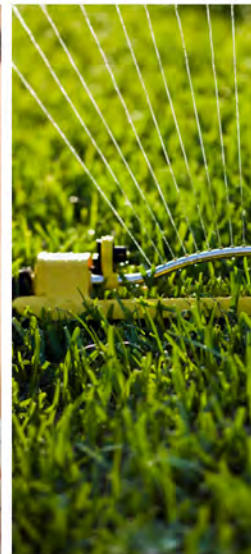


# WATER

*There's nothing else like it!*



Birmingham Water Works  
Annual Water Quality Report 2014

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**Aerial view of the Shades Mountain Filter Plant - a recipient of the Best Operated Plant Award for its outstanding operations.**

## CCR: GOVERNMENT MANDATED

The Birmingham Water Works Board (BWVB), like water utilities across the U.S., is required by the Environmental Protection Agency to send its customers this water quality report or Consumer Confidence Report (CCR) each year.

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

In 2013, as in years past, the BWVB met all state and federal regulations for water quality.



## OUR PEOPLE

### Board of Directors

- A. Jackie Robinson, III  
*Chairman/President*
- Sherry W. Lewis  
*First Vice Chairman*
- Ann D. Florie  
*Second Vice Chairman*
- David S. Herring  
*Secretary-Treasurer*
- Dr. George Munchus  
*Assistant Secretary-Treasurer*

### EnviroLab Management

- Anton Jones, Sr., MSM, REM  
*Manager of EnviroLab/Water Quality*
- Drusilla Hudson, CSEM, CESCO  
*Assistant Manager/Chief Chemist*
- Stacy Littleton, CSEM, REM  
*QA/QC Supervisor*

### Water Quality Operations

- Will T. Moore II  
*Water Quality Superintendent*

### Executive Staff

- Mac Underwood, CPA  
*General Manager*
- Darryl R. Jones, P.E.  
*Assistant General Manager  
Operations and Technical Services*
- T.M. "Sonny" Jones, IV, P.E.  
*Assistant General Manager  
Engineering and Maintenance*
- Michael Johnson, CPA  
*Assistant General Manager  
Finance and Administration*

### Regulatory Compliance

- Lori Brown  
*Regulatory Compliance Coordinator*

### Water Treatment

- Floyd Stephens  
*Water Treatment Manager*





# WHAT YOU NEED TO KNOW

## What is the Consumer Confidence Report?

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

## 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.

## 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 2013 calendar year are provided in the chart.

## Where can I get additional copies of this report?

You may obtain additional copies of the CCR at the BWWB Customer Service Center, by mail (upon request) or by visiting [www.bwwb.org](http://www.bwwb.org). For questions concerning the CCR, please call **Lori Brown at 205-244-4206**.

## What 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.

# OUR MISSION

The Birmingham Water Works Board 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.

*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](http://www.bwwb.org).*

# A COMMITMENT TO WATER QUALITY

## 2013 Awards:

- The Alabama Water and Pollution Control Association's (AWPCA's) Best Operated Plant Award was presented to the Carson and Shades Mountain Filter Plants for their outstanding operations.
- The Putnam Filter Plant received AWPCA's Award of Excellence for operations achieved throughout 2013.
- All four of the BWWB's filter plants (Carson, Putnam, Shades Mountain and Western) received the Alabama Department of Environmental Management's Optimized Plant Award.
- The BWWB's Pipe Tapping Team won their 10th National Championship at the American Water Works Association's Annual Conference and Exposition (ACE13) after winning their 5th World Championship in April at the 2013 World Water Cup.
- The BWWB's Top Operators Team also competed in ACE13 and won their 3rd National Championship. The team beat very competitive opponents from the California/Nevada section in the finals.
- The BWWB placed 75th in the industry in Training Magazine's Top 125 Award, which ranks 125 of the leading organizations in employer-sponsored training and development programs.
- The BWWB's Security Department ranked 11th in its sector from Security Magazine's Top 500 Security Award. Those in the utility's division include water, power, nuclear, dam, and gas utilities across North America.



American Water Works Association



BIRMINGHAM WATER WORKS

# BIRMINGHAM WATER WORKS

## SUSTAINING A RESOURCE YOU CAN'T LIVE WITHOUT

Water is what makes all life possible. It's no secret that water is essential to life, which is why the Birmingham Water Works Board (BWVB) commits daily to maintain, preserve, and conserve our most precious resource. To have access to some of the safest treated water in the world – just by turning on the tap – is very fortunate. According to the Environmental Protection Agency, the average American family uses roughly 140 gallons of water a day. This resource is a constant and essential component of human life, which is shown from the time we wake in the morning to brush our teeth and have our coffee to the time we rest through preparing dinner and taking nice, hot baths before sleeping at night.

