

## **NDWAC LEAD AND COPPER WORKING GROUP ON PUBLIC EDUCATION**

### **Meeting Two: December 15-16, 2005**

RESOLVE  
1255 Twenty-third St., NW Suite 275  
Washington DC 20037

#### **Welcome and Agenda Review**

Abby Arnold, RESOLVE Senior Mediator, welcomed the members of the National Drinking Water Advisory Committee (NDWAC) Lead and Copper Working Group on Public Education (WGPE) to its second meeting. Steve Heare, Director, Drinking Water Protection Branch, EPA Office of Groundwater and Drinking Water (OGWDW), also welcomed and thanked the working group members.

Ms. Arnold reviewed the meeting agenda and objectives of the meeting, which were to:

- Agree on the outline of the WGPE Recommendations
- Review and comment on draft working documents produced by the Principles and Rule Subgroups since Meeting 1.
- Agree on Principles Rationale and List, if possible
- Understand EPA's school initiatives on lead in drinking water
- Decide on next steps and schedule for the work of subgroups and the full WGPE.

Ron Bergman, Chief, Drinking Water Protection Branch, EPA OGWDW, reviewed the WGPE's mission and highlighted some of the concerns with the Lead and Copper Rule (LCR) public education (PE) requirements that EPA would like the WGPE to consider in drafting their recommendations. The LCR is unique because it places a large responsibility on the consumer. As such, EPA's goal is for consumers to understand the issues associated with lead in drinking water and steps consumers can take to protect their health. Mr. Bergman asked WGPE members to focus on ideas to better inform the consumer. The working group has discussed and agreed conceptually, as does EPA, that existing mandatory language should be shorter. EPA is now looking for more specific recommendations including appropriate language, delivery options, directions on actions consumers can take, and sources from which they can seek further information.

Mr. Bergman also updated the group on EPA's LCR short-term revisions, explaining that they are scheduled to be proposed in February.

#### **Draft WGPE Recommendations: Table of Contents and Background Sections**

Working group members reviewed, discussed, and suggested edits for the draft Table of Contents and Sections 2 and 3 of the WGPE recommendations. The purpose of Section 2 is to describe the purpose and charge of the WGPE as well as the process by which the group was convened and conducted its work. Members gave minimal comments on this background section, which will be incorporated into the next draft for review.

Section 3 of the report is meant to provide background on the issue of lead in drinking water and the PE requirements of the LCR. It also briefly discusses EPA's short-term revisions to the LCR. A small group met to suggest revised language, which RESOLVE will incorporate into the next draft.

### **Principles Subgroup Working Drafts**

Principles Subgroup members presented and explained the context for the rationale and list of principles that was discussed and revised over conference calls between meetings. A subgroup member explained that the Rationale is meant to introduce the list of principles, which focuses on recommended characteristics for revised LCR PE requirements as well as individual water systems' PE programs. Working group members discussed both documents, making minor edits to both. They agreed to review the principles rationale and list again following the meeting and send RESOLVE any further comments.

### **Rule Subgroup Proposed Approach and Matrix**

A WGPE member gave an overview of the matrix, which had been developed between meetings by the Rule Subgroup and circulated to the full WGPE for review. He explained that the goal of this matrix was to identify key facets of a public education program, including various water system scenarios and target audiences.

The group made notes and revisions to the matrix on the following topics:

#### **Row 1: Routine Regular Communication on Lead Sources in Tap Water When System Is Under the Action Level**

A member asked the WGPE to consider recommending routine regular communication for those water systems with particularly corrosive or unstable conditions. He highlighted the importance of giving consumers as much information as possible, and not just after an exceedance occurs. Some members supported the idea that additional public education in some localities could be beneficial, especially with the help of the public health community, though voiced concerns about making this a requirement. An ongoing program, such as Portland's, could require a dedicated lead PE expert, and can be very expensive. Further, water systems do not want to alarm consumers in areas with consistently successful corrosion control; one goal of risk communication is to not unnecessarily alarm the public. A member encouraged voluntary ongoing education programs organized locally in the event of a potential health risk, rather than as a continual regulatory requirement.

