

10 DAY EXT ISSUED

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REQUEST FOR DISCLOSURE OF DEQ RECORDS
Under The Freedom Of Information Act

This information is required under 1976 PA 442, as amended, in order to request public records.

0317-16

RMD-EXEC

Lansing

Due: 11-6-15

ALL INFORMATION MUST BE TYPED OR PRINTED EXCEPT FOR WRITTEN SIGNATURES

Company Name or Organization (if applicable) Natural Resources Defense Council, Inc		Company's Project/Reference Number	
Requester's First Name EVAN		Requester's Last Name FEINAUER	
Address (Street and Number) 20 NORTH WACKER DRIVE, SUITE 1300		Daytime Phone # (Include Area Code) 312.651.7938	
City CHICAGO		State IL	Zip Code 60606
		E-mail: efeinauer@nrdc.org	

This request is for records from ☐ Lansing Central and/or ☐ District Office

Any/All

SUBMISSION DATE: 10/15/2015

- ☐ I wish to review the records listed below
☒ I wish to receive a copy of the records listed below
☐ I wish to receive an estimate for the cost of fulfilling my request

NOTE: To refine the searching process, you may wish to narrow down your request by calling the Environmental Assistance Center (1-800-662-9278) for assistance, or checking specific boxes related to particular divisions. If you do not see what you are looking for in the list below, please feel free to use the additional comments field. For additional program information, please [click here](#).

Programs: If you are only requesting the available information from certain programs, then please list the site number (i.e., Site 1, 2, etc. or "ALL") in the appropriate form field(s) provided below. (see division acronyms in site table below).

AQD - Permits		OWMRP (RMG)- Hazardous Waste, ID#:	
RRD - BEA Only		OWMRP (RMG)- Solid Waste/Scrap Tires/Medical Waste	/ /
RRD - Environmental Remediation		OOGM - Oil, Gas and Minerals	
RRD - Leaking Underground Storage Tanks (Part 213)		WRD - Groundwater	
RRD - Superfund		WRD - Water Permits	
Storage Tanks (Part 211)- Jim Lucas - Lucasj@michigan.gov	SUBMIT to DLARA	WRD - Stormwater	
ODWMA (RMG)- Public Water Supply		WRD - Wetlands	

Check boxes for each Division you are requesting files from
 (You must provide the section, township, range for oil, gas and minerals records)

Description Provide a detailed description of materials being requested. At a minimum, include the Facility Name, Street Address, City and County.	Air Quality (AQD)	Oil, Gas & Minerals (OOGM)	Remediation & Redevelopment (RRD)	Resource Management (RMG)	Water Resources (WRD)
Site 1 COUNTY	☐	☐	☐	☐	☐
Site 2 COUNTY	☐	☐	☐	☐	☐
Site 3 COUNTY	☐	☐	☐	☐	☐
Site 4 COUNTY	☐	☐	☐	☐	☐
Site 5 COUNTY	☐	☐	☐	☐	☐

Additional Comments:

Please See Attached Letter



NATURAL RESOURCES DEFENSE COUNCIL

October 15, 2015

Via Federal Express and Electronic Mail to:

Freedom of Information Act Coordinator
 Department of Environmental Quality
 P.O. Box 30457
 Lansing, MI 48909-7957
 deqfoia@michigan.gov

Re: FOIA Request for Records Concerning Administration of the Safe Drinking Water Act's Lead and Copper Rule

Dear FOIA Coordinator:

I write on behalf of the Natural Resources Defense Council (NRDC) to request disclosure of records pursuant to the Michigan Freedom of Information Act (FOIA), 15 Mich. Comp. Laws §§ 15.231, et seq.

I. Description of Records Sought

Please produce records¹ in Michigan Department of Environmental Quality's (MDEQ's) possession, custody or control concerning testing and monitoring for lead in the City of Flint's (Flint's) drinking water and which reflect the following:

1. Records concerning any program established or maintained by Michigan "to assist local educational agencies in testing for, and remediating, lead contamination in drinking water from coolers and from other sources of lead contamination at schools" pursuant to 42 U.S.C. § 300j-24.
2. Records concerning MDEQ's designation of an optimized corrosion control treatment program for Flint's water system and/or the Detroit Water and Sewerage Department's drinking-water system, and/or MDEQ's approval of a corrosion control treatment option recommended by Flint or the Detroit Water and Sewerage Department. 40 C.F.R. § 141.82(d)(1).
3. Records created or received by MDEQ concerning MDEQ's review and/or approval of the addition of the Flint River as a primary water source for Flint's

¹ "Records" means anything denoted by the use of that word or its singular form in the text of FOIA and includes correspondence, minutes of meetings, memoranda, notes, emails, notices, facsimiles, charts, tables, presentations, orders, filings, and other writings (handwritten, typed, electronic, or otherwise produced, reproduced, or stored).

water system, or the Flint River's designation as an alternate water source in Flint's emergency response plan as an emergency or backup water source. Mich. Admin. Code R. 325.12303.

4. Records created or received by MDEQ from January 1, 1991, to the present concerning any long-term change in treatment to Flint's water system, including any "written documentation to the State" submitted by the City describing any change in water treatment or addition of a water source, and any approval or disapproval of such long-term changes. 40 C.F.R. § 141.90(a)(3).
5. Records from January 1, 2012, to the present concerning any modification of the monitoring requirements in the Lead and Copper Rule based on the interconnection between Flint's water system and the Detroit Water and Sewerage Department's water system. This includes, but is not limited to:
 - a. Any written explanation concerning how the monitoring, treatment, and reporting requirements will be administered and enforced in the Flint water system (a consecutive water system); and
 - b. Any records concerning U.S. EPA's approval, disapproval, or other response to MDEQ's proposal to implement the requirements in the Lead and Copper Rule for the Flint water system based on the interconnection between Flint's water system and the Detroit Water and Sewerage Department.
6. Records reflecting any tap water monitoring of the Flint water system for lead conducted from the period of April 1, 2014, through the present, including:
 - a. Correspondence between Flint officials and MDEQ officials;
 - b. All tap water samples submitted by Flint to the testing laboratory;
 - c. All tap water sample lab reports submitted by the laboratory to Flint;
 - d. All tap water sample lab reports submitted by Flint to MDEQ; and
 - e. All consumer notices sent by Flint to participants of lead and copper monitoring and subsequently provided to MDEQ.
7. Any records (including correspondence) concerning the invalidation of lead and copper monitoring results for Flint's water system from January 1, 2012, to the present, including:
 - a. Any written "decision and . . . rationale" concerning invalidated samples, 40 C.F.R. § 141.86(f); and
 - b. Records concerning any decision by MDEQ to invalidate tap water lead samples taken in Flint maintained pursuant to 40 C.F.R. § 142.14(d)(10)(iii) ("Each State which has primary enforcement responsibility shall retain, for not less than 12 years, files which shall include for each such public water system in the State:...(10) Records of State activities, and the results thereof, to... (iii) Invalidate tap water lead and copper samples under § 141.86(f) of this chapter.").
8. Records concerning any "materials evaluation of [Flint water system's] distribution system" conducted between 1991 and today to "identify a pool of targeted sampling sites" for purposes of monitoring under the Lead and Copper Rule. 40 C.F.R. § 141.86(a)(1).
9. Records concerning any decision by MDEQ to allow Flint to conduct "reduced monitoring" under the Lead and Copper Rule, pursuant to 40 C.F.R. § 141.86(d)(4).

10. Records concerning the control of lead and copper by Flint from January 1, 2012 to the present, maintained pursuant to 40 C.F.R. § 142.14(d)(8)(i)–(v), (ix)–(x), and (xvii).

II. Request for a Fee Waiver

NRDC requests that MDEQ waive any fee it would otherwise charge for search and production of the records described above. FOIA dictates that requested records may be provided without charge or at a reduced charge “if the public body determines that a waiver or reduction of the fee is in the public interest because searching for or furnishing copies of the public record can be considered as primarily benefiting the general public.” Mich. Comp. Laws § 15.234.

NRDC requests these records solely to benefit the general public. NRDC is a non-profit environmental and public health advocacy organization. NRDC works to ensure that all Americans have access to safe and affordable drinking water. The records requested shed light on a matter of considerable public interest: Flint’s monitoring for lead in the drinking water. There is broad public concern about the levels of lead in Flint’s drinking water, including dangers that such elevated lead levels may pose to the health of Flint residents. Disclosure of these records will benefit the general public by allowing NRDC to provide information to the public and otherwise assist in addressing the ongoing concerns of the public in Flint. Disclosure of these records will help the public, in particular residents of Flint, evaluate more effectively the potential threats to themselves and their families. NRDC has no commercial interest in these records.

III. Willingness to Pay Fees Under Protest

Please provide the records requested above regardless of your fee waiver decision. In order to expedite a response, NRDC will, if necessary and under protest, pay fees in accordance with Michigan’s FOIA provisions at Mich. Comp. Laws § 15.234, and MDEQ’s procedures and guidelines, for all or a portion of the requested records. Please contact me before doing anything that would cause the fee to exceed \$500. NRDC reserves its rights to seek administrative or judicial review of any fee waiver denial.

IV. Conclusion

Please email or (if it is not possible to email) mail the requested records to me at the NRDC office address listed below. Please send them on a rolling basis; MDEQ’s search for—or deliberations concerning—certain records should not delay the production of others that MDEQ has already retrieved and elected to produce. See generally Mich. Comp. Laws § 15.235. If MDEQ concludes that any of the records requested here are publicly available, please let me know.

Please do not hesitate to call or email with questions.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Evan Feinauer', with a long horizontal flourish extending to the right.

Evan Feinauer, Litigation Fellow
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JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



STEVEN E. CHESTER
DIRECTOR

April 21, 2004

Mr. Benjamin H. Grumbles, Acting Assistant Administrator
United States Environmental Protection Agency
Washington, DC 20460

Dear Mr. Grumbles:

Deputy(s)	<i>[Signature]</i>
Director's Office Staff	<i>[Signature]</i>
Division/Office Chief	<i>[Signature]</i>
Prepared by:	
Name	<i>Richard Benzie</i>
Division/Office	<i>WD</i>
Log Letter No.	<i>SIR 00302</i>
File No.	
☐ Delogged	

EQ 0110e (Rev. 1/2001)

SUBJECT: State Programs to Control Lead in School Drinking Water

Thank you for your letter of March 18, 2004, requesting information on efforts being taken by the Michigan Department of Environmental Quality (MDEQ) to control lead in drinking water at schools and day care facilities. The following information has been assembled by staff in our Water Division (WD) having the regulatory responsibility for public water systems.

The WD continues to actively implement the requirements of the Lead and Copper Rule (LCR) authorized by the 1986 amendments to the federal Safe Drinking Water Act, 1976 PA 399, as amended. In Michigan, we have approximately 900 schools and day care centers that meet the definition of a nontransient noncommunity (NTNC) public water system. All of these systems rely on groundwater as their source. Fortunately, groundwater in Michigan is not typically corrosive or conducive to significant lead leaching from water system components.

As specified by the LCR, routine monitoring for lead and copper has been and continues to be conducted in these NTNC systems. Our experience has shown lead levels to be acceptable in these schools and day care centers when samples have been correctly collected from actual drinking water taps. From 1999 to 2003, the MDEQ laboratory analyzed 14,207 lead samples from NTNC public water systems. Only 2.4 percent of these sample results exceeded the lead action level of 15 parts per billion (ppb). Over 94 percent of these results reported lead levels less than or equal to half the lead action level of 7.5 ppb, with 37 percent reporting lead as not detected. On the rare occasion that one of these NTNC systems exceeded the lead action level, the owners have typically eliminated exposure by supplying bottled water or removing the offending tap until a long-term solution has been instituted. Rarely have the elevated lead levels been attributed to a system-wide problem. In Michigan, it has been repeatedly demonstrated that elevated lead levels from drinking water taps in schools are diminished by fixture replacement. In the last 5 years, we have had only 10 action level exceedences reported from a total of 1,750 NTNC public water systems. Only two of these systems have had to install corrosion control treatment.

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In your letter, you state that schools are only subject to the requirements of the LCR if they have their own water system. This statement implies there is no benefit to those schools served by community public water systems. The WD feels strongly that the LCR does provide a significant benefit to schools and day care centers that are served by community public water systems (CPWS). Despite limitations in these regulations that severely restrict CPWS from using schools and day care centers as sampling sites, proper implementation of this regulation should result in reduced lead exposure for all customers. For instance, schools and day care centers connected to CPWS serving more than 50,000 residents benefited from the LCR because these water systems have had to demonstrate and maintain optimal corrosion control. These large systems were required to reduce lead levels throughout their water system to the lowest levels possible. In addition, schools and day care centers connected to CPWS serving 50,000 or fewer residents have benefited from proper implementation of the LCR because these water systems have had to achieve and maintain compliance with the lead action level. Furthermore, any CPWS that exceeded a lead action level also had to provide public notification and public service announcements in accordance with and on a frequency specified by the LCR. Therefore, schools and day care centers in these systems could choose to provide an alternate drinking water source until compliance was achieved and lead levels were reduced in their CPWS.

Your letter also references the Lead Contamination Control Act (LCCA) of 1988, which recalled drinking water coolers with lead-lined water reservoir tanks and banned new drinking water coolers with lead parts. This law caused Michigan's state plumbing board to make changes in the construction code to ban lead materials in other drinking water system components as well. Items such as 50/50 lead-tin solder for household plumbing, lead packers and lead wool used for well screens, and brass fixtures having greater than 8 percent lead were among the items banned from future use in potable water systems.

In 1988, prior to the LCCA, NTNC schools in Michigan were informed of the requirement to provide public notice regarding the potential for lead in drinking water, and they were mailed an example notice to use. All Michigan schools supplied by CPWS were also mailed the same information with a recommendation that they provide similar public notice although it was not required by law.

In 1989, over 8,000 Michigan schools and day care centers were mailed information on the LCCA. We cited concerns about lead levels and recommended a sampling and flushing protocol be instituted at all taps used for consumption, not just the water coolers required by the LCCA. In addition, staff of the WD made presentations to state school business officials and to the environmental health association representing local health departments. Articles were also published in school and day care association newsletters.

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In 1989, we also conducted a random telephone survey of 40 schools and 40 day care centers (both NTNC and those connected to another water system) regarding the LCCA. Seventy-five percent of the schools were aware of the LCCA requirements and 50 percent had performed some monitoring, while 40 percent of the day care centers were aware of the LCCA requirements, and about 20 percent had sampled.

In 1990, a second mailing to all 8,000 schools and day care centers was conducted, with updated information on the recall of water coolers as required by the LCCA and with the recommendations developed in Michigan on flushing drinking water outlets. In this letter, we also asked that any sample results be reported to us even though they were specifically not required to do so by the LCCA. About 30 of 500 school districts reported results from 720 "first draw" samples taken in over 200 buildings; 2.5 percent of these results exceeded the maximum contaminant level (MCL) of 50 ppb in effect at that time for lead, 8.6 percent exceeded 20 ppb, and 17.5 percent exceeded 10 ppb. It should be noted that all (104) flushed sample results reported lead levels less than 10 ppb. We also noted that the overall average levels in first draw samples collected from kitchen faucets were higher than levels from the targeted lead lined water coolers that were the focus of the LCCA. As a result of this data, state staff did pilot testing in three school districts and provided technical assistance to schools and day care centers. Follow-up sampling and investigations were also accomplished by state staff in other school districts.

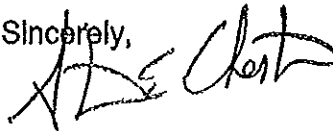
As you mentioned, the LCCA also established a technical assistance program to support state activities to reduce lead contamination in schools. The WD is aware of the United States Environmental Protection Agency (USEPA) technical assistance fact sheets, technical bulletins training seminars, and the publication, "Lead in School Drinking Water." As discussed, we conducted several mailings, made numerous presentations, conducted follow-up surveys, responded to requests for assistance, participated in several pilot tests to reduce lead levels, compiled data, conducted additional sampling, and responded to many telephone inquiries with appropriate technical assistance. All of these activities constitute our technical assistance program. However, no funding has ever been allocated to states for implementation of the LCCA. All of the activities performed by Michigan in response to the requirements of the LCCA were done so with resources diverted from other programs. The primary requirement of the LCCA was for schools that identified coolers on a list of those suspected to contain lead lining to repair, replace, remove, or sample to show that these coolers did not contribute to lead in the drinking water. If the schools did sample, they were also required to tell their customers that results were available. If schools had no coolers on the list, nothing further was required by the LCCA. Despite this limited application of the LCCA, Michigan has performed numerous activities beyond the scope specified in the LCCA without any federal funding.

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Finally, you ask what the USEPA can do to further efforts in this voluntary program. We have several suggestions. First, we recommend that the USEPA consider allowing schools to be considered Tier 1 sampling sites in CPWS so that we can gain more information on possible lead exposure in schools. Allowing CPWS to use schools will afford them an opportunity to use sampling sites that are more accessible than private homes, more likely to be geographically distributed throughout their system, and likely to satisfy a large constituency (parents). From our experience, we also recommend that the USEPA consider a sampling protocol for schools that would determine if the fixtures at kitchen taps are a problem that could be simply resolved by replacement. The USEPA may also want to consider requiring the owner of these facilities to replace any remaining lead service lines supplying schools or day care centers.

In conclusion, we understand that the detection of elevated lead levels at customer taps in Washington, DC, has caused the USEPA to focus on this issue. However, the MDEQ wants to emphasize that despite the limitations in this law, proper implementation of the LCR accomplishes adequate reduction in lead levels. Failure to carry out some rule provisions in one case should not be cause for disparaging implementation across the country, or for unnecessary revamping of this regulation. If you need further information or assistance, please contact Mr. James K. Cleland, Assistant Division Chief, WD, at 517-241-1287, or you may contact me.

Sincerely,



Steven E. Chester
Director
517-373-7917

cc: Mr. Stanley F. Pruss, Deputy Director, MDEQ
Mr. Jim Sygo, Deputy Director, MDEQ
Ms. JoAnn Merrick, Senior Executive Assistant to the Director, MDEQ
Mr. Andrew W. Hogarth, MDEQ
Mr. Richard A. Powers, MDEQ
Mr. James K. Cleland, MDEQ



**Controlling Lead in Drinking Water for
Schools and Day Care Facilities:**
A Summary of State Programs

Office of Water
EPA-810-R-04-001
www.epa.gov/safewater
July 2004

 *Printed on Recycled Paper*

Controlling Lead in Drinking Water for Schools and Day Care Facilities
A Summary of State Programs
 July 2004

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Controlling Lead in Drinking Water for Schools and Day Care Facilities

A Summary of State Programs

Children are susceptible to adverse health effects from lead, such as impaired mental development, IQ deficits, shorter attention span, and lower birth weight. Exposure to lead is a significant health concern, particularly for young children and infants whose growing bodies tend to absorb more lead than the average adult. Testing water in schools and day care facilities is important because children spend a significant portion of their days in these facilities and likely consume water while there.

There is no federal law requiring sampling of drinking water in schools that receive water from other public water systems, although schools that have their own water supply are subject to regulation and sampling as non-community public water systems. Schools served by a public water system may be included as a sampling location (i.e., tap) for a public water system's lead and copper monitoring program, but there are no federal requirements for more extensive testing. States and local jurisdictions may, however, establish programs for testing drinking water lead levels in schools. EPA has issued guidance designed to help schools develop and implement a sampling protocol to test for lead in their drinking water.

In March 2004, Acting Assistant Administrator for Water Benjamin Grumbles sent a letter to directors of state environmental and health agencies requesting information on state and local efforts to monitor and protect children from exposure to lead in drinking water at school and day care facilities. This paper summarizes the responses received from 49 states, Puerto Rico and the Navajo Nation on actions they have taken to reduce children's exposure to lead in drinking water. The summary also identifies recommendations made by states for future collaboration with EPA on this issue.

1.0 Background

Lead is a contaminant that EPA takes very seriously. Exposure to lead can have serious health effects, causing delays in normal physical and mental development in infants and young children and slight deficits in the attention span, hearing, and learning abilities of children. The Centers for Disease Control and Prevention (CDC) has identified a blood lead level of 10 micrograms per deciliter as the level of concern for lead in children.

The phase-out of leaded gasoline, lead-based paint, bans on lead in food and beverage containers and reductions in lead in industrial emissions, consumer goods, hazardous waste, and other sources have all helped to dramatically reduce lead exposure in young children. In fact, exposure in children has been dramatically reduced over the last two decades. According to a

2003 CDC report¹, 88% of children between the ages of 1 to 5 were estimated to have blood lead levels that exceeded 10 ug/dl for the period between 1976-1980. By 1999-2000, this estimate had decreased to approximately 2%.

While drinking water can serve as a source of lead exposure, the most common source for children today is lead in paint in older housing (primarily from housing built in the 1950s and homes with pre-1978 paint) and contaminated dust and soil². However, EPA's regulations are focused on reducing exposure to all sources of lead.

