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# West Coast Publishing

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## Water Resources Protection 2021-22 Affirmative

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# AFFIRMATIVE EVIDENCE FILE INTRO

## WATER RESOURCES 2021-2022 WEST COAST AFFIRMATIVE

**Resolved: The United States federal government should substantially increase its protection of water resources in the United States.**

### Finding Arguments in this File

Use the table of contents on the next pages to find the evidence you need or the navigation bar on the left. We have tried to make the table of contents as easy to use as possible. You'll find scenario/impacts, affirmatives, disadvantages, counterplans, and kritiks listed alphabetically in their categories.

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**Resolved: The United States federal government should substantially increase its protection of water resources in the United States.**

# AFF LEAD PIPES

## Lead Pipes Aff Explanation

This affirmative case file with negative answers is about the issue of lead water pipes in the US. After the Flint water crisis, which began in 2014, there has been increasing conversation around the safety of continuing to use lead service lines (LSLs) to connect public water systems to homes, buildings, and communities. Although lead is an extremely malleable material that's been good for making pipes for water delivery, it is a neurotoxin that has consequential impacts on human health, especially with high levels of consumption and exposure. To remedy this, water utility companies typically inject a chemical coating within lead pipes that prevents the lead from breaking down and entering the water stream, but over time and with disturbances these protections can fail.

The Affirmative case calls for a plan for the US federal government to allocate \$50 billion to fund an immediate LSL replacement program for the entirety of the US. The inherency section of the Affirmative evidence highlights the degree of the issue in the wake of the Flint crisis, the failure of current federal policies and regulations in managing lead exposure levels in water systems, and the slow and costly speed in which local and state authorities have already been attempting LSL replacements. The Harms section of this file outlines the health consequences of lead exposure which disproportionately affect children, environmental justice issues with leaving people exposed to lead infected water, and the ecological racism implications due to communities of color and low-income communities being most affected and unable to replace pipes themselves. The Solvency section of this file highlights the necessity for federal action on this issue, and identifies the costs for a complete replacement for all lead pipes in the US to be replaced. After the 1AC, there are extensions for the points above, and answers to typical negative arguments against the case including Disadvantages like Federalism and Counterplans like other water infrastructure projects.

The Negative responses in this file take multiple approaches in answering affirmative's of this kind. On the Inherency level, there is evidence indicating the existing programs for federal funding and support for LSL replacements and existing policy strategies states and local governments are already implementing. On the Harms level, there are arguments that the recently changed EPA Lead and Copper Rule sets new policy regulations and proposals that resolve the harms of the affirmative, and arguments that there are alternative causes for lead exposure to humans. Solvency arguments include cost, the issue of private property laws, and how incremental partial replacement strategies being sufficient to solve the harms. Additionally, there are specific case Disadvantages about lead pipe alternatives (usually copper or plastic) and their health effects, as well as links to a Federalism Disadvantage that can be utilized with the state and local response arguments on case.

## Lead Pipes 1AC

INHERENCY:

### **The Flint water crisis in 2014 demonstrates the need for lead pipes to be replaced nationally**

Lauren **Rosenthal** and Wall **Craft**, correspondents for American Public Media, 4 May **2020**, “Buried Lead,” APM Reports, <https://www.apmreports.org/story/2020/05/04/epa-lead-pipes-drinking-water>, accessed 3/18/21

The crisis in Flint started in 2014, after city officials tried to save money by transitioning away from using Detroit's water and temporarily tapping into the nearby Flint River. The river water was naturally more corrosive and would need to be treated. But utility managers made a disastrous move. They stopped the necessary treatments, and the protective coating inside the city's lead pipes melted away, carrying toxic doses of lead to residents' faucets. The tragedy was, in some ways, an exceptional event due to negligence by city and state officials that's been well documented. But one detail is often overlooked. Despite the incredibly high lead levels in Flint's drinking water — in some cases as high as 13,200 parts per billion — the Lead and Copper Rule requirements failed to flag the disaster. Astonishingly, even amid the crisis, Flint officials still managed to produce lead test results below the federal action level for months. The city needed 90 percent of its sampling sites to come back below 15 parts per billion, and when they did, officials claimed the water was safe. But some residents didn't trust Flint and sounded the alarm that their water was poisoned. LeeAnne Walters was one: After municipal tests found 397 parts per billion at her home, Walters reached out to Miguel Del Toral, who eventually blew the whistle on Flint within the EPA.

