



Annual WATER
QUALITY
REPORT

Reporting Year 2011

Presented By
Merchantville-Pennsauken
Water Commission

PWS ID#: 0424001

Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals 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 or concerns about the information in this report. Visit us at www.mpwc.com.

Community Participation

You are invited to participate in our public forum and voice any concerns about your drinking water. We meet the second Thursday of each month, beginning at 6:00 p.m. at our headquarters, 6751 Westfield Avenue, Pennsauken, NJ 08110.

Lead in Home Plumbing

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 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.

Where Does My Water Come From?

The Merchantville–Pennsauken Water Commission (MPWC) pumps groundwater from 14 wells that tap the Potomac-Raritan-Magothy (PRM) Aquifer and transmits it to the MPWC's six treatment facilities. These wells vary in depth from 140 feet to 300 feet deep. The distribution system consists of 220 miles of piping.

The quantity of water that we are able to pump during any given minute, day, month, or year is strictly regulated by the New Jersey Department of Environmental Protection (NJDEP). In 1993 the NJDEP permanently reduced our permitted annual pumpage capacity. Consequently, we must augment our well water supply from other sources. Currently, that source is NJ American Water Company (NJAWC). At the present time, a very small amount of water is purchased annually, which represents approximately 1 percent of our annual needs. NJAWC supplies water from three sources: surface water from the Delaware River and groundwater from the PRM and Mt. Laurel–Wenonah aquifers. Information on NJAWC water quality can be found at www.newjerseyamwater.com.

The MPWC prides itself on the above-ground water storage facilities that have been built through the years. These storage tanks greatly benefit our many customers. In total, MPWC has six (6) above-ground water tanks, with the newest located in Cherry Hill. The total capacity of the above-ground storage tanks is eight (8) million gallons of water. This type of water storage not only enhances water pressure (which is needed to take showers, sprinkle lawns, and fight fires), but it also provides over a full day's worth of water supply to our entire franchise area in case of an emergency situation.

The MPWC is committed to keeping abreast of the most recent advancements in water treatment technologies through continuous training and education. Our management staff, treatment and transmission personnel attend training seminars and courses designed to keep us up to date and aware of better ways to serve our customers with the safest and best tasting water possible.

The MPWC has invested in the most current and modern methods for the treatment and transmission of your drinking water. In fact, the MPWC has hosted other water treatment professionals to showcase our facilities and share our success stories.

These investments of time and money have enabled the MPWC to provide a continuous and plentiful supply of clean, safe, and tasty water over the past 86 years.

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.

About Our Violation

During the third quarter of 2011 (07/01/11 to 09/30/11), Water Treatment Plant TP#003016 missed the required Combined Radium (-226 and -228) and Gross Alpha and Uranium analysis. The DEP has requested quarterly sampling of this site through the third quarter of 2012, achieving 4 consecutive samples. Note: all samples prior and post event have been compliant.

Working Hard for You

Under the Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (U.S. EPA) is responsible for setting national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove these substances. Each system continually monitors for these substances and reports to the U.S. EPA if they were detected in the drinking water. The U.S. EPA uses this data to ensure that consumers are receiving clean water.

This publication conforms to the regulation under SDWA requiring water utilities to annually provide detailed water quality information to each of their customers. We are committed to providing you with this information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call the main office at (856) 663-0043 and ask for Superintendent Jeffrey C. Whalen. Our office hours are 8:00 a.m. to 4:00 p.m., Monday through Friday, or visit www.mpwc.com.

Source Water Assessment

Our Source Water Assessment Report and Summary is available at www.state.nj.us/dep/swap/ or by contacting the New Jersey Department of Environmental Protection (NJDEP), Bureau of Safe Drinking Water, at (609) 292-5550. The source water assessment performed on our 14 sources can be gotten by calling MPWC and asking for Superintendent Jeffrey C. Whalen.

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. Public water systems are required to monitor for regulated contaminants and to initiate treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, NJDEP may customize or change the existing monitoring schedules based on the susceptibility ratings.