1.1 Drinking Water Regulations for Lead

Although lead concentrations leaving a water treatment plant are generally low, corrosive water can result in lead leaching from lead pipes within a distribution system, lead solder used to connect pipe, or brass fixtures which may contain a small percentage of lead. The 1986 Amendments to the Safe Drinking Water Act (SDWA) required EPA to develop regulations to control for lead in drinking water. The Lead and Copper Rule (LCR), issued in 1991, is focused on controlling corrosion within the distribution system that delivers water to customers. The Rule requires that public water systems monitor a fixed number customer taps for lead. If more than ten percent of taps tested exceed 15 parts per billion (ppb), the system must undertake activities to control corrosivity of water, increase monitoring, educate the public, and possibly replace lead service lines within the distribution system. Additional information on the LCR can be found at www.epa.gov/safewater/lead.

The 1986 SDWA Amendments also required that only lead-free materials be used in new plumbing and in plumbing repairs. Solders and flux were only allowed to have 0.2% lead content and other pipes, pipe fittings and fixtures were limited to no more than 8% lead. (SDWA Sec. 1417)

In 1988, the SDWA was further amended by the Lead Contamination Control Act (LCCA), to reduce the exposure of lead to children in schools and day care facilities. The LCCA prohibited the sale of any drinking water cooler that is not lead-free and required that:

- the EPA identify each brand and model of drinking water cooler, indicating which are lead free and which have a lead-lined tank and distribute the list to states (SDWA Sec. 1463),
- the Consumer Product Safety Commission order that manufacturers and importers of all drinking water coolers identified as having a lead-lined tank repair, replace, or recall and provide a refund for such coolers (SDWA Sec. 1462),

¹Surveillance for Elevated Blood Lead Levels Among Children – United States, 1997–2001. Centers for Disease Control and Prevention. *Surveillance Summaries*, September 12, 2003. MMWR 2003;52 (No. SS-10)

²Risk Analysis to Support Standards for Lead in Paint, Dust and Soil (EPA 747-R-97-006, June 1998)

- the EPA publish a guidance document and testing protocol to assist states in determining the source and degree of lead contamination in school drinking water (SDWA Sec. 1464), and
- states establish programs to assist schools and day care facilities to test for and remedy lead contamination problems, with public availability of results of such testing (SDWA Sec. 1464(d)).

In 1989 and subsequent years, EPA released guidance and information to inform states and school systems how to test for and reduce the risk of lead exposure in school drinking water. A list of the publications is provided in Appendix A. EPA's guidance provides a protocol for testing water in schools and recommends that schools take action at fixtures where the lead concentration exceeds 20 ppb. This concentration differs from the 15 ppb action level that public water systems are required to follow. The 20 ppb action level is based on a smaller sample collection volume of 250 milliliters (ml) and is designed to pinpoint specific fountains and outlets that require attention. When testing fixtures, the levels of lead are expected in the initial flush of water that has been sitting in the pipes. The 15 ppb action level required for compliance with the LCR calls for a tap sample volume of 1000 ml (1 liter), and is designed to identify system-wide problems. If a one liter sample was collected from a drinking water fountain in schools, the initial high concentrations might be diluted by the later part of the sample, which could show lower concentrations. The 20 ppb school level is not inconsistent and likely is more stringent because it reflects a more concentrated sample; 20 ppb in a 250 ml sample would correspond to about 12 ppb in a one liter sample.

States are not required to establish testing programs as a result of a 1996 court decision. In 1996, the Fifth Circuit Court of Appeals decided *ACORN v. Edwards*, 81 F.3d 1387 (5th Cir. 1996), an appeal of a case in which the Association of Community Organizations for Reform Now (ACORN) had sued the State of Louisiana for failing to carry out several provisions related to section 1464 of the SDWA³. In its decision, the Fifth Circuit held that provisions in section 1464(d) were unconstitutional under the Tenth Amendment to the U.S. Constitution because they directly compelled the state to enact and enforce a federal regulatory program and provided no options for the State to decline the program. The decision did not, however, restrict states from developing and carrying out their own programs to assist schools.

1.2 *Drinking Water and Schools*

The U.S. Department of Education's 2001-2002 Public Elementary/Secondary School Universe Survey indicated that 53,000 of 91,380 public schools serve kindergarten through 8th grade. The Department's 1999-2000 Private School Survey indicated that 16,530 of 27,223 private schools in the country are elementary schools. With respect to day care facilities, a 2002

³Acorn v. Edwards can be found at <http://caselaw.findlaw.com/cgi-bin/getcase.pl?court=5th&navby=case&no=9430714cv0>

study sponsored by the National Child Care Association⁴ estimated that there are approximately 500,000 licensed child care providers, 306,000 of which are in homes.

EPA classifies public water systems within three categories: community, non-transient non-community, and transient non-community. Most of the population receives its drinking water from a community water system - a system that serves more than 25 people (or 15 connections) year round. Non-transient non-community water systems are systems that serve at least 25 people for more than 6 months in a year, but not year-round (e.g., schools). Transient non-community water systems generally serve different people every day because they do not spend much time at the location (e.g., gas stations, campgrounds).

Most schools and day care facilities receive water from community water systems. Although the schools are not required to be tested, the water system from which they receive water is subject to the requirements of the LCR. Some schools, however, have their own source of drinking water and are thus considered non-transient non-community water systems subject to drinking water regulations. Monitoring needed to meet requirements of the LCR would thus occur within the school grounds.

EPA collects inventory and compliance information on public water systems in its Safe Drinking Water Information System (SDWIS). The system includes a voluntary field to allow states to indicate whether a public water system is also a school or day care facility. A recent query of SDWIS retrieved 10,246 records for public water system/schools. An alternative estimate is that approximately one-half of the 19,575 non-transient non-community water systems in the country are schools. Using these two methods, EPA estimates that there are approximately 10,000 schools in the country that are also a public water system and which therefore must comply with the requirements of the LCR.

EPA also collects information on violations and exceedances of lead action levels for public water systems in the SDWIS system. Small public water systems that serve fewer than 3,300 must report a 90th percentile value⁵ only when it exceeds the 15 ppb action level. A preliminary review of SDWIS data indicates that 231 of 1647 public water systems identified as a school exceeded the action level during a monitoring period that ended in 2003. Most of the systems (85%) were non-transient non-community water systems.

⁴The National Economic Impacts of the Child Care Sector, Prepared by M. Cubed for the National Child Care Association. Fall 2002. Available at www.nccanet.org/NCCA%20Impact%20Study.pdf.

⁵The 90th percentile value is the concentration of lead in drinking water for the sample that represents the 90th percent of samples taken. For example, if a system takes 100 samples and sorts the results from lowest to highest (100 being highest), it would report the concentration of the 90th highest sample to the state.

2.0 State Programs to Control Lead in Schools and Day Care Facilities

Recently there has been heightened awareness of issues associated with lead in drinking water, driven, in part, by elevated levels of lead in drinking water for many homes served by the District of Columbia Water and Sewer Authority (WASA). This awareness prompted many school districts in the greater Washington, D.C. area to carry out testing in schools - even school districts that are not served by WASA. Results found elevated lead levels in drinking water from many school fixtures. Recent testing of lead in school drinking water have also identified problems in other parts of the country, including the Seattle, Baltimore and Philadelphia school systems.

On March 18, 2004, Acting Assistant Administrator Benjamin Grumbles sent a letter to states requesting information on state and local efforts to monitor and protect children from exposure to lead in drinking water at school and day care facilities (Appendix B). In order to ensure that the request reached both state drinking water programs responsible for overseeing implementation of national primary drinking water regulations and other programs aimed at preventing childhood exposure to lead, the letter was sent to directors of state environmental and health agencies. The letter asked states to provide information on:

- actions being taken to ensure that children are not exposed to lead from school drinking water
- any programs the state is currently implementing a program to control lead in the drinking water at schools and day care facilities, including how any programs are structured and their results
- other programs to reduce lead in schools
- suggestions as to how EPA could work collaboratively with states to further their efforts to implement voluntary programs.

52 As of June 25, 2004, EPA had received a total of 74 responses from 49 states, Puerto Rico, the Navajo nation and EPA's Region 2 office. Generally, states responded that they implemented the requirements associated with the LCCA and continue to focus on ensuring that schools with their own water system are in compliance with the LCR. A few have expanded existing regulatory authorities to better address schools and day care facilities. Several states have developed specific programs that are focused on improving drinking water quality and environmental health at schools. 

Most states agreed that minimizing lead in drinking water consumed by children is important and many are conducting surveys, expanding outreach efforts and taking advantage of partnerships to help them reach schools. However, they also indicated that, in the absence of additional federal funding, it would be difficult to expand programs beyond existing efforts because state drinking water programs are already challenged by funding shortfalls. The summary that follows describes state program highlights under various themes identified in the letters. Brief summaries of each response are included in Appendix C and copies of letters received from state programs are available on the EPA website.

2.1 *Implementing the LCCA and the LCR*

Most states described efforts they had taken to carry out requirements related to the LCCA in the late 1980's and early 1990's, including providing guidance to schools on testing, conducting analysis of drinking water samples, and helping schools to replace lead-line coolers. In **South Dakota**, the state continued efforts associated with the LCCA by developing the *South Dakota Environmentally Safe School Initiative* in 1993-94. The state worked with a majority of the schools in the state to see that first draw water samples were collected and tested for lead. Where lead levels were high, the state retested sites to verify and then provided grant funding to help schools replace fountains and coolers that posed problems.

Most states also described the current activities they carry out to implement the LCR for schools that are also public water systems. While many states indicated that they do not have any additional programs beyond those carried out to support the LCCA and LCR, some have placed a special emphasis on ensuring that schools comply with the LCR. **Massachusetts** works with schools that are non-transient non-community water systems which have drinking water that exceeds the action level. The state provides educational material, training, one-on-one consultation with school officials, and enforcement if necessary.

2.2 *Strengthening Existing Regulatory Programs*

Clearly, schools that are also public water systems are covered by the LCR. Many states also noted in their letters that schools also benefit from the LCR in that they are customers of public water systems that must meet the requirements. However, some states have modified their requirements to ensure that schools (as customers) are addressed.

Sample locations for lead and copper tap monitoring are selected in order to identify those sites that are high risk. For example, if a system has lead service lines, it must ensure that at least one half of the sample locations are served by lead service lines. **Florida** has added day care facilities to the definition of Tier 1 lead and copper sampling sites, and thus, made Florida's youngest citizens a priority in its lead and copper sampling strategy. The state also has a regulatory program to evaluate lead levels in drinking water provided by "limited use" public water systems, which serve fewer than 25 people (which is the population cut-off for the federal definition). This allows the state to monitor drinking water at many day care facilities that may serve fewer than 25.

Connecticut also has regulatory provisions that ensure that drinking water in day care facilities is monitored. There are approximately 1,400 licensed day care facilities in the state. State regulations require that all water supplies at day care facilities be tested every two years for lead content and the results submitted to the local and state health departments. The drinking water program generally gets 10-15 referrals a year due to elevated lead levels. If the facility is over the action level, it must provide approved bottled water until the situation is resolved.

2.3 *Directing Programs at Schools*

Many states described efforts that are focused specifically on schools. Some focus on lead in drinking water or drinking water generally while others look more broadly at environmental hazards within schools that could affect children.

Minnesota has a program to keep schools informed about the potential risks from exposure to lead in drinking water. All of Minnesota's schools receive written guidance material every five years regarding the reduction of lead in drinking water. The guidance manual, *"Reducing Lead In Drinking Water: A Manual for Minnesota's schools"*, provides detailed lead testing instructions and options for corrective actions. This program complements the state's general *"Get the Lead Out"* education campaign that has been implemented above and beyond the public education requirements of the LCR which informs the public of simple steps they can take to reduce their exposure to lead in drinking water.

Arizona's Department of Environmental Quality is addressing the issue of exposure to lead from drinking water through its *Children's Environmental Health Project* by developing a curriculum module for schools. This module will provide education about lead in drinking water to both students and administrators. It is intended to actively engage children in conducting drinking water lead investigations at their schools and also provide practical ways administrators and other school personnel can reduce potential risks to children.

The **Alaska** Department of Environmental Conservation has developed a *Safe Drinking Water for our Schools* project designed to address issues of noncompliance regarding testing of drinking water at schools around the state. The department provides a customized handbook for each school that includes simple step by step procedures for taking compliance samples. The state also provides a quarterly report card to each school system that grades the school based on whether it has completed scheduled monitoring and is meeting drinking water standards and other operating requirements.

Washington has several programs that speak to various aspects of maintaining safe drinking water and healthy schools. The Office of Environmental Health and Safety, through its School Health and Safety Program, publishes a guide for schools that has a component that directs schools to comply with drinking water requirements. The Department of Health is currently working with other state and local health agencies to train agency staff and potential licensees of day care facilities on safe drinking water requirements.

In 2000, **Vermont** passed the School Environmental Health Act, the goal of which is to provide schools with the resources necessary to develop and adopt environmental management plans. The state is currently working with eight schools in finalizing environmental management plans that include reducing exposure to lead and environmental asthma triggers.

In 1994, **California's** Department of Health Services (DHS) developed a study to investigate the extent of lead contamination in paint, soil, and drinking water in state schools.

Based on investigations of 200 schools between 1995-1997, the DHS estimated that 18% of the schools in the state were likely to have drinking water lead levels higher than the action level. After release of the study, the state provided \$1 million to the Department of Education in 1998-99 to test for the presence of lead in public schools. In 2000, a multi-agency effort within the state established the *Lead Safe Schools Project*. Although the program is focused on lead-based paint hazards which were identified as posing the greatest risk, it also recognizes water as a potential route of exposure. About 70% of the state's public school districts have received training through the program, including all districts with significant enrollments.

2.4 Conducting Studies and Surveys

Following passage of the LCCA, many states carried out surveys to determine lead levels in school drinking water. Several states indicated that they are making a renewed effort to reach out to schools. In **Arizona**, the Departments of Health Services and Environmental Quality are collaborating on a study of lead in drinking water in Arizona schools. The state is asking some 96 schools from throughout Arizona to participate in the study which will be funded through a cooperative agreement grant from the U.S. Agency for Toxic Substances and Disease Registry.

In 2003, **Maryland** conducted a survey to evaluate the current status of lead testing efforts within Maryland's public schools. The survey was prompted by the 2003 lead testing in Baltimore City Public Schools which revealed elevated levels of lead in drinking water. In response to the survey, the Department of the Environment has been contacted by several local Boards of Education for guidance on testing for lead in drinking water at schools that are supplied by municipal water.

The **New York** Departments of Health and Education have a joint effort underway to look at lead in school drinking water. The state identified a subset of systems it deemed were vulnerable to elevated lead levels because they had a 90th percentile lead concentration of greater than 10 ppb. In May 2004, the state distributed a survey to schools served by those public water systems. The state will be reviewing the results during the summer of 2004 and will share them with EPA.

2.5 Developing Partnerships are Critical

It is readily apparent from several the examples above that partnerships and collaboration are critical in addressing the issue of lead in school drinking water. Although state drinking water programs have responsibility for carrying out regulations related to drinking water, many of the efforts in schools are not subject to regulatory oversight. Further, there are other agencies (e.g., Education, Social Services) that have a more direct line of contact with schools and day care facilities. Finally, addressing risks to children posed by lead requires a multi-media approach that considers all of the potential avenues of exposure.

Many states described the efforts to address lead that are carried out by state Lead Poisoning Prevention Programs that are funded, in part, by the U.S. Centers for Disease Control

and Prevention. States such as **Louisiana** and **Hawaii** work together to identify whether drinking water is a potential sources of lead when children test high for blood lead levels. In **Alaska**, when a school PWS tests above the action level for lead, the Department of Health and Social Services will follow up to test blood lead levels in children. Fortunately, none of the tests have indicated high blood lead levels where there are action level exceedances.

Like other states, **Massachusetts** worked to fulfill the requirements of the LCCA and to mitigate lead levels in Massachusetts. However, in recent years, the Department of Environmental Protection (DEP) has begun to coordinate initiatives with several partners for a lead in school drinking water abatement program that responds to the needs of schools in Massachusetts. The DEP has entered into an agreement with the Department of Public Health to routinely review and follow-up with the local public water supplier and homeowner on all DPH drinking water results from the homes of children with elevated blood lead levels. The department provides school administrators, public health officials, public water suppliers, plumbing inspectors and other interested parties with educational materials and recommendations to assist in the schools' efforts to reduce the levels of lead and copper in their drinking water. At the end of March, 2004, the DEP Commissioner sent out an information package to all Superintendents of Public Schools, Private and Parochial School Principals, Collaborative Directors, all Public Water Superintendents, and day care providers with information about lead and drinking water.

3.0 EPA Regional Activities

Although this report is focused on actions being taken by states to address lead in drinking water, several EPA regional offices have also had initiatives in this area over the past several years. As part of its Healthy Schools Initiative, **EPA's Region I** office has been working with Massachusetts and the Boston Public Schools to ensure that water used in food preparation at Boston's public schools does not contain lead. The Region has also been working with the state Department of Environmental Protection to communicate with all public and private schools in the state.

As part of its Children's Health Initiative, **EPA's Region II** office worked with the New York City Board of Education to perform sampling at all 1,200 public schools under the Board's jurisdiction. At least one tap in 370 of the schools was removed from service because the lead concentration exceeded the 20 ppb guidance level. Based on its success with this program, the Region has extended its efforts to additional communities including Syracuse and Rochester, NY and Newark and Paterson, NJ.

EPA's Region III office has worked with many school districts under its jurisdiction, including Philadelphia and Baltimore for excessive lead levels in school drinking water. Recently the Region has been providing technical assistance to school districts in the greater Washington, D.C. area that are conducting sampling in schools.

4.0 Recommendations on Collaboration

Many states indicated that they would be interested in increasing their efforts in ensuring that school drinking water is safe. However, almost all who did so indicated that such an effort would not be possible for them to carry out in the absence of additional federal funding. One state indicated that the key to a successful collaborative effort to implement a voluntary program will require both human and financial resources and indicated that EPA must be willing to create new additional funding through the federal public water system supervision grant. However, the state also noted that, for a program to be truly successful, it must be established as a mandatory program, complete with an enforcement and compliance component, and then adequately funded through the public water system supervision grants.

A few states indicated that EPA could revise the current federal LCR monitoring requirements to allow regulated drinking water systems to collect samples from schools and other buildings rather than just from residences or by including them for consideration as Tier 1 sites (note: Florida has done in its state regulations). One state also recommended that EPA consider a sampling protocol for schools that would determine if the fixtures at kitchen taps are a problem.

However, some states also expressed that they would oppose requirements making sampling of drinking water inside schools mandatory due to concerns that it would be impracticable and difficult to enforce.

Several states acknowledged that EPA has done much by providing a method for the detection of lead in school drinking water, an action level for drinking water in schools and a guidance as to how to respond to identified problems. Some states expressed appreciation for EPA regional staff efforts with schools with elevated drinking water lead levels and others indicated that EPA's most effective role will be to continue to provide technical assistance documents for states to use. The last guidance released by EPA on lead in school drinking water was released in 1994. Several states indicated that they would like to see this guidance updated and reissued and training made available. States also suggested that EPA provide guidance for schools on how to address other non-acute water quality issues, such as taste, odor, color, and sediment.

With respect to funding, states expressed a need for funding to cover costs associated with technical assistance and laboratory costs for analysis of water samples. Another state indicated that funding would be useful to help compile and analyze data to facilitate assistance to schools and day care facilities. One state indicated that supplemental funding and guidance would be useful on the design and implementation of a cost-effective, statistically significant flushing/sampling programs in large buildings, such as schools. The state also envisions a study focusing on the effects of temperature and time of travel of drinking water from main to remote taps in facilities and what effect these play on effective flushing and representative sampling programs.

While finding a problem related to high lead levels is easy, it is difficult for a school or day care facility to address the cost of remediating a lead exposure problem. Some states indicated that they would like to see funding made available for repairs related to school replacement of water distribution systems and assistance in identifying cost-effective means of remediating the problem. One suggested providing for expanded funding mechanisms through state Drinking Water State Revolving Fund programs as an incentive for water systems to work with their school district customers.

5.0 Future Activities

EPA is currently considering how it will move forward in enhancing support for state and local efforts to address lead in school drinking water. Several regional offices already have developed initiatives, as described above, and may look to see how they can extend their efforts. EPA's Office of Water (OW) has been in contact with the Office of Children's Health Protection to learn how it can work with existing initiatives aimed at assisting schools in managing environmental hazards, such as the *Tools for Schools* program and a school health and safety self-assessment software tool. Further, OW is working to collect existing lead in drinking water in schools and day care facilities brochures, guidance, and tools in order to provide a central location for access.

EPA will also look to see how it can work with other Federal agencies – mainly the Departments of Housing and Urban Development, Health and Human Services, and Justice through the President's Task Force on Environmental Health Risks and Safety Risks to Children – on implementing a federal strategy to prevent childhood lead poisoning. The Agency will also work to identify potential opportunities for partnerships with the Department of Education.

It is important to note that many water utilities are not waiting for additional state or federal guidance on this matter before moving forward. Many water utilities are working closely with school districts to help them develop sampling plans and conduct analyses. EPA is working with the American Water Works Association, Association for Metropolitan Water Agencies and American Water (a multi-utility provider of drinking water) to learn how water utilities have been working with local governments to address school drinking water. In addition, EPA plans to develop complementary products to enhance the materials these organizations are currently developing to assist utilities and schools understand their roles and responsibilities in carrying out effective lead protection programs in schools and day care facilities.

EPA appreciates the responses provided by state programs. The information has helped the Agency to better understand the actions taken by states in the past and the needs and challenges for the future. The Agency will provide additional information on its activities as they are developed in the coming months.

