

UNREGULATED CONTAMINANT MONITORING RULE 3 (UCMR 3) CONDUCTED DURING 2015

Under the current cycle of the Unregulated Contaminant Monitoring Rule (UCMR 3) chemicals are being studied at levels that are often significantly below those in prior UCMR cycles. Importantly, UCMR 3 minimum reporting levels (MRLs) were established based on the capability of the analytical method, not based on a level established as "significant" or "harmful." In fact, the UCMR 3 MRLs are often below current "health reference levels" (to the extent that HRLs have been established). Results of UCMR 3 measurements should be interpreted accordingly. The detection of a UCMR 3 analyte above the MRL does not represent cause for concern, in and of itself. Rather, the implications of the detection should be judged considering health effects information (which is often still under development or being refined for unregulated contaminants).

Test Results for Shelby County Water Services taken at System Entry Points Test Results for Pelham Water Works taken at Entry Point to Distribution System and on Distribution System

CONTAMINANT	MRL µg/L	HIGHEST LEVEL DETECTED			
		ENTRY POINTS	DISTRIBUTION SYSTEM	TALLADEGA / SHELBY WTP	SHELBY So. WTP
Chromium	0.2	0.54	0.47	0.3	<0.2
Cobalt	1	ND	ND	<1	<1
Molybdenum	1	2.5	ND	<1	<1
Strontium	0.3	60	55.7	39	40
Vanadium	0.2	0.76	0.66	0.5	0.3
Chromium-6	0.03	0.2	0.2	0.06	0.07
Chlorate	20	ND	56.9	350	<20
1,4-dioxane	0.07	0.09	NT	<0.07	<0.07
1,1-dichloroethane	0.03	ND	NT	<0.03	<0.03
1,2,3-trichloropropane	0.03	ND	NT	<0.03	<0.03
1,3-butadiene	0.1	ND	NT	<0.1	<0.1
Bromochloromethane (halon 1011)	0.06	ND	NT	<0.06	<0.06
Bromomethane (methyl bromide)	0.2	ND	NT	<0.2	<0.2
Chlorodifluoromethane (HCFC-22)	0.08	ND	NT	<0.08	<0.08
Chloromethane (methyl chloride)	0.2	ND	NT	<0.2	<0.2
Perfluorobutanesulfonic acid (PFBS)	0.09	ND	NT	<0.09	<0.09
Perfluorohexanoic acid (PFHxA)	0.01	ND	NT	<0.01	<0.01
Perfluorohexane sulfonic acid (PFHxS)	0.03	ND	NT	<0.03	<0.03
Perfluorononanoic acid (PFNA)	0.02	ND	NT	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	0.02	ND	NT	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	0.04	ND	NT	<0.04	<0.04

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.

SECONDARY DRINKING WATER STANDARD

Secondary Drinking Water Standards regulate constituents that cause offensive taste, odor, color, corrosivity, foaming and staining. The concentration limit is called the Secondary Maximum Con-

centration Level (SMCL). Secondary Standards are not enforceable. Public water systems are not required to test for or remove secondary contaminants. Secondary Standards are guidelines used to provide communities with the best quality water possible.

Contaminant	LEVEL DETECTED			
	City System	Unit Measurement	SMCL	Noticeable Effects Above SMCL
Color, APHA	<10.		15 color units	Visible tint
Foaming Agents (Surfactants)	<0.02	ppm	0.5	Frothy, cloudy; bitter taste; odor
Iron	<0.05	ppm	0.3	Rusty color; sediment; metallic taste; reddish or orange staining
Magnesium	12.3-13.9	ppm		Black to brown color; black staining; bitter metallic taste
pH	6.81-7.18		6.5-8.5SU	Low pH: bitter metallic taste; corrosion High pH: slippery feel; soda taste; deposits
Silver	<1.001	ppm	0.1	Skin discoloration; graying of the white part of the eye
Zinc	<0.03	ppm	5	Metallic taste

