

ANNUAL
WATER
QUALITY
REPORT
Water testing performed in 2008



Presented By:

MUNICIPAL AUTHORITY OF THE
CITY OF NEW KENSINGTON

PWS ID#: 5650070

Meeting the Challenge

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2008. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies.



Important Health Information

Some people may be more vulnerable than the general population to contaminants in drinking water. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. U.S. EPA and CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

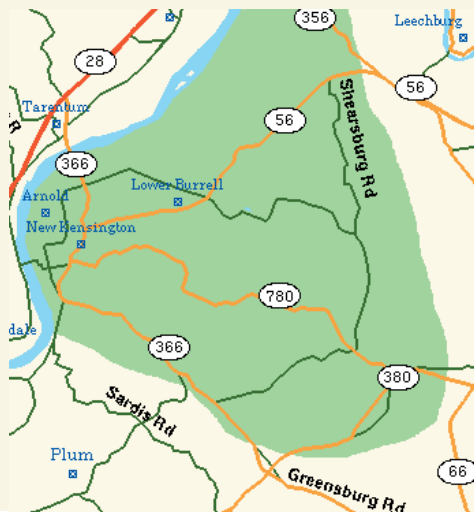
For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

Customers of the Municipal Authority of the City of New Kensington are fortunate because they enjoy an abundant supply of surface water from the Allegheny River. The Harold Burns Smith Water Treatment Plant draws water from the Allegheny River, which carries more than one billion gallons of water per day. The H. Burns Smith Water Treatment Plant was constructed around 1912 with major renovations occurring in 1957 and 1994 to draw from this water supply. This river is constantly being replenished from various reservoirs to our north, including the following: Kinzua Dam and Allegheny Reservoir, Tionesta Lake, East Branch Clarion River Lake, Mahoning Creek Lake, Crooked Creek Lake, Conemaugh River Lake, Loyalhanna Lake, along with underground sources and numerous small creeks and springs. Altogether, our treatment facility provides roughly 1.8 billion gallons of clean drinking water every year.

Source Water Assessment

A Source Water Assessment Report was completed in May of 2002 for our water supply. The greatest potential threats to the Municipal Authority water supply are from the following: stormwater and CSO runoff from industrial and commercial areas; cropland and golf courses carrying pesticide and herbicide contaminants, and possibly sanitary sewage, adjacent to the river; accidental release of known or unknown contaminants along the major transportation and pipeline corridors; cumulative impact of heavy metal discharge from the industrial and power plants with the potential for accidental releases of large quantities of a variety of substances from the power plant and its surrounding facilities; and cumulative release of petroleum products from a number of marinas with the potential for accidental spills along the river. A copy of this report is available for review at our main office.



Community Participation

We encourage public interest and participation in the decisions affecting your drinking water. You are invited to participate in our regular board meetings and to voice your concerns about your drinking water. The board meetings begin at 7:00 p.m. on the first Thursday of every month at the office of the Municipal Authority of the City of New Kensington, 920 Barnes Street, New Kensington, Pennsylvania. These meetings are advertised in the Valley News Dispatch.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhme) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. The Pennsylvania DEP has a Web site (www.emappa.dep.state.pa.us/wimw/viewer.htm) that provides complete and current information on water issues in Pennsylvania, including valuable information about our watershed. Also, the Municipal Authority has a Web site (www.newkenwater.com) that provides further information on water issues and contains links to related sites.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call the Plant Superintendent or Chemist at (724) 335-8595 between 8:00 a.m. and 4:00 p.m., Monday through Friday.

Naturally Occurring Bacteria

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested 817 samples (approximately 65 samples every month) for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations now require that public water that tests positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliform are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

Lead and Drinking Water

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. We are responsible for providing high-quality drinking water, but we 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 www.epa.gov/safewater/lead.



Fixtures With Green Stains

A green or blue-green stain on kitchen or bathroom fixtures is caused by tiny amounts of copper that dissolve in your home's copper plumbing system when the water sits unused overnight. Copper staining may be the result of a leaky faucet or a faulty toilet flush valve, so be sure your plumbing is in good working order.

Copper stains may also be caused by overly hot tap water. Generally speaking, you should maintain your water temperature at a maximum of 120 degrees Fahrenheit. You should consult the owner's manual for your heater or check with your plumber to determine your current heat setting. Lowering your water temperature will reduce the staining problem and save you money on your energy bill.

Also keep in mind that a tap that is used often throughout the day usually will not produce copper stains, so if you flush the tap for a minute or so before using the water for cooking or drinking, copper levels will be reduced.

How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is drawn from the Allegheny River and goes to a mixing chamber where potassium permanganate, powdered carbon, polyaluminum chloride, and lime are added. The addition of these substances causes small particles to adhere to one another (called 'floc'), which makes them heavy enough to settle into a basin from which sediment is removed. Chlorine is then added for disinfection. Ammonium sulfate is added during warmer months to combine with the chlorine (together they form monochloramine). This helps to prevent the formation of chlorine by-products and the loss of chlorine residual as water passes through the distribution piping. At this point, the water is filtered through layers of fine coal and sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges. Chlorine is added again at this point as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, caustic soda (used to adjust the final pH and alkalinity), fluoride (used to prevent tooth decay), and a corrosion inhibitor (used to protect distribution system pipes) are added before the water is pumped to sanitized storage reservoirs, water towers, and into your home or business.



Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium ¹ (ppm)	2008	2	2	0.04	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines/Chlorine ² (ppm)	2008	[4]	[4]	0.8	ND–1.15	No	Water additive used to control microbes
Fluoride ³ (ppm)	2008	4	4	0.96	0.72–1.1	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] ^{4,5} (ppb)	2008	60	NA	22.6	2–31.3	No	By-product of drinking water disinfection
Nitrate ⁶ (ppm)	2008	10	10	0.74	0.37–0.74	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] ^{7,5} (ppb)	2008	80	NA	51.8	21.1–83.3	No	By-product of drinking water chlorination
Total Organic Carbon ⁸ (ppm)	2008	TT	NA	1.5	1–2.3	No	Naturally present in the environment
Turbidity ⁹ (NTU)	2008	TT	NA	0.22	0.03–0.22	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2008	TT	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper ¹⁰ (ppm)	2007	1.3	1.3	0.045	0/31	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead ¹¹ (ppb)	2007	15	0	3	1/31	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹ Some people who drink water containing barium in excess of the MCL over many years could experience an increase in blood pressure.

² The amount reported is the monthly average of distribution samples. More than 50 samples are collected each month. Chloramines are used for disinfection when source water temperatures are above 50 degrees F.

³ The amount detected is the annual average. The fluoride content is measured on a weekly basis. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

⁴ The detected level denotes the maximum four-quarter running average of four sets of distribution samples.

⁵ We were required by the U.S. EPA to conduct an evaluation of our distribution system known as an Initial Distribution System Evaluation (IDSE). It's intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water. The range values include the IDSE sampling data.

⁶ Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

⁷ Some people who drink water containing trihalomethanes 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. The detected level denotes the maximum four-quarter running average of four sets of distribution samples.

⁸ The amount reported is the average of twelve monthly samples. Total organic carbon monitoring and removal is a treatment technique used to help reduce the amount of chlorine by-products formed in the distribution system.

⁹ 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.

¹⁰ Of the samples tested for copper, 90% were at or below 0.045 ppm.

¹¹ Of the samples tested for lead, 90% were at or below 3 ppb. An informational packet about lead in drinking water is available at our main office. Infants and children who drink water containing lead in excess of the Action Level over many years could develop kidney problems or high blood pressure.

Definitions

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

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

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to

health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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