

EARLY ADOPTERS

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



STATE PROFILE **Indiana**

Summary of Program Features

Indiana initiated a school drinking water lead testing program on April 1, 2017. This summary is based on a review of program documents collected between January 2018 – June 2018 and communication with Indiana state contacts.

School Drinking Water Testing Policy/Program Overview

Policy/Program Feature	Information from Policy/ Program Documents	Additional Information from Communication with State
<i>Background</i>		
Name	Indiana Finance Authority's (IFA) Lead Sampling Program for Schools ^{1,2}	
Date(s) of Water Policy/Program	April 1, 2017 to May 2018 ¹	
Issuing Authority	Other: Indiana Finance Authority ^{1,2}	
Agency Responsible for Program Management	Indiana Finance Authority ^{1,2}	
Policy or Program	Program ^{1,2}	
One-time or Surveillance Program	One-time ¹	
Mandatory/Voluntary for Schools	Voluntary ¹	
Partnership with Local/Community Water Supplier/System	Yes, required ²	Yes, recommendation to share results ³
Other Key Partnerships	Indiana Geological and Water Survey and 120WaterAudit ²	Indiana Association of Public School Superintendents and Indiana Association of School Business Officials ³
References or Uses the EPA 3Ts	Yes ¹	
<i>Program Coverage</i>		
School Type (Public, private, charter)	Public ^{1,2}	
Grade Levels	Kindergarten – grade 12 ¹	
Includes Testing for Lead	Yes ^{1,2}	
Includes Treatment/Remediation	Recommendation ^{1,2}	
Schools Eligible to Participate		
Schools of a certain building age	Not specified	
Schools that serve certain ages/ demographics	Not specified	
Schools that are their own local/ community water supplier	No ^{1,2}	
Schools that use local/community water supplier	Yes ^{1,2}	
Schools that have not received a waiver	Not specified	
<i>Funding</i>		
Funding Source	State government ²	
Funding Amount	Not specified	
Covers Sampling at Taps	Yes ^{1,2}	
Covers Testing in Lab	Yes ^{1,2}	
Covers Treatment/Remediation	No ^{1,2}	

Sampling Information

Policy/Program Feature	Information from Policy/Program Documents	Additional Information from Communication with State
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Background

Sampling/Testing Process One-Time or Recurring	One-time (prior to May 2018) ^{1,2}	
Number of Buildings/Facilities Sampled (All or a Portion?)	Not specified	A portion (all buildings where students are present) ³
Types of Taps Sampled	Drinking, cooking, ^{1,2} other fixtures used to provide water for human consumption, ¹ medicinal, ice machines, sports-related and faculty lounge ²	
Number of Taps Sampled Per School/ Building (All or a Portion?)	A portion (those that are used for drinking water) ²	

Initial Sampling at Taps

Stagnation Period	8 to 18 hours ²	
First Draw	Yes ^{1,2}	
Flushing Period	30 seconds ²	
Second Draw (Flushed Sample)	Yes ²	
Additional Initial Samples	Not specified	Yes, if results are inconclusive ³
Sample Size of Water	250 mL ²	
Action Level for Lead	15 ppb ^{1,2}	

Action Required When Samples Exceed Action Level for Lead

Follow-Up Draws	Yes, confirmatory testing recommended (not covered by program) ¹	Yes, confirmatory testing recommended after remediation work (not covered by program) ³
Flushing Period	Not specified	
Sample Size of Water	250 mL ²	
Additional Draws	Not specified	

Testing/Remediation/Communication Information

Policy/Program Feature	Information from Policy/Program Documents	Additional Information from Communication with State
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Testing

Type of Lab Used for Testing	Local, certified labs ²	
Sample(s) that Require Action if Results are Elevated	Not specified	First and second draw samples trigger remediation recommendations if above 15 ppb ³

Remediation

Short-Term Measures	Yes, guidance will be provided; ¹ EPA-approved measures are listed ²	
Long -Term Measures	Yes, guidance will be provided; ¹ EPA-approved measures are listed ²	

