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and Public Works

Subcommittee on Fisheries, Water and Wildlife

Washington, D.C.

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IMPLEMENTATION OF THE DRINKING WATER AND WASTEWATER  
INFRASTRUCTURE ACT: STATE PLANNING FOR FULL LEAD SERVICE LINE  
REPLACEMENT

Thursday, April 21, 2022

United States Senate

Committee on Environment and Public Works

Subcommittee on Fisheries, Water and Wildlife

Washington, D.C.

The committee, met, pursuant to notice, at 4:43 p.m. CST in  
The Presidential Room B and C, Shedd Aquarium, Chicago,  
Illinois, the Honorable Tammy Duckworth [chairman of the  
subcommittee] presiding.

Present: Senator Duckworth.

STATEMENT OF THE HONORABLE TAMMY DUCKWORTH, A UNITED STATES  
SENATOR FROM THE STATE OF ILLINOIS

Senator Duckworth. Welcome to this meeting of the Senate Environment and Public Works Subcommittee on Fisheries, Water, and Wildlife. Good morning. Thank you all for being here in the wonderful City of Chicago at the beautiful Shedd Aquarium for today's hearing with the Senate Environment and Public Works Subcommittee on Fisheries, Water, and Wildlife. What a fitting location for today's discussion of drinking water. I have to say, we could not have a better day.

This field hearing will seek to examine implementation of the lead abatement programs in the Drinking Water and Wastewater Infrastructure Act of 2021, also known as DWWIA and the \$15 billion in funding for the national lead service line replacement initiative, both of which were included in the historic Bipartisan Infrastructure Package that President Biden signed into law last year.

As I am sure many of the witnesses can attest today, there has been an historic lack of investment in our Nation's water infrastructure. This lack of investment has been especially profound in disadvantaged, small, rural, and tribal communities. At \$55 billion, DWWIA and the Bipartisan Infrastructure Law are hoping to change this, with the most significant investment in drinking water and wastewater infrastructure in history and

important programmatic changes that will assist States and municipalities in fixing and upgrading aging water infrastructure, including, this is especially important for Chicago, lead service line replacement, while also lowering non-federal cost-shares and increasing the use of grants to expand opportunities for more communities to access funding.

President Biden's national Lead Service Line Replacement effort will disperse funding to the States via the Drinking Water State Revolving Funds, to be used exclusively for lead pipe removal efforts in every State.

Now, according to the Biden Administration, this investment is considered a down payment on the estimated \$45 billion it would take to replace all pipes in this Country. I will continue to work to make sure that Congress follows through on the rest of this lead removal funding.

Lead pipes are a health crisis in our Country. According to the CDC, there is no known safe level of lead for children. Despite lead service lines being banned nearly 35 years ago, as of 2019, roughly half a million children under the age of six still had elevated levels of lead in their blood. We cannot continue to put our children at risk of permanent brain and kidney damage. We must figure out how to replace these pipes in an equitable and efficient manner. We must facilitate collaboration between States, municipalities, and the Federal

Government to finally make lead-free drinking water a reality for all communities.

The issue of lead contamination is no new challenge to my State of Illinois, and it is a cause that is very near to my heart. Illinois has more known lead service lines than any other State in the Country and Chicago has more than any other city. To put this in perspective, Newark had around 23,000 lead lines before they were able to replace all of them. Chicago has over 400,000, exponentially more.

According to a Chicago Tribune Article, between 2015 and 2020, tap water measurements in dozens of Illinois homes showed hundreds and sometimes even thousands of parts per billion of lead. These levels were comparable to those found by researchers during the Flint, Michigan crisis. To make matters worse, this lead contamination is most prominent in Black, Brown, and low-income communities.

However, the State has sprung into action, and now Illinois, and Chicago specifically, are ahead of the curve compared to many States when it comes to lead service line replacement plans. Illinois passed several laws last year making us one of only two States to mandate full lead service line replacement. Illinois law now requires that homes' lead service lines be replaced when replacing water mains, it requires water systems to submit a service line materials

inventory, and requires water systems to submit an initial lead service line replacement plan, among several others.

In 2020, Chicago launched its Homeowner Lead Service Line Replacement Program, designed to waive permit fees for residents who wish to replace their lead service lines, and the Equity Lead Service Line Replacement Program, which will provide lead service line replacement for eligible low-income residents, with a priority for homes with children or elevated lead levels in their water. This is great progress, but there is still much work to do.

These programs are progressing slowly, and significant roadblocks and unforeseen complications are arising throughout this process. Things like building codes, land easements, ownership requirements, financing restrictions, and funding are just some of the issues that our State of Illinois is dealing with, and other States across the Country will likely have to face to make a lead-free future a reality.

I am hopeful that Chicago will be an example of the critical role federal funding can have to increase, expedite, and improve the roll-out of lead service line replacement plans. Chicago and the State of Illinois should serve as a blueprint for cities across the Country on the steps, plans and issues that they will need to consider as they deploy their own service line replacement initiatives. I hope that today's hearing will

promote discussions that can improve the lead reduction plan for Chicago, and for Illinois as a whole, and help other States as we set out to accomplish lead service line replacement across the Nation.

I am so thankful to have such a great witness panel and a beautiful forum of the Shedd Aquarium to discuss this critical issue. We must get these poison pipes out of our homes. I look forward to the discussion today on how best to do that in an efficient and equitable way.

I would like now to take the time to introduce our witnesses. First, I would like to introduce John Kim, who was appointed Director of the Illinois EPA on January 22nd, 2019. Director Kim has served in many senior roles during his more than 25 distinguished years at the agency under five Governors of both parties. He most recently served as Chief Legal Counsel. He has also previously served as Director, Interim Director, Ethics Officer, Deputy General Counsel, Assistant Counsel/Special Assistant Attorney General, and Project Manager for an IEPA-China pollution prevention project. Holy cow.

[Laughter.]

Mr. Kim. I have been there a long time.

Senator Duckworth. You have been there a long time.

Institutional knowledge is a good thing.

In 2008 and 2009, Director Kim also served as Acting

General Counsel of the Illinois Department of Agriculture.

Before joining Illinois EPA, Director Kim was an Assistant Attorney General of Illinois and was the General Counsel to the Midwest Environmental Enforcement Association. He received his Juris Doctor from Southern Illinois University in Carbondale and his Bachelor of Science in industrial engineering from the University of Illinois at Urbana-Champaign.

Thank you for being here, Director Kim.

I would like to introduce Dr. Andrea Cheng, who is the Commissioner for the City of Chicago Department of Water Management. She has more than 17 years of experience in the department where she has worked in every aspect of the water purification and distribution process.

Commissioner Cheng has overseen multiple, large-scale research projects related to corrosion control of lead and managed capital plan projects such as the \$15 million construction of the department's new water purification labs. She developed the Nation's largest 311 lead kit sampling program and the city's water filter distribution program. She is also managing the development and implementation of the multi-year, multi-billion plan to replace the nearly 380,000 residential lead service lines in Chicago.

Commissioner Cheng is a nationally recognized expert on issues related to water quality, and has been published 40 times



on the subject. She is a licensed Professional Engineer and a Class A Public Water Supply Operator with a BS in Civil Environmental Engineering from the University of Illinois at Urbana-Champaign and her MS and a Ph.D. in Civil Environmental Engineering from the University of Texas at Austin.

Thank you for being here today, Commissioner Cheng.

Next, I would like to introduce Ms. Anthena Gore, who is a Strategist in the Water Programs unit at Elevate, a Chicago-based nonprofit that designs and implements clean and affordable energy, power, and water programs to bolster equitable climate action. In this role, Ms. Gore oversees the water affordability program portfolio, leading research and community engagement to better understand the scale and scope of water affordability challenges in the Great Lakes region, and facilitate community education and engagement to support lead service line replacement. She led the team in developing and publishing the City of Chicago Water Affordability Analysis, a two-year project extrapolating findings on residential utility billing data for more than a half million accounts, and recommendations to the city on water affordability strategies.

In her previous roles at Elevate, Ms. Gore was a sought-out subject matter expert on energy efficiency for public sector buildings and electric infrastructure in distressed communities, for which her work was published as a case study by the American

Council for an Energy Efficient Economy. Ms. Gore has also served on a select team from Elevate providing insight to the United Nations Sustainable Development Solutions Network on America's Zero Carbon Action Plan, and as a buildings and energy lead supporting three cities in the Bloomberg Philanthropies American Cities Climate Challenge.