OTHER CONTAMINANTS MONITORED

Contaminant	City System
Alkalinity Total	146-171 mg/l
Calcium	33.7-39.5 mg/L
Carbon Dioxide	9-11 mg/l
Hardness as mg eq CaCO3/l	135-153 mg/l
Langelier Saturation Index	-0.572-1.0311
Nickel	<0.001 mg/l
Specific Conductance	237-194 umhos

P.O. Box 1479
Pelham, AL 35124
205.620.6420

PRSRT STD
US Postage
PAID
Birmingham, AL
Permit #40

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 we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

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

Pelham Water Works serves you with water from two different sources; five wells that draw from the Copper Ridge Dolomite and Longview Limestone Aquifers and purchased water from Shelby County Water Services whose sources are the Talladega/ Shelby Water Treatment Plant (TSWTP) and the Shelby South Water Treatment Plant (SWTP). The water treated at these facilities comes from the Coosa River/Lay Lake. We treat our well water by adding chlorine at each

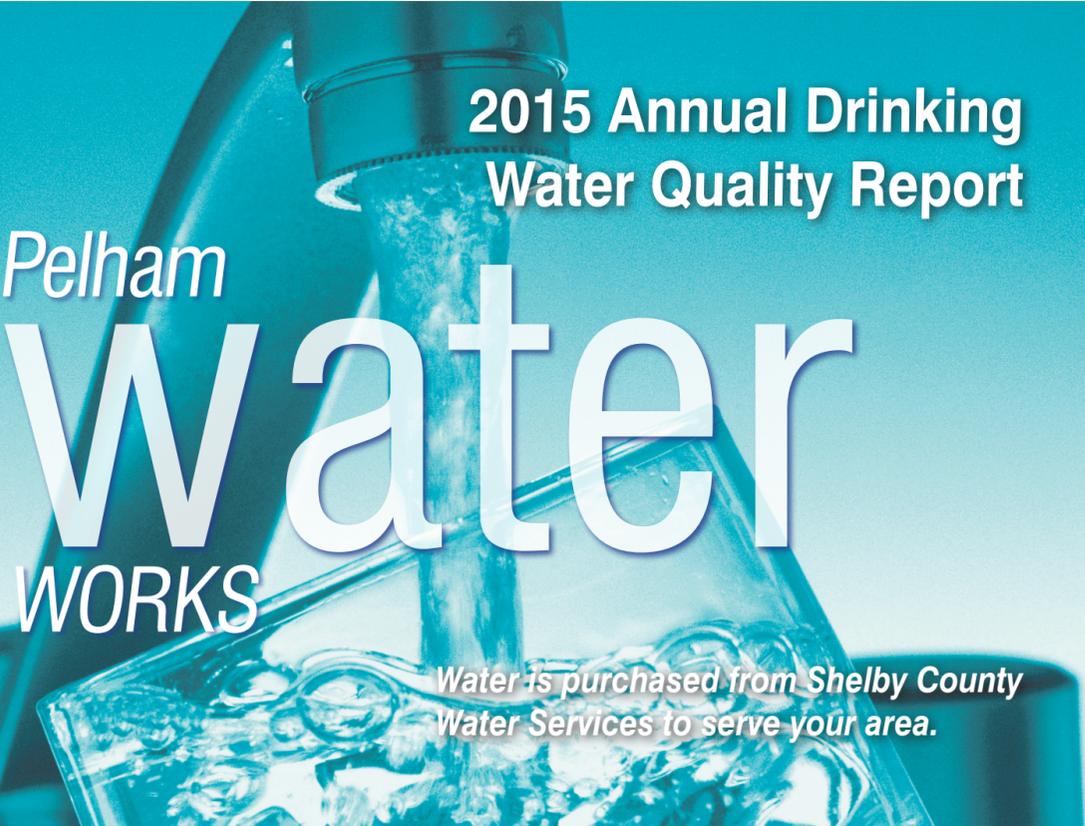
well before distribution and treatment of the water purchase from Shelby County Water Services is typical of surface water plants which includes flocculation, sedimentation, filtration and the addition of copper sulfate, potassium permanganate, hydrogen peroxide, powdered activated carbon, chlorine dioxide, alum-based coagulant, ferric-based coagulant, calcium carbonate, granular activated carbon, chlorine for disinfection and fluoride for dental health.

