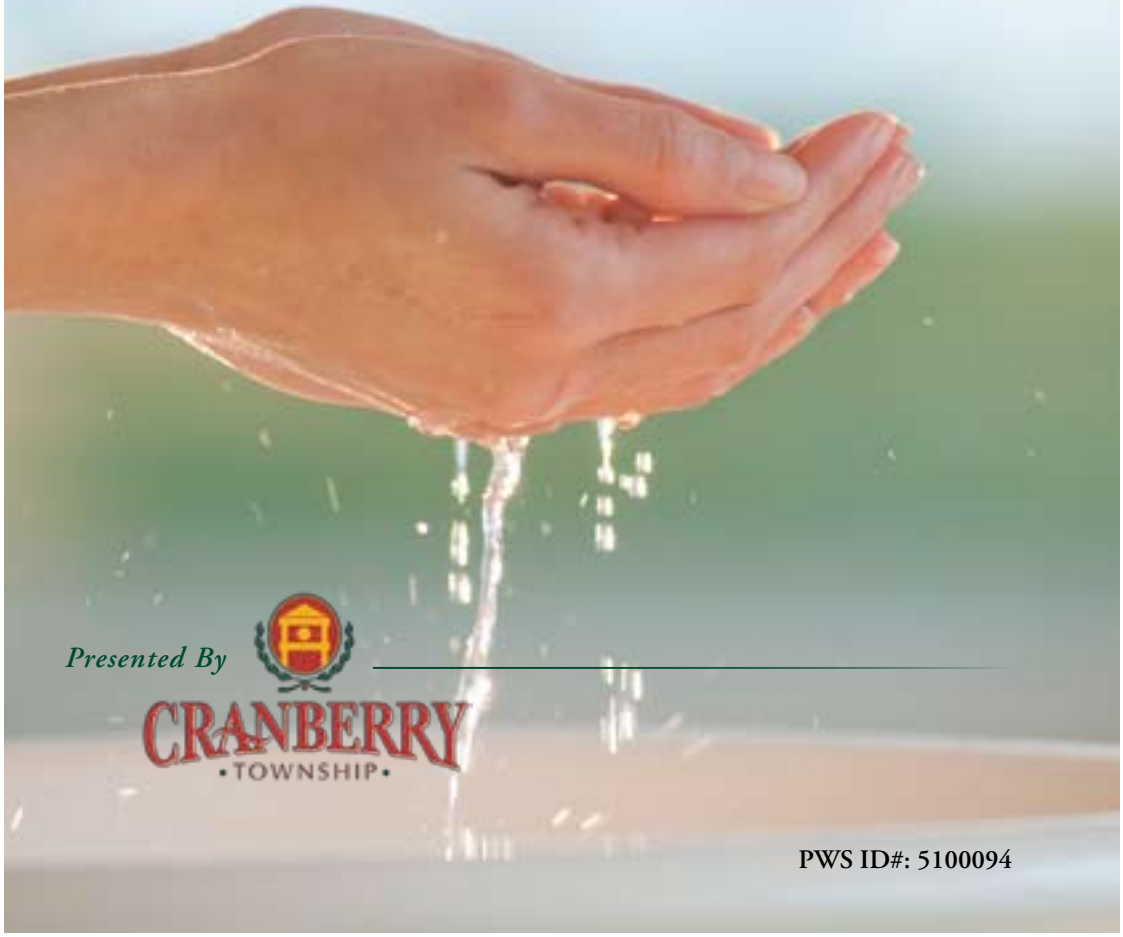
Annual

WATER QUALITY REPORT

Reporting Year 2011



Presented By

CRANBERRY TOWNSHIP

PWS ID#: 5100094

Meeting the Challenge

Thank you for looking at our annual water quality report, which covers testing performed between January 1 and December 31, 2011. We are pleased to report that, once again last year, your drinking water either met or exceeded all state and federal standards. That's no accident; we are constantly at work on new methods for delivering high-quality drinking water to you. As new challenges to drinking water safety surface, we will remain vigilant in meeting our goals for source water protection, water conservation, community education, and serving the needs of our customers.

We would welcome your thoughts or concerns about the information in this report; well-informed customers are our best allies.

Where Does My Water Come From?

Our water comes from the Ohio River. Cranberry Township purchased its entire water supply – 847 million gallons last year – from West View Water, a municipal authority in Allegheny County. Despite our growing population, that amount was actually 14 million gallons less than the year before – largely thanks to an aggressive program of leak detection and repair. Cranberry has a state allocation permit to use up to 4.4 million gallons a day from the Ohio River as its source of drinking water, and we are still comfortably below that allocated level of use. The Township's water supply, which includes provisions for substantial growth over the coming decade, is secured through a long-term agreement with West View, and we are now its biggest customer.

Community Participation

We encourage public involvement on issues concerning our water and wastewater systems. Meetings of the Cranberry Township Board of Supervisors are normally scheduled on the first and last Thursday of each month at 6:30 p.m. in the Cranberry Township Municipal Center, 2525 Rochester Road, and your input is always welcome. Check the Cranberry Township Web site (www.cranberrytownship.org) or call the Customer Service Center at 724-776-4806 to confirm meeting times.

Water Treatment Process

Before water arrives in Cranberry, it undergoes a series of treatments at the West View Water Authority's plant on Neville Island. After screening at the plant's intake, the water goes through a mixing chamber where treatment chemicals coagulate unwanted particles. Those particles then settle to the bottom in a clarifier tank, followed by activated carbon filtration to remove any remaining particles, odors, colorants, or anything else affecting its taste. Finally, a disinfectant is added to kill bacteria, the water passes through an ultraviolet light disinfection system, fluoride is added, and its pH level is stabilized with sodium hydroxide before powerful pumps send the water on its way to Cranberry.