Thank you for being here today, Ms. Gore.

Dr. Justin Williams is our last panelist, but not least. He is a Policy Manager at the Metropolitan Planning Council, which is an 87-year-old nonprofit dedicated to promoting sustainable, equitable infrastructure and planning in Illinois. As Policy Manager, Justin is responsible for advancing MPC's policy advocacy. He provides leadership on MPC's legislative and budget priorities, including developing MPC's annual policy change agendas.

Since 2020, Justin has led MPC's legislative advocacy on lead service line replacement in Illinois. He developed research, policy recommendations, communication materials, and outreach strategies that aided the passage of Illinois' Lead Service Line Replacement and Notification Act. Now that the bill has passed, he works on its equitable implementation, collaborating with State agencies, nonprofit partners, and elected officials, to ensure every resident of Illinois can have their lead service line replaced.

Thank you for being here today, Dr. Williams.

Now I will recognize each witness to provide their opening statement. Welcome, Director Kim. You are now recognized for your opening statement.

[The prepared statement of Senator Duckworth follows:]

STATEMENT OF JOHN J. KIM, DIRECTOR, ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

Mr. Kim. Thank you very much, Chairwoman Duckworth, for the opportunity to present information before the Senate Committee on Environment and Public Works this afternoon.

As Director of the Illinois Environmental Protection Agency, I am here today to provide information on the State of Illinois' current position in planning and preparing for full lead service line replacements in our communities. And I want to commend you on the excellent job you did in summarizing the State of Illinois right now, so I will be looking at some of the high points that you noted.

As you did note, Illinois is believed to have one of, if not the largest number of lead service lines in the Nation. That makes the infusion of additional federal funding to Illinois' State Revolving Fund far more valuable specifically to allow us to address full lead service line replacements. It is a vital task for us and something that is very important, although we will be discussing some of the obstacles and some of the challenges that we have before us.

Your work on the Drinking Water and Water Infrastructure Act and the federal infrastructure money from the Bipartisan Infrastructure Law, as you noted, will provide many opportunities for to work with community water supplies to begin

the process of addressing lead service line removal, with an ultimate goal of removing lead from drinking water in Illinois. We recognize this is a significant undertaking. But we also know that Illinois is in a unique and favorable position to address lead service line replacements.

As noted, a key step for us was passage and signing of Public Act 99-0922 in 2017, a new law advanced by a dedicated group of stakeholders and advocates. What that law requires is that community water supplies in the State will be required to begin developing and reporting service line material inventories to the Illinois EPA.

In 2021, our State legislature passed and Governor Pritzker signed into law Public Act 102-613, which is also referred to as the Lead Service Line Replacement and Notification Act. That act built upon the 2017 legislation to set clear timelines for community water supplies to complete their material inventories and required additional information to be included in those inventories. It also called for the submission of lead service line replacement plans. Most importantly, it did set up deadlines and timelines by which lead service lines will need to be removed.

The material inventories that are required under the new 2021 law will identify, as I noted before, additional information that will include the total number of service lines

in community water supplies, the materials of each of those service lines, the number of suspected lead service lines that have been identified since the last material inventory we submitted, and additional information. So based upon the information that we have received thus far, and the most recent material inventories submitted to us, over 3.8 million total service lines have been reported. Of those, approximately 667,000 are known to be and have been identified to be made of lead. We have an additional 820,000 service lines that are of unknown material.

Since State Fiscal Year 2017 to the present, the Illinois EPA has been working diligently to try and address this need in terms of providing important funding to community water supplies. In that time, 23 community water supplies have benefited from nearly \$67 million in funding provided through the Illinois EPA's State Revolving Fund. Each of those loans to those communities has been provided with 100 percent principal forgiveness.

Further, the Illinois EPA's Fiscal Year 2023 Intended Use Plan will also identify another 20 projects with another \$57 million in funding set aside to replace additional service lines. The additional funding that we have been talking about is provided both in terms of the federal capitalization grant funds that we receive on an annual basis, as well as the Water

Infrastructure Transfer Act, or Booker Act money that was allowed, which provided for a one-time transfer from the Clean Water Fund to the Drinking Water Fund. That allowed for a transfer of approximately \$170 million and that money has been put to very good use, as that funding is allowing for 100 percent principal forgiveness.

So these actions today demonstrate that the State of Illinois and the Illinois EPA have been very hard at work to facilitate ongoing lead service line replacement activity and importantly, planning for future projects. Illinois is prepared to begin utilizing Infrastructure Investment and Jobs Act funding with the introduction of projects in our Fiscal Year 2024 Intended Use Plan with our plan to begin accessing that IIJA money beginning in July of 2023. Our current projections will allow us to complete the lead service line replacement projects that we have before us utilizing the WIFTA money that we received and are still working through.

While we understand that additional funding such as this will provide significant benefits to Illinois communities, we also have to recognize and anticipate challenges, such as technical expertise, obtaining construction easements from individual residences, and finding qualified professionals and available resources that are able to actually complete the work.

Applying for funding under the existing SRF structure

involves an understanding of the technical, fiscal, and program requirements of the loan program. For example, an applicant must complete an Environmental Impact Study Review to ensure compliance with the National Environmental Protection Act. For disadvantaged communities, this kind of requirement can be overly burdensome and stands as a firm obstacle in the way of their accessing this loan money. Many communities simply do not have the existing resources to retain outside expertise for the planning and application phase.

To begin addressing this concern, Illinois EPA will be utilizing a new \$2 million appropriation of State funds from our most recent budget which will allow us to provide grants to the units of local government for costs associated with lead service line material inventories and technical assistance for water revolving fund applications. In essence, this is seed money which allows communities which would perhaps not otherwise have the financial wherewithal to begin that planning portion so that they can begin to position themselves to take the next step to seek funding for the actual removal activity.

As noted earlier, Illinois EPA has already started the process of funding lead service line replacements in Illinois, but one thing has been made clear to us. Our experience has been that communities are only interested in receiving funding which allows for 100 percent principal forgiveness. The main



reason for that is that communities are very reluctant to pass on the costs of lead service line replacements to all customers when not necessarily all those customers have lead service lines on their properties.

In closing, Illinois is committed to getting this vital funding to our communities, especially those disadvantaged communities that would have no other resources to take on the challenge. In Illinois, we already have deadlines for water systems to complete material inventories, deadlines for planning, and deadlines for replacement of lead service lines. The last significant hurdle we face is a dedicated and adequate funding stream to allow our citizens and our systems to complete necessary repairs.

Thank you very much, and I will be happy to answer any questions you may have about our program.

[The prepared statement of Mr. Kim follows:]

Senator Duckworth. Thank you so much, Director Kim.

I am going to ask that you pull the microphones a little closer to you so we can get a good recording.

Commissioner Cheng, you are now recognized for your opening statement.

STATEMENT OF ANDREA CHENG, COMMISSIONER, CITY OF CHICAGO,  
DEPARTMENT OF WATER MANAGEMENT

Ms. Cheng. Good afternoon, Chair Duckworth.

Thank you for inviting me to today's hearing regarding lead service line replacement initiatives. Thank you for shining a spotlight on Chicago and our home State of Illinois today. And thank you for your leadership and unwavering commitment on the Drinking Water and Wastewater Infrastructure Act of 2021, and ensuring that the Bipartisan Infrastructure Investment and Jobs Act includes funding for lead service line replacement. This historic federal investment can jump-start our work in Chicago, and in States and municipalities across the Country. Though the journey is far from over, it is an honor to appear before you today to share our progress, and what needs to be done.

Access to clean water should not be out of reach for any of our residents. When it comes to lead service lines, as you noted, Chicago unfortunately, has the largest number in the Country with approximately 380,000 in a dense urban environment. Despite that, we have been in compliance with the EPA's lead regulations since shortly after the Lead and Copper Rule was put in place in 1991.

Chicago is a leader in lead research and testing, focusing on corrosion control treatment. In fact, we will be switching to a new corrosion control treatment next year to continue to

reduce lead in water. Chicago also has one of the largest databases of lead testing in the U.S. We have mailed out over 100,000 free lead testing kits to residents.

But corrosion control is only one part of controlling lead in water. It is time for removal of our lead service lines here in Chicago. And that is what Mayor Lightfoot is doing. Addressing this legacy issue head on is her top priority for our Department of Water Management.

