

**Pelham Water Works monitored for Stage 2 Disinfection By-Products in the distribution system during 2014.**

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
HAA5 (Haloacetic Acids)(LRAA)	N	12-51	ppb	0	60	By-product of drinking water chlorination
TTHM (Total trihalomethanes) (LRAA)	N	16-64	ppb	0	80	By-product of drinking water chlorination

**Table of Detected Contaminants**

Contaminant	Talladega / Shelby WTP		Shelby South WTP		MCLG	MCL	Likely Source of contamination
	Violation Y/N	Level Detected	Level Detected	Unit Measurement			
Turbidity	N	0.29	0.39	NTU	n/a	TT	Soil runoff
Alpha emitters	N	< 1.0	ND	pCi/L	0	15	Erosion of natural and man-made deposits
Combined radium	N	< 0.9	ND	pCi/L	0	5	Erosion of natural and man-made deposits
Barium	N	ND	29	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chlorine	N	2.02	2.57	ppm	MRDLG=4	MRDLG=4	Water additive used to control microbes.
Chlorine Dioxide	N	40	N/A	ppb	MRDLG=800	MRDL=800	Water additive used to control microbes.
Chlorite	N	470	N/A	ppb	800	1000	By product of drinking water chlorination.
Copper	N	ND	11	ppb	1300	AL=1300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Fluoride	N	0.86	0.9	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	N	530	292	ppb	10000	10000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total Nitrate/Nitrite	N	530	292	ppb	10000	10000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
TOC (Total Organic Carbon)	N	2.0	1.31	ppm	N/A	TT	Naturally present in the environment.
TTHM (RAA) (Total Trihalomethanes)	N	14.7	9.85	ppb	0	80	By product of drinking water chlorination.
HAA5 (RAA) (Haloacetic Acids )	N	4.3	4.36	ppb	0	60	By product of drinking water chlorination.
HAA5 (LRAA)(Haloacetic Acids )	N	12-51	In distribution system	ppb	0	60	By product of drinking water chlorination
TTHM (LRAA) (Total Trihalomethanes)	N	16-64	In distribution system	ppb	0	80	By product of drinking water chlorination
<b>Secondary Contaminants</b>							
Aluminum	N	ND	ND	ppm		0.05-0.2	Effect colored water
Chloride	N	28.5	3	ppm		250	Effect salty taste
Magnesium, as Mg	N	4.83	3.88	ppm			Effect black to brown color; black staining; bitter metallic taste
Odor	N	ND	Strong Chlorine			3 Tons	Effect rotten egg, musty, or chemical smell
Sodium, as Na	N	4.88	4.05	ppm			
Sulfate	N	12.1	36.6	ppm		250	Effect salt taste
Total Dissolved Solids (TSS)	N	88	121	ppm		500	Effect hardness, deposits, colored water, staining, salty taste

**Microbiological Contaminants:**

- (1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. If coliforms were found in more samples than allowed, this would be a warning of potential problems.
- (2) Fecal coliform/E.Coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.
- (3) Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

**Radioactive Contaminants:**

- (4) Beta/photon emitters. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (5) Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (6) Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

**Inorganic Contaminants:**

- (7) Antimony. Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
- (8) Arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
- (9) Asbestos. Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
- (10) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
- (11) Beryllium. Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
- (12) Cadmium. Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
- (13) Chlorine. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
- (14) Chlorine dioxide. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
- (15) Chlorite. Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
- (16) Chromium. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
- (17) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
- (18) Cyanide. Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
- (19) Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years

- could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.
- (20) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
- (21) Mercury (inorganic). Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience problems with their stomach or intestines.
- (22) Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
- (23) Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
- (24) Total Nitrate/Nitrite. Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
- (25) Selenium. Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
- (26) Thallium. Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

**Synthetic organic contaminants including pesticides and herbicides:**

- (27) 2,4-D. Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
- (28) 2,4,5-TP (Silvex). Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
- (29) Acrylamide. Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
- (30) Atrachlor. Some people who drink water containing atrachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
- (31) Atrazine. Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
- (32) Benzo(a)pyrene (PAH). Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
- (33) Carbofuran. Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
- (34) Chlordane. Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
- (35) Dalapon. Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
- (36) Di (2-ethylhexyl) adipate. Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
- (37) Di (2-ethylhexyl) phthalate. Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
- (38) Dibromochloropropane (DBCP). Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
- (39) Dinoseb. Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.

