

**SAFE AT HOME: PRESERVING AND IMPROVING
FEDERALLY ASSISTED HOUSING**

HEARING
BEFORE THE
SUBCOMMITTEE ON
HOUSING, TRANSPORTATION, AND COMMUNITY
DEVELOPMENT
OF THE
COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE
ONE HUNDRED SEVENTEENTH CONGRESS
FIRST SESSION
ON
EXAMINING HEALTH THREATS IN HOUSING AND ESPECIALLY PUBLIC
HOUSING

JULY 20, 2021

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SAFE AT HOME: PRESERVING AND IMPROVING FEDERALLY ASSISTED HOUSING

TUESDAY, JULY 20, 2021

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
SUBCOMMITTEE ON HOUSING, TRANSPORTATION, AND
COMMUNITY DEVELOPMENT,
Washington, DC.

The Subcommittee met at 2:45 p.m., in room 538, Dirksen Senate Office Building, Hon. Tina Smith, Chair of the Subcommittee, presiding.

OPENING STATEMENT OF CHAIR TINA SMITH

Chair SMITH. The Subcommittee on Housing, Transportation, and Community Development will come to order. This hearing is in hybrid format. Our Members are in person, but we will have witnesses testifying both in person and by video.

So thank you so much, Senator Rounds, for joining me in this bipartisan hearing to look at health threats in housing and especially public housing. And thank you to all of our panelists, our three panelists, for joining us in this important hearing.

On Wednesday morning, at 3:56 a.m. on November 27th, 2019, one day before Thanksgiving, Minneapolis firefighters were dispatched to the Cedar High Apartments, a 49-year-old public housing highrise at 630 Cedar Avenue. And as they arrived, through the light snow and fog, firefighters discovered that alarms had been triggered for a fire on the 14th floor of the 25-story building.

Firefighters quickly recognized the magnitude of the challenge and immediately called for backup. The first three firefighters on the scene attacked the fire and attempted to rescue the victims, but the overwhelming heat of the fire soon forced them to turn back. As backup arrived, the firefighters launched a second attack, but the fire quickly spread throughout the 14th floor and on to the units on the upper floors, fueled by gusting wind blowing through a window that had come open.

As the fire spread, residents clamored to get out. Stairwells and corridors filled with smoke and heat, and people struggled to get down the highrise stairs. For hours, brave firefighters battled the blaze and worked to rescue people from the inferno. It is tragic that not everyone made it out safely that frigid morning. Five residents, ranging in age from 32 to 79, perished. Four were on the 14th floor and one on the 17th floor.

There are a number of factors that contributed to the deaths in the 630 Cedar fire, but many experts point to the building's lack

of fire sprinklers as a leading cause. Under Federal law, highrise public housing buildings built before 1992, like 630 Cedar, are not required to have fire sprinklers. The Department of Housing and Urban Development estimates that there could be as many as 184,000 public housing units across the country that lack fire sprinklers, just like the Cedar highrise.

The loss of life in the 630 Cedar fire is tragic, and nothing that we do will bring back those lost to their families and their loved ones. But, colleagues, I hope that today's hearing will galvanize us to understand these life and safety risks and then take action to protect our constituents from further tragedy because fires are not the only life and safety risk that people face in their homes.

Today, more than 500,000 children in the United States live with elevated levels of lead in their blood, according to the Centers for Disease Control. Children exposed to lead face significant health risks, including lower intelligence scores, behavioral problems, and hearing and speech issues. Black children and lower-income children are disproportionately victims of lead paint exposure. The leading cause of exposure is lead paint on walls and window sills, and this problem exists in every State.

According to the National Center for Healthy Housing, 54 percent of homes in Minnesota were built before 1978 and are likely to contain lead-based paint. In South Dakota, the number is exactly the same, 54 percent. In Ohio, it is 68 percent. In Pennsylvania, it is 69 percent.

Another significant risk at home is exposure to radon gas. Radon, which is colorless, odorless, and radioactive, is the leading cause of lung cancer among nonsmokers, resulting in 21,000 deaths per year, according to the EPA. In Minnesota, estimates are that two of every five homes has unsafe radon levels. And in South Dakota, the National Center for Healthy Housing estimates that 48 counties have average indoor radon levels higher than the EPA's action level.

Yet, many Americans have no idea of the risks that they face in their homes. So these health and safety risks are not limited to public housing and federally assisted housing alone, but the Federal Government, I think, has a special obligation to make sure that homes supported by, or funded by, taxpayers are safe and free of known hazards. And I hope that this hearing will raise awareness for all Americans about these health and safety risks.

Mitigating these risks will not be easy, public housing authorities operate on tight budgets and face billions of dollars of maintenance backlog. The reality is that we need significant investments in fire sprinklers and fire safety measures and carbon monoxide detectors, and in lead paint testing and remediation, and in radon testing and remediation.

But the good news is that many of us are working on a solution. The American Jobs Plan would invest \$40 billion for life-safety upgrades and other renovations in our Nation's public housing stock, and this investment will save lives. We should all push to secure funding specifically for fire sprinklers and other fire prevention efforts in public housing and support funding for programs to test for and remediate lead paint and radon in public and privately owned housing.

I have introduced legislation to fund fire sprinkler installation in public housing, which has bipartisan support in the House, and I ask my Republican and Democratic colleagues to join me on this bill.

Now before I turn to Senator Rounds, I would like to just briefly share excerpts from three letters that I have received from Minnesotans and from firefighters in this last week, and I would ask that these letters be inserted in the record in full, without objection.

The first comes from Hawo Geyre, a resident of the Cedar High apartment complex, and she said, "We still feel the loss of the five beloved community members, and every day we can still see where the fire happened. It is time to require the retrofitting of sprinklers in highrises, and it is time for the Federal Government to provide the funds to make this happen. We do not want to see any more lives lost to fire."

And another is a letter signed by the International Association of Fire Chiefs, the National Association of State Fire Marshals, and 10 other fire safety associations, and they write, "There is no single investment that HUD can make when it comes to addressing life-safety issues that is more important than retrofitting public housing with fire sprinkler systems. In buildings with sprinkler systems, the death rate per fire can be reduced by at least 87 percent. In fact, the risk of death to firefighters is nearly eliminated, and the injury rate is lowered by 67 percent in structures with fire sprinklers."

And, colleagues, finally I want to read a bit of a letter from Captain John Gardell of the Pittsburgh Bureau of Fire on behalf of the International Association of Firefighters, and he shares his personal experience with a highrise fire in Pittsburgh during his first year on the job. The blaze was on the fifth floor of an eight-story highrise, and Captain Gardell writes, "Arriving at the door of the apartment, my crewmates and I made entry into the residence. Through the thick, black smoke and elevated temperatures, we located the victim and extracted her from the building. Once outside, we turned her over to the on-the-scene paramedics. Alive but in critical condition, she received advanced life-support medical care on the scene while being transported to the hospital. Sadly, our rescued fire victim did not survive. She died in the hospital a few days later."

"I tell you this story," says Captain Gardell, "because I have thought about this call many times over my career. I am very confident this fire death was preventable. I am certain that had an automatic fire sprinkler system been present in the building, the victim would likely have survived."

So this issue of home health and fire safety is critical to every American. Many have recently seen footage of the tragic highrise condo collapse in Florida and are asking themselves for the first time whether their own homes are safe. So in this moment, I hope that we can join together to raise awareness of these critical life and safety hazards and commit ourselves to doing everything we can to stopping preventable deaths and dangers in our communities.

I look forward to hearing from our witnesses, and I thank you and will now turn to Senator Rounds for his opening Statement.

OPENING STATEMENT OF SENATOR MIKE ROUNDS

Senator ROUNDS. Thank you, Madam Chair. And let me just begin once again by apologizing for being late to this. Once again, we are intermixing votes along with the Committee schedule, but thank you, Madam Chair.

And thank you to our witnesses for taking the time to attend today's hearing. I would especially like to thank Ms. Sharon Vogel from my home State of South Dakota for her willingness to testify. I look forward to hearing from all of you.

When it comes to federally assisted housing, I think we all can agree that the goal is to provide a safe living space for those who need it. However, the means to achieve that end can be debated. Now is the perfect time to take a step back and to evaluate how current allocations are being utilized and how to better tackle these issues. While a lack of resources could be seen as a primary problem, I believe that agencies across the board can be more efficient with their program implementation and mission-critical functions. After these bureaucratic inefficiency problems are addressed, that is when additional funding can be considered.

For example, HUD has instituted mitigation efforts to decrease radon exposure. However, for the 6 years between 2013 and 2018, HUD did not test for radon in a single unit operated by a housing authority directly managed by the Department. How can we justify additional allocations for a program that is not utilizing its resources in the first place? Sometimes it really is not a funding issue; it is a utilization and implementation issue.

There are similar issues when it comes to Native American housing as well. Native housing funds come from both HUD and the Bureau of Indian Affairs. The BIA has been dubbed the least effective and most mismanaged Federal agency, which becomes apparent when you take a deeper look into the conditions of federally assisted Native American housing. According to the National American Indian Housing Council, 40 percent of on-reservation housing is inadequate, a fact that is unmistakable to me every time I drive through a reservation back home and see many of the homes boarded up and unfit for use.

One of the most pressing housing issues prevalent on reservations is overcrowding. According to a 2017 HUD report, nearly 16 percent of American Indians' and Alaska Natives' households experienced overcrowding compared to the national average of 2.2 percent. This level of overcrowding not only affects those living in the houses but the structures themselves. A staggering 12 percent of these households have heating issues compared to just one-tenth of 1 percent of the total in the United States. This is simply unacceptable.

However, there is a bit more to tell in regards to the struggles Native Americans face with housing. Despite having mismanaged funds and inefficiencies at the agency level, there is a true lack of resources available to this population. This issue is perpetuated by the fact that much of the population data coming from reservations is significantly undercounted. The undercounting happens for a

multitude of reasons, one being that families are afraid to admit the number of people they have living in their homes. When the population is not adequately counted, it results in inadequate funding levels, and the problems such as overcrowding persist.

It is apparent there are a wide range of public housing safety issues across the country. It is time we work to address these problems, and I look forward to joining Chairman Smith in this effort, especially in regards to some of the most prevalent and least addressed safety issues that are found on reservations in South Dakota.

Again, we welcome all of you here today, and I do look forward to hearing from our witnesses on the State of housing safety in our country. Thank you.

