









Daphne Utilities Lead and Copper Plan Amended May 2016



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- Public Education Notice in the Event of Lead Action Level Exceedance
- ✤ In the Event of a Monitoring Non-Compliance
- Customer Notice Regarding Lead

SYSTEM INFORMATION

System Name:	Daphne Utilities
PWSID Number:	AL0000029
Address:	900 Daphne Avenue Daphne, Alabama 36526
Contact:	Larry English – Water Quality Manager 251-583-5643 larrye@daphneutilities.com
System Type:	Ground
Population Served:	Approximately 25,800 (10,696 customers)
Water Sources:	Pleistocene/Miocene & Miocene Aquifers
Regulating Agency:	Alabama Department of Environmental Management (ADEM)
Primary Laboratory: Contact: Address: Telephone: FAX:	TTL Steve Martin PO Drawer 1128 (3516 Greensboro Ave) Tuscaloosa AL 35401 205-345-0816 205-343-0635
Alternate Laboratory: Contact: Address: Telephone: FAX:	Enviro Chem Inc Ken Mohr 4320 Midmost Dr Mobile AL 36608 251-344-9106 251-341-9492

PURPOSE

In 1992, the Alabama Department of Environmental Management (ADEM) adopted the Environmental Protection Agency (EPA)'s Lead and Copper Rule. According to ADEM, this is a critical component of ADEM's effort to protect public health and ensure the safety of the State's drinking water. The Lead and Copper Rules has four basic requirements as summarized by ADEM:

- 1. Require water system to optimize their treatment system to control corrosion in the distribution system and the customer's plumbing;
- 2. Determine tap water levels of lead and copper for customers who have lead service lines or lead-based solder in their plumbing systems;
- 3. Rule out the source water as a source of significant lead levels; and
- 4. If lead action levels are exceeded, the water system is required to take additional actions.

Daphne Utilities has adopted and acknowledged the four requirements of this plan as part of its ongoing commitment to providing safe drinking water. Daphne Utilities has optimized its treatment system through the addition of corrosion control additives, and it regularly tests for lead and copper throughout its water distribution system in accordance with ADEM and EPA requirements. Additional information on lead and copper can be located on EPA's and ADEM's websites and ADEM's Regulations, Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper.

SYSTEM WELL DATA

The Daphne Utilities water *system* has twelve (12) wells with eleven (11) currently in operation and one, Well Number 5, not in service. Of the operating wells, seven wells tap a shallow aquifer referred to as the Pleistocene/Miocene aquifer at an average depth of approximately 202 feet. The remaining four wells tap an aquifer with an average depth of approximately 384 feet which is referred to as the Miocene aquifer.

Corrosion control measures are implemented at various well sites and treatment sites. Currently, zinc orthophosphate, particularly POT804, is injected at wells numbers 1, 2, 4, 6, and 7 and the Henry Lovette Water Treatment Facility and Trojan Water Treatment Facility.

Currently, there are 30 sample sites each with an alternate site for monitoring lead and copper.

MATERIALS INVENTORY DATA

Daphne Utilities' water system currently contains approximately 175 miles of water distribution pipe which serves approximately 10,696 customers. Of those 175 miles approximately 44 miles are ductile iron, approximately 9 miles asbestos cement and approximately 122 miles of PVC. A number of system valves, hydrants, meters and fittings are installed that are typically constructed of ductile/cast iron or brass.

Water service lines are primarily copper with minimal plastic and galvanized piping. There are no known lead service lines on the system side of the water meter. In the past, a minimal number of lead "gooseneck" taps were encountered and replaced. In regards to materials of construction from the meter to the point of customer delivery, it is believed that the majority of materials are plastic (PVC, Pex, Polybutylene) or copper and some galvanized.

In areas where homes were built before 1986, which was the year amendments to the Safe Drinking Water Act reduced lead content in material, there is more likely a potential for lead solder, lead caulking, and lead and copper alloys. These areas include Lake Forest, the areas west of Highway 98 from the intersection with Main Street to Sea Cliff Drive, the area known as Dauphine Acres, and a portion of Parker Lane.

SAMPLING

SAMPLE SITES INCLUDING ALTERNATE SITES - Daphne Utilities currently samples 30 sites with an identified alternative for each site. Sampling currently occurs every three years. The current sample sites are included in Appendix A. Complete addresses are on file at Daphne Utilities' office.

