



**SCHOOL CITY OF HAMMOND
DRINKING WATER LEAD TESTING
AND MANAGEMENT PLAN**

APRIL 2019

Foreword

The School City of Hammond (“SCH”) has developed this *Drinking Water Lead Testing and Management Plan* (“Plan”) as a commitment to the reduction of lead exposure through school drinking water. It is widely understood that exposure to lead in children may have detrimental health impacts. This is why SCH has developed this Plan.

Various sources, including the Centers for Disease Control and Prevention, indicate that lead exposure is possible through various avenues, including:

- Paint in homes built before 1978
- Water pumped through leaded pipes, or distribution system constructed with components containing lead materials
- Imported items, including clay pots
- Certain consumer products such as candies, make up and jewelry
- Certain imported home remedies
- Soil contaminated with lead

SCH has developed this Plan of testing, remediation and communication as its commitment to ensuring that lead levels from drinking water outlet fixtures in its buildings is below the Lead Action Level as established by the Indiana Department of Environmental Management (currently 15 parts per billion).

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Introduction

In the fall of 2018, the School City of Hammond (“SCH”) began a voluntary testing program to identify lead levels in water drawn from drinking water outlet fixtures from selected school buildings in its district. As of that date, there were no State or Federal requirements for testing of water for lead content. However, regional and national concerns regarding health effects from elevated lead levels in drinking water prompted SCH to embark on a voluntary water testing program. An independent consultant was used to guide the district through the process. Instructional (schools) and non-instructional (office and support facilities) constructed prior to 1986 were included in the initial testing. This Plan includes provisions to expand testing into buildings constructed from 2012 and earlier as the latest revisions to EPA’s “The Reduction of Lead in Drinking Water Act were introduced in 2011.

Purpose of Plan

This Plan is designed to outline the guidelines that SCH uses for testing procedures, remediation and communication to the public related to lead levels from drinking water outlet fixtures in its buildings. The goal of the Plan is to ensure that lead levels from drinking water outlet fixtures is below the Lead Action Level as established by the Indiana Department of Environmental Management (currently 15 parts per billion).

Regulations and Guidance

(Courtesy of EPA 3Ts Guidance – October 2018 Revision)

Lead is regulated in public drinking water systems under a federal regulation known as the Lead and Copper Rule. This regulation was initially issued in 1991 and, in part, requires water systems to test for lead and copper and to take actions that reduce corrosivity and protect public health. Nearly all states have a drinking water office that implements the Safe Drinking Water Act (SDWA). Questions regarding the regulation of drinking water may be directed to the appropriate state drinking water program office or state licensing agency.

Requirements addressing lead in water include specific provisions in:

The SDWA Lead Ban (1986): A requirement that only “lead-free” materials be used in new plumbing and in plumbing repairs. In the 1986 ban, “lead-free” meant that solders and flux may not contain more than 0.2 percent lead, and pipes and pipe fittings may not contain more than 8.0 percent lead. It is likely that lead pipes and high-lead solder and fluxes continued to be used until 1988 in several states and territories, and until 1989 or 1990 in a few states, but other state or local governments may have imposed related lead-ban standards prior to 1988.

The Lead Contamination Control Act (LCCA) (1988): The LCCA is aimed at the identification and reduction of lead in drinking water at schools and child care facilities, including the recall of drinking water coolers with lead lined tanks and the publication of a list of drinking water coolers that were not “lead free” as defined by the LCCA (no more than 8% lead for components that come into contact with water and no more than 0.2% percent lead for solder, flux, or storage tank interior that comes into contact with water).

The Lead and Copper Rule (1991): A regulation by EPA to control the amount of lead and copper in water supplied by public water systems through corrosion control treatment, and other measures. Modifications were made to the Lead and Copper Rule in 2000 and 2007 to include revised requirements on demonstrating optimal corrosion control, monitoring, and reporting, treatment processes, public education, customer awareness, and lead service line replacement.

The Reduction of Lead in Drinking Water Act (2011): This act further reduced lead in pipes, pipe fittings, plumbing fittings, and fixtures to a weighted average of 0.25 percent. The act also redefined “lead-free” under the SDWA as not containing more than 0.2 percent lead when used with respect to solder and flux and not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.

Testing Protocol

1. Facilities constructed from 2012 and earlier will be subject to testing for lead levels in drinking water outlet fixtures.
2. By the end of 2020, drinking water testing for lead levels will be completed.
3. Follow-up testing will be conducted after any remediation activities are completed.
4. Following initial testing, drinking water outlet fixtures will be retested every two years.
 - a. Modification (reduction) to the frequency of retesting or in the number of drinking water outlet fixtures being retested may be made based upon previous results and previous remediation actions applied.
 - i. Example No. 1: Drinking water outlet fixtures that have been replaced or where lead filtration has been installed that test below the Lead Action Level initially and at repeat intervals may be removed from future retesting schedules.

