1. FOREWORD BY JUDITH ENCK

Clean drinking water is a basic human right.

In the United States, we attempted to secure this right in 1974 when Congress adopted the Safe Drinking Water Act. The U.S. Environmental Protection Agency (EPA) and state and local governments have traditionally focused on testing our water at the source — reservoirs and rivers and groundwater — to ensure that it is safe for human consumption. However, after the water leaves the reservoir, river, or groundwater source, travels through pipes, and enters our homes to be consumed, it is not typically tested. This is a failure.

The discovery of unsafe levels of lead in drinking water in communities all across the country is a wakeup call that the EPA's testing at the source is insufficient to secure the safety of our drinking water. If a home was built before 1940, the service line that connects the home to the water main very likely contains lead, and that lead may be found in the drinking water. In many communities, lead service lines continued to be used until much later, in some cases until they were federally banned in 1986. Lead's impact on our health has been and continues to be horrific.

The issue is so significant that in November 2021, Congress made $15 billion available to municipalities to replace lead service lines — a very positive decision that we applaud.

But replace these problematic lead lines with what, exactly? While dealing with the lead problem, will we be unintentionally creating new and different problems?

After Congress voted to provide this $15 billion, I inquired if they had considered what piping material should be used to replace the lead pipes. The answer was no. I then asked the EPA if it would offer guidance on what material should be used to replace the lead pipes. Again, the answer was no.

Those two answers inspired the publication of this report.

Local governments are being left on their own to make the critical decision about what materials should replace lead. And guess what's often being promoted as the alternative? Plastic. Once again, plastic is being made central to the lives and health of millions of Americans without much, if any, thought and without comprehensive oversight.

One might assume that plastic pipes should be used because they are more affordable, but that is not actually the case. In fact, the bulk of the expense of lead service line replacement comes from the machinery and labor costs of digging up streets and replacing the pipes, not from the costs of the replacement piping. We've reviewed bids that were submitted to several municipalities, and choosing copper rather than plastic raised the total project price by about 5% on average. Needless to say, it would be very expensive to repeat this process if the replacement pipe material proves, as lead did, to be unsafe.

For plastic pipes, most state governments rely on an assurance of safety provided by the National Sanitation Foundation, a private organization that is partially funded by the pipe manufacturers who pay the organization to certify their products. NSF relies on self-reported data from the manufacturers of plastic pipes. This is not an independent process.

Having industry oversee the safety of its own products and materials has not worked out well for our society in the past — nor is it a rational approach. For example, the EPA would not rely on the coal industry to develop air pollution standards. Why is this an acceptable practice for plastic pipes?

Lead pipe is shown after being replaced by a copper water supply line to a home in Flint, Michigan. (AP Photo/Paul Sancya)

While we strongly support the replacement of lead service lines, we need to know that the replacement pipe material used is safe. Beyond Plastics commissioned the well-respected science writer Meg Wilcox to look at the published literature, go beyond my initial inquiries, and examine this issue. What Wilcox found is eye-opening and raises concerns that need to be considered by the state and local officials who will be deciding what type of pipes will be used in their communities, as well as the residents who will be using the water that flows through the pipes.

The data on the safety and sustainability of plastic piping make a very strong case that replacing metal pipes with any type of plastic piping is likely to be a bad decision. As with all plastic products, the risk of leaching chemicals that are harmful to human health is real. There is evidence that this will occur, and the necessary testing to prove otherwise is either inadequate or nonexistent.

Communities that opt to replace their lead service lines with plastic pipes may well be leaping from the frying pan into the fire. And without a well-staffed, fully funded, trustworthy public body to ensure public safety, the profits of the plastics industry will inevitably be an unchecked driving force.

Although this is a complex topic, we've worked hard to make this report user-friendly, including posing some common-sense questions that local government, state government officials, and the public should ask when deciding what type of pipes to use.

Local residents have an important role to play in this process as they are the ones who will be drinking the water that flows through these pipes. They should review this information and have a voice in how the $15 billion in federal tax dollars and untold billions in other state and local funding will be used to install new pipes in their communities. We should all be informed about what is bringing water into our homes, into our bodies, into our lives.

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