



Annual
Water Quality Report
Water testing performed in 2010

Presented By



CRANBERRY
TOWNSHIP

PWS ID#: 5100094

Maintaining High Standards

We are pleased to present Cranberry's water quality report for 2010. It includes lab work performed throughout the year in a variety of tests, and the results once again reinforce the high level of confidence our residents have in their Township water supply.

Satisfying state and federal water quality standards is not a simple task. As you will see inside this report, those standards keep getting tighter, so our work to meet them has required our use of new equipment and practices as well. But the result has been our ability to consistently deliver the highest quality drinking water possible.

We encourage you to share your thoughts with us on the information contained in this report. If you have any questions, please contact our Environmental Programs Coordinator Lorin Meeder at 724-776-4806, ext. 1176.

Community Participation

We encourage public participation on issues concerning our water and wastewater system. 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. Check the Cranberry Township Web site (www.cranberrytownship.org) or call the Customer Service Center at 724-776-4806, ext. 5, to confirm meeting times. Your input is always welcome.

Where Does My Water Come From?

Our water comes from the Ohio River. Cranberry Township purchased its entire water supply – 861 million gallons last year – from West View Water, a municipal authority in Allegheny County. Cranberry has received a state Allocation Permit to use the Ohio as its source of drinking water. 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.

Before the water arrives in Cranberry, it undergoes a series of treatments at West View'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.

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 1-800-426-4791.

We're Under Pressure

First of all, we're delighted to inform you that according to the 2010 tests described here, your water meets or exceeds every federal quality standard for public drinking water. At a time when concerns about water quality are often in the news, that's reassuring. And our Board is working hard to make sure it remains abundant as Cranberry grows. Here's why:



Two years ago, we adopted a comprehensive plan which visualizes the Township in 2030 as a built-out, sustainable community of nearly 50,000 residents.

To manage that growth, we are increasing the capacity of our infrastructure – roadways, sewage treatment, utilities, social services, and all the rest as we go along. Our municipal water supply, of course, is a key part of that infrastructure, so we're expanding it to increase our ability to serve this growing customer base.

Right now, more than 90 percent of our residents use Cranberry's municipal water service. All of that water comes from the West View Water Authority, which pipes it up from the Ohio River to our system's gateway, along Commonwealth Drive in Thorn Hill Industrial Park. Our pumping station there is capable of pushing up to 3.1 million gallons a day into our distribution lines. But on peak days of summer, that just isn't enough, so we use the five million gallons in our three storage tanks to make up the difference. That difference will only widen as we grow.

As a result, we're replacing the current pump station with a new one, which we expect to go online in 2013. It will have a capacity of 4.4 million gallons a day. We're also expanding our water mains to include a new 24-inch line along Executive Drive. We want to make sure we have enough pipe capacity to easily move the water north without forcing its pressure so high that we break water lines and create problems for customers.

Our water pressure is already pretty high – which is a good thing, at least up to a point, particularly for fighting fires. And now, for the first time, you can see that pressure for yourself. You may have noticed that more and more of our fire hydrants have been repainted with different colored caps. That color indicates the water flow available at each hydrant, with blue signifying the highest pressure. Most of the ones which have been repainted are in the blue pressure zone. All of them, which include red, orange, and green capped hydrants, tell firefighters how much pump pressure to apply in combating a blaze.

So we're pleased that our system is keeping up with the safety and capacity needs of our fast-growing community. But we're also keeping an eye on the different concerns you've been seeing in the news. For example, we're actively working to hold down the level of THMs – byproducts of the chlorine used to disinfect water. We're on the lookout for TDS – salts, metals and other dissolved solids that are associated with industrial activities such as Marcellus Shale gas drilling. We're watching out for telltale signs of hexavalent chromium. And we're keeping ourselves informed about pharmaceuticals and health care products found in water.

Water quality standards are constantly evolving, so keeping in compliance is a full-time job. But it's one that our staff is doing a tremendous job with. We believe they have earned the confidence of our water customers, both now and into the future.

Cranberry Township Board of Supervisors

Lead and Drinking Water

Cranberry is required to test for lead in its water every three years. The last time we did it was 2007; we tested again in 2010, and tests showed no detectable lead presence. The reason we test is because elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

The West View Water Authority – Cranberry Township's sole supplier of municipal drinking water – issued a statement on December 10 announcing, as required by federal law, that it had found elevated levels of lead in the drinking water of some residential customers.