Appendix A

EPA Material on Managing Lead in School Drinking Water

EPA website on Lead in Drinking Water: Schools and Day Care Centers -
<http://www.epa.gov/safewater/lead/schoolanddccc.htm>.

Is There Lead in the Drinking Water?: You Can Reduce the Risk of Lead Exposure from Drinking Water in Educational Facilities, EPA 903-F01-002, 2002. Also available at <http://www.epa.gov/safewater/lead/pdfs/v2final.pdf>.

Lead in Drinking Water and Schools and Non-residential Buildings, EPA 812-B-94-002, 1994. Also available at <http://www.epa.gov/safewater/consumer/leadinschools.pdf>.

Sampling for Lead in Drinking Water in Nursery Schools and Day Care Facilities, EPA 812-B-94-003, 1994. Also available at <http://www.epa.gov/safewater/lcrmr/nursery.pdf>.

Lead in School Drinking Water, EPA 5709-89-001, 1989.

(Note: this list was also included as an enclosure to the letter in Appendix B)

Appendix B - Letter to State Programs



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
WATER

March 18, 2004

Ms. Ernesta Ballard, Commissioner
Alaska Department of Environmental Conservation
410 Wiloughby Avenue, Suite 105
Juneau, AK 99801-1795

Dear Ms. Ballard:

I am seeking your help in learning more about state and local efforts to monitor and protect children from exposure to lead in drinking water at schools and day care facilities and to share information about EPA's efforts to date in this area.

Washington, D.C. is experiencing seriously elevated levels of lead in drinking water in many homes served by the District's public water system. An investigation is underway to identify a solution to the problem, which appears to be the result of an increase in the corrosivity of drinking water due to changes in water treatment. Increased corrosion is causing excessive leaching of lead from lead service lines serving homes and from plumbing fixtures into drinking water at the tap.

While this event has placed a national spotlight on the issue of lead in drinking water, we believe the situation in the District is unique. However, I have also seen news reports from across the country focused on concerns related to elevated lead levels in school drinking water. I would like to better understand the actions states are taking to ensure that children are not exposed to lead from drinking water in schools.

Children are most at risk from health effects associated with lead exposure. Elevated blood lead levels can delay normal physical and mental development in infants and young children, and cause slight deficits in the attention span hearing, and learning abilities of children. The Centers for Disease Control and Prevention (CDC) has identified a blood lead level of 10 micrograms per deciliter as the level of concern for lead in children.

EPA regulates lead in drinking water through the Lead and Copper Rule, authorized by the 1986 Amendments to the Safe Drinking Water Act. When results from tap sampling indicate that more than 10 percent of homes tested have lead concentrations that exceed a 15 micrograms

per liter (ppb) action level, public water systems must take actions to control corrosion and to inform the public about steps they should take to protect their health. However, schools are only subject to the requirements of the rule if they have their own water system.

The Lead Contamination Control Act (LCCA) of 1988 recalled drinking water coolers with lead-lined water reservoir tanks and banned new drinking water coolers with lead parts. The Act also established a technical assistance program to support state activities to reduce lead contamination in schools. In 1989, EPA issued guidance recommending that schools receiving water from public water systems take remedial action on an individual outlet whenever the lead levels exceeded 20 ppb at that outlet. EPA has also released several other documents on lead control programs for drinking water over the past several years (enclosed).

I would like to better understand if your state is currently implementing a program to control lead in drinking water for schools and day care facilities. If the state does have such a program, I would like to know how it is structured and the results of the program. If the state is not implementing a program, has the state taken other steps to reduce lead exposure in schools? I would also be interested in hearing how you see EPA working collaboratively to further your state's efforts to implement this voluntary program.

I would very much appreciate it if you could provide a response to this letter by May 1, 2004. If you have any questions, please contact me or Cynthia C. Dougherty, the Director for the national drinking water program in the Office of Ground Water and Drinking Water at (202) 564-3750. I have also requested that Ms. Dougherty work with our Office of Enforcement and Compliance Assurance to undertake a national review of compliance with the Lead and Copper Rule. I thank you for your attention to this important public health matter.

Sincerely,

/s/

Benjamin H. Grumbles
Acting Assistant Administrator

Enclosure

cc. State Department of Health Commissioner
EPA Regional Administrators
State Drinking Water Administrators

Appendix C

Brief Summaries of State Letters

The letter from the Acting Assistant Administrator asked states to describe:

- State and local efforts to monitor and protect children from exposure to lead.
- Actions being taken to ensure that children are not exposed to lead from school drinking water
- Programs the state is currently implementing to control lead in the drinking water at schools and day cares including how they are structured and the results.
- How it could see EPA working collaboratively to the state's efforts to implement this voluntary program.

Acronyms

SDWA - Safe Drinking Water Act
 BLL - blood lead level
 AL - action level (for lead in drinking water)
 ALE - action level exceedance
 PWS - public water system
 LCR - lead and copper rule
 LCCA - Lead Contamination Control Act
 NTNC(WS)- non-transient non-community water system
 CWS - community water system

Note: The brief summaries that follow are based upon a staff review of the responses received from states. They are not intended to be representative of the full content of each response. Interested parties should review the state's complete response and any accompanying material.

Issues Addressed in State Letters

State	Discussed Specific Program Focused on Schools	Discussed Childhood Lead PPP funded by CDC	Discussed Test Blood Lead Levels	Discussed Implemented LCCA/LCR	Indicated No Additional program (LCCA/LCR only)	Conducted or Planning Special Sampling/Studies
AK	X		X			
AL		X	X			X
AR			X	X	X	
AZ	X	X	X			X
CA	X	X		X		X
CO	--	--	--	--	--	--
CT	X			X		X
DC						
DE				X		
FL	X			X	X	
GA		X		X	X	
HI		X	X	X		
IA				X	X	X
ID				X	X	
IL				X		
IN		X		X		
KS		X			X	
KY		X	X			
LA		X		X	X	
MA			X	X		X
MD	X	X	X	X		X
ME					X	
MI				X	X	
MN	X		X	X		
MO		X		X		
MS	X		X	X		
MT			X	X	X	
NC				X	X	
ND				X	X	
NE				X	X	
NH		X		X		X
NJ	X		X	X		X
NM				X		
NV				X	X	
NY	X			X		X
OH		X	X		X	
OK				X	X	
OR				X		
PA		X	X	X	X	
PR					X	
RI				X	X	
SC		X			X	X
SD	X					X
TN				X	X	
TX	X	X		X	X	
UT			X	X	X	
VA				X	X	X
VT	X	X	X	X		X
WA	X			X		
WI				X	X	X
WV				X	X	X
WY			X	X	X	
NN				X		

26/49 27/52 16/49

State Summaries

Alabama: Department of Environmental Management

- In response to the recent DC events, the state initiated its own special lead sampling study that looked at 14 PWSs which had tested above the action level in the past. The state tested schools in older, low income areas and found low lead levels. The state will be asking PWSs to replace some sampling locations with public school and day care facility sites.
- Currently no water systems in the state are using chloramines. The state will be working with those that are considering converting to chloramine to ensure that simultaneous compliance issues are addressed.

Department of Public Health

- The state has a Childhood Lead Poisoning Prevention Program that includes blood lead level testing.
- The state follows up at homes of children who have high BLLs. They annually inspect about 300 residences and find that less than 5% of homes have lead in drinking water, the majority of which are attributed to lead components in pumps for private wells.
- Lead in drinking water has not generally been found to be a problem in the state.

Alaska: Department of Health and Social Services

- ADHSS has been active in a state workgroup that has successfully and dramatically improved compliance by schools statewide.
- ADHSS maintains an active lead surveillance database, and investigates all reports of blood lead levels over 10 ug/dL. When a school PWS tests above the AL, the department follows up with BLL tests. No tests have indicated high BLLs where there are action level exceedances.

Department of Environmental Conservation

- The LCR applies to 645 PWSs, 96 of which are schools and 26 serve day care facilities.
- The department has developed a *Safe Drinking Water for our Schools* project designed to address issues of non-compliance regarding testing of drinking water at schools around the state. A customized handbook was developed for each school that contains compliance information specific to their school.

Arkansas: Arkansas Department of Health

- The state fully complied with the requirements of the LCCA without financial support from EPA. Limited blood lead screening program was instituted at local health units. Schools that were delinquent in monitoring or notification were reported to the local newspapers. For daycares, if a center didn't have a cooler, testing was encouraged.
- Most schools receive their drinking water through purchasing from an existing PWS that are regulated under the LCR, although there are some schools that own and operate their water supply system.
- Outside the LCR there are no special programs in place to monitor for these contaminants in PWSs, including schools. If there is reason to believe a school had high lead/copper levels - the department will collect samples upon request if they have adequate lab capacity.

Arkansas Department of Environmental Quality

- The state's focus is on a lead-based paint program that conducts outreach to schools.

Arizona: Department of Environmental Quality

- ADHS administers the Arizona Lead Poisoning Prevention Program; consisting of: lead poisoning blood studies, a physician's guide for medical case management for lead poisoned adults, brochures on childhood lead poisoning, a reporting requirement for elevated blood lead levels, and a targeted lead screening plan.
- ADEQ is addressing the issue of exposure to lead through drinking water through its Children's Environmental Health Project by developing a curriculum module for schools. This module is intended to provide education about lead in drinking water to both students and administrators. It will actively engage children in conducting drinking water lead investigations at their schools and also provide practical ways administrators and other school personnel can reduce potential risks to children.
- Although a very small percentage of PWS have ALEs. ADHS and ADEQ are currently collaborating on a study of lead in drinking water in Arizona schools. Some 96 schools from throughout Arizona have been asked to participate in the study. Arizona expects the results by the fall pursuant to a cooperative agreement grant from the US Toxic Substances and Disease Registry.

California: Health and Human Services Agency

- The state conducts several activities to prevent childhood lead poisoning
- In 1998, the state conducted "Lead Hazards in Schools" study to determine how common lead and lead hazards were in CA public schools and daycare facilities. The results of the survey were used to help develop and implement a multi-year California Lead Safe Schools Program

Department of Health Services - Follow-up letter

- CA has taken several steps to address lead in drinking water for schools and day care facilities.
 - From 1987-1989, the CA Dept of Education issued advisories regarding drinking water fountain testing. Another advisory was issued in 1994, warning of lead hazards in paint, soil, and drinking water. Schools were provided guidance on identification and testing of lead exposure hazards.
 - DHS requires all schools and day cares that are PWSs to meet the provisions of the LCR.
 - DHS also has a Childhood Lead Poisoning Prevention Program whose mission is to eliminate childhood lead poisoning by identifying and caring for lead burdened children and preventing environmental exposures to lead.
 - In 1994, DHS developed a study to investigate the extent of lead contamination in paint, soil, and drinking water in CA schools. Between 1995-1997, 200 schools were investigated. DHS estimated that 18.1% of the schools are likely to have lead levels over the action level.
 - After release of the study, the state funded \$1 million in 1998/9 to the Dept of Education to test for the presence of lead in public schools.

- In 2000, a multi-agency effort established the Lead Safe Schools Project. Although focused on lead-based paint hazards, it also recognizes water as a potential route of exposure. 70% of the state's public school districts have received training through the Lead-Safe School Project, including all districts with significant enrollment.

Environmental Protection Agency:

- The letter noted that DHS has primary responsibility for implementing drinking water laws in CA. However, CA EPA pointed to the Proposition 65 program as helping to reduce lead levels in fixtures, solder and paint.

Connecticut: Department of Public Health, Drinking Water Division

- The state regulates 195 daycare centers as NTNC PWSs. Lead exceedances have been identified in 17 NTNC daycare centers since Jan. 1, 2002, systems are in varying stages of achieving compliance with the LCR.
- There are 1400 licensed daycare facilities in the state. Facilities are required to be tested for lead every two years as part of the license renewal process. The drinking water program generally gets 10-15 referrals a year due to elevated lead levels. If the center is over the AL, it must provide approved bottled water until the situation is resolved.
- State regulates 205 schools with onsite water supply systems. 175 are classified as NTNC PWSs and 30 as CWSs. In 2002, the state instituted a capacity building project for schools.
- An additional 833 schools receive water from a community water system. No consistent sampling has been carried out in the 833 schools since 1988-89 when the LCCA was implemented
- Collaboration: EPA should provide grant money to primacy programs to cover costs associated with technical assistance and laboratory costs.

Delaware: Health and Social Services

- In response to recent events, the state is sending schools and daycare facilities a packet of information which includes information on the water fountains that were known to have used lead as well as information on how to further reduce children's exposure.

Florida: Department of Environmental Protection

- The state implemented the LCCA from 1988 to the mid 1990's. Received 100% cooperation from all Florida's 67 counties and their school districts. Broward County currently has a proposal to require annual lead monitoring in schools.
- In 1993 adopted LCR with 2 significant and important improvements 1. Added day care facilities to the definition of Tier 1 sampling sites. 2. Required all regulated water systems to notify each customer whose individual sample result for lead exceeds the lead action level.

Department of Health

- Florida has proactive programs to evaluate the lead content in drinking water and works to actively identify and protect children from lead exposure in the environment.

- The state has a regulatory program to evaluate lead levels in drinking water provided by limited use PWSs, which are systems that serve less than the federal definition of PWS. This brings in day care facilities that may serve fewer than 25.

Georgia: Dept. of Human Resources Division of Public Health

- The Childhood Lead Poisoning Program does not currently include a program to address lead exposure from drinking water. The state has not identified water as a significant source of lead. The Dept of Education assesses for presence of lead when schools are renovated, but have not identified lead in drinking water as an issue.

Department of Natural Resources

- The Dept of Education had responsibility for the responsibilities under the LCCA.
- The state has not had programs to control lead in school drinking water since 1992.

Hawaii: Department of Health

- The state implemented the LCCA in 1989. Schools are generally served by PWSs. In 1994, testing showed that only 6 of 233 samples failed the first flush test.
- Each year DOH issues an advisory for schools to flush all systems before the start of school, and after vacations if necessary. There is no other current program for reducing lead in schools' drinking water
- The Dept of Health currently administers a Childhood Lead Poisoning Prevention Program - funded by CDC grants. The state conducts blood lead level tests and investigates "Hot Spots".
- Collaboration - State acknowledged that EPA has done much by providing a method for the detection of lead in school drinking water, an action level for drinking water in schools and a guidance in the response to identified problems.
- Recommendations: EPA will need to address the cost of remediating a lead exposure problem. Although finding the problem is easy, correcting it is hard because it is too costly for the school or daycare facility. There has been no funding with LCCA. State would like to see EPA work toward making funding available for repairs related to school replacement of water distribution systems and identify cost effective means of remediating the problem.

Idaho: Department of Environmental Quality

- The state promulgated and implemented the Lead Ban in 1988 and the LCR in 1992.

Department of Health and Welfare

- The state did not provide information on drinking water in schools.

Illinois: Illinois Environmental Protection Agency and Illinois Department of Health

- IEPA oversees CWSs. The state describes LCCA and LCR activities through 1992, highlighting public education efforts that take special steps to protect children from exposure to lead in drinking water.
- Collaboration – EPA's most effective role will be to continue to provide technical assistance documents for states to use.

Illinois Department of Public Health

- IDPH regulates approximately 200 schools and day cares that are NTNCWS.

Indiana: Department of Environmental Management

- The state has 263 schools are PWSs, 16 of which have exceeded the 90th percentile action level.
- The state describes its “2000 Lead-Safe Families for 2000 Project” - which had the goal of reducing lead exposure to children and focusing on the primary prevention of lead poisoning. The state conducted ~1200 assessments and did not identify drinking water as a significant source of lead in the home.

Iowa: Department of Public Health

- IDPH Lead Poisoning Prevention Program (1989) - provides guidance to school, preschool, and day-care centers, follows up to see how the information is being utilized, and offers technical support to schools, preschools, and day-care centers that have questions or problems. No funds were allocated in the LCCA for this, but IDPH and Iowa Dept of Education worked together to get the information out. Informational mailings were sent out in 1989 and 1990 to comply with LCCA.
- The state’s primary focus is on reducing exposure to lead based paint in housing. The state’s follow up with children with high BLLs has not pointed to drinking water as a source, even in homes with higher levels of lead in drinking water.

Department of Natural Resources (Same letter)

- The state provided a general description of implementation of the LCR.

Kansas: Department of Health and Environment

- The State has a childhood lead poisoning prevention program focused on lead-based paint exposure. It does not have a program that specifically targets lead in drinking water.
- Most schools are provided water by on municipal PWS.

Kentucky: Cabinet for Health and Family Services

- The Department of Health does not provide proactive testing of water in schools. Water is tested in homes where children have high BLLs and other sites where they spend considerable time.

Louisiana: Department of Health and Hospitals

- The Department used to have an active program, but the staff and resources were shifted to the Lead and Copper program in 1996 due to a lawsuit.
- The state was sued because the plaintiff did not feel the state was doing enough to implement the LCCA. The judge ruled that the provision requiring states to establish remedial action programs to remove lead from schools and daycare facilities was unconstitutional. The lawsuit had the unintended effect of ending the lead program in LA. The state’s focus is now on the LCR - schools that are NTNC water systems.

Louisiana Department of Environmental Quality

- According to DEQ - DHH is implementing the Childhood Lead Poisoning Prevention Program across the state. The program identifies high risk areas and targets efforts and resources to reduce the number of children with elevated blood lead levels.

Maine: Department of Human Services

- The state is not currently implementing a program to control lead in drinking water for schools and day care facilities. Schools that are a PWS must meet the LCR requirements. If a PWS exceeds the AL, the state also recommends that the PWS sample for lead at schools.

Maryland: Department of Health and Mental Hygiene

- The Dept of Health does not conduct monitoring and testing of lead in the drinking water at schools and day care facilities - it is conducted by the Dept of the Environment..
- DHMH is actively involved in the Maryland Lead Poisoning Prevention Commission that is appointed by the governor and is involved in the Maryland Childhood Lead Screening Program.

Department of the Environment

- In the past year, blood lead levels were tested in over 1300 students from 15 Baltimore City elementary schools. Although all of the schools had fountains with elevated lead levels, no students had elevated blood lead levels.
- The state is actively involved in assisting schools to reinstate programs for lead testing in their drinking water welcomes any assistance that the EPA can provide. The state indicated it would be helpful if the EPA could assist states with funding to compile and analyze data, and provide technical assistance to schools and day care facilities.
- In 2003, Maryland conducted a survey to evaluate the current status of lead testing efforts within Maryland's public schools. This was prompted by the 2003 lead testing withing Baltimore City Public Schools that revealed elevated levels of lead in the drinking water.
- In response to the survey, Maryland's local Boards of Education have begun contacting MDE for guidance on testing for lead in the drinking water at the schools that are supplied by municipal water.

Massachusetts: Department of Environmental Protection

- DEP has worked to fulfill the requirements of the LCCA and to mitigate lead levels in Massachusetts.
- DEP coordinates initiatives with several partners for a lead in school drinking water abatement program that responds to the needs of schools in Massachusetts. The letter outlines several activities carried out by DEP.
 - The DEP has an agreement with the Dept of Public Health to routinely review and follow-up with the local public water supplier and the homeowner on all DPH drinking water results from the homes of children with elevated blood lead levels. Results are reported to EPA in DEP's annual LCCA report as well as routine Performance Partnership Agreement reports.
 - DEP works with schools that are NTNCWS whose drinking water exceeds the action level to mitigate exposure to children. This work involves providing educational material, training, and one-on-one consultation with school officials and enforcement if necessary. DEP also works with any other schools known to have elevated lead levels to mitigate exposure to children.

- The department provides school administrators, public health officials, public water suppliers, plumbing inspectors and other interested parties with educational materials and recommendations to assist in the schools' efforts to reduce the levels of lead and copper in their drinking water.
- On March 30, 2004, the DEP Commissioner sent out an information package to all Mass. Superintendents of Public Schools, Private and Parochial School Principals, Collaborative Directors, all Public Water Superintendents, and day care providers with information about lead and drinking water.

Michigan: Department of Environmental Quality

- The state has 900 NTNC PWSs that are schools and day care facilities. All rely on ground water as their source. The state has implemented the LCCA and LCR, but has no specific lead in school drinking water program.
- Recommendations: EPA should consider schools as Tier 1 sampling sites so that more information on lead exposure in schools can be gained. The state also recommended that EPA consider a sampling protocol for schools that would determine if the fixtures at kitchen taps are a problem.

Minnesota: Department of Health

- The state provides all MN schools written guidance materials every five years regarding the reduction of lead in drinking water - "Reducing Lead in Drinking Water: A Manual for Minnesota's Schools."
- MDH has a general education campaign that urges the public to "Get the Lead Out" by taking simple steps to reduce lead in drinking water.

Mississippi: Department of Health

- The state has 25 schools identified as NTNCWS and is working with 5 that are over the AL to determine an appropriate course of action.
- The state will conduct environmental testing when children are identified with high BLLs.
- The MSDH Office of Childcare Licensure and Division of Water Supply are working to identify the sources of drinking water for all day care facilities in the state, with special attention to those served by private wells.
- The state will be contacting the Dept of Education for a list of schools in order to arrange monitoring in districts served by PWSs that do not have corrosion control in place.

