main Street. This enabled NPWA to bring into the Sellersville Borough, our treated surface water from the Forest Park Water Treatment Plant in Chalfont. Water main replacement projects along East Ridge Avenue, Branch Street and West Park Avenue were also completed in 2011.

On-going improvements for 2012 include a water main replacement project on E. Temple Avenue. New water main is also being installed and old main is being replaced in portions of Washington Avenue, Lawn Avenue, Church Street, Maple and Eyre Avenues. In addition, an upgrade to the Eyre Avenue Booster Station is underway. This upgrade will improve the

current operations of the booster station as well as add another facet to this station. NPWA is creating a new pressure zone that will increase and sustain water pressure to the following areas: Eyre Ave., Hickory Ln., Hickory Ct., Peabody Ct., Portsmouth Ct., Newbury Ct., Barrington Ct. and portions of Washington, Lawn and Winard Avenues.

NPWA has made significant strides in improving the water quality in Sellersville over the past several months. We have and will continue to make improvements in the Sellersville area in order to provide our customers with the finest quality drinking water and service.



North Penn Water Authority serves over 32,000 customers in the following municipalities:

Hatfield Borough
Lansdale Borough
Sellersville Borough
Souderton Borough
Franconia Township
Hatfield Township
Lower Salford Township
Skippack Township
Towamencin Township

and portions of:
East Rockhill Township
Hilltown Township
Montgomery Township
New Britain Borough
New Britain Township
Salford Township
Upper Gwynedd Township
Upper Salford Township
West Rockhill Township
Worcester Township

North Penn Water Authority has instituted a high-speed mass communication and notification system to communicate to customers about emergency, non-emergency or normal maintenance situations related to the water supply system when necessary. This capability allows the Authority to contact all customers within a short period of time or contact only those customers within a specific geographic area affected by a localized situation. Examples of this include a water main break or a temporary interruption of service due to construction or repair work. It is also used to notify customers when there will be flushing of hydrants in their area.

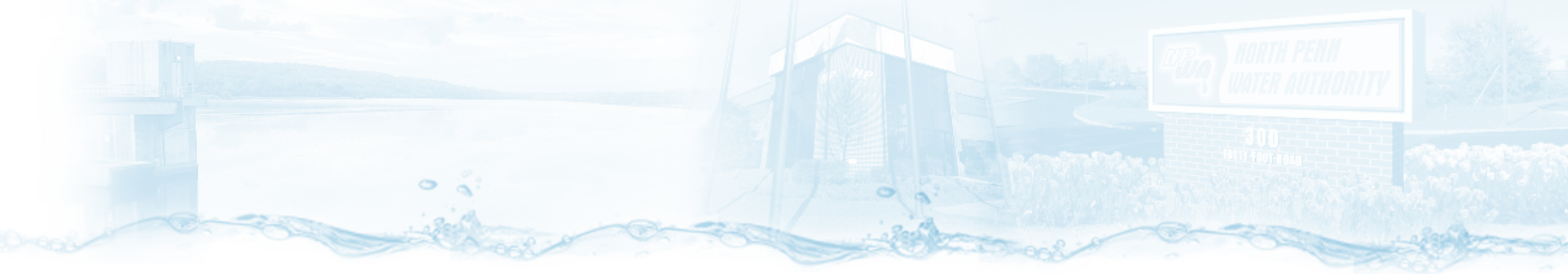
The Authority asks that all customers provide current contact information such as a preferred contact phone number. This will enable NPWA to reach you quickly and also ensures the database is accurate and up-to-date. Your information may be submitted by e-mail at info@northpennwater.org, by contacting the Community Relations Coordinator or online at www.northpennwater.org.



THE DATA IN THE BELOW TABLES ARE FOR SOURCES THAT ARE **NO LONGER IN USE**.
PLEASE SEE PAGE 2 OF THIS REPORT FOR MORE INFORMATION.