## The EPA's Lead and Copper Rule isn't enough – only fully replacing LSL's solves exposure and long-term economic benefits

Tom **Neltner**, Chemical Policy Director for the Environmental Defense Fund, 12 March 2020, "Everyone needs their lead pipes replaced, not just those who can afford it," Environmental Defense Fund, <https://www.edf.org/blog/2020/03/12/everyone-needs-their-lead-pipes-replaced-not-just-those-who-can-afford-it>, accessed 3/15/21

And proposed changes to the federal regulation for lead in water, the Lead and Copper Rule, could make the environmental justice concerns and health equity disparities even worse. The connection between lead exposure and heart disease Lead exposure isn't a danger for children alone. It also puts adults at higher risk of death from cardiovascular disease. Until now, we haven't known what these findings mean for the societal costs of lead and the benefits from reducing exposure. In a new analysis, we used publicly available information from the Environmental Protection Agency to quantify the benefits of replacing all lead service lines. We found that each line replaced yields a \$22,000 payback in reduced deaths from cardiovascular disease — that's more than \$205 billion over 35 years. This staggering figure underscores the need for a national commitment on lead pipe replacement that won't leave vulnerable communities behind when deciding how to fund these replacements. The time is now for a renewed national commitment These analyses come at a critical time, as the EPA finalizes revisions to the Lead and Copper Rule. The agency proposed revisions in 2019 that — while a step forward — fall short in several key ways, including by continuing to treat lead service line replacement as a last resort instead of an integral part of a long-term plan to protect consumers. EDF submitted extensive comments calling on the agency to strengthen the rule, including providing key recommendations from our research, and we anticipate that the EPA will incorporate our concerns into the final rule. But it will be years before a new rule is in effect. In the meantime, cities and states should step up to fully replace their lead service lines, while ensuring funding and other support for low-income and communities of color. Fortunately, hundreds of communities across the country are taking steps in this area, and we've seen innovative approaches in Denver, Cincinnati, Washington, D.C., and the state of Michigan. The challenge of fully replacing the nation's lead service lines may be monumental, but as we now know, it not only makes common sense — it makes economic sense, too. Our new research shows how important it is to see that this work benefits all residents equitably.

## **Lead pipe service lines affect 10 million US homes – only by replacing lead pipes can the root cause of the issue be addressed**

Keith **Gaby**, media contact for the Environmental Defense Fund, **2019**, “Lead pipes: A threat to kids across America,” Environmental Defense Fund, <https://www.edf.org/health/lead-pipes-threat-kids-across-america>, accessed 3/15/21

Flint failed its residents, especially its children, at many levels. It's now our collective responsibility to ensure that the tragedy that occurred in Flint is not replicated in other cities across America. More than 500,000 kids in the U.S. have elevated levels of lead in their blood, primarily from lead paint and pipes. 9.2 million U.S. homes have lead pipes Up to ten million homes across the country get water through lead pipes - called lead service lines - that connect the main drinking water line in the street to our homes. Corrosion control can help manage the risk of lead in water, but the only effective long-term fix is getting rid of the lead pipes. We need a strategy that addresses the root causes of lead exposure before a crisis hits, not after it.

### **HARMS:**

#### **The Flint water crisis proves lead pipes are a serious water infrastructure issue that must be addressed**

Ross **Pomeroy**, staff writer for Real Clear Politics, 17 October **2019**, “Why Does the U.S. Still Have So Many Lead Water Pipes?,” Real Clear Science, [https://www.realclearscience.com/blog/2019/10/17/why\\_does\\_the\\_us\\_still\\_have\\_so\\_many\\_lead\\_water\\_pipes.html](https://www.realclearscience.com/blog/2019/10/17/why_does_the_us_still_have_so_many_lead_water_pipes.html), accessed 3/17/21

Five years ago, the Flint Water Crisis woke Americans to the potential danger of lead in drinking water. Still, many onlookers might think that this is an isolated problem, endemic to a forlorn city long seen as an outlier from the rest of America. While it's true that America's drinking water is safe and generally well-managed, it's also true that tens of millions of Americans rely on public drinking water systems that utilize vast lines of aging lead pipes and maintain delicate systems which prevent that lead from leaching in. Should these safeguards fail, many people could find themselves drinking dangerously tainted water. Today, we know lead to be a highly toxic metal, particularly dangerous to children, but more than a century ago, we knew it simply to be dense and durable yet also soft and malleable. Moreover, lead is nearly impervious to rust and doesn't decay from soil contact. These qualities made it perfect for smaller pipes called service lines that branch off from larger water mains and carry water to buildings, where they must twist and bend to get to sinks, showers, and toilets. Plumbers also became enamored with lead fittings and solder to rig piping within houses. "Despite lead being more expensive than steel or other pipes, lead pipes were a better investment for municipalities and building owners because they lasted so much longer," author Seth M. Siegel described in his recently published book *Troubled Water*. "By 1900, twenty-three of the twenty-five largest U.S. cities, and 85 percent of all cities, were primarily using lead service lines," Siegel added, citing research by Werner Troesken, a Professor of History at the University of Pittsburgh. While the use of lead for new drinking water lines slowed – eventually to a standstill – in the second half of the 20th century, there remains more than 6.1 million lead service lines in the United States, most prominently in Illinois and Ohio.