Pelham Water Works has completed its Source Water Assessment Program as required by the Alabama Department of Environmental Management and a copy is available for viewing at the water works office.

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.

Pelham Water Works routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st of 2015, unless otherwise noted. Certain contaminants are monitored less frequently than annually. The data presented is from the most recent testing done in accordance with applicable regulations. However, if the data is more than five years old it is not a requirement to be included.



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.

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 (µg/l) - 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) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - 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 - 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

Bacteriological 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. Coliforms were found in more samples than allowed and this was 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) Fecal Indicators. Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

(4) 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.

Radiological Contaminants:

(5) Beta/gamma 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.

(6) 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.

(7) 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:

(8) Arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

(9) 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.

(10) Asbestos. Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign testicular nodules.

(11) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

(12) Beryllium. Some people who drink water containing beryllium in excess of the MCL over many years could develop respiratory lesions.

(13) Bromate. Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

(14) Cadmium. Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

(15) Chloramines. Some people who use water containing chloramines in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines in excess of the MRLs are often below current "health" MRDLs could experience stomach discomfort.

(16) Chlorine. Some people who use water containing chlorine in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine in excess of the MRDL could experience stomach discomfort.

(17) 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.

(18) 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.

(19) Chromium. Some people who use water containing chromium in excess of the MCL over many years could experience allergic dermatitis.

(20) 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.

(21) Cyanide. Some people who drink water containing cyanide in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

(22) 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.

(23) 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.

(24) Mercury (inorganic). Some people who drink water containing inorganic mercury in excess of the MCL over many years could experience kidney damage.

(25) 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.

(26) 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.

(27) Total Nitrate and 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.

(28) 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.

(29) 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.

Organic contaminants:

(30) 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.

(31) Alcohol. Some people who drink water containing alcohol 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.

(32) Atrazine. Some people who drink water containing atrazine in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

(33) 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.

(34) Benzopyrene [BP]. 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.

(35) Carbazon. Some people who drink water containing carbazon in excess of the MCL over many years could experience problems with their blood, nervous or reproductive systems.

(36) 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.

(37) Chlorobenzene. Some people who drink water containing chlorobenzene 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.

(38) Chloroethane. Some people who drink water containing chloroethane in excess of the MCL over many years could experience problems with their liver or kidneys.

(39) Dieldrin. Some people who drink water containing dieldrin in excess of the MCL over many years could experience problems with their liver or kidneys.

(40) Dieldrin. Some people who drink water containing the weed killer 2,4-D in excess of the MCL over many years could experience allergic dermatitis.

(41) Dieldrin. Some people who drink water containing dieldrin in excess of the MCL over many years could experience minor kidney changes.

(42) 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.

(43) D-chlorobenzene. Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

(44) p-Dichlorobenzene. Some people who drink water containing p-dichlorobenzene 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.

(45) Picloram. Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

(46) P-dicoflofenone. 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.

(47) 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.

(48) D-chlorobenzene. Some people who drink water containing d-chlorobenzene in excess of the MCL over many years could experience problems with their liver.

(49) D-chlorobenzene. Some people who drink water containing d-chlorobenzene in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory system.

(50) Di (2-ethylhexyl) adipate. Some people who drink water containing di (2-ethylhexyl) adipate in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.

(51) 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.

(52) Dioxin. 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.

(53) Dioxin. 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.

(54) Diquat. Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

(55) Endosulfan. Some people who drink water containing endosulfan in excess of the MCL over many years could experience problems with their stomach or intestines.

(56) Endrin. Some people who drink water containing endrin 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.

(57) 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.

