

WATER WORKS, GAS AND SEWER BOARD
CITY OF PIEDMONT, ALABAMA

ANNUAL DRINKING WATER QUALITY REPORT-2002

INTRODUCTION

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process, protect our water resources, and to ensure the quality of your water. This report provides background information on your water system and presents water quality data for the year 2001.

WATER SOURCE

Our water source is Ladiga Creek, a stream formed from limestone springs east of Highway 278 East. The Source Water Assessment Program for Ladiga Creek and the springs, which is a study to define the recharge areas to our water sources, will be completed this summer and will allow us to better protect your drinking water.

TREATMENT AND DISTRIBUTION SYSTEM

The City of Piedmont has been providing water to citizens in the area since 1898. Components of the original system have been completely replaced. The current Piedmont Water Works, Gas, and Sewer Board was first incorporated back in 1948 to ensure a safe, dependable source of water to every home in the area. As of the end of April 2001, we were serving approximately 2,800 homes and businesses.

The water from Ladiga Creek is pumped to our Water Treatment Plant for treatment, which includes adding chlorine for disinfection, aluminum sulfate for coagulation and sedimentation, and soda ash for pH control. Next the water flows through a flocculator and four settling basins. The water is then filtered through multi-media filters and, fluoride is added for the prevention of tooth decay. Then the finished water is pumped to you. All of the materials and equipment used in the process of treating and distributing water to you has been approved by the National Sanitation Foundation (NSF). The NSF has a general information phone number you can call to get more information (800-673-6275).

The Water Treatment Plant and the pumps at the creek have the capacity of 100% production in the event of power failure by the use of standby power generation.

The Water Treatment Plant has received the “**Best Operated Plant**” award in Alabama 8 times in the last 14 years and “**The Safe Drinking Water Excellence Award**” in Region IV (8 states) in 1993 and 2000. The plant is adequately staffed 24 hours a day, 7 days a

week by 5 State Certified Grade IV operators.

The Piedmont Water Works, Gas, and Sewer Board currently maintains the following:

- Water Mains in Service	104 Miles
- Sewer Mains in Service	28 Miles
- Gas Mains in Service	68 Miles
- Water Storage Tanks	3
- Water Storage Capacity	2.3 Million Gallons
- Water Treatment Capacity	2.25 Million Gallons per Day
- Water Booster Pump Stations	2
- Public Fire Hydrants	388
- Sewage Treatment Capacity	1.55 Million Gallons per Day

We routinely complete a water storage facility inspection plan, and utilize a Bacteriological Monitoring Plan and a Cross Connection Policy to ensure safe drinking water for our customers.

MANAGEMENT

Our system is governed by a Board of Directors, which consists of two appointed town officials. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second Thursday of every month. The meeting is held at the Board Office beginning at 2:00 P.M. The Board Members are:

Mr. Charles Miller Mr. Gerald Whitton Mr. Bruce Dempsey

If you have any questions about this report or concerns about your water utility, please contact:

Mr Robert Lee Young, General Manager
P.O. Box 229 – 128 South Center Ave., Piedmont, Alabama 36272
Phone: (256) 447-9066 Fax: (256) 447-9067 E-Mail: youngrl@bellsouth.net

We are also members of the American Water Works Association, Alabama Rural Water Association, Water Environment Federation, Alabama Water Pollution and Control Association, Alabama Natural Gas Association, and Municipal Distributors Group of Alabama.

WATER QUALITY DATA FOR 2001

Last year, as in years past, your tap water met or surpassed all U.S. Environmental Protection Agency (EPA) and Alabama Department of Environmental Management (ADEM) drinking water health standards. Your Local Water officials vigilantly safeguard Piedmont water supplies and once again we are proud to report that our system has not

violated a maximum contaminant level or any other water quality standard. We are pleased to report that our drinking water is safe and meets all federal and state requirements. This section describes our water quality and what it means.

Piedmont Water Works, Gas, and Sewer Board routinely monitors for constituents in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1st to December 31st, 2001, or from the most recent sampling prior to 2001 (ADEM does not require us to monitor for all constituents every year). Although we are only required to report those constituents that were detected, we are including a list of all the tests that we ran to give you an idea of the extensive testing that is done to ensure that your water is safe. The shaded rows indicate constituents that were detected, although they are all below the regulatory levels. Please note that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

The lab data are presented in eight tables, grouped according to EPA requirements. In these tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

Not Required (NR) – laboratory analysis not required.