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## **The new EPA Lead and Copper Rule lowers the annual LSL replacement rates and has lead exposure minimum rates that are still dangerous**

Sarah **Kaplan** and Brady **Dennis**, environmental health reporters for the Washington Post, 22 December 2020, “Federal lead-pipe rule overhauled for first time in decades,” The Washington Post, <https://www.washingtonpost.com/climate-environment/2020/12/22/epa-lead-drinking-water/>, accessed 3/17/21

In addition, water utilities would be required to replace their portion of a lead service line anytime a resident decides to replace the lead pipe leading to his or her home. In communities that exceed the 15-parts-per-billion federal action level, officials will be required to replace a minimum of 3 percent of known or suspected lead service lines annually. That’s a more lenient standard than the current minimum requirement of 7 percent — and one unlikely to sit well with some public health advocates. That rule was “littered with loopholes and off ramps,” Wheeler said Tuesday. Among them: utilities were allowed to replace just part of lead service lines, which can cause spikes in lead contamination. He argued that the new rule’s 3 percent criteria will do more to reduce lead service lines than the old, faulty one. But the new rule will still allow millions of lead service lines to remain in use. It does not require utilities to replace pipes unless they detect lead concentrations above the action level in 10 percent or more of taps tested. “It’s just a missed opportunity,” said Mona Hanna-Attisha, a Michigan State University professor and pediatrician. “That’s what breaks my heart most.” In 2015, Hanna-Attisha went public with research detailing the dangerously high lead levels in the children of Flint, Mich. — exposing an ongoing water crisis in the mostly low-income, majority-Black city after residents had been voicing concerns for years. Though the federal government will continue to permit lead pipes where lead levels are below 15 parts per billion, the American Academy of Pediatrics has documented lasting decreases in cognition in children exposed to concentrations of just 5 parts per billion. Even the EPA has set its goal maximum contaminant level for lead in drinking water at zero. Olson pointed out that low levels of contamination coming from taps today don’t necessarily mean the water won’t be dangerous tomorrow. Nearby construction, water main repairs and other disturbances can shake loose lead particles that have been sitting in pipes for years. Flint’s water crisis was brought on when the city switched to a water source that wasn’t treated to prevent corrosion. By allowing much of the nation’s lead infrastructure to remain in the ground, Hanna-Attisha said, the new rule is “by and large a recipe for more Flints to come.”

## **Almost any amount of lead exposure has extreme health consequences, only removing lead pipes solves**

Lauren **Rosenthal and Wall Craft**, correspondents for American Public Media, 4 May **2020**, “Buried Lead,” APM Reports, <https://www.apmreports.org/story/2020/05/04/epa-lead-pipes-drinking-water>, accessed 3/18/21

Lead is a dangerous toxin, fatal in large doses. By the time President Richard Nixon created the EPA in 1970, it was clear that even small amounts of lead could be harmful — especially to kids, whose brains and bodies are still growing. Chronic, low-level exposure can cause a "wearing down" of intellectual ability in kids, said Dr. Bruce Lanphear, a professor and clinician scientist at the BC Children's Hospital Research Institute in Vancouver, who studies the effects of lead on kids. It can be subtle at first — a few lost IQ points, increased risk of attention deficit hyperactivity disorder or difficulty focusing in class. Kids who struggle in school are less likely to graduate and go to college. Prolonged exposure can have more severe effects. There's a growing body of research that associates lead exposure with lack of impulse control and criminal behavior. So far scientists haven't found a threshold of lead exposure in kids at which there's no risk. Beginning in the early 1970s, the government ordered manufacturers to begin phasing out lead in everyday products, starting with gasoline and paint. Water that travels through a lead pipe will almost certainly contain some level of lead, though it can fluctuate daily. The only way to ensure that drinking water is completely free of lead is to remove lead pipes.