Unique from any other liquid water flows through the blood, carrying oxygen and nutrients to cells and flushing toxins out of our bodies. It also cushions our joints and soft tissues. Without water as a routine part of our daily consumption, we would not be able to digest or absorb food. It is responsible for so much of our being, which is why operators in the treatment plants and chemists in the EnviroLab perform more than 100,000 water quality tests on samples collected.

The Mayo Clinic suggests that we consume about eight cups of water a day. Going without water

isn't smart, and it doesn't take long before you begin suffering from

the effects of dehydration. Your body weight, overall health and the weather play into the scenario as well. While people may fast or try a body cleanse without food, you should absolutely never go without water for more than a day.

With about 70% of the earth's surface being cov-

ered in undrinkable water, the BWVB prides itself in being able to produce one

of the most vital and sustainable resources to customers' every-

day. Because of the community's depen-

dency on consumable drinking wa-

ter, the BWVB tests its water

thoroughly using the best avail-

able technology. Filter plant operators, chemists from the EnviroLab, water quality technicians, meter readers, leak repair crews, engineers, and even customer support representatives in the call center all work together to assure that the community receives its most precious resource.

The security of your water is incredibly vital to your health, and the BWVB has one of the best security systems in the nation. For the past two years the system ranked 11th and 15th in the Utility Sector, in Security Magazine's Top 500 Security Departments in North

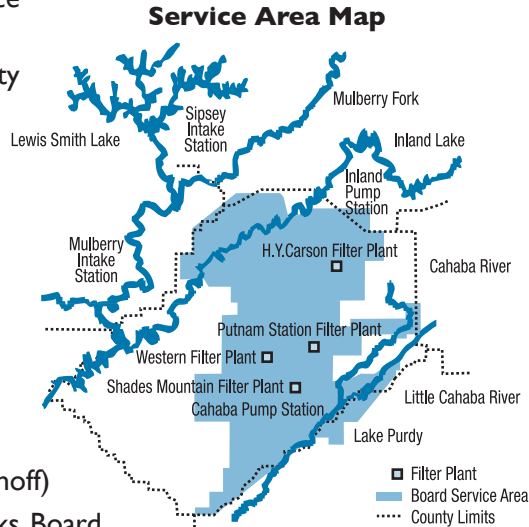
America, competing in the same category as power, nuclear, oil and gas utilities. The BWVB placed first among other water systems for its outstanding security. The utility has been recognized in many capacities from the Alabama Department of Environmental Management, American Water Works Association, Alabama Water and Pollution Control Association, leading publications such as Security Magazine and Training Magazine, as well as placed first in several nationally recognized conferences and expositions. Constantly on the move, just like the water it produces, there is no surprise that the BWVB is ranked 5th in the nation for water quality. So the next time you pour yourself a nice refreshing glass of ice-cold water, keep in mind that each drop is of the highest quality, because simply put, **there is nothing else like it!**



# 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 Birmingham Water Works Board is making a maximum effort to physically protect all of our critical assets.

# WHERE DOES MY WATER COME FROM?

## Black Warrior Basin

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

## Cahaba Basin

- Big Cahaba River
- Little Cahaba River
- Lake Purdy

# SYSTEM INFORMATION FOR 2013

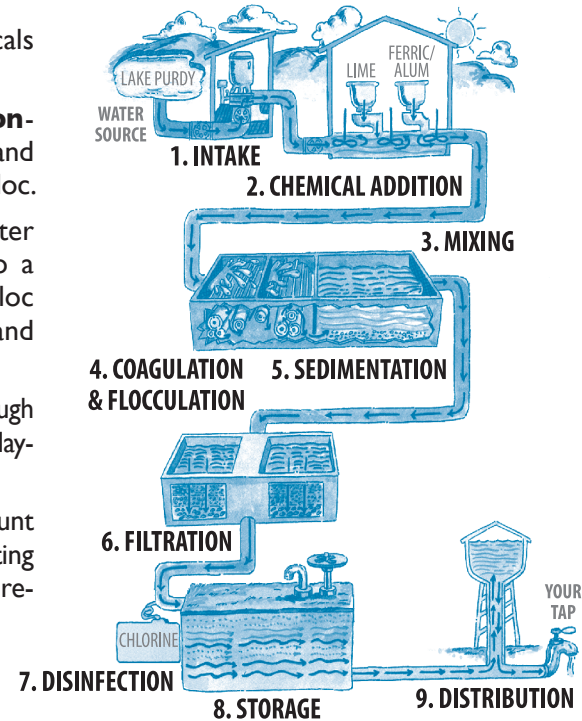
- Gallons of water produced each day: **100 million\***
- People served: **600,000\***
- Square miles in service area: **759\***
- Miles of water main (pipes) in system: **4,000\***