(58) Ethylbenzene. Some people who drink water containing ethylbenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

(59) 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.

(60) 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.

(61) Halobenzoic Acids (HBA). Some people who drink water containing halobenzoic acids in excess of the MCL over many years may have an increased risk of getting cancer.

(62) 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.

(63) 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.

(64) Heptachlorobenzene. Some people who drink water containing heptachlorobenzene 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.

(65) Hexachlorocyclopentadiene. Some people who drink water containing hexachlorocyclopentadiene in excess of the MCL over many years could experience problems with their kidneys or stomach.

(66) Lindane. Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.

(67) Methoxychlor. Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.

(68) Ocarmyl (Vibac). Some people who drink water containing ocarmyl in excess of the MCL over many years could experience slight nervous system effects.

(69) 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.

(70) Picloram. Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

(71) 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.

(72) Simazine. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

(73) Styrene. Some people who drink water containing styrene in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

(74) Tetachlorobenzene. Some people who drink water containing tetachlorobenzene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

(75) Toluene. Some people who drink water containing toluene in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

(76) 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 increased risk of getting cancer.

(77) 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.

(78) 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.

(79) 2,4,5-TP (Silvex). Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

(80) 1,2,4-Trichlorobenzene. Some people who drink water containing 1,2,4-trichlorobenzene in excess of the MCL over many years could experience changes in their adrenal glands.

(81) 1,1,1-Trichloroethane. Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could have problems with their liver, kidneys, or immune system.

(82) 1,1,2-Trichloroethane. Some people who drink water containing 1,1,2-trichloroethane in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(83) Trichloroethylene. Some people who drink water containing trichloroethylene 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.

(84) 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.

