

# 2014 Annual Drinking Water Quality Report

## Cassatt Water

Kershaw County and Lee County Regional Water Authority

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SCDHEC System #SC2820005



We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water is produced from wells within our system and water purchased from the City of Camden and the Alligator Rural Water & Sewer Company. Our Source Water Assessment Plan is available for your review at [www.scdhec.net/water/html/srcwtr.html](http://www.scdhec.net/water/html/srcwtr.html). If you do not have Internet access, please contact Cassatt Water at (803) 432-8235 to make arrangements to review this document or answer any questions about this report. We want our customers to be informed about their water utility.

The U.S. Environmental Protection Agency (EPA) requires that all water utilities provide their customers with annual drinking water quality reports, as mandated by the 1996 Amendments to the Safe Drinking Water Act. This report provides Cassatt Water Customers with information regarding your drinking water consumption and can help you and your family to make health-related decisions.

### ANY QUESTIONS?

If you would like to know more about the information provided in this report, please contact us at 803 432-8235 ext. 11, a member of our staff will be glad to answer any questions you might have. Also, you can find additional information concerning drinking water on the EPA's website ([www.epa.gov/safewater/](http://www.epa.gov/safewater/)).

# What's In My Water?

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals and radioactive substances.



All drinking water, including bottled, may reasonably be expected to contain at least a small amount of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

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. Cassatt Water is 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 drinking 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 at 800 426-4791 or at <http://www.epa.gov/safewater/lead>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

## What Does It All Mean?

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

**Parts per million (ppm)** or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb)** or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.

**Maximum Contaminant Level (MCL)** - 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. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

**Maximum Contaminant Level Goal (MCLG)** 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.

**Maximum Residual Disinfectant Level (MRDL)** - 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - 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.

**Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present.

**Nephelometric Turbidity Unit (NTU)** - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Running Annual Average (RAA)** - Highest result of quarterly averages.

**Total Organic Carbon (TOC) Removal** - The percent removal must be at least 1 or the system is in violation.

**Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**Parts per trillion (ppt)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**Microgram per Liter (ug/l)** 1 microgram per liter or 1 part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000

# Test Results

Kershaw County and Lee County Regional Water Authority (Cassatt Water) routinely monitors for constituents in your drinking water in accordance with Federal and State laws. This table shows the results of our monitoring for the period of January 1, 2014 to December 31, 2014.

## Cassatt Water

Inorganic Contaminants	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (2014)	N	2 Range 0 – 1.8	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
Fluoride (2014)	N	0.88 Range 0 – 0.88	ppm	4	4.0	Erosion from natural deposits; Water additive which promotes Strong teeth; Discharge from fertilizer and aluminum factories
Mercury (2014)	N	2 Range 0 – 2.4	ppb	2	2	Discharge from refineries and factories; Erosion of natural deposits; Runoff from landfills; Runoff from cropland

Radioactive Contaminants	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Gross Alpha Excluding Radon & Uranium (2014)	N	7 Range 0 – 7.1	pCi/L	0	15	Erosion of natural deposits
Combined Radium 226/228 (2014)	N	4 Range 0 – 4.3	pCi/L	0	5	Erosion of natural deposits

Disinfection and Disinfection By-Products*	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Chlorine (2014)	N	1 Range 1 - 1	ppm	4	4	Water additive used to control microbes
Total Trihalomethanes TTHM (2014)	N	1 Range 0 – 9.2	ppb	No goal for the total	80	By-product of drinking water disinfection
Haloacetic Acids (HAAS) (2014)	N	1.45 Range 0 – 1.45	ppb	No goal for the total	60	By product of drinking water disinfection

\*Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Contaminant Metals	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	# Sites Over AL	Likely Source of Contamination
Copper (2012)	N	90 <sup>th</sup> %ile 0.29	ppm	1.3	AL = 1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Volatile Organic Contaminants	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Toluene (2014)	N	0.00114 Range 0–0.00114	ppm	1	1	Discharge from petroleum factories

Kershaw County and Lee County Regional Water Authority (Cassatt Water) participated in the US EPA's Unregulated Contaminant Monitoring Regulation 3 (UCMR 3) program from May 2014 through February 2015. Unregulated contaminants are constituents in the water that don't yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. Contaminants detected are listed below by sampling location, range of levels of detected contaminants and the likely source of contamination.

Unregulated Contaminants UCMR 3	Sampling Location	Range of Levels Detected	Units	Likely Source of Contamination
Hexavalent Chromium (Dissolved)	Midway Well Plant	ND – 0.038	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chlorate	Midway Well Plant	120 - 230	µg/L	Agricultural defoliant or desiccant; used in production of chlorine dioxide