Another member pointed out that there are a number of ways to approach ongoing education besides bill stuffers. For example, utilities could send pediatricians information to give to parents instructing them not to boil water. This would be similar to giving out information about how to install car seats properly. A second interesting example is the UV index, coded green, orange, and red. While most of the population would not be concerned about a "red" air quality day, sensitive groups like asthmatics would be made aware.

A group member noted that the WGPE could include a Section 6 recommendation that EPA collaborate with CDC and other public health officials to better incorporate lead in drinking water into their strategies and educational materials.

Mr. Bergman explained that EPA's interest is in hearing how an ongoing message can meet the group's criteria of public education as timely and compelling. He also reminded the WGPE of the scope of the exceedance problem nationwide. He shared that, of 72,000 water systems monitoring for lead and copper, there were approximately 2,000 action level exceedances over the past two years. Just over 100 of these systems in exceedance served over 3,300 people and only 37 were very large systems.

Members agreed to form a subgroup to further discuss the issue and draft a proposal to bring to Meeting 3. The Row 1 Subgroup will discuss potential recommendations for ongoing education requirements or guidance for utilities that have not had a lead exceedance but may have other risk factors such as corrosivity.

### **Row 2: Notification of Individual Results**

Liz McDermott, OGWDW, EPA, pointed out that the draft WGPE recommendation (to provide numerical testing results to consumers who provide a water system to the utility, free of charge) is very similar to what EPA is proposing in the LCR short-term revisions. A member clarified that results of any samples required by the LCR, whether for an individual occupant, school, business, or other consumer, would be shared at no cost. The numerical sample result and most recent 90<sup>th</sup> percentile value (if the current value has not yet been calculated) will be given to the occupant. If a school is a non-transient non-community water system, it would be regulated separately.

Liz McDermott, EPA, noted that there was a workshop on sampling and that she can provide the meeting summary to WGPE members.

### **Row 3: Public Education Upon Occasion of Exceedance of Action Level**

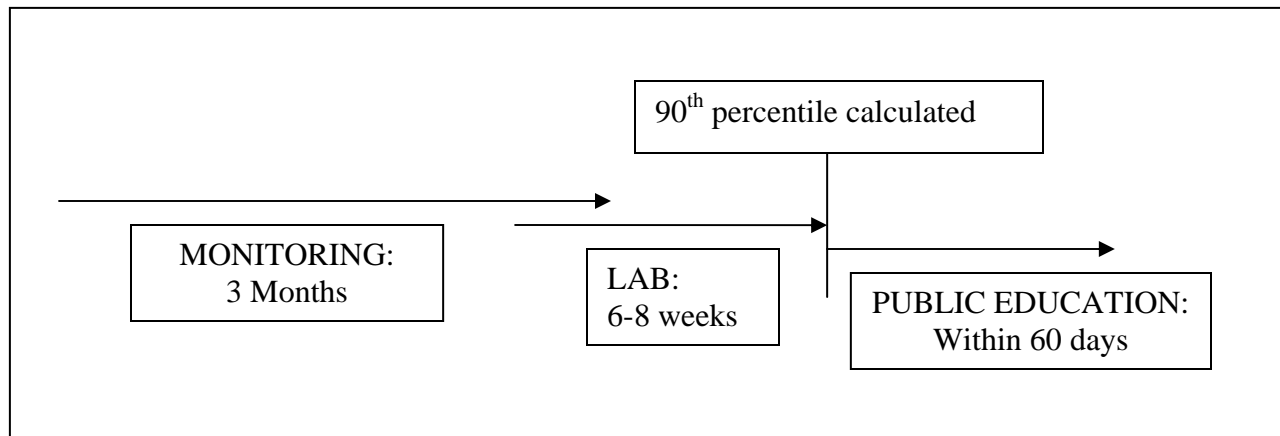
#### *Timing*

WGPE members discussed the timing requirement for sending PE materials following an action level exceedance. Ms. McDermott explained the monitoring periods for LCR. The first is a compliance monitoring period, comprised of two six-month sampling periods. If a system is below the action level for compliance monitoring, they may wait a full year before taking additional samples. If, after a year, a system remains in compliance, they may sample once every three years.