## **Children, pregnant women, low-income people, and minorities all face higher risks of lead exposure**

Centers for Disease Control and Prevention (**CDC**), Childhood Lead Poisoning Prevention Program, 2 November **2020**, “Populations at Higher Risk,” Centers for Disease Control and Prevention, <https://www.cdc.gov/nceh/lead/prevention/populations.htm>, accessed 3/17/21

In many places across the United States, significant numbers of children are still exposed to lead. This is due mainly to the different sources of lead in the environment and other risk factors. For example, older houses and houses in low-income areas are more likely to contain lead-based paint and lead pipes, faucets, and plumbing fixtures. Children who live in households at or below the federal poverty level and those who live in housing built before 1978 are at the greatest risk of lead exposure. Also, communities of color are at a higher risk of lead exposure because they may not have access to safe, affordable housing or face discrimination when trying to find a safe, healthy place to live. This is called housing inequity, and it puts some children, such as non-Hispanic Black persons, at a greater risk of exposure to lead. Children less than six years old are at a higher risk of lead exposure because their bodies are still developing, and they are growing so rapidly. Young children also tend to put their hands, or other objects, that may be contaminated with lead dust, into their mouths. Additionally, as lead can pass from a mother to her unborn baby, women who are pregnant are also at a greater risk for lead exposure. As some other countries have less stringent regulations to protect children from lead exposure, children who are immigrants, refugees, or recently adopted from outside of the United States are also at risk for higher lead exposure.

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## **Lead in water affects nearly 20 million people in the US and has disproportionate health impacts on children**

Lauren **Rosenthal** and Wall **Craft**, correspondents for American Public Media, 4 May **2020**, “Buried Lead,” APM Reports, <https://www.apmreports.org/story/2020/05/04/epa-lead-pipes-drinking-water>, accessed 3/18/21

It's indisputable that there's no safe amount of lead for humans. The toxin is especially dangerous for children; even small amounts can inhibit brain development and intellectual ability. Congress banned the use of lead pipes in 1986 but allowed those already in the ground to remain. Three decades later, an estimated 15 to 22 million Americans still cook with and drink tap water entering their homes through lead pipes, known as "service lines." Instead of replacing all the lead service lines, the government has attempted to monitor and limit lead contamination in water, principally through the EPA's Lead and Copper Rule. The nearly 30-year-old regulation lays out treatment standards that depend on regular testing. Lead is colorless and odorless when it's dissolved in water. The only way to detect it — and confirm that treatment works — is by testing water from the tap.

## **Lead exposure in water sources is an issue of inequity and environmental justice – replacing lead service lines is key to solve**

American Public Health Association (**APHA**), Environmental Health, **No Date**, “Lead,” American Public Health Association, <https://www.apha.org/lead>, accessed 3/17/21

Everyone deserves access to safe drinking water. Yet in Flint, Michigan, lead in the water supply caused many in the community to be exposed and, ultimately, resulted in lead poisoning in many children. This case has brought about concerns of inequities and environmental injustice. As a public health priority, systems must be in place that reduce and respond to environments that are harmful to the public's health. This requires more resources to communities facing the greatest threats. APHA supports the Lead Service Line Replacement Collaborative's goal to speed up voluntary lead service line replacement in communities across the United States. The collaborative encourages the removal of lead lines that are in contact with drinking water.

## **Traditional methods of lead pipe replacement has disproportionate on low-income and communities of color – only full national replacement solves**

Tom **Neltner**, Chemical Policy Director for the Environmental Defense Fund, 12 March **2020**, “Everyone needs their lead pipes replaced, not just those who can afford it,” Environmental Defense Fund, <https://www.edf.org/blog/2020/03/12/everyone-needs-their-lead-pipes-replaced-not-just-those-who-can-afford-it>, accessed 3/15/21

Across the country, over 9 million homes still get their drinking water through a lead pipe. Given our growing understanding of the risks of even low levels of lead exposure to both children and adults — and the benefits of reducing exposure — replacing these lead service lines is a no-brainer. Two new analyses underscore the need to make lead pipe replacement a national priority, and for programs to prevent disproportionate impacts on low-income and communities of color. Lead pipe replacement and environmental justice The default approach to lead service line replacement, performed during infrastructure repair work, involves replacing the line that's on public property, but leaving the portion on private property untouched unless the resident pays. As a result of these ‘partial replacements,’ residents are placed at risk for greater lead exposure. It's also a missed opportunity to achieve the long-term benefits and cost savings of doing it right the first time. While intuitively, this poses a major equity concern, we wanted to test the theory in a scientific way. With support from EDF, researchers at American University evaluated data on more than 3,400 lead service line replacements conducted in Washington, D.C., from 2009-2018. During this period, the water utility had launched a program to streamline the process: Homeowners could have their lines replaced during infrastructure projects, or voluntarily, outside of such planned work. Researchers found that the program had the unintended consequence of disproportionately impacting low-income and Black households. Fortunately, Washington, D.C., has a new policy that takes steps to resolve the problem moving forward while addressing the legacy issue. Most of the 11,000 other cities with lead service lines have not taken such steps, however, and are likely still using the default approach.