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

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

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

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

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

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

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

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

Action Level - the concentration of a contaminant, which if exceeded, triggers treatment or other requirements that 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.

Our monitoring results are shown in the table on the following pages.

TABLE OF PRIMARY CONTAMINANTS

At high levels some primary contaminants are known to pose health risks to humans. This table provides a quick glance of any primary contaminant detections.

CONTAMINANT	MCL	AMOUNT		CONTAMINANT	MCL	AMOUNT DETECTED
		DETECTED	DETECT			
BACTERIOLOGICAL			Endothal	100 ppb	ND	
Total Coliform Bacteria	< 5 %	0		Endrin	2 ppb	ND
Turbidity	TT	ND		Epichlorohydrin	TT	NR
RADIOLOGICAL			Glyphosate	700 ppb	ND	
Beta/photon emitters (mrem/yr)	4	NR		Heptachlor	400 ppt	ND
Alpha emitters (pCi/l)	15	0.7		Heptachlor epoxide	200 ppt	ND
Combined radium (pCi/l)	5	NR		Hexachlorobenzene	1 ppb	ND
INORGANIC CHEMICALS			Lindane	200 ppt	ND	
Antimony	6 ppb	ND		Methoxychlor	40 ppb	ND
Arsenic	50 ppb	ND		Oxamyl [Vydate]	200 ppb	ND
Asbestos (MFL)	7	NR		PCBs	500 ppt	ND
Barium	2 ppm	0.015		Pentachlorophenol	1 ppb	ND
Beryllium	4 ppb	0.001		Picloram	500 ppb	ND
Cadmium	5 ppb	ND		Simazine	4 ppb	ND
Chromium	100 ppb	ND		Toxaphene	3 ppb	ND
Copper	AL=1.3 ppm	ND		Benzene	5 ppb	ND
Cyanide	200 ppb	ND		Carbon tetrachloride	5 ppb	ND
Fluoride	4 ppm	1.3		Chlorobenzene	100 ppb	ND
Lead	AL=15 ppb	ND		Dibromochloropropane	200 ppt	ND
Mercury	2 ppb	ND		o-Dichlorobenzene	600 ppb	ND
Nitrate	10 ppm	0.8 ppm		p-Dichlorobenzene	75 ppb	ND
Nitrite	1 ppm	ND		1,2-Dichloroethane	5 ppb	ND
Selenium	50 ppb	ND		1,1-Dichloroethylene	7 ppb	ND
Thallium	2 ppb	ND		cis-1,2-Dichloroethylene	70 ppb	ND
ORGANIC CHEMICALS			trans-1,2-Dichloroethylene	100 ppb	ND	
2,4-D	70 ppb	ND		Dichloromethane	5 ppb	ND
2,4,5-TP(Silvex)	50 ppb	ND		1,2-Dichloropropane	5 ppb	ND
Acrylamide	TT	NR		Ethylbenzene	700 ppb	ND
Alachlor	2 ppb	ND		Ethylene dibromide	50 ppt	ND
Atrazine	3 ppb	ND		Styrene	100 ppb	ND
Benzo(a)pyrene [PAHs]	200 ppt	ND		Tetrachloroethylene	5 ppb	ND
Carbofuran	40 ppb	ND		1,2,4-Trichlorobenzene	70 ppb	ND
Chlordane	2 ppb	ND		1,1,1-Trichloroethane	200 ppb	ND
Dalapon	200 ppb	ND		1,1,2-Trichloroethane	5 ppb	ND
Di (2-ethylhexyl)adipate	400 ppb	ND		Trichloroethylene	5 ppb	ND
Di (2-ethylhexyl) phthlates	6 ppb	ND		TTHM	80 ppb	30.8ppb
Dinoseb	7 ppb	ND		Toluene	1	ND
Diquat	20 ppb	ND		Vinyl Chloride	2 ppb	ND
Dioxin [2,3,7,8-TCDD]	30 ppq	NR		Xylenes	10 ppm	ND
				Haloacetic Acids	60 ppb	42.5ppb

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

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	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	Trichlorfluoromethane	ND	0.000 - 0.000