In 2021 we created an ambitious lead service line replacement plan here in Chicago to address this legacy issue. However, the costs associated with lead service line replacement are significant: approximately \$15,000 to \$26,000 per lead service line replacement for a whole one, including private side and public side. And we know that other cities who have had the most success with lead service line replacement offered some level of assistance for the private side of the lead service line. Again, we are grateful for this new and historic federal investment to help with our lead service line replacements.

Chicago has rolled out three lead service line replacement programs: a Homeowner Initiated program that waives up to \$3,100 in permit fees for those who are able to do their own replacement; also a one-block pilot of lead service line replacement alongside water main replacement that includes free public and private side; and an equity program funded by a HUD

Community Development Block Grant which provides free lead service line replacement for both the private and public side for low-income homeowners.

This equity program is unique in that it focuses entirely on low-income homeowners with prioritization towards those who have children in the home or elevated lead levels. These are the homes that are most impacted by lead service lines and least able to afford to replace them.

Next, we are in the process of starting a program for free, full lead service line replacement for daycares. Replacing a lead service line in a daycare doesn't just impact one family, it impacts many children.

Chicago has also been actively working on our lead service line inventory since 2016 by having staff note material properties during field work. Our goal is to have a database and online interactive lead service line inventory by 2023. In January 2023, our Break and Leak Lead Service Line program will be in full force, replacing the full lead service line any time there is a leak or break. We expect about 4,000 to 5,000 breaks or leaks per year, which means 4,000 to 5,000 lead service line replacements per year.

We will also be expanding our lead service line replacement alongside water main and sewer main replacements in 2023. We are looking at where and when to replace lead service lines on a

block-level with an equity lens, looking at numerous factors, including income, environmental justice and vulnerable population.

While logistically challenging, doing lead service line replacement alongside an entire block has been shown to reduce overall costs for many communities. While each community has its own set of unique challenges on lead service line replacement, there is an opportunity at this moment to make real, meaningful and practical progress, and there has never been more drive to overcome these challenges.

The scale of the work ahead requires strong coordination the federal, State, and local levels, as demonstrated here today. Field hearings like this help drive critically important innovation and I am extremely appreciative of our ability to testify today.

Thank you, and I look forward to answering your questions.

[The prepared statement of Ms. Cheng follows:]

Senator Duckworth. Thank you so much, Dr. Cheng.

Ms. Gore, we now turn to you for your opening statement.

STATEMENT OF ANTHENA GORE, STRATEGIST, WATER PROGRAMS AT ELEVATE

Ms. Gore. Thank you so much, Chair Duckworth, for this opportunity to testify today.

This short bio about me tells the story of what I represent and who I am today. I would like to add a small bit about where I am from. I am from North Lawndale in Chicago. My mother is a musician who has been blind all her life; my father, an electrical technician, a tradesman who excelled so much at his craft that his opportunities were subverted. Thanks to their fighting spirit, I am an overcomer of childhood lead poisoning.

These experiences underpin every point in my testimony. Today, I am going to focus on what it means to build resilience and equity into the implementation of lead service line replacement initiatives. Among many things that could be discussed, resilience and equity in lead service line replacement will require three things: a strong, effective communications and outreach network; technical assistance for small, rural, and disadvantaged communities and tribal nations; and an unprecedented transformational financial investment and unbiased commitment to improving local economies via workforce development innovations.

First, a resilient and equitable communications and outreach network knows how to reach people, connect them to resources and funding, and move actions to completion. In my



experience, if the message doesn't reach the people, the money certainly will not. When I was leading a public sector energy efficiency outreach program that targeted what the State of Illinois categorized as economically distressed communities, I learned that most decision makers want to know two things: who do I call, and what is the next step?

There was plenty of material made available via one-pagers, fact sheets, websites, and the like. However, communication moves at the speed of trust and word of mouth is still the best way to deliver those messages. Decisionmakers at any level want to hear about opportunities from people they know and trust, people they have good feelings about developing relationships with, and people that will support them as they learn about and develop new projects.

For example, resilience and equity in this space could look like activating community-based and/or centralized outreach teams to form relationships with publicly owned utilities and municipal decision makers to help facilitate their access to resources and the funding that is available. This service could also help fill in gaps where there are broadband challenges at the community scale.

For initiative uptake at a residential level, it could be working with community-based organizations and special service consultants to offer timely, relevant, and actionable

information in multiple languages, in larger prints, via TTY phone services for the hearing impaired, and even in braille for homeowners like my mom. All of these communications and outreach efforts should acknowledge where a deep lack of trust exists between local government and community. A resilient and equitable communications network reaches people and enables them to act on and complete lead service line replacement initiatives.

Secondly, technical assistance for disadvantaged communities and tribal nations is paramount to sustain and maintain water systems located therein, and everything else that depends on and interacts with those systems. In the wake of COVID-19, we must intentionally embrace and fortify the interdependence of our lives and economies.

We cannot afford to continue extractive and exploitative practices within these communities and then turn on the heel during unprecedented times to rely on essential workers and limited tangible goods coming from these communities. It is not fair and it is not sustainable. Water is life, and it requires a circular and curative ecosystem to sustain that life. Technical assistance for these communities is a critical part of that ecosystem.

Resilience and equity in technical assistance requires the understanding that though it is a technical, transactional

activity on its face, technical assistance requires a host of skills: patience, customer service, relationship management, emotional intelligence, cultural competency, collaboration, and leadership. At Elevate, we have a strong history of successful community engagement and outreach. We strategize with policy and utility leaders about their water affordability and lead service line replacement initiatives; we convene with water advocates to understand the plight of community issues; we visit and listen to the stories of people in homes and businesses affected by water debt and lead in water challenges.

As a person who had lead poisoning at age two, I take pride in saying that Elevate has extensive experience with the childcare community, a vulnerable population to lead in water. We have learned how to be in community, when to lead and when to let community lead us. Equitable technical assistance also includes understanding communities' experiences and orientation to their water infrastructure, in order to equip them with information to make better decisions. For some communities, this is beyond only replacing lead service lines; this is an opportunity to better define, design and install or build water infrastructure that better serves the community and the people, economies and systems interacting with that community.

Furthermore, the need for technical assistance to disadvantaged communities is vital to ensure affordable water

rates. These communities are facing water bill affordability crises that range from exorbitant arrears to inability to respond to emergencies. Disadvantaged communities must be properly defined and should include input from people living the experience, and should be integrated into a technical assistance program that flags these communities to receive grants and principal forgivable loans instead of loans that would result in future rate increases and compounding stress on the residents.

It is absolutely imperative that this matter is handled with precision and care to ensure that the messages and money get to communities that need it the most. This requires hard and soft skills necessary to build capacity and operational efficiency in small, rural, and disadvantaged communities and tribal nations such that if we were to look 10 years ahead, we will see a well-maintained water system that can ensure public health and safety while meeting supply needs.

Technical assistance is a great responsibility because done well, is simply not transactional, it is a transference that affords the communities respect and room to realize their own agency, a State in which leaders are equipped and empowered to carry forward their unique commitments for growing and sustaining their residents and their business.

Lastly, for communities to implement lead service line replacement initiatives, the workforce must be there to meet the

demand. When I say workforce development, I mean that in the same way that one would talk about a lifecycle approach to infrastructure. The investment in human capital has to align with the investment in the physical infrastructure. We must fully assess the social infrastructure required to train people, retain employment, and facilitate innovation in the water industry.

Two significant things are happening right now in the water industry. A lot of water professionals are retiring in the next five to ten years, and this is going to have a great impact because generally, sadly, there was an era of time across trade industries when people kept knowledge and information close to the chest for job security.

Thinking back on how these things affected my own life, I remember when my father graduated from a technical institute and took on his job as an electrical technician. Within the year, he lost his job as an electrical technician because he was too enthusiastic. He was tracking to outpace his supervisor in knowledge and pay; therefore, he was perceived as a threat to someone else's job security.

According to the 2018 Brookings Institution report titled *Renewing the Water Workforce*, "Water workers tend to be older and lack gender and racial diversity in certain occupations; in 2016, nearly 85 percent of them were male and two-thirds were

white, pointing to a need for younger, more diverse talent.”

What happens when newly recruited younger and/or diverse talent runs into the same roadblocks my father encountered?

