

EARLY ADOPTERS

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



STATE PROFILE **Oregon**

Summary of Program Features

Oregon initiated a school drinking water lead testing policy to form a program in March 2016. This summary is based on a review of program documents collected between January 2018 – June 2018 and communication with Oregon state contacts.

School Drinking Water Testing Policy/Program Overview

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

Name	Lead Testing Reimbursement Program ¹	
Date(s) of Water Policy/Program	March 1, 2016 to December 1, 2016 ¹	
Issuing Authority	State legislature ^{1,2}	State legislature ³
Agency Responsible for Program Management	Oregon Department of Education ^{1,2}	
Policy or Program	Policy ^{1,2}	
One-time or Surveillance Program	One-time ^{1,2}	
Mandatory/Voluntary for Schools	Voluntary ^{1,2}	
Partnership with Local/Community Water Supplier/System	Not specified	No official state-local partnership ³
Other Key Partnerships	Not specified	
References or Uses the EPA 3Ts	Yes ⁴	

Program Coverage

School Type (Public, private, charter)	Public ^{1,2} and charter schools ¹	Public and charter schools ³
Grade Levels	Not specified	Kindergarten – grade 12 buildings (if pre-Kindergarten in building, then tested) ³
Includes Testing for Lead	Yes ^{1,2}	
Includes Treatment/Remediation	Not specified	No ³
Schools Eligible to Participate		
All schools	Not specified	All public and public charter schools ³

Funding

Funding Source	State government reimburses schools ^{1,2}	
Funding Amount	\$5,000,000 (proposed amount) ²	
Covers Sampling at Taps	Not specified	Additional \$10 per test provided to help cover sampling costs ³
Covers Testing in Lab	Yes, ^{1,2} but amount reimbursed will depend on total number of tests and costs across the state ¹	Yes, lab fees fully covered ³
Covers Treatment/Remediation	No ¹	

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 ^{1,2}	
Number of Buildings/Facilities Sampled (All or a Portion?)	Not specified	70% of districts participated in the program ³
Types of Taps Sampled	Drinking, cooking and other human consumption ^{1,2}	Drinking, food preparation and other human consumption ³
Number of Taps Sampled Per School/ Building (All or a Portion?)	Not specified	

Initial Sampling at Taps

Stagnation Period	Not specified	8 to 18 hours per EPA 3Ts guidance ³
First Draw	Yes ¹	
Flushing Period	Not specified	Follows 3Ts guidance ³
Second Draw (Flushed Sample)	Not specified	Follows 3Ts guidance ³
Additional Initial Samples	Not specified	Follows 3Ts guidance ³
Sample Size of Water	Not specified	Follows 3Ts guidance ³
Action Level for Lead	Not specified	20 ppb per EPA 3Ts ³

Action Required When Samples Exceed Action Level for Lead

Follow-Up Draws	Yes, if initial samples are elevated, follow up tests are eligible for reimbursement ¹	
Flushing Period	Not specified	Follows 3Ts guidance ³
Sample Size of Water	Not specified	Follows 3Ts guidance ³
Additional Draws	Not specified	Follows 3Ts guidance ³

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	State-approved, accredited lab ^{1,2,4}	
Sample(s) that Require Action if Results are Elevated	Not specified	

Remediation

Short-Term Measures	Not specified	Follows 3Ts guidance ³
Long -Term Measures	Not specified	Follows 3Ts guidance ³

Communication

Groups Notified of Test Results	Government ¹	Government and public ³
Type of Results Shared (outlet level, building level, school level)	Other: Number of tests performed, location and type of outlet ¹	Other: Number of tests performed, location, type of outlet and lead levels ³

Sources:

1. Oregon Department of Education. Lead Testing Reimbursement Program Frequently Asked Questions. October 2016. <https://www.oregon.gov/ode/schools-and-districts/finance/Documents/Lead%20Testing%20Reimbursement%20Program%20FAQs.pdf>. Accessed March 22, 2018.
2. Emergency Board Legislative Fiscal Office for Oregon Department of Education. Item 41: Legislative Fiscal Office for Department of Education: Lead Testing in Schools. September 2016. Received by email on March 22, 2018.
3. Email Communication with Oregon Department of Education Contact. June 2018.
4. Oregon Health Authority. Healthy School Facilities. Oregon.Gov. <http://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/HEALTHYNEIGHBORHOODS/HEALTHYSCHOOLFACILITIES/pages/index.aspx>. Accessed March 5, 2018.

Summary of Water Test Results

This report features data collected through Oregon's Lead Testing Reimbursement Program, initiated on March 1, 2016. Data provided by the state program on March 20, 2018 documented findings from 50,260 drinking water samples that were collected from 1,234 organizations. The state's program was ongoing through December 1, 2016. In 2017, Oregon passed an additional policy that requires schools to adopt a testing plan by 2019. 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.

Table 1: Oregon's Lead Testing Reimbursement Program Results Summary

In Oregon, 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 Oregon's Lead Testing Reimbursement 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 Oregon, data were reported by fixture. Each school reported the date and time of collection, building name, location of fixture, and the dates of retest if needed.