EPA established the monitoring period in the warmest part of the year (May-September) because that is the timeframe when water tends to be most corrosive. For systems testing yearly or every three years, sampling generally takes place from June to September.

One member commented that, for some systems, the warmest time of year may be in September. However, if PE is required within 60 days after the monitoring period, those systems cannot wait until September, because samples may not all be collected in time to calculate the 90<sup>th</sup> percentile.

Thus, he suggested the monitoring period should be June through October. EPA clarified that states currently have the discretion to modify the monitoring period. A member voiced concern that, if sampling does not take place until September, and it takes three months or more for testing, plus 60 days to get PE out to the public, consumers may not be notified until February about the exceedance. Another member noted that extending the monitoring period could mean that a woman could become pregnant and have her child before PE notices are sent to the public. Members agreed that the timing for testing and PE needs to be clarified.



*Example Timeline for Monitoring, Testing, and Public Education on Lead and Drinking Water*

Members noted the logistical challenge of getting sample results from labs, especially as all utilities send in their samples for testing between June and September. Another major challenge is that utilities rely on occupants to take the water samples, so some samples are not immediately available. The combination of delayed sample collection and busy labs can delay PE, because utilities are unable to calculate the 90<sup>th</sup> percentile until all samples have been collected and analyzed. One member explained that an individual, high priority sample could be tested within a week at a lab. However, given the number of samples from multiple systems received by labs, the queue can become quite long. Another member added that there are at least two steps of quality assurance, so each sample will enter the queue at least twice. After the sample is tested, it will be recorded and reviewed by a supervisor, and then the lab manager.

A member pointed out that the timeline between the end of the monitoring period in September and the calculation of the 90<sup>th</sup> percentile is currently undefined. He noted it could be possible to request that labs return samples within 30 or 45 days from the end of the monitoring period. EPA cannot enforce this with labs, but utilities could write such requirements in their contracts with labs. Currently, results can take up to six months, but are generally received within 30-40 days. Another member observed that this requirement would not be a problem in his state, as 99% of systems already follow this timeline.

Other members said they understood the technical challenges of the testing procedures and also emphasized that the WGPE should be creative about ways to make the timeline as tight as possible and to inform consumers as soon as possible, so they can take action to protect their health. One idea was to make free samples available for households with pregnant women or children under six. A member responded that such a program would not cost a system very

much, because very few people tend to request free testing. When her utility sends targeted mailings to households with pregnant women, they only receive a 2-3% response.

The group discussed options for getting information to consumers faster in the event of an exceedance. One WGPE member suggested that the timing should be 60 days “or sooner.” Another member agreed that the group should consider how to create a culture of notifying the public as soon as possible, and mailings may not be the most effective method. Another member noted that, while utilities should respond as soon as possible, their handling of lead must be balanced with acute issues such as nitrate and coliform.

A member noted that systems already have to maintain best practices for corrosion control, as well as alkalinity, pH, phosphate, and other measures. This is required twice a year. She suggested that the WGPE could recommend that, if a water system changes treatment, it has to sample for corrosivity and lead leaching.

One member discussed lead as a chronic contaminant with aspects of an acute contaminant, especially for pregnant women, children on formula mixed with water, and other young children. These sensitive populations can be affected in the short-term, making lead more like an acute contaminant than some other chronics. Thus, a public education program on lead should include an aspect that responds more quickly and notifies these populations on a shorter timeline.

A subgroup related to Row 1 will address the question of ongoing education and reaching at-risk populations. They will consider the timeline associated with sampling and calculating the 90<sup>th</sup> percentile, as discussed previously.

### *Delivery*

Group members pointed out that who delivers the message to the public is critical, and brainstormed a list of conduits for PE materials:

- Pharmacies
- Formula companies
- Grandparents (they often watch children)
- Childcare workers/facilities
- Baby advice books
- Take-home message for new parents from hospitals
- Pediatricians
- Health agencies – environmental health and maternal/child health and WIC
- Social services
- Faith communities
- Chamber of commerce

The intended audience for this information includes

- Pregnant women
- Infants to school age
- Nursing moms, formula fed babies
- General population

- Homeowners remodeling (and drinking their water)

A WGPE member pointed out that the Consumer Confidence Report (CCR) allows utilities flexibility in how they deliver information to organizations and populations of interest. There is a checklist of suggested methods for distributing materials, such as websites, mailings, hand delivery, and posting in public places. Actual methods used by the utility must be documented.