Workforce development must continue to account for how institutionalized vocational pathways intersect with race and socioeconomic, and other facets of identity, such as ability and gender. Resilient and equitable workforce development involves building support networks that will help workers endure while the Country reckons with its history of inequity. At large, this could be realized through training, mentorship, pay and benefits equity, knowledge transfer and retention, professional development, and wraparound services for those coming from hard-to-reach or citizen re-entry backgrounds.

For entrepreneurs and business owners, this is fair contracting, removing barriers to acquiring DBE/MBE/WBE/VBE status, better connection and engagement with local and domestic supply and value chains, capacity building, especially to acquire and maintain general business operations specialists like accountants, lawyers, technologists, and administrators who can keep the business compliant and on a path to expansion, and most importantly, hiring, retaining and growing the local workforce in their communities and putting that money back into the communities that serve that workforce.

Again, I emphasize that water is life, and it requires a

circular and curative ecosystem to sustain that life.

In conclusion, we must make a transformational, holistic investment in people to see the outcome of safe, affordable, and well-maintained water systems. Strong communications and outreach networks, well-rounded technical assistance and sustainable workforce development initiatives are critical to getting the lead out and keeping the lead out of water for future generations to come.

Thank you so much.

[The prepared statement of Ms. Gore follows:]

Senator Duckworth. Thank you, Ms. Gore.

Lastly, Dr. Williams, you are now recognized for your opening statement.



STATEMENT OF JUSTIN WILLIAMS, POLICY MANAGER, METROPOLITAN  
PLANNING COUNCIL

Mr. Williams. Thank you, Senator Duckworth, for the opportunity to speak about this important issue. And for truly, your tireless work to ensure clean drinking water and environmental justice for Americans.

Twenty twenty-one was a remarkable year for ensuring clean drinking water in Illinois, for the reasons that you and others on this panel have already enumerated. The Federal Government passed the Bipartisan Infrastructure Law dedicating \$15 billion to lead service line replacement funding. And the State of Illinois also took historic action. The only thing I will add to this enumeration is my gratitude to you, your colleagues in Congress, the Illinois legislature and Governor Pritzker for the tremendous leadership in tackling this issue in Illinois.

The challenge and opportunity now before Illinois communities is to make good on those federal and State actions. Success in this matter is, I will empathize at the outset, a racial equity imperative. In Illinois, Black and LatinX residents are twice as likely as White Illinoisans to live in a communities that contain all of this known toxic infrastructure.

As a matter of environmental justice, Illinois' communities simply must complete this work as quickly as possible. We can't allow another lead in drinking water crisis like Flint's or

Benton Harbor's to take place. We can't allow another generation of children to be needlessly exposed to this toxin in their drinking water.

Three factors are going to be critical to the success of Illinois communities in rising to this occasion: Illinois communities need more funding, grant funding needs to be prioritized for communities and residents most in need, and as stated by Mr. Gore, technical resources must be available to utilities to do this work.

First, Illinois communities are going to need more funding. With nearly 670,000 known lead service lines, as we have already discussed, Illinois has more of this toxic infrastructure than any other State. Assuming an average cost of \$7,056 per full replacement, it will cost over \$4.7 billion to replace all of Illinois' known lead service lines in the coming decades.

The Bipartisan Infrastructure Law is a huge achievement, delivering an estimated \$565 million to Illinois based on current State Revolving Fund allotment levels over the next five years. Yet that investment represents just over 12 percent of the funding needed in Illinois. We have a long way to go in ensuring sufficient funding for communities to complete this work. Meeting this funding need will require all levels of government working together.

Second, it is imperative that until full funding of lead

service line replacement is reached, all lead service line replacement grant funding needs to be prioritized for the highest need communities and residents. Residents should never have to choose between lead-free drinking water and affordable drinking water. All residents should be assured both. The best way to achieve that outcome is for low-income residents and utilities to have grant funding that covers the full cost of lead service line replacement, so they aren't asked to bear a cost of replacement they cannot afford.

This both an environmental justice issue and a program effectiveness issue. A 2020 analysis of Washington, D.C.'s lead service line replacement program in which homeowners were asked to pay for replacement found that wealthier and whiter wards were far more likely to voluntarily replace their lead pipes. This finding is squarely in line with USEPA's own environmental justice analysis of the Lead and Copper Rule, in which they recognized that changes to the rule " ... that depends on ability-to-pay will leave low-income households with disproportionately higher health risks." Grant funding needs to be prioritized for communities and residents with the highest financial and infrastructure need. That is the surest way to get all Illinois' lead pipes replaced and produce a more equitable outcome.

Third and finally, Illinois communities are going to need

technical support. Utilities in Illinois vary widely in their ability to tackle the different aspects of lead service line replacement, from community engagement to finding lead service lines to planning to construction. There needs to be assistance available for staff-constrained and resource-constrained utilities in the form of information, outreach from agencies, and guidance on best practices. Critically, there needs to be support for communities to help them take advantage of federal funding streams, which can be impossibly complex for some resource-constrained utilities to apply for.

By increasing the amount of funding available, targeting grant assistance to communities and residents most in need, and providing our communities with technical support, we can all see Illinois' lead service lines replaced in the coming years. I thank you again for the opportunity to speak on this matter.

[The prepared statement of Mr. Williams follows:]

Senator Duckworth. Thank you, Dr. Williams.

All right, now we will turn to questions for the witnesses. My first question is for Commissioner Cheng. For many States and cities, this national initiative to remove all lead service lines will be the first time that they have begun to make a plan for lead line removal. Chicago is fortunate to be ahead of the curve, with several programs and a comprehensive plan initiated in 2020. Although there is a lot of work left to be done, a lot of work has already started.

Can you tell me what steps Chicago has already taken in regard to their lead service line replacement initiatives? What future steps does Chicago have planned to further implement this replacement program?

Ms. Cheng. Certainly, thank you. As you noted, Chicago unfortunately has the largest number of lead service lines in the U.S., 380,000. So because of that, we have actually been doing research on controlling lead in water since 1976. Chicago is a leader in lead research and testing. We focus on corrosion control treatment for lead, which is kept as a compliance with the Lead and Copper rules, and shortly after it was put in place in 1991. In fact, we will be switching to a new corrosion control treatment next year to continue to reduce lead in water.

Chicago actually has one of the largest databases of lead testing in the U.S. We have mailed out over 100,000 free lead

testing kits. But corrosion control is only one part of controlling lead in water. Mayor Lightfoot has made replacing our lead service lines her top priority for her department.

As a result, we created ambitious lead service line replacement here in Chicago to address this legacy issue. We also created a comprehensive website for everything from helping a resident identify their service line, test their water, request water filter kits, and replace lead service lines at [leadsafechicago.org](https://leadsafechicago.org). We also have our initial lead service line replacement plan up on that website.

Chicago has rolled out three lead service line replacement plans which set an equitable groundwork for larger programs that ramp up over time, a homeowner initiative program that waives up to \$3,100 in permit fees for those who are able to do their own replacement. Also a one-block SRF funded pilot of lead service line replacement alongside water main replacement that includes free private and public side replacement, and an equity program funded by a HUD community development block grant which provides free lead service line replacement for both the public and private side for low-income homeowners.

As we noted, that equity program is unique in that it focuses entirely on low-income homeowners with prioritization for those who have children in the home or elevated blood levels. These are the homes that are most impacted by lead

service lines and least able to afford to replace them.

Next, we will be in the process of starting our free, full lead service line replacement daycare program. As I noted, replacing a lead service line in a daycare doesn't just impact one family, it impacts many children. Chicago has also been actively working on our lead service line inventory since 2016 by having our staff note material properties through its field work. Our goal is to have a database and online interactive lead service line inventory by 2023.

In January 2023, our Break and Leak lead service line replacement will be in full force, replacing the full lead service line any time there is a break or leak. We expect that to be about 4,000 to 5,000 lead service line replacements per year.

We will also be expanding our lead service line replacement program alongside water and sewer main replacements in 2023. We are looking at where and when to replace lead service lines on a block level with an equity lens, using numerous factors, including income, environmental justice and vulnerable population. While logistically challenging, doing lead service line replacement along an entire block has been shown to reduce overall costs for many communities.

Again, we are grateful for this new and historic federal investment to help with our lead service line replacement and

are looking forward to working with the State to take full advantage of all opportunities for our residents who need it most.