Chair SMITH. Thank you, Senator Rounds. I am now going to introduce our witnesses, and I will introduce all three and then turn to each of you to make your opening Statements. We are grateful to welcome today Dr. David Jacobs, who is the Chief Scientist at the National Center for Healthy Housing, Jennifer Keogh, who is the Deputy Executive Director of the Minneapolis Public Housing Authority, and Sharon Vogel, who is the Executive Director of the Cheyenne River Housing Authority in Eagle Butte, South Dakota. Welcome and thank you for your willingness to be with us today, and I look forward to hearing from each of you.

Before the witnesses begin, I have just a few reminders. This hearing is in a hybrid format. Our Members are in person, but we will have witnesses testifying both in person and by video. If there is a technology issue, we will move to the next witness and then come back again.

For each of you, you have 5 minutes for your opening Statements, and you have a clock in front of you or on your screen to guide you. And your full written Statement will be made part of the record. For Ms. Vogel, who is joining virtually, you will hear a bell ring when you have 30 seconds remaining and then again when your time is expired. And the speaking order will work out here at the podium amongst the Senators.

I will now turn to Dr. Jacobs for 5 minutes for his opening Statement. Thank you.

STATEMENT OF DAVE JACOBS, CHIEF SCIENTIST, NATIONAL CENTER FOR HEALTHY HOUSING, COLUMBIA, MARYLAND

Mr. JACOBS. Thank you for the opportunity to appear before you today. I come before you not only as scientist but also as a low-income housing provider. I have served on the board of Lincoln Westmoreland Housing. Here in the District in the Shaw neighborhood, we provide housing for over 150 families. So I sort of straddle both worlds.

I think in general the link between housing and health is pretty still poorly understood. If you think about it, these are two biggest parts of our economy that are at risk. We are dealing with an affordable housing crisis, and we are still trying to figure out how to deal with our health care financing system. So there is an enormous cost and burden here. If we were to understand the links, we could avoid some of the unnecessary expenditures and optimize both worlds.

A lot of the burden that we have talked about is not only lack of funding, but as Senator Rounds said, it is also implementation issues. But in general, we have as a Nation failed to construct, maintain, preserve housing that not only prevents injury or illness but actually supports good health. If you think about it, it just makes no sense in the world to have a child go to the emergency room with an asthma attack or a lead poisoning and then treat the symptoms, only to release him back into the home with mold or with asthma triggers or lead-based paint hazards. That causes increased costs needlessly.

There is some alarming new evidence that I want to put before the Committee today. Blood lead testing, according to CDC, has been down by 34 percent during the pandemic. There is some preliminary evidence that hospitalizations for serious lead poisoning cases may actually be increasing. And HUD's new survey on housing shows that there is an additional 4.6 million homes that have deteriorated lead-based paint. Half a million kids still have blood lead levels above the CDC reference value, and in my book, that is an epidemic, in anybody's counting.

Thirty-five million homes have at least one health and safety hazard. As we have heard, these problems are most severe among low-income and populations of color, but I do want to note that HUD's survey also shows the problem is just as bad in the rural areas. We did a study in Illinois on private well waters, and we found that 48 percent of those wells had lead in the water. Now that is the bad news.

The good news is that solutions do exist. We have researched this extensively. We have the systems that we know how to prevent a lot of these, and so we only need to take them to scale and release our people's ability to make the right decisions and to expend the resources wisely.

We sent letters on both appropriations and infrastructure. So I want to, first of all, thank the Congress in recent years for increasing the appropriations for a long neglected issue of lead in healthy homes. The House provided 460 million in its—in its appropriations bill. The National Safe and Healthy Housing Coalition, which, I would note, is cochaired by someone from Indian Country, has recommended a figure of \$600 million. We also need increases at CDC and EPA. I would note CDC has not updated its blood lead surveillance data since 2017.

I also think that it is important to include lead in the infrastructure bill, lead paint specifically, and specifically window replacement. There is a friend of mine in Minnesota who has probably replaced more windows than anybody else in the country. Windows have the highest levels of lead paint. They create—if we replace them, it creates jobs, it creates improved energy value, it eliminates a major source of lead poisoning, and it increases home value and reduces fuel bills. So what is not to like?

We, at the Center for Healthy Housing, talk to many jurisdictions, and the need for increased technical assistance remains dire. For example, we provided technical assistance to Cleveland, which was able to pass its own local lead poisoning prevention law. And I think that gets to Senator Rounds' issue about implementation.

The technical assistance does not really happen if it is not included in the bills.

We have some specific recommendations with regard to disclosure. Most houses in this country remain uninspected, and that means parents do not know exactly where the lead or other hazards are located in their own homes.

We have different income eligibility criteria across different programs. So CDBG, Lead Hazard Control, HOME weatherization, LIHEAP, Medicaid, they all have slightly different income requirements, and there is just no good reason to have these different definitions of "low income." We could streamline that.

I agree with Senator Smith that Congress should also increase radon testing. It is shameful that they did not do more in previous years. We just did a study on this that showed the importance of testing all homes.

So I want to close with a—quickly with a quote from President Roosevelt, who said, "A Nation must believe in three things: It must believe in the past. It must believe in the future. And it must, above all, believe in the capacity of its own people to learn from the past so that they can gain in judgment in creating their own future."

So I think lead hazards and other healthy homes issues belong in our past. Let us do something so that they do not remain in our future. Thank you.

Chair SMITH. Thank you very much, Dr. Jacobs. We will now turn to Ms. Keogh.

STATEMENT OF JENNIFER KEOGH, DEPUTY EXECUTIVE DIRECTOR, MINNEAPOLIS PUBLIC HOUSING AUTHORITY, MINNEAPOLIS, MINNESOTA

Ms. KEOGH. Chairwoman Smith, Ranking Member Rounds, Members of the Committee, thank you for the opportunity to testify today. My name is Jennifer Keogh, and I am the Deputy Executive Director of the Minneapolis Public Housing Authority in Minneapolis, Minnesota. I am also the Chair of the Legislative Network Advocacy Committee of the National Association of Housing and Redevelopment Officials, also known as NAHRO.

The Minneapolis Public Housing Authority, or MPHA, is the largest housing authority in the State of Minnesota, and our mission is to deliver quality, well-managed homes to a diverse, low-income population. MPHA provides rental assistance to 26,000 people through our Public Housing and Housing Choice Voucher Programs. We own and operate 6,000 units of public housing, including 900 family units and 42 highrise communities. Our highrise population is 60 percent elderly and disabled; 80 percent identify as a person of color. And our average household income is under \$13,000 annually, which is approximately 18 percent of the area median income.

I am here today to support Senator Tina Smith and Senator Amy Klobuchar's Public Housing Fire Safety Act, which would provide needed resources to PHAs, including MPHA, to install fire sprinklers. Additionally, I am here to support the investment of at least \$70 billion to address the capital needs of public housing properties across the country. Housing is critical infrastructure.

In November 19, a fire occurred in one of MPHA's highrises that took the lives of 5 residents. In April 20, I was selected to serve as MPHA's new Deputy Executive Director alongside Abdi Warsame, MPHA's new Executive Director and CEO. Despite overwhelming physical needs throughout the entire portfolio, we have made the installation of fire suppression systems a top priority. In doing so, due to the lack of funding, we are forced to ignore other critical needs of aging building systems.

MPHA is implementing a plan in 2021 to install sprinkler systems in 10 of its buildings. Sixteen of our buildings are already retrofitted with sprinkler systems, and we have plans to complete installations in all remaining buildings within the next 3 years. Retrofitting a sprinkler system is costly. It can cost \$1 million or more, and the overall cost for this year's installation in those 10 additional units is estimated at approximately \$12 million.

While we recognize that the investment in sprinklers is essential, the results of prioritizing the sprinkler work is that other crucial capital needs remain unmet. These needs include not just sprinklers but electrical, plumbing, heating, elevators, and other essential building systems. MPHA has an estimated \$164 million capital repair backlog across our 6,000-unit portfolio, and this figure does not include important upgrades to actually improve the housing we provide.

We cannot make these needed repairs without significant resources provided by Congress. Our residents are depending on Congress to finally provide MPHA with the funding it needs to improve and preserve our units. Minneapolis is not the only PHA that struggles to keep up with growing capital needs and few Federal resources to preserve our affordable housing. The State of Minnesota's estimated capital backlog is \$355 million, and this problem is mirrored across the country.

In 2010, the National Public Housing Capital Needs Assessment found that the backlog for public housing capital funding was \$26 billion, with an annual growth rate of \$3.4 billion. The report noted that deferring maintenance each year causes the amount of backlog to compound at an 8.7 percent inflation rate. As a result, even when accounting for other Federal capital programs, NAHRO estimates that the capital fund backlog was approximately \$70 billion in 2019.

Housing is critical infrastructure. We need Congress to meet their obligation to provide safe housing to our residents by fully funding the \$70 billion capital backlog. We also need targeted investments through the passage of the Public Housing Fire Safety Act to help us quickly address pressing safety issues.

Chairwoman Smith, Ranking Member Rounds, thank you for the opportunity to testify today. I am happy to answer any questions.

Chair SMITH. Thank you so much. And we will now turn to Ms. Sharon Vogel.

**STATEMENT OF SHARON VOGEL, EXECUTIVE DIRECTOR,
CHEYENNE RIVER HOUSING AUTHORITY, EAGLE BUTTE,
SOUTH DAKOTA**

Ms. VOGEL. Good afternoon. Thank you, Chairman Smith and Ranking Member Rounds, and Members of the Subcommittee, for

the opportunity to testify before you today on preserving and improving our federally assisted homes.

[Technical difficulties.]

Chair SMITH. OK. Ms. Vogel is having technical difficulties. So while we are waiting, maybe I will start with a couple of questions, and then when she comes back in, we can get going. That is great.

OK. Ms. Keogh, I would like to start with you a little bit. I appreciate your testimony about the Cedar High apartment fire in 2019, which was the impetus for the bill that Senator Klobuchar and I are working on. Could you just tell us a little bit more about what Minneapolis has done since that fire?

And in your testimony, you described how you have had to prioritize sprinklers as opposed to other deferred maintenance. Could you tell us a little bit more about what you have not been able to get done as a result of that reprioritizing?

Ms. KEOGH. Thank you, Chairwoman Smith. So as you know, I was not—I certainly was not there in November when the fire happened. So when I came into leadership with Abdi, what we—what presented before us was they had a fire suppression plan, which I know we have shared with you, and it was over a period of time. So that fire suppression plan that we evaluated was that we would do fire suppression as—not as a standalone project but during major rehabilitation projects and as dollars were available. That plan—as we came into leadership, very clearly fire suppression became a top priority. So we went into our first budget process and determined how can we accelerate this plan in a shorter amount of time, and that is where—that is where that three—that 3-year plan came.