### **PLAN:**

**Plan Text: The United States federal government should substantially increase its protection of water resources in the United States by allocating \$50 billion dollars towards the full and immediate replacement of all lead service lines (LSLs) in the country**

**SOLVENCY:****Biden's administration could allow EPA regulatory changes and congressional funding for LSL replacement**

**The Economist**, 3 December 2020 edition, "Millions of Americans still get their drinking water from lead pipes," The Economist, <https://www.economist.com/united-states/2020/12/03/millions-of-americans-still-get-their-drinking-water-from-lead-pipes>, accessed 3/17/21

With federal help, states and cities might move faster. One concern is regulation. The EPA last updated its Lead and Copper Rule, setting out how fast lead pipes should be replaced, in 1991. It requires 7% of them in a given site to be swapped out yearly, though this has evidently not been enforced. An amendment the EPA sent to the White House in July, which is still awaiting Donald Trump's signature, would relax that to 3% a year. (It would also tighten rules to speed replacement in schools.) Mr Olson calls the proposed change "appalling". Cities want to make changes, but swapping out 10m service lines could cost \$50bn, says Mr Olson (it is cheaper to do it in bulk). Twice this summer the Democrat-run House of Representatives passed bills to start paying for it—first a \$22.5bn authorization, then an appropriations bill that set aside \$1bn for this fiscal year. Proposed infrastructure bills also include sums for removing lead pipes. But in the Senate such plans have, so far, led nowhere. Joe Biden's administration could nudge things on. The EPA may set higher standards again and might order overdue public hearings on the topic, perhaps in badly afflicted cities like Flint. A bill co-sponsored by a Republican congressman from New Jersey, Chris Smith, would require all lead pipes to be replaced within a decade. His timetable may look too ambitious, but waiting for 500 more years to fix the problem isn't much of a plan, either.

## **Congress can fully replace all lead service lines nationally with a \$45 billion investment – the plan allows water utility companies to replace LSL's on both public and private property**

Joanna **Slaney**, Legislative Director at the Environmental Defense Fund, 16 April **2020**, “The next infrastructure stimulus bill is the right place for lead pipe replacement funding – to create jobs, save money and provide safer water for all,” Environmental Defense Fund, [http://blogs.edf.org/health/2020/04/16/infrastructure-stimulus-bill-lead-pipe-replacement-funding/?utm\\_source=leadnet&utm\\_campaign=edf-health\\_none\\_upd\\_hlth&utm\\_medium=email&utm\\_id=1587069360](http://blogs.edf.org/health/2020/04/16/infrastructure-stimulus-bill-lead-pipe-replacement-funding/?utm_source=leadnet&utm_campaign=edf-health_none_upd_hlth&utm_medium=email&utm_id=1587069360), accessed 3/17/21

While there is broad consensus that LSLs must be fully removed to protect public health, funding challenges have stymied progress. A \$45 billion investment in LSL replacement would: Protect public health by enabling water systems around the country to quickly begin eliminating the LSLs to protect residents. We have already seen from Newark and Flint that with adequate funding, communities can dramatically accelerate full LSL replacement. More than pay for itself by yielding more than \$205 billion in societal benefits in reduced cardiovascular disease deaths over 35 years — a 450% return on the investment on top of the benefits in protecting children’s brain development. The savings per line is greater than \$22,000 while the average costs, when the work is done systematically and efficiently, is less than \$5,000. Permanently upgrade infrastructure by facilitating critical upgrades to water distribution systems in a way that protects residents from increased lead in their drinking water when the LSL is disturbed. Reduce disparities by enabling utilities to fully replace LSLs, thereby resolving equity concerns that utilities currently face in replacing the lead pipe on private property. Funding would allow utilities to avoid rate increases on residents that would disproportionately impact low-income communities. Without support, these residents have to choose whether to pay for an LSL replacement out of pocket or risk exposure to more lead – a practice shown to pose serious environmental justice concerns. Create jobs for the plumbers and contractors who will perform the LSL replacements. This is shovel-ready work that involves construction and plumbing crews conducting the replacement. Utilities may not know where every LSL is located, but they know where most are and can get started quickly. The time is right to invest in our communities by upgrading our drinking water infrastructure. Cities, suburbs, towns, rural communities, and utilities share the goal of reducing lead exposure to children and adults, but funding is needed to conduct the replacements without placing too much burden on ratepayers – especially those already struggling to pay their water bills. The \$45 billion investment in full LSL replacement will strengthen the overall effort by better protecting health and reducing disparities.

