

# EARLY ADOPTERS

## State Approaches to Testing School Drinking Water for Lead in the United States



### STATE PROFILE **Alabama**

#### **Summary of Program Features**

Alabama initiated a school drinking water lead testing program in April 2017. This summary is based on a review of program documents collected between January 2018 – June 2018 and communication with Alabama state contacts.

# School Drinking Water Testing Policy/Program Overview

Policy/Program Feature	Information from Policy/Program Documents
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## Background

<b>Name</b>	Not specified
<b>Date(s) of Water Policy/Program</b>	April 2017 to September 2019 <sup>1</sup>
<b>Issuing Authority</b>	State government departments <sup>1,2</sup>
<b>Agency Responsible for Program Management</b>	Alabama Department of Environmental Management <sup>1,2</sup>
<b>Policy or Program</b>	Program <sup>1,2</sup>
<b>One-time or Surveillance Program</b>	One-time program <sup>1,2</sup>
<b>Mandatory/Voluntary for Schools</b>	Voluntary <sup>1-3</sup>
<b>Partnership with Local/Community Water Supplier/System</b>	Yes, encouraged <sup>1,2</sup>
<b>Other Key Partnerships</b>	Not specified
<b>References or Uses the EPA 3Ts</b>	Yes <sup>1,2</sup>

## Program Coverage

<b>School Type (Public, private, charter)</b>	Public schools <sup>1-3</sup>
<b>Grade Levels</b>	Pre-Kindergarten – grade 12 <sup>2</sup>
<b>Includes Testing for Lead</b>	Yes <sup>1,2</sup>
<b>Includes Treatment/Remediation</b>	Not specified
<b>Schools Eligible to Participate</b>	All schools <sup>1,2</sup>

## Funding

<b>Funding Source</b>	Not specified
<b>Funding Amount</b>	Not specified
<b>Covers Sampling at Taps</b>	Not specified
<b>Covers Testing in Lab</b>	Not specified
<b>Covers Treatment/Remediation</b>	Not specified

# Sampling Information

Policy/Program Feature	Information from Policy/Program Documents
<i>Background</i>	
<b>Sampling/Testing Process One-Time or Recurring</b>	One-time, over three-year period <sup>1,2</sup>
<b>Number of Buildings/Facilities Sampled (All or a Portion?)</b>	A portion (Buildings occupied by students; fixtures built between 1982-1987; if multiple buildings on campus were built at same time with same fixtures, fixtures from only one building are required to be sampled; if no fixtures manufactured from 1982-1987, then oldest fixtures should be given preference as sampling sites.) <sup>3</sup>
<b>Types of Taps Sampled</b>	Drinking (water cooler) and cooking <sup>1-3</sup>
<b>Number of Taps Sampled Per School/Building (All or a Portion?)</b>	A portion (at least two per school) <sup>1-3</sup>

## *Initial Sampling at Taps*

<b>Stagnation Period</b>	At least 8 hours <sup>3</sup>
<b>First Draw</b>	Yes <sup>1-3</sup>
<b>Flushing Period</b>	Not specified
<b>Second Draw (Flushed Sample)</b>	Not specified
<b>Additional Initial Samples</b>	Not specified
<b>Sample Size of Water</b>	250 mL <sup>3</sup>
<b>Action Level for Lead</b>	20 ppb <sup>1,3</sup>

## *Action Required When Samples Exceed Action Level for Lead*

<b>Follow-Up Draws</b>	Yes, if initial results are elevated <sup>1,3</sup>
<b>Flushing Period</b>	Not specified
<b>Sample Size of Water</b>	250 mL <sup>3</sup>
<b>Additional Draws</b>	Not specified

# Testing/Remediation/Communication Information

Policy/Program Feature	Information from Policy/Program Documents
<i>Testing</i>	
<b>Type of Lab Used for Testing</b>	State-certified lab, <sup>1,2</sup> analytical lab <sup>3</sup>
<b>Sample(s) that Require Action if Results are Elevated</b>	First draw <sup>3</sup>
<i>Remediation</i>	
<b>Short-Term Measures</b>	Not specified
<b>Long -Term Measures</b>	Not specified
<i>Communication</i>	
<b>Groups Notified of Test Results</b>	Government and general public; <sup>1,2</sup> Students, staff and community upon request; <sup>1</sup> People served by each building sampled <sup>3</sup>
<b>Type of Results Shared (outlet level, building level, school level)</b>	Not specified

## **Sources:**

1. Alabama Department of Environmental Management. Lead Testing In Schools Report. <http://adem.alabama.gov/newsEvents/reports/LeadTestingInSchoolsReport.pdf>. Accessed March 5, 2018.
2. Alabama Department of Environmental Management. Lead Testing at Schools Master Plan. <http://www.adem.state.al.us/programs/water/waterforms/LeadTestingatSchoolsMasterPlan.pdf>. Accessed March 5, 2018.
3. Alabama Department of Environmental Management. Lead Testing at Schools Sampling Plan. <http://www.adem.state.al.us/programs/water/waterforms/LeadTestingatSchoolsSamplingPlan.pdf>. Accessed March 5, 2018.

