Annual WATER QUALITY REPORT

Reporting Year 2011

Presented By
Reynoldsburg
Water Department

PWS ID#: 2503203

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. After all, well-informed customers are our best allies.

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.

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.

Where Does My Water Come From?

The City of Reynoldsburg purchases its water from the City of Columbus. We receive our water through six master water meters. The water from Columbus entering Reynoldsburg on East Main Street and along East Broad Street is treated at the Hap Cremean Water Plant. The Hap Cremean Water Plant utilizes surface water from the Hoover Reservoir on Big Walnut Creek. The water entering Reynoldsburg on SR 256 is treated at the Parsons Avenue Water Plant. The Parsons Avenue Water Plant draws water from a ground water supply. We purchased 1.266 billion gallons of drinking water from Columbus, an average 3.468 million gallons per day.

Cryptosporidium in Drinking Water

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 under gone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infection. These people should seek advice from their health care providers about drinking water.

Cryptosporidium (Crypto), for example, is a microscopic organism that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. It is important to note that not all Crypto species are human pathogens and may not cause any adverse effects in humans. Crypto comes from animal waste in the watershed and may be found in our source water; it is found in surface water throughout the U.S. Crypto is eliminated by using a multi-barrier water treatment process, including coagulation, sedimentation, softening, filtration, and disinfection; however, the most commonly used filtration methods cannot guarantee 100 percent removal.

Crypto was detected 10 out of 28 times in the Scioto River and 11 out of 29 times in Big Walnut Creek. Also, 2 out of 12 times, Crypto was detected in Dublin Rd. Water Plant tap water and 1 out of 12 times in Hap Cremean Water Plant tap water. It should be noted, the presence in tap water was minimal and current testing methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Since these results are inconsistent with historical data spanning over 15 years, additional pro-active testing was conducted to confirm the presence of Crypto. Because these results were inconclusive, advanced genotype testing was recently performed that verified the Crypto species detected were nonhuman pathogens.

EPA/CDC 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. For additional information or questions about Columbus water quality, please call the Water Quality Assurance Lab at (614) 645-7691.

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.

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. Over the past five years, 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.

Source Water Assessment

A high-quality source water supply allows the Columbus Division of Water to provide consumers with quality water at a reasonable cost. Protecting our raw water sources requires investments to secure the needs of a growing population, now and in the future. As part of its on-going efforts to maintain regulatory compliance and monitor our water supply, the Columbus Division of Water has completed a Source Water Assessment process. Below is a synopsis of the results:

The City of Columbus water system uses surface water from the Scioto River and Big Walnut Creek, as well as ground water pumped from sand and gravel deposits of the Scioto River Valley. All three sources of water have a relatively high susceptibility to contamination from spills or releases of chemicals. The ground water pumped at the Parsons Avenue plant is susceptible (compared to other ground water systems) because there is no significant clay overlying and protecting the aquifer deposits. The Scioto River and Big Walnut Creek are even more susceptible because they are more accessible and less protected from spills.

The drinking water source protection areas for the City of Columbus's three water sources contain numerous potential contaminant sources, especially the protection area for the Dublin Road Water Treatment Plant (extending along the Scioto River). These include industrial activities, stormwater runoff from developing areas, and a heavily traveled transportation network running alongside and over the water bodies. Runoff from agricultural fields is a concern in both the Scioto River and Big Walnut Creek watersheds.

The City of Columbus treats the water to meet drinking water quality standards, but no single treatment protocol can address all potential contaminants. The City has been proactive in pursuing measures to further protect its source waters. These include land stewardship programs and incentive-driven programs to reduce erosion and runoff of pesticides and fertilizers into the Scioto River and Big Walnut Creek and their reservoirs. More detailed information is provided in the City of Columbus Drinking Water Source Assessment Report, which can be viewed by calling the Watershed Section at (614) 645-1721. More details about the land stewardship program can be found on Columbus's Web site at http://watershed.columbus.gov.

Fact or Fiction

Tap water is cheaper than soda pop. *(Fact: You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.)*

Methods for the treatment and filtration of drinking water were developed only recently. *(Fiction: Ancient Egyptians treated water by siphoning water out of the top of huge jars after allowing the muddy water from the Nile River to settle. And, Hippocrates, known as the father of medicine, directed people in Greece to boil and strain water before drinking it.)*

A typical shower with a non-low-flow showerhead uses more water than a bath. *(Fiction: A typical shower uses less water than a bath.)*

Water freezes at 32 degrees Fahrenheit. *(Fiction: You can actually chill very pure water past its freezing point (at standard pressure) without it ever becoming solid.)*

The Pacific Ocean is the largest ocean on Earth. *(Fact: The Atlantic Ocean is the second largest and the Indian Ocean is the third largest.)*

A single tree will give off 70 gallons of water per day in evaporation. *(Fact)*

Community Participation

Public participation and comment are encouraged at regular meetings of Reynoldsburg City Council, which meets the first and third Mondays of each month at 7:30 p.m. (except August and holidays) at the Municipal Building, 7232 East Main Street, Reynoldsburg, Ohio.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Mark Kipp, Superintendent of Water/Wastewater, at (614) 322-4500.

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. 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.

Note: We have a current, unconditioned license to operate our water system.

REGULATED SUBSTANCES

				Reynoldsburg Water Distribution System		Hap Cremean Water Plant		Parsons Ave. Water Plant			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2011	3	3	NA	NA	0.25	ND–0.63	ND[1]	NA[1]	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2011	[4]	[4]	1.13	0.67–1.25	NA	NA	1.07	0.38–2.13	No	Water additive used to control microbes
Fluoride (ppm)	2011	4	4	NA	NA	1.09	0.60–1.09	0.96	0.85–0.96	No	Water additive which promotes strong teeth
Haloacetic Acids [HAA] (ppb)	2011	60	NA	26.0	5.7–68.5	35.8	22.1–44.7	4.0	1.6–6.1	No	By-product of drinking water disinfection
Nitrate (ppm)	2011	10	10	NA	NA	2.0	ND–2.0	1.0	ND–1.0	No	Runoff from fertilizer use
Simazine (ppb)	2011	4	4	NA	NA	0.19	ND–0.30	ND[1]	NA[1]	No	Herbicide runoff
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	42.5	2.77–106	50.5	30.3–71.2	19.9	11.2–28.3	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2011	5% of monthly samples are positive	0	4.2	NA	ND	NA	ND	NA	No	Naturally present in the environment
Total Organic Carbon [TOC][2] (removal ratio)	2011	TT	NA	NA	NA	2.27	1.86–3.05	NA	NA	No	Naturally present in the environment
Turbidity[3] (NTU)	2011	TT	NA	NA	NA	0.15	0.03–0.15	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	NA	NA	100	NA	NA	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 (ppm)	2011	1.3	1.3	0.0223	0/31	No	Corrosion of household plumbing systems
Lead (ppb)	2011	15	0	<1	0/31	No	Corrosion of household plumbing systems

UNREGULATED SUBSTANCES

		Hap Cremean Water Plant		Parsons Ave. Water Plant		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2011	5.0	NA	3.7	NA	By-product of drinking water disinfection
Bromoform (ppb)	2011	ND	NA	1.6	NA	By-product of drinking water disinfection
Chloroform (ppb)	2011	25.0	NA	2.2	NA	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2011	0.6	NA	4.1	NA	By-product of drinking water disinfection

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).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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

[1] Sampled in 2009.

[2] The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of the TOC removal requirements.

[3] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.