Testing Procedure

The EPA “*3Ts for Reducing Lead in Drinking Water in Schools and Childcare Facilities – October 2016 Revision*” (“*3Ts Guidance*”) is the guidance document for all testing procedures. In accordance with the Indiana Department of Environmental Management (IDEM) guidelines, the Lead Action Level is reduced to 15 parts per billion (ppb) from the EPA’s 20 ppb.

1. Cold drinking water and food preparation outlet fixtures will be inventoried and assigned a unique identifier. Includes ice makers for consumable ice, beverage dispensing equipment and outlet fixtures used for potable water to athletic areas. Does not include outlet fixtures of hand washing sinks, custodial service sinks, irrigation spigots, showers, emergency eye wash stations or other outlet fixtures unintended or unsanitary as a consumable water source.
2. A selected chemistry laboratory certified under the Federal Safe Drinking Water Act by the Indiana State Department of Health will provide all 250 mL (wide mouth preferred) sample containers, instructions for handling sample containers, Chain of Custody forms, and completed analysis results.
3. Only cold water from drinking water outlet fixture is to be tested. Hot water outlet fixtures are not to be tested.
4. On a date different from the sample collection activity date (within a few days) and before the building opens, collect a sample of water that will represent the supply to the building. Do so by allowing water to flow from an outlet nearest the building’s supply by running the water for several minutes until the water runs cold. Collect a sample of this water following the same guidelines as described below for sample collection.
5. Preparation for the sampling activity will include: Having all the items that are needed to collect the samples ready to go - including sample bottles, labels, waterproof pen and the laboratory chain of custody.
 - a. Notify building users of the date and time when water is not to be used due to the scheduled sampling event.

- b. “Bag” and apply signs on outlet fixture to be tested, or lock the area/building.
 - i. Water must have been stagnant between 8 and 18 hours prior to sampling.
 - c. Only 250 mL sample containers supplied by the certified laboratory will be used.
 - d. Containers should not be opened until ready to collect the sample.
 - e. Pre-label the containers according to the inventory record.
 - i. Sample bottle is to be labeled with the same information (date, time, location, etc.) as on the Chain of Custody form.
 - f. The interior surfaces of the cap or bottle are not to be touched.
 - g. Food and drink are to be kept away from the sampling area.
 - h. To ensure samples best represent water used for drinking/cooking during the school week, collecting samples in the mornings after vacations, weekends, or holidays should be avoided.
6. First-draw samples should be collected early in the morning before any water has been used in the building. Water must have been stagnant between 8 and 18 hours prior to sampling.
 - a. On the morning of the sampling, a quick walk-through of the facility is to be completed to ensure no outlets were left running overnight.
 7. Make sure no water has been drawn from the outlet before collecting the sample.
 8. Sampling will begin at the outlet closest to the Point of Entry (where the water enters the building from the street). In facilities where there are multiple floors, begin from the bottom floor and continue up.
 9. If a drinking water fountain is being sampled, the container’s mouth should be angled in a way that it will capture the entire flow of water from the bubbler.
 10. If the outlet is a motion-sensor or metered faucet, the sample is to be collected as it would under normal use conditions.
 11. Aerators or screens are not to be removed prior to sampling.
 12. First-draw: Container is to be placed under the outlet that is being sampled and then the cold water tap is to be opened at the same rate that would be used under normal use for filling a glass of water, taking precautions to not allow any water to run down the drain.
 - a. First-draw sample identifies lead levels in the outlet fixture.
 13. Flush-draw: Allow the cold water to flow down the drain for 30 seconds from the outlet that is being sampled at the same rate for filling a glass of water, then place the container under the outlet to collect the sample.
 - a. Flush-draw sample identifies lead levels just upstream of the outlet fixture.
 14. Each container is to be capped securely in accordance with instructions provided by the certified laboratory.
 15. Observations that may influence the samples’ results (e.g. leaking outlets, discolored water, low water pressure, etc.) are to be recorded on the chain of custody form.
 16. Ensure that sample container is labeled with the same information (date, time, location, etc.) as on the Chain of Custody form.
 17. Containers are to be prepared for shipping according to the certified laboratory’s instructions.