So that plan, though, as you asked, is we have to ignore other critical needs. So the toughest part of this job is when you have to compare what are all critical life and safety issues: Catastrophic fire. Elevators go down in the middle of the night, and it is a 284, you know, story highrise of seniors. They are all—it is—they are all difficult decisions. But it is elevator repair. It is—it is our heating systems. It is our windows and facades. It is our roofs. All of those types of things you make decisions on, what will get funded that year and what will not, based on appropriations coming in from the capital fund.

Chair SMITH. Right. And your deferred maintenance gap backlog is about 160?

Ms. KEOGH. \$164 million.

Chair SMITH. \$164 million, right. So I think that this just illustrates the scope of the challenge that we have—that we have in front of us.

Dr. Jacobs—I want to thank you for that, Ms. Keogh.

Dr. Jacobs, I wanted to touch base with you on a related issue. The COVID-19 pandemic has made abundantly clear the connections between health and housing. The CDC identifies housing as a key social determinant of health, meaning that the environment and the conditions that you live in have a big impact on what health risks you face and what health outcomes you get. And I think this is an important foundation for this conversation that we are having about health and safety risks in housing generally.

So, Dr. Jacobs, could you talk a bit about housing as a social determinant for health, what that means, and how housing conditions impact outcomes, and especially what impact this has on children when they are living in substandard housing?

Mr. JACOBS. Thank you for the question. I will open with a speech I heard in Minnesota from the CEO of the Blue Cross Blue Shield Foundation, and he opens it with a picture of a salmon swimming upstream. And he said: Those of us in the health world, we need to do what this fish is doing. We need to swim upstream and look at the root causes. It is not enough to just treat people after they get sick.

So as you indicated, housing is clearly one of those. Over a hundred years ago, housing and health were actually joined at the hip through the sanitation movement. We had cholera. We had typhoid. We had tuberculosis. And while better medicine played a key role in conquering those diseases, it was also by improving ventilation, improving potable water supply in the buildings.

And then over the years, that connection atrophied, and so people lost the connection between housing and health. The housing world became more financial. The medical world became more treatment oriented. And only now we are realizing when it comes to chronic diseases, like lead poisoning and asthma and mold-induced illness and certain injuries, if we do not attack the root causes, we will pay the cost down the road, which is illogical. Right? It does not make sense.

So making the investment in building systems so that we reduce the health care cost is—it has been shown over and over again through lots of cost-benefit analyses. It just makes simple sense.

We should not have to choose between—I remember a housing authority director once told me, “Well, you pick one. I have got enough money to keep my furnaces working in the winter, or I can take care of my lead paint problem. Which one would you pick?”

Chair SMITH. Right.

Mr. JACOBS. We should not be in a world where we have to make those kinds of choices. We can do the right thing.

Chair SMITH. Thank you so much.

I think, Senator Rounds, Ms. Vogel is back on the phone, so we will get her. But I think that that is very much the point that you were making about the substandard housing that we see so often in Indian Country.

All right, Ms. Vogel. Welcome back and you may begin your testimony.

Ms. VOGEL. Thank you very much, and good afternoon, Chairwoman Smith and Ranking Member Rounds and Members of the Subcommittee, for the opportunity to testify before you today on preserving and improving our federally assisted homes.

My name is Sharon Vogel. I am the Executive Director of the Cheyenne River Housing Authority located on the Cheyenne River Sioux Reservation in South Dakota. I am also the Chairwoman of the United Native American Housing Association, comprised of 33 tribally designated housing entities from the States of North and South Dakota, Nebraska, Montana, Utah, Wyoming, and Colorado. I am also proudly serving my first term on the Board of Directors of the National Low Income Housing Coalition and continue my

service as a board member of the National American Indian Housing Council.

The Cheyenne River Housing Authority currently provides low-income housing to over 800 families. We serve primarily a Native American population throughout 19 communities on our reservation. The Cheyenne River Housing Authority is the tribally designated housing entity for the Cheyenne River Sioux Tribe. We currently manage 735 rental units, 86 home ownership units, with 42 new rental units under construction, and we continue to build our successful record of developing affordable housing by designing and financing rental and home ownership homes for eligible families.

Native Americans living in tribal areas and remote Alaskan villages experience some of the greatest housing needs in the country, with high poverty rates, low incomes, overcrowding, lack of plumbing and heat, and unique development issues. Due in part to these unique conditions, Native American households have been especially hard hit by the pandemic and its resultant economic downturn, being more likely to develop serious illness as a result of the pandemic.

But overcrowding of available housing stresses both the occupants and the structures themselves. Homes on Cheyenne River require much more maintenance than the average wear and tear to remain safe and livable. This is not for the lack of property management. It is because there are not enough homes to go around. A 3-bedroom house is designed for a family of 5 or 6, but often because of overcrowding these units are occupied by 3 or more families, sometimes as many 15 individuals sharing a house.

Preserving limited Indian housing resources nationwide makes it essential that Indian housing be remembered in the upcoming infrastructure legislation, including the 70 billion being targeted for rehabilitation of federally assisted housing.

We strongly support the recently introduced bill to reauthorize the Native American Housing Assistance and Self-Determination Act, sponsored by Senators Smith and Rounds. In particular, the proposed provisions reinstating the highly successful drug elimination program and the long-awaited changes to the NAHASDA program requirements, many of which were originated by our UNAHA region.

In order to bring NAHASDA resources where they are needed the most, we also support the proposed 9 billion increase for the competitive IHBG program.

The pandemic has exposed significant gaps in our Federal housing safety net. Housing inequities contributed to the spread of COVID cases and deaths. And the lack of a universal housing assistance program placed tens of millions of renters at risk of losing their homes and, with that, the ability to keep themselves and their families safe. We can build back better by closing gaps in our safety net so that our tribal governments and our Nation are better prepared for the next crisis. Thank you.

Chair SMITH. Thank you so much, Ms. Vogel, and to all of our testifiers. And I will now turn to Senator Rounds for 5 minutes of questioning.

Senator ROUNDS. Thank you, Madam Chair. And look, first of all, let me just say thanks to Ms. Vogel for taking the time to speak

with us today as well as our other two panelists. Your information is critical that we share it and that we look at ways to improve housing across this country for those individuals that simply do not have other alternatives.

Ms. Vogel, I would like to thank you for taking the time out of your day to join us all the way from Eagle Butte in South Dakota. You may be familiar with a member of my personal staff, Kyle Chase, who is also an enrolled member of the Cheyenne River Sioux Tribe. He is also my chief legal counsel, and he has been a real asset in terms of providing us with additional information about working through some of these issues.

But I want to begin by inquiring as to the unique vulnerabilities that Native American communities face when it comes to housing safety. Ms. Vogel, can you expand on the specific housing safety issues facing tribes today and how those issues differ from off-reservation public housing?

Ms. VOGEL. Thank you for that question, Senator Rounds. The unique threats that are facing our—the safety of our families is, of course, one, the rural isolation of our communities, the response time for any first responders. You know, not having firefighting equipment stationed locally, that is one.

Another is the meth contamination of our units. We have an epidemic of meth use in our tribal communities, and the residual effects of the use of meth in our homes leaves our elders and our young children, those with compromised health conditions, in very vulnerable positions. That is also a big concern of ours.

Others is, you know, that the overcrowding creates a lot of stress on the house. Mold is a problem, you know, from just all the moisture in the house and not having proper ventilation. You know, the lack of heating and upgrades to keep up with the demand. You know, we face, you know, serious problems with heating and cooling costs, making, you know, families choose between, you know, do I pay my light bill, do I pay my heating bill, or you know, do I buy groceries.

So there is a lot of stresses because of the threats that face our families to ensure—that are not the same as what the others testified. There is not enough money to address every threat, and so we, too, have to prioritize. Thank you.

Senator ROUNDS. Ms. Vogel, thanks for that. And I would like to follow up a little bit. You indicated earlier that Chair Smith and I have promoted the reauthorization of NAHASDA, and part of that is it reinstates the HUD drug elimination program. I am curious. Sometimes I do not think folks realize what an impact a meth house is or what impacts that has in terms of getting somebody new into a home that has had meth in the past. Could you talk just a little bit about what it takes to rehab a home where meth has been a problem?

Ms. VOGEL. Yes. That is—that has been an increasing cost. You know, when we discover—when we have a vacant unit, we test that unit to see if it tests positive for meth. So if it tests positive for meth, then it is the cleanup cost, the remediation, before we can even start to address the rehabilitation of it.

But the condition of the homes that—when there is meth used and the behaviors of the tenants themselves is there is a lot of ten-

ant damage to the unit. And so, you know, we have gone in where we have had to strip the sheetrock down, and because of holes in the walls we find dirty needles behind the sheetrock, and so we have to be very careful in removing things. Doors are missing. There is broken windows. So there is just structural damage to the unit. So you know, when we go in, we have to replace cabinets. We have to replace vanities, doors. We have to re-sheetrock. There is just an extensive lot of damage unfortunately because of the drug use and the behaviors, violent behaviors, that come with that.

So we always have catchup. So we try to do as many as we can, you know, throughout the year, but at the end of the fiscal year, we are carrying vacant units into the next year.

Senator ROUNDS. Thank you for that, and my time is expired. But I think you lay out some of the additional costs that maybe a lot of folks out there are not aware of that go into trying to rehab a home that in the past worked, but with someone on meth or using meth in that home, the type of damage that it does to the home and what it takes to get it all put back together. Thank you very much for participating this afternoon.

Chair SMITH. Thank you, Senator Rounds.

Senator Cortez Masto.

Senator CORTEZ MASTO. Thank you. Thank you, Madam Chair and Ranking Member. Let me follow up on Ms. Vogel's conversation with Senator Rounds. I am a proud cosponsor of the bipartisan NAHASDA reauthorization. Based on the challenges, Ms. Vogel, that you highlighted, how would the NAHASDA reauthorization improve the State of Indian housing? What would you be able to do with this reauthorization?

Ms. VOGEL. Well, there are so many improvements to it just for program-wise. You know, having the reinstatement of the drug elimination program would allow us to really focus on prevention and engaging our youth in drug-free activities, which would give them options.