\*Approximations

**WATER** *There's nothing else like it!*

# 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 and 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 delivers an average of 100 million gallons of water per day.



# ABBREVIATIONS

- NA:** Not Applicable
- CDC:** Centers for Disease Control
- ND:** Not Detected
- NTU:** Nephelometric Turbidity Unit
- EPA:** Environmental Protection Agency
- ADEM:** Alabama Department of Environmental Management

**WATER** *There's nothing else like it!*

# WATER QUALITY DATA

## 2013 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)			
Presence of Coliform bacteria is < 5% of monthly samples	The highest percentage of bacteria in the distribution system for one month was 0.61% (2 out of 330 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.			
Parameters (mg/L)	Inorganic Chemicals and Radiological			
MCL	Carson Highest	Putnam Highest	Shades Mountain Highest	Western Highest
Antimony	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND
Barium	ND	ND	ND	ND
Beryllium	ND	ND	ND	ND
Cadmium	ND	ND	ND	ND
Chlorine	2.80	2.40	2.45	3.71
Chromium	0.1	ND	ND	ND
Copper	1.3	ND	ND	ND
Cyanide	0.2	ND	ND	ND
Fluoride	4	0.98	0.82	0.80
Gross Alpha (pCi/L)	15	ND	ND	ND
Lead	0.015	ND	ND	ND
Mercury	0.002	ND	ND	ND
Nickel	0.1	0.001	ND	ND
Nitrate as N	10	0.42	0.42	0.56
Nitrite as N	1	ND	ND	ND
Radium 226 (pCi/L)	5	0.2	0.2	0.2
Radium 228 (pCi/L)	5	ND	ND	ND
Selenium	0.05	ND	ND	ND
Thallium	0.002	ND	ND	ND
Total Nitrate/Nitrite	10	0.42	0.28	0.56
Turbidity (NTU)	0.3 (TT)	0.307	0.180	0.180

### 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	0.05	ND	ND	ND	ND
Lindane	0.2	ND	ND	ND	ND
Methoxychlor	40	ND	ND	ND	ND
o-Dichlorobenzene	600	ND	ND	ND	ND



# WATER QUALITY DATA

2013 Chemical Analysis					
Standard List Of Primary Drinking Water Contaminants For CCR					
Primary Drinking Water Standards - Limits are set based on public health effects.					
Regulated Organic Chemicals					
Parameters (µg/L)	MCL	Carson Highest	Putnam Highest	Shades Mountain Highest	Western Highest
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
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	0.15	ND
Styrene	100	ND	ND	ND	ND
Tetrachloroethylene	5	ND	ND	ND	ND
Toluene	1	ND	ND	ND	ND
Total Halocacetic Acids	60	28.6	19.2	36.8	42.5
Total Trihalomethanes	80	21.4	27.8	37.4	36.9
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	40.1			

TOC Percent Removal for Filter Plants					
	MCL	Carson	Putnam	Shades Mountain	Western
Total Halocacetic Acids (µg/L)	System-wide Running Annual Average (RAA): 60 µg/L	31.0			
Total Organic Carbon (TOC)	4 (TT)	1.00	1.00	1.00	1.00

TOC Step Removal is based on percent reduction of TOC and value of alkalinity in raw water.

- 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 (BWVB) 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 you 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 BWVB uses acrylamide based polymers in its solids handling operations.
- On January 2, 2013, a large water main break occurred that resulted in a loss of water pressure in the western part of the water system along US Hwy-78. A boil water notice was issued for the affected area. On January 4th, the system was restored to normal operation.
- 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.