Lead in Home Plumbing

There are no homes in Cranberry equipped with water pipes containing lead, although the plumbing in homes built before 1987 may have used solder containing lead as well as faucet parts made with small amounts of lead. However, if lead were present – as it is in some older communities in the region – elevated levels could cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes mainly from service line materials and plumbing fixtures in the home. We are responsible for providing high-quality drinking water to Cranberry but we can't control the variety of materials used in plumbing components elsewhere, particularly in older homes. If you're not sure whether the water where you are staying has been exposed to pipes containing lead, 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 still concerned about lead in your water, you may wish to have the 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.

Mea Culpa

Last year, West View Water – Cranberry's sole supplier of drinking water – incurred a late reporting violation for dioxin monitoring. Samples were submitted and tested in the appropriate time frame, but the subcontracted laboratory did not report the results on time. However, no dioxin was detected in the samples, so it did not exceed drinking water standards.

Important Health Information

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 or http://water.epa.gov/drink/hotline.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Lorin F. Meeder, Environmental Programs Coordinator, at 724-776-4806, ext. 1176.

Fracking Water

Drilling for natural gas in the Marcellus Shale formation, which lies a mile or more below the surface in many parts of Pennsylvania, involves breaking up rock to release the gas trapped inside. The most widely used method for doing that, hydraulic fracturing, requires tons of water, which is mixed with various chemicals and injected into the shale under high pressure. Some of that water returns to the surface, and it is by then highly contaminated. It is commonly referred to as "fracking water."

Laboratory tests show that chemicals contained in fracking water have the potential to seriously harm human health. So keeping fracking water away from the sources of potable water in Southwestern Pennsylvania is a matter of great concern to local residents. As a result, state and local water officials are constantly monitoring, testing, and working to improve the methods for handling and treating that water. Vigilance in keeping drilling water away from fresh water sources will remain a top priority in the region.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has convinced a lot of people that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is neither cleaner nor safer than most tap water. In fact, between 25 and 40 percent of bottled water is actually just bottled tap water. But people spend 10,000 times more per gallon for bottled water than they typically do for tap water. So if you drink eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual cost would be far less than what you'd pay for bottled water.

Water Main Flushing

Distribution mains are the pipes that carry water to homes, businesses, and hydrants in your neighborhood. The water entering those mains is of very high quality; however, water quality can deteriorate in pipelines over time. In Cranberry, we clean the interiors of those water distribution lines by flowing water through them at full force. We call that water main flushing.

Flushing helps maintain water quality in several ways. For example, it removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of water. Beyond that, sediment can shield undesirable microorganisms from the disinfecting power of chlorine, contributing to their growth within the distribution mains. Flushing helps to remove standing water and ensures the freshness of water with sufficient dissolved oxygen, appropriate disinfectant levels, and an acceptable taste and smell.

However, during flushing operations in your neighborhood, some short-term deterioration of water quality is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full force before use, and avoid using hot water in order to prevent sediment blasted loose in the flushing process to accumulate in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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 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.

Safeguarding Cranberry Waterworks

People here don't think much about their water or sewer service. They don't need to. Cranberry has a group of professionals on staff who do a great job of caring for the Township's water systems all year long. As a result, nobody has to wonder whether there'll be water when they turn on the tap or whether their water is safe to drink. As you'll see in this report, that water meets or exceeds every federal standard for drinking water, and there's plenty of it to go around.

But even though Cranberry's water systems are in excellent shape, their care is a joint responsibility of the Township and its customers. For example, conserving water by repairing small leaks and drips lowers your water bill and helps avert serious damage to your home. But it also relieves capacity strains on the public system.

The current generation of low-flow kitchen, bath, and laundry room fixtures also helps to conserve water. In fact, over the past few years, the average household water consumption in Cranberry has actually declined. Part of it was the result of the Township's effort to find and fix leaking pipes in its distribution system. But a lot of it has to do with new homes outfitted with water-conserving fixtures, and people remodeling their homes with more efficient ones.

Perhaps the most important responsibility of water customers is to recognize that water is a constantly recycled resource, and that the things people put down the drain today can end up in their drinking water tomorrow. So while sewage treatment plants are very good at removing biological material from the wastewater, there are lots of chemicals – paints, pharmaceuticals, solvents, preservatives, insecticides, and much more – that municipal plants just aren't equipped to deal with. And that's not counting industrial wastes, which can be even more toxic. Keeping those agents out of the wastewater stream is an ongoing battle, and it requires everyone's awareness and cooperation.

However, even though people here don't usually think a lot about their water service, we don't want them to take it for granted. So to help focus more public attention on maintaining Cranberry's high level of service, the Township is working to raise the profile of its fresh water, wastewater, and stormwater systems. They are now being collectively identified as Cranberry Waterworks. The Township's goal is to extend the sense of ownership, stewardship, and future development of those systems to people throughout the community.

Having a secure, high-quality source of water is an important personal benefit to customers and a huge advantage to the region and its economic future. But it is a fragile advantage – one which is constantly at risk of degradation from system failures as well as from new chemical and biological threats. Cranberry is working diligently to identify, block, and correct those threats, and we invite all of our customers to join us in that effort.

Cranberry Township Board of Supervisors

Sampling Results

During the past year, we took hundreds of samples to determine whether any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants were present in our water. The table below shows only those which were detected.

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
Haloacetic Acids [HAA] (ppb)	2011	60	NA	10.6	4.3–21.4	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	46.1	28.3–73.5	No	By-product of drinking water disinfection

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)	2010	1.3	1.3	0.061	0/30	No	Corrosion of household plumbing systems; 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.

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).