CONTAMINANTS – Tested at Sellersville Wells 4 and 5 and Sellersville Water Treatment Plant

Contaminant (Unit of Measure)	Violation Yes/No	Average Level Detected	Range Detected	MCLG	MCL	Major Sources in Drinking Water
Disinfectant Residuals and Disinfection By-products (DBPs)						
Chlorine (ppm) (Leaving Treatment Plant)	No	1.28	0.50 - 2.20	MRDLG=4	MRDL=4	Water additive used to control microbes
Chlorine (ppm) (Leaving the Wells)	No	1.06	0.4 – 1.73	MRDLG=4	MRDL=4	Water additive used to control microbes
Inorganic Contaminants						
Arsenic (ppb) (See health effects section)	Yes	9.2	0 – 16.9	0	10	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Nitrate (ppm)	No	0.16	0 – 0.38	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Radionuclides						
Alpha Emitters (pCi/L)	No	1.6	0 – 4.8	0	15	Erosion of natural deposits
Combined Radium (pCi/L)	No	1.2	0 – 2.1	0	5	Erosion of natural deposits
Uranium (µg/L)	No	0.6	0 – 1.9	0	30	Erosion of natural deposits
Synthetic Organic Contaminants (SOCs)						
Benzo(a)pyrene [PAH] (ng/L)	No	10	0 - 80	0	200	Leaching from linings of water storage tanks and distribution lines
Dalapon (ppb)	No	0.2	0 – 1.4	200	200	Runoff from herbicide used on rights of way
Hexachlorocyclopentadiene (ppb)	No	0.13	0 – 0.48	50	50	Discharge from chemical factories
Volatile Organic Contaminants (VOCs)						
Trichloroethylene (ppb)	No	0	0 – 0.7	0	5	Discharge from metal degreasing sites and other factories
Performance Monitoring at the Treatment Plant						
Total Organic Carbon (% removal)	No	37.3 – 60.9 Removal Achieved	40 - 50 Removal Required	N/A	TT	Naturally present in the environment
Turbidity (NTU)	No	0.09	0.02 - 0.29	N/A	TT	Soil runoff



DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCTS – Tested Throughout the Distribution System

Contaminant (Unit of Measure)	Violation Yes/No	Average Level Detected	Range Detected	MCLG	MCL	Major Sources in Drinking Water
Chlorine (ppm)	No	0.64	0.30 – 1.17	MRDLG=4	MRDL=4	Water additive used to control microbes
HAA5 [Haloacetic Acids] (ppb) (See health effects section)	Yes	89.2	4.02 – 224	N/A	60	By-product of drinking water disinfection
TTHM [Total Trihalomethanes] (ppb) (See health effects section)	Yes	58.8	14.4 – 123	N/A	80	By-product of drinking water disinfection

LEAD AND COPPER – Tested at Customers' Taps – Most recent tests were done in 2010

Contaminant (Unit of Measure)	Violation Yes/No	90th Percentile Result	Action Level (AL)	MCLG	# of Sites Above AL of Total Sites	Major Sources in Drinking Water
Copper (ppm)	No	0.552	1.3	1.3	0 out of 20	Corrosion of household plumbing systems
Lead (ppb)	No	3.6	15	0	0 out of 20	Corrosion of household plumbing systems

In the above 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:

- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Maximum Contaminant Level (MCL):** 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 (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.
- **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.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **N/A:** Not Applicable
- **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.
- **pCi/L:** picocuries per liter (a measure of radioactivity in water)
- **ppb:** parts per billion, or micrograms per liter (µg/L)
- **ppm:** parts per million, or milligrams per liter (mg/L)
- **ppt:** parts per trillion, or nanograms per liter (ng/L)



THE DATA IN THE BELOW TABLES ARE FOR SOURCES THAT ARE **CURRENTLY IN USE**.
PLEASE SEE PAGE 2 OF THIS REPORT FOR MORE INFORMATION.