# WATER QUALITY DATA

2013 Chemical Analysis Regulated Drinking Water Contaminants For CCR										Major Sources in Drinking Water			
Parameters (mg/L)	MCLG	MCL	MCLG	MCL	Carson		Putnam		Shades Mountain		Western		Major Sources in Drinking Water
					Range	Highest	Range	Highest	Range	Highest	Range	Highest	
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 0.61% (2 out of 330 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
Antimony	0.006	0.006			ND	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum refineries; fire retardants; ceramics; erosion of 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			ND	ND	ND	ND	ND	ND	ND	ND	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	2.80	1.42 - 2.80	2.40	1.50 - 2.40	2.45	1.10 - 2.45	3.71	1.22 - 3.71			Water additive used to control microbes
Chromium	0.1	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from steel and pulp mills; erosion of natural deposits
Copper	1.3	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Corrosion of household plumbing systems; Erosion of natural deposits
Cyanide	0.2	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from steel/ metal factories; discharge from plastic and fertilizer factories
Fluoride	4	4	0.98	0.59 - 0.98	ND	ND	0.82	0.76 - 0.82	0.80	ND - 0.80			Erosion of natural deposits; Water additive which promotes strong leath; Discharge from fertilizer and aluminum factories
Gross Alpha (pCi/L)	0	15	ND	ND	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	0.00	0.015	ND	ND	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	ND	ND	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and croplands
Nickel	0.1	0.1	0.001	0.001	ND	0.001	ND - 0.001	0.001	0.001	ND - 0.001			Runoff from fertilizer; leaching from septic tanks and sewage; Erosion of natural deposits
Nitrate as N	10	10	0.42	0.30 - 0.42	0.42	0.35 - 0.42	0.28	0.25 - 0.28	0.56	0.40 - 0.56			Erosion of natural deposits
Nitrite as N	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Erosion of natural deposits
Radium 226 (pCi/L)	0	5	0.2	0.2	0.2	0.2	0.5	0.5	0.2	0.2			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	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	ND	ND	Leaching from ore-processing sites; Discharge from electronics, glass and drug factories
Total Nitrate/Nitrite	10	10	0.42	0.30 - 0.42	0.42	0.35 - 0.42	0.28	0.25 - 0.28	0.56	0.40 - 0.56			Runoff from fertilizer; leaching from septic tanks and sewage; Erosion of natural deposits
Turbidity (NTU)	N/A	0.3 (TT)	0.307	0.013 - 0.307	0.300	0.010 - 0.300	0.180	0.010 - 0.180	0.180	0.010 - 0.180			Soil runoff

Regulated Organic Chemicals										Major Sources in Drinking Water	
Parameters (µg/L)	MCLG	MCL	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Major Sources in Drinking Water
1,1-Dichloroethane	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
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, preapples 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
Endosulfan	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 Epoxide	0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	Residue of banned pesticide
Hexachlorobenzene	0	0.2	ND	ND	ND	ND	ND	ND	ND	ND	Breakdown of heptachlor
Hexachlorocyclopentadiene	50	50	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from metal refineries and agricultural chemical factories
Lindane	0.0002	0.2	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from chemical factories
Methoxychlor	40	40	ND	ND	ND	ND	ND	ND	ND	ND	Runoff/ leaching from insecticide used on cattle, lumber, gardens, alfalfa, livestock
o-Dichlorobenzene	600	600	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
Oramyl (Vydate)	200	200	ND	ND	ND	ND	ND	ND	ND	ND	Runoff/ leaching from insecticide used on apples, potatoes, and melons
PCB 1016	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfill; Discharge of waste chemicals
PCB 1221	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfill; Discharge of waste chemicals
PCB 1232	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfill; Discharge of waste chemicals
PCB 1242	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfill; Discharge of waste chemicals
PCB 1246	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfill; Discharge of waste chemicals
PCB 1260	0	0.5	ND	ND	ND	ND	ND	ND	ND	ND	Runoff from landfill; Discharge of waste chemicals
p-Dichlorobenzene	75	75	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
Pentachlorophenol	0	1.00	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from wood preserving factories
Picramnia	500	500	ND	ND	ND	ND	ND	ND	ND	ND	Herbicide runoff
Simazine	4	4	ND	ND	ND	0.15	ND - 0.15	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	N/A	1	ND	ND	ND	ND	ND	ND	ND	ND	Discharge from petroleum factories
Total Halocyclic Acids	1	60	28.6	16.4 - 28.6	19.2	11.9 - 19.2	36.8	13.4 - 36.8	42.5	15.1 - 42.5	By-product of drinking water chlorination
Total Trihalomethanes	N/A	80	21.4	18.3 - 21.4	27.8	15.3 - 27.8	37.4	12.6 - 37.4	36.9	19.9 - 36.9	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