Other improvements, of course, would be the—allowing the rent structures to be determined by the TDHE, working with our tribal government. We have such—some of our families have zero income. I mean, they go months without income because of the general assistance is sporadic. And so we do not get the revenues from them, you know, on an ongoing basis.

The other improvements, of course, would happen is that, you know, we would be eligible. The HUD-VASH would be permanent. We would be able to apply for those vouchers for our veterans and be able to house our homeless veterans.

The—just the inclusion of making sure that, you know, we could use the Federal funds that are program funds as matching funds for other Federal programs, and so we would be able to leverage our dollars with other Federal funding opportunities to do infrastructure or build homes. So there are so many improvements that would make a difference for our TDHEs and just have an immediate impact.

Senator CORTEZ MASTO. Thank you. And then, Ms. Keogh, same question to you, with respect to reauthorization of NAHASDA but also some of the ways that Congress can support efforts by State housing authorities, U.S. Department of Housing and Urban Devel-

opment, to make federally assisted housing more resilient to fires, floods, or other natural disasters.

Ms. KEOGH. Thank you for the question. Regarding NAHASDA, we do not have any Indian housing within my portfolio. So I cannot address that, but thank you for the question in regards to what can we do for federally assisted housing. For years right now, we are receiving 10 cents on the dollar for the dollars that we need for capital repairs. And so the bill that Senator Smith and Senator Amy Klobuchar have out for fire safety having standalone dollars that are set aside just for fire suppression would be incredibly impactful for housing authorities like mine as well as the other housing authorities nationally that still have work to do with fire suppression.

In regards to the other critical life and safety issues, again 10 cents on the dollar, so funding a housing authority is at levels that allow them to make all of the repairs necessary so that we are providing decent, safe, and sanitary housing.

Senator CORTEZ MASTO. Thank you. And, Dr. Jacobs, you said it best. We know that safe and stable housing was critical to preventing additional illness and deaths due to the COVID-19 pandemic. Housing is health care; it is. And in your testimony, you point to a specific downside of stay-at-home practices for low-income children, especially Black and Latino children: higher levels of lead paint poisoning and asthma from mold. What did your research find about an increase in housing-related illnesses? What else should we be aware of?

Mr. JACOBS. This underscores the importance of CDC's surveillance system. We have a pretty good surveillance system for medical care. When it comes to housing, there is not really a good way to track ongoing housing deficiencies that can impact health in the long run. So CDC needs to release its data on blood lead levels. It looks actually like asthma, for example, improved a little bit, along with certain other communicable diseases. On the other hand, it appears that injuries, home-based injuries, might have increased a little bit.

It is still very preliminary, but it is logical, if you think about it, that because children or elders spend more time at home during the pandemic we want our homes to be healthy. If they do not—because they shield us in part from the pandemic. But as you spend more time at home, your exposure goes up. And with exposure going up, then other things can happen, whether it is carbon monoxide poisoning or others. So it is important that houses be built in a resilient manner, and that means increasingly using green standards.

You may remember Superstorm Sandy looked at—when they did the rebuilding, beyond the rescue they also said, let us not just build it back the way it used to be; let us build it back in a more resilient fashion. And therefore, if you are going to rebuild using HUD dollars, you have to comply with green standards. Green standards is sort of an emerging area, if you will, but the evidence is increasingly clear that they improve health, improve resilience, and also, of course, have an energy benefit.

Senator CORTEZ MASTO. Thank you.

Chair SMITH. Senator Van Hollen.

Senator VAN HOLLEN. Thank you, Madam Chair, Ranking Member Rounds. Thank you to all our witnesses today.

Dr. Jacobs, thank you for your work in this area. I am proud of the fact that the National Center for Healthy Housing is in Maryland. Columbia, Maryland.

Let me ask you this. We know that communities across Maryland, in fact across the United States, including Baltimore in our State, you can see the legacy of disinvestment. You can see the legacy of segregation and redlining. And in fact, nationally, 60 percent of Black Americans live in historically redlined communities, the same communities that also have a much higher risk of lead poisoning, and that, as you know, has been an ongoing issue in Baltimore City as well.

We have had hearings in this Committee that, you know, talked about the correlation between that redlining and segregation and the wealth gap. And can you talk a bit about how housing safety issues are also intimately tied to health equity outcomes, especially in low-income communities and communities of color?

Mr. JACOBS. Thank you for the question. It is critically important. It seems to me that this issue is sort of the poster child, if you will, of environmental justice or environmental injustice, if you will. We pay the price over the long run for not making sure that not only we have adequate health standards for housing but that it is equitable. Equity matters a great deal. And increasingly, what we need to do is think about, well, how do we build resilient communities so that they are mixed income, so that they are diverse, so that people can use the strengths that all of us have to overcome each of our own weaknesses. So I think there are some models out there that point to that direction, but building mixed-income neighborhoods from a housing perspective, it is tough.

I opened the hearing by saying I am president of the board of a low-income housing development here in DC, in the Shaw neighborhood. Now 10 years ago, that was a struggling neighborhood. Now it is going upscale, and some people no longer want us in that neighborhood. We are the only affordable housing left there.

So overcoming the barriers, helping people to grasp why mixed-income neighborhoods, why diverse neighborhoods, and why that is good for the Nation seems to me an ongoing challenge that those of us in both housing and health need to think through more thoroughly. It is a great question.

Senator VAN HOLLEN. Well, I appreciate your answer because, as you have heard from my colleagues on the Committee and as you know, we are in the process now of looking at major investments in housing, both in terms of greater potential for first-time ownership but also more rental assistance. And one of the proposals that we have put forward, actually on a bipartisan basis, in legislation has been affordable housing vouchers that allow families with younger kids to move to areas of greater opportunity, which would increase diversity of neighborhoods. Are there other policies we should be thinking about here at the Federal level as we work on this legislation that would address the issues that you are talking about?

Mr. JACOBS. The research based on this is pretty clear. There is a long-running study called "Moving to Opportunities". I am sure

you are familiar with that. But it shows the positive health and many other benefits that accrue when we build these sorts of diverse neighborhoods.

When it comes to the Section 8 Housing Choice Voucher Program, I think it is important that we think through how those housing units qualify for the program. We have talked about carbon monoxide. We talked about lead. You cannot see those things with the naked eye, and yet most of HUD's inspection systems rely on visual assessment, which is not adequate for a number of these health concerns. So those inspection systems need to be reformed and based on good scientific evidence.

And we should increasingly use standards like the National Healthy Housing Standard that two HUD secretaries released along with us and the American Public Health Association. That seems to me to be the trajectory of where we should go, and all federally assisted programs should comply with it. It is not enough to just leave it up to local jurisdictions to figure out how their own housing stock can be made safe and healthy and resilient. It is going to take some leadership from the Federal Government to clarify that.

Senator VAN HOLLEN. Can I do one quick follow-on, Madam Chair?

And I know you are applying that idea across the board, and I think that is exactly right. I know that you have also done some specific work in the area of asthma. Is there an ongoing effort that those proposals that you just referenced include establishing certain standards with respect to protecting people from asthma in federally assisted housing programs?

Mr. JACOBS. Yes, absolutely. So for example, one key component is ventilation. It turns out to be a rather complicated issue, but in multifamily housing, a lot of which is federally subsidized, there are not—there are not actually clear requirements when it comes to ventilation. I spent time in Chicago. It is good enough to open the bathroom window, according to the local code. But in the winter time, people do not do that. So asthma is highly correlated with inadequate ventilation.

And clearly, if we were to reduce—if we were to improve ventilation standards—and there are some voluntary ones that are out there that should be used. I sit on the American Society of Heating, Refrigeration, and Air Conditioning Engineers, which has a voluntarily standard. There is no reason why federally assisted housing should not adopt that standard. It says specifically how much air should be brought in, how it is going to be distributed, how it can be optimized so that you do not pay a huge energy penalty. And the evidence base is pretty clear that when you do that you have lower rates not only of asthma but moisture problems and the like.

So housing needs to be thought of as a system, not as these sort of disparate, substandard elements.

Senator VAN HOLLEN. Thank you. Thank you, Madam Chair.

Chair SMITH. Thank you so much.

Senator Rounds I do not believe has any follow-up questions. And, Senator Cortez Masto, do you have any other questions you would like to ask? OK.

Right. I just have two things I would like to follow up on briefly and before we wrap up. I appreciate the questions that Senator Van Hollen was getting at, really focusing on issues of housing and equity. And in most places around the country, the residents of federally assisted housing are low-income; they are more likely to be elderly people, people living with disabilities, and people of color.

Ms. Keogh, could you talk—this is clearly then an equity issue as we think about the much-needed investments in these federally supported housing. Ms. Keogh, could you tell us a little bit about the demographics of folks living in the residences that you serve in Minneapolis and why this lens, this equity lens, is so important?

Ms. KEOGH. Thank you for the question. So across our public housing portfolio, over 80 percent identify as a person of color, over 30 percent are Somali head of household, and specific to our highrise population, over 60 percent are elderly and/or a person with disabilities.

So using an equity lens is imperative. It is imperative as we create policies, policies whether at the Federal level or policies that we get to create as housing authorities in how we in how we implement our programs, how we create new programs, whether again it is at the HUD level or at the local level, and how we balance our budgets. We have to be using an equity lens to address the disparities that exist across racial and ethnic lines.

Communities were designed intentionally, and Senator Van Hollen talked about that, through redlining. In Minneapolis in particular, racial covenants were recorded. They are recorded back into homes back to 1910, and the use of those racial covenants forced our Black community to live in segregated communities. And we see that living out today in our city that is incredibly segregated, and the racial disparities along those lines are deep.

And if we want to be a thriving community, we know that we need to make better investments in the city of Minneapolis as well as within our region. We have this—we have an opportunity to be intentional. This is a once in a lifetime opportunity, I think, with the investments that are at stake, to intentionally repair what has resulted in displacement, racial segregation, and inequitable communities.

Chair SMITH. Thank you. Thank you so much for that.

The last thing I want to just touch on has come up in the conversation is the issue of HUD inspections. And, Dr. Jacobs, HUD has procedures to inspect public housing buildings and HUD-assisted multifamily buildings on a routine basis, and they look at conditions inside the building walls and doors and ceilings and so forth. And theoretically, HUD is equipped to identify and address the issues that they find. But what can you tell us about how these inspections work in practice? What is—you know. What in this process is not working? And does HUD have the staffing and the resources and the capacity to do what Congress is asking them to do?

Mr. JACOBS. So there are disparate inspection protocols that different programs use. There is one for public housing. There is one for project-based Section 8 housing. There is one for Housing Choice Vouchers.

