

[MUSIC PLAYING]

BONNIE I'm Bonnie.

WILLISON:

DEIDRE I'm Deidre.

PEROFF:

BONNIE Dr. Deidre Peroff, is my guest co-host today for *The Water We Swim In*, stories about the Great Lakes and the people working towards equity. Today on the podcast, we're looking into lead. How lead became an environmental justice issue and what we can do about it.

WILLISON:

DEIDRE Hi, I'm Deidre Peroff. I am a social science outreach specialist with Wisconsin Sea Grant, and my office is based in Milwaukee, Wisconsin. I study a number of topics related to how people's behavior impacts environmental problems and human health, and specifically how environmental problems can disproportionately affect low income communities, communities of color, and those with limited resources, and kind of look into what we can do about that.

PEROFF:

BONNIE So lead is obviously, a big environmental issue in the country, but also just like where you live. What made you interested in covering this topic personally?

WILLISON:

DEIDRE So I moved to Milwaukee about 7 and 1/2 years ago. There was kind of a lot of talk about lead in the city, about how lead was getting into people's houses and things like that. Fast forward, later in 2016 we bought our first house in Milwaukee, and it was a house that was built in 1898, so it's over 100 years old. And then I ended up having two children in Milwaukee who are both really young now, almost two and four.

PEROFF:

And so the issue of lead and whether or not my kids and me when I was pregnant had the potential of getting lead poisoning became a really personal issue that I was interested in. And I was also really interested in whether my house had lead paints, and if these things were affecting my family but also communities in Milwaukee that I work with. So I really wondered about how I could keep my kids and my community safe, and protect against lead poisoning, and wondered if people were able to access the info and resources they needed to keep their families and their community members safe.

BONNIE What do you like about working here?

WILLISON:

ALEJANDRA Actually, I like working with families, that's the part that I enjoy most.

VIGIL:

BONNIE That's Alejandra. We spoke to her while visiting The 16th Street Community Health Center in Milwaukee.

WILLISON:

ALEJANDRA My name is Alejandra Vigil, and I'm the community lead outreach coordinator here at 16th Street Clinic at the Lead Prevention Program.

VIGIL:

BONNIE The 16th Street Health Center serves the South side of Milwaukee.

WILLISON:

ALEJANDRA Actually, we have this diversity of communities. We have Hispanics, we have Burmese, we have Rohingyas, we have a different kind of families.

VIGIL:

BONNIE We were visiting 16th Street because we wanted to hear about their lead outreach work. Alejandra told us about the home visits that she does.

WILLISON:

ALEJANDRA Today, we're going to do door-to-door. We usually go afternoons 4 to 6, and we just walk around the neighborhood, knocking the doors, and providing information about lead. You just knock at the door and they open the door like, oh, come here. I know you, you're my friend, you're from the clinic. So they receive you with open arms, well sometimes.

VIGIL:

The first question that we ask them is if they have any children under six years old because that's the age that we are targeting. Sometimes they say no, sometimes they say yes, I do have one, two, three. I don't have any children but I do have grandchildren. And then yeah, we just do a visual inspection around the house. When we go to a home visit that's the first thing that we check, the windows, the frames of the windows, and sometimes the porch, and then chip and pin.

JAMIE There's a lot of old houses here and maybe they haven't been updated and so there's a lot of lead paint that's still in the houses because lead paint was banned in 1978. So a lot before 1978 could have had lead paint.

FERSCHINGER:

BONNIE That's Jamie Ferschinger, Director of Environmental Health at 16th Street Community Health Centers.

WILLISON:

JAMIE A child can get lead poisoned with the amount of lead that's in like a sugar packet. So you don't need a lot to become lead poisoned.

FERSCHINGER:

MOLLY COUSIN: Definitely if a kid gets admitted to the hospital, you can see lead paint chips on X-rays, where they've literally been eating paint chips.

BONNIE Dr. Molly cousin who's a pediatrician at 16th Street said that lead exposure causes damage to the brain and nervous system and behavioral and learning issues in kids. And there's really no cure. There's no way to undo lead poisoning.