(85) Xylenes. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

TEST RESULTS 2015 unless noted

LEVEL DETECTED									
Contaminant	Violation Y/N	City System	Talladega/ Shelby WTP (TSWTP)	Shelby South WTP (SWTP)	Unit Measurement	MCLG	MCL	Likely Source of Contamination	
Bacteriological Contaminants									
1	Total Coliform Bacteria	N	ND	ND	ND	0	Presence or Absence	MCLG=0 MCL=presence of coliform bacteria in < 5% of monthly samples, or if a routine sample and a follow up repeat sample are total coliform positive and one is also fecal coliform or E. coli positive	Naturally present in the environment
2	Fecal coliform and <i>E. coli</i>	N	ND	ND	ND	0	Presence or Absence		Human and animal fecal waste
3	Fecal Indicators (enterococci or coliphage)	N	ND	ND	ND	Presence or Absence	None	TT	Human and animal fecal waste
4	Turbidity	N	.05-.59	0.17	0.55	NTU	n/a	TT	Soil runoff
Radiological									
5	Beta/photon emitters	N	ND in 2004	ND 2008	ND in 2012	mrem/yr	0	4	Decay of natural and man-made deposits
6	Alpha emitters	N	2.2 in 2011	<1.0 in 2008	ND in 2012	pCi/L	0	15	Erosion of natural deposits
7	Combined radium-226/228	N	<0.6-1.4 in 2011	<0.9 in 2008	ND in 2012	pCi/L	0	5	Erosion of natural deposits
Inorganic Chemicals									
8	Antimony	N	ND	ND	ND	ppb	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
9	Arsenic	N	ND	ND	ND	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
10	Asbestos	N	ND in 2006	ND	NT	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
11	Barium	N	0.016-0.027	ND	.0319	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
12	Beryllium	N	ND	ND	ND	ppb	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
13	Bromate	N	NT	NT	NT	ppb	0	10	By-product of drinking water chlorination
14	Cadmium	N	ND	ND	ND	ppb	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
15	Chloramines	N	NT	NT	NT	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
16	Chlorine	N	1.21-1.60	2.0	2.75	ppm	MRDLG=4	MRDL=4	Water Additive used to control microbes
17	Chlorine Dioxide	N	NT	40	NT	ppb	MRDLG=800	MRDL=800	Water additive used to control microbes
18	Chlorite	N	NT	880	NT	ppb	800 ppb	1 ppm	By-product of drinking water chlorination
19	Chromium	N	ND	ND	ND	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
20	Copper	N	<0.001-0.002	ND	ND	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
21	Cyanide	N	ND	ND	ND	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
22	Fluoride	N	ND	0.63	1.19	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
23	Lead	N	ND	ND	ND	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
24	Mercury (inorganic)	N	ND	ND	ND	ppb	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
25	Nitrate (as Nitrogen)	N	0.64-0.98	0.520	0.149	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
26	Nitrite (as Nitrogen)	N	ND	ND	ND	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
27	Total Nitrate and Nitrite	N	0.64-0.98	0.520	0.149	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
28	Selenium	N	ND	ND	ND	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
29	Thallium	N	ND	ND	ND	ppb	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Organic									
30	Acrylamide	N	ND in 2006	ND	ND	ppb	0	TT	Added to water during sewage/wastewater treatment
31	Alachlor	N	ND	ND	ND	ppb	0	2	Runoff from herbicide used on row crops
32	Atrazine	N	ND	ND	ND	ppb	3	3	Runoff from herbicide used on row crops
33	Benzene	N	ND	ND	ND	ppb	0	5	Discharge from factories; leaching from gas storage tanks and landfills
34	Benzo(a)pyrene (PAH)	N	<0.00002-0.00003	ND	ND	ppt	0	200	Leaching from linings of water storage tanks and distribution lines
35	Carbafuran	N	ND	ND	ND	ppb	40	40	Leaching of soil fumigant used on rice and alfalfa
36	Carbon tetrachloride	N	ND	ND	ND	ppb	0	5	Discharge from chemical plants and other industrial activities
37	Chlordane	N	ND	ND	ND	ppb	0	2	Residue of banned termiticide
38	Chlorobenzene or Monochlorobenzene (MCB)	N	ND	ND	ND	ppb	100	100	Discharge from chemical and agricultural chemical factories
39	2,4-D	N	ND	ND	ND	ppb	70	70	Runoff from herbicide used on row crops
40	Dalapon	N	ND	ND	ND	ppb	200	200	Runoff from herbicide used on rights of way
41	Dibromochloropropane	N	ND	ND	ND	ppb	0	200	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
42	o-Dichlorobenzene	N	ND	ND	ND	ppb	600	600	Discharge from industrial chemical factories
43	p-Dichlorobenzene	N	ND	ND	ND	ppb	75	75	Discharge from industrial chemical factories
44	1,2-Dichloroethane	N	ND	ND	ND	ppb	0	5	Discharge from industrial chemical factories
45	1,1-Dichloroethylene	N	ND	ND	ND	ppb	7	7	Discharge from industrial chemical factories
46	cis-1,2-Dichloroethylene	N	ND	ND	ND	ppb	70	70	Discharge from industrial chemical factories
47	trans-1,2-Dichloroethylene	N	ND	ND	ND	ppb	100	100	Discharge from industrial chemical factories
48	Dichloromethane or Methylene Chloride (DCM)	N	ND	ND	ND	ppb	0	5	Discharge from pharmaceutical and chemical factories
49	1,2-Dichloropropane	N	ND	ND	ND	ppb	0	5	Discharge from industrial chemical factories
50	Di(2-ethylhexyl) adipate	N	ND	ND	ND	ppb	400	400	Discharge from chemical factories
51	Di(2-ethylhexyl) phthalate	N	ND	ND	ND	ppb	0	6	Discharge from rubber and chemical factories
52	Dinoseb	N	ND	ND	ND	ppb	7	7	Runoff from herbicide used on soybeans and vegetables