I think it was in 2017 Congress asked HUD to consolidate all of those inspection protocols and also think about specialized inspection protocols, like for lead paint or asthma triggers or injury assessments. So HUD has not done that. We are trying to help them do exactly that. The National Healthy Housing Standard has annotated, scientific, evidence base that shows which housing defects are important, how the interventions can be done to improve them.

I think it is a little—it is not clear who is in charge at HUD, frankly, on this. There is the Real Estate Assessment Center. There is the Office of Healthy Homes and Lead Hazard Control, which I previously ran back in the 90s and the aughts. It is a little disparate. And so I think it is probably worth thinking through how can Congress mandate a true consolidation so that the inspection systems are reliable, they have been validated, and they are based on good evidence so that we can direct our scarce dollars to the remediations that make the most sense and the repairs. If we do not do the inspections properly, we will not be able to respond intelligently.

So I think HUD could use some direction to proceed. It is not—they have been doing demonstrations now for, I do not know, a few years. It is time to marshal the evidence of what those demonstrations actually showed and develop a unified inspection protocol.

Chair SMITH. Thank you. And I just want to double-check if Ms. Vogel or Ms. Keogh would like to add anything to that HUD inspections issue.

Ms. KEOGH. Senator Smith, I can tell you I am certified in HQS. So I can do inspections for the voucher program, and I have done thousands of inspections in units across the Twin Cities' area.

And this is just—I am going to just go on the record that this is my own personal thought, that you are right on the money, Doctor. They are very subjective. The way we do inspections for vouchers, what is required for public housing units are different. And from a voucher standpoint, it is incredibly subjective because it is based on a person's assessment of what they are going into. We are not trained to identify mold. Mold is something by sight. And so when we think about all of the healthy hazards that lie within units, having some type of standard protocol across all of our federally assisted programs, to me, just makes good sense.

Chair SMITH. Thank you. Ms. Vogel, would you like to add anything?

Ms. VOGEL. Yes. Thank you. I do support that, of establishing some standards. Currently, we do inspections. It is a requirement under our grant conditions that we do annual physical inspections of all of our rental units. And we do comply with that, but it is all done in-house. And so having the additional training and the resources to be able to become an industry standard is something that we definitely support.

Chair SMITH. Thank you so much. Well, I want to thank all of our witnesses for being here today and for providing testimony.

And for Senators who wish to submit any questions for the record, those questions are due 1 week from today, which will be Tuesday, July 26th. For our witnesses, you will have 45 days to respond to any questions for the record. And thank you again so much.

Thank you, Senator Rounds.
And with that, our hearing is adjourned.
[Whereupon, at 3:48 p.m., the hearing was adjourned.]
[Prepared statements and additional material supplied for the
record follow:]

PREPARED STATEMENT OF DAVE JACOBS

CHIEF SCIENTIST, NATIONAL CENTER FOR HEALTHY HOUSING, COLUMBIA, MARYLAND

JULY 20, 2021

Thank you for the opportunity to discuss health and safety in federally assisted housing. My remarks today will show the enormous burden and cost associated with our nation's failure to construct, maintain, and preserve housing that supports good health. They will also show that proven and practical solutions exist yet remain to be implemented at the scale needed. After all, it makes no sense to treat a child's asthma attack or lead poisoning in a hospital emergency room, only to release that child back into the home that caused the illness in the first place.

Healthy Housing, Covid, and Overall Trends

There is alarming new evidence that the necessary increased time spent at home to help mitigate the Covid pandemic also led to increased housing-related illnesses such as lead poisoning from paint. Blood lead testing declined dramatically by 34% according to the latest data from CDC,¹ and one state reported that childhood lead poisoning has increased by 27% and a shocking 367% increase in hospitalizations for childhood lead poisoning.²

New data from HUD also show that the number of homes with deteriorated lead paint actually increased by 4.6 million homes from 2005 to 2018 as the housing stock continues to age.³ Homes in rural areas have about the same prevalence of lead paint hazards as do urban areas.

Children of color and those from low-income families are at much higher risk, a significant environmental justice concern.^{4 5}

HUD reported in 2017 that 7.7% of HUD-assisted housing was either severely or moderately inadequate. In public housing, the figure was 11.8% and in voucher housing it was 6.4% (these are likely underestimates because they do not include such recognized hazards such as lead paint, asthma triggers and mold).⁶

¹ Courtney JG, Chuke SO, Dyke K, et al. Decreases in Young Children Who Received Blood Lead Level Testing During COVID-19 — 34 Jurisdictions, January–May 2020. MMWR Morb Mortal Wkly Rep 2021;70:155–161. DOI: <http://dx.doi.org/10.15585/mmwr.mm7005a2external icon>

² Email to Leadnet from Ben Haygood, New Jersey Environmental Health Policy Director for Isles, Inc, March 30, 2021. Leadnet listserve is operated by the National Center for Healthy Housing

³ Presentation from HUD: Findings on Lead-Based Paint/Hazards from the American Healthy Homes Survey II. CDC Lead Exposure and Prevention Advisory Committee Meeting. Peter Ashley. May 14, 2021

⁴ Timothy Dignam, Rachel B. Kaufmann, Lauren LeSturgeon, Mary Jean Brown. Control of Lead Sources in the United States, 1970-2017: Public Health Progress and Current Challenges to Eliminating Lead Exposure. Journal of Public Health Management and Protection. January/February 2019. Volume 25, Number 1 Supp p. S13-S22.

⁵ Whitehead LS, Buchanan SD. Childhood lead poisoning: a perpetual environmental justice issue? J Public Health Manag Pract. 2019;25(1 Supp):S115-S120.

⁶ Eggers F. Characteristics of HUD-Assisted Renters and Their Units in 2017. HUD Office of Policy Development and Research. March 2020.

A recent study showed private water wells in rural areas, which are not regulated by EPA, showed that lead was detected in tap water in 48.3% homes.⁷

Nationally, 35 million homes have at least one safety or health hazard.⁸ The need for further action is urgent.

Housing and Health

These and other data demonstrate that the nation is faced with an affordable housing crisis and a health care crisis. In general, we have treated them as if they were separate issues. On the medical side, we often wait until people become seriously ill until treatment begins. On the housing side, we often wait until conditions become so bad that maintenance and capital improvement costs increase. Recognizing how the two are related and how each can be optimized will save billions of dollars and reduce needless pain and suffering if we rely on the evidence.

Housing is deteriorating. We have deferred both needed maintenance and capital improvements in both federally assisted housing and low-income unassisted housing and we have not constructed enough new housing. Moreover, we have not adopted sufficient smart healthy housing policies. As a result, we are faced with escalating housing costs and ever-increasing health care costs.

Improved investment in federally assisted and other low-income housing will help mitigate specific health hazards, preserving both housing affordability and reducing health care costs.

My Background

I am a scientist and a low-income housing provider. I am currently the Chief Scientist at the National Center for Healthy Housing (NCHH) and also board president of Lincoln Westmoreland Housing, a non-profit inter-racial faith-based housing organization here in DC. I also serve as director of a World Health Organization Collaborating Center on Healthy Housing in the US, an adjunct professor at the University of Illinois at Chicago School of Public Health and a board member of the nation's only professional association of lead paint inspectors and remediation businesses, the Lead and Environmental Hazards Association. Today I represent NCHH.

NCHH is a national technical, scientific and policy non-profit organization dedicated to developing and promoting practical scientifically validated measures to protect children from residential environmental hazards while preserving affordable housing and reducing inequities. NCHH develops valid and practical strategies to make homes safe from

⁷ Geiger SD, Bressler J, Kelly W, Jacobs DE, Awadalla SS, Hagston B, Onwuta U, Panier C, Dorevitch S. Predictors of Water Lead Levels in Drinking Water of Homes With Domestic Wells. *J Public Health Manag Pract.* 2020 Nov 27. doi: 10.1097/PHH.0000000000001255. Epub ahead of print.

⁸ National Center for Healthy Housing. State of Healthy Housing (data from American Housing Survey). Dec 31, 2020. <https://nchh.org/tools-and-data/data/state-of-healthy-housing/executive-summary/>

hazards, to alert low-income families and occupants about housing-related health risks, and to help parents protect their children from unhealthy housing.

Previously, I served as the Director of the Office of Healthy Homes and Lead Hazard Control at the U.S. Department of Housing and Urban Development from 1995 – 2004. I was the principal author of the first federal interagency strategy to address childhood lead poisoning for the President’s Task Force on Environmental Health and Safety Risks to Children in 2000, a report to Congress launching the healthy homes initiative and I have published many peer-reviewed scientific studies and policy analysis.⁹

Childhood Lead Poisoning Policy Improvements

Passing and implementing specific policy improvements can bring about an end to what can only be described as an epidemic of vast proportions, with over 500,000 children having blood lead levels above the CDC reference value.¹⁰

The solutions to childhood lead poisoning have been validated through extensive research (described later in detail) but they remain to be implemented at the scale needed to eliminate childhood lead poisoning as a significant public health problem. Specifically, Congress should:

- **Provide increased appropriations** for lead and healthy homes programs at HUD, CDC and EPA. The House recently provided \$460 million in its appropriations bill for HUD’s lead and healthy homes program, but the National Safe and Healthy Housing Coalition has recommended \$600 million.¹¹ Congress is to be commended for significantly increasing appropriations in recent years, but the need remains far greater. Failure to increase appropriations will mean increased future costs that could be avoided, as documented in many cost-benefit analyses.¹²
- **Include lead paint in infrastructure plans and funding**. Lead is unfortunately part of our housing infrastructure, not just in the air we all breathe and in the water we all drink. Both water pipes and lead paint need to be included in the infrastructure plan. The 2008 financial crisis showed that housing is part of our infrastructure; failure to invest in it adequately threatens our entire economy. The National Center for Healthy Housing recently sent a letter to Congress¹³ signed by over 80 housing, health, weatherization, environmental justice, and parent’s community

⁹ Partial listing available: <https://www.ncbi.nlm.nih.gov/myncbi/1JOrfKcLhQAv/bibliography/public/>

¹⁰ CDC Lead Exposure and Prevention Advisory Committee. May 14, 2021.