CONTAMINANTS – Tested at Sellersville Well 6, Forest Park Water Treatment Plant and Hilltown Township

Contaminant (Unit of Measure)	Violation Yes/No	Average Level Detected	Range Detected	MCLG	MCL	Major Sources in Drinking Water
Disinfectant Residuals and Disinfection By-products (DBPs)						
Bromate (ppb)	No	1.9	1.2 – 2.2	0	10	By-product of drinking water disinfection
Chlorine (ppm) (Leaving Treatment Plant)	No	1.10	0.85 - 1.22	MRDLG=4	MRDL=4	Water additive used to control microbes
Chlorine (ppm) (Leaving Well)	No	1.07	0 – 2.0	MRDLG=4	MRDL=4	Water additive used to control microbes
Inorganic Contaminants						
Arsenic (ppb)	No	0.4	0 – 0.7	0	10	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	No	0.12	0.02 – 0.21	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	No	0.09	N/A	2	2	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Nickel (ppb)	No	1.6	0.8 – 2.3	100	100	Erosion of natural deposits; by-product of various industrial processes
Nitrate (ppm)	No	0.62	0.39 – 0.79	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Radionuclides						
Alpha Emitters (pCi/L)	No	1.3	0 – 2.5	0	15	Erosion of natural deposits
Combined Radium (pCi/L)	No	0.8	0 – 1.6	0	5	Erosion of natural deposits
Uranium (µg/L)	No	2.1	1.9 – 2.2	0	30	Erosion of natural deposits
Synthetic Organic Contaminants (SOCs)						
Atrazine (ppb)	No	0	0 – 0.1	3	3	Runoff from herbicide used on row crops
Volatile Organic Contaminants (VOCs)						
cis-1,2-Dichloroethylene (ppb)	No	0.6	0 – 3.1	70	70	Discharge from industrial chemical factories
Trichloroethylene (ppb)	No	0	0 – 0.7	0	5	Discharge from metal degreasing sites and other factories

CONTAMINANTS – Tested at Sellersville Well 6, Forest Park Water Treatment Plant and Hilltown Township

Contaminant (Unit of Measure)	Violation Yes/No	Average Level Detected	Range Detected	MCLG	MCL	Major Sources in Drinking Water
Performance Monitoring at the Treatment Plant						
Total Organic Carbon (% removal) ¹	No	47.6 – 67.3 Removal Achieved	35 - 50 Removal Required	N/A	TT	Naturally present in the environment
Turbidity (NTU) ²	No	0.03	0.02 - 0.05	N/A	TT	Soil runoff

Unregulated Contaminants

N-Nitrosodiethylamine (NDEA) (ppb) <i>(July 2009 – April 2010 Results)</i>	N/A	0	0 – 0.0086	N/A	N/A	Nitrosamines can form as intermediates and byproducts in chemical synthesis and manufacture of rubber, leather, and plastics; can form spontaneously by reaction of precursor amines with nitrate and related compounds, or by action of nitrate-reducing bacteria
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¹ 100% of all samples met the required total organic carbon removal at the Forest Park Water Treatment Plant.

² Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. 100% of all samples were <0.1 NTU. As a member of the Partnership for Safe Drinking Water, our goal is to achieve <0.1 NTU. We accomplished this in 2011.

DISINFECTANT RESIDUALS AND DISINFECTION BY-PRODUCTS – Tested Throughout the Distribution System

Contaminant (Unit of Measure)	Violation Yes/No	Average Level Detected	Range Detected	MCLG	MCL	Major Sources in Drinking Water
Chlorine (ppm)	No	0.76	0.73 - 0.78	MRDLG=4	MRDL=4	Water additive used to control microbes
HAA5 [Haloacetic Acids] (ppb)	No	10.8	10.8 – 10.8	N/A	60	By-product of drinking water disinfection
TTHM [Total Trihalomethanes] (ppb)	No	23.9	23.6 – 24.1	N/A	80	By-product of drinking water disinfection

In the above 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:

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- **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.
- **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.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **N/A:** Not Applicable
- **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.
- **pCi/L:** picocuries per liter (a measure of radioactivity in water)
- **ppb:** parts per billion, or micrograms per liter (µg/L)
- **ppm:** parts per million, or milligrams per liter (mg/L)



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Below is a list of contaminants which NPWA monitored for in 2011 but **DID NOT DETECT**:

Microbiological Contaminants

E. coli
Total Coliform Bacteria

Radionuclides

Radium 226

Unregulated Contaminants

Methyl tertiary butyl ether (MTBE)