## Cities prove replacement is slow and costly – federal support is key

**The Economist**, 3 December 2020 edition, “Millions of Americans still get their drinking water from lead pipes,” *The Economist*, <https://www.economist.com/united-states/2020/12/03/millions-of-americans-still-get-their-drinking-water-from-lead-pipes>, accessed 3/17/21

Over a century has passed since the dangers of consuming lead became widely known. Ingesting even small quantities damages young brains and may raise the risk of heart problems. Yet residents of Chicago—and many other cities—still mostly swig from taps fed by lead pipes. About 400,000 lead service lines connect to the mains in the Windy City, linking about four in five of all houses there. One study of nearly 3,000 homes, two years ago, found two-thirds had elevated levels of lead in their water. In Chicago some residents are told to flush their taps before drinking, to fit filters or avoid boiled water (doing so can concentrate higher levels of lead). Older houses in poorer districts may be worst affected. Since this problem has been identified for so long, why does it persist? The city’s water woes can be blamed in part on the historic clout of industrial lobbyists and a union of plumbers. In the last century, even as other cities stopped installing the pipes or started removing them, they nudged Chicago’s political bosses to set rules making lead pipes compulsory. That lasted until a federal ban on new lead pipes in 1986. More than three decades on, Lori Lightfoot recently became the first mayor to set out a plan to fix things. The catch? It will cost \$8.5bn, which the city government does not have. At the current pace of replacing fewer than 800 pipes a year, notes an alderman, residents won’t all get lead-free water until the mid-26th century. Mayors are more alert to the problem these days, especially since the water crisis in 2014 in Flint, Michigan exposed residents to high levels of lead leaching from their pipes. Flint is spending \$100m upgrading its system. Erik Olson of the Natural Resources Defence Council, who has campaigned on the issue for 30 years, says thousands of water systems across the country, serving tens of millions of people, still face “serious problems”. The new attention to the problem encourages him.

## Full LSL replacement has tremendous health and economic benefits

Caroline **Pakenham**, Roya **Alkafaji**, and Deborah **Philbrick**, policy experts with Elevate Energy, 2019, “MUNICIPAL STRATEGIES FOR FULL LEAD SERVICE LINE REPLACEMENT: LESSONS FROM ACROSS THE UNITED STATES,” *Illinois Municipal Policy Journal*, 2019, Vol. 4, No. 1, 121-140, [https://las.depaul.edu/centers-and-institutes/chaddick-institute-for-metropolitan-development/research-and-publications/Documents/IMPJ\\_121-139\\_Municipal\\_Strategies\\_Lead\\_Service\\_Replacement\\_copy%5B1%5D.pdf](https://las.depaul.edu/centers-and-institutes/chaddick-institute-for-metropolitan-development/research-and-publications/Documents/IMPJ_121-139_Municipal_Strategies_Lead_Service_Replacement_copy%5B1%5D.pdf), accessed 3/21/21

Beyond the health considerations associated with full lead service line replacement, economic benefits can also result from full replacement. A recent study by the Pew Charitable Trusts and the Robert Wood Johnson Foundation found that replacing lead service lines “in the homes of children born in 2018 would protect more than 350,000 children and yield \$2.7 billion in future benefits, or about \$1.33 per dollar invested” (Urahn et al., 2017, p. 2). The future benefits include improved health outcomes and economic benefits for impacted children (Urahn et al., 2017). Additionally, major investment into water infrastructure improvements can result in increased economic activity and jobs. A recent study found that investing \$82 billion in water infrastructure annually over the next decade would result in 1.3 million jobs and \$220 billion in economic activity (Value of Water Campaign, 2017).