<https://www.cdc.gov/nceh/lead/advisory/lepac-meeting-5-14-21.html>

¹¹ National Safe and Healthy Housing Coalition, FY 2022 Letter on HUD, CDC, and EPA Appropriations. June 30, 2021. <https://nchh.org/build-the-movement/nshhc/take-action/action-letter-archive/2021-letters/>

¹² 10 Policies to Prevent and Respond to Childhood Lead Exposure: An assessment of the risks communities face and key federal, state, and local solutions. Pew Charitable Trusts and Robert Wood Johnson Foundation. Aug 2017. <https://nchh.org/information-and-evidence/healthy-housing-policy/10-policies/>

¹³ Letter to Congress. Infrastructure Should Include Lead Paint And Healthy Homes. May 14, 2021 https://nchh.org/resource-library/letter_2021.05.14_fy22-request-to-congress-on-infrastructure-lead-and-healthy-homes.pdf

organizations requesting \$19 billion for lead paint hazard remediation and \$45 billion for lead water pipe replacement. Studies repeatedly demonstrate that eliminating lead paint on leaky old single-pane windows results in:

- Elimination of a major source of lead poisoning,
 - Job creation
 - Fuel bill reduction
 - Improved energy efficiency
 - Increased home value.
- Increase the supply of lead-safe and healthy homes in the private market, which would enable families in Housing Choice Voucher Section 8 units and other privately owned homes to prevent housing-related illness and injury. Increased appropriations and lead paint funding in infrastructure bills will help meet this need in Section 8 voucher units, because they are eligible for HUD's lead hazard grant programs. Most privately owned homes have not been inspected for lead paint hazards and have not been remediated.
- Increase technical assistance to local jurisdictions. Local jurisdictions, such as Cleveland, Rochester, Rhode Island, Grand Rapids and many others are adopting new and exciting efforts to address lead and other health hazards in housing in their areas. We and others have provided much-needed technical assistance for such efforts, but the new appropriations and infrastructure funding have increased this need. The additional resources for lead and healthy homes should be accompanied by increased dedicated technical assistance so that local jurisdictions and HUD, EPA and CDC local grantees can spend their appropriations more expeditiously and implement new initiatives more wisely.
- Update the Lead Paint Law. The nation's main lead paint law¹⁴ has not been updated significantly since it was passed in 1992. The main improvements should include:
 - Eliminating the loophole in the lead paint disclosure law by requiring lead inspections/risk assessments at the time of sale or lease, because most homes have not been inspected. This means parents do not have the information they need to protect their children because they do not know exactly where the lead is located in their own homes. It also means that landlords and owners do not know where their maintenance and capital improvements should be targeted.
 - Although the disclosure rule is a joint regulation between HUD and EPA, only the latter has subpoena authority, which makes compliance assistance and enforcement needlessly bureaucratic. Congress should grant HUD subpoena authority for the lead paint disclosure regulation.
 - Requiring HUD to end the practice of visual assessment of paint in HUD's Housing Choice Voucher Program, because lead paint is not visible to the naked eye. Instead, lead inspections and risk assessments should be required, as is currently the case in public housing and project-based section 8 housing, so that maintenance, rehabilitation, and financing can be directed to lead hazards. Congress has appropriated funding in recent

¹⁴ Title X of the 1992 Housing and Community Development Act

years for this purpose in HCV Section 8 units, but most housing choice voucher units are not assessed properly for lead hazards unless a child has an elevated blood lead level. Congress should explicitly state that HUD has the authority to reform its HCV Section 8 lead paint requirements. In short, taxpayer dollars should not be used to subsidize housing units that poison children.

- Reforming HUD's single family mortgage insurance program, which was the only HUD program not to be reformed in 1999.¹⁵ It makes little sense to have different requirements in single and multi-family mortgage insurance programs.
- Requiring Fannie Mae, Freddie Mac and FHA to include lead paint risk assessment and remediation in their underwriting standards.
- Requiring housing authorities to integrate their lead inspection data into both maintenance and capital improvements in public housing.¹⁶
- Consolidate all HUD inspection protocols. More than three years ago, Congress asked HUD to consolidate all its housing inspection protocols, but the Department has failed to do so. Its demonstration was delayed, and it is unclear whether HUD has made significant progress.¹⁷ The proposed standards are far too weak. HUD should adopt the National Healthy Housing Standard, which was developed by the National Center for Healthy Housing and the American Public Health Association and introduced by two former HUD Secretaries. This model code is based on years of experience and is referenced to the extensive scientific literature on housing deficiencies and the methods that are proven to work.¹⁸
- CDC should update its blood lead surveillance data, which has not been done since 2017, 4 years ago.¹⁹ Some states still do not report their blood lead data to CDC.
- EPA should be tasked with conducting increased training so that local jurisdictions can improve their staffing, lead testing and remediation capacity.
- Streamline low-income eligibility criteria across all programs that influence lead hazards, instead of confusing and inconsistent requirements, including HUD's lead hazard control and demonstration programs, CDBG, HOME, DOE's weatherization assistance programs, LIHEAP, Medicaid, CHIP, and allied programs. There is no reason to have different definitions of "low-income" across these programs.

¹⁵ 24 CFR Part 35, subpart E, 1999

¹⁶ Jacobs DE. Lead poisoning in private and public housing: The legacy still before us. Invited editorial. American Journal of Public Health 109(6) 830-832. June 2019.

¹⁷ Department of Housing and Urban Development Real Estate Assessment Center. National Standards For The Physical Inspection Of Real Estate (NSPIRE).

https://www.hud.gov/program_offices/public_indian_housing/reac/nspire/demonstration

¹⁸ National Center for Healthy Housing & American Public Health Association. (2014, May 16). National healthy housing standard. Columbia, MD: National Center for Healthy Housing. Available at

<https://nchh.org/resource-library/national-healthy-housing-standard.pdf>

¹⁹ CDC National Childhood Blood Lead Surveillance Data. 2012-2017.

<https://www.cdc.gov/nceh/lead/data/national.htm>

- Create a lead hazard remediation tax credit. Current IRS regulations permit landlords to deduct lead remediation costs as a business expense, but low- and moderate-income households are not permitted to do so.
- Prohibit US corporations from continuing to manufacture new residential lead paint in other countries, such as Sherwin Williams.²⁰ The US should support the World Health Organization's and other's efforts to ban this dangerous product and other non-essential uses of lead.²¹

Trends in Childhood Lead Poisoning and Environmental Justice

Lead poisoning is a major example environmental injustice. In 1987, a major report on hazardous waste sites showed that Black and other minority communities were more highly exposed to lead.²² CDC data show that the average (geometric mean) blood lead levels in micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$) for Black children is 40% higher than for white children (1.8 $\mu\text{g}/\text{dL}$ and 1.3 $\mu\text{g}/\text{dL}$, respectively). For low-income children vs other children, the difference was 1.6 $\mu\text{g}/\text{dL}$ and 1.2 $\mu\text{g}/\text{dL}$, respectively.²³ The differences in blood lead levels by race, ethnicity and income have remained statistically (and stubbornly) significant.²⁴

This inequity has been reduced as has the overall population blood lead level, due primarily to modern lead hazard control efforts and policies that stopped the production of new residential lead paint in the US, eliminated lead from food canning and gasoline, reduced industrial emissions and others. From 1976-1980 to 2015-2016, the blood lead level of the US population aged 1 to 74 years declined 93.6%, from 12.8 to 0.82 $\mu\text{g}/\text{dL}$. In 2015-2016, 0.2% of children aged 1 to 5 years had blood lead levels of 10 $\mu\text{g}/\text{dL}$ or higher, and 1.3% were 5 $\mu\text{g}/\text{dL}$ or higher (these were the two blood lead trigger levels used in the 1990s and 2010s).²⁵

These improvements have demonstrated that solutions exist, but over half a million children have blood lead levels above the CDC reference value in 2021.²⁶

²⁰ DE Jacobs. Lead Poisoning: Focusing on the Fix. Invited Editorial. J Public Health Management Practice, 2016, 22(4), 326-330.

²¹ Global Alliance to End Lead Paint. UN and WHO. <https://www.unep.org/explore-topics/chemicals-waste/what-we-do/emerging-issues/global-alliance-eliminate-lead-paint>

²² Toxic Wastes and Race In The United States A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites. Commission For Racial Justice. United Church of Christ. 1987. <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf>

²³ Blood Lead Levels in Children Aged 1-5 Years — United States, 1999-2010. Morbidity and Mortality Weekly Report. Vol. 62, No. 13 April 5, 2013. p. 245. Reported by: William Wheeler and Mary Jean Brown

²⁴ Whitehead LS, Buchanan SD. Childhood lead poisoning: a perpetual environmental justice issue? J Public Health Manag Pract. 2019;25(1 Supp):S115-S120.

²⁵ Timothy Dignam, Rachel B. Kaufmann, Lauren LeSturgeon, Mary Jean Brown. Control of Lead Sources in the United States, 1970-2017: Public Health Progress and Current Challenges to Eliminating Lead Exposure. Journal of Public Health Management and Protection. January/February 2019. Volume 25, Number 1 Supp p. S13-S22.

²⁶ CDC Lead Exposure and Prevention Advisory Committee. May 14, 2021. <https://www.cdc.gov/nceh/lead/advisory/lepac-meeting-5-14-21.html>

In 1991-94, the Centers for Disease Control and Prevention (CDC) estimated that 890,000 children had blood lead levels greater than 10 µg/dL (micrograms of lead per deciliter of blood).²⁷ The data also showed that 16% of low-income children and 21% of African-American children living in older housing where lead-based paint is most prevalent were poisoned, compared to 4.4% for all children at the time. In December of 2000, CDC provided more recent data showing that while some counties had prevalence rates as high as 27%, the average blood lead level in young children had declined by 25% from 1996-99.²⁸ The data showed that the problem is most severe in older housing in both urban and rural areas.

The reason for this improvement is that the nation took action. Congress and government agencies mandated that lead exposures from lead solder in food and infant formula canning, gasoline and new residential and toy paint were eliminated. Lead in air emissions, occupational exposures and water all were controlled and older housing with lead paint is continually being rehabilitated, abated or demolished. Studies of the numerous (but often subtle and asymptomatic) harmful effects of lead were completed and a consensus emerged, reflected in a major report from the National Academy of Sciences.²⁹

Yet if no further action is taken, millions of children will be unnecessarily poisoned in the decades to come. The means and methods to solve this long-running problem are known and Congress should act.

