

The new lead and copper drinking water rule: Is it enforceable?

New lead rule won't protect children

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Lead poisoning is one of the nation's most urgent environmental health problems. The Centers for Disease Control calls it "the most common and socially devastating environmental disease of young children." The statistics are shocking: three million young children — one out of every six — have blood lead levels high enough to impair mental development.

Unfortunately, while the health risks are enormous, the federal response is minuscule. In some instances, it is even counter-productive. The new federal national primary drinking water regulation for lead is a case in point.

Lead in drinking water is one of the most important causes of childhood lead poisoning. Overall, lead from drinking water is 20 percent of the public's exposure to lead. Thirty million children under the age of six are exposed to lead in their drinking water. If lead were eliminated from drinking water, the blood lead levels in one million children would be brought below the level known to affect the brain.

Sadly, small infants are the most vulnerable to drinking water contamination. When mothers boil tap water to make baby formula germ-free, they unintentionally concentrate the lead. Infants who drink the contaminated formula can suffer permanent brain damage.

Congress responded to this health crisis in 1986 by mandating that the United States Environmental Protection Agency (EPA) set a new nationwide standard for lead in drinking water. EPA failed to meet its 1989 deadline for setting the new standard. Under court order, the agency finally acted in May — adopting a fundamentally flawed lead regulation.

The problems with EPA's rule are numerous. To begin with, most of the EPA requirements are not triggered unless more than 10 percent of the homes in the community have lead levels in tap water that exceed an "action level" of 15 parts per billion (ppb). By EPA's own reckoning, nearly one million Americans with high lead levels above 15 ppb will receive no protection under this "action level" approach.

Even where clean-up is required under the new EPA rule, there is little assurance the water will be properly treated to reduce lead corrosion. EPA favors self-regulation by water companies, directing water companies to submit proposed corrosion control plans to the state for approval. Inexplicably, the public has no opportunity to review and comment on these plans.

Removal of lead pipes used by water companies is the final step of EPA's proposal. But it occurs at a glacial pace that takes nearly a decade to start and more than 20 years to complete. Worse, because of loopholes in the program, water companies are not required to remove any lead pipes in their systems that contribute to, but do not exclusively cause, problems at the tap.

Congress must act quickly to correct these flaws. Along with Congressman Gerry Sikorski of Minnesota, I have introduced comprehensive legislation to stop childhood lead poisoning. Our bill, H.R. 2840, would strengthen the EPA regulation by requiring action to remove lead whenever the lead concentration in the water in any home exceeds 10 ppb. It also would shorten cleanup deadlines, provide for public comment, and close loopholes in the service line replacement program.

The drinking water provisions in H.R. 2840 have been endorsed by a wide variety of health, environmental, and educational organizations, including the American Academy of Pediatrics, the National Education Association, and the Alliance to End Childhood Lead Poisoning. The National League of Cities, which represents many municipal water suppliers, has testified that in many respects "this legislation is substantially better than the EPA rule."

Beyond drinking water, Congress must also confront the other major causes of lead poisoning, including deteriorated lead paint and lead in the food supply. H.R. 2840 would insure that families are informed about the risks they face from lead paint before they move into a new home or apartment. And it would also require the Food and Drug Administration to bring down lead levels in food.

We owe it to our children to reverse EPA's misguided course without delay.

Water suppliers are actively working to get the lead out

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Although exposure to lead from drinking water contributes only about 10 to 20 percent of total public exposure, (other sources are paint, soil, and air), water suppliers are actively supporting measures to reduce lead exposure from drinking water as well as other sources.

The American Water Works Association supports the efforts of the Congress and the Environmental Protection Agency (EPA) to develop and enforce effective laws and regulations which will protect public health. We have worked with EPA in developing the EPA lead rule and are currently working with the Congress to strengthen EPA's capability to deal effectively with lead contamination.

The EPA lead rule recognizes that the major source of lead contamination in drinking water is from lead in home plumbing and lead service lines connecting homes to water mains. For this reason, lead is unique as a drinking water contaminant in that it primarily occurs after the water has been treated and distributed to the consumer. The action level established by EPA will protect over 95 percent of the American public from high lead levels in their drinking water. This is a major advance over the previous rule which allowed high lead levels in the public water supply system and did little to protect consumers from lead in their own plumbing or service lines.