- (40) Diquat. Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
- (41) Dioxin (2,3,7,8-TCDD). Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
- (42) Endothal. Some people who drink water containing endothal in excess of the MCL over many years could experience problems with their stomach or intestines.
- (43) Endrin. Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
- (44) Epichlorohydrin. Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems and may have an increased risk of getting cancer.
- (45) Ethylene dibromide. Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
- (46) Glyphosate. Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
- (47) Heptachlor. Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
- (48) Heptachlor epoxide. Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
- (49) Hexachlorobenzene. Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
- (50) Hexachlorocyclopentadiene. Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
- (51) Lindane. Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
- (52) Methoxychlor. Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
- (53) Oxamyl (Vydate). Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
- (54) PCBs (Polychlorinated biphenyls). Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thyroid gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
- (55) Pentachlorophenol. Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
- (56) Picloram. Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
- (57) Simazine. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
- (58) Toxaphene. Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

**Volatile Organic Contaminants:**

- (59) Benzene. Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
- (60) Carbon Tetrachloride. Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
- (61) Chlorobenzene. Some people who drink water containing chlorobenzene in excess of the MCL

- over many years could experience problems with their liver or kidneys.
- (62) o-Dichlorobenzene. Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
- (63) p-Dichlorobenzene. Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
- (64) 1,2-Dichloroethane. Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
- (65) 1,1-Dichloroethylene. Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
- (66) cis-1,2-Dichloroethylene. Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
- (67) trans-1,2-Dichloroethylene. Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
- (68) Dichloromethane. Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
- (69) 1,2-Dichloropropane. Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
- (70) Ethylbenzene. Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
- (71) Styrene. Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
- (72) Tetrachloroethylene. Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
- (73) 1,2,4-Trichlorobenzene. Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
- (74) 1,1,1-Trichloroethane. Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
- (75) 1,1,2-Trichloroethane. Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
- (76) Trichloroethylene. Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
- (77) Toluene. Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
- (78) Vinyl Chloride. Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
- (79) Xylenes. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
- (80) Total Organic Carbon. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increase risk of getting cancer.
- (81) THMs (Total Trihalomethanes). Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
- (82) HAAs (Haloacetic Acids). Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

# Pelham Water WORKS

*Water is purchased from Shelby County Water Services to serve your area.*

**P.O. Box 1479  
Pelham, AL 35124 | 205.620.6420**

# Annual Drinking Water Quality Report

## PELHAM WATER WORKS

We are very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services delivered to you over the past year. Our goal is and always has been, to provide you a safe and dependable supply of drinking water.

We purchase water from Shelby County Water Services to serve your area. The sources of the water are the Talladega/ Shelby Water Treatment Plant (TSWTP) and the Shelby County South Water Treatment Plant (SWTP). The water treated at these facilities comes from the Coosa River/Lay Lake. The treatment capacity of the Talladega/Shelby Water Treatment Plant is 13.8 million gallons per day and the treatment capacity of the Shelby County South Water Treatment Plant is 8 million gallons per day for a total capacity of 21.8 million gallons per day.

Water at the Talladega/Shelby Water Treatment Plant and the Shelby South Water Treatment Plant is treated in a manner that is typical of surface water plants. Treatment includes flocculation, sedimentation, filtration and the addition of copper sulfate, potassium permanganate, hydrogen peroxide, powdered activated carbon, chlorine dioxide, alum-based coagulant, ferric-based coagulant, calcium carbonate, granular activated carbon, chlorine for disinfection and fluoride for dental health.

Pelham Water Works and Shelby County Water Services routinely monitor for constituents in your drinking water according to Federal and State laws. The Chemical Monitoring Data Information in this report has been provided to Pelham Water Works by Shelby County Water Services. The tables show the results of monitoring for the period of January 1st to December 31st of 2014 unless noted otherwise.

We are pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact the City of Pelham's Public Works Director, Mr. Eddy Jowers at Pelham Water Works, 205-620-6413. We want our valued customers to be informed about their water utility. If you want to attend any of our regularly scheduled City Council Meetings, they are on the 1st and 3rd Monday of each month. Mayor Gary W. Waters is the Superintendent of the Water Works and the City Council members serve as the Water Board. The Council Members include Rick Hayes, Ron Scott, Beth McMillan, Maurice Mercer and Karyl Rice.

### DEFINITIONS

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

**Not Tested (NT)** - no testing was required during this monitoring period.

**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.

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

**Parts per quadrillion (ppq) or Picograms per liter (picograms/l)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

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

**Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL)** - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

**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.

**Action Level** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

**Maximum Contaminant Level** - (mandatory language)

The "Maximum Allowed" (MCL) is 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.

**Maximum Contaminant Level Goal** - (mandatory language) The "Goal" (MCLG) is 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 Goal or 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.

**Maximum Residual Disinfectant Level or 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.

**RAA** - Running annual average

**LRAA** - Locational running annual average.

### WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts 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.

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 and radioactive material, and it can pick up substances resulting from the presence of animals or from human activity.