Missouri: Department of Health and Senior Services

- The state has a multi-tiered system to ensure all citizens are not exposed to lead in drinking water. A majority of schools and childcare centers are connected to PWSs.

Missouri Department of Natural Resources

- The state performed testing under LCCA in the early to mid 1990's. Since 1992, the focus has been on the LCR. The state tests more than 1600 PWSS for lead and copper - 96 of which are schools and day centers with their own water supply and has not identified problems with lead exceedances.

Montana: Department of Environmental Quality

- Many rural schools and daycare facilities have their own public water supplies and are directly regulated under the LCR. Schools supplied by larger water systems have a more limited degree of coverage, depending on the selection of sample sites by the public water utility.
- County and local governments have provided lead education and assistance, especially in connection with Superfund sites. Some counties perform blood lead testing by request, but recent budget cuts have reduced the effectiveness of these local efforts.

Nebraska: Health and Human Services System

- The state does not have a program that targets schools and day care facilities. The letter discusses results of testing carried out by the program in 1989-1991 to meet the LCCA.

Nevada: Dept. of Human Resources - Health Division

- The state does not currently have a special program to control lead in schools and daycare facilities. If a school is served by a CWS, the water is monitored under the LCR.
- Schools with their own water source are regulated as NTNC water systems and are subject to the LCR, with the sampling points on the school campus.

New Hampshire: Department of Health and Human Services

- The state described the Childhood Lead Poisoning Program funded by the CDC.

Department of Environmental Services

- The state regulates 190 PWSs that are schools.
- This past May DES contacted all CWSs that provide drinking water to schools and requested that they sample for lead levels at representative sites at those schools. The state is also holding seminars about lead in drinking water for schools and CWS this summer and fall.

New Jersey: Department of Health and Senior Services

- The state collects blood lead data under State regulations mandating childhood and occupational screening.
- The NJ DEP has a current agreement with the USEPA R2 to share public school testing in some school districts, so survey the remainder of the extent of their testing under the LCCA. This activity is being conducted in coordination with th DHSS and NJDOE. DHSS contribution is a brochure simplifying the steps in the EPA guidance.

New Mexico: Environment Department

- The state will work with EPA to identify and ensure that school and day care facilities classified as PWSs meet the requirements of the LCR.

New York: Department of Health and Department of Environmental Conservation

- The state describes on-going measures and future actions to control lead in drinking water at schools and day cares.

Department of Health

- The state regulates more than 400 schools that operate and maintain their own drinking water supply.
- The DOH and Dept of Education have a joint effort underway to assess vulnerable systems (those with 90th percentile greater than 10 ppb). In May 2004, a survey was sent to schools served by those systems. The results are expected in the summer of 2004 and will be shared with EPA.
- The state has worked with Region 2 and the NYC school district to test water supplied to all 1200 public school in NYC (total of 33,857 drinking water outlet samples collected). In NYC mitigative measures were taken at outlets in 370 schools. A similar effort in Syracuse tested 137 schools (2351 samples) and remediated 289 outlets. The program is being expanded to Rochester and other larger cities.

North Carolina: Department of Environment and Natural Resources

- The state has no programs beyond that required by SDWA. Schools that are regulated as a PWS must comply with LCR.
- The state indicates that voluntary program are currently beyond the program's means.

North Dakota: Department of Health, Environmental Section

- The state implemented the LCCA in 1988, but found the program did not enjoy the success typically seen in other drinking water initiatives due to funding problems and because the entities were typically unregulated. The state abandoned all but the technical assistance portion of the program
- The state noted that the key to a successful collaborative effort to implement a voluntary program is both human and financial and indicated that EPA must be willing to create new additional funding through the PWSS grant. The state also noted that, for a program to be truly successful, it must be established as a mandatory program, complete with an enforcement and compliance component, and then adequately funded through the PWSS grants.

Ohio: Ohio EPA

- The state does not have a program directed exclusively at lead in drinking water at school and day care facilities, although there are a number of State and local programs that address lead in drinking water as part of their overall efforts to reduce lead exposures.
- Ohio requires all CWS and NTNCWS to monitor for lead and copper in their distribution systems - this include 469 schools and day care facilities that operate their own PWS.
- Some schools and day cares are served by a larger PWS, owners and operators may choose to sample schools and day cares, but it is not common.
- The Ohio Childhood Lead Poisoning Prevention Program provides funding, public and professional education, environmental consultation and investigation, case management, and data collection and analysis. The program addresses needs of children from birth to age 6. The state collects all blood lead screening reports and provides data analysis to the federal government.
- The state expressed concerns that the current increased attention given to lead will result in unnecessary additional burden on state drinking water programs.

Oklahoma: Department of Environmental Quality

- The state implemented the LCCA and continued sampling for lead at schools through the implementation of the LCR by the public water supply systems. 65 schools and day cares have their own water supply systems and are regulated under the LCR.
- The state indicated that lead has not been a major concern in the state and has no indication that a special monitoring program would be warranted to investigate lead contamination in OK.

Oregon: Department of Environmental Quality

- The DEQ indicated that it is not involved with this type of program. Drinking water is overseen by the Dept of Human Services.

Department of Human Services

- The state described activities undertaken in the 1990's to respond to the LCCA. Updates are provided to schools through the Dept of Education.

Pennsylvania: Department of Health

- The DOH currently funds 10 local community-based Childhood Lead Poisoning Prevention Projects serving targeted identified high-risk areas. The state has not found lead in drinking water to be a problem in Pennsylvania

Department of Environmental Protection

- The state carried out the requirements of the LCCA and oversees implementation of the LCR for the 10% of schools in PA that are public water systems.
- The state indicates that further involvement is constrained by a lack of federal funding. The state supports EPA regional staff efforts with schools with elevated drinking water lead levels, particularly efforts in the Philadelphia district to test and remediate.

Puerto Rico: Departamento de Salud (Department of Health)

- There are currently no programs specifically addressing lead control in drinking water for schools or day care facilities. The department is interested in collaborating with EPA to implement lead control programs for schools and day care facilities and receiving more information regarding EPA's voluntary lead control program for schools and day cares.

Rhode Island: Department of Health

- The state implemented the LCCA since 1991, but is not currently implementing a program to control lead levels. The state is considering the possibility of sampling day care facilities as well as re-sampling schools that showed levels about 15ppb in initial testing.
- As for a collaborative effort with the EPA, the DOH would seek assistance in the form of supplemental funding and guidance on the design and implementation of a cost-effective, statistically significant study of flushing/sampling program in large buildings, such as schools. The state also envisions a study focusing on the effects of temperature and time of travel of drinking water from main to remote taps in facilities and what effect these play on effective flushing and representative sampling programs.

South Carolina: Dept. of Health and Environmental Control

- The state does not have an ongoing program that specifically addresses lead in drinking water in schools, which are generally under the authority of the Dept of Education. However, there are numerous activities in other programs that address this issue. The Childhood Lead Poisoning Prevention Program provides educational materials, presentations, and training upon request to a variety of groups.
- The Bureau of Water routinely samples water supply systems for schools that are also PWSs. Although the department has regulatory authority over school sanitation, they do not have the funding to conduct routine inspections. Day care facilities are subject to lead hazard assessment inspections as a requirements for licensing, and could have water tested as part of that process.

South Dakota: Dept. of Environment and Natural Resources

- The state described a South Dakota Environmentally Safe School Initiative in 1993/94. A majority of the schools in the state collected first draw water samples to test for lead. Where levels were high, the state retested to verify, and provided grant money to replace fountains and coolers that posed problems.
- Collaboration: 1. States must be included in the effort and there must be federal funding to pay for all the work. 2. EPA could revise the current federal LCR monitoring requirements to allow regulated drinking water systems to collect samples from schools and other buildings rather than just from residences.

Tennessee: Department of Environment and Conservation - Division of Water Supply

- The state implemented the LCCA, but didn't establish a program to continue with a specific training and sampling program because of funding. The Division of Water supply does provide technical assistance to school systems/daycares upon request.
- The DEC does not plan to increase activity in this area.

Department of Health

- The department is not involved with a program to control lead in schools.

Texas: Department of Health

- TDH is not aware of any committees or work groups specifically focusing on the issue of lead in drinking water in schools and day care facilities. Other than identifying lead - lined water cooler reservoirs in 1988, lead in drinking water in school has not been identified as issue in Texas.
- As part of the lead poisoning prevention program in Texas, the TDH established a Lead Work Group to discuss strategies to eliminate lead poisoning from all sources of exposure.

Texas Commission for Environmental Quality

- Since 2002, TCEQ's drinking water program has sent EPA booklets on lead to the administrators of schools or day care facilities that are also a PWS before schools starts each fall. Currently, no schools or day care facilities are exceeding the action level.

Utah: Department of Health

- The state does not have a program to control lead levels in drinking water for school or day care facilities. If water monitoring revealed elevated lead levels, the Department of Health would be able to assess the impact on BLLs of children who drink the water.

Department of Environmental Quality

- In 1988, in response to LCCA, the state provided 42 school districts and childcare facilities with all the available information to aid in lead lined drinking water tank recall.
- BLLs for children in the state are very low. Where they are elevated, they are attributed to Superfund sites and lead paint.
- Lead in drinking water is not a problem in the state, but the letter outlines the state's plan ensure that what happened in DC does not happen in Utah.

Vermont: Department of Environmental Conservation

- The state carried out the LCCA between 1988-1994. In 1994, the voluntary testing program for lead in drinking water had very low participation. The state will shortly initiate another effort focused on lead in schools.
- The state would like to work closely with EPA in determining approaches to ensuring that lead is as low as possible in schools.

Department of Health

- The state's Childhood Lead Poisoning Prevention Program provides environmental sampling for families of children with elevated blood lead levels. This may include some sampling from homes, day cares and schools.
- In 2000, passed the School Environmental Health Act, the goal of which is to provide schools with the resources necessary to develop and adopt environmental management plans. Currently 8 schools are participating in finalizing environmental management plans that include reducing exposure to lead and environmental asthma triggers.
- Licensed child care facilities practice Essential Maintenance Practices for buildings built before 1978. Drinking water is addressed in the licensing regulations.

Virginia: Department of Health

- Following the LCCA, the Dept of Health provided technical assistance to schools and day cares and distributed the EPA guidance, the Dept of Education distributed a guidance. The state would like to see the existing EPA guidance updated.
- There are no ongoing special program beyond the scope of LCCA and LCR for schools. This summer the state is working with other state agencies to test for lead in selected schools and day care facilities statewide.

Washington: Department of Health

- The state has several programs that speak to various aspects of maintaining safe drinking water and healthy schools. The Office of Environmental Health and Safety, through its School Health and Safety Program, publishes a guide for schools that has a component that directs schools to comply with drinking water requirements.
- The DOH is currently working with the DSHS and local health agencies to train agency staff and potential licensees on safe drinking water requirements.

- The state suggests that EPA consider updating and expanding its technical assistance including: existing publications and references, providing specific funding, providing Drinking Water Academy courses, hosting workshops, providing expanded funding mechanisms (DWSRF) as an incentive for water systems to work with their school district customers, and providing schools with guidance for addressing non-acute water quality issues, such as taste, odor, color, and sediment.

West Virginia: Department of Health and Human Resources, Bureau of Public Health

- The state does not have the resources to conduct a sampling program targeted specifically to schools other than those that have their own water system.
- There are 68 NTNCWS serving schools in WV. All but one are in compliance with the LCR (one has high copper levels).
- The state is interested in providing a higher level of surveillance to include all schools, but there is not enough funding at this time.

Wisconsin:

Department of Natural Resources

- The state indicates that only NTNCWS that are schools/day cares exceeding a lead or copper action level are taking action to reduce lead and copper levels. There are no other monitoring programs specifically aimed at school or daycare facilities served by a CWS.
- The state has a program that seeks to reduce the exposure to lead paint in school, but activities associated with this program are generally complete. The state indicates that if EPA is going to mandate additional efforts on lead in drinking water, funding will be needed to implement it.

Wyoming: Department of Health

- Region 8 has jurisdiction for drinking water in the state because the state does not have primacy.
- The WDH collects results from blood lead tests performed on all children but there is no Wyoming state program that addresses lead exposure in children. The state would be interesting in a voluntary program, but resources are not currently available to support activities.

The Navajo Nation NNEPA

- The LCCA was implemented in the early 1990's. NNEPA does not have a program that requires sampling in schools unless the school owns/operates a public water system.
- The Indian Health Service conducts inspections of schools and other facilities. IHS requires school facilities to sample their drinking water in accordance with LCCA.
- Collaboration: More funds are needed to conduct broader and effective assessments. The LCCA needs to be revisited in terms of becoming a regulatory requirement.

Lead in Drinking Water in Schools and Child Care Facilities Meeting Summary

December 7, 2004
Wyndham Washington Hotel

Facilitated by Steve Heare, U.S. Environmental Protection Agency

Meeting Format

- Welcome and introductions
- Two case study presentations followed by group discussion
- Case study presentation followed by group discussion
- Panel sub-group discussions and report outs
- Closing remarks

Welcome

Steve Heare, Director, Drinking Water Protection Division, Office of Water, EPA

This workshop is part of a series hosted by the United States Environmental Protection Agency (EPA). The objective of this series is to provide a forum to exchange information, learn about participants' experiences, and discuss options and approaches with national experts on implementation of the Lead and Copper Rule (LCR). Today's workshop was developed to discuss the topic of lead in drinking water consumed by children in child care centers and schools.

Meeting Kick-Off

Ben Grumbles, Assistant Administrator, Office of Water, EPA

EPA Assistant Administrator Ben Grumbles began the meeting by discussing the meeting's objectives and the role of EPA in this process. A goal of this meeting is to obtain insights from water industry professionals and school/childcare practitioners regarding current activities, programs, challenges and opportunities related to lead in the drinking water of schools and child care facilities. This should not imply that lead in drinking water is the greatest risk facing today's children, nor is it a growing national problem; however, national attention has recently been focused on this subject, and EPA sees this as an opportunity to support a course of action to reduce lead in drinking water.

It is important to review the current state of affairs to determine whether additional guidance, regulatory revisions, or additional training and workshops are necessary. A health risk does exist and families have been losing faith in their drinking water. This workshop will focus on bringing the environmental and educational components of society together by sharing insights, tools used, and lessons learned to reduce risk and improve communication.

EPA's Office of Ground Water and Drinking Water (OGWDW) has focused its efforts on Lead and Copper Rule (LCR) revisions. OGWDW will continue this accelerated review and will look at areas of targeted revisions. It will also focus on nonregulatory approaches and building partnerships--collaborative efforts with school districts, public utilities, and other federal agencies. The LCR went into effect 12 years ago, on December 7, 1992.

It is important to emphasize the "Three T's": training, testing and telling. These are not new regulatory mandates, but are tools. 'Training' is following up on workshops and providing tools to school officials, custodians, and local and statewide drinking water officials to raise awareness of the issue and promote better monitoring of drinking water. 'Testing' deals with the importance of monitoring. The federal government cannot mandate states to monitor drinking water in schools except where the schools are a public water system. However, the importance of accurate and timely monitoring and testing cannot be understated. "Telling" addresses the importance of communication and sharing results with the public. The federal government cannot directly require that test results be made public; however, it is in everyone's interest to ensure the community or concerned stakeholders (e.g., parents, teachers, local leaders) know the results of any testing that takes place.

Many other health issues compete for priority with school and local government officials (e.g., asbestos, lead-based paint) and it is a challenge to devote the appropriate attention and commit the necessary funding to each priority. Another goal of this process is to address how the government and its partners can join together to find the resources to focus attention on drinking water quality.

The Office of Water is not the only office at EPA focused on healthy schools. The *Tools for Schools* program addresses indoor air quality and asthma triggers. The Office of Toxic Substances deals with lead in paint and dust (as well as asbestos) and has a lead campaign for Head Start programs.

EPA is not focused on finding new Federal mandates to impose on schools and state and local water administrators. Rather, EPA is more interested in forming collaborative relationships (e.g., with the Department of Education). EPA would like to see more examples of partnerships that will encourage public water systems to be more responsive to customer needs.

**Dana Carr, Program Specialist
Office of Safe and Drug Free Schools, Department of Education**

Dana Carr spoke briefly about the objectives of the workshop from an education standpoint.

Children spend significant amounts of time in schools and child care facilities. Schools are particularly vulnerable to lead because of the nature of school buildings and the water use patterns (age of the buildings, plumbing and fixtures as well as periods of little or no water usage). Long-term effects of lead (e.g., lowered IQ, behavioral problems) are concerns, especially in light of recent news stories which reported the levels of lead that have been discovered in some schools.

DOE's Office of Safe and Drug-Free Schools protects the school environment so that children will be ready to learn while they are at school. Prevention (maintaining healthy facilities) is a large part of this process. Voluntary testing is a challenge, particularly considering schools' competing financial priorities. The testing itself may be costly, and the responsibility of needing to take action once you are aware of a problem is even more costly.

Schools face increasing pressures to take responsibility for identifying and addressing lead problems, and providing the funding to do so. DOE's approach is to build and maintain partnerships with appropriate parties and to expand training of school staff.

Panel Members and Observer Introductions

Panel members introduced themselves and gave a brief summary of their background relevant to the workshop topic (see **Attachment A** for the attendance list). Audience members were also invited to introduce themselves. Ben Grumbles welcomed organizations and individuals who have not previously been involved in this discussion.

Mr. Grumbles conveyed the EPA perspective that this issue has not necessarily received the attention it deserved over the years. There are approximately 53,000 public elementary schools in this country; about 10,000 of which meet the definition of public water supply. The remaining 43,000 are not regulated by the Safe Drinking Water Act. Ensuring these places are safe havens for the nation's children will require forming proactive partnerships with utilities, and focusing on training, testing, and sharing. It is hoped that this workshop will generate ideas and proposals to ensure drinking water in schools and child care centers meet minimum standards.

After these introductions, two case studies were presented to the panel.

Case Study #1: Presentation of a Water System's Experience Stephen Gerwin, Washington Suburban Sanitary Commission

Stephen Gerwin presented the first case study. The Washington Suburban Sanitary Commission (WSSC) serves two counties in Maryland (Montgomery and Prince George's) and has always met LCR requirements. The water system serves a population of 420,000; including almost 350 public schools. The distribution system is newer than that used by the District of Columbia and does not have any known conventional lead service lines.

Background on Lead

Lead from paint, dust, and soil is the major source of lead in the domestic environment. Drinking water has never been the sole source of exposure in a case of a child with elevated blood lead levels. Since lead in water from the Potomac River, where WSSC obtains its water, is near or below the detection limit, any lead found in drinking water originates in the distribution system. Lead components do not exist at the water plant or in transmission mains (although older cities, like the District, may have lead service lines); therefore, the main source of lead in water is from plumbing within the home. Lead is added to the brass used in plumbing fixtures to aid in machining. It can also leach from lead "pig tails," water meters, and lead solder in copper pipe. Corrosivity is believed to be the main cause of lead leaching into drinking water. Most often, pH is raised to lessen the water's acidity and reduce corrosion. Previously, WSSC produced water with a pH of 7; they now produce water with a pH of 8, a substantial increase.

WSSC's LCR History

WSSC was required by the LCR to identify the homes considered most at-risk for lead problems. Attention was focused on homes built after 1982. WSSC distributed testing over the two counties, but focused some sampling around an area that experienced high growth in the 1980s. WSSC sampled over 100 homes to see whether the 90th percentile exceeded the lead action level of 15 ppb. The 15 ppb level is an action level, not an MCL or health based standard. The sampling process is intended to give a picture of general system-wide lead levels.

The first round of sampling, in the early 1990s, indicated that the system had exceeded the action level. WSSC developed a corrosion control plan which was approved by the Maryland Department of the Environment in 1995. Lead levels have been declining in the distribution system over the past decade. In 2002, a sampling of 50 homes for lead found no sites exceeding the 15 ppb action level (maximum detection was 7 ppb). In late 2003 WSSC introduced a corrosion inhibitor to address copper pipe pinhole leaks. In 2004 they wanted to ensure that the chemical was not impacting lead levels. Testing indicated that lead levels had generally improved since 2002.

Recent School Testing

Schools that are not regulated as public water systems are subject to the Lead Contamination Control Act (LCCA), not the LCR, and are therefore responsible for their own water sampling and remediation. WSSC decided to support school water sampling by providing free lab services and technical expertise as needed. Stakeholders from Montgomery and Prince George's counties were assembled in 2004 to determine whether testing would be desired. This involved the cooperation of diverse groups, including representatives from public schools, public health officers, county environmental staff, and WSSC. Public health officers wanted to test the drinking water for assurance; everyone assumed that the testing would show that there were no problems with lead in the drinking water.

Initial results indicated that 10-20 percent of the fixtures tested were over the recommended limit of 20 ppb. The team immediately notified the schools and developed a plan for flushing and identifying safe sources of water. The results were obtained in the early afternoon and by the next morning schools had already begun implementing a flushing plan. They originally expected 5,000-6,000 samples, but over 30,000 samples were eventually analyzed for the school systems (WSSC covered the \$25/sample fee). Results did not seem to correspond to school age.

Action

The two counties chose to address the issue in different ways. Montgomery County wanted to test all the fixtures in all school buildings; Prince George's County focused on testing primary sources of drinking water (water coolers and bubblers). If a first draw sample yielded high results, additional first and second draw samples would be taken. The sources of water children used most often usually had low levels detected due to frequent use. Some of the highest numbers were obtained from fixtures that were rarely used.