Senator Duckworth. Thank you.

Director Kim, as I discussed with Commissioner Cheng, in many ways Illinois has had a head start in regard to lead abatement planning and programs. Can you discuss any steps that the State of Illinois has already taken to address community needs for lead service line replacement and other lead efforts?

Mr. Kim. Yes, thank you. As noted previously, one of the most important things that we can do is to first get a good assessment of what the problem is, what the scope of the problem is. To begin adequate planning, to have a better understanding of exactly what level of funding is needed, that is an important perspective.

So the two State laws that we referenced that require in-depth material inventories are going to allow us a much better understanding of exactly how many lead service lines we have, where they are located, and also gives us a sense of which communities are going to be most impacted by it. What that is going to allow us to do then is to continue to work with our partners, continue to work with our program, and continue to try and shape it so that we are going to be addressing those most urgent needs first.



The other thing about that plan, the legislation, that is important is, as mentioned before, it sets in place a specific site of timeline. So your final inventory is due in April of 2024, your initial plan for removal is due in 2024, and then your final plan is in 2027, at which point a clock begins. The clock is going to be determined by the number of lines that you have. So obviously, the greater the number, the longer the time period, with incremental annual amounts that are going to be required on an annual basis.

Putting this kind of structure in place and continuing to align our available funding with those needs is the most important thing we can do to really put communities in the best position to try and not only understand what the problem is, but give them as many resources as possible to actually try and take care of those problems.

Senator Duckworth. Are there funds for those inventories?

Mr. Kim. Yes. As noted, one of the terms that we have with programs like this is we want to make sure that communities, that again, minority communities, the most in need, but also might unfortunately be the most under-resourced, that they have the resources that they need, the financial ability they need to begin that process. So as I mentioned before, we have a \$2 million appropriation from our State legislature that will allow us to provide grants to communities in need to allow

them to access the technical assistance they need to complete their inventories, to access any kind of consulting work that they need to begin to look into putting their plans together. What we are hoping is that that is going to provide the initial start for them to get them on that path so that they begin to take on the more important work of actually beginning to do the replacement.

Senator Duckworth. Thank you.

Commissioner Cheng, two weeks ago I held an EPW Subcommittee hearing on the implementation of DWWIA and invited Mayor Baraka of Newark, New Jersey, to testify about their recent success in replacing all 23,000 lead service lines at no cost to their residents. He highlighted that two of the barriers that the city needed to address to expedite the replacement of the lead pipes was, first, amending State law to allow the use of public money on private lands, and secondly, allow for right-of-entry onto private property. He spoke at length about rental properties where the landlords could not be found, and it was really helpful to be able to just go right onto the property and begin the work.

Do you believe, Commissioner Cheng, that these similar issues would be barriers to the lead service line program in Chicago? Do you believe we should be including similar changes in Chicago?

Ms. Cheng. Thank you. First of all, I applaud Newark Mayor Baraka, and Water and Sewer Utilities Director Kareem Adeem, who have been generous in sharing their findings with us here in Chicago. Rising out of the midst of a lead violation and lawsuit, they used innovation to help their residents in replacing lead service lines. So we really appreciate their sharing their information.

Each city and State has its set of unique challenges. However, often different State and local regulations are needed to be complied with as part of the lead service line replacement. We are currently working with State and local officials to address regulations that we anticipate will significantly increase efficiencies and decrease costs. We are going to continue to collaborate to make sure we handle lead service line replacement in the most fiscally responsible manner.

One significant different is simply the scale. In Chicago, as you mentioned, Chicago has over 380,000 lead service lines, which is an estimated cost of about \$8 billion to \$10 billion to replace both the public and the private side. Newark only had 23,000 lead service lines. The revenue to pay for this work must come from somewhere. But we also need to balance keeping our rates affordable to residents. We are thrilled that the federal funding will help offset this cost. But it will not

cover the full cost.

As you are aware, the replacement of a lead service line may require work both on publicly-owned lines between streets and sidewalks, and private land and property, including the line all the way into the home. But with regard to Newark's right-of-entry, which requires homeowners to allow entry to their private property, as you can imagine, it raises a complex set of issues. But we are exploring other avenues here in Chicago before we decide if requiring a right-of-entry is the way to go.

So far with our free equity lead service line program and our free lead service line replacement water main pilot, we have indeed found it difficult to convince some homeowners to participate. We are learning lessons from that experience. For right now, Chicago is focusing on reaching residents where they are with on the street community meetings in multiple languages, programs and neighborhood libraries, and more.

Senator Duckworth. Will you touch briefly on helping water services cover the costs from the portion of line that goes from the water main to the curb stop or the meter, and where the property owner has to pay to replace the segment of the line that goes into the home? But in communities where, especially lower income communities, the homeowners don't have the ability to replace the portion that goes into the home, this cost is just not possible for a household to pay. But then if you only

replace the utility-owned pieces, not only is less cost-effective, but it can also increase lead levels because you are doing that work.

What current federal, State and local financing pools or options does Chicago use to help homeowners do the part that goes right into the home? Do you think other financing measures are necessary or would be helpful in that process?

Ms. Cheng. Yes. In Chicago, we took a lot of time to see what worked and what didn't work in other cities, and take advantage of all opportunities at the federal, State and local level. We found that in order to provide equity in lead service line replacement, the scope of funding sources has to be carefully considered, to your point. So for us, this includes looking at water operating funds locally, our own water equity funds in Chicago, which we currently use for the homeowner initiated program to waive permit fees.

So this is a small dollar value, this program is only about \$150,000 a year. But it can't be used for private funding. So it is limited. This funding comes from water rates, which we want to keep affordable.

But if you look at our equity program, where we are using the HUD community development block grant, there are a couple of advantages. Obviously, it is a grant, first of all. So it can be used on public and private side, and it doesn't have to be

repaid. But it also can be used both for in-house crews or contractors, so you have to look at, for each funding source, what kind of people can do the work.

It also covers not just the literal replacement of the lead service line, but also funding for outreach, basic restoration, removal of asbestos if it is on the lead service line replacement. So there is other appurtenances that that funding covers.

The disadvantage of the CDBG grant is that it is very cumbersome for homeowners to provide the required ownership and financial paperwork. It can be a hindrance in completing the application. It also has to be homeowner occupied, it doesn't allow for renters. So the issue they found in Newark, that is obviously a hindrance. It also requires a tier two environmental review, involving a review by the State Historic Preservation Office, which can be extensive and lengthy.

So there are some significant downsides. But it is something that, it is another option that many cities may not have considered as well in the interim.

Of course, there is the Illinois EPA SRF, which we have been lucky enough to get. Right now that is funding our lead service line replacement water main pilot as well as our daycare program. The advantage is it does not have to be homeowner occupied. So for that funding, it does accommodate renters. If

they don't determine the requirements for low-income eligibility for you, the water utility does. So that makes it a little less cumbersome for the homeowners. It doesn't require a tier two environmental review, and it is a very low interest rate, which is important.

In terms of disadvantages, it is a loan unless you get the principal forgiveness portion of it. And you can only use contractors, not in-house crews. And if you use the principal forgiveness portion, you can't use it on outreach and some of the things related to lead service line replacement.

There is a 20-year repayment term right now for SRF. An extension to 30 years would be really beneficial to SRF borrowers. But overall it is a really helpful program.

Of course, there is USEPA's WIFIA, which we are about to close on, and that is really exciting as well. It is a larger dollar for us, we are getting \$337 million over five years. And you can use in-house crews or contractors. It does also accommodate renters. Again, they don't predetermine the low-income eligibility requirement, and there is no tier two environmental review, and it is a very long-term loan with a very low interest rate, which makes it very, very affordable, really great for the water utility.

Again, the disadvantage is that it is a loan and needs repayment. But it is a really great tool out there.

We have also applied for the USEPA's WIIN grants. Because it is a true grant, it can be used on the public and private side. Disadvantages are we have applied in the past, but because we don't have an actual violation in Chicago, we are unlikely to receive it, understandably. They save that funding for those who really most need it. And it is a smaller dollar value, compared to our need.

But of course, last but not least, we are thrilled about the new SRF funding coming from the federal Infrastructure Investment and Jobs Act. While this funding has only recently been allocated to States, we are working closely with IEPA to ensure that Chicago can take full advantage of these resources, which include both the traditional low-interest loans and forgivable loans. We appreciate EPA's focus on equity. The forgivable loans would allow us to use some of this funding for the private side replacement.