## Unregulated Contaminants continued

Strontium	Midway Well Plant	3.4 – 4.8	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Molybdenum	Singleton Crk. Rd Plant	3.6 – 6.5	µg/L	Naturally occurring element found in ores and present in plants, animals and bacteria; commonly used to form molybdenum trioxide used as a chemical reagent
Hexavalent Chromium (Dissolved)	Singleton Crk. Rd Plant	ND – 0.093	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
1, 4 Dioxane	Singleton Crk. Rd Plant	ND – 0.074	µg/L	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Bromochloromethane	Singleton Crk. Rd Plant	ND - 860	ng/L	Used as a fire-extinguishing fluid, an explosive suppressant, and as a solvent in The manufacturing of pesticides
Chloromethane (Methyl Chloride)	Singleton Crk. Rd Plant	ND - 290	ng/L	Halogenated alkane; used as a foaming agent, in production of other substances and by-product that can form when chlorine used to disinfect drinking water
Chromium	Singleton Crk. Rd Plant	ND - 1	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium	Singleton Crk. Rd Plant	74 -190	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Singleton Crk. Rd Plant	0.29 – 0.39	µg/L	Naturally-occurring elemental metal; used in vanadium pentoxide which is a chemical intermediate and a catalyst
Hexavalent Chromium (Dissolved)	Baker Lot Plant	0.032 – 0.044	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chlorate	Baker Lot Plant	180 - 340	µg/L	Agricultural defoliant or desiccant; used in production of chlorine dioxide
Cobalt	Baker Lot Plant	1 – 1.1	µg/L	Naturally-occurring element found in the earth's crust and at low concentrations in Seawater, and in some surface and ground water; cobaltous chloride was formerly used in medicines and as a germicide
Strontium	Baker Lot Plant	1.9 - 2	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Hexavalent Chromium (Dissolved)	Arrowhead Rd. Plant	ND - 0.088	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Bromochloromethane	Arrowhead Rd. Plant	ND - 350	ng/L	Used as a fire-extinguishing fluid, an explosive suppressant, and as a solvent in The manufacturing of pesticides
Chlorate	Arrowhead Rd. Plant	ND - 410	µg/L	Agricultural defoliant or desiccant; used in production of chlorine dioxide
Chloromethane (Methyl Chloride)	Arrowhead Rd. Plant	ND - 750	ng/L	Halogenated alkane; used as a foaming agent, in production of other substances and by-product that can form when chlorine used to disinfect drinking water
Molybdenum	Arrowhead Rd. Plant	2.2 – 2.9	µg/L	Naturally occurring element found in ores and present in plants, animals and bacteria; commonly used to form molybdenum trioxide used as a chemical reagent
Strontium	Arrowhead Rd. Plant	51 - 80	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Arrowhead Rd. Plant	ND – 1.2	µg/L	Naturally-occurring elemental metal; used in vanadium pentoxide which is a chemical intermediate and a catalyst
Hexavalent Chromium (Dissolved)	Camden-Connection	0.073 – 0.13	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
1,4-Dioxane	Camden-Connection	0.07 – 0.13	µg/L	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Chromium	Camden-Connection	ND – 0.37	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium	Camden-Connection	54 - 64	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Camden-Connection	0.69 – 1.6	µg/L	Naturally-occurring elemental metal; used in vanadium pentoxide which is a chemical intermediate and a catalyst
Hexavalent Chromium (Dissolved)	Distribution System	ND - 0.047	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chlorate	Distribution System	99 - 180	µg/L	Agricultural defoliant or desiccant; used in production of chlorine dioxide
Cobalt	Distribution System	ND – 1.5	µg/L	Naturally-occurring element found in the earth's crust and at low concentrations in seawater, and in some surface and ground water; cobaltous chloride was formerly used in medicines and as a germicide
Chromium	Distribution System	ND – 0.38	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium	Distribution System	3.3 – 4.2	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Distribution System	ND – 0.32	µg/L	Naturally-occurring elemental metal; used in vanadium pentoxide which is a chemical intermediate and a catalyst

For more information on Unregulated Contaminants go to: <http://www.drinktap.org/home/water-information/water-quality/ucmr3.asp>

## The City of Camden

Contaminant	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Fluoride (2014)	N	0.42 Range 0.42 – 0.42	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (2014)	N	0.45 Range 0.45 – 0.45	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits

The City of Camden participated in the US EPA's Unregulated Contaminant Monitoring Regulation 3 (UCMR 3) program in 2013 and 2014. Unregulated contaminants are constituents in the water that don't yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. Cassatt Water purchases some of its water from the City of Camden. As a customer of Cassatt Water, you have a right to know the results. Contaminants detected are listed below by sampling location, range of levels of detected contaminants and the likely source of contamination.

Unregulated Contaminants UCMR 3	Sampling Location	Range of Levels Detected	Units	Likely Source of Contamination
Hexavalent Chromium (Dissolved)	Camden-WTP	0.079 – 0.22	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
1,4-Dioxane	Camden-WTP	ND – 0.43	µg/L	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Chromium	Camden - WTP	0.21 – 0.34	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium	Camden-WTP	47 – 67	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Camden-WTP	0.58 – 1.5	µg/L	Naturally-occurring elemental metal; used in vanadium pentoxide which is a chemical intermediate and a catalyst
Hexavalent Chromium (Dissolved)	Distribution System	0.082 – 0.28	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chromium	Distribution System	ND – 0.3	µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Strontium	Distribution System	51 – 65	µg/L	Naturally occurring element; historically, commercial use of strontium has been in faceplate glass of cathode-ray tube televisions to block x-ray emissions
Vanadium	Distribution System	0.6 – 1.4	µg/L	Naturally-occurring elemental metal; used in vanadium pentoxide which is a chemical intermediate and a catalyst

For more information on Unregulated Contaminants go to: <http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx>

## Alligator Rural Water & Sewer Company

Contaminant	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Nitrate (2014)	N	2 Range 1.6 – 1.6	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
Combined Radium 226/228 (2013)	N	2.68 Range 2.68 – 2.68	pCi/L	0	5	Erosion of natural deposits