Housing Is the Largest and Most Important Source of Childhood Lead Poisoning

The evidence is overwhelmingly clear that the major high dose source for most children in the U.S. today is existing lead-based paint in older housing and the contaminated dust and soil it generates.^{30, 31} The existing limit for lead in new residential house paint set by

²⁷ Centers for Disease Control and Prevention, "Update: Blood Lead Levels—United States 1991-1994," Morbidity and Mortality Weekly Report, U.S. Department of Health and Human Services/Public Health Service, Vol 46, No. 7, Feb 21, 1997, p. 141-146 and erratum in vol 46, No. 26, p. 607, July 4, 1997. Also, Brody et al., Blood lead levels in the U.S. Population: Phase 1 of the third National Health and Nutrition Examination Survey, 1988 to 1991, Journal of the American Medical Association 272(4): 277-283, July 27, 1994 and Pirkle et al., The decline in blood lead levels in the United States, Journal of the American Medical Association 272(4):284-291, July 27, 1994

²⁸ Centers for Disease Control and Prevention, Blood lead levels in young children—United States and Selected States, 1996-1999, Morbidity and Mortality Weekly Report 49(50): 1133-1137, December 22, 2000

²⁹ National Academy of Sciences. Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations, Report of the Committee on Measuring Lead in Critical Populations, Board on Environmental Studies and Toxicology, Commission on Life Sciences, National Academy of Sciences. Washington, DC: National Academy Press, 1993.

³⁰ Jacobs DE. Lead-based paint as a major source of childhood lead poisoning: A review of the evidence. In: Lead in Paint, Soil and Dust: Health Risks, Exposure Studies, Control Measures and Quality Assurance (Beard ME and Iske SDA, eds). Philadelphia: ASTM STP 1226, American Society for Testing and Materials, 1995;175-187; Also: McElvaine MD, DeUngria EG, Matte TD, Copley CG, Binder S. Prevalence of radiographic evidence of paint chip ingestion among children with moderate to severe lead

the Consumer Product Safety Commission in the U.S. is 90 parts per million (ppm). But older paints already coating surfaces in housing can be more than 500,000 ppm. These older paints can produce extraordinarily high levels of lead dust, exceeding 9,300 micrograms of lead per square foot ($\mu\text{g}/\text{ft}^2$) from only a single square foot of lead paint in an average sized room.³² This is much, much higher than the existing EPA dust lead standard of 10 $\mu\text{g}/\text{ft}^2$.

The evidence that housing with lead paint hazards is the main problem comes from several sources. Together with others, I published a study showing that the reduction in childhood lead poisoning can be largely explained by trends in housing demolition, window replacement and other renovation, and lead paint abatement.³³ If housing were not the main contributor, then demolition, window replacement and abatement trends would not have tracked the trend in childhood lead poisoning as closely as it actually has.

Furthermore, the most recent HUD survey of the nation's housing stock (conducted in 2019) shows that there was a statistically significant improvement in the number of U.S. housing units, but 29 million homes still have a lead paint hazard in the form of deteriorated lead paint, or lead-contaminated house dust or bare soil. 21.6% of African-American households live in a home with lead paint hazards and 23.6% of households in poverty live in such homes. And 22% of homes with a child under six years old have lead paint hazards.³⁴

Even more alarming is the fact that the number of homes with deteriorated lead paint actually increased by 4.6 million homes from 2005 to 2018 as the housing stock continues to age. Government support matters. 21% of homes with some form of subsidy have lead paint hazards, compared to 25% of homes without support, presumably because government standards are in place for many subsidized homes. The main problem continues to be in unassisted low-income housing where such standards are lacking.

Regulation of Federally Assisted Housing

HUD issued a regulation that controlled exposures from federally assisted housing undergoing renovation, repair or painting (as well as other forms of assistance). The regulation was issued in 1999, had a one-year phase-in period and finally took full effect

poisoning. St. Louis, Missouri, 1989-90, *Pediatrics* 89:740-742 (1992). Also: Clark CS, Bornschein R, Succop P, Roda S, Peace B. Urban lead exposures of children in Cincinnati, Ohio, *Journal of Chemical Speciation and Bioavailability*, 3(3/4):163-171

³¹ President's Task Force on Environmental Health Risks and Safety Risks to Children. *Eliminating Childhood Lead Poisoning: A Federal Strategy Targeting Lead-based paint Hazards*. Washington DC: U.S. Department of Housing and Urban Development and U.S. Environmental Protection Agency, February 2000.

³² HUD Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing. 1995. U.S. Department of Housing and Urban Development, Washington DC, Chapter 4.

³³ Jacobs DE and Nevin R. *Validation of a Twenty-Year Forecast of U.S. Childhood Lead Poisoning: Updated Prospects for 2010*, *Environ Res* 102(3) 352-364, Nov 2006.

³⁴ Presentation from HUD: Findings on Lead-Based Paint/Hazards from the American Healthy Homes Survey II. CDC Lead Exposure and Prevention Advisory Committee Meeting. Peter Ashley. May 14, 2021

in 2001.³⁵ The experience with the HUD regulation shows that renovation and repair work can be done safely and is feasible and effective. But that regulation only covers federally assisted housing, which is only a small fraction of the houses at risk.

However, the EPA Renovation, Repair and Painting regulation does not require lead dust testing to ensure children are protected at the end of the job, unlike HUD's regulation for federally assisted housing. There are established cleaning and lead dust testing procedures³⁶ that are known to achieve very low dust lead levels, up to six years following the repairs.³⁷ In particular, dust testing after the work has been completed is essential to ensuring that cleaning has been adequate. Without dust testing, many houses will contain high levels of lead dust, which is not necessarily visible to the naked eye. The absence of dust testing places children at unnecessary risk. Therefore, lead dust testing should be included in EPA's Renovation Repair and Painting Regulation.

This regulation also needs better enforcement. A recent cost-benefit analysis demonstrated that better enforcement had the highest return on investment.³⁸

Incomplete HUD Regulation

It is worth noting that the HUD regulation remains incomplete. The public housing program requires that testing be completed and that hazards be eliminated in the course of maintenance and comprehensive modernization. But some housing authorities, such as the New York City Housing Authority did not remediate the hazards and are now being monitored to ensure it does so. This is largely because testing results were not integrated into planning processes and because of the large backlog in both maintenance and capital improvements as a result of inadequate funding.

Lead risk assessments are not currently required in the Section 8 Housing Choice Voucher Program, unlike public housing. Instead, the current requirements call for a mere visual examination, which cannot reliably detect lead problems. HUD has existing authority under the 1937 Housing Act (as amended) to assist states and subdivisions of states to "remedy the unsafe housing conditions" but did not exercise this authority when its rule was promulgated in 1999, because some believed HUD did not have the statutory authority to do so. Congress should explicitly authorize HUD to update the Housing Choice Voucher requirements.

³⁵ 24 CFR Part 35

³⁶ HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, Department of Housing and Urban Development, Washington DC, 1995, with update in 2012

³⁷ Wilson J, Pivetz T, Ashley PJ, Strauss W, Jacobs DE, Menkedick J, Dixon S, Tsai HC, and V. Brown, Evaluation of HUD-Funded Lead Hazard Control Treatments at Six Years Post-Intervention, Environ Res. 102(2) 237-48 Oct 2006.

³⁸ 10 Policies to Prevent and Respond to Childhood Lead Exposure: An assessment of the risks communities face and key federal, state, and local solutions. Pew Charitable Trusts and Robert Wood Johnson Foundation. Aug 2017. <https://nchh.org/information-and-evidence/healthy-housing-policy/10-policies/>

HUD also did not incorporate modern lead hazard control methods in its single-family mortgage insurance program. A section of the HUD regulation is reserved for final action for this program (24 CFR Part 35, Subpart E), but no such action has been forthcoming since 1999. Why should children who live in housing with multi-family mortgage insurance be covered, while children who live in housing with single-family mortgage insurance remain unprotected? HUD should complete its regulation so that all children in federally assisted housing are protected and so that taxpayers do not have to subsidize housing that poisons children.

The Federal Housing Administration (FHA), Department of Agriculture (USDA), the Department of Veterans Affairs (VA), the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) should require a lead risk assessment and abatement of lead-based paint hazards in pre-1978 structures and identification and replacement of lead service lines for government insured mortgages.

Currently, multifamily properties receiving FHA mortgage insurance are subject to the Department of Housing and Urban Development's (HUD) lead-safe housing rule, but for single-family properties, FHA only requires that the "[m]ortgagee must confirm that the Property is free of lead paint hazards," based on the absence of past reports and a visual assessment, not an actual lead paint risk assessment—and there is no abatement requirement. FHA requires lead-free pipes for new wells, but existing lead service lines are not addressed. Fannie Mae and Freddie Mac have a requirement that properties meet underwriting criteria of being "safe, sound, and structurally secure," but no effort is made to identify lead hazards and remediate them.

The Low-Income Housing Tax Credit Program

Furthermore, the Low-Income Housing Tax Credit program, which is perhaps the federal government's largest housing construction and rehabilitation program, does not have explicit lead-based paint requirements. This means that approximately 14,000 housing units are rehabilitated each year without regard to lead-based paint hazards.³⁹ Taxpayers should not be subsidizing housing rehabilitation that could poison children, either through tax credits or federally subsidized mortgage insurance. Congress should require the Internal Revenue Service to issue explicit lead paint requirements for the Low Income Housing Tax Credit Program.

Lead-Safe Window Replacement

With many other organizations and supporters, we have proposed that the infrastructure plan include window replacement.⁴⁰

³⁹ Jacobs DE. *The Low Income Housing Tax Credit and Childhood Lead Poisoning Prevention* Final Report, Prepared for the Centers for Disease Control and Prevention, Contract 200-2006-M-18771, April 15, 2007.

⁴⁰ Reddy A. Jobs, Climate, Health, Equity: The Case for (Healthy) Housing as Critical Infrastructure. April 30, 2021. <https://nchh.org/2021/04/jobs-climate-health-equity-the-case-for-healthy-housing-as-critical-infrastructure/>

Together with colleagues, I have published a study showing that window replacement is particularly important. Specifically, replacing single-pane windows in older housing (nearly all such windows are known to have lead paint) will achieve billions of dollars in savings.⁴¹ Window replacement has emerged as a major form of controlling lead-based paint hazards, because more than any other building component, windows are known to contain the highest levels of lead paint and lead-contaminated dust.⁴² The benefits come from reduced childhood lead poisoning, lower utility bills from heating and cooling, and increased market value. In short, a lead-safe window replacement incentive can make a major impact on preventing childhood lead poisoning, while also achieving improved energy conservation and increased home value--all at the same time.⁴³

Federal energy, environmental, and housing policies, together with local utility programs and policies should be modified to encourage homeowners and others to replace lead contaminated windows with new energy-efficient ones.