However, the warning does not apply to water customers in Cranberry. The lead that was discovered is not in the water source; it's in the plumbing of some of the older homes in Ohio River communities that West View also serves. Here's why:

Lead was formerly used as an alloy in the metal water lines and fixtures of homes. If left in contact with standing water for an extended period, small amounts of lead can enter the water. The West View measurements were taken at the taps of these older homes after the water had been left standing in its pipelines overnight.

Cranberry tests its water for lead using the same methodology as West View. Nothing above normal levels of contaminants has ever been found. However, a warm-weather reformulation of West View's disinfectant treatment chemistry – the replacement of chlorine with chloramines – was determined to accelerate the leaching of lead from older pipes. So it has reverted to using chlorine alone.

Water service lines containing lead were in common use 100-150 years ago. Cranberry didn't introduce municipal water service until 60 years ago, by which time the composition of piping had changed. National standards regulating the use of lead in plumbing lines, fixtures, solder, and flux were enacted in 1986 as amendments to the Safe Drinking Water Act. Today in Cranberry, home water service lines are made of either copper or plastic, neither of which contain lead.

Q & A

Why do I get this report each year?

Community water system operators are required by federal law to provide their customers an annual water quality report. The report helps people make informed choices about the water they drink. It lets people know what contaminants, if any, are in their drinking water and how these contaminants may affect their health. It also gives the system operators a chance to tell customers what it takes to deliver safe drinking water.

Why does my water sometimes look milky?

Cloudy water is most often caused by small air bubbles, not unlike the small gas bubbles one finds in carbonated beverages or beer. The best way to verify that water's cloudiness is caused by air is to fill a glass and set it on the counter. If the cause of the cloudiness is air, the water in the glass should clear from bottom to top as the tiny air bubbles rise to the surface. This type of cloudiness is most common in the winter. You can safely drink, cook with, or bathe in this water.

How much water is used during a typical shower?

The Federal Energy Policy Act set a nationwide regulation that limits showerheads to a maximum flow of 2.5 gallons per minute (GPM). Showerheads made before 1980 are rated at 5 GPM. Since the average shower is estimated to last 8.2 minutes, the old showerheads use 41 gallons of water, while the newer, low-flow showerheads use only about 21 gallons.

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 supplied by public water systems. For bottled water, U.S. Food and Drug Administration regulations establish limits for contaminants in order to provide the same level of protection. However, even good drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. But 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, as well as 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 byproducts 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 1-800-426-4791.

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. 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									
				Cranberry Township		West View Water Authority			
Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Amount Detected	Range Low-High	Amount Detected	Range Low-High	Violation	Typical Source
Chloramines [Entry Point] ¹ (ppm)	2010	MinRDL: SW=0.2/ GW=0.4	NA	NA	NA	1.41	1.41–2.19	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chlorine [Entry Point] ¹ (ppm)	2010	MinRDL: SW=0.2/ GW=0.4	NA	NA	NA	1.0	1.0–2.20	No	Water additive used to control microbes
Haloacetic Acids [HAA] (ppb)	2010	60	NA	8.4	6.3–11.6	16	1.0–6.7	No	Byproduct of drinking water disinfection
Nitrate (ppm)	2010	10	10	NA	NA	1.0	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	38.29	28.43–41.93	30.3	0.8–24.1	No	Byproduct of drinking water disinfection
Turbidity ² (NTU)	2010	TT=1	NA	NA	NA	0.083	ND–0.083	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2010	TT=95% of samples<0.3	NA	NA	NA	100	NA	No	Soil runoff

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

				Cranberry Township		West View Water Authority			
Substance (Unit of Measure)	Year Sampled	AL	MCLG	Amount Detected (90TH%tile)	Sites Above AL/ Total Sites	Amount Detected (90TH%tile)	Sites Above AL/ Total Sites	Violation	Typical Source
Copper (ppm)	2010	1.3	1.3	0.061	0/30	0.124	0/106	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead ³ (ppb)	2010	15	0	ND	0/30	29.6	19/106	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹The amount-detected values for chlorine [entry point] and chloramines [entry point] represent the lowest levels that were detected.

²Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of the filtration system.

³Lead was not detected in any of the tests performed by Cranberry Township.

Definitions

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

GW: Groundwater source.

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.

MinRDL (Minimum Residual Disinfectant Level): The minimum level of residual disinfectant required at the entry point to the distribution system.

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).

SW: Surface water source.

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