- ◇ In Oregon, half (50%) of public schools serving grades PK-12 had one or more draws at or above the state's action level for lead.
- ◇ In Oregon, thirteen percent (13%) 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*
<i>School-Level Summary</i>		
Number of schools with test result for lead	938	891
Average (min/max) number of samples taken at each school	50.3 (1, 688)	51.6 (1, 688)
Number (%) of schools with one or more samples at or above the State's "action level"	465 (50%)	444 (50%)
<i>Outlet/Tap-Level Summary</i>		
Number of samples	47,228	46,020
Number (%) of samples at or above the State's "action level"	6,247 (13%)	6,106 (13%)

* See table 3 for characterization of schools

Table 1a: Oregon’s Lead Testing Reimbursement Program Results Summary By School Level among the 891 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	559	158	168	6
Average (min/max) number of samples taken at each school	46.2 (1, 364)	55.8 (1, 180)	67.3 (1, 688)	14.5 (1, 45)
Number (%) of schools with one or more samples at or above the State’s “action level”	285 (51%)	76 (48%)	80 (48%)	3 (50%)
<i>Outlet/Tap-Level Summary</i>				
Number of samples	25,810	8,821	11,302	87
Number (%) of samples at or above the State’s “action level”	3,536(14%)	1,253 (14%)	1,257 (11%)	60 (69%)

* See table 3 for characterization of schools

Table 1b: Oregon’s Lead Testing Reimbursement Program Results Summary By Metro Status or Locale among the 891 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	284	226	200	181
Average (min/max) number of samples taken at each school	76.5 (1, 688)	53.3 (1, 364)	39.4 (1, 334)	24.2 (1, 145)
Number (%) of schools with one or more samples at or above the State’s “action level”	173 (61%)	130 (58%)	86 (43%)	55 (30%)
<i>Outlet/Tap-Level Summary</i>				
Number of samples	21,715	12,039	7,877	4,389
Number (%) of samples at or above the State’s “action level”	2,447 (11%)	2,538 (21%)	700 (9%)	421 (10%)

* See table 3 for characterization of schools

Additional Details on Findings from Oregon

School Eligibility for Oregon's Lead Testing Reimbursement Program

Eligible schools according to available program documents:

- ◇ Public schools serving grades Kindergarten – 12 (if pre-Kindergarten in building, then tested)
- ◇ Public charter schools

Characteristics of Schools in the Oregon's Lead Testing Reimbursement 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 that were being served by Oregon's Lead Testing Reimbursement 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 891 Oregon schools with drinking water lead testing results provided by Oregon's Lead Testing Reimbursement Program that were also present in the 2015-2016 NCES Common Core of Data. These 891 schools represent 95% of the 938 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 Oregon's Lead Testing Reimbursement Program Data¹

Type of Organization	Number	Category Definition
Schools Serving Grades PK-12	938	Sum of all school types serving grades PK-12
Public schools serving grades PK-12 (including public charter), with identifiable school characteristics	891	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	47	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	19	Sum of All School Types Serving Other Grades or Age Groups
Child care centers	17	Organizations or schools that primarily serves as a child care center (includes preschool)
School-based adult education programs	1	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	277	Other organization or facility types such as recreation centers, educational administration buildings, afterschool programs
Total number of organizations where data were collected	1,234	Total number of organizations where data were collected as of December 1, 2016

1. Oregon schools with drinking water lead test results provided by the Oregon 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 Oregon's Lead Testing Reimbursement Program data or other public data sources (i.e., state school directory, school district websites).

Characteristics of Public Schools in Oregon Serving Grades PK-12

In Oregon,

- ◇ 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 1,221 public schools serving grades PK-12, according to the National Center for Education Statistics Common Core of Data 2015-2016.
- ◇ Of these, 891 (73%) schools had lead testing findings that were collected via Oregon's Lead Testing Reimbursement Program in schools as of December 1, 2016. These 891 schools represent 82% of Oregon's PK-12 students.

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

	Schools Eligible to Participate in Oregon's Lead Testing Reimbursement Program ¹	Schools with Drinking Water Lead Test Results (March 1, 2016 – December 1, 2016) ^{2,3}
NUMBER OF SCHOOLS²	1,221	891 (73%)
<i>School-Level⁴</i>		
Primary	757 (62%)	559 (63%)
Middle	200 (16%)	158 (18%)
High	243 (20%)	168 (19%)
Middle/High	21 (2%)	6 (1%)
<i>Metro Status/Locale⁴</i>		
City	341 (28%)	284 (32%)
Suburban	256 (21%)	226 (25%)
Town	295 (24%)	200 (22%)
Rural	329 (27%)	181 (20%)
NUMBER OF STUDENTS IN GRADES PK-12	560,351	461,396 (82%)
<i>Number (%) of students eligible for free or reduced price meals</i>	282,401 (50%)	233,261 (51%)
<i>Number (%) students by race and ethnicity⁴</i>		
White	354,201 (63%)	283,024 (61%)
Black	13,119 (2%)	11,351 (2%)
Asian	22,373 (4%)	20,512 (4%)
Hispanic	127,008 (23%)	110,151 (24%)
Hawaii Native/Pacific Islander	3,966 (1%)	3,520 (1%)
American Indian/Alaska Native	7,994 (1%)	6,403 (1%)
Two or More Races	31,690 (6%)	26,435 (6%)

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. Oregon schools with drinking water lead test results provided by the Oregon program were matched to the 2015-2016 NCES Common Core of Data database using school and district names and other information provided by in Oregon's Lead Testing Reimbursement 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: Oregon]. 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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