However, this funding can only be accessed if a city, to a private city, if the State's definition of disadvantaged community is changed. But we are committed to working closely with IEPA to formulate a new definition that allows all the communities of a State, regardless of size, to access this grant funding.

Senator Duckworth. I think that last point is really important, that we understand what the definition of a



disadvantaged community is.

Ms. Gore, your organization, Elevate, has done some incredible work in Illinois when it comes to tackling lead in drinking water. Your organization has partnered with several groups to test and remove sources of lead in drinking water at several childcare facilities, protecting thousands of children from the harmful effects of lead poisoning.

I know that Elevate currently administers, with the Illinois Department of Public Health and Illinois EPA, LeadCare Illinois, which is a free statewide lead water testing and training program for licensed childcare providers. In May, Elevate will be launching a new program, called LeadCare Complete, for licensed childcare providers in the city of Chicago itself. The program will offer free internal plumbing upgrades to providers with lead in their drinking water.

These programs are incredible and really get to the heart of the issue for me, which is protecting children. Could you talk a little bit about these programs and what grants or sources of funding you have used to help finance them?

Ms. Gore. Absolutely, thank you. These programs are funded by the EPA Water Infrastructure Improvements for the Nation Act, that is WIIN, particularly using the EPA's Voluntary Lead Testing in Schools and Childcare grant program. So this funding is a resource that creates or expands programs

to test for lead in drinking water at schools and childcare programs in the U.S., and it laid the foundation for LeadCare Illinois, which focuses on childcares.

So this program is administered by Elevate in partnership with Illinois Action for Children. In addition to free testing resources, LeadCare Illinois also offers providers training on how to test and mitigate sources of lead in drinking water. It has a call center available to providers to answer their questions and concerns.

Since its launch in January 2021, the program has served approximately 700 childcare providers, of which 42 percent have found lead in their water. So I cannot overstate the value of childcare providers, who are business owners and operators as well, of knowing this information and having resources to actually do something about it, to keep their businesses running, and importantly, to comply with the State of Illinois' Department of Children and Family Services testing requirements.

As you mentioned, in May, Elevate will be launching a new program called LeadCare Complete for licensed childcare providers in the city of Chicago. That will offer free internal plumbing upgrades to providers with lead in their drinking water. Again, this is USEPA WIIN grant funding, with support graciously from the city of Chicago.

Prior to WIIN and the Voluntary Lead Testing in Schools and

Childcare grant program, there were no statewide resources for facilities to test for lead. So we have seen lead levels as high or higher than front levels at some of these facilities. They would only have found out by accessing these free resources.

So right now, I just want to extend my gratitude, and thank you, Chair Duckworth, for your foresight and your early, consistent efforts to make sure that children are safe and families are protected from the ripple effects of lead poisoning, which I personally know can be a huge burden on families. Also thank you to my colleagues, Caroline, Elizabeth, and Eliza, from the Elevate water team, who are leading these water programs are really doing the work. That early funding was a great step, and the expansion to do the removal and replacement under DWWIA, again, thank you, Chair Duckworth, is going to be a direction that we need to keep going in to make sure that these facilities have a comprehensive service that preserves and improves the integrity of their buildings and grounds, and that the threat of lead is completely removed on the site.

Senator Duckworth. Thank you, Ms. Gore.

Commissioner Cheng, I want to come back to you a little bit on the cost of removing the lead service lines. The EPA estimates an average cost of around \$4,700 to remove each lead

service line with costs ranging in the Nation from \$1,200 to \$12,300 per line. However, it is estimated that it will cost about \$25,000 to replace the lead service lines per household in Chicago. This is more than three times the national average.

Could you explain why the costs are so high to replace the lead service lines in Chicago? Are there measures we can take to decrease these costs?

Ms. Cheng. Yes, thank you. Comparing one city's cost for lead service line replacement to another city's cost can sometimes be like comparing apples to oranges, depending on what they consider part of the scope for lead service line replacement. In Chicago, our cost is \$15,000 to \$30,000 including public side replacement, private side replacement, water meter installation if one doesn't exist, private sewer drain replacement, basic restoration outside the home, and patching up where the entry hole is dug in the basement.

However, not all cities included restoration or private side costs in their estimates, and most cities do not have to perform private sewer drain replacement as part of their lead service line replacement. This is because of differences in urban density and State regulations.

In Illinois, the Illinois Department of Public Health regulates the water service lines and private sewer drains. Current regulations require that water service lines and private

sewer drains be separated spatially or replaced with a more watertight material, regardless of the surrounding conditions.

Like in many older cities, the lead service lines being replaced in Chicago are often too close laterally to the private sewer drain, triggering a requirement to either move the private sewer drain or replace the private drain, which requires large trenches. This is so disruptive to a homeowner's property that some will turn down completely free LSL replacement because of it. In addition, it adds 35 percent to 50 percent to the overall lead service line replacement cost.

So Chicago is working with the Illinois Department of Public Health to explore options for maximizing the public health benefit from water line-sewer drain separation while acknowledging the significant health benefit from lead service line replacement. I am happy to announce that last month, IDPH announced a newly created, statewide variance so that additional nearby sewer infrastructure doesn't have to be replaced as a part of lead service line replacement as long as the private sewer drain is intact and not leaking.

We are waiting on a final version of the variance which will hopefully come shortly, and will be a huge step for Chicago's lead service line programs, allowing us to use less expensive and faster trenchless methods for construction. Trenchless techniques also help us save trees compared to

traditional trenching.

Senator Duckworth. Thank you.

Dr. Williams, this is the largest federal investment in water infrastructure and lead service line replacement in the history of the Country, with \$15 billion going to States to replace to replace their lead service lines. However, we know that it is estimated to cost about \$45 billion to replace all the lead service lines across America.

What options will need to be explored after States receive this initial investment in lead service line replacement funding?

Mr. Williams. Thank you for the question, Senator. It is really going to take every level of government working together to figure out how to fund the balance. Certainly, the Federal Government, we would love to see additional grant funding from the Federal Government to give to communities to help them to this work in a way that makes it affordable to every resident. I know you are working tirelessly on that, and we genuinely appreciate your efforts on that.

At the State level, States are going to need to come up with new funding sources to help complement federal grant funding. That may be in the form of bonds, that may be in the form of new revenue streams. I want to say that the State will be considering many of these options in an upcoming taskforce

that was mandated by the Lead Service Line Replacement and Notification Act of 2021. The Lead Service Line Advisory Board is going to start meeting soon, and is explicitly tasked with exploring some of these options. So I will look forward to seeing those.

Then at the local level, certainly there is going to be a need for many of the creative financing mechanisms that Commissioner Cheng has already talked about. Additionally, finding ways to bring costs down on lead service line replacement, so that communities can maximize the impact of available grant funding.

One way that communities can do that is through coordination. So coordinating on the one hand, on infrastructure projects happening within municipal boundaries, so as communities do water main replacement, and as they do street resurface things, they can take advantage of those infrastructure projects to bring the per-service line costs down per replacement. That is going to take advance foresight and planning, and as we talked about already, some communities are going to need assistance coming up with that advance foresight and planning.

But also, communities can explore options to collaborate and coordinate across municipal boundaries. The bottom line is that in Illinois, many Illinois communities are going to be

going through this work at the exact same moment. The more communities can be learning from their neighbors about what works well, what helps them bring their costs down, what didn't go so well and that they could have done better, or ways to engineer joint procurement agreements to potentially buy in bulk and bring costs down, all of these sorts of cost efficiencies will also be an important tool for local government entities.

So it is really going to take creative approaches from every level of government.

Senator Duckworth. Thank you.

Director Kim, in your testimony you state that applying for funding under the existing SRF structure involves a lot of expertise and work, including completing an environmental impact statement to ensure compliance with the National Environmental Protection Act and other intimidating documents. Through my DWWIA bill, we are trying to ensure that all communities have increased access to funding. However, the process for actually applying to receive this money could be prohibitive for disadvantaged communities and small communities in particular.

Do you have ideas or thoughts on how we can make applying for SRFs and grant money easier for these communities that need it the most and may not have the upfront dollars to go through the process?