Inorganic Contaminants

Antimony	Chromium	Nitrite
Beryllium	Cyanide	Selenium
Cadmium	Mercury	Thallium

Regulated Volatile Organic Contaminants

1,1,1-Trichloroethane	p-Dichlorobenzene	Tetrachloroethylene
1,1-Dichloroethylene	Benzene	Toluene
1,2,4-Trichlorobenzene	Carbon tetrachloride	trans-1,2-Dichloroethylene
1,1,2-Trichloroethane	Chlorobenzene	Vinyl Chloride
o-Dichlorobenzene	Dichloromethane	Xylenes, total
1,2-Dichloroethane	Ethylbenzene	
1,2-Dichloropropane	Styrene	

Synthetic Organic Contaminants

1,2-Dibromo-3-chloropropane	Dioxin (2,3,7,8-TCDD)	Lindane
2,4-D	Diquat	Methoxychlor
2,4,5-TP (Silvex)	Endothall	Oxamyl (Vydate)
Alachlor	Endrin	Pentachlorophenol
Carbofuran	Ethylene dibromide	Picloram
Chlordane	Glyphosphate	PCBs (Polychlorinated biphenyls)
Di-2(ethylhexyl) adipate	Heptachlor	Simazine
Di-2(ethylhexyl) phthalate	Heptachlor Epoxide	Toxaphene
Dinoseb	Hexachlorobenzene	

PEOPLE WITH SPECIAL HEALTH CONCERNS

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from EPA's Safe Drinking Water Hotline at **1-800-426-4791** or visiting their website at www.epa.gov/safewater.

HEALTH EFFECTS INFORMATION

In May 2011, arsenic was detected in Wells 4 and 5 at levels which exceeded the maximum contaminant level (MCL). Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. NPWA sent you a notice when this situation occurred. Since this notice was sent out, both of these wells have been shut down permanently. The water that is now being served to the customers of Sellersville meets all federal and state drinking water standards.

In March, May and August of 2011, NPWA sent notifications indicating that trihalomethanes (THMs) and haloacetic acids (HAAs) were detected at levels which exceeded the maximum contaminant level (MCL). THMs and HAAs are by-product chemicals that are formed when chlorine, which is added to the water during the treatment process for disinfection, reacts with the naturally-occurring organic matter in the water. Some people who drink water containing trihalomethanes and/or haloacetic acids in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Since the Sellersville Water Treatment Plant has been shut down, and the interconnection bringing Forest Park Water into Sellersville is complete, the THM and HAA levels have dropped and are now well within state and federal limits.

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. North Penn Water Authority 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 EPA's Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

In our unregulated contaminant assessment monitoring performed **July 2009 – April 2010**, 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. Foods 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.

Cryptosporidium and *Giardia* are microbial pathogens found in surface water throughout the U.S. Monitoring of our source water (before treatment) at Forest Park Water



(Continued on next page)

HEALTH EFFECTS INFORMATION (Continued)

(FPW) indicated the presence of Cryptosporidium in 1 out of 12 samples collected. Giardia was not detected in any of the 12 samples collected at FPW. Monitoring of the source water at the Sellersville Water Treatment Plant indicated the presence of Giardia in 2 out of 18 samples collected. Cryptosporidium was not detected in any of the 18 samples collected at the Sellersville Water Treatment Plant. Treatment processes are designed to remove or inactivate Cryptosporidium and Giardia 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, immuno-compromised people are at greater risk of developing life-threatening illness. NPWA encourages immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium and Giardia must be ingested to cause disease, and it may be spread through means other than drinking water.

EDUCATIONAL INFORMATION

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 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products 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.

In order to ensure that tap water is safe to drink, EPA and PA DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and PA 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 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 at **1-800-426-4791** or visiting their website at **www.epa.gov/safewater**.