# WATER QUALITY DATA

2013 Chemical Analysis					
Running Annual Average for System Wide Stage 2 Sites					
MCLG	MCL	RAA	Major Sources in Drinking Water		Major Sources in Drinking Water
Total Trihalomethanes (µg/L)	N/A	System-wide Running Annual Average (RAA): 80 µg/L	By-product of drinking water chlorination		By-product of drinking water chlorination
Total Haloacetic Acids (µg/L)	N/A	System-wide Running Annual Average (RAA): 60 µg/L	By-product of drinking water chlorination		By-product of drinking water chlorination
TOC Percent Removal for Filter Plants					
Total Organic Carbon (TOC)	Carson	Putnam	Shades Mountain	Western	Major Sources in Drinking Water
	1.00	1.00	1.00	1.00	Naturally present in the environment

Parameter(s) (mg/L)	Secondary Drinking Water Standards											
	Limits are set based on cosmetic or aesthetic effects.											
	MCLG	MCL	Carson		Putnam		Shades Mountain		Western		Major Sources in Drinking Water	
Aluminum	0	0.05 - 0.2	0.021	0.008	ND - 0.008	0.035	0.022 - 0.035	0.047	0.02 - 0.047	0.047	0.02 - 0.047	By-product of drinking water treatment.
Bromide	N/A	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Calcium	0	Monitored	16.7	22.8	17.5 - 22.8	47.8	22.4 - 47.8	33.3	16.5 - 33.3	33.3	16.5 - 33.3	
Carbon Dioxide	0	Monitored	1.73	ND	ND	2.25	ND - 2.25	1.73	ND - 1.73	1.73	ND - 1.73	
Chloride	0	250	4.81	4.21	3.98 - 4.21	6.26	5.39 - 6.26	5.16	ND - 5.16	5.16	ND - 5.16	
Color, APHA	N/A	N/A	ND	ND	ND	0.109	0.005 - 0.109	0.002	ND - 0.002	0.002	ND - 0.002	
Copper	1.30	1.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Foaming Agent	0.50	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Iron	0	0.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Langelier Index	N/A	Non-corrosive	-0.036	0.782	0.110 to 0.782	0.220	-0.071 to 0.220	0.724	-0.046 to 0.724	0.724	-0.046 to 0.724	
Magnesium	N/A	Monitored	3.45	3.95	3.07 - 3.95	7.12	4.13 - 7.12	11.3	2.74 - 11.3	11.3	2.74 - 11.3	
Manganese	0	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Manganese Odor	0	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	
pH	0	6.5 - 8.5	8.31	9.15	8.25 - 9.15	7.79	7.13 - 7.79	8.22	7.78 - 8.22	8.22	7.78 - 8.22	
Potassium	N/A	Monitored	1.89	1.86	1.60 - 1.86	1.41	1.36 - 1.41	1.91	1.82 - 1.91	1.91	1.82 - 1.91	
Silver	0	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Sodium	0	Monitored	2.07	2.16	1.67 - 2.16	8.32	6.49 - 8.32	10.2	2.30 - 10.2	10.2	2.30 - 10.2	
Specific Conductivity (US)	0	Monitored	158	181	151 - 181	386	226 - 386	328	172 - 328	328	172 - 328	
Sulfate	0	250	35.5	49.9	33.0 - 49.9	70.9	39.2 - 70.9	72.5	38.1 - 72.5	72.5	38.1 - 72.5	
TDS	0	500	88.0	93.0	63.0 - 93.0	208	105 - 208	188	65.0 - 188	188	65.0 - 188	
Temperature (°F)	N/A	N/A	58.0	56.0	55.0 - 56.0	77.0	52.0 - 77.0	72.0	55.0 - 72.0	72.0	55.0 - 72.0	
Total Alkalinity	0	Monitored	28.0	34.0	22.0 - 34.0	92.0	48.0 - 92.0	54.0	32.0 - 54.0	54.0	32.0 - 54.0	
Total Hardness	0	Monitored	104	116	60.0 - 116	158	88.0 - 158	130	90.0 - 130	130	90.0 - 130	
Zinc	0	3.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	

## 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 immunocompromised, 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.