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## **AFF EXTENSIONS**



## Inherency – Extensions

### **The EPA’s Lead and Copper Rule needs to be revised – but not without total replacement of lead service lines**

Keith **Gaby**, media contact for the Environmental Defense Fund, **2019**, “Lead pipes: A threat to kids across America,” Environmental Defense Fund, <https://www.edf.org/health/lead-pipes-threat-kids-across-america>, accessed 3/15/21

Update drinking water regulations. The Environmental Protection Agency needs to overhaul its lead in drinking water rule – the Lead and Copper Rule. In fall 2019, EPA proposed a revision to the LCR that would be a step forward but also has several serious flaws. Improve oversight of suppliers. Federal, state and local entities must also improve oversight to make sure utilities that supply water comply with the law. Disclose hazards earlier. When people buy or rent a home, they need to be told clearly and definitively about any lead pipes so that they can factor replacement costs into their decision making. Why replace lead pipes? Over time, water can corrode lead service lines, allowing lead to leach into the water. To prevent this, utilities add chemicals to reduce the amount of lead getting into the drinking water. But corrosion control can fail. Failures can be community-wide – like in Flint, where officials switched to more corrosive water – or in a single home when a pipe is disturbed. Unpredictable failures often go undetected. While corrosion control is necessary, it isn't a fail-safe. The best long-term solution is to replace the lead service lines. Twenty years from now, we don't want to still be struggling with these failures.

## **Congress is prioritizing stimulating the economy and improving water infrastructure – the plan is an essential part of that effort**

Joanna **Slaney**, Legislative Director at the Environmental Defense Fund, 16 April **2020**, “The next infrastructure stimulus bill is the right place for lead pipe replacement funding – to create jobs, save money and provide safer water for all,” Environmental Defense Fund, [http://blogs.edf.org/health/2020/04/16/infrastructure-stimulus-bill-lead-pipe-replacement-funding/?utm\\_source=leadnet&utm\\_campaign=edf-health\\_none\\_upd\\_hlth&utm\\_medium=email&utm\\_id=1587069360](http://blogs.edf.org/health/2020/04/16/infrastructure-stimulus-bill-lead-pipe-replacement-funding/?utm_source=leadnet&utm_campaign=edf-health_none_upd_hlth&utm_medium=email&utm_id=1587069360), accessed 3/17/21

During the past few weeks, Congress has taken extraordinary measures to provide much-needed emergency relief to people as we collectively struggle with the COVID-19 crises. Over the coming months, lawmakers have said they will turn their attention to providing funding to stimulate the economy with a focus on water infrastructure as a priority. Lead pipe replacement should be an essential part of that effort. To guide the Congressional effort, EDF and hundreds of others signed onto U.S. Water Alliance’s COVID-19 Relief and Recovery: Guiding Principles to Secure Our Water Future. The four principles are: Ensure water is reliable and affordable to all, Strengthen water utilities of all sizes, Close the water access gap, and Fuel economic recovery by investing in water systems. In line with of our support for these principles, EDF is advocating that Congress provide \$45 billion for water utilities to fully replace lead service lines (LSL) – the lead pipes connecting a home to the water main under the street. Today, there are more than nine million homes still serviced by LSLs in the country, exposing millions of children and adults to the myriad of harms associated with lead. For children, these harms include undermining brain development. In adults, lead has been shown to cause heart disease, cancer, and impact the neurological, reproductive, and immune systems.

## **Momentum to fully replace lead water pipes is high now after the Flint crisis**

Mark **Barna**, contributor for The Nation’s Health, July **2019**, “Momentum builds across US to replace lead water pipes: Water contamination an issue for millions,” The Nation’s Health: A Publication of the American Public Health Association, <https://www.thenationshealth.org/content/49/5/1.1>, accessed 3/17/21

Since the water contamination in 2015 in Flint, Michigan — caused by officials switching to a new water source that corroded lead pipes, leaching the metal into the tap water of thousands of households — hundreds of U.S. towns, cities and counties have become more proactive about replacing lead pipe lines. But the challenge for many communities and residents is paying the cost of replacement. Installation in the U.S. of lead service lines for homes and commercial buildings began in the 1800s and persisted in high volume into the 1920s, when the dangers of lead to human health became better known. Even so, some cities such as Chicago installed lead pipes into the 1980s. Most lead service lines are in cities and counties in the Northeast and upper Midwest. Corrosion control chemicals have had success containing the metal. But since the contamination in Flint, the push to completely replace lead service lines has gained momentum. “The goal is to fully remove all lead from the water main to the house,” Stephen Estes-Smargiassi, MCRP, director of planning and sustainability for the Massachusetts Water Resources Authority, told The Nation’s Health.

