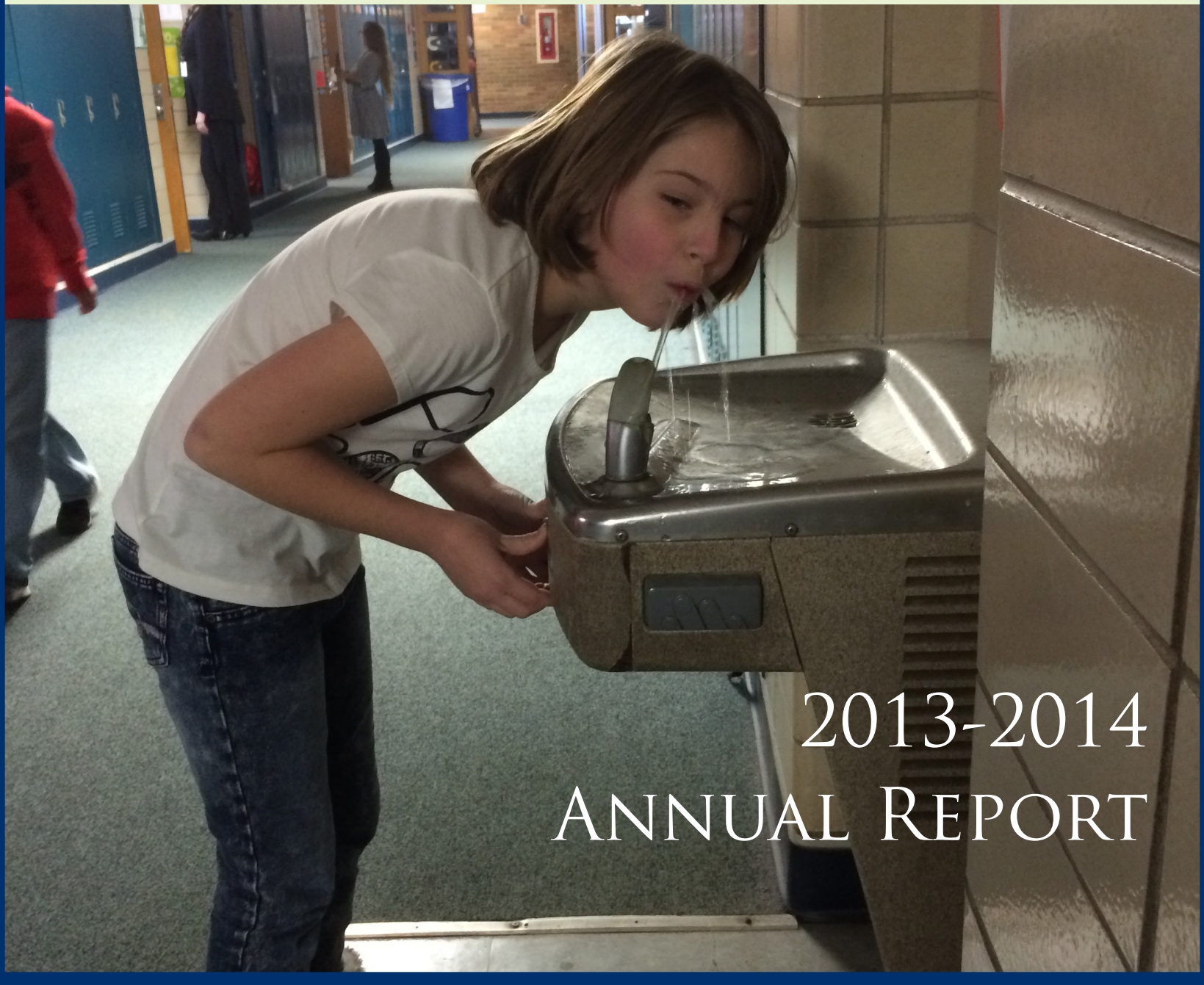
Calhoun County Public Health Department

"Good to Grow"

3Ts for Reducing Lead in Drinking Water in Schools



2013-2014 Annual Report

Lead Education

WHAT IS LEAD?

- Lead is a toxic metal that is harmful if inhaled or swallowed.

WHAT HEALTH EFFECTS CAN LEAD CAUSE?

- At high levels, lead can cause serious illness affecting many parts of the body.
- More often, low levels cause learning disabilities without any obvious illness.

WHO IS AT RISK?

- Children ages 6 and under are at greatest risk.
- Pregnant women and nursing mothers should also avoid exposure.