MCLs 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immunocompromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk 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 (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 of components associated with service lines and home plumbing. Pelham Water Works 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 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 <http://www.epa.gov/safewater/lead>.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

We at Pelham Water Works and Shelby County Water Services work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

### TEST RESULTS 2014 unless noted

Contaminant	Violation Y/N	Talladega/Shelby WTP (TSWTP) Level Detected	Shelby South WTP (SWTP) Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>							
1. Total Coliform Bacteria	N	ND	ND	Presence Or Absence	0		Naturally present in the environment
2. Fecal coliform and E.coli	N	ND	ND	Presence Or Absence	0		Human and animal fecal waste
3. Turbidity	N	0.29	0.39	NTU	n/a	TT	Soil runoff
<b>Radioactive Contaminants (TSWTP tested in 2008, SWTP tested in 2012)</b>							
4. Beta/photon emitters	N	ND	ND	mrem/yr	0	4	Decay of natural and man-made deposits
5. Alpha emitters	N	<1.0	ND	pCi/L	0	15	Erosion of natural deposits
6. Combined radium	N	<0.9	ND	pCi/l	0	5	Erosion of natural deposits
<b>Inorganic Contaminants</b>							
7. Antimony	N	ND	ND	ppb	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
8. Arsenic	N	ND	ND	ppb	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
9. Asbestos	N	ND	N/A	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
10. Barium	N	ND	29	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
11. Beryllium	N	ND	ND	ppb	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
12. Cadmium	N	ND	ND	ppb	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
13. Chlorine	N	2.02	2.57	ppm	MRDLG=4	MRDLG=4	Water additive used to control microbes.
14. Chlorine dioxide	N	40	N/A	ppb	MRDLG=800	MRDL=800	Water additive used to control microbes.
15. Chlorite	N	470	N/A	ppb	800	1000	By-product of drinking water chlorination.
16. Chromium	N	ND	ND	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
17. Copper	N	ND	11	ppb	1300	AL= 1300	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
18. Cyanide	N	ND	ND	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
19. Fluoride	N	0.86	0.9	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
20. Lead	N	ND	ND	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
21. Mercury (inorganic)	N	ND	ND	ppb	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
22. Nitrate (as Nitrogen)	N	530	292	ppb	10000	10000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
23. Nitrite (as Nitrogen)	N	ND	ND	ppb	1000	1000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
24. Total Nitrate/Nitrite	N	530	292	ppb	10000	10000	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
25. Selenium	N	ND	ND	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
26. Thallium	N	ND	ND	ppb	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
<b>Synthetic Organic Contaminants including Pesticides and Herbicides (TSWTP tested in 2013, SWTP tested in 2012)</b>							
27. 2,4-D	N	ND	ND	ppb	70	70	Runoff from herbicide used on row crops
28. 2,4,5-TP (Silvex)	N	ND	ND	ppb	50	50	Residue of banned herbicide
29. Acrylamide	N	ND	ND	ppb	0	TT	Added to water during sewage/wastewater treatment
30. Atrachlor	N	ND	ND	ppb	0	2	Runoff from herbicide used on row crops
31. Atrazine	N	ND	ND	ppb	3	3	Runoff from herbicide used on row crops
32. Benzo(a)pyrene (PAH)	N	ND	ND	ppt	0	200	Leaching from linings of water storage tanks and distribution lines
33. Carbofuran	N	ND	ND	ppb	40	40	Leaching of soil fumigant used on rice and alfalfa
34. Chlordane	N	ND	ND	ppb	0	2	Residue of banned herbicide
35. Dalapon	N	ND	ND	ppb	200	200	Runoff from herbicide used on rights of way
36. Di(2-ethylhexyl) adipate	N	ND	ND	ppb	400	400	Discharge from chemical factories
37. Di(2-ethylhexyl) phthalate	N	ND	ND	ppb	0	6	Discharge from rubber and chemical factories
38. Dibromochloropropane	N	ND	ND	ppt	0	200	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
39. Dinoseb	N	ND	ND	ppb	7	7	Runoff from herbicide used on soybeans and vegetables
40. Diquat	N	ND	ND	ppb	20	20	Runoff from herbicide use
41. Dioxin [2,3,7,8-TCDD]	N	ND	ND	ppq	0	30	Emissions from waste incineration and other combustion; discharge from chemical factories