Mr. Kim. Yes, again, I want to echo the other colleagues,



I think the work that you have been doing to highlight this issue, the work on DWWIA, and placing the emphasis on federal funding is obviously crucial to providing the fiscal side of that puzzle. But there are issues. For example, one of the points that you raised, USEPA has existing cross-cutting requirements which require the application of certain requirements for different programs, with the understanding or with the theory that they should be applying regardless, because of the subject matter being general enough.

But really, that does create some questions. Because if you look at the type of work that we are talking about here, for lead service line replacement, it does call into question what the utility of something like an environmental impact statement would be, or compliance with National Historic Preservation Act requirements, the Coastal Area Protection Act. These are requirements that are obviously, while well-intended are certainly applicable in certain instances.

But a good argument could be made that these types of requirements are really not something that is directly relevant to this type of work, and therefore what they represent is simply one extra burden, one extra cost, and one extra obstacle that has to be addressed by a small community. Especially as you noted, when you are talking about smaller size communities, they simply do not have the wherewithal to be able to take on

that kind of obligation on their own. They will need to access some federal funding, either on their own or something provided with assistance from the State or the federal level, to go out and secure that kind of assistance.

So the more attention that can be paid at the federal level to provide that kind of money, and I know that was specifically one of the key points of DWWIA, again, what we feel is going to be helpful with our \$2 million appropriation where we are going to be applying that in grant funding to those types of impacted communities, those are the things we think are important.

But taking out some of those regulatory requirements that are embedded within the SRF program for this type of particular work would be a big help. That could be done by USEPA considering things such as waivers of certain types of requirements like this, USEPA taking an extra step of providing some technical assistance, financial centers, things like that, so that they could provide some resources to these smaller communities or these under-resourced communities so that they can have that sort of leg up or that lift up to try and help them get to the point where they can begin to access these funds.

From our perspective, what we have been trying to do is to anticipate these needs as much as possible. So again, in addition to the additional funding that we are talking about,

our staff, we try to staff up, we anticipate the increased demand that we are going to be seeing from the federal money, which is we think fantastic. We want to make sure that from a resource perspective, administrative resource perspective, that we are able to do that. So we have additional project managers, we have additional accountants. So we feel we are ready to take on that additional influx of work.

As we noted, the State law does require these steps to be taken. But yes, those are the types of regulatory obstacles at the federal level that if they were taken out or waived, would certainly make it a lot easier for some of these communities to be able to take those big, important steps.

Senator Duckworth. Thank you.

Dr. Williams, could you talk a little bit about what are some of the challenges in your communities face in accessing funding and what programs you think could help improve this?

Mr. Williams. Certainly. So as Director Kim has noted, communities vary widely in their ability to access federal funding streams. Really, it happens across the whole cycle of the federal funding application and monitoring process.

So there are sort of three big areas where communities might need assistance in accessing federal funding. That is identifying the funds to apply for, then actually completing the application, then reporting and monitoring. In the first place,

there are actually quite a few federal programs, thankfully, that address lead service line replacement. While that is a real asset to communities, it can also be very confusing for a resource-constrained utility and municipality to understand which one is the right fit for them for that project.

Even within the SRF, for instance, a community may not know whether they are eligible for a grant or principal forgiveness of other assistance. They may be prohibited at the outset from applying because they don't really understand whether or not that is the right program for them.

So in the second place, as Director Kim highlighted very well, communities face barriers in terms of finishing the application. Certainly, there are financial documents and planning documents that for staff in a small to mid-size utility, the staff may be in some instances part-time. They may be dealing with other infrastructure priorities on their plate, and may have limited experience dealing with the SRF. Compiling all of these forms into one place, working through all of them, can be prohibitive. They may struggle to complete that and get that application into IEPA.

Then finally, at the reporting state, many of these same obstacles apply. Communities may not have the kinds of data reporting infrastructure and experience with certain federal monitoring forms that allow them to be in compliance with

federal reporting. A lot of this is about a mismatch of sorts between the complexities of applying for and reporting on and going through the federal application processes on the one hand, and constrained municipal staff capacity. Oftentimes, municipal staff are dealing with multiple, competing immediate priorities. It can be very, very challenging for them to access the funding.

I am thrilled to hear Director Kim talk about assistance programs that IEPA is considering right now, because it is badly needed for Illinois communities to help them really move through the entire scope of the SRF process. Helping communities understand which funding source is right for them to apply to, helping them compile all the necessary application forms together and complete those, and then helping communities understand the best way to comply with reporting requirements, all of that is tremendously needed for Illinois communities in the years ahead.

Senator Duckworth. I couldn't agree with you more. I think that technical assistance and that help is needed, especially in communities of smaller size. So to have a threshold to say, well, we are going to help communities, only communities of a population of 25,000 or something like that, that is what we are going to after, that is what we consider the community really needs to be high, and not just smaller communities that perhaps are in a downward spiral where there is

no tax base, to even come up with anything to fix the water problems that they have.

Ms. Gore, to build off of what Dr. Williams was discussing which I think was really important is this idea of community outreach. But communities may not even know what they qualify for, or what help that is. As you said so perfectly in your testimony, in your experience, if the message doesn't reach the people, the money certainly will not. What a perfect statement, and I wholeheartedly agree with you.

Can you explain, Ms. Gore, how using this technical assistance in a community and hyper-local level is critical to helping us deliver the message about how these programs work, and why they are necessary, and what sorts of impacts these outreach efforts can have?

Ms. Gore. Absolutely, thank you. I applaud everyone's comments here that the technical assistance is going to be critical. So at Elevate, we often work in partnership with Metropolitan Planning Council on our water initiatives. So we have done this kind of work in the city of Chicago and the city of Evanston, and we are experienced in other cities in the vein of water affordability and lead service line replacement. We are learning a great deal about just what everyday folks are dealing with. That is really the data-rich information that needs to be paired with the technical expertise to really get a

program off the ground.

The takeaway from that work has really been that technical assistance is a capacity building function. It must leave evidence of its effectiveness. So there should be an intentional community outreach and engagement plan to facilitate dialogue and actionable solutions. Stakeholders need to be engaged as early as possible.

Technical assistance is transferring knowledge that builds confidence and the ability to respond to opportunities and threats. In the one utility, other municipal officials and community members are sharing their culture, their current state of affairs, even their vulnerabilities with these folks who are offering technical assistance. So it demands trust, it demands respect, and an unwavering commitment to journey through with these community leaders and not have technical assistance folks do the transactional in and out sort of thing.

There is no savior complex and no poverty peddling necessary in this process. Community engagement and outreach is critical to understand attitudes, values, beliefs, perceptions, levers that can trigger behavior change. These things advance or impede where you can move as far as those threats and opportunities.

That was aptly demonstrated in Newark. They had a significant timeline reduction because they had a very robust

community engagement strategy and the completion of their lead service line replacement was cut by seven years. So we have seen it in action. It helps with values, mission alignment, working through that process of building trust, and productive dialogue for how you enter, exist and may even leave a communal or business and public space. And definitely, as Commissioner Cheng was talking about, how you enter private and residential spaces. These are things that can definitely stop a program in its tracks.

So I will just say that for technical assistance, again, it is capacity building, it is sense-making and organizing, and it is absolutely critical to engage all stakeholders as early as possible to make this a resilient process.

Senator Duckworth. Thank you. I think it is important to talk about what exactly we mean when we talk about disadvantaged communities that may need greater technical assistance or greater outreach.

Director Kim, in my DWWIA bill, one of the main themes was bringing increased grants and lower cost-shares so that small, rural, tribal, and disadvantaged communities receive priority in federal funding programs wherever possible, and removing barriers for them to qualify for these funds.

In federal law governing the SRFs, we have definitions for what "small communities" are, and what a disadvantaged community



is. They are defined separately from one another, a small community and a disadvantaged community. They are defined separately, and they both have their own challenges. We do not require a disadvantaged community to be a small community, for example.

However, Illinois EPA uses a definition for "disadvantaged community" that has a small population requirement. As Chicago has the most lead service lines of any city in the Country, it is worth noting that it would not be qualified as a priority here because of the size.

Director Kim, do you believe that Illinois' definition of a disadvantaged community is the most accurate way to allow for prioritization of funds to communities most in need? I do know that the State legislature has passed a law that creates a commission to reevaluate this definition. Would Illinois and Illinois EPA ever consider making changes to this definition?