53	Dioxin [2,3,7,8-TCDD]	N	ND in 2006	ND	ND	ppq	0	30	Emissions from waste incineration and other combustion; discharge from chemical factories
54	Diquat	N	ND	ND	ND	ppb	20	20	Runoff from herbicide use
55	Endothall	N	ND	ND	ND	ppb	100	100	Runoff from herbicide use
56	Endrin	N	ND	ND	ND	ppb	2	2	Residue of banned insecticide
57	Epichlorohydrin	N	ND in 2006	ND	ND	ppb	0	TT	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
58	Ethylbenzene	N	ND	ND	ND	ppb	700	700	Discharge from petroleum refineries
59	Ethylene dibromide	N	ND	ND	ND	ppt	0	50	Discharge from petroleum refineries
60	Glyphosate	N	ND	ND	ND	ppb	700	700	Runoff from herbicide use
61	HAA5 (Haloacetic Acids) (LRAA)	N	12-50	13.1	5.2	ppb	0	60	By-product of drinking water chlorination
62	Heptachlor	N	ND	ND	ND	ppt	0	400	Residue of banned termiticide
63	Heptachlor epoxide	N	ND	ND	ND	ppt	0	200	Breakdown of heptachlor
64	Hexachlorobenzene	N	ND	ND	ND	ppb	0	1	Discharge from metal refineries and agricultural chemical factories
65	Hexachlorocyclopentadiene	N	ND	ND	ND	ppb	50	50	Discharge from chemical factories
66	Lindane	N	ND	ND	ND	ppt	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens
67	Methoxychlor	N	ND	ND	ND	ppb	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
68	Oxamyl [Vydate]	N	ND	ND	ND	ppb	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
69	Pentachlorophenol	N	ND	ND	ND	ppb	0	1	Discharge from wood preserving factories
70	Picloram	N	ND	ND	ND	ppb	500	500	Herbicide runoff
71	PCBs [Polychlorinated biphenyls]	N	ND	ND	ND	ppt	0	500	Runoff from landfills; discharge of waste chemicals
72	Simazine	N	ND	ND	ND	ppb	4	4	Herbicide runoff
73	Styrene	N	ND	ND	ND	ppb	100	100	Discharge from rubber and plastic factories; leaching from landfills
74	Tetrachloroethylene	N	ND	ND	ND	ppb	0	5	Leaching from PVC pipes; discharge from factories and dry cleaners
75	Toluene	N	ND	ND	ND	ppm	1	1	Discharge from petroleum factories
76	Total Organic Carbon (TOC)	N	0.3-0.5	1.70	1.10	ppm	n/a	TT	Naturally present in the environment
77	TTHM (Total trihalomethanes) (LRAA)	N	30-61	20.2	11.7	ppb	0	80	By-product of drinking water chlorination
78	Toxaphene	N	ND	ND	ND	ppb	0	3	Runoff/leaching from insecticide used on cotton and cattle
79	2,4,5-TP (Silvex)	N	ND	N/D	N/D	ppb	50	50	Residue of banned herbicide
80	1,2,4-Trichlorobenzene	N	ND	ND	ND	ppb	70	70	Discharge from textile-finishing factories
81	1,1,1-Trichloroethane	N	ND	ND	ND	ppb	200	200	Discharge from metal degreasing sites and other factories
82	1,1,2-Trichloroethane	N	ND	ND	ND	ppb	3	5	Discharge from industrial chemical factories
83	Trichloroethylene	N	ND	ND	ND	ppb	0	5	Discharge from metal degreasing sites and other factories
84	Vinyl Chloride	N	ND	ND	ND	ppb	0	2	Leaching from PVC piping; discharge from plastics factories
85	Xylenes	N	ND	ND	ND	ppm	10	10	Discharge from petroleum factories; discharge from chemical factories

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 480 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.