WILLISON:

MOLLY COUSIN: The thing that usually sticks with me whenever a family learns that their child has an elevated lead level is the fact that, it happened. Oh, my God, what do I do? And it's like, well, there's not a lot to do need to stop the source. And then feed your kid healthy, high calcium, lots of fruits and vegetables, make sure they're not iron deficient. There's not a Great answer for this.

BONNIE Lead paint is a huge concern and that's where kids get the most acute lead poisoning. But another area of concern is lead in drinking water. This is one reason that we wanted to do this story because Sea Grant does a lot of work with water. And lead in drinking water is a really big problem. Throughout the 1800s and 1900s, cities used lead pipes to bring water to people's homes. It's estimated that there's still 6 to 10 million lead service lines being used in the US still today. During a lead outreach home visit, Alejandra checks the faucet by looking at the aerator, that little screen that screws into your faucet.

WILLISON:

ALEJANDRA VIGIL: That tiny piece we able to remove it and then you can see the tiny pieces of lead. And the other things but then we explain the families please do not use this water to cook or to drink, that's why we provide the water filter pitcher.

BONNIE WILLISON: Lead can get into drinking water when the pipes get corroded there are a lot of different factors for what makes lead pipe corrosion worse, like the types and amounts of minerals in the water and the water temperature.

ALEJANDRA VIGIL: Sometimes families they think, oh, let me use hot water when I'm cooking. And when they use hot water, the lead it is like, yay, I'm having fun here in very hot water. So yes, it is hard. It is hard to teach the families not to cook with hot water.

BONNIE WILLISON: So while we've likely all heard that lead is bad and it can cause significant health problems and learning delays in children, we wondered specifically how did lead poisoning become an environmental justice issue? Are children more likely to get lead poisoning depending on where they live? Here's Jamie, again.

JAMIE FERSCHINGER: I would say that there are lead hazards throughout the City of Milwaukee. But the hotspots of lead poisoning are focused in two main areas of Milwaukee, on the North side and on the South side, we're on the South Side.

BONNIE WILLISON: Milwaukee is one of the country's most segregated cities between Black and white populations.

JAMIE FERSCHINGER: Yeah, that is something that comes up a lot in the work that I do here because I've tried to really center my work around environmental justice. And what comes up a lot is this map that I use a lot to kind of show how Milwaukee is hyper segregated. So it's a map that was created after the 2010 census, and it shows populations of white, Black, Asian, and Hispanic communities, and individuals in the city.

And it just stands out really well that up in the northern part of the city, it's like over 90% African-American and Black populations. In the southern city, it's mostly Hispanic. And then the white communities and neighborhoods in the city are really like along Lake Michigan on the East side and then in the suburbs.

JAMIE FERSCHINGER: Lead pipes are equally distributed throughout the City of Milwaukee, but lead poisoning is not equally distributed throughout the City of Milwaukee. Lead paint at one point was probably distributed equally throughout the City of Milwaukee but now it's really focused in two areas, on the North side and on the South Side.

MOLLY COUSIN: Milwaukee just kind of has the persistent issue with too many houses with lead paint and too few dollars to help renovate and remediate those homes. And so we're kind of using kids as lead detectors instead of testing houses for lead we're testing children.

BONNIE WILLISON: The Wisconsin Department of Health Services says that in our state, Black children are four times more likely than white children to have lead poisoning. And when we look at Milwaukee, we see that lead poisoning rates for children are a lot higher on the North and the South Side compared to the largely white suburbs. To understand why, I did some research into the history of lead in Wisconsin. And it was kind of surprising. So Deidre, you know how in Wisconsin we're the Badgers? Do you know how we got that name? Where the Badger name came from?

**DEIDRE
PEROFF:**

No, I don't. I should, I was a Badger. OK, well, I'll tell you. It goes back to lead, actually. So before the time of the Badger, before colonization, a lot of indigenous peoples, the Ho-Chunk, Meskwaki, Fox, and Sauk, and other Native American tribes mined lead in the upper Mississippi region, so near the Mississippi River in what we now know as Wisconsin. And then in the 1830s, a lead boom brought thousands of miners to Southwest Wisconsin.