Should My Child Be Tested?

A simple blood test can check for lead in your child's body. Thousands of children in Calhoun County get tested every year. You can ask your health care provider if testing is recommended for your child. The test is usually done at 12 and 24 months of age, but can be done later if it was missed. If the results are high, the health department will help you find ways to keep your child away from lead sources. The cost of the test is covered by most health plans and Medicaid.

How Do I Know if There is Lead in My Water?

Testing the water at the faucet is the only way to know for sure. Testing the faucets you use for drinking water is a good idea for both well owners and city water users. City water departments test their water for lead, but these tests can't rule out problems caused by your home's plumbing.

You can visit the Environmental Health office to pick up a test kit. We are located at 190 E. Michigan Ave., Battle Creek. The test costs $24. Or, you can purchase a mail-in test kit from a home improvement store.

If a test shows a high level of lead (above 15 ug/L or 0.015 mg/L), call the Safe Drinking Water Hotline at 1-800-426-4791 to learn more about reducing the level.

How Does Lead Get Into Water?

Lead enters tap water through contact with your plumbing.

Some plumbing parts contain lead. Water can absorb lead as it flows through them.

Today, plumbing parts made for drinking water contain very little or no lead. However, the plumbing installed in your home probably has more lead in it than plumbing being installed today. Here are some examples of plumbing materials that contain lead:

- Interior lead pipes, which were often installed in new homes until around 1930.
- For city water users, an underground lead pipe connecting your home to the water main. This is most likely for homes built before 1950.
- Lead solder at copper pipe joints. Lead solder was banned for use on drinking water pipes in 1987.
- Brass or bronze parts, including chrome-plated faucets. Brass tends to contain about 5% lead, but the percentage used in faucets has dropped, starting in the late 1990s.
- Laundry room faucets and outdoor faucets, which can be higher in lead, since they are not intended for drinking use.

Quick Tips to Reduce Lead in Your Drinking Water

- Don't drink water that stood in your plumbing for more than 6 hours. First run the water until the temperature stops changing.
- Don't run hot water for drinking or cooking. For infant formula, heat cold tap water with a stove or microwave.
- Once a month, remove the aerator from your faucet, and clean the inside.
- If you plan to buy a home water filter, check the box to see if it's certified to remove lead.
- To help block the effects of lead, serve your family meals that are low in fat and high in calcium and iron, including dairy products and green vegetables.
- Boiling your water will NOT get rid of lead.

DON'T FORGET ABOUT LEAD PAINT

The most dangerous source of lead is lead paint. Old lead paint releases chips or dust that children can get into their mouths. Most homes built before 1978 have some lead paint. A lead professional can check your house or apartment for lead paint. If you qualify for assistance, the state government can help pay for this, and for fixing any problems that are found. Call MI Healthy Homes at 1-866-691-LEAD to find a certified professional or to find out if you qualify for assistance.

Year-Two Activities

Water sample collection remained a primary task in the second year of the project. With the initial groundwork in place for working with the EPA, and relationships with many facilities already established, it was possible to collect more water samples than in the first year. CCPHD collected 1,890 water samples at 57 facilities, compared to 1,014 samples in the first year. Some of these samples were collected from 27 facilities that were already tested once in the first year ("second round" testing). Second round testing was included in the project plans in order to verify the original results and measure variability from one year to the next. This variability information is of interest to the EPA in determining an appropriate frequency for lead testing in schools and child care facilities. In addition to second round testing, 30 new facilities were enrolled and tested in the second year. The new facilities included 15 public schools (including the county juvenile home), one private school, four child care centers, and 10 child care homes (which are licensed child care facilities operated in the licensee's home).

Education efforts were expanded in the second year. CCPHD continued to verbally convey key points regarding lead in water when speaking with facility staff. In addition, a new EPA publication titled "Drinking Water Best Management Practices for Schools and Child care Facilities" was provided to each participating facility for future reference.