# WATER QUALITY DATA

## 2013 Chemical Analysis Unregulated Organic Substances Substances Not Detected

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

Dicamba	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorotrichloromethane	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m-Dichlorobenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methiocarb	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylol	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tertiary Butyl Ether	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metolachlor	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metribuzin	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monobromoacetic Acid	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monochloroacetic Acid	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Chlorotoluene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chlorotoluene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propachlor	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propoxur	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	0	Monitored	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Unregulated Substances Detected													
Bromodichloromethane	0	Monitored	4.17	3.51 - 4.17	4.23	2.93 - 4.23	6.13	3.90 - 6.13	10.1	3.91 - 10.1			
Chloroform	0	Monitored	17.2	14.8 - 17.2	23.6	12.3 - 23.6	31.3	8.39 - 31.3	30.7	16.0 - 30.7			
Dibromochloromethane	0	Monitored	ND	ND	ND	ND	ND	ND	2.27	ND - 2.27			
Dichloroacetic Acid	0	Monitored	14.3	7.44 - 14.3	13.6	7.67 - 13.6	21.1	8.94 - 21.1	20.5	7.45 - 20.5			
Trichloroacetic Acid	0	Monitored	14.3	8.26 - 14.3	6.37	4.18 - 6.37	15.7	4.43 - 15.7	22.1	7.67 - 22.1			

# WATER QUALITY DATA

## 2013 Chemical Analysis Stage 2 Sites

Sites	Monochloroacetic Acid (µg/L)		Dichloroacetic Acid (µg/L)		Trichloroacetic Acid (µg/L)		Dibromoacetic Acid (µg/L)		LRAA Total Haloacetic Acids (HAA5) (µg/L)		
	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	
											Average per Site
Carson	ND	ND	14.3	7.44 - 14.3	14.3	8.26 - 14.3	ND	ND	28.6	16.4 - 28.6	21.8
Parade Gas Station Hwy 75	ND	ND	23.6	12.5 - 22.6	21.0	9.78 - 21.0	ND	ND	43.7	22.3 - 43.7	31.2
Putnam	ND	ND	13.6	7.67 - 13.6	6.37	4.18 - 6.37	ND	ND	19.2	11.4 - 19.2	16.1
Birmingham Fire Station #30	ND	ND	20.6	14.4 - 20.6	20.7	12.5 - 20.7	ND	ND	41.3	26.9 - 41.3	33.3
New Temple Baptist Church	ND	ND	20.7	12.8 - 20.7	19.1	11.4 - 19.1	ND	ND	39.7	25.7 - 39.7	32.3
Shades Mountain	ND	ND	21.1	8.94 - 21.1	15.7	4.43 - 15.7	ND	ND	36.8	13.4 - 36.8	23.3
Birmingham Fire Station #32	ND	ND	21.4	10.1 - 21.4	17.1	5.80 - 17.1	ND	ND	38.5	15.9 - 38.5	25.7
Highland Lakes Bristol Lane	ND	ND	23.9	13.4 - 23.9	18.7	10.3 - 18.7	ND	ND	42.6	25.1 - 42.6	33.8
Hoover Fire Station #2	ND	ND	25.2	8.75 - 25.2	19.4	7.47 - 19.4	ND	ND	44.6	16.4 - 44.6	29.9
Moody Firestation	ND	ND	21.2	6.13 - 21.2	24.0	18.6 - 24.0	ND	ND	39.9	29.9 - 39.9	35.2
Shades Crest Grocery	ND	ND	24.6	16.5 - 24.6	22.1	12.6 - 22.1	ND	ND	41.1	29.9 - 41.1	35.5
Western	ND	ND	20.5	7.45 - 20.5	22.1	7.67 - 22.1	ND	ND	42.5	15.1 - 42.5	26.5
Birmingham Fire Station #12	ND	ND	17.0	9.85 - 17.0	5.99	4.50 - 5.99	ND	ND	33.0	15.3 - 33.0	17.8
Birmingham Fire Station #18	ND	ND	28.6	10.2 - 18.6	20.4	9.48 - 20.4	ND	ND	39.0	20.2 - 39.0	26.7
Pleasant Grove Post Office	ND	ND	22.9	10.4 - 22.9	22.8	11.0 - 22.8	ND	ND	45.7	23.0 - 45.7	32.2
Shannon Firestation	ND	ND	29.6	11.1 - 29.6	22.3	10.5 - 22.3	ND	ND	48.1	32.7 - 48.1	34.7
Sites	Chloroform (µg/L)		Bromochloromethane (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	17.2	14.8 - 17.2	4.17	3.51 - 4.17	ND	ND	21.4	18.3 - 21.4	19.4	19.4	
Parade Gas Station Hwy 75	46.5	14.1 - 46.5	6.63	3.58 - 6.63	ND	ND	53.1	17.7 - 53.1	32.8	32.8	
Putnam	23.6	12.3 - 23.6	4.23	2.93 - 4.23	ND	ND	27.8	15.3 - 27.8	19.0	19.0	
Birmingham Fire Station #30	33.4	25.1 - 33.4	6.42	4.71 - 6.42	ND	ND	39.8	29.8 - 39.8	33.3	33.3	
New Temple Baptist Church	65.0	37.6 - 65.0	7.78	6.33 - 7.78	ND	ND	72.7	45.1 - 72.7	60.2	60.2	
Shades Mountain	31.3	8.39 - 31.3	6.13	3.90 - 6.13	ND	ND	37.4	12.6 - 37.4	23.7	23.7	
Birmingham Fire Station #32	28.1	16.6 - 28.1	5.99	4.41 - 5.99	1.22	ND - 1.22	ND	34.1	15.0 - 34.1	25.9	
Highland Lakes Bristol Lane	44.5	25.0 - 44.5	7.39	5.79 - 7.39	1.53	ND - 1.53	ND	53.2	33.7 - 53.2	39.6	
Hoover Fire Station #2	46.0	9.10 - 46.0	7.54	4.23 - 7.54	1.11	ND - 1.11	ND	54.6	14.4 - 54.6	34.6	
Moody Firestation	73.1	63.7 - 73.1	10.1	8.31 - 10.1	1.54	ND - 1.54	ND	84.7	73.4 - 84.7	76.8	
Shades Crest Grocery	66.3	22.3 - 66.3	10.1	5.92 - 10.1	1.67	1.14 - 1.67	ND	79.9	29.5 - 79.9	48.1	
Western	30.7	16.0 - 30.7	10.1	3.91 - 10.1	2.27	ND - 2.27	ND	36.9	19.9 - 36.9	25.9	
Birmingham Fire Station #12	36.2	11.4 - 36.2	5.61	3.75 - 5.61	1.03	ND - 1.03	ND	41.8	20.4 - 41.8	23.0	
Birmingham Fire Station #18	31.5	13.5 - 31.5	10.1	3.63 - 10.1	2.37	ND - 2.37	ND	37.6	17.2 - 37.6	27.8	