And the nickname for these miners was Badgers because they oftentimes, didn't even build like houses to live in they just dug into the hillsides and like lived there. Cities, especially bigger cities started using lead pipes in water infrastructure in the late 1800s. And they used lead because it lasts longer than iron, and it is malleable, you could bend the pipes around other existing stuff, and it was easier, I guess.

But at the same time, there were a lot of people and organizations even back in the late 1800s that recognized that lead pipes were unhealthy. So by the early 1920s, many cities and towns were starting to prohibit or restrict their use. But the plumbing codes of some major cities still called for lead for many years and even decades beyond that point. Cities like Boston, Philly, Denver, Chicago, and Milwaukee.

In 1960, the federal government steps in for the first time on this issue and they basically set what's an acceptable blood lead level for kids. But we know that there was tons of lead being used in gasoline, being used in paint, being used in pipes that were all out in the environment, that we're kind of slowly phased out. And today, the EPA estimates that nearly 10 million lead service lines are still in use.

That's kind of why we're talking today there are a lot in Milwaukee and throughout Wisconsin. What we also know is that, certain neighborhoods in Milwaukee have higher rates of lead poisoning.

**BONNIE
WILLISON:**

Yeah, so going back to our ultimate question, what led up to this and why are Black children in Milwaukee more likely to have elevated lead levels? And also, children from the South Side, which is primarily Hispanic or Latino. Milwaukee was kind of intentionally designed to be segregated like this.

**DEIDRE
PEROFF:**

So a lot of these insights came from an article that I found really eye opening that was written by Erica Morrell and Dalvery Blackwell in 2022 called, *Spatialized Intersectionality-- Gendered and Racialized Residential Segregation in the Milwaukee Lead Crisis*. We reached out to Dalvery Blackwell for an interview, but unfortunately she was unavailable to tell the story herself.

Hypersegregation in Milwaukee goes all the way back to the 1800s, when there were petitions to outlaw African-American migration to Wisconsin. Milwaukee's black population was largely confined to the north part of Milwaukee, which was later known as Bronzeville, or the inner core of the city.

In the 1920s, they had these racially restrictive covenants that strictly forbid non-whites to be housed in properties in certain neighborhoods in Milwaukee and prevented Blacks to own any houses in greater than 90% of Milwaukee and the greater Milwaukee region. And then a lot of the segregation that you see today in Milwaukee was exacerbated by redlining practices sanctioned at the federal level that took place mostly starting around the 1930s.

Specific areas of the city were designated a different color. And if there were these "red zones" of the city, it was virtually impossible to purchase homes in these areas or to buy insurance, and made it nearly impossible for people living in these areas of the city to achieve any level of economic success or generate any sort of wealth.

And close to 100% of the Black population in Milwaukee lived in these redlined areas, which soon became overcrowded with multi-level rental units and landlords making unsafe modification to homes, like turning them from single family homes into multi-level units.

Another thing that you hear a lot about when you hear about hyper-segregation in Milwaukee is the rate that African-American men specifically are incarcerated in Milwaukee, like, coming from specific zip codes. Although African descendant males in their prime fatherhood years-- between 25 and 39 years old-- accounted for just 7% of Wisconsin population, they rose to comprise about 50% of people incarcerated.

Because such a large percentage of Black men were incarcerated who were in their kind of prime fatherhood years, they left a lot of women in this area to automatically be left the head of the household. As the head of the household, they had to provide all of the income for the household and then also find a place to live and raise their children, and so you can imagine kind of the impact this had when they were living in pretty rundown areas with landlords that were poorly managing the units. They were in older homes and things like that.

And then in the 1960s is when white flight really started, and so a lot of white Americans that were living in downtown Milwaukee decided they wanted to live in the suburbs, moved out west, in this case, which left a lot of those communities even more rundown, in these older buildings that were not getting renovated, and they weren't seeing any sorts of investments to make them better and more livable. Yeah.

BONNIE WILLISON: And it wasn't until 1968 that discrimination became illegal in housing. So 1968 was the Fair Housing Act and so, I mean, that's like a few generations ago that it became officially illegal. When I see the map of where lead poisoning is, we know that lead poisoning usually occurs from paint. Lead paint is found in old houses.