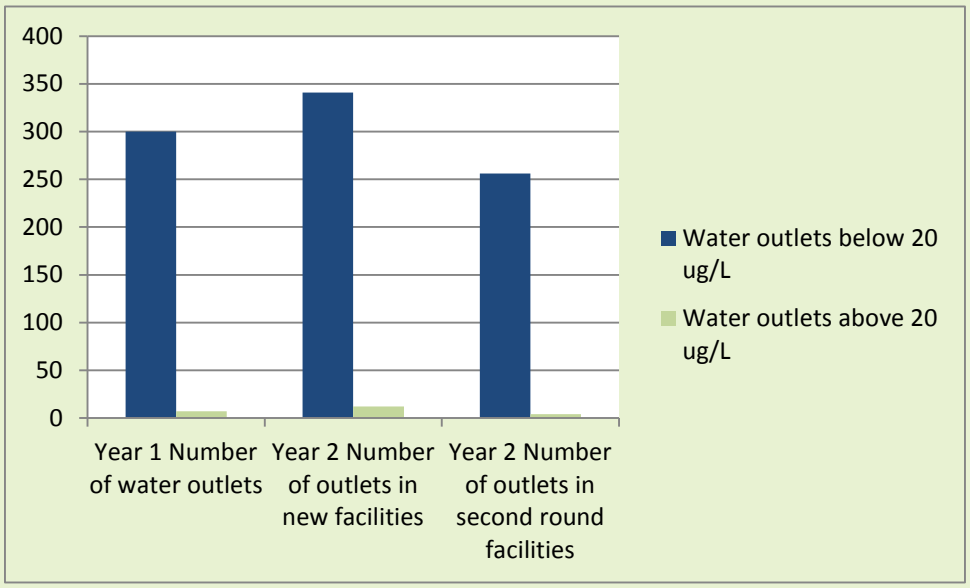
CCPHD presented lead in water information at two local events. The first was an Earth Day event organized by the Calhoun County Conservation District that introduced elementary school students to the concept of lead toxicity and its potential presence in water sources. Information was also provided to the public at the CCPHD booth on Health Day at the Calhoun County Fair.

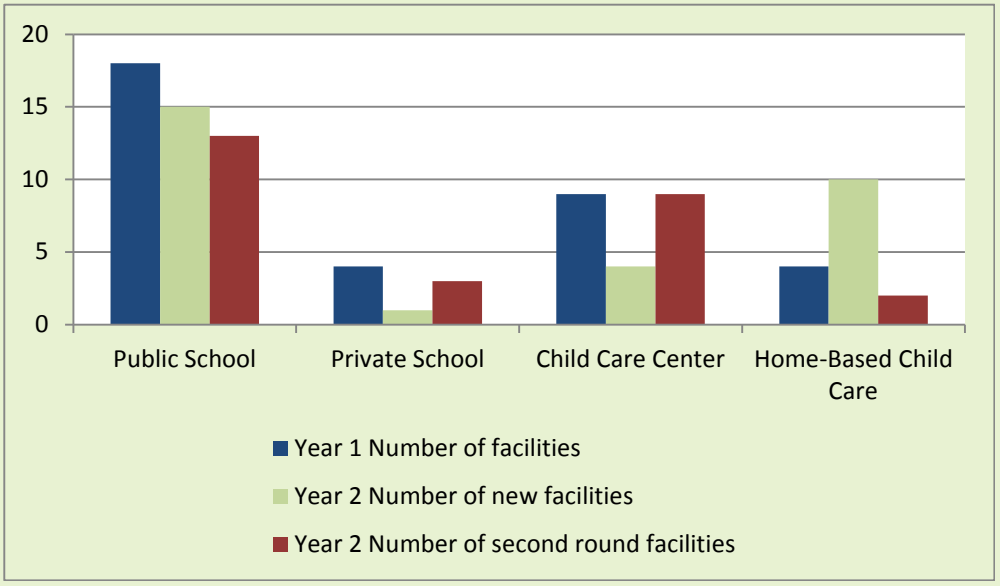
	Year 1	Year 2
Facilities Tested:	35	57
Second Round Testing		*27*
Newly Added Facilities		*30*
Water Outlets Tested:	307	613
Second Round Testing		*260*
Newly Added Facilities		*353*
Water Outlets with Results Above Guidelines	7	16
Water Samples Collected	1,014	1,890
Facility Type:		
Public Schools	18	28
Private Schools	4	4
Child Care Centers	9	13
Home-Based Child Care Facilities	4	12

Outcomes

Seven of the facilities tested in the second year were found to have at least one water outlet with results above the EPA guideline of 20 micrograms per liter. While this is an increase from the three facilities that had elevated results in the first year, the proportion of water outlets that exceeded the guideline remained low, at less than 4% over the first two years combined.