Meters	Monochloroacetic Acid (µg/L)		Dichloroacetic Acid (µg/L)		Trichloroacetic Acid (µg/L)		Dibromoacetic Acid (µg/L)		LRAA Total Haloacetic Acids (HAA5) (µg/L)		
	Highest	Range	Highest	Range	Highest	Range	Highest	Range	Highest	Range	
											Average per Site
West Jefferson - 4251 Flat Top Road, 35073	ND	ND	21.2	12.4 - 21.2	22.7	9.58 - 22.7	ND	ND	43.8	21.9 - 43.8	29.5
Brookside #1 - 1298 Brookside Coalburg Road, 35181	ND	ND	15.8	10.9 - 15.8	11.3	8.69 - 11.3	ND	ND	27.2	19.6 - 27.2	23.3
Brookside #2 - 2299 Robert Road, 35214	ND	ND	17.8	12.2 - 17.8	14.9	10.7 - 14.9	ND	ND	32.6	22.8 - 32.6	26.1
Pine Bluff #1 - 22495 State Highway 79, 35172	ND	ND	17.6	10.9 - 17.6	16.6	11.0 - 16.6	ND	ND	33.6	21.9 - 33.6	30.8
Pine Bluff #2 - 9 Good News Road, 35172	ND	ND	18.0	13.0 - 18.0	17.6	13.7 - 17.6	ND	ND	35.7	27.0 - 35.7	31.0
Mulga #1 - 316 Templeton Road, 35218	ND	ND	18.0	12.3 - 18.0	19.4	10.1 - 19.4	ND	ND	37.4	22.4 - 37.4	29.3
Mulga #2 - 601 Pleasant Grove Road, 35127	ND	ND	19.3	6.28 - 19.3	26.9	14.5 - 26.9	ND	ND	34.8	29.7 - 34.8	32.1
Graysville #1 - 2395 Forestdale Blvd, 35214	ND	ND	17.0	7.73 - 17.0	21.4	7.93 - 21.4	ND	ND	38.4	15.9 - 38.4	25.0
Graysville #2 - 4251 Flattop Road, 35073	ND	ND	23.6	12.2 - 23.6	27.5	9.58 - 27.5	ND	ND	51.1	21.9 - 51.1	30.3
Remlap - 942 Ridgewood Drive, 35133	ND	ND	19.6	14.4 - 19.6	18.6	14.0 - 18.6	ND	ND	36.7	28.4 - 36.7	33.6
Meters	Chloroform (µg/L)		Bromochloromethane (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	52.5	23.8 - 52.5	8.55	4.12 - 8.55	2.03	ND - 2.03	ND	ND	60.2	31.1 - 60.2	39.5
Brookside #1 - 1298 Brookside Coalburg Road, 35181	32.4	20.7 - 32.4	5.23	3.82 - 5.23	ND	ND	ND	ND	37.3	24.5 - 37.3	31.2
Brookside #2 - 2299 Robert Road, 35214	45.1	21.0 - 45.1	9.73	4.23 - 9.73	2.31	ND - 2.31	ND	ND	52.0	25.2 - 52.0	34.4
Pine Bluff #1 - 22495 State Highway 79, 35172	27.1	15.1 - 27.1	5.19	4.15 - 5.19	ND	ND	ND	ND	31.6	19.2 - 31.6	26.2
Pine Bluff #2 - 9 Good News Road, 35172	25.4	15.0 - 25.4	4.51	3.94 - 4.51	ND	ND	ND	ND	29.8	19.1 - 29.8	24.0
Mulga #1 - 316 Templeton Road, 35218	26.1	20.6 - 26.1	7.18	4.73 - 7.18	1.52	ND - 1.52	ND	ND	30.9	26.2 - 30.9	29.2
Mulga #2 - 601 Pleasant Grove Road, 35127	63.0	20.8 - 63.0	8.54	3.96 - 8.54	1.91	ND - 1.91	ND	ND	72.6	25.4 - 72.6	40.5
Graysville #1 - 2395 Forestdale Blvd, 35214	34.2	14.0 - 34.2	10.1	3.43 - 10.1	2.49	ND - 2.49	ND	ND	40.4	17.7 - 40.4	28.1
Graysville #2 - 4251 Flattop Road, 35073	51.7	20.6 - 51.7	11.1	3.87 - 11.1	2.53	ND - 2.53	ND	ND	59.1	24.4 - 59.1	40.0
Remlap - 942 Ridgewood Drive, 35133	36.0	21.5 - 36.0	5.96	5.08 - 5.96	ND	ND	ND	ND	41.5	26.6 - 41.5	34.9