Source water protection is a long-term dedication to clean and safe drinking water. It is more cost-effective to prevent contamination than to address contamination after the fact. Every member of the community has an important role in source water protection. The NJDEP recommends controlling activities and development around drinking water sources, whether it is through land acquisition, conservation easements, or hazardous waste collection programs. We will continue to keep you informed of SWAP's progress and developments. If you have any questions about these findings, please contact us during regular business hours.

What Are PPCPs?

When cleaning out your medicine cabinet, what do you do with your expired pills? Many people flush them down the toilet or toss them into the trash. Although this seems convenient, these actions could threaten our water supply.

Recent studies are generating a growing concern over pharmaceuticals and personal care products (PPCPs) entering water supplies. PPCPs include human and veterinary drugs (prescription or over-the-counter) and consumer products, such as cosmetics, fragrances, lotions, sunscreens, and house cleaning products. Between 2005 and 2010, the number of U.S. prescriptions increased 12 percent to a record 3.7 billion, while nonprescription drug purchases held steady around 3.3 billion. Many of these drugs and personal care products do not biodegrade and may persist in the environment for years.

The best and most cost-effective way to ensure safe water at the tap is to keep our source waters clean. Never flush unused medications down the toilet or sink. Instead, check to see if the pharmacy where you made your purchase accepts medications for disposal, or contact your local health department for information on proper disposal methods and drop-off locations. You can also go on the Web at www.Earth911.com to find more information about disposal locations in your area.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. All contaminants' detected levels are below state set MCLs. 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. 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 about drinking water from their health care providers. The U.S. EPA/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.

REGULATED SUBSTANCES ¹

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2011	15	0	12.39	3.51–12.39	No	Erosion of natural deposits
Barium (ppm)	2011	2	2	0.106	0.037–0.106	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
cis-1,2-Dichloroethylene (ppb)	2011	70	70	0.67	ND–0.67	No	Discharge from industrial chemical factories
Combined Radium (pCi/L)	2011	5	0	4.38	2.75–4.38	No	Erosion of natural deposits
Fluoride (ppm)	2011	4	4	0.07	0.05–0.07	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] ² (ppb)	2011	60	NA	5	ND–5	No	By-product of drinking water disinfection
Methyl tert-Butyl Ether [MTBE] (ppb)	2011	70	NA	6.71	ND–6.71	No	Leaking underground gasoline and fuel tanks; Gasoline and fuel oil spills
Nickel (ppb)	2011	100	NA	0.012	0.006–0.012	No	Pollution from mining and refining operations; Natural occurrence in soil
Nitrate (ppm)	2011	10	10	3.14	0.83–3.14	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] ² (ppb)	2011	80	NA	18.52	ND–18.52	No	By-product of drinking water disinfection
Trichloroethylene (ppb)	2011	1	0	0.63	ND–0.63	No	Discharge from metal degreasing sites and other factories
Uranium (pCi/L)	2011	30	0	0.76	ND–0.76	No	Erosion of natural deposits

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.

pCi/L (picocuries per liter): A measure of radioactivity.

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).

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 (ppm)	2009	1.3	1.3	0.01	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2009	15	0	5.6	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2011	250	NA	38.4	18.1–38.4	No	Runoff/leaching from natural deposits
Hardness [as CaCO ₃] (ppm)	2011	250	NA	61.5	35.7–61.5	No	Naturally occurring
Iron (ppm)	2011	0.3	NA	0.052	ND–0.052	No	Leaching from natural deposits; Industrial wastes
Manganese (ppm)	2011	0.05	NA	<0.01	ND–0.05	No	Leaching from natural deposits
Sodium (ppm)	2011	50	NA	26.3	7.4–26.3	No	Naturally occurring
Sulfate (ppm)	2011	250	NA	52.3	11.8–52.3	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2011	500	NA	211	108–211	No	Runoff/leaching from natural deposits
Zinc (ppm)	2011	5	NA	0.11	ND–0.11	No	Runoff/leaching from natural deposits; Industrial wastes

¹Under a waiver granted on December 30, 1998, by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals and asbestos.

²We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is 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.