And that's where the old houses are, in the North Side, in the South Side. Why is that? Because the people who can't afford to buy a house-- people who are renters are kind of at the whim of whatever housing is available and affordable. And when there's so many people as renters, landlords, there's like no incentive for them to redo the house. Just evict them if they complain, and get the next person into your house with lead paint.

DEIDRE PEROFF: Yeah. So when we keep like trying to investigate why are more-- why do black children in Milwaukee have elevated lead levels, there's not really like a clear answer to that. It's a combination of paint in old buildings, and it's also related to water and old pipes, and it's also related to resources provided to these communities.

So there isn't-- we don't really right now know where all the lead pipes are. I feel like there that would be easily known, but we're having to go back and figure that out.

ANDRIAN LEE: Yeah. Yeah, that's surprising. But no one really has a solid number. Some states have a good idea of how many lead service lines they have, and others don't report that data at all. Sometimes all you can do is dig. You just dig to the service line and see what it's made of.

BONNIE WILLISON: I thought you meant like "dig for information."

ANDRIAN LEE: Oh, no, like physically dig into the ground and unearth these pipes.

BONNIE WILLISON: That was Andrian Lee, who was a Sea Grant Policy Fellow at UW Milwaukee. She spent the 2022-2023 school year researching lead pipes and policy. Lead service lines are the lead pipes used to connect the water main to an individual house or building. As Andrian was saying, it's hard to even know how many lead service lines are still in the ground.

The current estimate is that Milwaukee has 66,000 lead service lines left. Milwaukee waterworks has been replacing about 900 pipes a year, which means that it would take about 73 more years to replace them. And that's a really long time, especially when these pipes have been causing problems already for decades.

And in order to fix the problem, it costs a lot of money-- infrastructure money. Water infrastructure is one of the reasons that Andrian wanted to become a lawyer.

ANDRIAN LEE: I know that there's a lot of money being moved when it comes to infrastructure projects, and I wanted to get involved in that world to get the money moving where it needs to be.

BONNIE WILLISON: Milwaukee would need a huge investment of funding to be able to replace all lead pipes. And then in 2021, Congress passes the Bipartisan Infrastructure Law.

ANDRIAN LEE: So I was in law school when the bill was enacted. The bill itself, it's over \$1 trillion of funding towards infrastructure projects. I just remember feeling-- oh, wow, this is huge. This is a huge amount of money. We haven't seen this kind of investment in infrastructure in several decades. I thought that era had passed. It's a historically large amount of money to rehabilitate, to improve, and to transition the infrastructure of the United States.

MELISSA SCANLAN: I had a similar reaction when I learned about the bill. And then, once it was signed into law, I was very excited to dig into it and see what this meant for water infrastructure.

BONNIE WILLISON: That's Melissa Scanlan, Andrian's advisor and the director for the Center for Water Policy at UW Milwaukee's School for Freshwater Sciences.

MELISSA SCANLAN: We were digging in very quickly into what the term "disadvantaged communities" meant because in the bill it was designated that 49% of the water infrastructure supplemental funding was supposed to go to a community with that designation.

BONNIE WILLISON: Disadvantaged communities. 49% of this historic funding is supposed to go to disadvantaged communities. But how is this term defined? What does that mean? And does it actually work towards environmental justice? These are the questions that Melissa started looking into.

It turns out that, while the Environmental Protection Agency gives recommendations for how to define disadvantaged communities, each state, tribe, or territory has to come up with their own definition. For example, they might use population as a way to define disadvantaged communities.

MELISSA SCANLAN: So if you're a community that's under a certain number of people, like 10,000, then you could be considered disadvantaged, but above that you wouldn't be. And that really ignores some other factors that happen in larger population centers where you would still actually have a lot of trouble with households meeting their water bills in a larger population center.

BONNIE WILLISON: Wisconsin was one of those states that used population as a metric in determining which communities are considered disadvantaged.

ANDRIAN LEE: As far as the money designated for disadvantaged communities specifically, up until 2022, Milwaukee specifically, which has a high poverty rate, was having difficulty accessing the principal forgiveness and grants.