WSSC felt that it was critical that the issue of lead in school drinking water be separated from the issue of lead in residential water.

Case Study #2: Presentation of a School's Experience **Ron English, Deputy General Counsel, Seattle Public Schools**

The second case study was presented by Ron English and focused on the experiences of the Seattle School District. The district has faced many challenges related to lead in drinking water in the past year, but was finally able to adopt a new policy on December 1, 2004.

Background

The Seattle School District is an inner-city district (42 percent of 47,000 students qualify for free or reduced lunch) with an aging stock of buildings. They purchase their water from Seattle Public Utilities. In 1991-1992 lead testing was conducted. About 25 percent of drinking water fountains were found to exceed 20 ppb. The bubblers at these fountains were replaced, but not the plumbing. A flushing program was instituted, but was not consistently applied. Recommendations that the plumbing at 4 schools in the district be replaced were not implemented due to levy failures. The results of the testing were never made public and no action was taken from 1992 until 2003.

In 2003, parents became aware of and publicized problems with iron in school water. Testing also exposed elevated lead levels. High lead levels were found in a kindergarten classroom. One student was reported to have become ill after she was introduced to the classroom and improved after she left; however, she was never tested for lead.

Action

The school district immediately provided bottled water for all schools over 7 years old (60 schools) and hired a consultant to create a comprehensive testing program for the district. Testing took place at all schools (included testing for lead, cadmium, iron, copper, *E. Coli*, color and turbidity). A decision was made that water was not to be consumed from any fountain/tap until testing showed that it was safe. Water from drinking fountains in hallways, classrooms, and sinks were tested after an 18-hour period of stagnation following flushing. Testing indicated lead over 20 ppb in 25% of locations.

The testing program revealed lead levels rebound to their original levels in just 2-3 hours, so a drinking fountain must be used frequently throughout the day to keep levels down. Replacing the bubbler didn't completely solve the problem because the 250-mL test samples also drew water from 7-feet of piping behind the fountain. In the summer of 2004 the plumbing was replaced at the 4 schools where this had been recommended in the 1990's.

Most of the kitchens in the district use pre-packaged foods and therefore use minimal water. These taps were not considered high priority. Age-appropriate warning signs have been posted in all restrooms warning children not to drink the water from these taps.

Letters were sent to every parent in the district.

Iron Removal

Iron was the original problem that brought water quality issues to light in 2003. Now, the iron standard for Seattle Public Schools is almost as strict as that used for public water systems. One option for removing high iron is to install filters. It was determined that drinking water filters work at about half the rated capacity. They tend to clog after a few hundred gallons and therefore cannot be relied upon for the entire year.

The school district did not want to use point-of-entry treatment since they would then be considered a water system and subject to more rules. Seattle Public Schools will look at all the technologies available for completely replacing the plumbing in 11 schools; however, this is expected to be a very expensive program.

2004 Policy

Seattle's approach is to "provide access to ample quantities of clean, safe, aesthetically pleasing water; establish and maintain public confidence; and be proactive." Seattle Public Schools decided to set a lead standard even lower than that recommended by EPA (10 ppb vs 20 ppb) for standing and flushed water. Even so, there was still a problem of many parents in the community distrusting the District and the toxicologist hired by the District.

The remediation program includes: fixing or disabling any fountain found to be over 10 ppb lead, testing for iron in 50 schools, complete replacement of pipe in 11 schools, and retesting every 3 years.

Seattle Public Schools reported the comprehensive results on their web site. A 4-page question and answer section was reviewed by technical experts and will be included soon.

Credibility

Even though the Seattle School Board recently adopted a water policy, their credibility had been lost due to previous inaction. The public has little confidence in the drinking water in Seattle schools. The Board is working hard to regain credibility. The new policy establishes a public oversight committee that will produce briefings and be proactive. The committee, consisting of a water quality consultant, county and state health departments, Seattle Public Utilities, and toxicologists has already met several times and will oversee all actions. Unlike some school districts who indicate only whether or not their water quality passed minimum safety standards (which could hide instances of exceedances), Seattle Public Schools decided to disclose all results of the testing.

Conclusion

School districts lack the time and expertise to develop a good water quality program. A standardized recommendation from EPA, not necessarily a law or regulation, would be very helpful. This could address what schools should test for, how often schools should test, and protocol nuances.

Panel Discussion

After the case studies, the facilitator solicited comments from panel members about issues brought up in the case studies. **Attachment B** contains the list of comments.

Case Study #3: Presentation of a State Program Steve Messer, Connecticut Department of Public Health, Drinking Water Division

The final case study was presented by Steve Messer, Supervising Sanitary Engineer for the Compliance Section of the Connecticut Department of Public Health (DPH) Drinking Water Division.

In the State of Connecticut, 3 community water systems (CWSs) serve 87 percent of the state. There are 4,000 small public water suppliers.

A small focused work group was created in 1995 to effectively regulate more than 2,600 noncommunity public water systems. They were faced with minimal staffing and charged to utilize innovative techniques. This work group immediately prioritized schools and daycare centers, as they serve high risk populations.

The work group focused on forming collaborations with other vested entities and improving outreach activities. At the time, the compliance rate for schools was 46 percent, while daycare centers had a 12 percent compliance rate. Issues addressed included inadequate sources such as dug wells and springs, buried wellheads, coliform bacteria (*E. coli*), lead and copper exceedances, and schools running out of water (due to having only one supply source). The work group was able to eliminate about 99 percent of bacteria and *E. coli* problems.

There were political concerns that water testing requirements would drive businesses out of the state. Since daycare centers are usually in rented facilities, they sometimes faced eviction from owners who didn't want to spend the money on water testing and possible remediation. Despite all these problems, public sentiment backs clean water. The general public takes for granted that the drinking water provided to them at all establishments is acceptable unless notified otherwise.

The following organizations participated in the work group's efforts: DPH Drinking Water Division (DWD), DPH Day Care Licensing Program (DCLP), DPH Food Protection Program (FPP), local health departments and districts, the Department of Education School Facilities Unit, and EPA Region 1 staff. The DPH DCLP implements existing drinking water regulations, while the FPP regulates food service at schools.

Daycare Facilities on Noncommunity Public Water Systems

The public health department connection is key to child care facility compliance since the DPH licenses daycare facilities. When the collaboration started there were only 65 identified nontransient noncommunity (NTNC) public water supplies (PWS) serving daycare centers. However, 93 more potential NTNC PWSs were identified after a search of DPH's daycare licensing files. Collaborative efforts emphasized teamwork between daycare licensing staff and drinking water engineers. Daycare staff and local health officials participated in drinking water training sessions. A new daycare licensing form and procedures were developed to identify any remaining daycare centers which may qualify as a PWS and to ensure compliance at existing centers. DPH committed to collecting and covering the cost of

analyzing a one-time complete water quality profile for “newly identified” daycare centers. Current compliance rates at daycare centers is now approaching 100 percent, with over 170 regulated facilities.

Schools on Noncommunity Public Water Systems

Connecticut’s Capacity Project for schools identified poor drinking water infrastructure at many Connecticut schools. Single source systems often experience water outages and school closings. Poor management and technical capacity have led to several statewide issues. Staff completed 147 sanitary surveys in 60 days at schools and cited infrastructure deficiencies in addition to public health code violations.

As a result of CT’s program, 15 schools have committed to connecting to a municipal water supply, 36 have installed or are in engineering design for completely new water facilities, 48 have been identified as needing completely new facilities, and the remaining 48 schools have been identified as requiring minor to moderate improvements to their existing facilities. Some of the new facilities are state-of-the-art.

Schools that have signed DPH consent orders for necessary improvements are eligible to receive grant funding ranging from 20-80 percent reimbursement, depending on the relative wealth of the community. This project was featured in the Spring 2004 “On Tap” magazine. Most school systems fall in the 60-80 percent reimbursement rate. However, political situations have prevented some from seeking help, even though funding is available.

Daycare Facilities

In Connecticut there are 1,622 licensed daycare centers. 130 are on non-public wells, 8 are on transient public water systems, 162 are on nontransient public systems, and 1,322 are on community public water systems. CT’s program requires that when any child care center or group home is licensed, a first draw sample is required as part of the initial license application and at every 2-year renewal. If the sample is elevated, the facility is required to use bottled water. Elevated test results from child care programs served by LCR-compliant community water systems are submitted to the Division of Water and the community water system is notified.

When a licensed child care center is a NTNC it is subject to LCR requirements; if test samples come back elevated, letters will be sent to the child care center including language requiring the center to provide bottled water.

All compliance water quality data for public water systems is maintained in the Safe Drinking Water Information System (SDWIS). The DPH DCLP maintains all licensure information for daycare facilities in a Microsoft Access database. The DPH DWD works with the DPH DCLP to link the two databases.

What’s Missing?

Schools and daycare centers served by noncommunity water systems are covered under the SDWA for monitoring requirements. Connecticut’s daycare centers, including those served by community water systems, now monitor for lead every 2 years as part of their licensing renewal requirements. The only missing piece is schools served by community water systems. There are no existing laws, licensing, or procedures in place to ensure monitoring, and therefore protection, in these schools.

Conclusion

CT's voluntary measures have been developing over the past 9 years and lean heavily upon the regulations and licensing procedures of others for enforcement. Involved organizations usually have many other responsibilities. Voluntary measures take a back seat when other daily required activities cannot be met. Mandatory measures will eventually get done. Awareness of drinking water issues (especially in schools and daycare centers) has been raised through electronic media and communication and are at an all-time high. The public demands and expects no less than perfection for their own children.

Mr. Messer suggests immediately implementing as many voluntary initiatives as possible with willing participants. Schools and daycare centers could be added to current Tier 1 sample sites under the LCR for CWS and should be prioritized over single family homes. Money for public health protection should also be used effectively.

Panel Discussion

After the case study, the facilitator solicited comments from panel members and audience members. **Attachment C** contains the list of comments.

Observer Comments

Members of the audience were further invited to share their comments. Comments from observers are as follows:

- Exposure regulations should be instituted across the board, no matter what kind of system is serving the water. Health effects are not dependent on source.
- Many houses still have their own wells and septic systems and their potential lead problems are not being addressed.
- There are many demands on water systems and schools. A shortage of funds is always a big issue.
- Lead in drinking water is a national, not a local, issue.
- There needs to be immediate remediation or action at schools and child care facilities where lead levels in water are high.
- Long-term issues include: prioritizing public health criteria, determining "lead-free" manufacture standards, and incorporating building codes (some older schools were originally designed as bomb shelters). Long-term priorities should be put in the spotlight as well as immediate problems.

Reports from Issue Sub-panels

The topics were divided into two issue groups for further discussion.

- Testing - how to promote testing, testing program components, funding
- Building partnerships - who and how? Communicating results - message and delivery

Specifically, the sub-panels were asked to identify issues associated with their topic(s), challenges and opportunities, strategies to address challenges, and critical information gaps. After discussing and considering the issues, each sub-panel summarized their topic for the full group.

Testing

- Funding for testing and remediation is the biggest issue. Who will pay for testing? Perhaps this can be addressed partially through financing such as taxes.
- Accountability - the public utility is responsible for the corrosivity of their water; however, once water enters school property, the plumbing is the school's responsibility. The school and utility should partner together to address water quality issues.
- Enforcing recommendations requires time and money. Hopefully, addressing water quality issues can progress from mandates to voluntary programs with incentives.
- EPA can help by developing a package of materials to include the following types of model materials available to school districts: school ordinances, school policies, protocols (what to test for, how to test and how often), a list of basic health information, plumbing standards for fixtures, background information (e.g., what is lead?), and scientific risk-based information. The target audience is school superintendents, principals, or maintenance managers.
- What are alternatives to remediation?

Partnerships and Communications

- In partnerships, it is the role of the utility to start the process.
- Partner with a broad audience (schools, parents, PTA, advocacy groups); get to know the partner before forming a collaboration.
- Tailor the message to the audience, but maintain a consistent message.
- Differentiate between schools and child care providers; messages may not resonate the same way.
- Pediatricians and primary care physicians are often primary sources of information. It is important to keep them involved as well. Lead exposure is especially critical in the first 3 years.

Adjournment

EPA will post the meeting summary and, with permission, a list of participants and contact information. EPA will continue to revise materials, consider revising 11-year-old guidance for voluntary programs, and evaluate whether any changes need to be made to the LCR.

Attachment A

Lead in Drinking Water in Schools and Child Care Facilities Meeting

December 7, 2004

Washington, D.C.

Participants

Claire Barnett	Healthy Schools Network
Jim Bogden	National Association of State Boards of Education
Barry Brooks	Centers for Disease Control and Prevention, Lead Poison Prevention Program
Gary Burlingame	Philadelphia Water Department
Dana Carr	US Department of Education, Safe and Drug Free Schools
Ron English	Seattle Public School District
Sherry Everett-Jones	Centers for Disease Control and Prevention, Division of Adolescent School Health
Stephen Gerwin	Washington Suburban Sanitary Commission
Shelli Grapp	Cedar Rapids Water Department
Brenda Greene	National School Boards Association
Ben Grumbles	US EPA, Assistant Administrator, Office of Water
Gregg Grunenfelder	Washington State Department of Health, Drinking Water Program
Steve Heare	US EPA, Office of Ground Water and Drinking Water
Julia Krall	Campaign for Safe and Affordable Drinking Water
Jim Loving	National Child Care Association
Steve Messer	Connecticut Department of Public Health, Drinking Water Division
Kenton Pattie	Fairfax County Council of PTA's Health and Safety Committee
Larry Pauling	Prince George's County Public Schools
Alan Roberson	American Water Works Association
Carleen Wallington	National Head Start Association
Camile Welborn	US Department of Education, Safe and Drug Free Schools

Attachment B

Issues Identified on Lead in Drinking Water in Schools and Child Care Facilities

First Panel Discussion

General Issues

Use same networks at local level as those set up for counterterrorism.

Why test? Public relations and legislative potential.

Enhanced voluntary approach may be the best approach.

What can EPA do?

- can be an advocate for federal funding.

The process is as important as the product

- building partnerships, engaging the press. Creating advisory committees or building on existing committees is important.

Transparency is critical. Once trust is lost, it can take decades to restore.

Blood Lead Levels and Health

Blood lead levels are often perceived as a translation from drinking water lead levels.

Hate to see resources changing the focus of lead exposure from dust or paint (bigger problem) to drinking water.

Is there data regarding blood lead levels? Is there convincing science indicating there is a problem?

- D.C. did some testing. Found that blood lead levels in children are typically decreasing, but where lead was high in water, blood lead levels did not decrease.

Each local health department has a person tasked with testing blood lead levels who can be used as a resource.

How long does lead stay in the bloodstream? (Question from floor)

- when introduced to the body it gets into the blood quickly
- ½ life is approximately 30 days until it is absorbed or excreted

Daycare/Childcare

What is water system's role with child care centers and how to reach them?

The LCR regulates lead at private homes with the action level at 15ppb, must also protect kids at schools or child care facilities with the same level of protection.

What experience have people had trying to make contact with child care centers?

Child care centers that do not own their building do not have control over the plumbing in a leased space. Hold building owner responsible, not the child care provider.

- one owner's solution in CT was to threaten to kick the daycare out.

Schools

It may be tough to sell this as an issue to schools. Isn't the key age of concern at preschool ages?

- 0 to 72 months are key ages to test

Schools need to be aware that water systems do not monitor them under the LCR - monitoring is school's responsibility.

How to prioritize individual school testing vs. comprehensive testing of all schools.

The Health Department is critical source to help with health effects information for schools.

Question for Ron English regarding the activist parents and where they are now.

- They are pleased with the policy in place but will be watching implementation carefully.
- Parents are a powerful constituency. They push state regulations. They also add a degree of complication

"No Child Left Behind" has a vehicle in place that could be utilized.

- The Department of Education has a web site (edfacilities.org) that deals with design information.

Are taxpayers more likely to pass school levies if problems with lead in drinking water are fully disclosed?

Alternative Sources/Flushing

How do you assure that kids can get water when taps with high lead are shut off?

- bottled water, use of other taps, limiting some points as long as you have other taps available is not as critical

Has any connection been made to addressing design standards?

- can design standards address new school plans as well as rehab/retrofit?
- design standards for new school buildings should focus on water quality.
- clearly define flushing - typically what people think they do is flushing, but in actuality they just stir up sediment

Flushing protocols may not be appropriate for all schools, based on plumbing.

Are the testing protocols different for pre- and post-1997 construction?

Low lead versus no lead

- "Lead free" means less than 8 percent. These can still leach quite a lot of lead.
- Lead-free fixtures are available for fountains, but not for sinks.
- All replaced components, bubbler heads, and plumbing need to be lead-free.
- Engineers, architects and plumbers need to be educated about this.
 - Plumbers may not know what they are installing or what is required.
 - Some of these issues could be addressed at time of purchase by schools.

Sanitation of bottled water when provided. Are there protocols for cleaning bottled water dispensers? (Question from floor)

Flushing may not address the problems at aging schools or perhaps different protocols should be developed, based on the age of the facility.

What is the appropriate frequency of testing? This is unclear for most schools. Is there an EPA recommendation? (Question from floor)

NSF 61 addresses leaching of lead (and other metals), but needs greater education and enforcement of its use by plumbers. (Comment from the floor)

- How much of the brass in the faucet comes in contact with the water?
- What about products produced outside of U.S.?
 - Regulation of plumbing includes Uniform Plumbing Code, international standards, also some states have their own codes

Attachment C

Issues Identified on Lead in Drinking Water and Child Care Facilities

Second Panel Discussion

General

It can be difficult to convey the 15 ppb action level under the LCR to parents.

Harmonize the approach for all NTNC schools and those served by PWSs.

What immediate actions should be taken to deal with high lead levels found in drinking water?

What are long-term issues and how should they be addressed? (building codes with drinking water emphasis, public health designs for schools)

Utilities deal with many contaminants in drinking water, not just lead.

- Other health issues form competing priorities.

Testing

To address exposure, school testing is needed

Should EPA require water systems to sample at schools and child care facilities as Tier 1 under the LCR?

- puts burden on utility to change water chemistry
- could skew overall water system results by shifting focus to large building plumbing problems
- LCR distribution system monitoring was designed to get a statistical sense of the water system as a whole and evaluate utility's corrosion control.
- Is LCR the best place for this, or should there be a new regulation for schools and daycare facilities?
 - LCR has action levels, not MCL
 - "safe" amount of lead is zero
- LCCA is possible mechanism - problem is funding
- results at schools with higher lead could force testing at all school

What are the testing costs for lead sample?

- Testing costs \$25/sample.

Washington state has set aside money for school testing. There are typically funding shortfalls for testing.

Where to test? Testing should give a representative sample of drinking water and cooking water supply.

Testing after remediation is also important to ensure problem is resolved.

- Highest success for eliminating problem is through the replacement of faucet fixtures.

Funding

Question for Steve Messer - where does Connecticut get funding to provide grants to school facilities?

- state budget (general fund).

Blood Lead Levels

More research is needed on how the level of lead in drinking water affects blood lead levels.

- EPA has some information. However, correlation between blood lead levels and lead in water is dependent on a host of parameters, not just level in the water, which may be more variable and unknown (other sources of lead, nutrition, etc).
- CDC is looking at other models and studies.

Schools

Competing resources for schools - can EPA help prioritize environmental health risks?

- Coordinate between EPA programs.
- Drinking water quality must be considered a priority in order to compete with other issues.

Is ground water contamination an issue for schools with their own water supplies?

- Often there is self-contamination of wells by schools; contaminated soils can also contribute to the contamination of wells.
- Address ground water contamination at schools.

Public education for high lead in drinking water at the public water system does not always get to schools.

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF PUBLIC HEALTH3423 N. LOGAN/MARTIN L. KING JR., BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

Raj M Wiener, Director

DATE: November 1990

TO: Michigan School Superintendents
Child Care Center LicenseesSUBJECT: LEAD CONTAMINATION CONTROL ACT OF 1988: WATER COOLER RECALL
INFORMATION, FLUSHING RECOMMENDATION, AND SAMPLING PROTOCOL

This letter and enclosures are being sent to provide an update regarding the Lead Contamination Control Act of 1988. One enclosure contains general information on the recall of certain Halsey Taylor water coolers by the Consumer Products Safety Commission. Halsey Taylor is required to notify schools, child care centers, and others of the specific terms of the recall. If you have not already received detailed recall instructions and procedures from Halsey Taylor, you should contact them directly.

The recall of certain water coolers is one aspect of the lead in drinking water issue. Lead can also be leached from lead pipe, lead soldered joints, and components other than water coolers. The Department of Public Health is required to provide this information in an effort to assist schools and child care centers in testing for and remedying potential lead contamination of drinking water. For your information, included in this mailing, is a general lead sampling protocol with a list of certified laboratories, the current EPA "cooler list", and a recommended flushing protocol. This material can be used to develop an overall lead screening/sampling program and institute an appropriate flushing or repair program at your facility.