42. Endothal	N	ND	ND	ppb	100	100	Runoff from herbicide use
43. Endrin	N	ND	ND	ppb	2	2	Residue of banned insecticide
44. Epichlorohydrin	N	ND	ND	ppb	0	TT	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
45. Ethylene dibromide	N	ND	ND	ppt	0	50	Discharge from petroleum refineries
46. Glyphosate	N	ND	ND	ppb	700	700	Runoff from herbicide use
47. Heptachlor	N	ND	ND	ppt	0	400	Residue of banned herbicide
48. Heptachlor epoxide	N	ND	ND	ppt	0	200	Breakdown of heptachlor
49. Hexachlorobenzene	N	ND	ND	ppb	0	1	Discharge from metal refineries and agricultural chemical factories
50. Hexachlorocyclo- pentadiene	N	ND	ND	ppb	50	50	Discharge from chemical factories
51. Lindane	N	ND	ND	ppt	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens
52. Methoxychlor	N	ND	ND	ppb	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
53. Oxamyl [Vydate]	N	ND	ND	ppb	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
54. PCBs [Polychlorinated biphenyls]	N	ND	ND	ppt	0	500	Runoff from landfills; discharge of waste chemicals
55. Pentachlorophenol	N	ND	ND	ppb	0	1	Discharge from wood preserving factories
56. Picloram	N	ND	ND	ppb	500	500	Herbicide runoff
57. Simazine	N	ND	ND	ppb	4	4	Herbicide runoff
58. Toxaphene	N	ND	ND	ppb	0	3	Runoff/leaching from insecticide used on cotton and cattle
<b>Volatile Organic Contaminants (TSWTP tested in 2013, SWTP tested in 2013; TOC, TTHM, HAA5 tested in 2014 for both Treatment Plants)</b>							
59. Benzene	N	ND	ND	ppb	0	5	Discharge from factories; leaching from gas storage tanks and landfills
60. Carbon tetrachloride	N	ND	ND	ppb	0	5	Discharge from chemical plants and other industrial activities
61. Chlorobenzene	N	ND	ND	ppb	100	100	Discharge from chemical and agricultural chemical factories
62. o-Dichlorobenzene	N	ND	ND	ppb	600	600	Discharge from industrial chemical factories
63. p-Dichlorobenzene	N	ND	ND	ppb	75	75	Discharge from industrial chemical factories
64. 1,2 - Dichloroethane	N	ND	ND	ppb	0	5	Discharge from industrial chemical factories
65. 1,1 - Dichloroethylene	N	ND	ND	ppb	7	7	Discharge from industrial chemical factories
66. cis-1,2-Dichloroethylene	N	ND	ND	ppb	70	70	Discharge from industrial chemical factories
67. trans - 1,2 -Dichloroethylene	N	ND	ND	ppb	100	100	Discharge from industrial chemical factories
68. Dichloromethane	N	ND	ND	ppb	0	5	Discharge from pharmaceutical and chemical factories
69. 1,2-Dichloropropane	N	ND	ND	ppb	0	5	Discharge from industrial chemical factories
70. Ethylbenzene	N	ND	ND	ppb	700	700	Discharge from petroleum refineries
71. Styrene	N	ND	ND	ppb	100	100	Discharge from rubber and plastic factories; leaching from landfills
72. Tetrachloroethylene	N	ND	ND	ppb	0	5	Leaching from PVC pipes; discharge from factories and dry cleaners
73. 1,2,4 -Trichlorobenzene	N	ND	ND	ppb	70	70	Discharge from textile-finishing factories
74. 1,1,1 - Trichloroethane	N	ND	ND	ppb	200	200	Discharge from metal degreasing sites and other factories
75. 1,1,2 -Trichloroethane	N	ND	ND	ppb	3	5	Discharge from industrial chemical factories
76. Trichloroethylene	N	ND	ND	ppb	0	5	Discharge from metal degreasing sites and other factories
77. Toluene	N	ND	ND	ppm	1	1	Discharge from petroleum factories
78. Vinyl Chloride	N	ND	ND	ppb	0	2	Leaching from PVC piping; discharge from plastics factories
79. Xylenes	N	ND	ND	ppb	10000	10000	Discharge from petroleum factories discharge from chemical factories
80. TOC (Total Organic Carbon)	N	2.0	1.31	ppm	N/A	TT	Naturally present in the environment
81. TTHM (RAA) Total Trihalomethanes	N	14.7	9.85	ppb	0	80	By product of drinking water chlorination
82. HAAs (RAA) Haloacetic Acids	N	4.3	4.36	ppb	0	60	By product of drinking water chlorination

In accordance with regulations, lead and copper samples were taken from the Shelby County Water Services' distribution system in 2014. The 90th percentile values were ND for lead and 0.164 ppm for copper. All samples were below the action level.

Shelby County Water System took 463 bacterial samples in the year with zero positive samples for E.coli and Total Coliform.

Residual Chlorine in the distribution system ranged from 0.4 mg/L to 2.4 mg/L.

Based on a study conducted by ADEM with the approval of EPA a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for any of these contaminants was not required.

*MRL* - minimum reporting level *µg/L* - one microgram per liter or one millionth of a gram per liter | Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard.