Annual Water Quality Report 2016

BIRMINGHAM WATER WORKS

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The Birmingham Water Works Board has open meetings monthly at its main office located at 3600 First Avenue N., Birmingham, AL 35222. Meeting dates and times are posted on our Web site and at our main office. The Board welcomes public input and comments during its meetings.

For questions, please call 205-244-4000 or visit www.bwwb.org.

MISSION

The Birmingham Water Works Board (BWWB) is committed to providing the highest quality water and service to our customers and our entire service area. As a concerned corporate citizen, we are responsive to the needs of the entire community and strive to maintain, preserve and conserve our precious water resources in order to ensure adequate water quality and supply for future generations.

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The Association of Metropolitan Water Agencies – an organization of the largest publicly owned drinking water suppliers in the United States – honored the BWWB with its 2015 Sustainable Water Utility Management Award. This award recognizes water utilities who have made a commitment to management that achieve a balance of innovative and successful efforts in areas of economic, social and environmental endeavors.

CCR: GOVERNMENT MANDATED

The BWWB, like water utilities across the U.S., is required by the EPA to send its customers the Consumer Confidence Report (CCR) each year.

In 1996, Congress amended the Safe Drinking Water Act (SDWA) by adding a provision requiring all community water systems to deliver to their customers an annual water quality report, which contains information on the water system's source water, levels of any detected contaminants, compliance with drinking water rules and other educational information.

In 2015, as in years past, the BWWB met all state and federal regulations for water quality.

WHAT YOU NEED TO KNOW

What is the Consumer Confidence Report?

The CCR is an annual report – on the water quality of a particular water system such as the BWWB – required by the Environmental Protection Agency (EPA). The report details, and outlines contaminants and their levels in drinking water.

Why am I getting this report?

The BWWB is federally mandated by the EPA to provide this information to you. The Alabama Department of Environmental Management (ADEM) enforces these rules for the EPA. Regulated drinking water substances that were detected during the 2015 calendar year are provided in the report.

Where can I get additional copies of this report?

You may obtain additional copies of the CCR in person at the BWWB's Customer Service Center, by mail (upon request) or online by visiting www.bwwb.org. For questions concerning the CCR, please call **Jarrod Shotts at 205-244-4206**.

Why authorities regulate contaminant levels?

In order to ensure that tap water is safe to drink, the EPA and ADEM prescribe regulations that limit the amount of certain substances in water provided by public water systems.

For whom is this report produced?

The CCR is produced for customers and wholesalers of the BWWB and ensures that everyone is provided safe drinking water.

How much does it cost to receive this report?

This report is free of charge to all customers and stakeholders of the BWWB.

ADDING QUALITY TO LIFE

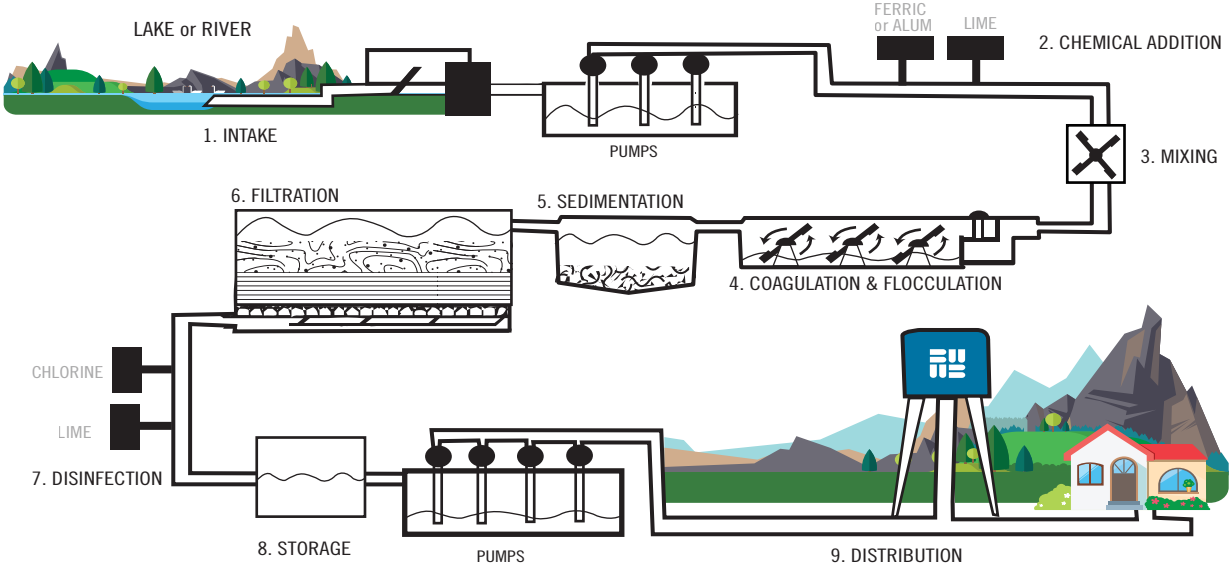
Water is a major part of one's everyday life and has a significant effect on our environment and society. We are surrounded by water everywhere we are whether it's a morning shower, cup of coffee, drive past a community garden or park fountain, its even found throughout fast food restaurants, schools and businesses. With it being utilized in our community, homes, personal health and health care systems, it is vital that the BWWB operates a well-kept system.

Recently, the water system was recognized for being among the top industry leaders for its training and development programs, as well as security. The BWWB placed 10 among 125 leading organizations across America for its employer-sponsored training and development programs, receiving acknowledgment for its commitment to investing in staff, which was highlighted through its three leadership development programs. The BWWB placed ahead of organizations such as Best Buy, New York Life, WellSpan Health, BNSF Railway, AT&T, Sacramento Municipal Utility District and others.

At the same time, the utility was also recognized for its security, ranking 28 in the security silo of energy and utilities. For the past four consecutive years, the water system has been recognized in the Security 500 – a ranking of enterprise security leaders by Security Magazine, a publication that examines security threats, solutions and developments for security professionals. Annually, the reports determine forerunners in sectors such as agriculture, education, energy and utilities, information technology, manufacturing and more.

Securing water sources and organizing a trained, well-informed staff has been key to helping the BWWB remain a leader in the industry. Daily, the BWWB works to maintain a quality system in an effort to serve the community and preserve the environment, because by just adding water, you can improve your overall quality of life.

THE WATER TREATMENT PROCESS



1. Intake - Water is taken from the source. Fish, plants and other debris are screened out and water is drawn into the treatment plant.

2. Chemical Addition - Chemicals are added to kill germs, remove odor and improve taste.

3. Mixing - Water and chemicals are rapidly mixed.

4. Coagulation & Flocculation- The particles stick together and form larger particles called floc.

5. Sedimentation - The water and floc particles flow into a sedimentation basin. The floc then settles to the bottom and is removed from the water.

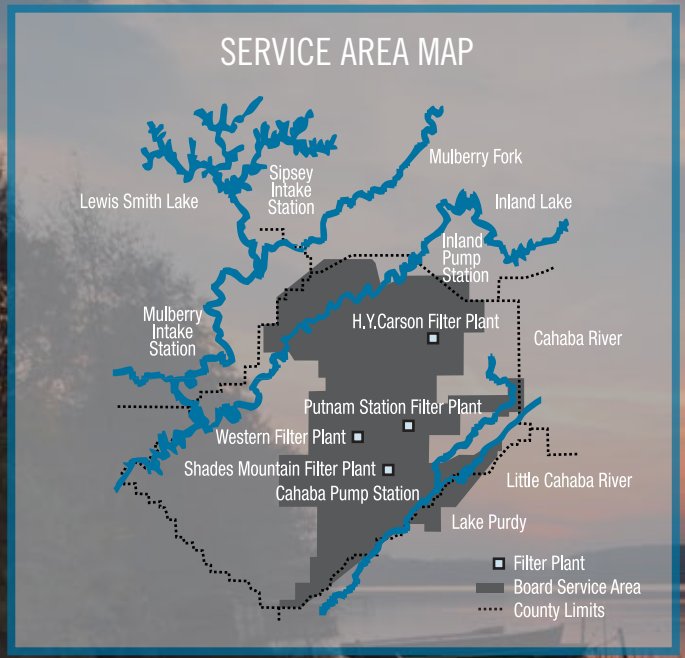
6. Filtration- Water flows through filters. The filters are made of layers of sand, anthracite and/or gravel.

7. Disinfection - A small amount of chlorine or other disinfecting chemical is added to kill any remaining germs and keep the water safe as it travels to your house.

8. Storage- Water is placed in a closed tank or clearwell.

9. Distribution - Water is transported to houses. The BWWB delivered an average of 103.6 million gallons of water per day in 2015.

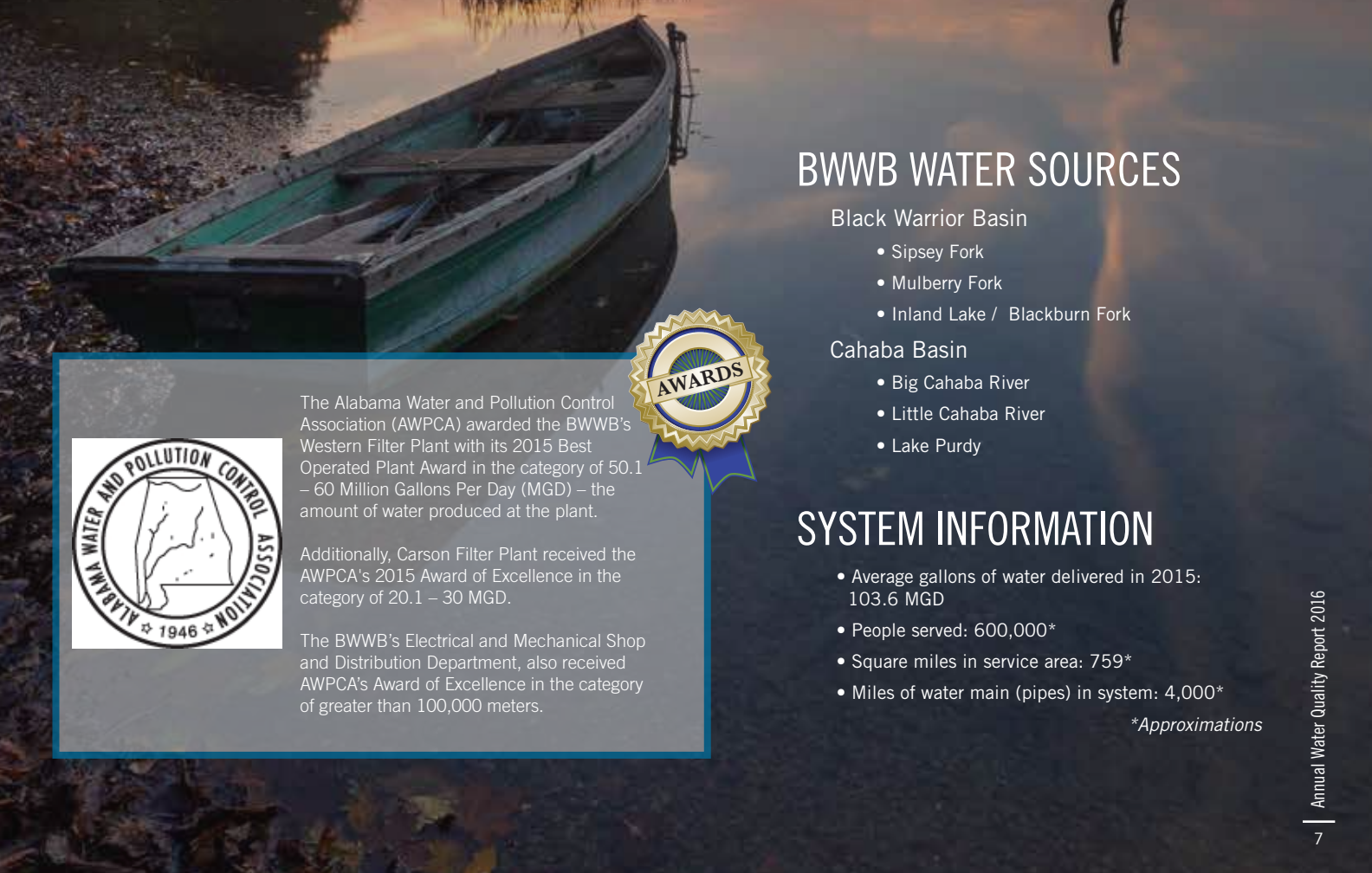
SOURCE WATER ASSESSMENT



A source water assessment has been updated for the water system. It is available for review at the BWWB's main office during normal business hours. The following is a list of the sources of raw water along with the susceptibility rating of the contaminant source and the contaminant sources:

- Inland Lake – low susceptibility (septic tank); moderate susceptibility (boat launch)
- Cahaba River – moderate susceptibility (highways, secondary roads and railroad)
- Mulberry Fork – moderate susceptibility (septic tanks); high susceptibility (strip mining, bridge and highway)
- Sipsey Fork – moderate susceptibility (storm water runoff)

The BWWB is making a maximum effort to physically protect all of our critical assets.



BWWB WATER SOURCES

Black Warrior Basin

- Sipsey Fork
- Mulberry Fork
- Inland Lake / Blackburn Fork

Cahaba Basin

- Big Cahaba River
- Little Cahaba River
- Lake Purdy

SYSTEM INFORMATION

- Average gallons of water delivered in 2015: 103.6 MGD
- People served: 600,000*
- Square miles in service area: 759*
- Miles of water main (pipes) in system: 4,000*

**Approximations*

The Alabama Water and Pollution Control Association (AWPCA) awarded the BWWB's Western Filter Plant with its 2015 Best Operated Plant Award in the category of 50.1 – 60 Million Gallons Per Day (MGD) – the amount of water produced at the plant.

Additionally, Carson Filter Plant received the AWPCA's 2015 Award of Excellence in the category of 20.1 – 30 MGD.

The BWWB's Electrical and Mechanical Shop and Distribution Department, also received AWPCA's Award of Excellence in the category of greater than 100,000 meters.

JUST ADD WATER...
TO YOUR HOME

The benefits of good water quality are endless. One advantage is that it can lead to a longer life for your appliances and fixtures, sparing you the cost of constant replacement. While many people today are concerned about drinking water quality, those in the BWWB's service area can rest assured that their water meets the EPA's SDWA standards. Annually, the BWWB collects and samples water throughout its service area to assure that customers are receiving the best quality water.

The Alabama Mississippi Section of the American Water Works Association recognized Special Projects Coordinator Lorenzo Clay from the BWWB Purification Department and Chief Operator at the Shades Mountain Filter Plant Wendell Cox in its 68th Annual Conference. Clay was awarded Young Professional of the Year from Alabama and Cox was recognized as Operator of the Year from Alabama.

Below are a few tips you can use to ensure household water quality:

Flush cold taps when household water is not used for several hours

Run cold water taps for two minutes before using water for drinking and cooking. When water sits in your pipes for long periods of time, water quality can decline.

Routinely clean faucet strainers

Sediment and metals can collect in the aerator screen located at the tip of your faucets.

Replace aerators that are in poor condition. These are available at local hardware stores.

JUST ADD WATER...
TO YOUR COMMUNITY

Water impacts the quality of life in a community, which in turn impacts the quality of life for generations to come. It serves as a major component to local businesses and growing industries. Municipal parks, fire stations, residential and commercial spaces all consume large amounts of water.

Sometimes it's easy to forget that we also use water in ways we don't see every day. It's used to grow our food, manufacture our favorite goods and keep our businesses running smoothly. We also use a significant amount of water to meet the nation's energy needs. Each day, an array of pipes and pumping stations managed by our public water system are needed to transport a reliable supply of water to our taps.

10

gallons of water is wasted each minute when using a standard hose to wash a car.

100

gallons of water is wasted per month when a leaky faucet is left alone.

25-50

gallons of water are used for a five minute shower.

JUST ADD WATER...
TO YOUR HEALTH

ADDITIONAL INFORMATION FOR YOUR HEALTH

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 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised, such as cancer patients undergoing chemotherapy, organ transplant recipients, people with HIV/AIDS or other immune system disorders, some elderly people and infants can be particularly at risk for infection.

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 microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791. For further information, contact the Jefferson County Health Department at 205-933-9110.

DEFNITIONS

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

Contaminant – Any substance other than water. Note that contaminants, as defined, include dissolved minerals, purifying and dental health promotion additives.

Locational Running Annual Average (LRAA) – The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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.

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 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 contaminantion.

Running Annual Average (RAA) – Compliance period where an average of four consecutive quarterly samples are used.

Total Haloacetic Acids (HAA5) – By-product of drinking water chlorination.

Total Trihalomethanes (TTHM) – By-product of drinking water chlorination.

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

Turbidity (NTU) – Measure of the clarity of water as it relates to its particle content.

Variance and exemptions – ADEM or EPA permission not to meet an MCL or treatment technique under certain conditions.

ABBREVIATIONS

ADEM: Alabama Department of Environmental Management

CDC: Centers for Disease Control

EPA: Environmental Protection Agency

ºF - Fahrenheit

mg/L – Milligrams per liter, or parts per million (ppm).

µS/cm - Microsiemens

NA: Not Applicable

ND: Not Detected

NTU: Nephelometric Turbidity Unit

pCi/L - Picocuries per liter

SU - Standard Unit

TOC – Total Organic Carbon.

TON - Threshold Odor Number

µg/L – Micrograms per liter, or parts per billion (ppb).

2015 WATER QUALITY DATA

2015 Chemical Analysis

Standard List Of Primary Drinking Water Contaminants for CCR
Primary Drinking Water Standards - Limits are set based on public health effects.

Bacteriological		
	MCL	**Distribution System Microbiological Substance (Regulated)**
Total Coliform Bacteria	Presence of Coliform bacteria is < 5% of monthly samples	The highest percentage of bacteria in the distribution system for one month was 0.85% (3 out of 351 samples). All locations that tested positive for Coliform bacteria were tested for *E. coli*. *E. coli* was not detected in any of these samples. All locations that tested positive for Coliform bacteria were resampled and all resamples were negative.

Inorganic Chemicals and Radiological					
Parameters (mg/L)	**MCL**	**Carson Highest**	**Putnam Highest**	**Shades Mountain Highest**	**Western Highest**
Antimony	0.006	**ND**	**ND**	**ND**	**ND**
Arsenic	0.01	**ND**	**ND**	**ND**	**ND**
Barium	2	**0.02**	**0.02**	**0.03**	**0.03**
Beryllium	0.004	**ND**	**ND**	**ND**	**ND**
Cadmium	0.005	**ND**	**ND**	**ND**	**ND**
Chlorine	4	**3.53**	**2.15**	**2.54**	**2.20**
Chromium	0.1	**ND**	**ND**	**ND**	**ND**
Copper	AL = 1.3	**0.002**	**ND**	**0.044**	**0.002**
Cyanide	0.2	**ND**	**ND**	**ND**	**ND**
Fluoride	4	**0.61**	**0.70**	**ND**	**0.62**
Gross Alpha (pCi/L)	15	**ND**	**ND**	**ND**	**ND**
Lead	AL = 0.015	**ND**	**ND**	**ND**	**ND**
Mercury	0.002	**ND**	**ND**	**ND**	**ND**
Nitrate as N	10	**0.28**	**0.32**	**0.33**	**0.54**
Nitrite as N	1	**ND**	**ND**	**ND**	**ND**
Radium 226 (pCi/L)	5	**0.1**	**ND**	**ND**	**0.1**
Radium 228 (pCi/L)	5	**ND**	**ND**	**ND**	**ND**
Selenium	0.05	**ND**	**ND**	**ND**	**ND**
Thallium	0.002	**ND**	**ND**	**ND**	**ND**
Total Nitrate/Nitrite	10	**0.28**	**0.32**	**0.33**	**0.54**
Turbidity (NTU)	0.3 (TT)	**0.360**	**0.239**	**0.220**	**0.192**

Regulated Organic Chemicals					
Parameters (µg/L)	MCL	Carson Highest	Putnam Highest	Shades Mountain Highest	Western Highest
1,1 Dichloroethylene	7	ND	ND	ND	ND
1,1,1 Trichloroethane	200	ND	ND	ND	ND
1,1,2 Trichloroethane	5	ND	ND	ND	ND
1,2 Dichloroethane	5	ND	ND	ND	ND
1,2 Dichloropropane	5	ND	ND	ND	ND
1,2,4-Trichlorobenzene	70	ND	ND	ND	ND
2,4,5-TP (Silvex)	50	ND	ND	ND	ND
2,4-D	70	ND	ND	ND	ND
Alachlor	2	ND	ND	ND	ND
Atrazine	3	ND	ND	ND	ND
Benzene	5	ND	ND	ND	ND
Benzo(a)pyrene	0.2	ND	ND	ND	ND
Carbofuran	40	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND
Chlordane	2	ND	ND	ND	ND
Chlorobenzene	100	ND	ND	ND	ND
Cis-1,2 Dichloroethylene	70	ND	ND	ND	ND
Dalapon	200	ND	ND	ND	ND
Di (2-Ethylhexyl) Adipate	400	ND	ND	ND	ND
Di (2-Ethylhexyl) Phthalate	6	ND	ND	ND	ND
Dibromochloropropane	0.2	ND	ND	ND	ND
Dichloromethane	5	ND	ND	ND	ND
Dinoseb	7	ND	ND	ND	ND
Diquat	20	ND	ND	ND	ND
Endothall	100	ND	ND	ND	ND
Endrin	2	ND	ND	ND	ND
Ethylbenzene	700	ND	ND	ND	ND
Ethylene Dibromide (EDB)	0.05	ND	ND	ND	ND
Glyphosate	700	ND	ND	ND	ND
Heptachlor	0.4	ND	ND	ND	ND
Heptachlor Epoxide	0.2	ND	ND	ND	ND
Hexachlorobenzene	1	ND	ND	ND	ND
Hexachlorocyclopentadiene	50	ND	ND	ND	ND
Lindane	0.2	ND	ND	ND	ND
Methoxychlor	40	ND	ND	ND	ND
o-Dichlorobenzene	600	ND	ND	ND	ND
Oxamyl (Vydate)	200	ND	ND	ND	ND
PCB, 1016	0.5	ND	ND	ND	ND
PCB, 1221	0.5	ND	ND	ND	ND
PCB, 1232	0.5	ND	ND	ND	ND
PCB, 1242	0.5	ND	ND	ND	ND
PCB, 1248	0.5	ND	ND	ND	ND

Regulated Organic Chemicals					
Parameters (µg/L)	MCL	Carson Highest	Putnam Highest	Shades Mountain Highest	Western Highest
PCB, 1016	0.5	**ND**	**ND**	**ND**	**ND**
PCB, 1221	0.5	**ND**	**ND**	**ND**	**ND**
PCB, 1232	0.5	**ND**	**ND**	**ND**	**ND**
PCB, 1242	0.5	**ND**	**ND**	**ND**	**ND**
PCB, 1248	0.5	**ND**	**ND**	**ND**	**ND**
PCB, 1254	0.5	**ND**	**ND**	**ND**	**ND**
PCB, 1260	0.5	**ND**	**ND**	**ND**	**ND**
p-Dichlorobenzene	75	**ND**	**ND**	**ND**	**ND**
Pentachlorophenol	1	**ND**	**ND**	**ND**	**ND**
Picloram	500	**ND**	**ND**	**ND**	**ND**
Simazine	4	**ND**	**ND**	**ND**	**ND**
Styrene	100	**ND**	**ND**	**ND**	**ND**
Tetrachloroethylene	5	**ND**	**ND**	**ND**	**ND**
Toluene	1000	**ND**	**ND**	**ND**	**ND**
Total Haloacetics Acids	60	**27.1**	**7.51**	**22.8**	**26.1**
Total Trihalomethanes	80	**24.8**	**9.73**	**29.5**	**39.1**
Toxaphene	3	**ND**	**ND**	**ND**	**ND**
Trans-1,2 Dichloroethylene	100	**ND**	**ND**	**ND**	**ND**
Trichloroethylene	5	**ND**	**ND**	**ND**	**ND**
Vinyl Chloride	2	**ND**	**ND**	**ND**	**ND**
Xylenes	10,000	**ND**	**ND**	**ND**	**ND**

Running Annual Average for System Wide Stage 2 Sites		
	MCL	RAA
Total Trihalomethanes (µg/L)	System-wide Running Annual Average (RAA): 80 µg/L	**30.8**
Total Haloacetic Acids (µg/L)	System-wide Running Annual Average (RAA): 60 µg/L	**21.7**

TOC Step Removal for Filter Plants					
	MCL	Carson	Putnam	Shades Mountain	Western
Total Organic Carbon (TOC)	4 (TT)	**1.00**	**1.00**	**2.00**	**1.00**

2015 Chemical Analysis

	MCLG	MCL	Regulated Drinking Water Contaminants for CCR Primary Drinking Water Standards - Limits are set based on public health effects.								Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria is < 5% of monthly samples	The highest percentage of bacteria in the distribution system for one month was 0.85% (3 out of 351 samples). All locations that tested positive for Coliform bacteria were tested for *E. coli*. *E. coli* was not detected in any of these samples. All locations that tested positive for Coliform bacteria were resampled and all resamples were negative.								Naturally present in the environment. Human and animal fecal waste
			Carson		Putnam		Shades Mountain		Western		
Parameters (mg/L)	**MCLG**	**MCL**	**Highest**	**Range**	**Highest**	**Range**	**Highest**	**Range**	**Highest**	**Range**	**Major Sources in Drinking Water**
Antimony	0.006	0.006	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	0	0.01	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	**0.02**	**0.01 - 0.02**	**0.02**	**0.01 - 0.02**	**0.03**	**0.02 - 0.03**	**0.03**	**0.02 - 0.03**	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	0.004	0.004	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace and defense industries
Cadmium	0.005	0.005	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chlorine	4	4	**3.53**	**1.43 - 3.53**	**2.15**	**1.18 - 2.15**	**2.54**	**1.40 - 2.54**	**2.20**	**2.00 - 2.20**	Water additive used to control microbes
Chromium	0.1	0.1	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from steel and pulp mills; erosion of natural deposits
Copper	1.3	AL = 1.3	**0.002**	**ND - 0.002**	**ND**	**ND**	**0.044**	**0.038 - 0.044**	**0.002**	**ND - 0.002**	Corrosion of household plumbing systems; erosion of natural deposits
Cyanide	0.2	0.2	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from steel/ metal factories; discharge from plastic and fertilizer factories
Fluoride	4	4	**0.61**	**0.54 - 0.61**	**0.70**	**0.53 - 0.70**	**ND**	**ND**	**0.62**	**0.59 - 0.62**	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha (pCi/L)	0	15	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation
Lead	0	AL = 0.015	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Corrosion of household plumbing; erosion of natural deposits
Mercury	0.002	0.002	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate as N	10	10	**0.28**	**ND - 0.28**	**0.32**	**0.29 - 0.32**	**0.33**	**0.30 - 0.33**	**0.54**	**ND - 0.54**	Runoff from fertilizer; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite as N	1	1	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Runoff from fertilizer; leaching from septic tanks and sewage; erosion of natural deposits
Radium 226 (pCi/L)	0	5	**0.1**	**ND - 0.1**	**ND**	**ND**	**ND**	**ND**	**0.1**	**ND - 0.1**	Erosion of natural deposits
Radium 228 (pCi/L)	0	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Erosion of natural deposits
Selenium	0.05	0.05	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
Thallium	0.0005	0.002	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Leaching from ore-processing sites; discharge from electronics, glass and drug factories
Total Nitrate/Nitrite	10	10	**0.28**	**ND - 0.28**	**0.32**	**0.29 - 0.32**	**0.33**	**0.30 - 0.33**	**0.54**	**ND - 0.54**	Runoff from fertilizer; leaching from septic tanks and sewage; erosion of natural deposits
Turbidity (NTU)	N/A	0.3 (TT)	**0.360**	**0.017 - 0.360**	**0.239**	**0.015 - 0.239**	**0.220**	**0.010 - 0.220**	**0.192**	**0.017 - 0.192**	Soil runoff
Parameters (µg/L)	**Regulated Organic Chemicals**										**Major Sources in Drinking Water**
1,1 Dichloroethylene	7	7	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from industrial chemical factories
1,1,1 Trichloroethane	200	200	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from metal degreasing sites and other factories
1,1,2 Trichloroethane	3	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from industrial chemical factories
1,2 Dichloroethane	0	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from industrial chemical factories
1,2 Dichloropropane	0	5	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	Discharge from industrial chemical factories

Parameters (µg/L)	Regulated Organic Chemicals										Major Sources in Drinking Water
			Carson		Putnam		Shades Mountain		Western		
Parameters (mg/L)	MCLG	MCL	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Major Sources in Drinking Water
1,2,4-Trichlorobenzene	70	70	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from textile-finishing factories
2,4,5-TP (Silvex)	50	50	ND	ND	ND	ND	ND	ND	ND	ND	Residue of banned herbicide
2,4-D	70	70	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops
Alachlor	0	2	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops
Atrazine	3	3	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops
Benzene	0	5	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from factories; leaching from gas storage tanks and landfills
Benzo(a)pyrene	0	0.2	ND	ND	ND	ND	ND	ND	ND	ND	Leaching from linings of water storage tanks and distribution lines
Carbofuran	40	40	ND	ND	ND	ND	ND	ND	ND	ND	Leaching of soil fumigant used on rice and alfalfa
Carbon Tetrachloride	0	5	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical plants and other industrial activities
Chlordane	0	2	ND	ND	ND	ND	ND	ND	ND	ND	Residue of banned termiticide
Chlorobenzene	100	100	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical and agricultural chemical factories
Cis-1,2 Dichloroethylene	70	70	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
Dalapon	200	200	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on rights of way
Di (2-Ethylhexyl) Adipate	400	400	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical factories
Di (2-Ethylhexyl) Phthalate	0	6	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from rubber and chemical factories
Dibromochloropropane	0	0.2	ND	ND	ND	ND	ND	ND	ND	ND	Runoff/ leaching from soil fumigant used on soybeans, cotton, pineapples and orchards
Dichloromethane	0	5	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from pharmaceutical and chemical factories
Dinoseb	7	7	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide used on soybeans and vegetables
Diquat	20	20	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide use
Endothall	100	100	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide use
Endrin	2	2	ND	ND	ND	ND	ND	ND	ND	ND	Residue of banned insecticide
Ethylbenzene	700	700	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum refineries
Ethylene Dibromide (EDB)	0	0.05	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum refineries
Glyphosate	700	700	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from herbicide use
Heptachlor	0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	Residue of banned termiticide
Heptachlor Epoxide	0	0.2	ND	ND	ND	ND	ND	ND	ND	ND	Breakdown of heptachlor
Hexachlorobenzene	0	1	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	50	50	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical factories
Lindane	0.2	0.2	ND	ND	ND	ND	ND	ND	ND	ND	Runoff/ leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	40	40	ND	ND	ND	ND	ND	ND	ND	ND	Runoff/ leaching from insecticide used on fruits, vegetables, alfalfa, livestock
o-Dichlorobenzene	600	600	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
Oxamyl (Vydate)	200	200	ND	ND	ND	ND	ND	ND	ND	ND	Runoff/ leaching from insecticide used on apples, potatoes, and tomatoes
PCB, 1016	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
PCB, 1221	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
PCB, 1232	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
PCB, 1242	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
PCB, 1248	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
PCB, 1254	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
PCB, 1260	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
p-Dichlorobenzene	75	75	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
Pentachlorophenol	0	1	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from wood preserving factories
Picloram	500	500	ND	ND	ND	ND	ND	ND	ND	ND	Herbicide runoff
Simazine	4	4	ND	ND	ND	ND	ND	ND	ND	ND	Herbicide runoff
Styrene	100	100	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	0	5	ND	ND	ND	ND	ND	ND	ND	ND	Leaching from PVC pipes; discharge from factories and dry cleaners

Toluene	1000	1000	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum factories
Total Haloacetic Acids	N/A	60	27.1	15.4 - 27.1	7.51	5.80 - 7.51	22.8	14.3 - 22.8	26.1	10.2 - 26.1	By-product of drinking water chlorination
Total Trihalomethanes	N/A	80	24.8	13.6 - 24.8	9.73	7.40 - 9.73	29.5	12.6 - 29.5	39.1	14.2 - 39.1	By-product of drinking water chlorination
Toxaphene	0	3	ND	ND	ND	ND	ND	ND	ND	ND	Runoff/ leaching from insecticide used on cotton and cattle
Trans-1,2 Dichloroethylene	100	100	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
Trichloroethylene	0	5	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from metal degreasing sites and other factories
Vinyl Chloride	0	2	ND	ND	ND	ND	ND	ND	ND	ND	Leaching from PVC piping; discharge from plastic factories
Xylenes	10,000	10,000	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum factories; discharge from chemical factories

Running Annual Average for System Wide Stage 2 Sites				
	MCLG	MCL	RAA	Major Sources in Drinking Water
Total Trihalomethanes (µg/L)	N/A	System-wide Running Annual Average (RAA): 80 µg/L	30.8	By-product of drinking water chlorination
Total Haloacetic Acids (µg/L)	N/A	System-wide Running Annual Average (RAA): 60 µg/L	21.7	By-product of drinking water chlorination

TOC Step Removal for Filter Plants							
TOC Percent Removal			Carson	Putnam	Shades Mountain	Western	Major Sources in Drinking Water
Total Organic Carbon (TOC)	N/A	4 (TT)	1.00	1.00	2.00	1.00	Naturally present in the environment

Secondary Drinking Water Standards Limits are set based on cosmetic or aesthetic effects.											
			Carson		Putnam		Shades Mountain		Western		
Parameters (mg/L)	MCLG	MCL	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Major Sources in Drinking Water
Aluminum	0	0.05 - 0.2	0.021	0.017 - 0.021	0.017	0.016 - 0.017	0.041	0.026 - 0.041	0.034	0.020 - 0.034	By-product of drinking water treatment
Bromide	N/A	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	
Calcium	0	Monitored	16.2	13.6 - 16.2	20.0	17.4 - 20.0	44.1	27.0 - 44.1	41.1	23.4 - 41.1	
Carbon Dioxide	0	Monitored	ND	ND	ND	ND	1.76	ND - 1.76	1.77	ND - 1.77	
Chloride	0	250	4.52	4.35 - 4.52	3.95	3.75 - 3.95	8.84	6.89 - 8.84	7.22	5.24 - 7.22	
Copper	1	1	0.002	ND - 0.002	ND	ND	0.044	0.038 - 0.044	0.002	ND - 0.002	
Foaming Agent	0.5	0.5	ND	ND	ND	ND	ND	ND	ND	ND	
Iron	0	0.3	ND	ND	ND	ND	ND	ND	ND	ND	
Langlier Index	N/A	Non-corrosive	-0.7531	-1.8439 to -0.7531	0.4058	-0.8281 to 0.4058	0.0034	-0.2079 to 0.0034	0.3148	0.0383 to 0.3148	
Magnesium	N/A	Monitored	3.60	2.99 - 3.60	3.79	2.72 - 3.79	8.16	5.71 - 8.16	7.51	5.99 - 7.51	
Manganese	0	0.05	0.002	0.002	0.003	ND - 0.003	0.007	0.002 - 0.007	0.002	ND - 0.002	
pH (SU)	0	6.5 - 8.5	7.88	7.32 - 7.88	8.71	8.18 - 8.71	7.91	7.68 - 7.91	8.67	7.97 - 8.67	
Potassium	N/A	Monitored	1.81	1.73 - 1.81	1.91	1.72 - 1.91	2.56	1.30 - 2.56	2.22	1.99 - 2.22	
Silver	0	0.1	ND	ND	ND	ND	ND	ND	ND	ND	
Sodium	0	Monitored	1.94	1.63 - 1.94	1.99	1.59 - 1.99	11.2	8.68 - 11.2	11.6	4.29 - 11.6	
Specific Conductivity (µS/cm)	0	Monitored	147	127 - 147	167	142 - 167	359	244 - 359	382	186 - 382	
Sulfate	0	250	28.3	25.6 - 28.3	35.7	31.8 - 35.7	70.5	35.7 - 70.5	80.0	45.7 - 80.0	
TDS	0	500	90	75 - 90	93	83 - 93	218	143 - 218	230	125 - 230	
Temperature (°F)	N/A	N/A	54	48 - 54	55	47 - 55	81	48 - 81	81	49 - 81	
Total Alkalinity	0	Monitored	28	22 - 28	28	24 - 28	80	62 - 80	70	32 - 70	
Total Hardness	0	Monitored	74	46 - 74	74	58 - 74	144	78 - 144	138	70 - 138	
Zinc	0	5	0.016	0.006 - 0.016	0.006	0.006	0.008	ND - 0.008	ND	ND	
Color, APHA	N/A	15 color units	ND	ND	ND	ND	ND	ND	ND	ND	
Odor	0	3 TON	ND	ND	ND	ND	ND	ND	ND	ND	
Monitoring											
Nickel	N/A	N/A	0.001	ND - 0.001	0.001	ND - 0.001	0.003	0.002 - 0.003	ND	ND	Discharge from nickel smelting/refining and steelworks industries

2015 Chemical Analysis

Unregulated Organic Substances

Substances Not Detected

Parameters (µg/L)	MCLG	MCL	Carson		Putnam		Shades Mountain		Western	
			Highest	Range	Highest	Range	Highest	Range	Highest	Range
1,1,1,2-Tetrachloroethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
3-Hydroxycarbofuran	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Aldicarb	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Aldicarb Sulfone	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Aldicarb Sulfoxide	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Butachlor	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Carbaryl	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Dibromoacetic Acid	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Dicamba	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Fluorotrichloromethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND

Hexachlorobutadiene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Methiocarb	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Methomyl	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tertiary Butyl Ether	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Metolachlor	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Metribuzin	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Monobromoacetic Acid	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Monochloroacetic Acid	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
o-Chlorotoluene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
p-Chlorotoluene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Propachlor	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Propoxur	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND
Unregulated Organic Substances Detected										
Bromodichloromethane	0	Monitored	4.42	2.65 - 4.42	2.34	1.88 - 2.34	7.52	3.36 - 7.52	10.0	3.30 - 10.0
Chloroform	0	Monitored	20.4	10.9 - 20.4	7.44	5.52 - 7.44	20.4	9.25 - 20.4	26.4	10.9 - 26.4
Dibromochloromethane	0	Monitored	ND	ND	ND	ND	1.60	ND - 1.60	2.61	ND - 2.61
Dichloroacetic Acid	0	Monitored	13.1	6.81 - 13.1	5.26	3.32 - 5.26	12.0	9.16 - 12.0	13.4	5.39 - 13.4
Monobromoacetic Acid	0	Monitored	4.24	ND - 4.24	ND	ND	ND	ND	4.51	ND - 4.51
Trichloroacetic Acid	0	Monitored	10.8	7.77 - 10.8	2.64	1.78 - 2.64	10.8	5.11 - 10.8	8.26	4.77 - 8.26

•The most recent testing for Lead and Copper Compliance within the distribution system was from June – September 2013. This testing was done in accordance with applicable regulations. The 90th percentile lead sample was <0.0025 mg/L. No lead samples exceeded the action level. The 90th percentile copper sample was 0.218 mg/L. No copper samples exceeded the action level.

•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. The Birmingham Water Works Board (BWWB) 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.

• The BWWB uses acrylamide based polymers in its solids handling operations.

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

2015 Chemical Analysis
Stage 2 Sites

Sites	Monochloroacetic Acid (µg/L)		Monobromoacetic Acid (µg/L)		Dichloroacetic Acid (µg/L)		Trichloroacetic Acid (µg/L)		Dibromoacetic Acid (µg/L)		Total Haloacetic Acids (HAA5) (µg/L)		LRAA Total Haloacetic Acids (HAA5) (µg/L)
	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Average per Site
Carson	ND	ND	4.24	ND - 4.24	13.1	6.81 - 13.1	10.8	7.77 - 10.8	ND	ND	27.1	15.4 - 27.1	19.1
Parade Gas Station Hwy 75	ND	ND	ND	ND	19.8	10.1 - 19.8	17.6	8.14 - 17.6	ND	ND	37.4	20.0 - 37.4	24.7
Putnam	ND	ND	ND	ND	5.26	3.32 - 5.26	2.64	1.78 - 2.64	ND	ND	7.51	5.80 - 7.51	6.61
Birmingham Fire Station #12	ND	ND	ND	ND	5.28	4.48 - 5.28	3.57	2.10 - 3.57	ND	ND	8.85	6.62 - 8.85	7.83
Birmingham Fire Station #30	ND	ND	ND	ND	12.8	9.85 - 12.8	12.9	10.3 - 12.9	ND	ND	25.6	20.7 - 25.6	23.2
New Temple Baptist Church	ND	ND	ND	ND	15.1	12.2 - 15.1	11.2	7.37 - 11.2	ND	ND	26.3	19.5 - 26.3	23.0
Shades Mountain	ND	ND	ND	ND	12.0	9.16 - 12.0	10.8	5.11 - 10.8	ND	ND	22.8	14.3 - 22.8	17.7
Birmingham Fire Station #32	ND	ND	ND	ND	11.7	8.41 - 11.7	10.3	5.76 - 10.3	ND	ND	22.0	14.8 - 22.0	18.0
Highland Lakes Brisstol Lane	ND	ND	ND	ND	17.7	12.2 - 17.7	15.1	8.54 - 15.1	ND	ND	32.8	20.7 - 32.8	25.2
Hoover Fire Station #2	ND	ND	ND	ND	14.1	10.9 - 14.1	12.4	6.97 - 12.4	ND	ND	26.6	17.8 - 26.6	22.2
Moody Fire Station	ND	ND	ND	ND	18.0	9.87 - 18.0	14.0	7.96 - 14.0	ND	ND	31.2	17.8 - 31.2	24.7
Shades Crest Grocery	ND	ND	ND	ND	19.2	9.67 - 19.2	17.3	6.67 - 17.3	ND	ND	36.5	16.3 - 36.5	25.3
Western	ND	ND	4.51	ND - 4.51	13.4	5.39 - 13.4	8.26	4.77 - 8.26	ND	ND	26.1	10.2 - 26.1	18.6
Birmingham Fire Station #18	ND	ND	ND	ND	13.1	6.97 - 13.1	9.66	6.16 - 9.66	ND	ND	22.7	13.1 - 22.7	18.7
Pleasant Grove Post Office	ND	ND	ND	ND	17.0	10.7 - 17.0	13.1	8.76 - 13.1	ND	ND	30.1	9.59 - 30.1	20.6
Shannon Fire Station	ND	ND	ND	ND	21.6	10.2 - 21.6	14.6	5.92 - 14.6	ND	ND	36.2	16.2 - 36.2	27.3

Sites	Chloroform (µg/L)		Bromodichloromethane (µg/L)		Dibromochloromethane (µg/L)		Bromoform (µg/L)		Total Trihalomethanes (TTHM) (µg/L)		LRAA Total Trihalomethanes (TTHM) (µg/L)
	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Average per Site
Carson	20.4	10.9 - 20.4	4.42	2.65 - 4.42	ND	ND	ND	ND	24.8	13.6 - 24.8	17.3
Parade Gas Station Hwy 75	23.9	14.6 - 23.9	4.08	3.34- 4.08	ND	ND	ND	ND	27.9	18.0 - 27.9	22.0
Putnam	7.44	5.52 - 7.44	2.34	1.88 - 2.34	ND	ND	ND	ND	9.73	7.40 - 9.73	8.90
Birmingham Fire Station #12	8.77	7.26 - 8.77	2.66	2.22 - 2.66	ND	ND	ND	ND	11.4	9.48 - 11.4	10.3
Birmingham Fire Station #30	24.2	21.2 - 24.2	4.66	4.13 - 4.66	ND	ND	ND	ND	28.9	25.4 - 28.9	27.6
New Temple Baptist Church	45.5	28.3 - 45.5	5.86	4.67 - 5.86	ND	ND	ND	ND	50.8	32.9 - 50.8	42.3
Shades Mountain	20.4	9.25 - 20.4	7.52	3.36 - 7.52	1.60	ND - 1.60	ND	ND	29.5	12.6 - 29.5	22.7
Birmingham Fire Station #32	22.2	9.42 - 22.2	8.04	3.48 - 8.04	1.65	ND - 1.65	ND	ND	31.9	12.9 - 31.9	21.0
Highland Lakes Brisstol Lane	42.3	23.1 - 42.3	10.9	5.60 - 10.9	2.30	1.19 - 2.30	ND	ND	55.5	29.9 - 55.5	43.5
Hoover Fire Station #2	24.2	16.9 - 24.2	7.76	4.96 - 7.76	1.74	1.08 - 1.74	ND	ND	32.9	23.0 - 32.9	28.8
Moody Fire Station	36.7	19.1 - 36.7	5.91	4.88 - 5.91	1.29	ND - 1.29	ND	ND	42.6	25.9 - 42.6	33.8
Shades Crest Grocery	45.4	16.4 - 45.4	10.9	5.04 - 10.9	2.41	1.13 - 2.41	ND	ND	58.7	22.6 - 58.7	38.9
Western	26.4	10.9 - 26.4	10.0	3.30 - 10.0	2.61	ND - 2.61	ND	ND	39.1	14.2 - 39.1	26.2
Birmingham Fire Station #18	24.0	11.9 - 24.0	8.67	3.33 - 8.67	2.60	ND - 2.60	ND	ND	35.3	15.2 - 35.3	23.8
Pleasant Grove Post Office	30.0	14.1 - 30.0	9.62	4.53 - 9.62	2.47	ND - 2.47	ND	ND	41.6	18.7 - 41.6	32.2
Shannon Fire Station	51.6	19.8 - 51.6	11.2	5.79 - 11.2	2.50	1.09 - 2.50	ND	ND	65.3	28.5 - 65.3	45.2

Consecutive System Meters													
Meters	Monochloroacetic Acid (µg/L)		Monobromoacetic Acid (µg/L)		Dichloroacetic Acid (µg/L)		Trichloroacetic Acid (µg/L)		Dibromoacetic Acid (µg/L)		Total Haloacetic Acids (HAA5) (µg/L)		LRAA Total Haloacetic Acids (HAA5) (µg/L)
	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Average per Site
West Jefferson - 4251 Flat Top Road, 35073	ND	ND	ND	ND	16.4	7.70 - 16.4	13.5	6.14 - 13.5	ND	ND	27.6	13.8 - 27.6	22.9
Brookside #1 - 1298 Brookside Coalburg Road, 35181	ND	ND	ND	ND	16.9	6.56 - 16.9	9.11	3.31 - 9.11	1.00	ND - 1.00	26.0	9.87 - 26.0	16.5
Brookside #2 - 2299 Robert Road, 35214	ND	ND	ND	ND	18.4	7.73 - 18.4	19.2	4.46 - 19.2	ND	ND	37.6	12.2 - 37.6	24.0
Pine Bluff #1 - 22495 State Highway 79, 35172	ND	ND	ND	ND	21.0	9.54 - 21.0	14.1	9.31 - 14.1	ND	ND	34.0	18.9 - 34.0	26.4
Pine Bluff #2 - 9 Good News Road, 35172	ND	ND	ND	ND	19.0	10.9 - 19.0	13.0	11.4 - 13.0	ND	ND	32.0	22.3 - 32.0	26.4
Mulga #1 - 316 Templeton Road, 35218	ND	ND	ND	ND	23.5	8.09 - 23.5	14.2	6.42 - 14.2	1.00	ND - 1.00	33.9	14.5 - 33.9	26.1
Mulga #2 - 601 Pleasant Grove Road, 35127	ND	ND	ND	ND	20.4	12.8 - 20.4	23.6	8.88 - 23.6	ND	ND	43.9	21.7 - 43.9	29.4
Graysville #1 - 2395 Forestdale Blvd, 35214	ND	ND	ND	ND	14.1	5.10 - 14.1	13.0	4.50 - 13.0	ND	ND	27.1	9.60 - 27.1	18.8
Graysville #2 - 4251 Flattop Road, 35073	ND	ND	ND	ND	14.0	7.34 - 14.0	10.9	5.98 - 10.9	ND	ND	22.2	13.3 - 22.2	19.4
Remlap - 942 Ridgewood Drive, 35133	ND	ND	ND	ND	20.0	12.9 - 20.0	16.0	12.9 - 16.0	ND	ND	36.0	25.9 - 36.0	30.1
UAB/VA - 1813 6th Avenue South, 35233	ND	ND	ND	ND	17.2	9.48 - 17.2	13.7	6.30 - 13.7	ND	ND	30.9	15.8 - 30.9	24.1

Meters	Chloroform (µg/L)		Bromodichloromethane (µg/L)		Dibromochloromethane (µg/L)		Bromoform (µg/L)		Total Trihalomethanes (TTHM) (µg/L)		LRAA Total Trihalomethanes (TTHM) (µg/L)
	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Average per Site
West Jefferson - 4251 Flat Top Road, 35073	29.3	14.6 - 29.3	9.17	3.88 - 9.17	2.37	ND - 2.37	ND	ND	39.7	18.5 - 39.7	32.5
Brookside #1 - 1298 Brookside Coalburg Road, 35181	28.6	16.6 - 28.6	9.35	3.51 - 9.35	2.44	ND - 2.44	ND	ND	40.4	20.1 - 40.4	27.2
Brookside #2 - 2299 Robert Road, 35214	32.5	11.8 - 32.5	9.78	3.42 - 9.78	2.53	ND - 2.53	ND	ND	44.8	15.3 - 44.8	32.3
Pine Bluff #1 - 22495 State Highway 79, 35172	26.4	14.3 - 26.4	4.13	2.88 - 4.13	ND	ND	ND	ND	30.6	17.3 - 30.6	22.0
Pine Bluff #2 - 9 Good News Road, 35172	29.6	17.8 - 29.6	4.76	3.57 - 4.76	ND	ND	ND	ND	34.3	21.4 - 34.3	27.7
Mulga #1 - 316 Templeton Road, 35218	35.5	13.5 - 35.5	10.1	3.78 - 10.1	2.53	ND - 2.53	ND	ND	48.1	17.3 - 48.1	31.1
Mulga #2 - 601 Pleasant Grove Road, 35127	37.6	25.3 - 37.6	10.4	5.45 - 10.4	2.57	1.06 - 2.57	ND	ND	50.6	31.8 - 50.6	38.5
Graysville #1 - 2395 Forestdale Blvd, 35214	26.4	8.90 - 26.4	8.66	2.88 - 8.66	2.19	ND - 2.19	ND	ND	35.8	11.8 - 35.8	27.0
Graysville #2 - 4251 Flattop Road, 35073	28.6	15.0 - 28.6	9.39	3.84 - 9.39	2.45	ND - 2.45	ND	ND	40.4	18.9 - 40.4	31.0
Remlap - 942 Ridgewood Drive, 35133	32.0	16.6 - 32.0	4.63	3.28 - 4.63	ND	ND	ND	ND	36.6	19.9 - 36.6	28.4
UAB/VA - 1813 6th Avenue South, 35233	33.5	10.3 - 33.5	9.86	3.78 - 9.86	1.95	ND - 1.95	ND	ND	45.3	14.1 - 45.3	29.9

BIRMINGHAM
WATER WORKS

3600 FIRST AVENUE N.
BIRMIGNHAM, AL 35222

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