# Summary of Water Test Results

This report features data collected through the Alabama School Drinking Water Lead Testing Program, initiated in April 2017. This state profile is focused on water quality testing completed in public schools serving grades pre-Kindergarten (PK)-12. Data provided by the state program on March 7, 2018 documented findings from 1,417 drinking water samples that were collected from 255 organizations. The state's program is ongoing through September 2019.

**Table 1: Alabama School Drinking Water Lead Testing Program Result Summary**

In Alabama, the level of lead found in a drinking water sample that warrants action, or the “action level,” is 20 ppb for a water sample of 250mL. This summary describes “first draw” samples taken in the Alabama School Drinking Water Lead Testing Program. The “first draw” is a sample that is taken from the tap as soon as the water is turned on. Additional “draws” may be taken according to the state's procedures.

In Alabama, data were reported by school. Each school reported the date, number of 250 mL samples or “draws” taken, the highest recorded lead content result in a sample, and the number of tested samples with a lead content level that was over the “action level.”

- ◇ In Alabama, two percent (2%) of public schools serving grades PK-12 had one or more draws at or above the state's action level for lead.
- ◇ In Alabama, less than one percent (<1%) of first draw samples tested from public schools serving grades PK-12 had a lead content that was at or above the state's action level for lead.

	All schools providing drinking water quality testing results	Public schools serving grades PK-12 providing drinking water lead testing results*
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## *School-Level Summary*

<b>Number of schools with test result for lead</b>	243	232
<b>Average (min/max) number of samples taken at each school</b>	5.7 (1, 30)	5.8 (1, 30)
<b>Number (%) of schools with one or more samples at or above the State's “action level”</b>	5 (2%)	5 (2%)

## *Outlet/Tap-Level Summary*

<b>Number of samples</b>	1,384	1,345
<b>Number (%) of samples at or above the State's “action level”</b>	6 (<1%)	6 (<1%)

\* See table 3 for characterization of schools

**Table 1a: Alabama School Drinking Water Lead Testing Program Results Summary *By School Level* among the 232 Public Schools Serving Grades PK-12 Providing Drinking Water Lead Testing Results\***

	Primary	Middle	High	Middle/High
<i>School-Level Summary</i>				
<b>Number of schools with test result for lead</b>	129	48	51	4
<b>Average (min/max) number of samples taken at each school</b>	5.4 (1, 30)	5.8 (1, 30)	6.9 (1, 18)	3.0 (1,6)
<b>Number (%) of schools with one or more samples at or above the State's "action level"</b>	3 (2%)	1 (2%)	1 (2%)	0 (0%)
<i>Outlet/Tap-Level Summary</i>				
<b>Number of samples</b>	701	278	354	12
<b>Number (%) of samples at or above the State's "action level"</b>	3 (<1%)	2 (1%)	1 (<1%)	0 (0%)

\* See table 3 for characterization of schools

**Table 1b: Alabama School Drinking Water Lead Testing Program Results Summary *By Metro Status or Locale* among the 232 Public Schools Serving Grades PK-12 Providing Drinking Water Lead Testing Results\***

	City	Suburban	Town	Rural
<i>School-Level Summary</i>				
<b>Number of schools with test result for lead</b>	103	30	26	73
<b>Average (min/max) number of samples taken at each school</b>	4.2 (1,16)	4.4 (1,14)	10.1 (2, 30)	7.0 (1, 20)
<b>Number (%) of schools with one or more samples at or above the State's "action level"</b>	2 (2%)	0 (0%)	1 (4%)	2 (3%)
<i>Outlet/Tap-Level Summary</i>				
<b>Number of samples</b>	436	133	263	513
<b>Number (%) of samples at or above the State's</b>	2 (<1%)	0 (0%)	2 (1%)	2 (<1%)

\* See table 3 for characterization of schools



## Additional Details on Findings from Alabama

### **School Eligibility for Alabama School Drinking Water Lead Testing Program**

Eligible schools according to available program documents:

- ◇ Public schools serving grades PK – 12

### **Characteristics of Schools in the Alabama School Drinking Water Lead Testing Program**

The National Center for Educational Statistics (NCES) is the primary federal entity for collecting and analyzing educational data in the United States. Each year, the NCES reports a directory of all public schools in the United States and their characteristics in the Common Core of Data.

In order to better understand the characteristics of schools participating in the Alabama School Drinking Water Lead Testing Program, we matched demographic data on the schools and students available in the NCES Common Core of Data (2015-2016) school directory to the schools present in the data available from the state's drinking water testing program. We matched these schools using the school and district names and other public data sources.

We identified 232 Alabama schools with drinking water lead testing results provided by the Alabama School Drinking Water Lead Testing Program that were also present in the 2015-2016 NCES Common Core of Data. These 232 schools represent 95% of the 243 schools serving grades PK-12 that had drinking water lead testing results reported in the state program data.