# DEFINITIONS

**ACTION LEVEL (AL)** – Concentration of contaminant that, when exceeded, triggers treatment of other requirements that 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)** – 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)** – 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 contaminants.

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

**RUNNING ANNUAL AVERAGE (RAA)** – Compliance period where an average of four consecutive quarterly samples are used.

**TOC** – Total Organic Carbon.

**TOTAL HALOACETIC ACIDS (HAA5)** – By-product of drinking water chlorination.

**TOTAL TRIHALOMETHANES (TTHM)** – By-product of drinking water chlorination.

**TREATMENT TECHNIQUE (TT)** – Required process intended to reduce the level of a contaminant in drinking water.

**TURBIDITY** – Measure of the clarity of water as it relates to its particle content.

**ug/L** – micrograms per liter, or parts per billion (ppb).

**VARIANCE AND EXEMPTIONS** – ADEM or EPA permission not to meet an MCL or treatment technique under certain conditions.

# WATER WORD SEARCH

*Water For Life*



- WATER
- LIFE
- HEALTH
- DEHYDRATION
- EXERCISE
- NUTRITION
- FITNESS
- HUMAN
- BODY
- LIFESTYLE
- DIET
- CALORIES
- HYGIENE
- BRAIN
- HYDRATED
- SURVIVE
- ENERGY
- SWEAT
- SKIN

# ATTENTION CUSTOMERS

**For any water quality concerns (i.e. muddy, cloudy, taste and odor in water) please call the Water Quality Department at 205-244-4381.**



**An electronic version of this document is available at <https://www.bwwb.org/sites/default/files/2014CCR.pdf>.**

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