Tier:	All sites are Tier I – Refer to Appendix A
Year and Type of Construction:	Refer to Appendix A for each residential site
Name of Resident & Address:	Complete Addresses are On File at Daphne Utilities'
	Office
Lead Service Line:	No lead service lines- Refer to Appendix A

SAMPLE FREQUENCY

The water system is required to collect samples every three (3) years. This sampling occurs in the months of June, July, August, or September unless written approval from ADEM for an alternative monitoring period is received per ADEM Regulations, Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper. The last samples were collected in 2014.

SAMPLING PROTOCOL

Sampling protocol is per ADEM Regulations Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper. Residents are instructed in person by Daphne Utilities' staff and provided a written instruction of how and when to collect the sample. The sample is recommended to be taken as a first draw but at a minimum the water shall remain undisturbed in the plumbing system a minimum of 6 hours. Collections are made from the cold water kitchen tap or bathroom sink tap. Taps used for monitoring may not include faucets that have point of use or treatment devices installed. Samples are collected in one (1) liter containers provided by Daphne Utilities or its testing laboratory.

STEPS IN THE EVENT OF AN ACTION LEVEL EXCEEDANCE

Elevated levels of lead can cause serious health problems especially for pregnant women, infants, and young children. However, lead is rarely found in source water. Lead in drinking water is primarily found from materials and components associated with service lines and home plumbing. Daphne Utilities is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. Steps customers can implement to minimize potential for lead exposure are noted the annual Consumer Confidence report.

Also, Daphne Utilities implements corrosion control measures to make the drinking water less corrosive to the materials it comes into contact with on its way to the costumers' tap.

If a lead or copper compliance limit is exceeded, increased monitoring consistent with the initial monitoring compliance requirements will occur. The treated water will be analyzed for the contaminant using the same methodology and location as required for inorganic containments in each source water used per ADEM Regulations Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper.

The existing corrosion control systems in place will be properly maintained. Water quality parameters are tested and evaluated on regular schedules. All necessary re-testing, any necessary equipment modifications and public notifications shall be per ADEM Regulations Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper.

PUBLIC NOTIFICATION PROCEDURES

In the event of a monitoring violation or an action level exceedance, necessary public notification procedures will be followed per ADEM Regulations Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper. The type and scope of a particular violation will determine which method(s) are required. The requirements for a particular occurrence will be communicated to the Alabama Department of Environmental Management prior to implementation.

If subject to the public education requirements of the referenced Regulation, within 10 days after the end of each period in which public education was sent, written documentation that contains the following will be delivered to ADEM:

- A demonstration that public education materials that met the content and delivery requirements of the referenced Regulation were delivered.
- A list of all newspapers, radio stations, television stations, and facilities and organizations to which public education materials during this period were required to be delivered to perform public education task.

Appendix A

LEAD AND COPPER SAMPLING SITES Daphne Utilities AL 0000029

No.	Alternate Site *	Name and Address of Customer *	Tier 1, 2, or 3	Lead Service Line Sample (Yes or No)	Year of Plumbing	Type Construction
1	Bayhill Dr.	Bayhill Dr. Daphne, AL 36526	1	No	1988 (1983 Alt)	Wood
2	Bayview Dr.	Bayview Dr. Daphne, AL 36526	1	No	1985	Brick
3	Bayview Dr.	Bayview Dr. Daphne, AL 36526	1	No	1987	Wood
4	Brentwood Dr.	Brentwood Dr. Daphne, AL 36526	1	No	1986	Wood
5	Cameron Circle	Cameron Circle Daphne, AL 36526	1	No	1984 (1989 Alt)	Composition
6	Creekside Dr.	Creekside Dr. Daphne, AL 36526	1	No	1986	Wood
7	Captain O'Neal Dr.	Captain O'Neal Dr. Daphne, AL 36526	1	No	1986	Wood
8	Captain O'Neal Dr.	Captain O'Neal Dr. Daphne, AL 36526	1	No	1985 (1984 Alt)	Wood
9	Captain O'Neal Dr.	Captain O'Neal Dr. Daphne, AL 36526	1	No	1985	Wood
10	Dauphine Circle	Dauphine Circle Daphne, AL 36526	1	No	1988 (1989 Alt)	Wood
11	Dewayne Circle	Dewayne Circle Daphne, AL 36526	1	No	1983	Wood
12	Hanover Dr.	Hanover Dr. Daphne, AL 36526	1	No	1987	Wood
13	Lakefront Dr.	Lakefront Dr. Daphne, AL 36526	1	No	1986 (1987 Alt)	Wood
14	Lancaster Way	Lancaster Way Daphne, AL 36526	1	No	1984	Composition
15	Lancaster Way	Lancaster Way Daphne, AL 36526	1	No	1984	Brick