18. Ship the samples according to the certified laboratory's instructions, and within the time frame recommended by the laboratory.
19. Outlet fixtures at Bubblers, Ice Makers, Water Dispensers, Water Fountains, and Electric Water Coolers where first-draw samples or second-draw samples exceed the Lead Action Level will be shut-off or otherwise removed from service. Remedial action will be taken.
20. Outlet fixtures (except Bubblers, Ice Makers, Water Dispensers, Water Fountains, and Electric Water Coolers) where first-draw samples exceed the Lead Action Level but second-draw flush sample results are below the Lead Action Level will be labeled "Flush Water for 30-seconds Before Drinking" (pictorials included). Remedial action will be taken.



21. Untested outlets that are not to be used for consumption, such as hand washing sinks, science laboratory sinks, custodial service sinks and exterior spigots will be labeled "Non-potable water. Do Not Drink" (pictorials included).



22. Labels will be inspected on a periodic basis and replaced as needed.

Remediation Methods

Remediation methods may include any of the following, with follow-up testing afterwards where the fixture is to remain in service:

- a) Cleaning aerators and flushing
- b) Replacing the fixture
- c) Removing pipe or fixture fittings
- d) Rerouting piping
- e) Installation of a Point-of-Use filter and scheduling ongoing maintenance
- f) Permanent removal
- g) Provide a central water source
- h) Provide bottled water

Preventive Maintenance

After extended periods of non-use (spring, summer and winter breaks), outlets throughout each facility will be opened to flush stagnant water out of the systems before occupancy. As well, labels will be inspected on a routine basis where they have been applied at non-drinking water outlets or outlet fixtures where a 30-second flush is necessary before drinking. Missing or damaged labels will be replaced.

Communications and Records

SCH will maintain a page on its district website to provide the public with easy access to this Plan, updates, testing plans and schedules, test results and remediation actions. Records will be maintained in the Buildings & Grounds Department.

Source Documents

The following sources and references to other sources within each were incorporated into the development of the testing process and this Plan:

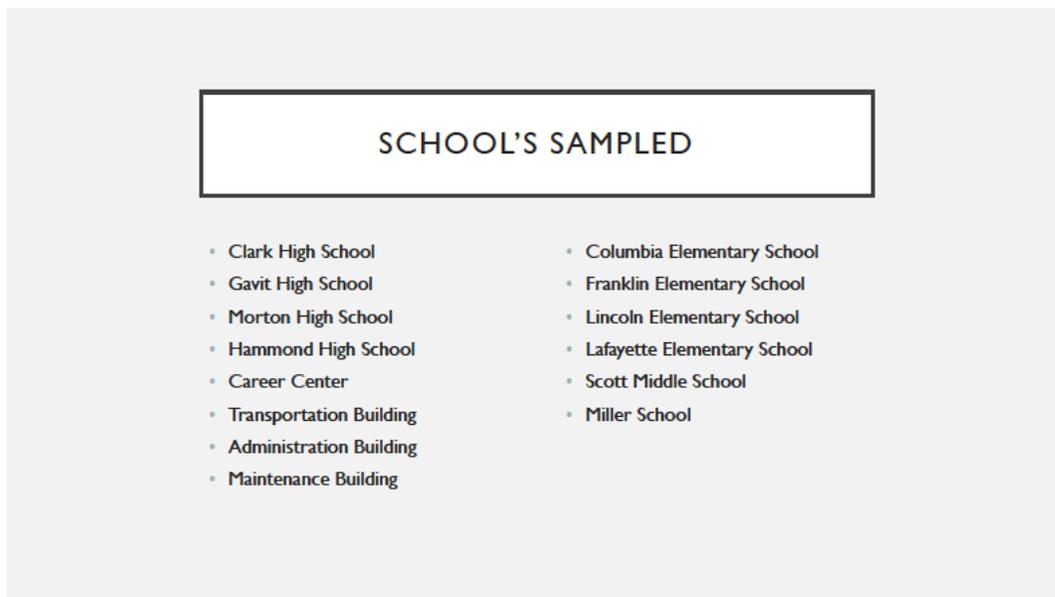
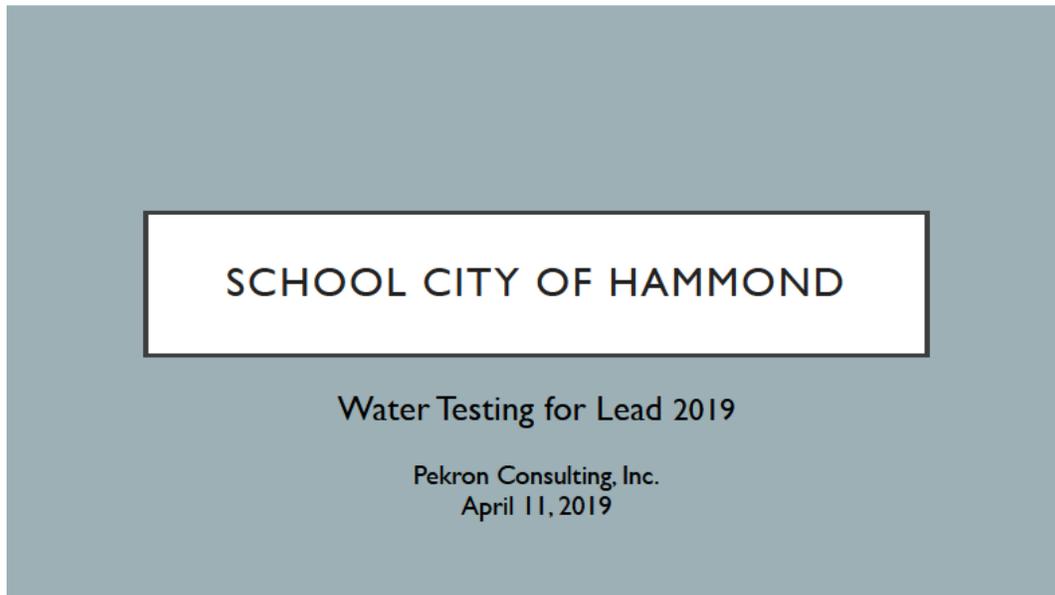
Table 1: Regulations and Guidance Governing Lead in Schools Drinking Water