Mr. Kim. Thank you. Those are very good questions. I first want to note that it is important to recognize that to date we have not turned down any application for lead service line replacement in the State. All of the applications that we have approved have been 100 percent fiscal forgiveness. That includes communities that are well above 25,000 in number.

That is because, as you note, the definition of disadvantaged community that is in our State Revolving Fund

regulations is not the definition that we apply in utilizing our lead service line replacement work. That is because we were able to balance both the existing principal forgiveness abilities under the capitalization grants under our existing SRF program, and then also the 100 percent principal forgiveness under the WIFTA transfer money from the Booker Act. So between those two pots of money, the additional 20 projects that I discussed have all been principal forgiveness free. The only definition we have actually applied in those cases is simply that the community water supply has a connection to those lead service lines.

So now, looking forward, in terms of what definition would serve us best, we would agree that a definition needs to be more attuned to the specifics of addressing this type of work. Along those lines, we have already been working on developing a definition that we would utilize for our Fiscal Year 2024 Intended Use Plan and that would also be something that we would codify in our rules.

As you noted, there is a State law, Senate Bill 3905, that does call for the creation of a commission that would work on exactly this type of topic. We have had a number of good conversations with the proponents behind that bill. I think the work we have done already to date and our expected timeline of when we would like to get that done will certainly mesh well

with the bill's timeline. The legislation calls for recommendations to be provided to our State legislature at the conclusion of the allotted time, which is sometime early next year. Our goal is to have something in place from a regulatory perspective so that those recommendations might actually simply note back to our existing new definition.

We will be taking all those kinds of considerations into account. But again, so far, we have turned down no community for lead service line replacement work.

Senator Duckworth. That is good to know. Thank you.

Ms. Gore, I want to talk again about this definition of disadvantaged community. Does it concern you that population is used as the first deciding factor in the Illinois determination of whether a community qualifies as disadvantaged? If so, could you explain why?

Ms. Gore. Absolutely. I am just overjoyed to hear that Director Kim is not necessarily following that to the letter, that you are finding workarounds, so that you don't turn down any communities. That is extremely important.

But there are plenty of communities in Illinois that have populations below 25,000 but the average median income for the household is in the seventies. So it is small, but it is stable, and they can facilitate getting its share of funds and probably has a more stable government.

So if the population is the deciding factor, that cuts directly into the ability to target funds to people that really need the assistance.

I just have a couple of quick thoughts on this because this was a contentious point when I was doing my energy efficiency work as well. There are communities in Illinois that are categorized as economically distressed. So that is looking at property values and poverty levels that are producing these outcomes of weak markets and a devastated tax base. When agriculture manufacturing and heavy industrial construction jobs are outsourced or go away because of technological shifts, these communities, whether they are below or over 25,000, are feeling the hardship reverberating from their dinner tables to their city council dais. It is a real problem.

So environmental jobs and energy and natural resources, water, and the hopes of other occupations can really help bring community and economic development back online for these communities and lead service line replacement can be one of those catalysts. If we take a look again at some of the stuff at the federal level, new market tax credits and opportunity zones programs help. The basic eligibility for those programs, they are using census tracks with income at or lower than 80 percent area needed income, or poverty greater than 20 percent. But those things are not used in the definition of a

disadvantaged community right now.

The other factors to be taken into account include health equity, which is termed medically underserved areas at the federal level, and FEMA disaster zones. I won't go too far into all of those different factors. But in the evaluation of particularly the opportunity zones programs, the lack of community engagement and the involvement have very negative impacts on the community, the way the community perceives the program and its participants, and their employment and housing situations as well. It is very well documented by institutions, by Brookings, and the Urban Institute.

So my real question here is, why can we take all of that into account for folks who can form LLCs and take advantage of these tax havens, but when it comes to the water system and public health issues, crises across the Nation, none of those things are mentioned? It is very unnerving to me.

So I would urge decision makers and leadership who are drafting this definition to just consider that prior and emerging work that has been done for the number of terms that we have used to describe these communities, small, rural, disadvantaged, distressed, and other terms.

Just today, the River Network just hosted their last workshop on State Revolving Loan Funds. There is a particular presentation on State Revolving Loan Fund policy frameworks that

was presented by the Environmental Policy Innovation Center which provides a lot of social determinants for how that can be incorporated into this definition of disadvantaged communities. Again, look at groups like Economic Intervention Group, Brookings, PolicyLink, look at the communities in Illinois that are designating themselves as environmental justice communities through programs like Illinois Solar for All, which we administer at Elevate for the Illinois Power Authority.

For those designations that they are doing at the community level, that is their voice. It is community-based collaborative work, and it can be integrated into the disadvantaged communities definition scoping. Those collaborations reflect long-term trust and relationship building and enables communities to be ready when funding comes down the line, not to always have to react. They can be prepared.

And these thinkers and doers have provided, again, rich information, and the definition should consider social determinants on health, income, municipal financial fitness, levels of contamination, even using violations that have occurred at the water system through EPA to talk about, well, is there a capacity issue while the violation is occurring? Let's turn that into something that can be positive and actionable for that community.

Again, there is so much information to address these gaps.

Consider it all and take what is needed.

Senator Duckworth. Thank you.

When we were writing DWWIA, the fastest way to get money to these States for lead service line replacement was to allocate the funding through the State Revolving Funds, a system that was already in place, so we didn't have to create something new. However, this allocation is done through a formula, and not based on estimated lead service line burden. If you were to do it based on an estimated lead service line burden, obviously Illinois would qualify for so much more, because we have so much of the lead service lines in the Country.

Dr. Williams, can you explain how the SRFs actually work in reality and how we may be able to improve this lead funding allocation to be more representative of the actual existence of lead service lines in the future across this Country?

Mr. Williams. Yes, absolutely, Senator. As you point out, the SRF is distributed to States based on a formula. The way that formula is produced is every four years, USEPA does a process called the Drinking Water Infrastructure Needs Survey and Assessment. Through that assessment, USEPA does, as the name would suggest, surveys and assesses how much need there is for drinking water infrastructure upgrades, maintenance, in the coming years, then assigns a percentage value to each State and territory to say how much of federal SRF appropriations each

State and territory is going to get.

In Illinois, our SRF allotment is under the current 2018 needs assessment, and it is 3.77 percent. Consequently, of the \$15 billion available for lead service line replacement through the Bipartisan Infrastructure Law, Illinois is estimated to get about \$565 million over the next five years. The first distribution of that has been made.

Unfortunately, as you pointed out, that needs assessment from 2018 did not take into account lead service line replacement costs per State. What that means is States with some of the highest lead burden, we are talking about States like not only Illinois, but Michigan, Indiana, Ohio, Wisconsin, these States are getting significantly less of the lead service line replacement funding than their share of those national lead service line burdens would suggest.

So for example, in Illinois, Illinois is estimated to have approximately 12 percent of the Nation's lead service lines. If Illinois were receiving a commensurate share of the \$15 billion in funding, that would be \$1.8 billion. So you can see that there is a pretty big gap, \$1.3 billion or so, between the old SRF allotment currently designating funds to Illinois in Fiscal Year 2022 and the amount of funding that Illinois would receive if it was receiving a proportional share. Every year that that funding goes out according to that old formula is hundreds of



millions of dollars that Illinois is not going to be able to take advantage of, although its need is still there.

Fortunately, there is an opportunity to address this on the near horizon. USEPA is currently updating the Drinking Water Infrastructure Needs Survey and Assessment. This update currently underway by law must specifically include reference to lead service line replacement costs in States and territories. That is a straightforward way that USEPA can start to address this problem. It is critical that this happen as soon as possible in 2022, so that distributions of lead service line replacement funding in Fiscal Year 2023 can distribute that funding according to each State and territory's lead service line replacement need.

Senator Duckworth. Thank you. That is a great explanation.

As we are coming up on time, we will bring this hearing to an end. But before we adjourn, some housekeeping. Senators will be allowed to submit questions for the record through close of business on May 5th. We will compile those questions, send them to our witnesses and ask our witnesses to reply by May 19th.

I want to thank all the witnesses for participating in this important hearing. The discussions we have had today will help us navigate this process more efficiently and for us to work

together to make lead pipes in Illinois and in our Nation a thing of the past.

With that, the hearing is adjourned. Thank you.

[Whereupon, at 5:37 p.m. CST, the hearing was adjourned.]