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## The Trump administrations EPA regulations have slowed the pace for LSL replacement

Sarah **Kaplan** and Brady **Dennis**, environmental health reporters for the Washington Post, 22 December 2020, "Federal lead-pipe rule overhauled for first time in decades," The Washington Post, <https://www.washingtonpost.com/climate-environment/2020/12/22/epa-lead-drinking-water/>, accessed 3/17/21

But advocates said the Trump administration's approach does not include the most important step to getting lead out of U.S. drinking water — requiring the removal of the estimated 6 million or more lead service lines that remain underground throughout the nation. Lead is a powerful neurotoxin that accumulates in the body and is particularly damaging to young children, causing brain damage, developmental and behavioral problems, and learning disabilities. There are no safe levels of lead exposure for children. "To us it is a bitter disappointment," said Erik Olson, a drinking-water expert and senior strategic director for health at the Natural Resources Defense Council. "The fundamental problem is we're going to leave millions of lead service lines in the ground for decades, and that's going to mean generations of kids' health will suffer."

## Water pipe infrastructure is aging and already needs to be replaced, current rate is too slow

Rachel **Layne**, CBS MoneyWatch contributor, 21 November 2018, "Lead in America's water systems is a national problem," CBS News, <https://www.cbsnews.com/news/lead-in-americas-water-systems-is-a-national-problem/>, accessed 3/21/21

It has been four years since the story of lead-contaminated water in Flint, Michigan, first riveted the country. Yet in recent weeks, news about lead-contaminated water and sluggish government responses are surfacing across the nation from cities including Newark, Chicago, Detroit, Baltimore and Milwaukee. There is no acceptable level of lead in drinking water, according to the Centers for Disease Control and the U.S. Environmental Protection Agency. So why are so many municipalities, homeowners and schools still finding lead in their systems today? One reason may be aging infrastructure and the cost to replace old water pipes and lead solder used in household plumbing. Drinking water is delivered via 1 million miles of pipes across the U.S., much of them laid in the early- to mid-20th century with a lifespan of 75 to 100 years, according to a 2017 report from the American Society of Civil Engineers. Those pipes are being replaced at an average rate of 0.5 percent a year -- at that pace it would take roughly two centuries to renew the whole system at a cost of around \$1 trillion, according to one estimate from the American Water Works Association. Meanwhile, a 2016 CNN report found that more than 5,000 U.S. water systems serving roughly 18 million people violated EPA rules for lead in water.

**Existing funds for LSL replacement only project a fraction of total pipes being replaced**

Environmental Protection Agency (EPA), October 2019, "Strategies to Achieve Full Lead Service Line Replacement," Environmental Protection Agency, [https://www.epa.gov/sites/production/files/2019-10/documents/strategies\\_to\\_achieve\\_full\\_lead\\_service\\_line\\_replacement\\_10\\_09\\_19.pdf](https://www.epa.gov/sites/production/files/2019-10/documents/strategies_to_achieve_full_lead_service_line_replacement_10_09_19.pdf), accessed 3/17/21

The analysis (refer to "Analysis of SRF for LSLR" in the LCRR docket under EPA-HQ-OW-2017-0300 at <https://www.regulations.gov>). estimates that 149,200 lead service line replacements could occur from DWSRF funds in the next 35 years. This represents 1.5-2.4% of the estimated 6.1 million to 10 million LSLs nationwide. It is estimated that approximately 9% of the DWSRF funding is being used for LCR compliance purposes, while the remainder funds proactive LSLR. The EPA analysis included LSLRs only when they were not coupled with other infrastructure work, unless the project description explicitly stated the number of LSLs replaced. The EPA took a conservative approach of excluding these LSLR from the analysis, which may result in an under estimation of full LSLRs due to DWSRF funding. It is also possible that DWSRF projects that only listed work such as main replacements would incidentally remove LSLs without explicitly describing LSLR in its project description, which would also result in an under estimation. The EPA assumes sustained interest in LSLR over thirty-five years. As proposed, the LCR revisions include provisions such as publicly-available LSL inventories and improved public education, which is expected to sustain demand for full LSLR over time. The EPA did not include a coefficient to increase or decrease the rate of DWSRF utilization for LSLR over the 35-year period of analysis. It is possible that EPA funding resources decrease over time, or that interest in LSLR decreases or competes with funding for other priorities. As proposed, water systems that exceed the lead trigger level or lead action level would be required to remove LSLs as part of a goal-based or mandatory program. It is estimated that the proposed rule will result in 146,000 mandatory full LSLR and 240,000 goal-based full LSLR, or an additional 97,000 and 240,000 LSLR from the current LCR over 35 years. While the EPA is aware of several water systems using SRF funds for proactive LSLR, a few are using SRF for compliance with the LCR. The EPA's estimate of DWSRF utilization for LSLR likely includes both proactive and compliance-based LSLR, however it is unknown what percentage of the estimate is proactive versus compliance-based.