HOW NPWA IS PROTECTING THE WATER YOU DRINK

The Authority has continued to work proactively to protect its sources of water. The North Branch Watershed Association (NBWA) provides educational speakers at meetings, performs riparian buffer plantings, stream cleanups and supports township and county endeavors to mark stream input locations on roadways and private areas. NBWA is dedicated to protecting the North Branch of the Neshaminy Creek, which provides approximately 85% of North Penn Water Authority's source water. Any individuals wishing to become involved in the North Branch Watershed Association may contact Marianne Morgan at the Authority at **215-855-3617** or Meghan Rogalus, Watershed Specialist at Bucks County Conservation District at **215-345-7577, ext. 107**.

In 2009, NPWA's Wellhead Protection (WHP) Program was approved by the PA DEP. The Authority's WHP Program meets the requirements for a local WHP Program in accordance with the Pennsylvania Safe Drinking Water Regulations. The WHP Program provides valuable information to the Authority such as: identifying the protection zone around each well, identifying potential sources of contamination for each well, identifying the land areas around our wells, and the underground geologic layers, that are within the pumping zones of influence. This information will greatly assist the Authority in dealing with emergency response in case of a hazardous spill event that could threaten the well, so that remedial measures could be put in place. Also, implementation of contingency planning could involve revisions to local land use practices, if necessary,

to protect the integrity of the groundwater supply.

A Source Water Assessment of Sellersville's three groundwater sources and one raw water catchment basin was completed in 2005 by the PA DEP. The area around the three groundwater wells is primarily forested and agricultural/undeveloped land with moderate development. The area around the catchment basin is primarily forested with a very small amount of agricultural/undeveloped land and water. The Assessment found that Sellersville's wells were most susceptible to contamination from transportation corridors, agricultural activities, and abandoned landfills. Potential pollutants used or found in residential areas, auto repair shops, cemeteries, and an electroplater also pose a high threat to these wells. In addition to these potential threats, naturally occurring arsenic is a problem for some of Sellersville's wells. Sellersville's raw water catchment basin is most susceptible to contamination from activities related to Route 309 as it runs through the watershed basin.



NORTH BRANCH
NESHAMINY CREEK



In 2003, a Source Water Assessment of the North Branch Neshaminy Creek Intake, which supplies water to the Forest Park Water Filtration Plant, was completed and prepared by Spotts, Steven & McCoy, Inc. for the PA DEP. The Assessment found that the North Branch Neshaminy Creek Intake is potentially most susceptible to point sources of pollution from auto repair shops, wastewater treatment plants, boating, quarries, on-lot septic systems and gas stations. Non-point sources of potential contamination include major transportation corridors and runoff from areas of urban development, livestock farming, and industrial parks. The most serious potential sources are related to accidental release of a variety of materials along transportation corridors and high nutrients from Lake Galena. If you are interested in obtaining information concerning Source Water Assessments for the state, please contact the Authority or the state **PA DEP** at **484-250-5970** or you may obtain copies of these Assessments at **www.dep.state.pa.us** (keyword: **DEP source water**).



FOREST PARK WATER

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 then flows into Lake Galena, which is the reservoir for Forest Park Water. Water released from Lake Galena flows down the Neshaminy Creek to where it is drawn into the Forest Park Water Treatment Plant, in Chalfont, Pennsylvania. 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, Pennsylvania. This diversion controls the level of Lake Galena for recreational purposes, ensures a sufficient drinking water supply, and maintains baseflow in the stream.

Forest Park is a state of the art water treatment facility that combines conventional treatment processes with advanced techniques, which include ozone disinfection and membrane filtration. Membrane filtration is a leading-edge technology capable of consistently producing very high quality water and ensures the plant can safely meet the more stringent federal and state water quality regulations that will be required

in the near future. This combination of traditional and innovative water treatment allows Forest Park to produce the safest, highest quality water possible. In 2011, Forest Park Water received the prestigious Area Wide Optimization Program (AWOP) Award presented by the PA DEP. The award recognizes outstanding efforts toward optimizing turbidity removal performance. AWOP is a national filter plant optimization effort among 22 states, the EPA, and the Association of State Drinking Water Administrators. The AWOP Award and Forest Park Water's on-going participation in the "Partnership for Safe Water", a voluntary program administered by the American Water Works Association, demonstrate Forest Park Water's continuing commitment to operational excellence.