Communication

Groups Notified of Test Results	Parents, government, public water supplier ² and general public ^{1,2}	IFA posts summary results to website; IFA sends detailed results to school officials and recommends the school to share with parents, local health department, government, water supplier, and general public ³
Type of Results Shared (outlet level, building level, school level)	Not specified	

Sources:

1. Indiana Finance Authority. Lead Sampling Program for Public Schools. <https://www.in.gov/ifa/2958.htm>. Accessed March 5, 2018.
2. Indiana Finance Authority. Indiana Finance Authority Lead Sampling Program Guidance for Schools. <https://www.in.gov/ifa/files/IFA%20Lead%20Sampling%20Program%20Guidance%20for%20Schools.pdf>. Accessed March 5, 2018.
3. Email Communication with Indiana Finance Authority Contact. June 2018.

Summary of Water Test Results

This report features the data collected through the Indiana Finance Authority's (IFA) Lead Sampling Program for Schools, initiated on April 1, 2017. Data provided by the state program on February 26, 2018 documented findings collected from 239 organizations. The state's program was ongoing through May 2018. While many states may collect water quality data from a number of organizations, this state profile is focused on water quality testing completed in public schools serving grades pre-Kindergarten (PK)-12.

This summary is based on data that were available as of February 26, 2018. This data represents approximately 30% of all schools that the state program estimates are now currently enrolled in the testing program.

Table 1: Indiana Finance Authority's Lead Sampling Program Results Summary

In Indiana, the level of lead found in a drinking water sample that warrants action, or the "action level," is 15 ppb for a water sample of 250mL. This summary describes "first draw" samples taken in the Indiana Finance Authority's Lead Sampling Program for Schools. 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 Indiana, data were reported by school. Each school reported whether any fixture tested in the school had a lead content level that was over the "action level."

- ◇ In Indiana, fifty eight percent (58%) of public schools serving grades PK-12 had one or more draws 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*
<i>School-Level Summary</i>		
Number of schools with test result for lead	230	224
Number (%) of schools with one or more draws at or above the State's "action level"	133 (58%)	131 (59%)

* See table 3 for characterization of schools

Table 1a: Indiana Finance Authority’s Lead Sampling Program Results Summary *By School Level*, among the 224 Public Schools Serving Grades PK-12 Providing Drinking Water Lead Testing Results*

	Primary	Middle	High	Middle/High
<i>School-Level Summary</i>				
Number of schools with test result for lead	142	46	35	1
Number (%) of schools with one or more samples at or above the State’s “action level”	80 (56%)	27 (59%)	24 (69%)	0 (0%)

* See table 3 for characterization of schools

Table 1b: Indiana Finance Authority’s Lead Sampling Program Results Summary *By Metro Status or Locale*, among the 224 Public Schools Serving Grades PK-12 Providing Drinking Water Lead Testing Results*

	City	Suburban	Town	Rural
<i>School-Level Summary</i>				
Number of schools with test result for lead	39	40	59	86
Number (%) of schools with one or more samples at or above the State’s “action level”	21 (54%)	25 (63%)	37 (63%)	48 (56%)

* See table 3 for characterization of schools

Additional Details on Findings from Indiana

School Eligibility for Indiana Finance Authority's Lead Sampling Program for Schools

Eligible schools according to available program documents:

- ◇ Public schools serving grades Kindergarten – 12
- ◇ Schools that use a community water source

Excluded schools:

- ◇ Schools that are their own community water source

Characteristics of Schools in the Indiana Finance Authority's Lead Sampling Program for Schools

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 that were being served by the Indiana Finance Authority's Lead Sampling 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 224 Indiana schools with drinking water lead testing results provided by the Indiana Finance Authority's Lead Sampling Program for Schools that were also present in the 2015-2016 NCES Common Core of Data. These 224 schools represent 97% of the 230 schools serving grades PK-12 that had drinking water lead testing results reported in the state program data. For this summary, we considered schools serving grades PK-12 eligible to participate in the program. Eligible schools serving grades K-12 may have also served PK students. Additionally, state-provided testing results included schools identified as serving grade PK only.