LEAD AND COPPER SAMPLING SITES Daphne Utilities AL 0000029

No.	Alternate Site *	Name and Address of Customer *	Tier 1, 2, or 3	Lead Service Line Sample (Yes or No)	Year of Plumbing	Type Construction
16	Meadow Circle	Meadow Circle Daphne, AL 36526	1	No	1988	Wood
17	Milburn Circle	Milburn Circle Daphne, AL 36526	1	No	1983	Wood
18	Montclair Loop	Montclair Loop Daphne, AL 36526	1	No	1986	Wood
19	Oakridge Ct., W.	Oakridge Ct., W. Daphne, AL 36526	1	No	1986	Brick
20	Old County Rd.	Old County Rd. Daphne, AL 36526	1	No	1985 (1984 Alt)	Wood
21	Randall Ave.	Randall Ave. Daphne, AL 36526	1	No	1988	Brick
22	Randall Ave.	Randall Ave. Daphne, AL 36526	1	No	1985 (1989 Alt)	Brick
23	Ridgewood Dr.	Ridgewood Dr. Daphne, AL 36526	1	No	1985	Brick
24	Ridgewood Dr.	Ridgewood Dr. Daphne, AL 36526	1	No	1988	Composition
25	Rolling Hills Dr.	Rolling Hills Dr. Daphne, AL 36526	1	No	1988	Composition
26	Tomrick Circle	Tomrick Circle Daphne, AL 36526	1	No	1986	Brick
27	Wildwood Circle	Wildwood Circle Daphne, AL 36526	1	No	1988	Composition
28	Willow Brook Circle	Willow Brook Circle Daphne, AL 36526	1	No	1985	Wood
29	Windsor Ct.	Windsor Ct. Daphne, AL 36526	1	No	1986	Brick
30	Windsor Dr.	Windsor Dr. Daphne, AL 36526	1	No	1984	Wood

Appendix B

This notice and language has been prepared in accordance with ADEM Regulation, Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper, Appendix C <u>in the event</u> of an exceedance of a lead compliance limit.

The Alabama Department of Environmental Management (ADEM) and the Utilities Board of the City of Daphne, Alabama are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by *(insert date when corrosion control will be completed for your system)*. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace each lead service line that we control if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at 251-626-2628. This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

Health effects of lead. Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery, porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that will not hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination such as dirt and dust that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths. Lead in drinking water, although rarely the sole cause of lead poisoning can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 per cent or more of a person's total exposure to lead. Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipe made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%. When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead. Steps You Can Take in the Home To Reduce Exposure To Lead in Drinking Water. Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this booklet. For more information on having your water tested, please call Daphne Utilities at 251-626-2628.

If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:

Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15-30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one or two gallons of water and costs less than (insert a cost estimate based on flushing two times a day for 30 days) per month. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live in a high-rise building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level. Try not to cook with or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove. Remove loose lead solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced, by removing the faucet strainers from all taps and running the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time. If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify the Water Supply Branch of ADEM about the violation.

Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You may be able to identify the plumbing contractor by checking the record of building permits which should be maintained in the files of the City of Daphne. A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the portion of the line we own. If the line is only partially controlled by the <u>(insert name of the city, county, or water system that</u> <u>controls owns the line</u>), we are required to provide you the owner of the privately-owned portion of

Sample Public Education Notice in the Event of a Lead Compliance Limit Exceedance

the line with information on how to replace your the privately-owned portion of the service line, and offer to replace that portion of the line at you're the owner's expense and take a follow-up tap water sample within 14 days of the replacement. If we replace only the portion of the line that we own, we also are required to notify you in advance and provide you with information on the steps you can take to minimize exposure to any temporary increase in lead levels that may result from the partial replacement, to take a follow-up sample at our expense from the line within 72 hours after the partial replacement, and to mail or otherwise provide you with the results of that sample within three business days of receiving the results. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes. Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards. The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

Purchase or lease a home treatment device. Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap, however all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit. Purchase bottled water for drinking and cooking. You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include: Utilities Board of the City of Daphne, Al, at 251-626-2628 can provide you with information about your community's water supply, and a list of local laboratories that have been certified by ADEM for testing water quality; City of Daphne at 251-621-9000 can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and Alabama Department of Public Health at 334-206-5300 or the Baldwin County Health Department at 251-947-3618 can provide you with information about the health effects of lead and how you can have your child's blood tested. The following is a list of some State approved laboratories in your area that you can call to have your water tested for lead.

> Name and Phone Number for ADEM certified Laboratory No. 1

Name and Phone Number for ADEM certified Laboratory No. 2

This notice and language has been prepared in accordance with ADEM Regulation, Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper <u>in the event</u> of an exceedance of a lead action level.

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER. The Utilities Board of the City of Daphne, Alabama found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

Health effects of lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of the body. The greatest rick of lead exposure is to infants, young children and pregnant women. Scientists have linked the effects of lead on the brain with the lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child received lead from the mother's bones, which may affect brain development.

- (Add Sources of lead.)
- > (Explain what lead is.)
- (Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home/building plumbing materials and service lines that may contain lead.)
- (Discuss other important sources of lead exposure in addition to lead in drinking watere.g. paints).
- (Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.)
- (Encourage running the water to flush out the lead.)
- (Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.)
- (Explain that boiling water does not reduce lead levels.)
- (Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.)
- (Suggest that parents have their child's blood tested for lead.)
- (Explain why there are elevated levels of lead in the system's drinking water (if known) and what the water system is doing to reduce the lead levels in homes/building in this area.)
- (Discuss lead in plumbing components, the difference between low lead and lead free, and how the consumers can get their water tested.)

For more information, call us at 251-626-2628 or visit or website at <u>www.daphneutilities.com</u>. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA/s website at <u>www.epa.gov/lead</u> or contact your health care provider. This notice has been prepared in accordance with ADEM Regulation, Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper, Appendix C and with language recommended by ADEM <u>in the event</u> of non-compliance for monitoring.

Daphne Utilities is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During *[inset monitoring period]*, we did not monitor for lead and copper and therefore cannot be sure of the quality of your drinking water during that time.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

(insert follow up measures taken such as a statement that the water system has monitored for the required contaminants properly since the non-compliance occurred.)

Should you have any questions concerning this non-compliance or monitoring requirements, please contact:



This notice has been prepared in accordance with ADEM Regulation, Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper, for use when distribution results of any lead and copper monitoring conducted at the customer's tap as part of the monitoring program.

What are the health effects of lead?

Elevated levels of lead can cause serious health problems especially for pregnant women, infants, and young children. However, lead is rarely found in source water. Lead in drinking water is primarily found from materials and components associated with service lines and home plumbing. Daphne Utilities is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

What is the maximum contaminate level goal (MCLG) and action level (AL) for lead?

Maximum Contaminate 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. The MCLG for lead is zero.

Action Level (AL)– The concentration of lead in water which is used to determine compliance with ADEM Regulations Division 7 Water Supply Program, Chapter 335-7-11 Control of Lead and Copper. This action level value is the 90th percentile level determined from monitoring water at specific sites in the distribution system. A system is considered in compliance if the lead action level is equal to or less than the lead compliance limit of 0.015 mg/l.

Steps consumers can take to reduce exposure to lead:

- 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.
- Use only water from the cold water tap for drinking, cooking, and especially for making baby formula. Most of the lead in household water usually comes from the plumbing in your house, not from the local water supply, and hot water is more likely to cause lead to leach from plumbing materials.
- 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 additional steps you can take to minimize exposure is available from the EPA's Safe Drinking Water Hotline at 1-800-426-4791 or at <u>www.epa.gov/safewater</u>.

Danny Lyndall General Manager Daphne Utilities 900 Daphne Avenue, Daphne AL (251) 626-2628