-2-

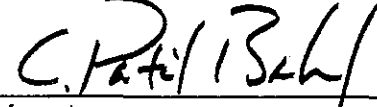
Any questions concerning lead in drinking water or the interpretation of your test results should be directed to the Division of Water Supply, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, at 3423 North Logan Street, P.O. 30195, Lansing, Michigan 48909. The telephone number is (517) 335-9216. In the Upper Peninsula, please send the results to the Division of Upper Peninsula, Bureau of Environmental and Occupational Health, Michigan Department of Public Health at 305 Ludington Street, Escanaba, Michigan 49829. The telephone number is (906) 786-6410. Questions regarding specific Halsey Taylor water coolers or recall procedures may be directed to Halsey Taylor Water Cooler Program, 775 Corporate Woods Parkway, Vernon Hills, IL 60061. The Halsey Taylor special toll free telephone is 1-800-635-2358.

Raj M Wiener



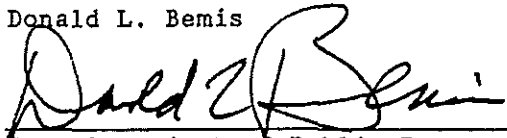
Director
Department of Public Health

C. Patrick Babcock



Director
Department of Social Services

Donald L. Bemis



Superintendent of Public Instruction
Department of Education

Enclosures

November 1990

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

DRINKING WATER COOLERS WITH LEAD LINED TANKS
AND OTHER WATER COOLERS CONTAINING LEAD

Fact Sheet: Lead in Drinking Water Coolers

Water Coolers With Lead-Lined Tanks

The following list of model numbers represents all of the drinking water coolers with lead-lined tanks that have been identified to date. The models listed here were selected because one or more of the units in that model series have been tested and found to have lead-lined tanks. These six models are made by the Halsey Taylor company.

WM 8A	GC 10ACR	GC 5A
WT 8A	GC 10A	RWM 13A

Other Water Coolers Containing Lead

EBCO Manufacturing Company

EBCO has identified all pressure bubbler water coolers with shipping dates from 1962 through 1977 as having a bubbler valve containing lead, as defined by the LCCA. The units contain a single 50-50 tin-lead solder joint on the bubbler valve. Model numbers for those coolers in this category were not available.

The following EBCO models of pressure bubbler coolers produced from 1978 through 1981 contain one 50-50 tin-lead solder joint each:

CP3	DP7SM	DPM8H
DP16M	CP3H	DP7S
DP13A	13P	DP7WM
DP7M	DP3RH	EP10F
DP13M-60	CP10	CP5M
DP12N	DP20	DP14S
DPM8	DP8AH	DP15M
C10E	PD5S	DP5M
7P	DP13SM	DP13M
DP3R	EP5F	CP3M
CP5	DP13S	PX-10
13PL	DP7WMD	DP7MH
DP8A	WTC10	DP14M
DP10X	DP15MW	DP15W

Halsey Taylor Company

Halsey Taylor reports using lead solder in these models of water cooler manufactured between 1978 and the last week of 1987.

WMA-1	SCWT/SCWT-A
SWA-1	DC/DHC-1
S3/5/10 D	BFC-4F/7F/4FS/7FS

In addition to these Halsey Taylor models, Halsey Taylor indicates that the following Haws brand coolers manufactured for Haws by Halsey Taylor from November 1984 through December 18, 1987, are not lead free because they contain two tin-lead solder joints. The model designations for these coolers are:

HC8WT	HC14W	HCBF7D
HC8WTH	HC4F	HCBF7HO
HC14WT	HC4FH	HWC7
HC14WTH	HC8F	HWC7D
HC14WL	HC8FH	HC2F
HC16WT	HC14F	HC2FH
HC4W	HC14FH	HC5F
HC6W	HC14FL	HC10F
HC8W	HCBF7	

Pressure bubbler water coolers manufactured by EBCO and marketed under the "Oasis" and "Kelvinator" brand names with the identified model numbers have been distributed in the U.S. In addition, EBCO indicated that "Aquarius" pressure bubbler water coolers are manufactured for distribution in foreign countries, including Canada. Although unlikely, it is conceivable that an "Aquarius" cooler with one of the model numbers listed above could have been transported into the U.S.

November 1990

Division of Water Supply
Michigan Department of Public Health

TESTING FOR LEAD IN DRINKING WATER AT SCHOOLS/DAY CARE CENTERS

GENERAL SCREENING AND SAMPLING PROTOCOL

These procedures are intended to outline a general screening process for determining lead concentrations that may be present in the water system under "normal" conditions. NOTE: If sampling is done to determine the net lead level contribution of an eligible Halsey Taylor water cooler for recall purposes, refer to the enclosures on recall procedures.

Before you sample:

1. Complete an inventory of drinking water coolers, by make, model, and serial number for the facility. Enclosed is a list of water coolers that have been identified by E.P.A. as having "lead lined tanks" or as being "non lead free". Any of these fixtures found in your facility should be sampled. Since this list is not all inclusive, you may want to sample some coolers in your facility that are not on the list. NOTE: Certain Halsey Taylor tank type water coolers manufactured before April 1, 1979, are subject to a recall by the Consumer Products Safety Commission. Refer to the enclosures outlining this recall or contact Halsey Taylor directly at 1-800-635-2358 for information on recall eligibility.
2. To prioritize other potential sampling locations, you should study the plumbing layout of the building. A sample should be collected from drinking water fixtures that would be representative of:
 - an area of low water flow or infrequent use of water.
 - areas containing lead piping, or lead-soldered copper piping or additions that were built after the initial facility construction.
 - fixtures used primarily for drinking/consumption such as "break" rooms, lounges, and kitchen faucets.
3. Contact a laboratory with the capability of providing accurate analysis for lead in drinking water to arrange for sampling containers and analysis. A certified laboratory is recommended but is not required for general sampling. However, the water cooler recall criteria requires the use of a certified laboratory unless analysis has already been done by a "qualified" laboratory using E.P.A. approved methods and sampling protocol. A list of laboratories certified for lead analysis of drinking water is attached.
4. You may want to contact your local health department to inquire if they have a program or recommendations relative to sampling for lead in drinking water.

-2-

When you sample:

- 
5. Collect the sample in the morning on a Tuesday through Friday during a period when school is in session so the system has been in normal use. Samples should be taken from cold water fixtures only. The fixture must not have received prior use the day of sampling. Capture the first flow out of the fixture and fill the sample container. This is called a "first draw" sample.
 6. If you choose to collect a small number of initial screening samples, you may want to collect a second sample from each location that a "first draw" sample was taken. This sample should be collected after flushing the fixture continuously for at least five minutes. This will be called a "flushed" sample. It would generally be representative of lead concentrations upstream of the fixture. (Normally flushed samples would be taken as a follow-up when an initial screening lead result was over 20 parts per billion.)
 7. Record the following information to identify the sample:
 - Name of facility sampled, individual collecting sample, date and time of sampling, and school district number, or license number if it is a day care center.
 - Location in the building of the fixture sampled, type of fixture, and brand name, model and serial number (if it is a water cooler). Please also indicate whether it is a cooler on the "non lead free" or "lead lined" list eligible for recall.
 - Indicate type of sample as "first draw" or "flushed" sample. In the case of a flushed sample, indicate the duration of the flush prior to sampling.

When you receive results:

- 
8. The current Maximum Contaminant Level for lead in drinking water is 50 parts per billion. E.P.A. has proposed to lower this standard in the future. They currently recommend further testing and corrective action for fixtures where screening samples indicate lead concentrations above 20 parts per billion.
 9. Prior to conducting follow-up sampling on elevated lead results it is recommended you contact, the Michigan Department of Public Health, or a qualified consultant. A copy of the manual Lead In School Drinking Water, (GPO stock # 055-000-00281-9) can also be obtained to provide additional information. It is available by sending a check or money order for \$3.25 to: Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

10. This Department is required to assist schools and child care centers in reducing exposure to lead in drinking water under the Lead Contamination Control Act of 1988. The Department of Public Health is not required to provide lab analyses. Evaluating the results of sampling from schools and child care centers should help us determine the scope of the problem and how best to deal with it in Michigan. For the Department to be able to evaluate the public health impacts of lead exposure in these facilities, it is important that you provide a copy of laboratory results along with your log of sampling information and cooler inventory to the Division of Water Supply, Bureau of Environmental and Occupational Health, Michigan Department of Public Health at 3423 North Logan Street, P.O. 30195, Lansing, Michigan 48909. The telephone number is (517) 335-9216. In the Upper Peninsula, please send the results to the Division of Upper Peninsula, Bureau of Environmental and Occupational Health, Michigan Department of Public Health at 305 Ludington Street, Escanaba, Michigan 49829. The telephone number is (906) 786-6410.
11. It is the position of this Department that a proper routine flushing of the drinking water outlets is a simple and effective means to reduce the exposure to lead in drinking water. We recommend this flushing be conducted at least on Monday mornings and after holidays and periods of stagnation of the water in the piping. This procedure should be implemented on a routine basis. If results of water system sampling (prior to implementing a flushing program) indicate minimal lead levels, continued routine flushing may not be necessary. When excessive lead levels are indicated, flushing should be continued to reduce exposure if the fixture must be kept in service. Further sampling of the problem fixture and the connecting water line should be made to determine the source of the lead and if repair or replacement is feasible as a long-term solution.

November 1990

Division of Water Supply

Michigan Department of Public Health

STATE CERTIFIED LABORATORIES FOR THE ANALYSIS OF LEAD IN DRINKING WATER

The following laboratories are certified in Michigan for analysis of drinking water for lead. Schools and day care centers are not required to sample for lead under the Lead contamination control Act of 1988. Therefore, the use of a certified laboratory is not required by law, but it is recommended. NOTE: Procedures for determining eligibility of certain Halsey Taylor water coolers for recall require the use of a state certified laboratory in most cases.

Burmah Technical Services
408 Auburn Avenue
Pontiac, Michigan 48058
Telephone (313) 334-4747

National Testing Laboratories, Inc.
893 Ecorse Road
Ypsilanti, Michigan 48917
Telephone (313) 483-8333

Davy Laboratories
P.O. Box 2076
LaCrosse, Wisconsin 54601
Telephone (608) 782-3130

Northern Lake Services Inc.
400 North Lake Ave
Crandon, Wisconsin 54520
Telephone (715) 478-2777

RMT Inc.
1406 East Washington Avenue
Madison, Wisconsin 53703
Telephone (608) 255-2134

Enviroscan
303 West Military Road
Rothschild, Wisconsin 54474
Telephone (705) 359-7226

Applied Biochemists
5300 West County Line Rd. 96N
Mequon, Wisconsin 53092
Telephone (414) 242-5870

Water Test Corporation
P.O. Box 6360
Manchester, New Hampshire 03108-6360
Telephone (603) 623-7400

GT Environmental Laboratories
902 West Second Street
P.O. Box 2312
Wichita, Kansas 67203

National Sanitation Foundation
3475 Plymouth Road
P.O. Box 1468
Ann Arbor, Michigan 48106
Telephone (313) 769-8010

Aqua Tech Environmental
Consultants, Inc.
181 South Main Street
Marion, Ohio 43302
Telephone (614) 382-5991

Free-Col Laboratories
P.O. Box 557 Cotton Road
Meadville, Pennsylvania 16335-0557
Telephone (717) 787-4669

Gulf Coast Laboratories, Inc.
2417 Bond Street
University Park, Illinois 60466
Telephone (312) 534-5200

Roy F. Weston, Inc.
256 Welsh Road
Lionville, Pennsylvania 19353
Telephone (215) 524-7360

Pace Laboratories
1710 North Douglas Drive
Golden Valley, Minnesota 55422
Telephone (612) 544-5543

November 1990

Division of Water Supply
Michigan Department of Public Health

FLUSHING PROTOCOL

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

Potential lead contamination in drinking water exists in any plumbing system constructed with lead or lead-soldered plumbing. When water is allowed to stand unused in the pipe, lead concentrations in drinking water may increase. Flushing, a relatively inexpensive and effective method, can be used to reduce the exposure to lead in drinking water.

These procedures are intended to outline a general flushing process for the reduction of lead concentrations that may be present in the water system under "normal" conditions. These procedures are suggestions which may be modified for the development and implementation of an efficient flushing process at your facility.

FLUSHING PROCEDURES

1. The water distribution system for each building should be examined and a tap selected near the end of each main feeder line that carries drinking water in the building. The tap should be located as far as possible from the point where the water service line enters the building.

An individual should be assigned to flush the main feeder taps before employees or students arrive. Taps should be fully open and allowed to run five minutes, or until water becomes noticeably cool to the touch. This should occur on Monday mornings, after holidays, or prolonged periods of time in which water is left stagnant.

2. After the main feeder lines have been flushed, all taps used for drinking or cooking should be flushed on Monday mornings, or after periods of stagnation. Staff should be assigned to flush drinking water outlet taps in or near their respective work areas. These drinking water taps should be flushed for approximately two minutes.
3. A diagram for each building should be developed showing the location of the selected taps for flushing the main feeder lines, and the location of all drinking water fountains. Written procedures should be established for flushing in each building and a log kept to record the date the procedures were completed.

-2-

4. Coolers that are identified as being "lead lined" in accordance with the list furnished by the E.P.A. should be sampled and taken out of service if excessive lead levels are found. NOTE: See Water Cooler Recall Information or contact Halsey Taylor Inc. at their special hotline number 1-800-635-2358. The results of all lead testing at schools and child care centers must be made available to the public and copies should be submitted to the Division of Water Supply of the Michigan Department of Public Health.
5. If building sampling indicates lead levels exceeding 20 parts per billion in individual fixtures, flushing should be implemented at least as an interim measure. Additional sampling should be done to determine if repair or replacement of the fixture or the connecting water line is feasible. Where practical, the elimination of the source of lead is preferred as a long-term solution to reducing lead exposure as opposed to primary reliance on flushing.
6. Any questions should be directed to the Division of Water Supply, Bureau of Environmental and Occupational Health, Michigan Department of Public Health at 3423 North Logan Street, P.O. 30195, Lansing, Michigan 48909. The telephone number is (517) 335-9216. In the Upper Peninsula, please send the results to the Division of Upper Peninsula, Bureau of Environmental and Occupational Health, Michigan Department of Public Health at 305 Ludington Street, Escanaba, Michigan 49829. The telephone number is (906) 786-6410.

November 1990

Division of Water Supply
Michigan Department Of Public Health

WATER COOLER RECALL - SUMMARY OF CONSENT AGREEMENT BETWEEN THE CONSUMER
PRODUCTS SAFETY COMMISSION AND HALSEY TAYLOR INCORPORATED

The Lead Contamination Control Act of 1988, requires the Environmental Protection Agency (E.P.A.) to identify all water coolers that have "lead lined" tanks as defined in the Act. The Consumer Products Safety Commission (CPSC) is required to properly investigate and initiate a recall of all water coolers with lead lined tanks. As a result of a consent agreement between CPSC and Halsey Taylor Incorporated, a water cooler recall/refund became effective May 21, 1990. This is intended to answer basic questions regarding the recall program.

What water coolers are eligible?

Tank type water coolers manufactured by Halsey Taylor prior to April 1, 1979, that contribute more than 20 parts per billion of lead to the drinking water are eligible for refund or replacement.

How do I know if a cooler is included in the recall?

The following units are included:

1. Coolers without a letter in the serial number.
2. Coolers with a letter in the serial number if both (a) and (b) are true:
 - (a) the serial number is in the 15,000,000 series, and
 - (b) the last digit of the serial number is an "8" preceded by a letter "A" through "M" (example: 015123456L8);

or

 - (c) the last digit of the serial number is a "9" preceded by the letter "A", "B", or "C" (example: 015865432B9).

However, water coolers which meet the above criteria are excluded from the program if they bear the following model designations: BFC (all models), S3D, S5D, S10D, SCWT (all models except SCWT-14W), WC-7, WM series and SW series (if there is a "-" in the model designation followed by a single number, such as the WM8A-1 or WM-8A-1).

-2-

What sampling is required to show the cooler contributes more than 20 parts per billion of lead to the drinking water?

Two water samples are required to demonstrate the eligible unit contributes over 20 parts per billion of lead to drinking water.

1. A "flush test" must be taken at the close of the work/school day. The sample is collected in an approved container after flushing the fixture for 15 minutes. The cooler is then taken out of service (cover or seal the unit - do not shut off the supply valve to the cooler).
2. The "overnight test" must be collected the morning following the flush test, before the water cooler has been used. Collect the water in an approved container immediately after opening the faucet without allowing any water to waste.

Subtract the flush result from the overnight result to arrive at the net lead contributed by the water cooler. If the net result exceeds 20 parts per billion and the cooler meets the model and serial number requirements, the unit qualifies for the recall/refund program.

Who can perform the laboratory analysis?

Lead testing must be done by laboratories certified by the state for analysis of drinking water for lead. Except: If testing has already been done by a qualified laboratory using E.P.A. approved methods, the samples were collected pursuant to an E.P.A. approved sampling protocol, and the results are still available, additional testing need not be conducted.

What if the cooler identification tag is missing, the cooler has been destroyed, or there are other special conditions? There are provisions in the recall program to address these types of situations.

For detailed information on the recall/refund program and how to apply contact:

Halsey Taylor Water Cooler Program
775 Corporate Woods Parkway
Vernon Hills, Illinois 60061

or,

call the special toll free number 1-800-635-2358

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN

P.O. BOX 30195, LANSING, MICHIGAN 48909

Raj M Wiener, Acting Director

May 26, 1989

TO: Environmental Health Directors

FROM: Lee E. Jager, P.E., Chief *LEJ*
Bureau of Environmental and Occupational Health

SUBJECT: Lead Contamination Control Act of 1988

On April 10, 1989, the EPA held a news conference to "explain" the Lead Contamination Control Act. The Act deals with exposure to lead in drinking water at schools and child care centers. Among other things, the Act requires that EPA publish a list of drinking water coolers that contain lead components or lead based solder and flux. Of course, such coolers may be in use at facilities other than schools and child care centers so the impact of the "water cooler list" may go beyond just schools and child care centers. The Act also requires the states "to develop a program to assist local educational agencies and day care centers in testing for and remedying lead contamination in drinking water."

Attached is a copy of the Act, the water cooler list, and a copy of the initial mailing that will be sent to all schools, child care centers and local health departments (addressed to the health officer). This mailing is being sent jointly by the Departments of Public Health, Education, and Social Services. This first mailing is intended to clarify the state's position relative to the Act and how we propose to implement the required program. Additional information will be made available as the program is developed. If you have any questions in the interim, please contact the Division of Water Supply at (517) 335-9216 or the Division of Upper Peninsula at (906) 786-6410.

LEJ:ROW
Attachments

STATE OF MICHIGAN



JAMES J. BLANCHARD, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN

P.O. BOX 30195, LANSING, MICHIGAN 48909

Raj M Wiener, Acting Director

May 26, 1989

TO: Michigan School Superintendents
Child Care Center Licensees
Local Health Departments

RE: Lead Contamination Control Act of 1988--EPA Water Cooler List and
Sampling Information

The 1986 Amendments to the Federal Safe Drinking Water Act contained a requirement for nationwide public notification of the potential for excessive lead in drinking water due to past practices of using lead piping, fittings and solder containing lead in potable water piping systems. The notification also contained information on how to identify piping systems where lead would most likely be found. A notice was sent by the Department of Public Health to all public and private schools outlining the recommendation to minimize any potential exposure to lead in drinking water by implementing a routine program to flush the water distribution system after periods of stagnation such as weekends and holidays.

On November 1, 1988, Congress passed the Lead Contamination Control Act of 1988 to further define and minimize the exposure to lead in drinking water at all schools including child care centers. The Governor has designated the Department of Public Health the lead agency for the implementation of the Act. The Departments of Education and Social Services have agreed to assist the Department of Public Health with the distribution of information necessary to implement the Lead Contamination Control Act of 1988.

The Act calls for the Environmental Protection Agency to:

- Provide a guidance document and testing protocol, plus a list of potentially lead containing water coolers, to the states.
- Require the states to establish a program to assist local educational agencies and child care centers in testing for, and remedying, lead contamination in drinking water.
- Require the states by 1990, to ensure that all potentially lead containing coolers are eliminated or tested and found not to be a source of lead in drinking water.

-2-

Congress has not yet appropriated any funds to assist the states or schools in implementing this program. The Federal "guidance document" focuses on extensive lead sampling of drinking water in the water distribution system at each school and child care center. There are a total of approximately 8,000 schools and child care centers in Michigan to be sampled.

The Michigan Department of Public Health intends to implement a lead sampling program that is a simplified, scaled down version of the EPA proposal. The actual sampling will likely be done by school and center personnel and the department will provide the sampling information and training. We are currently trying to reallocate resources to provide the lead analysis by the Michigan Department of Public Health Laboratory at no charge. However, the laboratory does not presently have the capacity to accommodate a statewide lead analysis program. The Department of Public Health is now working on a limited pilot sampling project at a few schools. When the results are in and the statewide school/child care sampling program is finalized, you will be receiving additional information regarding sampling procedures and laboratory availability. You are not required by law to conduct a monitoring program at this time.

The first edition of the list of potentially lead containing water coolers is attached as it was received from the EPA. The list deals with coolers that are non lead-free as defined in the Act. Page 2 itemizes certain water coolers that have thus far been tested and determined to be "lead lined" as defined in the Act.

While a sampling program is being developed, the Department of Public Health recommends that the routine flushing of all drinking water outlets be continued. In addition, we recommend shutting off any drinking water cooler that has been identified as being "lead lined". If you locate any of the other potentially lead containing coolers identified on the list you may, at your option, choose to shut them off also. However, it should be noted that in most cases this may eliminate but a small fraction of the lead that may be present in the water system piping in the form of solder, flux, brass fittings, or lead pipe itself. We, therefore, stress the need to maintain a routine flushing program in addition to discontinuing the use of lead-lined water coolers.