Agency	Title	HTTP	Description and Applicability
Indiana Finance Authority (IFA); Indiana Department of Environmental Management (IDEM)	Guidance for Schools: IFA Lead Sampling Program for Public Schools	https://www.in.gov/ifa/files/IFA%20Lead%20Sampling%20Program%20Guidance%20for%20Schools.pdf	2017-2018 voluntary water testing program developed by IFA with assistance from IDEM, and includes references to other State and Federal documents. Applicable to Public Schools that enrolled in the program
Federal Environmental Protection Agency (EPA)	3Ts for Reducing Lead in Drinking Water in Schools – October 2006	https://www.in.gov/idem/files/lead_epa_toolkit_3ts.pdf	Guidance for testing and reducing lead in drinking water for schools, and includes reference to other Federal documents. Applicable to schools.
Federal Environmental Protection Agency (EPA)	3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities – October 2018	https://www.epa.gov/sites/production/files/2018-09/documents/final_revised_3ts_manual_508.pdf	Guidance for testing and reducing lead in drinking water for schools and child care facilities, and includes reference to other Federal documents. Applicable to schools and child care facilities
Centers for Disease Control and Prevention (CDC)	Lead Home	https://www.cdc.gov/nceh/lead/default.htm	Lead Information: Blood Lead Levels; Lead in Drinking Water; Information for Parents. Broad based information for all consumers.

Updates and Planned Activities

Description	Notes
Procuring and installing POU filters	4/1/16 – Began research to match specific application - see Testing Procedure #19; Remediation/Follow-up Testing .
Board Report by Pekron Consulting	4/16/19 completed – See Page 10 .
Water Test Results Received	4/17/19 Posted on district website
POU Water Filters Installed	7/1/19 – 8/1/19
Do Not Drink Labeling Completed	8/9/19

Pekron Consulting Board Report



SOURCES INCLUDED IN THE TESTING

- Potable drinking water sources were tested within this survey, these sources included:
 - Drinking fountains
 - Bubblers
 - Ice Machines
 - Sinks (kitchen / food prep, dish washer sprayer, class room)
 - Hot water dispenser (kitchen)

School	Number of Sources	Sources Exceeding 15 First Draw	Sources Exceeding 15 Second Draw
Columbia Elementary School	31	10	8
Franklin Elementary School	35	3	0
Lincoln Elementary School	55	10	0
Lafayette Elementary School	44	14	1
Scott Middle School	28	8	1
Miller School	20	8	2
Clark High School	57	13	5
Gavit High School	59	13	0
Morton High School	68	22	12
Hammond High School	18	2	0
Career Center	45	7	1
Transportation Building	2	0	0
Administration Building	24	2	1
Maintenance Building	12	3	1

SUMMARY

- Recommendations for Corrective Action:
 - Water sources which yielded a first draw sample result exceeding the IDEM Action Level, but a second draw sample analyzed below the IDEM Action Level, the School City of Hammond may opt to flush the sources as recommended by the EPA 3T guidance document, until which time a permanent control measure is selected.
 - School City of Hammond selected action:
 - Drinking water sources with these results were removed from service while remediation action is carried out
 - Non-drinking water sources with these results were kept in service and labeled "Not Drinking Water – Do Not Drink"
 - Water sources which yielded first and second draw sample results above the IDEM Action Level shall be taken out of service as recommended by the EPA 3T guidance document, until which time a permanent control measure is selected.