Secondary Contaminants

CONTAMINANT	MCL	AMOUNT DETECTED	UNIT MEASUREMENT
Aluminum	0.02	0.03600	PPM
Chloride	250	5.00	PPM
Iron	0.3	ND	PPM
Manganese	0.3	ND	PPM
Silver	0.1	ND	PPM
Total Dissolved Solids	500	108.00	PPM
Zinc	5	0.016	PPM
SPECIAL CONTAMINANTS			
CONTAMINANT	MCL	AMOUNT DETECTED	UNIT MEASUREMENT
Calcium	N/A	23.0	PPM
Carbon Dioxide	N/A	6.16	PPM
Foaming Agents	N/A	ND	PPM
Magnesium	N/A	12.3	PPM
Nickel	N/A	ND	PPM
pH	N/A	6.48	PPM
Sodium	N/A	1.48	PPM
Specific Conductance	N/A		PPM
Sulfate	N/A	10.9	PPM
Total Alkalinity	N/A	87.0	PPM
Total Hardness (as CaCO ₃)	N/A	108	PPM

Explanation for reasons for variance/exemption

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.

The tables below list all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables is from testing done in the calendar year of the report. The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Table of Detected Contaminants

CONTAMINANT	MCLG	MCL	Range	Amount Detected in Reported Units	Multiplier	Amount Detected	Likely Source of Contamination
BACTERIOLOGICAL 2001 Monitoring Results							
Turbidity	0	TT		ND	1	ND NTU	Erosion of natural deposits
RADIOLOGICAL 2001 Monitoring Results							
Alpha emitters	0	15	0 - 0.7	1.9	1	0.7 PCI/L	Erosion of natural deposits
INORGANIC 2001 Monitoring Results							
Barium	2	0.015			1,000	15 ppb	Erosion of natural deposits
Beryllium	0.004	0.004	0 0.001	0.001	1,000	1 ppb	Erosion of natural deposits
Copper (August 17, 2001)		AL=1.3	No. sites above action level = 0	0.5	1	0.5 ppm	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	4	4	0 1.3	1.3	1	1.3 ppm	Erosion of natural deposits, water additive
Lead (August 17, 2001)	0	AL=15	No. sites above action level = 0	0.004	1,000	4 ppb	Corrosion of household plumbing systems
Nitrate	10	10	0 - 0.8	0.53	1	0.8 ppm	Erosion of natural deposits
ORGANIC 2001 Monitoring Results							
TTHM	0	80	0.016 - 0.030	0.0308	1,000	30.8 ppb	By-product of drinking water chlorination
Total HAA5	0	60	0.291 - 0.0425	0.0425	1,000	42.5 ppb	By-product of drinking water chlorination

Detected Unregulated Contaminants Table

CONTAMINANT	AVERAGE	RANGE	
Chloroform	0.0163	0.0110	0.0225
Dibromochloromethane	0.00104	0.0007	0.00170
Bromodichloromethane	0.00488	0.0038	0.0066
Detected Secondary Contaminants			
CONTAMINANT	MCL	AMOUNT DETECTED	UNIT MEASUREMENT
Aluminum	0.02	0.0360	PPM
Chloride	250	5.00	PPM
Total Dissolved Solids	500	108.0	PPM
Zinc	5.0	0.0160	PPM
Detected Special Contaminants			
CONTAMINANT	MCL	AMOUNT DETECTED	UNIT MEASUREMENT
Calcium	N/A	23.0	PPM
Carbon Dioxide	N/A	6.16	PPM
Magnesium	N/A	12.3	PPM
pH	N/A	6.48	PPM
Sodium	N/A	1.48	PPM
Sulfate	N/A	10.9	PPM
Total Alkalinity	N/A	87.0	PPM

What does this mean?

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

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 activities.

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

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

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk should seek advice about drinking water from their health care providers. EPA (Environmental Protection Agency)/CDC (Center of Disease Control) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe

Drinking Water Hotline. All Drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants.

The Piedmont Water Works, Gas, and Sewer Board is also conducting a Source Water Assessment (SWA), which is a study to define the recharge areas to our water sources. The study will be completed this summer and will allow us to better protect your drinking water.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

Please call our office if you have questions.

National Sanitation Foundation