LEAD IN DRINKING WATER COOLERS¹

In response to a Congressional survey, major manufacturers of drinking water coolers identified close to one million (1,000,000) water coolers containing lead. Most of these are likely to be still in use. Only very limited information was provided concerning water coolers manufactured prior to the 1960's, although the industry has existed since before the 1920's. The most serious problems are believed to be associated with water coolers that have water reservoir tanks lined with lead-containing materials.

Three major manufacturers, Halsey Taylor Company, EBCO Manufacturing Corporation, and Sunroc Corporation, indicated that lead had been used in some models of their drinking water coolers. As of January 1989, the manufacturers identified the following coolers as having lead containing components in contact with drinking water:

Halsey Taylor Company

The Halsey Taylor Company reported use of lead solder in numerous models of water coolers manufactured between 1978 and the last weeks of 1987.

MODEL NUMBERS:

WMA-1	SWA-1	S3/5/10 C&D	S300/500/1000D
SCWT/SCWT-A	DC/DHC-1	HWC7/HWC7-D	BFC-4F/7F/4FS/7FS
5656 FTN*	5800 FTN*	8880 FTN*	

*With cusp connection

EBCO Manufacturing Company

The EBCO Manufacturing Company (whose products are also marketed under the names "Oasis", "Kelvinator", and "Aquarious" and were also marketed by Westinghouse Corp.) identified four (4) categories of drinking water coolers which are not lead-free under the 1986 Safe Drinking Water Amendments. The first category consists of all pressure bubbler water coolers with shipment dates from 1962 through 1977. These units contain one (1) 50-50 tin-lead solder joint on the bubbler valve. Model numbers are not available.

The second category consists of bottled water coolers with shipment dates from 1962 through 1977 with model numbers CBI(H) and DB1R(H). These units may have one (1) 50-50 tin-lead solder joint.

The third category consists of units produced from 1978 through 1981. The pressure bubbler coolers had one 50-50 tin-lead solder joint.

-2-

MODEL NUMBERS:

CP3	CP3-50	CP3H	CP5	CP10
CP10-50	7P	13P	13PL	DP20
DP20-50	DP3R	DP3RH	DP8A	DP8AH
DP13A	DP13A-50	DP14A-50/60	DP10X	C10E
WFE10	PX-10	DP12N	DP15W	DP5M
DP7M	DP7MH	DPM8	DPM8H	DP13M
DP13M-60	DP14M	DP15M	DP16M	CP3M
CP5M	DP15MW	DP5S	DP7S	DP13S
DP14S	DP7SM	DP13SM	DP7WM	DP7WMD
DP5F	DP10F	EP5F	EP10F	WTC10
WEEC03	WEEC05	WEEC07	WEEC10	WEEC13
WEEH03	WEFC03	WEFC08	WEFC10	WEFC13
WEFC15	WEFC20	WEFC13-0X	WEFC20-0X	WEKC05-0X
WEFH03	WEFH08	WEKC03	WEKC05	WELC05
WELC07	WELC08	WELC13	WELC14	WELC15
WELC16	WELH07	WELH08	WEMC07	WEMC13
WW07T	WEFH03	WEFH08	WEPC05	WERC05
WERC07	WERC13	WETC05	WETC10	WEWC07
WEEC03	WEEC10-0X			

The fourth and final category consists of bottled water coolers containing one 50 - 50 tin-lead solder joint produced between 1978 and 1981 with model numbers DB2 and DB1R(H).

EBCO did not provide any information regarding coolers manufactured prior to 1962.

Sunroc Corporation

The Sunroc Corporation reported the use of lead-bearing solder as a secondary seal on the connecting lines in a limited number of bottled water coolers manufactured between 1979 and 1983. Model numbers reported include USB-1, USB-3, T6Size 3, BC and BCH.

In addition to the above, EPA's Water Engineering Research Laboratory (WERL) in Cincinnati, Ohio, examined twenty-two, (22) water coolers provided by the U.S. Navy to EPA. The WERL identified the presence of water tanks with linings which contained lead in nine of these water coolers, each of which was manufactured by Halsey Taylor.

The following chart lists the drinking water coolers identified to date as having lead-lined water reservoir tanks.

Halsey Taylor
MODEL NUMBERS:

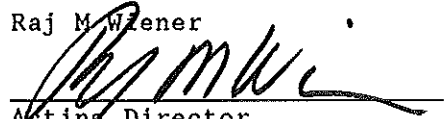
SERIAL NUMBERS

WM 8 A	838269
WT 8 A	66 421303
WT 8 A	66 421268
GC10ACR	65 361559
GC-10-A	69-598593
GC 10A	142378
GC 10A	113383

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If you need additional information regarding flushing and lead contamination or desire a copy of the Act, please write to the Michigan Department of Public Health, Bureau of Environmental and Occupational Health - Division of Water Supply at 3423 North Logan Street, P.O. Box 30195, Lansing, Michigan 48909 or telephone (517) 335-9216. In the Upper Peninsula, please write to the Michigan Department of Public Health, Bureau of Environmental and Occupational Health - Division of Upper Peninsula at 305 Ludington Street, Escanaba, Michigan 49829 or telephone (906) 786-6410.

Raj M. Wiener


Acting Director
Department of Public Health

C. Patrick Babcock


Director
Department of Social Services

Donald L. Bemis


Superintendent of Public Instruction
Department of Education

PUBLIC LAW 100-572—OCT. 31, 1988

LEAD CONTAMINATION CONTROL ACT
OF 1988

29-139 0 - 68 15721

102 STAT. 2884

PUBLIC LAW 100-572—OCT. 31, 1988

Public Law 100-572
100th Congress

An Act

Oct. 31, 1988

(H.R. 4939)

Lead
Contamination
Control Act of
1988
Consumer
protection.
42 USC 201 note.

To amend the Safe Drinking Water Act to control lead in drinking water.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Lead Contamination Control Act of 1988".

SEC. 1. LEAD IN DRINKING WATER COOLERS AND IN SCHOOL DRINKING WATER.

(a) **ADDITIONAL REQUIREMENTS TO REGULATE THE SAFETY OF DRINKING WATER.**—The Safe Drinking Water Act (title XIV of the Public Health Service Act; 42 U.S.C. 300f and following) is amended by adding the following new part at the end thereof:

"PART F—ADDITIONAL REQUIREMENTS TO REGULATE THE SAFETY OF DRINKING WATER

42 USC 300j-21. "SEC. 1461. DEFINITIONS.

"As used in this part—

"(1) **DRINKING WATER COOLER.**—The term 'drinking water cooler' means any mechanical device affixed to drinking water supply plumbing which actively cools water for human consumption.

"(2) **LEAD FREE.**—The term 'lead free' means, with respect to a drinking water cooler, that each part or component of the cooler which may come in contact with drinking water contains not more than 8 percent lead, except that no drinking water cooler which contains any solder, flux, or storage tank interior surface which may come in contact with drinking water shall be considered lead free if the solder, flux, or storage tank interior surface contains more than 0.2 percent lead. The Administrator may establish more stringent requirements for treating any part or component of a drinking water cooler as lead free for purposes of this part whenever he determines that any such part may constitute an important source of lead in drinking water.

"(3) **LOCAL EDUCATIONAL AGENCY.**—The term 'local educational agency' means—

"(A) any local educational agency as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 9381),

"(B) the owner of any private, nonprofit elementary or secondary school building, and

"(C) the governing authority of any school operating under the defense dependent's education system provided for under the Defense Dependent's Education Act of 1978 (20 U.S.C. 921 and following).

"(4) REPAIR.—The term 'repair' means, with respect to a drinking water cooler, to take such corrective action as is necessary to ensure that water cooler is lead free.

"(5) REPLACEMENT.—The term 'replacement', when used with respect to a drinking water cooler, means the permanent removal of the water cooler and the installation of a lead free water cooler.

"(6) SCHOOL.—The term 'school' means any elementary school or secondary school as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 2864) and any kindergarten or day care facility.

"(7) LEAD-LINED TANK.—The term 'lead-lined tank' means a water reservoir container in a drinking water cooler which container is constructed of lead or which has an interior surface which is not lead free.

SEC. 1462. RECALL OF DRINKING WATER COOLERS WITH LEAD-LINED TANKS. 42 USC 300j-22.

"For purposes of the Consumer Product Safety Act, all drinking water coolers identified by the Administrator on the list under section 1463 as having a lead-lined tank shall be considered to be imminently hazardous consumer products within the meaning of section 12 of such Act (15 U.S.C. 2061). After notice and opportunity for comment, including a public hearing, the Consumer Product Safety Commission shall issue an order requiring the manufacturers and importers of such coolers to repair, replace, or recall and provide a refund for such coolers within 1 year after the enactment of the Lead Contamination Control Act of 1988. For purposes of enforcement, such order shall be treated as an order under section 15(d) of that Act (15 U.S.C. 2064(d)).

Business and
Industry.

SEC. 1463. DRINKING WATER COOLERS CONTAINING LEAD.

42 USC 300j-23.

"(a) PUBLICATION OF LISTS.—The Administrator shall, after notice and opportunity for public comment, identify each brand and model of drinking water cooler which is not lead free, including each brand and model of drinking water cooler which has a lead-lined tank. For purposes of identifying the brand and model of drinking water coolers under this subsection, the Administrator shall use the best information available to the Environmental Protection Agency. Within 100 days after the enactment of this section, the Administrator shall publish a list of each brand and model of drinking water cooler identified under this subsection. Such list shall separately identify each brand and model of cooler which has a lead-lined tank. The Administrator shall continue to gather information regarding lead in drinking water coolers and shall revise and republish the list from time to time as may be appropriate as new information or analysis becomes available regarding lead contamination in drinking water coolers.

Public
Information

"(b) PROHIBITION.—No person may sell in interstate commerce, or manufacture for sale in interstate commerce, any drinking water cooler listed under subsection (a) or any other drinking water cooler which is not lead free, including a lead-lined drinking water cooler.

"(c) CRIMINAL PENALTY.—Any person who knowingly violates the prohibition contained in subsection (b) shall be imprisoned for not more than 5 years, or fined in accordance with title 18 of the United States Code, or both.

"(d) **CIVIL PENALTY.**—The Administrator may bring a civil action in the appropriate United States District Court (as determined under the provisions of title 28 of the United States Code) to impose a civil penalty on any person who violates subsection (b). In any such action the court may impose on such person a civil penalty of not more than \$5,000 (\$50,000 in the case of a second or subsequent violation).

42 USC 300j-24.

"SEC. 1461. LEAD CONTAMINATION IN SCHOOL DRINKING WATER.

"(a) **DISTRIBUTION OF DRINKING WATER COOLER LIST.**—Within 100 days after the enactment of this section, the Administrator shall distribute to the States a list of each brand and model of drinking water cooler identified and listed by the Administrator under section 1463(a).

Public
Information.

"(b) **GUIDANCE DOCUMENT AND TESTING PROTOCOL.**—The Administrator shall publish a guidance document and a testing protocol to assist schools in determining the source and degree of lead contamination in school drinking water supplies and in remedying such contamination. The guidance document shall include guidelines for sample preservation. The guidance document shall also include guidance to assist States, schools, and the general public in ascertaining the levels of lead contamination in drinking water coolers and in taking appropriate action to reduce or eliminate such contamination. The guidance document shall contain a testing protocol for the identification of drinking water coolers which contribute to lead contamination in drinking water. Such document and protocol may be revised, republished and redistributed as the Administrator deems necessary. The Administrator shall distribute the guidance document and testing protocol to the States within 100 days after the enactment of this section.

State and local
governments.

"(c) **DISSEMINATION TO SCHOOLS, ETC.**—Each State shall provide for the dissemination to local educational agencies, private nonprofit elementary or secondary schools and to day care centers of the guidance document and testing protocol published under subsection (b), together with the list of drinking water coolers published under section 1463(a).

"(d) REMEDIAL ACTION PROGRAM.—State and local
governments

"(1) **TESTING AND REMEDYING LEAD CONTAMINATION.**—Within 9 months after the enactment of this section, each State shall establish a program, consistent with this section, to assist local educational agencies in testing for, and remedying, lead contamination in drinking water from coolers and from other sources of lead contamination at schools under the jurisdiction of such agencies.

"(2) **PUBLIC AVAILABILITY.**—A copy of the results of any testing under paragraph (1) shall be available in the administrative offices of the local educational agency for inspection by the public, including teachers, other school personnel, and parents. The local educational agency shall notify parent, teacher, and employee organizations of the availability of such testing results.

"(3) **COOLERS.**—In the case of drinking water coolers, such program shall include measures for the reduction or elimination of lead contamination from those water coolers which are not lead free and which are located in schools. Such measures shall be adequate to ensure that within 15 months after the enactment of this subsection all such water coolers in

schools under the jurisdiction of such agencies are repaired, replaced, permanently removed, or rendered inoperable unless the cooler is tested and found (within the limits of testing accuracy) not to contribute lead to drinking water.

"SEC. 1465. FEDERAL ASSISTANCE FOR STATE PROGRAMS REGARDING LEAD CONTAMINATION IN SCHOOL DRINKING WATER. 42 USC 100j-25.

"(a) SCHOOL DRINKING WATER PROGRAMS.—The Administrator shall make grants to States to establish and carry out State programs under section 1464 to assist local educational agencies in testing for, and remedying, lead contamination in drinking water from drinking water coolers and from other sources of lead contamination at schools under the jurisdiction of such agencies. Such grants may be used by States to reimburse local educational agencies for expenses incurred after the enactment of this section for such testing and remedial action.

"(b) LIMITS.—Each grant under this section shall be used as by the State for testing water coolers in accordance with section 1464, for testing for lead contamination in other drinking water supplies under section 1464, or for remedial action under State programs under section 1464. Not more than 5 percent of the grant may be used for program administration.

"(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section not more than \$30,000,000 for fiscal year 1989, \$30,000,000 for fiscal year 1990, and \$30,000,000 for fiscal year 1991."

SEC. 3. LEAD POISONING PREVENTION PROGRAMS.

The Public Health Service Act is amended by adding the following new section after section 317:

"SEC. 317A. LEAD POISONING PREVENTION.

42 USC 247b-1.

"(a) GRANTS TO STATES.—The Secretary, acting through the Director of the Centers for Disease Control, may make grants to States and agencies of units of local governments for the initiation and expansion of community programs designed to (1) screen infants and children for elevated blood lead levels, (2) assure referral for treatment of, and environmental intervention for, infants and children with such blood lead levels, and (3) provide education about childhood lead poisoning. In making grants under this paragraph, the Secretary shall give priority to applications for programs which will serve areas with a high incidence of elevated blood lead levels in infants and children.

Children and youth.

"(b) GRANT APPLICATIONS.—(1) No grant may be made under subsection (a), unless an application therefor has been submitted to, and approved by, the Secretary. Such an application shall be in such form and shall be submitted in such manner as the Secretary shall prescribe and shall include each of the following:

"(A) A complete description of the program which is to be provided by or through the applicant.

"(B) Assurance satisfactory to the Secretary that the program to be provided under the grant applied for will include educational programs designed to communicate to parents, educators, and local health officials the significance and prevalence of lead poisoning in infants and children which the program is designed to detect and prevent.

Children and
youth.

"(C) Assurances satisfactory to the Secretary that the applicant will report on a quarterly basis the number of infants and children screened for elevated blood lead levels, the number of infants and children who were found to have elevated blood lead levels, the number and type of medical referrals made for such infants and children, the outcome of such referrals, and other information to measure program effectiveness as required under paragraph (2).

"(D) Assurances satisfactory to the Secretary that the applicant will make such reports respecting the program involved as the Secretary may require.

Reports.

"(E) Such other information as the Secretary may prescribe.

"(2) The Secretary shall prepare and submit a report to the Committee on Energy and Commerce of the United States House of Representatives and to the Committee on Labor and Human Resources of the United States Senate not later than one year after the enactment of this section, and annually thereafter, on the effectiveness during the period reported on of the programs assisted under grants under subsection (a).

"(c) MAINTENANCE OF EFFORT.—No grant may be made under subsection (a) unless the Secretary determines that there is satisfactory assurance that Federal funds made available under such a grant for any period will be so used as to supplement and, to the extent practical, increase the level of State, local, and other non-Federal funds that would, in the absence of such Federal funds, be made available for the program for which the grant is to be made and will in no event supplant such State, local, and other non-Federal funds.

"(d) COORDINATION.—No grant may be made under subsection (a) unless the Secretary determines that there will be coordination between the recipient of the grant and activities within the State in which the grantee is located under titles V and XIX of the Social Security Act relating to lead poisoning prevention.

"(e) METHOD AND AMOUNT OF PAYMENT.—The Secretary shall determine the amount of a grant made under subsection (a). Payments under such grants may be made in advance on the basis of estimates or by way of reimbursement, with necessary adjustments on account of underpayments or overpayments, and in such installments and on such terms and conditions as the Secretary finds necessary to carry out the purposes of such grants. Not more than 10 percent of any grant may be obligated for administrative costs.

"(f) SUPPLIES, EQUIPMENT, AND EMPLOYEE DETAIL.—The Secretary, at the request of a recipient of a grant under subsection (a), may reduce the amount of such grant by—

"(1) the fair market value of any supplies or equipment furnished the grant recipient, and

"(2) the amount of the pay, allowances, and travel expenses of any officer or employee of the Government when detailed to the grant recipient and the amount of any other costs incurred in connection with the detail of such officer or employee,

when the furnishing of such supplies or equipment or the detail of such an officer or employee is for the convenience of and at the request of such grant recipient and for the purpose of carrying out a program with respect to which the grant under subsection (a) is made. The amount by which any such grant is so reduced shall be available for payment by the Secretary of the costs incurred in furnishing the supplies or equipment, or in detailing the personnel,

on which the reduction of such grant is based, and such amount shall be deemed as part of the grant and shall be deemed to have been paid to the grant recipient.

"(g) **RECORDS.**—Each recipient of a grant under subsection (a) shall keep such records as the Secretary shall prescribe, including records which fully disclose the amount and disposition by such recipient of the proceeds of such grant, the total cost of the undertaking in connection with which such grant was made, and the amount of that portion of the cost of the undertaking supplied by other sources, and such other records as will facilitate an effective audit.

Public
Information.

"(h) **AUDIT AND EXAMINATION OF RECORDS.**—The Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the recipient of a grant under subsection (a), that are pertinent to such grant.

"(i) **INDIAN TRIBES.**—For purposes of this section, the term 'units of local government' includes Indian tribes.

"(j) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to carry out this section not more than \$20,000,000 for fiscal year 1989, \$22,000,000 for fiscal year 1990, and \$24,000,000 for fiscal year 1991."

SEC. 4. CERTIFICATION OF TESTING LABORATORIES.

42 USC 300j-26.

The Administrator of the Environmental Protection Agency shall assure that programs for the certification of testing laboratories which test drinking water supplies for lead contamination certify only those laboratories which provide reliable accurate testing. The Administrator (or the State in the case of a State to which certification authority is delegated under this subsection) shall publish and make available to the public upon request the list of laboratories certified under this subsection.

Public
Information.

SEC. 5. CONFORMING AMENDMENT.

42 USC 300j-4.

Section 1445 of the Safe Drinking Water Act (title XIV of the Public Health Service Act) is amended by adding the following new subsection at the end thereof:

"(f) **INFORMATION REGARDING DRINKING WATER COOLERS.**—The Administrator may utilize the authorities of this section for purposes of part F. Any person who manufactures, imports, sells, or distributes drinking water coolers in interstate commerce shall be treated as a supplier of water for purposes of applying the provisions of this section in the case of persons subject to part F."

Business and
Industry.

Approved October 31, 1988.

LEGISLATIVE HISTORY—H.R. 4939:

HOUSE REPORTS: No. 100-1041 (Comm. on Energy and Commerce).

CONGRESSIONAL RECORD, Vol. 134 (1988):

Oct. 6, considered and passed House

Oct. 14, considered and passed Senate.



MEMORANDUM



Date: April 13, 1989

To: Water Supply Division Staff

From: Elgar *4/13*

Subject: Lead Contamination Act

As you probably have heard, EPA held a news conference on April 10 to "explain" the requirements of the Lead Contamination Control of 1988. The act basically deals with lead exposure in schools, especially from water coolers. There are no direct sampling requirements for schools in the act. The act requires EPA to develop a list of water coolers that may be lead lined or are "non lead free". It also requires the states to develop a program to assist school systems in assessing the exposure of lead in their water systems. This news conference caught us by surprise.

Rich Overmyer and I have developed a letter to be sent to the schools, day care centers and local health departments explaining their requirements and that the state will be developing a plan to assist the schools. Rich had been working on this prior to the news conference and had planned on this type of mailing. Along with this letter we are sending EPA's list of lead lined and non lead free water coolers. We hope to get this letter out as soon as possible but it has to be signed by the directors of three departments. We also plan to send a copy of this letter directly to the environmental health directors with a cover letter in case the letter to the administrators does not get to them.

If you get questions from school administrators or local health departments you can forward them to Rich or I.