**Table 2: Number and Types of Organizations Represented in Alabama School Drinking Water Lead Testing Program Data<sup>1</sup>**

Type of Organization	Number	Category Definition
<b>Schools Serving Grades PK-12</b>	<b>232</b>	<b>Sum of all school types serving grades PK-12</b>
<b>Public schools serving grades PK-12 (including public charter), with identifiable school characteristics</b>	232	All public schools with grades PK-12, including public charter schools, with identifying information in the national census of public schools (National Center for Education Statistics (NCES) Common Core of Data, 2015-2016)
<b>Other public schools serving grades PK-12, without identifiable school characteristics</b>	5	All other public schools with grades PK-12, including public charter schools, without identifying information in the national census of public schools (NCES Common Core of Data, 2015-2016)
<b>Non-public schools</b>	2	Private schools
<b>Other schools</b>	4	Schools of unknown type or schools that do not fit into other categories above
<b>Schools Serving Other Grades/Age Groups</b>	<b>2</b>	<b>Sum of All School Types Serving Other Grades or Age Groups</b>
<b>Child care centers</b>	1	Organizations or schools that primarily serve as a child care center (includes preschool)
<b>Public schools with unknown grades</b>	1	Public schools that have identifying information in the national census of public schools (NCES Common Core of Data 2015-2016) but do not specify the grades that are served
<b>Other organization or facility types</b>	<b>10</b>	<b>Other organization or facility types such as recreation centers, educational administration buildings, afterschool programs</b>
<b>Total number of organizations where data were collected</b>	<b>255</b>	<b>Total number of organizations where data were collected as of March 7, 2018</b>

- Alabama schools with drinking water lead test results provided by the Alabama program were matched to the 2015-2016 NCES Common Core of Data database using school and district names and other information provided by Alabama drinking water lead testing program data or other public data sources (i.e., state school directory, school district websites)

## Characteristics of Public Schools in Alabama Serving Grades PK-12

In Alabama,

- ◇ All public schools serving grades PK-12 were considered eligible to participate in the state's drinking water testing program for this study.
- ◇ There are 1,438 public schools serving grades PK-12, according to the National Center for Education Statistics Common Core of Data 2015-2016.
- ◇ Of these, 232 (16%) schools had lead testing findings that were collected via the Alabama Drinking Water Lead Testing Program in schools as of March 7, 2018. These 232 schools serve 20% of Alabama's PK-12 students.

**Table 3: Number and Characteristics of Alabama Public Schools Serving Grades PK-12 (NCES Common Core of Data 2015-16)<sup>1</sup>**

	<b>Schools Eligible to Participate in the Alabama School Drinking Water Lead Testing Program<sup>1</sup></b>	<b>Schools with Drinking Water Lead Test Results (April 2017 – March 7, 2018)<sup>2,3</sup></b>
<b>NUMBER OF SCHOOLS<sup>2</sup></b>	1,438	232 (16%)
<i>School-Level<sup>4</sup></i>		
<b>Primary</b>	791 (55%)	129 (56%)
<b>Middle</b>	255 (18%)	48 (21%)
<b>High</b>	347 (24%)	51 (22%)
<b>Middle/High</b>	45 (3%)	4 (2%)
<i>Metro Status/Locale<sup>4</sup></i>		
<b>City</b>	334 (23%)	103 (44%)
<b>Suburban</b>	249 (17%)	30 (13%)
<b>Town</b>	220 (15%)	26 (11%)
<b>Rural</b>	635 (44%)	73 (31%)
<b>NUMBER OF STUDENTS IN GRADES PK-12</b>	722,240	141,663 (20%)
<i>Number (%) of students eligible for free or reduced price meals</i>	367,943 (51%)	61,378 (43%)
<i>Number (%) students by race and ethnicity<sup>4</sup></i>		
<b>White</b>	404,666 (56%)	83,768 (59%)
<b>Black</b>	237,670 (33%)	37,716 (27%)
<b>Asian</b>	10,430 (1%)	3,148 (2%)
<b>Hispanic</b>	48,240 (7%)	12,190 (9%)
<b>Hawaii Native/Pacific Islander</b>	632 (<1%)	167 (<1%)
<b>American Indian/Alaska Native</b>	6,396 (1%)	890 (1%)
<b>Two or More Races</b>	14,206 (2%)	3,784 (3%)

1. Public schools and their characteristics were identified using the National Center for Education Statistics Common Core of Data 2015-2016, Public Elementary/Secondary School Universe Survey Data, downloaded March 22, 2018 from <https://nces.ed.gov/ccd/pubschuniv.asp>.
2. Only schools identified in the 2015-2016 NCES Common Core of Data database are included here.
3. Alabama schools with drinking water lead test results provided by the Alabama program were matched to the 2015-2016 NCES Common Core of Data database using school and district names and other information provided by Alabama drinking water lead testing program data or other public data sources (i.e., state school directory, school district websites).
4. Percentages may not add up to exactly 100% due to rounding.

### Citation:

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