Congress is now considering legislation which would allow EPA to establish both a standard for the public water system and an action level at the tap. This will assure the American people that the public water supply is free of unsafe lead levels and that appropriate action will be taken by public water suppliers to minimize the lead levels at the tap.

The new EPA lead rule is certainly enforceable. The real question is — can the rule or any legislation accomplish the goal of completely preventing the possibility of lead poisoning in children? Unfortunately, no. One reason is that most of the sources of exposure, old paint, soil,



etc., are unregulated, diffuse, and often unidentified.

In terms of water, the tragedy of lead contamination is that, despite the best efforts of the Congress, EPA, and the public water systems, children could continue to be exposed to lead contamination in drinking water from lead in home plumbing. Despite proposed legislation or the EPA lead rule, excessive lead levels from plumbing could still be found at some taps — even when a public water system has lead-free water, has removed all lead service lines, and has installed optimal treatment to minimize lead leaching. This was the case in the recent sampling which found high levels at some taps in the Capitol in Washington, DC.

While legislation and regulations will help reduce possible lead contamination in drinking water, it will not solve the problem of lead exposure of children drinking water from home plumbing systems containing lead. More must be done to encourage people to replace lead plumbing fixtures in their own homes.

The critical step that remains in protecting the public from lead exposure in drinking water, that is, replacing household fixtures, lead solder, and connections, is an area over which water utilities do not have jurisdiction. Thus, we call upon those with solutions to the household aspect of the lead problem to step forward so we can join together to address all aspects of the problem. Then, truly, we as a nation can "get the lead out!"

A state's perspective on implementation and enforcement

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An effective state program that addresses the requirements of the Lead and Copper Rule will inform suppliers about the regulations and provide them with training and technical assistance. Before state agencies can provide these functions, training of state staff will be required. Without these activities, the effectiveness of state enforcement actions is minimal and noncompliance is heightened. The rule also requires states to make numerous complex decisions directing specific corrosion control treatment for each public supply.

A national survey estimated that states would initially need about \$47 million dollars and thereafter \$38 million dollars annually to implement the rule. State drinking water programs will not be able to meet the scope of the responsibilities imposed by the Lead and Copper Rule without hefty increases in resources

for these programs. Implementation and enforcement issues that must be dealt with are outlined as follows.

Data Management: will states have data management systems that are capable of storing and analyzing the vast amount of testing data needed to make compliance determinations and select the best corrosion control treatment options? Without such systems, it will be very inefficient for states to track a system's compliance with the rule because of the innumerable compliance items contained in the rule. While many states are developing such systems, will they be ready when the rule becomes effective?

Sampling: States will not be able to examine whether or not the actual sampling sites meet the criteria established in the rule. Systems may also have great difficulty meeting the criteria due to lack of accurate information regarding interior household plumbing. Will samplers be able to collect unflushed samples in private homes in the early morn-

ing, and if homeowners collect the samples, how will systems assure they are taken according to protocol? We expect many systems will not comply (at least initially) with the monitoring requirements.

Corrosion control: States are required to designate for each system its optimum corrosion control technique and specify the optimum value for the appropriate water quality parameters. How will states make these decisions responsibly and in a timely fashion? Training of state personnel will be essential. Furthermore, will systems consistently be able to meet the lead and copper action levels even with optimum corrosion control? Test data available to date indicate this may be a substantial problem. How will states and systems deal with situations when optimum corrosion control strategies conflict with wastewater discharge permits, for instance when corrosion inhibitors containing zinc or phosphates are the optimum method?

Many small systems, especially

nontransient systems, do not presently treat their water; the relatively precise chemical dosages needed for corrosion control will call for competent operators that are, in many cases, simply not available to the smallest public water systems. Without competent operators, chemical overdoses, with potential adverse health effects, or frequent underdoses, limiting effectiveness of corrosion control, will occur. With small systems, states will often need to consider simplicity and safety, rather than theoretical effectiveness of treatment systems in specifying "optimal corrosion control."

In summary, the rule presents many difficulties to states for which easy answers are not available. The temptation and pressure for EPA to threaten primacy withdrawal to states for not fully complying with the rule may be very real. It remains doubtful, however, whether an action of this sort would improve the protection of public health in the long term.