The WGPE decided to have a subgroup to discuss delivery methods and how to reach vulnerable populations.

#### *Required Topics and Language*

The WGPE then discussed required topics and language for materials a utility would send out after a lead ALE. Currently, there is a list of required topics that was developed by the subgroup. This document includes health effects as the only section of mandatory language.

One member questioned why the group would require a topic without providing mandatory language. Another member asked why, if mandatory language was created in 1991, the WGPE was now recommending cutting down on this regulation. A member responded that, based on the Public Notification model and feedback from utilities, regulators, health care providers, and consumers, having less mandatory language than the current LCR requires would help make communication clearer and more effective. He also pointed out that non-mandatory language in templates and guidance would be easier to test and modify than language mandated in the regulations. Further, most language that is not required but suggested in the template will be used by at least small and medium utilities.

Mr. Bergman noted that EPA would like to see references to EPA's lead website and phone number included in the public education materials. He reminded the WGPE that all changes to the LCR regulation, including the mandatory language, will need to go through agency review.

The group discussed dealing with required topics in three ways: 1. drafting mandatory language for each required topic, 2. creating bullet points with additional details that utilities must cover for each required topic, and 3. creating a template with recommended language for each required topic.

A member noted that, some systems would benefit from "canned" language, but others would probably like being able to adapt language to local circumstances. Another member agreed that required topics plus details was a good approach, but advocated for a mandatory introductory section to grab consumers' attention. She did not feel the current required introduction ("some homes may" language) goes far enough to alert consumers and motivate them to act.

A member said she was leaning toward requiring language for some additional topics, especially those that are difficult to articulate in a simple, clear way. Another member requested that the WGPE make an effort to explain why and when flexibility in language is needed. This would help others understand why required language is not needed for all topics. The group agreed that they should add a new requirement to explain why the exceedance occurred and what the utility is doing to address the lead exceedance.

The WGPE agreed to form a subgroup to discuss an approach using required topics, required language, and/or bullet points. There will also be a subgroup to discuss how these ideas might affect small systems and whether they should be adapted.

#### **Rows 4-7**

The WGPE did not discuss Rows 4 (public education during continued exceedance), 5 (additional outreach for unusual circumstances), 6 (general lead service line replacement information), or 7 (lead service line replacement specific to location being replaced, at time of replacement) in depth and will return to these in future discussions.

#### **Lead in Drinking Water in Schools and Childcare**

Lisa Christ, OGWDW, EPA, gave a presentation on EPA's program on lead in drinking water in schools and childcare facilities. (Ms. Christ's presentation, "Reducing Children's Exposure to Lead in Drinking Water in Schools and Child Care Facilities," is attached.) EPA has generated a number of materials and recommended activities to assist these facilities in testing for and communicating about lead with staff, students, and the community.

CDC has stated that there is no safe level of lead, with health effects to children including impaired mental development, shorter attention span, and low birth weight. Children under 6 are especially vulnerable, more readily absorb lead, and more likely to be exposed to lead sources such as paint, dust, and soil. Children are also vulnerable to lead leached into drinking water through corrosion of plumbing products.

A number of factors affect absorption and health effects, including frequency of exposure, dose, individual susceptibility, nutrition, and overall health of the child. Total exposure to lead in a child's or person's lifetime from all environmental sources is also a factor.

There are three regulations that govern lead in drinking water, including in schools.

The 1986 Lead Ban requires that new plumbing and repairs must be "lead-free" (up to 0.2% lead for soldering and flux; up to 8% for pipes and fittings; and endpoint devices, such as kitchen and bar faucets, drinking fountains, water coolers, and residential refrigerator ice makers, must meet NSF national standard 61, Section 9). The 1988 Lead Contamination Control Act (LCCA) was passed to help identify and reduce lead in drinking water at schools and gave states oversight of implementation and enforcement. One effect of the ban was replacement of lead-lined coolers in school water fountains and identification of approved manufacturers and models, though overall compliance with the LCCA has varied among states. Finally, the LCR was passed in 1991 to minimize corrosivity and amount of lead and copper in drinking water from a public water system.