Among the three facilities that tested above the guideline in the first year, follow-up actions led to improvements in water quality at two facilities and a re-classification of the third. The re-classification occurred at a facility where the single elevated outlet was subsequently re-tested and yielded results below the guideline. The initial test result was probably inflated by a very long stagnation time at that outlet. This outlet appeared to be seldom used and was not flushed by the school the day before initial sampling. CCPHD recommends that schools flush the day before sampling, in part to eliminate lengthy stand times, but staff at this facility had opted not to flush before the initial samples were collected. For the other two facilities, CCPHD first discussed the various options available for voluntary remediation with facility staff. These discussions addressed the pros and cons of each option from the point of view of CCPHD and the facility. At one facility, six faucets tested above the guideline. The school took remediation actions, and second round testing found that of these six faucets, only one remained slightly above the guideline. If the facility replaced brass valves, there would probably be a further reduction in lead levels. At the third facility, after discussions with CCPHD the school replaced the brass shut-off valve beneath the one sink that had elevated results. Follow-up testing found that lead levels had dropped well below the guideline.





Goal and Collaboration Efforts

The Calhoun County Public Health Department's (CCPHD) "Good to Grow" project, based on the U.S. Environmental Protection Agency (EPA) Training-Testing-Telling (3Ts) program, is a three-year pilot program in partnership with the EPA and the W.K. Kellogg Foundation.

The project's goal is to determine the health risk posed by the presence of lead in the drinking water of schools and child care facilities served by a municipal water supply. The project is non-enforcement in nature and relies on the voluntary participation of facility administration. Because facilities cannot be required to participate, all eligible facilities may not elect to be involved. Continued efforts will be made to garner their participation.

The removal of lead hazards from facilities where young children with still-developing bodies and minds spend much of their time will lower the possibility of an elevated blood lead level.

The CCPHD collaborates with the EPA, Calhoun County schools and child care facilities, the Water Quality Association, and the National Sanitation Foundation. These collaborations continue to prove beneficial, providing in-kind services and resources to our project participants.

Through program collaboration with the CCPHD School Wellness Program, the CCPHD is able to provide health education, including lead information to staff, parents, and students.

Participating facilities included public school districts and parochial grade schools, but no charter schools as of yet. Participants also included child care centers, home child care facilities, and private/parochial preschools. Efforts to recruit additional participants have been ongoing.

Our primary partner remains the EPA via the Office of Ground Water and Drinking Water. We also interact directly with the regional labs that support the project.

Keeping Kids Lead Free

1 http://www.cdc.gov/nceh/lead/tips.htm

Future Plans

Water sample collection will continue through at least part of the third year. The EPA has arranged to provide lab support through June 2015 if needed. The initial project goals included testing at colleges. While colleges have been assigned a lower priority than other facility types based on EPA recommendations, it is possible that at least one college will be tested. At facilities where elevated results are found, CCPHD will continue to support facility staff by providing specific recommendations for both short-term and long-term measures to prevent exposure to lead.

Dissemination of findings will continue at appropriate events. Possible events include regional and national conferences of environmental health professionals (such as the Michigan Environmental Health Association). CCPHD will support, and hopes to be actively involved in, the development of a white paper that will include findings on lead in water from this project, among others. Education efforts will continue to include participation in any available health fairs targeted at parents of young children. This may include events held in schools by CCPHD School Wellness Program nurses. CCPHD will continue to explore additional approaches for increasing awareness of the potential for exposure to lead in water.

High Blood Lead Level

According to the CDC, "Protecting children from exposure to lead is important to lifelong good health. No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement. And effects of lead exposure cannot be corrected.

The goal is to prevent lead exposure to children before they are harmed. There are many ways parents can reduce a child's exposure to lead. The most important is stopping children from coming into contact with lead. Lead hazards in a child's environment must be identified and controlled or removed safely."[1]

MORE INFORMATION

Information on lead in water:

EPA Safe Drinking Water Hotline
800-426-4791

Lead in Drinking Water Website
www.epa.gov/safewater/lead

To get your water tested:

Calhoun County
Environmental Health Division
269-969-6341

Information on lead in general:

National Lead Information Center
800-424-LEAD

Calhoun County Public Health Department
"Good to Grow"
190 E. Michigan Avenue
Battle Creek, MI 49014
Phone: 269-969-6341
Fax: 269-969-6490
www.calhouncountymi.gov/publichealth

Collaborating Partners

Funding for the "Good to Grow" project is provided through the W. K. Kellogg Foundation

Participating School Districts (to date)

- Albion Public Schools
- Athens Area Schools
- Battle Creek Public Schools
- Harper Creek Community Schools
- Lakeview School District
- Marshall Public Schools
- Pennfield Schools
- Tekonsha Community Schools

Other Collaborating Partners

- Environmental Protection Agency
- Water Quality Association