MELISSA SCANLAN: If you define disadvantaged communities just based on heavily weighting small population centers, yes, you will be getting money to rural areas who definitely need it. But there will also at the same time be a lot of other urban centers that will be left out of that.

BONNIE WILLISON: It was the fall of 2022 when Melissa actually had a graduate level class do some research into Wisconsin's definition of disadvantaged communities and present that research to the Department of Natural Resources, the DNR.

ANDRIAN LEE: Through advocacy from all sorts of nonprofit organizations and through a report produced by students supervised by Melissa, Wisconsin modified their criteria for who is designated as a disadvantaged community, and Milwaukee was approved for \$1.5 million in principal forgiveness towards one of their water infrastructure projects.

So the criteria-- the definitions for disadvantaged community are quite crucial in determining who gets these badly needed funds.

MELISSA SCANLAN: I give the Wisconsin Department of Natural Resources a lot of credit because they dug into that task and really evaluated it and then came up with some solutions that-- no solution is going to be perfect, and they may find out that the metrics they've come up with are missing certain things as they go along in the years. But it's an improvement what they did in terms of having a lot more ways that they're looking at how poverty shows up in a community and how you can identify it.

BONNIE WILLISON: So this "disadvantaged communities" definition question we've been talking about is important because it affects the money that will get for lead pipe replacement. When Wisconsin gets our lead pipe remediation money from the infrastructure bill, 49% of that money as well is set to go to disadvantaged communities.

MELISSA SCANLAN: So we have pivoted to looking more closely at the issue of lead pipes and how this money from the infrastructure bill can potentially be distributed over the next five years to replace a lot of the lead pipes throughout the country. And we're evaluating, well, how far will this money actually go to address the problem?

ANDRIAN LEE: So 7 out of the top 10 states with the most lead service lines in the United States are Great Lakes states. Among those, Illinois has the most lead service lines, and Chicago specifically has the most lead service lines of any city in the US. So it's not an insignificant problem in the Great Lakes region.

Milwaukee has by far the most lead service lines in Wisconsin. The next city is Racine, and they have a full order of magnitude less lead service lines. We can say that Milwaukee has the largest need just in terms of magnitude.

BONNIE WILLISON: So Wisconsin will get \$74 million for lead pipe remediation, and Milwaukee is set to get \$30 million of that. But will this historic amount of infrastructure money be enough?

MELISSA SCANLAN: There is an issue that we haven't talked about, which is the gap between the amount of federal funding that exists and what the actual needs are in terms of funding. And that was something that came out in our research that we have been doing.

ANDRIAN LEE: In the Great Lakes Region, the funding from the bipartisan infrastructure law covers only 27% of the estimated cost to replace all the lead service lines in the region. So going state by state, we see that Pennsylvania gets the closest amount that it needs at 72%, but Ohio gets the least at only 15%. So the supplemental funding from the federal law isn't quite enough to get us where we need to be. So the states and local communities will have to find other ways of financing the replacements.

DEIDRE PEROFF: Yeah. That's kind of sad that it's this historic amount of money, but it's still not going to get us where we need for everyone to have clean water.

MELISSA SCANLAN: It's a sobering reality that even this amount of money that we celebrate-- it's wonderful to have this infusion of money-- but we have to be realistic about what it will cover, and it shows the need to be very efficient about how it's being spent and make sure that where the dollars are placed, you're really putting them in the places, the communities that are most at need, that cannot cover the costs of this by increasing rates on ratepayers.

ANDRIAN LEE: So we have a long road ahead, but at least we're working to identify the problem, and the fact that the federal government has specifically carved out this amount of money for lead service lines is really encouraging. It signals that there is an acknowledgment of the severity of the issue and the urgency.

BONNIE WILLISON: We'll be right back.

[MUSIC PLAYING]

So now we've talked about what it's going to take to fix this lead pipe problem, but we still have a huge problem with another huge source of lead, which is paint. The specialist from 16th Street Community Health Center that we spoke to brought up a lot about how people are really affected by lead paint, and that's causing a lot of lead poisoning in Milwaukee.

When somebody gets lead poisoning, is there a way where you can distinguish what the source of lead was, if it came from mostly paint or water? Here's Dr. Cousin.