UNREGULATED CONTAMINANTS TABLE

CONTAMINANT	Average	Range	CONTAMINANT	Average	Range
1,1-Dichloropropene	ND	0.000-0.000	Chloroform	ND	0.000-0.000
1,1,1,2-Tetrachloroethane	ND	0.000-0.000	Chloromethane	ND	0.000-0.000
1,1,2,2-Tetrachloroethane	ND	0.000-0.000	Dibromochloromethane	ND	0.000-0.000
1,1-Dichloroethane	ND	0.000-0.000	Dibromomethane	ND	0.000-0.000
1,2,3-Trichlorobenzene	ND	0.000-0.000	Dicamba	ND	0.000-0.000
1,2,3-Trichloropropane	ND	0.000-0.000	Dichlorodifluoromethane	ND	0.000-0.000
1,2,4-Trimethylbenzene	ND	0.000-0.000	Dieldrin	ND	0.000-0.000
1,3-Dichloropropane	ND	0.000-0.000	Hexachlorobutadiene	ND	0.000-0.000
1,3-Dichloropropene	ND	0.000-0.000	p-Isopropylbenzene	ND	0.000-0.000
1,3,5-Trimethylbenzene	ND	0.000-0.000	M-Dichlorobenzene	ND	0.000-0.000
2,2-Dichloropropane	ND	0.000-0.000	Methomyl	ND	0.000-0.000
3-Hydroxycarbofuran	ND	0.000-0.000	MTBE	ND	0.000-0.000
Aldicarb	ND	0.000-0.000	Metolachlor	ND	0.000-0.000
Aldicarb Sulfone	ND	0.000-0.000	Metribuzin	ND	0.000-0.000
Aldicarb Sulfoxide	ND	0.000-0.000	N-Butylbenzene	ND	0.000-0.000
Aldrin	ND	0.000-0.000	Naphthalene	ND	0.000-0.000
Bromobenzene	ND	0.000-0.000	N-Propylbenzene	ND	0.000-0.000
Bromochloromethane	ND	0.000-0.000	O-Chlorotoluene	ND	0.000-0.000
Bromodichloromethane	ND	0.000-0.000	P-Chlorotoluene	ND	0.000-0.000
Bromoform	ND	0.000-0.000	P-Isopropyltoluene	ND	0.000-0.000
Bromomethane	ND	0.000-0.000	Propachlor	ND	0.000-0.000
Butachlor	ND	0.000-0.000	Sec-Butylbenzene	ND	0.000-0.000
Carbaryl	ND	0.000-0.000	Tert-Butylbenzene	ND	0.000-0.000
Chloroethane	ND	0.000-0.000	Trichlorofluoromethane	ND	0.000-0.000

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Y/N	City System	LEVEL DETECTED				MCLG	MCL	Likely Source of contamination
			Talladega / Shelby WTP	Shelby So. WTP	Unit Measurement	NTU			
Turbidity	N					n/a	TT	Soil runoff	
Barium	N	0.016-0.027	ND	0.0319	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Chlorine	N	1.21-1.60	2.0	2.75	ppm	MRDL G=4	MRLD =4	Water Additive used to control microbes	
Chlorine Dioxide	N	NT	40	NT	ppb	800	800	Water additive used to control microbes	
Chlorite	N	NT	880	NT	ppb	MRDL G=800	MRDL = 1000	Water additive used to control microbes	
Copper	N	<0.001-0.002	ND	ND	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
Fluoride	N	<0.20	0.63	1.19	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	
Nitrate (as Nitrogen)	N	0.64-0.98	0.520	0.149	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Total Nitrate and Nitrite	N	0.64-0.98	0.520	0.149	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Benzo(a)pyrene (PAH)	N	<0.00002-0.00003	ND	ND	ppt	0	200	Leaching from linings of water storage tanks and distribution lines	
HAA5 (Haloacetic acids) (LRAA)	N	12-50	13.1	5.2	ppb	0	60	By-product of drinking water chlorination	
Total Organic Carbon (TOC)	N	0.3-0.5	1.70	1.10	ppm	n/a	TT	Naturally present in the environment	
TTHM (Total trihalomethanes) (LRAA)	N	30-61	20.2	11.7	ppb	0	80	By-product of drinking water chlorination	
Secondary Contaminants									
Aluminum	N	ND	ND	ND	ppm				