Table 2: Number and Types of Organizations Represented in Indiana Public School Drinking Water Lead Screening Program Data¹

Type of Organization	Number	Category Definition
Schools Serving Grades PK-12	230	Sum of all school types serving grades PK-12
Public schools serving grades PK-12 (including public charter), with identifiable school characteristics	224	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)
Other public schools serving grades PK-12, without identifiable school characteristics	6	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)
Schools Serving Other Grades/Age Groups	3	Sum of All School Types Serving Other Grades or Age Groups
School-based adult education programs	2	Schools providing adult education programs
Public schools with unknown grades	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
Other organization or facility types	6	Other organization or facility types such as recreation centers, educational administration buildings, afterschool programs
Total number of organizations where data were collected	239	Total number of organizations where data were collected as of February 26, 2018

1. Indiana schools with drinking water lead test results provided by the Indiana program were matched to the 2015-2016 NCES Common Core of Data database using school and district names and other information provided by in the Indiana Finance Authority's Lead Sampling Program data or other public data sources (i.e., state school directory, school district websites).

Characteristics of Public Schools in Indiana Serving Grades PK-12

In Indiana,

- ◇ 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 1,715 public schools serving grades PK-12, according to the National Center for Education Statistics Common Core of Data 2015-2016.
- ◇ Of these, 224 (13%) schools had lead testing findings that were collected via the Indiana Finance Authority's Lead Sampling Program for Schools as of February 26, 2018. These 224 schools serve 12% of Indiana's PK-12 students.

Table 3: Number and Characteristics of Indiana Public Schools Serving Grades PK-12 (NCES Common Core of Data 2015-16)¹

	Schools Eligible to Participate in the Indiana Finance Authority's Lead Sampling Program ¹	Schools with Drinking Water Lead Test Results (April 1, 2017 – February 26, 2018) ^{2,3}
NUMBER OF SCHOOLS²	1,715	224 (13%)
<i>School-Level⁴</i>		
Primary	1,052 (61%)	142 (63%)
Middle	351 (18%)	46 (21%)
High	321 (19%)	35 (16%)
Middle/High	27 (2%)	1 (<1%)
<i>Metro Status/Locale⁴</i>		
City	523 (31%)	39 (17%)
Suburban	386 (23%)	40 (18%)
Town	301 (18%)	59 (26%)
Rural	504 (29%)	86 (38%)
NUMBER OF STUDENTS IN GRADES PK-12	943,927	116,000 (12%)
<i>Number (%) of students eligible for free or reduced price meals</i>	464,722 (49%)	55,110 (48%)
<i>Number (%) students by race and ethnicity⁴</i>		
White	639,731 (68%)	89,700 (77%)
Black	124,411 (13%)	8,623 (7%)
Asian	21,156 (2%)	1,944 (2%)
Hispanic	110,215 (12%)	10,776 (9%)
Hawaii Native/Pacific Islander	665 (<1%)	76 (<1%)
American Indian/Alaska Native	1,932 (<1%)	307 (<1%)
Two or More Races	45,767 (5%)	4,574 (4%)

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. Indiana schools with drinking water lead test results provided by the Indiana program were matched to the 2015-2016 NCES Common Core of Data database using school and district names and other information provided by the Indiana Finance Authority's Lead Sampling 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:

Cradock AL, Poole MK, Vollmer LY, Barrett JL, Flax C, Hecht CA. State Approaches to Testing School Drinking Water for Lead in the United States [State Profile: Indiana]. Boston, MA: Harvard Prevention Research Center on Nutrition and Physical Activity at the Harvard T.H. Chan School of Public Health; 2019. Available at <https://www.hsph.harvard.edu/prc/projects/school-research/early-adopters>. Address correspondence to Angie Cradock, ScD, MPE at acradock@hsph.harvard.edu.

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