MOLLY COUSIN: That's something you really can't tease out. I know people have tried to look using different isotopes of lead, but it's really hard to find what is lead in collaterals versus lead in other exposures.

BONNIE WILLISON: Here's Jamie Ferschinger.

JAMIE FERSCHINGER: Lead is invisible in a way. If your arm is broken, you're like, oh, my arm is broken. But lead poisoning, you don't know until later that there's a learning disability. If a child becomes lead poisoned when they're an infant and then later they might have learning difficulties, you don't really realize that maybe that was lead, which is why at the clinic we test seven times before the age of six, because you can't know that a child's lead poisoned when they're a baby unless you check their lead level. So that's why this team is so important.

And so with the lead outreach program, by having the team go to the home-- so the parents or the guardians may have received that information from the provider that your child has lead poisoning. Then this team can go connect those dots for the guardians because they can go into the home and say, oh, this is probably where the lead poisoning is coming from.

DEIDRE PEROFF: So as we were talking to Jamie and Alejandra and they were telling us about all this flaky paint that you could find on windows, I started to get concerned about my own windows at my house, which was built in 1895. I think what Alejandra was talking about is that there is a way to tell by looking if it's actually lead paint or not.

So she shared a picture on her phone to show me what it looked like. It looks like an alligator, like-- I don't know-- scales on a reptile. So that's a little bit different than normal paint, which I think after a long time like would peel, but it doesn't have that sort of crackly, speckled look. And I wasn't sure if that was in my house, but I felt like running home right away to look at my windows and see if I was getting exposed to lead paint or not.

Say you come into my house and you're like, there's lead all over your windows and all over your porch, and then I say, OK, what do I do about it? And in the short term, you were saying put plastic or maybe paint over it or something?

JAMIE FERSCHINGER: Like you're mentioning, our team goes in to really try to identify and reduce the exposure in the home in a very cost-effective way because it is expensive. True lead abatement is really expensive. So the Lead Safe Homes program is funded through the state. And the city of Milwaukee also has a very similar program that's a lead abatement program.

And so a family, once they do a lead risk assessment to identify that there's lead in the home, then the family is relocated, and that's all covered. It's relocated while the work is done in the home to abate all of the lead. So if it's been found that there's lead in the windows or if it's on the walls, there will be contractors that come in who will do the work.

DEIDRE PEROFF: Does that happen a lot?

ALEJANDRA VIGIL: That happens a lot, especially here in the Southside area.

JAMIE FERSCHINGER: Because there are a lot of older houses here.

ALEJANDRA VIGIL: Correct. Correct.

ANDRIAN LEE: So what else can people do to know if they have a lead problem in their house?

MOLLY COUSIN: You can always look up where-- is your house on a lead collateral? That's information that you can find out through the city. And if that's the case, you qualify for a free filter from the city. And then looking at the conditions of your housing, if you see flaking paint or if you see dust or if you're planning to renovate, ask to have it tested.

BONNIE But as we've learned, it's the low income renters, who are disproportionately People of Color, who are affected by lead poisoning the most.

MOLLY COUSIN: It's just there's higher concentrations of People of Color in the central districts of Milwaukee where the older housing tracts are that haven't been kept up as well. So lead doesn't discriminate children.

ANDRIAN LEE: Is there anything you want to add about why that might be? Because I live in Bayview, and that's all really old houses here. But I don't know if the kids in Bayview are-- I don't think they're as much at risk as kids on the South Side of Milwaukee or the North Side of Milwaukee, which also have old houses.

MOLLY COUSIN: Right. But I think if you look at the housing conditions versus the housing age, you're going to see very different sorts of risk factors in that way. Have windows been modernized? A lot of times you'll see the exposure might just be like a porch outside. Well, how well have you kept up your house versus how well can people who might not own their house or, if they are poorly paid, how well can they keep up their housing?

JAMIE Sometimes I feel it doesn't serve us well as a community, in my opinion, if we're only focused on one issue and **FERSCHINGER:** not all the issues, if it's just the paint and not the water, and just the water and not the paint, and just the soil and not the water and the paint. Nutrition also plays into lead poisoning.