WEB:lw



MEMORANDUM

TO: Local Health Department
Environmental Health Directors

DATE: 4/15/88

FROM: William A. Kelley, P.E., Chief
Division of Water Supply
Bureau of Environmental and Occupational Health
Michigan Department of Public Health

SUBJECT: Notification At Schools

The attached packet of information on the EPA required lead notice will be sent out by this Department to all school superintendents in order to help them meet their obligation for public notification as required under part 141.34 of The Safe Drinking Water Act Amendments, PL 99-399 of 1986.

The notice is required of all community and nontransient water supplies. Community supplies have already begun this notification process, the schools should begin shortly, and we will provide a similar notice for the business/industry nontransient supplies on the noncommunity water supply inventory. The notification is required to begin before June 19, 1988.

We anticipate that this mandated lead notification will generate numerous phone calls and questions regarding lead in drinking water. Basically the lead issue involves contamination from lead components of potable water piping (lead pipe, solder, and flux) as opposed to source contamination of ground or surface water. Studies in Michigan and elsewhere have shown that where there are lead plumbing components, levels of lead exceeding the .050 parts per million MCL may be found when the water has been in contact with the lead for an extended period of time. The levels vary with the aggressiveness of the water, time, and other factors. Fortunately, tests also indicate that flushing the piping satisfactorily reduces the lead levels. Based on these findings, we are recommending that nontransient supplies implement a routine flushing of potable water lines each morning or especially after weekends or holidays. Home owners, and other consumers should follow similar procedures prior to using the water for drinking or cooking.

We expect that there will be numerous requests for sampling of lead. We are in the process of sampling nontransient supplies for metals including lead and most community supplies have been sampled for metals in the past. However, these samples normally represent the water quality at the source. They would not necessarily be a good indicator of the lead content of drinking water from a worst case scenario, ie, where a distribution system contains lead components and a sample is collected without flushing from a line that has not been used over a weekend. It is not practical or reasonable to attempt to sample distribution systems, service lines, homes, and nontransient potable water piping to determine what we know can occur, especially when flushing will effectively and reasonably address the concern.

Local Health Departments

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4/15/88

For these reasons the Department will not be able to provide lead analysis for drinking water upon request unless it is related to a groundwater contamination site or source approval for a new supply. Individuals insisting on having drinking water sampled for lead should be directed to a private laboratory. Questions regarding the lead issue should be directed to the appropriate MDPH Water Supply Program Staff.

The department is also enclosing with this mailing a supply of pamphlets entitled "The Safe Drinking Water Act Program Summary - October 1987". This pamphlet was revised on February 17, 1988 by EPA to summarize the 1986 amendments to the Safe Drinking Water Act and may be useful to your staff.

WAK:ROW
Enclosure

MEMORANDUM



TO: School Administrators

DATE: 4/15/88

FROM: William A. Kelley, P.E., Chief *William A. Kelley*
 Division of Water Supply
 Bureau of Environmental and Occupational Health
 Michigan Department of Public Health

SUBJECT: Public Notification On Lead In Drinking Water

The Safe Drinking Water Act Amendments PL 99-399 part 141.34 as printed in the Federal Register June 19, 1986 (copy enclosed) requires that each public water supply inform persons served by the system about the potential for lead in drinking water, potential adverse health effects, and generally how to minimize exposure.

Notification is required nationwide even if there is no violation of the drinking water standard for lead and regardless of the source of your water. If your facilities are customers of a municipal water system the utility is required to provide you with a proper notice for students and employees. If an on-site well supplies drinking water to the school, the school administration is the supplier of water, and therefore is responsible for making the notification. The Michigan Department of Public Health is charged with enforcement of the Act.

To assist you in making the required information available and to provide uniform and responsible information on the issue of lead in drinking water, this department has prepared a public notice that will satisfy the requirements of the law. For schools the notice can either be posted for three consecutive months in a conspicuous place (drinking fountains and kitchens) or it can be sent home with students and staff. The notification must begin before June 19, 1988. This must be done at schools using an on-site water well for drinking water. We strongly recommend you make the same notification at your facilities served by a municipal water supply even though the utility will also provide you with some type of notice. We make this recommendation because the problem of lead in drinking water is primarily related to the building plumbing as opposed to the actual source of the water, and a uniform notice should help to keep the problem in perspective. You may wish to send a copy of the notice along with a copy of this memorandum to parents and staff and post the notice.

The presence of lead in lead pipe and lead based solder and flux used to join copper pipes has been shown to be the primary source of lead in drinking water. Lead piping has not been allowed for new installations for over ten years. Lead based solder and flux should no longer be used for potable water systems. Random testing has shown that the lead levels are highest when the water stands in contact with the lead components in the water distribution piping for extended periods of time. When this piping is flushed the lead levels are satisfactorily reduced.

The Michigan Department of Public Health feels there is no reason for alarm or overreaction to the lead issue and that the simple yet effective flushing of the potable water lines routinely each morning especially after weekends and holidays, if implemented, will reasonably allow the public to avoid potential unnecessary exposure to drinking water contaminated with lead from the piping components.

School Administrators

-2-

4/15/88

When you have made the information available to the public we ask that you complete the attached form and return it to this office so that we will have a record of your compliance with this EPA mandated regulation.

If you have questions or need additional information about the notification or the lead issue in general please contact your local health department or the Michigan Department of Public Health, Division of Water Supply at 517-335-9216 or the Division of Upper Peninsula at 906-786-6410.

WAK:ROW
Attachment

PUBLIC NOTICE
CONCERNING
POTENTIAL FOR LEAD IN DRINKING WATER

UNDER THE SAFE DRINKING WATER AMENDMENTS, PUBLIC LAW 99-339 OF 1986, THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY IS REQUIRING A NATIONWIDE PUBLIC NOTIFICATION TO INFORM CONSUMERS OF THE POSSIBILITY THAT PLUMBING SYSTEMS MAY CONTAMINATE DRINKING WATER WITH LEAD.

THIS NOTICE IS REQUIRED EVEN IF THERE IS NOT A VIOLATION OF THE NATIONAL DRINKING WATER STANDARD FOR LEAD.

THE REQUIRED MESSAGE IS AS FOLLOWS:

"THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY SETS DRINKING WATER STANDARDS AND HAS DETERMINED THAT LEAD IS A HEALTH CONCERN AT CERTAIN LEVELS OF EXPOSURE. THERE IS CURRENTLY A STANDARD OF .050 PARTS PER MILLION (PPM). BASED ON NEW HEALTH INFORMATION, EPA IS LIKELY TO LOWER THIS STANDARD SIGNIFICANTLY.

PART OF THE PURPOSE OF THIS NOTICE IS TO INFORM YOU OF THE POTENTIAL ADVERSE HEALTH EFFECTS OF LEAD. THIS IS BEING DONE EVEN THOUGH YOUR WATER MAY NOT BE IN CURRENT VIOLATION OF THE STANDARD.

EPA AND OTHERS ARE CONCERNED ABOUT LEAD IN DRINKING WATER. TOO MUCH LEAD IN THE HUMAN BODY CAN CAUSE SERIOUS DAMAGE TO THE BRAIN, KIDNEYS, NERVOUS SYSTEMS, AND RED BLOOD CELLS. THE GREATEST RISK, EVEN WITH SHORT TERM EXPOSURE, IS TO YOUNG CHILDREN AND PREGNANT WOMEN.

LEAD LEVELS IN YOUR DRINKING WATER ARE LIKELY TO BE HIGHEST:

- IF YOUR HOME OR WATER SYSTEM HAS LEAD PIPES, OR,
- IF YOUR HOME HAS COPPER PIPES WITH LEAD SOLDER, AND
- IF THE HOME IS LESS THAN FIVE YEARS OLD, OR
- IF YOU HAVE SOFT OR ACIDIC WATER, OR
- IF WATER SITS IN PIPES FOR SEVERAL HOURS."

IT SHOULD BE NOTED THAT THE MAJOR SOURCE OF LEAD EXPOSURE AND LEAD POISONING IN THE UNITED STATES IS DUE TO CHILDREN CONSUMING LEAD BASED PAINT CHIPS.

RANDOM SAMPLING BY THE MICHIGAN DEPARTMENT OF PUBLIC HEALTH HAS CONFIRMED THE PRESENCE OF LEAD IN DRINKING WATER FROM SOME PIPING SYSTEMS WHEN THE WATER HAS REMAINED STAGNANT FOR A PERIOD OF TIME. TESTS HAVE SHOWN THAT FLUSHING LINES FOR SEVERAL MINUTES PRIOR TO USING THE WATER FOR DRINKING OR COOKING CAN SATISFACTORILY REDUCE THE LEVEL OF LEAD OR OTHER METALS THAT COULD CONCENTRATE IN A BUILDINGS PIPING SYSTEM.

THE MICHIGAN DEPARTMENT OF PUBLIC HEALTH RECOMMENDS THAT IN ORDER TO MINIMIZE POTENTIAL FOR EXPOSURE TO LEAD IN DRINKING WATER THE FACILITY SHOULD INSTITUTE A ROUTINE PROCEDURE FOR MORNING FLUSHING OF ALL DRINKING FOUNTAINS AND THE FAUCETS USED FOR DRINKING AND FOOD PREPARATION PARTICULARLY ON MONDAYS OR AFTER HOLIDAYS.

THE DEPARTMENT BELIEVES THIS IS AN EFFECTIVE AND APPROPRIATE RESPONSE TO ADDRESS THE ISSUE OF LEAD IN DRINKING WATER. PERSONS WITH SPECIFIC CONCERNS RELATIVE TO ANY POSSIBLE HEALTH EFFECTS ARE URGED TO CONTACT THEIR PHYSICIAN. OTHER QUESTIONS SHOULD BE DIRECTED TO YOUR LOCAL HEALTH DEPARTMENT OR THE MICHIGAN DEPARTMENT OF PUBLIC HEALTH, DIVISION OF WATER SUPPLY AT 517-335-9216.

LEAD IN DRINKING WATER NOTIFICATION
RESPONSE FORM

PLEASE RETURN TO: MICHIGAN DEPARTMENT OF PUBLIC HEALTH
DIVISION OF WATER SUPPLY
3500 N. LOGAN, P.O. BOX 30035
LANSING, MICHIGAN 48909

IN ACCORDANCE WITH THE SAFE DRINKING WATER ACT AMENDMENTS, PUBLIC LAW 99-399 PART 141.34 THE FOLLOWING SCHOOLS HAVE ISSUED A PUBLIC NOTICE ON LEAD IN DRINKING WATER.

SIGNATURE:

TITLE:

DISTRICT & NAME
OF FACILITY

NOTICE
POSTED or DELIVERED

SOURCE OF WATER
OWN WELL or MUNICIPAL

Final Rule

Wednesday
October 20, 1987

Part II

Environmental Protection Agency

40 Parts 141, 142, and 143
Drinking Water Regulations; Public
Notification; Final Rule

circulatory system. Chemicals which cause adverse effects among exposed industrial workers and in laboratory animals also may cause adverse health effects in humans who are exposed at lower levels over long periods of time. EPA has set the enforceable drinking water standard for 1,1,1-trichloroethane at 0.2 parts per million (ppm) to protect against the risk of these adverse health effects which have been observed in humans and laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

(9) Fluoride.

[Note.—EPA is not specifying language that must be included in a public notice for a violation of the fluoride maximum contaminant level in this section because § 143.5 of this part includes the necessary information. See paragraph (f) of this section.]

(f) Public notices for fluoride. Notice of violations of the maximum contaminant level for fluoride, notices of variances and exemptions from the maximum contaminant level for fluoride, and notices of failure to comply with variance and exemption schedules for the maximum contaminant level for fluoride shall consist of the public notice prescribed in § 143.5(b), plus a description of any steps which the system is taking to come into compliance.

(g) Public notification by the State. The State may give notice to the public required by this section on behalf of the owner or operator of the public water system if the State complies with the requirements of this section. However, the owner or operator of the public water system remains legally responsible for ensuring that the requirements of this section are met.

4. Subpart D is amended by adding a new § 141.34 to read as follows:

§ 141.34 Public notice requirements pertaining to lead.

(a) Applicability of public notice requirement. (1) Except as provided in paragraph (a)(2) of this section, by June 19, 1990, the owner or operator of each community water system and each non-transient, non-community water system shall issue notice to persons served by the system that may be affected by lead contamination of their drinking water. The State may require subsequent notices. The owner or operator shall provide notice under this section even if there is no violation of the national primary drinking water regulation for lead.

(2) Notice under paragraph (a)(1) of this section is not required if the system

demonstrates to the State that the water system, including the residential and non-residential portions connected to the water system, are lead free. For the purposes of this paragraph, the term "lead free" when used with respect to solders and flux refers to solders and flux containing not more than 0.2 percent lead, and when used with respect to pipes and pipe fittings refers to pipes and pipe fittings containing not more than 8.0 percent lead.

(b) Manner of notice. Notice shall be given to persons served by the system either by (1) three newspaper notices (one for each of three consecutive months and the first no later than June 19, 1988); or (2) once by mail notice with the water bill or in a separate mailing by June 19, 1988; or (3) once by hand delivery by June 19, 1988. For non-transient non-community water systems, notice may be given by continuous posting. If posting is used, the notice shall be posted in a conspicuous place in the area served by the system and shall not later than June 19, 1988, and continue for three months.

(c) General content of notice. (1) Notices issued under this section shall provide a clear and readily understandable explanation of the potential sources of lead in drinking water, potential adverse health effects, reasonably available methods of mitigating known or potential lead content in drinking water, any steps the water system is taking to mitigate lead content in drinking water, and the necessity for seeking alternative water supplies, if any. Use of the mandatory language in paragraph (d) of this section in the notice will be sufficient to explain potential adverse health effects.

(2) Each notice shall also include specific advice on how to determine if materials containing lead have been used in homes or the water distribution system and how to minimize exposure to water likely to contain high levels of lead. Each notice shall be conspicuous and shall not contain unduly technical language, unduly small print, or similar problems that frustrate the purpose of the notice. Each notice shall contain the telephone number of the owner, operator, or designee of the public water system as a source of additional information regarding the notice. Where appropriate, the notice shall be multilingual.

[Note (Optional Information): Each notice should advise persons served by the system to use only the cold water faucet for drinking and for use in cooking or preparing baby formula, and to run the water until it gets as cold as it is going to get before each use. If there has recently been major water use in the household, such as showering or bathing,

flushing toilets, or doing laundry with cold water, flushing the pipes should take 5 to 30 seconds; if not, flushing the pipes could take as long as several minutes. Each notice should also advise persons served by the system to check to see if lead pipes, solder, or flux have been used in plumbing that provides tap water and to ensure that new plumbing and plumbing repairs use lead-free materials.

The only way to be sure of the amount of lead in the household water is to have the water tested by a competent laboratory. Testing is especially important to apartment dwellers because flushing may not be effective in high-rise buildings that have lead-soldered central piping. As appropriate, the notice should provide information on testing.]

(d) Mandatory health effects information. When providing the information in public notices required under paragraph (c) of this section on the potential adverse health effects of lead in drinking water, the owner or operator of the water system shall include the following specific language in the notice:

"The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that lead is a health concern at certain levels of exposure. There is currently a standard of 0.050 parts per million (ppm). Based on new health information, EPA is likely to lower this standard significantly.

"Part of the purpose of this notice is to inform you of the potential adverse health effects of lead. This is being done even though your water may not be in violation of the current standard.

"EPA and others are concerned about lead in drinking water. Too much lead in the human body can cause serious damage to the brain, kidneys, nervous system, and red blood cells. The greatest risk, even with short-term exposure, is to young children and pregnant women.

"Lead levels in your drinking water are likely to be highest:

- if your home or water system has lead pipes; or
- if your home has copper pipes with lead solder, and
 - if the home is less than five years old, or
 - if you have soft or acidic water, or
 - if water sits in the pipes for several hours."

(e) Notice by the State. The State may give notice to the public required by this section on behalf of the owner or operator of the water system if the State meets the requirements of paragraph (b) and the notice contains all the information specified in paragraphs (c) and (d) of this section. However, the owner or operator of the water system remains legally responsible for ensuring that the requirements of this section are met.

(f) Enforcement by the State. All States shall enforce the requirements of

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this section by June 19, 1988, as required by section 1417(b)(2) of the Act. If the Administrator determines that a State is not enforcing these requirements, the Administrator may withhold up to five percent of the State program grant fund under section 1443(a) of the Act.

PART 142—[AMENDED]

1. The authority citation for Part 142 is revised to read as follows:

Authority: 42 U.S.C. §§ 330g-2, 300g-3, 300g-4, 300g-5, 300g-6, 300j-4, and 300j-9.

2. Section 142.10 is amended by revising paragraph (b)(6)(v) to read as follows:

§ 142.10 Requirements for a determination of primary enforcement responsibility.

(b) * * *

(6) * * *

(v) Authority to require public water systems to give public notice that are no less stringent than the EPA requirements in §§ 142.32 and 142.16(a).

3. Section 142.16 is revised to read as follows:

§ 142.16 Special privacy requirements.

(a) *State public notification requirements.* If a State exercises the option specified in § 142.32(b)(4) to authorize less frequent notice for minor monitoring violations, it must adopt a program revision enforceable under State authorities which promulgates rules specifying either: (1) which monitoring violations are minor and the frequency of public notification for such violations; or (2) by establishing criteria for determining which monitoring violations are minor and the frequency of public notification.

PART 143—[AMENDED]

1. The authority citation for Part 143 continues to read as follows:

Authority: 42 U.S.C. 330g-1(c), 300j-4, and 300j-9.

2. In § 143.5, paragraph (a) and the introductory text of paragraph (b) are revised to read as follows:

§ 143.5 Compliance with secondary maximum contaminant level and public notification for fluoride.

(a) Community water systems, as defined in 40 CFR 141.2(e)(1) of this title, that exceed the secondary maximum contaminant level for fluoride as determined by the last single sample taken in accordance with the requirements of § 141.23 of this title or any equivalent State law, but do not exceed the maximum contaminant level for fluoride as specified by § 141.62 of this title or any equivalent State law, shall provide the notice prescribed in paragraph (b) of all billing units annually, all new billing units at the time service begins, and the State public health officer.

(b) The notice required by paragraph (a) shall contain the following language including the language necessary to replace the superscripts:

[FR Doc. 87-24331 Filed 10-27-87; 8:45 am]
BILLING CODE 6560-50-M

TITLE 42 - THE PUBLIC HEALTH AND WELFARE**CHAPTER 6A - PUBLIC HEALTH SERVICE****SUBCHAPTER XII - SAFETY OF PUBLIC WATER SYSTEMS****Part F - Additional Requirements To Regulate Safety of Drinking Water****§ 300j-24. Lead contamination in school drinking water****(a) Distribution of drinking water cooler list**

Within 100 days after October 31, 1988, the Administrator shall distribute to the States a list of each brand and model of drinking water cooler identified and listed by the Administrator under section 300j-23 (a) of this title.

(b) Guidance document and testing protocol

The Administrator shall publish a guidance document and a testing protocol to assist schools in determining the source and degree of lead contamination in school drinking water supplies and in remedying such contamination. The guidance document shall include guidelines for sample preservation. The guidance document shall also include guidance to assist States, schools, and the general public in ascertaining the levels of lead contamination in drinking water coolers and in taking appropriate action to reduce or eliminate such contamination. The guidance document shall contain a testing protocol for the identification of drinking water coolers which contribute to lead contamination in drinking water. Such document and protocol may be revised, republished and redistributed as the Administrator deems necessary. The Administrator shall distribute the guidance document and testing protocol to the States within 100 days after October 31, 1988.

(c) Dissemination to schools, etc.

Each State shall provide for the dissemination to local educational agencies, private nonprofit elementary or secondary schools and to day care centers of the guidance document and testing protocol published under subsection (b) of this section, together with the list of drinking water coolers published under section 300j-23 (a) of this title.

(d) Remedial action program**(1) Testing and remedying lead contamination**

Within 9 months after October 31, 1988, each State shall establish a program, consistent with this section, to assist local educational agencies in testing for, and remedying, lead contamination in drinking water from coolers and from other sources of lead contamination at schools under the jurisdiction of such agencies.

(2) Public availability

A copy of the results of any testing under paragraph (1) shall be available in the administrative offices of the local educational agency for inspection by the public, including teachers, other school personnel, and parents. The local educational agency shall notify parent, teacher, and employee organizations of the availability of such testing results.

(3) Coolers

In the case of drinking water coolers, such program shall include measures for the reduction or elimination of lead contamination from those water coolers which are not lead free and which are located in schools. Such measures shall be adequate to ensure that within 15 months after October 31, 1988, all such water coolers in schools under the jurisdiction of such agencies are repaired, replaced, permanently removed, or rendered inoperable unless the cooler is tested and found (within the limits of testing accuracy) not to contribute lead to drinking water.

(July 1, 1944, ch. 373, title XIV, § 1464, as added Pub. L. 100-572, § 2(a), Oct. 31, 1988, 102 Stat. 2886; amended Pub. L. 104-182, title V, § 501(f)(10), Aug. 6, 1996, 110 Stat. 1692.)

42 USC 300j-24

NB: This unofficial compilation of the U.S. Code is current as of Jan. 4, 2012 (see <http://www.law.cornell.edu/uscode/uscpri.html>).

Amendments

1996—Pub. L. 104-182 made technical amendment to section catchline and subsec. (a) designation.