According to the Department of Education, there are approximately 500,000 licensed childcare centers and 90,000 public schools. 10,000 of these schools have their own water supply and are therefore regulated as a public water system and required to comply with the 15 ppb action level.

While not mandatory, EPA recommends that schools collect water samples and remove water fountains and faucets with first-draw lead levels exceed 20 ppb. Like the LCR, this level is not a health-based standard but a treatment feasibility number and a trigger for a school to take action at an individual outlet. The purpose of this recommendation is to identify and replace plumbing in schools that may be a source of lead leaching. EPA recognizes the importance of testing drinking water in schools and child care centers as facilities where children spend much of their day.

EPA recommends “3 Ts” for reducing lead in drinking water in schools and child care facilities:

1. *Training* school officials to raise awareness, assist in identifying potential problem outlets, and establishing a testing plan;
2. *Testing* drinking water to identify problems and take corrective actions as necessary; and
3. *Telling* students, parents, staff, and the community about the testing program and outcomes.

EPA is developing a 3Ts Toolkit for schools and child care centers, which will include revised guidance for programs and testing, as well as supporting materials to assist staff of schools and child care facilities with the implementation of programs and policies to reduce lead in drinking water. They are also working on materials and templates to help schools with communication efforts, and an LCR Quick Reference Guide for Schools and Child Care Centers directed at the approximately 10,000 schools and child care facilities that are public water systems. Further, the agency is developing a website for all things related to schools, child care centers, and drinking water ([www.epa.gov/safewater/schools](http://www.epa.gov/safewater/schools)), as well as videos highlighting the importance of testing and how to sample.

In December 2004, EPA co-hosted a meeting with DoEd on this topic, with the purpose of exchanging information and discussing options with national experts in drinking water and children’s health and education. Other collaborative activities include a memorandum of understanding (MOU) between EPA, CDC, DoEd, state drinking water programs, and drinking water utility organizations. The goal of this MOU is for signatories to encourage schools and child care facilities to test drinking water for lead; share results with students, parents, staff, and others; act to correct problems; and encourage the drinking water community to assist these facilities.

EPA is finalizing materials this week for signatures, web launching, and then printing. EPA will assemble packets of materials or provide individual pieces free of charge, in addition to their availability on the website.

They plan to send out announcements to school associations, child care associations, NACCHO, ASTHO, through the CDC to state and local child care licensing agencies, and through DoEd to safe and drug free school state coordinators. In addition, EPA will issue a press release and attend as many conferences for schools, childcare, and health officials as possible with the kits.

The email address for this program is [safewaterforkids@epa.gov](mailto:safewaterforkids@epa.gov).



**Parking Lot**

WGPE members raised a number of “parking lot” issues that they did not have the opportunity to discuss in depth but may want to address in future discussions:

*Sampling protocol.* Some members expressed dissatisfaction with the sampling protocol for LCR compliance, particularly because of its sample size. One member pointed out that the problem is compounded due to a lack of health effects research and establishment of health endpoints for lead. A member described the sampling process as “broken” and said it does not provide the public with information it needs.

*Evaluation of PE Communication.* Members pointed out that PE materials have not been evaluated for their efficacy in communicating information to different populations, so it is difficult to know whether the brochure language works. Members want to know more about effective methods of communication. They considered suggesting the EPA fund research on this topic.

*Data/Research Needs.* Several members noted that there are a number of research needs for lead and public education. Some recommended a literature review on existing information about health effects on sensitive subpopulations. Members recognized that, if funding for PE is limited, EPA, utilities, and others should learn more about how to communicate effectively and which populations are most at risk so they can prioritize and conduct outreach efforts in a way that promotes health and builds trust with consumers. Another member pointed out that it is also important to understand any unintended consequences of language. For example, when communicating about the health risks of lead in drinking water to new mothers, language should not encourage them to stop nursing.

**Public Comment**

No members of the public asked to make comments to the WGPE.