So if I were to look at some commonalities, in my opinion of the North and the South Side, both of them are fairly underserved. They have housing stock that's pretty old and, in some cases, more malnutrition. So even if you have a really well fed child and someone who is malnourished or is hungry and they're both exposed to lead, they're going to take it up differently. So as the team often shares with families, if a child is hungry, they're going to absorb blood faster. So I think we really do have to look at it in a comprehensive way if we're going to solve it.

ANDRIAN LEE: So yeah, as we dug deeper into this connection into lead poisoning and environmental justice, the connection between poverty and an increased likelihood of getting lead poisoning became increasingly transparent. It isn't just where you live, but your chances of getting harmed by lead or your children being poisoned by lead are so deeply integrated with this history of segregation in Milwaukee.

This leads to underserved communities having less access to resources, living in rental properties, and even living in food deserts where it's more difficult for people to get healthy, nutritious food that's affordable. All of these factors really contribute to this disparities around lead poisoning. They're all interconnected.

MOLLY COUSIN: We've known that lead has been hazardous since the mid 1900s, and we didn't choose to act for a very, very, very long time. We know how cities were set up for people to live in some places and for other people not to live in those same places. We know where our major highways, when there was lead in the gasoline-- know where do those go through? This predominantly affects children. Children can't vote. Children can't make decisions.

So I think we as a society need to make the decision that this problem is worth investing in fixing. And so that would mean improving the allocation of money to remediation of homes. And I think in a lovely world where I'm the boss, I would want to see houses tested for lead before kids were in them and not testing kids for what houses have elevated lead levels.

JESSOB Thanks so much for joining us. I'm Jessob Reisbeck.

REISBECK:

BILL WALSH: I'm Bill Walsh. Mayor Cavalier Johnson just finished delivering his annual State of the City message, talking not only about how Milwaukee is doing today but where he hopes to take it in the future.

BONNIE WILLISON: So Milwaukee's mayor gave the State of the City address in June of 2023. He gave a special shout out to lead.

BILL WALSH: Cavalier Johnson announced an ambitious new goal for the city of Milwaukee-- replace all lead lateral surface lines in 20 years. He described the severity of the issue during his speech.

CAVALIER JOHNSON: Childhood blood lead levels are twice as high among Black children compared to those of white children. Last year--

BONNIE WILLISON: The previous estimate for replacing all of the lead pipes in Milwaukee was 60 or 70 years, so this new goal of 20 years would be much faster. But it's much needed. In anticipation of getting this record amount of money from the infrastructure bill, Milwaukee Water Works has developed an equity prioritization plan.

REPORTER: Milwaukee water works has come up with what it's calling an equity prioritization plan to replace the lines.

MAN: So we are basing the prioritization on the Area Deprivation Index. It's an index created by a professor at the University of Wisconsin, Madison.

REPORTER: The plan will identify neighborhoods census blocks across the city. Each will be given a score based on a number of socioeconomic factors like income, education, employment, and housing quality.

BONNIE WILLISON: Deirdre, what do you think about this equity prioritization plan?

DEIDRE PEROFF: I think it's great. It's definitely a step in the right direction. The one thing that we really learned from making this episode is that it's just a super complex issue. It goes back hundreds of years, looking at how the city got so segregated and how there's so many issues with deteriorating buildings and people not having economic wealth and really just a lack of knowledge and education around lead and what they can do to protect their families.

So it is about education and awareness, but it's also about some larger systemic changes that prevent people from living in conditions that are more susceptible to getting lead poisoning.

BONNIE WILLISON: Here's Jamie Ferschinger.

JAMIE FERSCHINGER: My hopes would be that we continue to increase awareness, to have every child tested on a regular basis for lead, having a multi-sector approach to solving the lead issue, and making sure that there's resources that go into every corner of the community, starting with those that need it the most.

[MUSIC PLAYING]

BONNIE WILLISON: This episode of *The Water We Swim In* was produced and hosted by Dr. Deidre Peroff and me, Bonnie Willison. Learn more about Wisconsin Sea Grant at SeaGrant.wisc.edu.