Other Health Issues in Housing

The solutions recommended above can and should be applied to other housing-related diseases and injuries, such as asthma, mold-induced illnesses, carbon monoxide poisoning and fire related injuries, trips and falls, and others.

These other housing-related health issues can be grouped around 10 key principles that make a home healthy and can guide future Congressional Policy. They are:

1. Free of excessive moisture and leaks
2. Adequately ventilated, both with fresh air and proper air distribution and exhaust
3. Free of excessive exposure to contaminants, such as lead, radon, and organic compounds such as formaldehyde
4. Free of pests
5. Clean
6. Well maintained
7. Safe and free of injury hazards
8. Affordable
9. Energy Efficient
10. Accessible for persons with disabilities⁴⁴

⁴¹ Nevin R, Jacobs DE, Berg M, Cohen J. Monetary benefits of preventing childhood lead poisoning with lead-safe window replacement. *Environ Res Environ Res.* 2008 Mar;106(3):410-419.

⁴² Jacobs DE, Clickner RL, Zhou JL, Viet SM, Marker DA, Rogers JW, Zeldin DC, Broene P and W. Friedman. The Prevalence of Lead-Based Paint Hazards in U.S. Housing. *Environ Health Perspect* 110:A599-A606, Sept 13, 2002.

⁴³ Nevin R and Jacobs DE. Windows of Opportunity: Lead Poisoning Prevention, Housing Affordability and Energy Conservation, *Housing Policy Debate* 17(1): 185-207, 2006.

⁴⁴ National Center for Healthy Housing. 2020. <https://nchh.org/information-and-evidence/learn-about-healthy-housing/healthy-homes-principles/>

For example, radon is an important healthy homes issue requiring Congressional action. Radon is the second-leading cause of lung cancer and is almost entirely a housing-related health problem. Congress should direct HUD to follow through on the April 2021 recommendations of the Inspector General to “develop and issue a department-wide radon policy that notes that radon is a radioactive substance” and is “designed to ensure that radon testing and mitigation are consistent and sufficient for all HUD programs, and align with HUD’s environmental regulations.”⁴⁵

Congress should also fund radon testing and mitigation over three years at scale in public housing and should explicitly require the use of certified professionals and compliance with the EPA-recommended ANSI-AARST standards. Congress should direct HUD FHA to implement radon testing, or buyer notification/warning requirement encouraging testing, in the single-family programs.

Emerging Lead Paint Threats

The nation is now faced with emerging exposures that threaten the progress we have made. New residential lead-based paint is now being manufactured in several Asian countries⁴⁶ and in Nigeria⁴⁷ and likely elsewhere. The concentrations of lead in these paints are enormous, exceeding 100,000 parts per million (ppm). By comparison, the existing US standard for lead in new residential paint is 90 ppm. It is bad enough that these countries are contaminating their own houses and putting their own workers and children at great risk. But in today’s global economy, it is only a matter of time before these products appear in the U.S., re-contaminating the very houses that taxpayers and parents have already spent billions cleaning up.

These emerging threats are not limited to paint. Lead contaminated toy jewelry has already caused death in at least one child⁴⁸ and has likely exposed many others. There is no reason for lead to be used in any children’s product, including plastic toys. Other non-toxic stabilizers and additives can and should be used, as has been done in house paint here in the U.S. The US should strongly support the Global Alliance to Eliminate Lead Paint, led by the World Health Organization and the United Nations.⁴⁹ It should also support implementation of the World Health Organization’s Housing and Health Guidelines.⁵⁰

⁴⁵ HUD Office of Inspector General’s 2021 evaluation of HUD Program Offices’ Policies and Approaches for Radon (Report Number: 2020-OE-0003).

⁴⁶ Clark CS, et al. 2006. The lead content of currently available residential paint in several Asian countries. *Environ Res* 102: 9-12

⁴⁷ Adebamowo EB, et al. 2007. Lead content of dried films of domestic paint currently sold in Nigeria. *Science of the Total Environ*. Article in Press. Available on line at www.sciencedirect.com

⁴⁸ KK Berg et al. 2006. Death of a child after ingestion of a metallic charm. *Morbidity and Mortality Weekly Report* 55(12) 340-341

⁴⁹ Global Alliance to End Lead Paint. <https://www.unep.org/explore-topics/chemicals-waste/what-we-do/emerging-issues/global-alliance-eliminate-lead-paint>

⁵⁰ WHO Housing and Health Guidelines. 2018. <https://apps.who.int/iris/bitstream/handle/10665/276001/9789241550376-eng.pdf>

Background on Lead Toxicity and Remediation

Lead is one of the most extensively studied poisons, with over 25,000 studies and publications. The evidence is clear that lead causes a large number of health problems, particularly in young children. Perhaps the most recent review of lead toxicity is from EPA,⁵¹ but others are also available.⁵²⁻⁵³ Lead is a metal with no useful biological function in the body, unlike other metals such as zinc or iron. Its principal adverse health effects in young children include:

- Mental and thought impairment, such as declines in cognition (as measured by Full Scale IQ, academic performance, and executive function);
- Attention, Impulsivity and Hyperactivity disorders, Conduct Disorders in Children and Young Adults (criminal offenses in young adults ages 19-24 years and higher parent and teacher ratings of behaviors related to conduct disorders in children ages 8-17 years);
- Behavior problems, as shown in higher parent and teacher ratings of depression or anxiety or other related problems such as withdrawn behavior in children ages 8-13 years;
- Reduced hearing;
- Reduced coordination and stability;
- Delayed pubertal onset;
- Lower birth weight and increased spontaneous abortion (miscarriages).
- Higher probability of asthma and allergy;
- At higher exposures, death, coma, encephalopathy (brain dysfunction) and many other effects;
- In adults lead exposure is linked to reduced executive function (decision making skills), visual, learning and memory problems, depression and anxiety, reduced hearing, hypertension incidence and increased blood pressure, peripheral artery disease, coronary heart disease, reduced kidney function, decreased red blood cells, altered heme (blood forming) synthesis, and reduced function in both male and female reproductive systems;
- Cancer.⁵⁴

The American Academy of Pediatrics states that there are no effective medical treatments for lead poisoning and that prevention of exposure is needed.⁵⁵

⁵¹ EPA. Integrated Science Assessment for Lead. June 2013. EPA/600/R-10/075F

⁵² National Toxicology Program Monograph on Health Effects of Low-level Lead (June 2012)

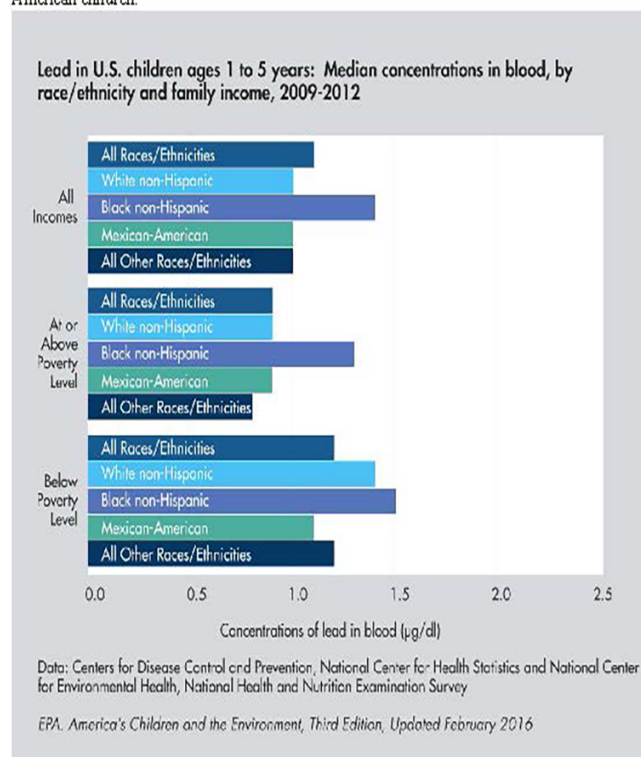
⁵³ Jacobs DE. Lead IN: Patty's Toxicology. (2012, July). Lead. In E. Bingham & B. Cohns (Eds.), Patty's Toxicology, 6th edition (pp. 381-426). New York: John Wiley and Sons. [ISBN: 978-0-470-41081-3]. 7th Edition pending, 2021.

⁵⁴ The International Agency for Research on Cancer has listed inorganic lead as a "probable" human carcinogen and the National Toxicology Program has listed it as "reasonably anticipated to be a human carcinogen."

⁵⁵ American Academy of Pediatrics, Council On Environmental Health. Prevention of Childhood Lead Toxicity. Pediatrics. 2016;138(1):e20161493

Lead Disparities by Race and Ethnicity

Blood lead levels are higher among younger children, those belonging to poor families, and those enrolled in Medicaid. Furthermore, blood lead levels for non-Hispanic black children were significantly higher compared with either non-Hispanic white or Mexican American children.⁵⁶



Lead Paint Identification and Remediation

The association between lead paint and blood lead has been extensively reviewed⁵⁷ and the National Academy of Sciences stated, "Lead-based paint is the largest source of high-dose

⁵⁶ Brown MJ and Wheeler. 2013. Blood Lead Levels in Children Aged 1-5 Years — United States, 1999-2010. *Morbidity and Mortality Weekly Report*, April 5, 2013, Vol. 62, No. 13, 245-248

⁵⁷ Jacobs DE. Lead-Based Paint as a Major Source of Childhood Lead Poisoning: A Review of the Evidence in Lead In Paint, Soil and Dust: Health Risks, Exposure Studies, Control Measures and Quality

lead exposure for children.”⁵⁸ Unlike earlier sources of lead exposure such as gasoline, food canning and industrial emissions that can all be controlled by eliminating its use in central refineries and factories, residential lead paint is widely dispersed (but highly concentrated on some surfaces) in homes throughout the nation, making finding and eliminating dangerous exposures difficult. General practice historically has been to wait until a child is found to have been exposed to lead in order to find and eliminate the source of lead in the home.

In general, there are two methods of identifying lead paint problems and two means of eliminating them.⁵⁹ The presence of lead paint in a home is determined by a lead-based paint inspection that measures lead paint on most surfaces with a common painting history. The second method is to conduct a lead paint risk assessment, which measures lead in deteriorated paint, dust and soil. The two methods can be combined.

There are also two broad methods of remediating lead paint problems—long term “abatement” and shorter term “interim controls.” These two methods can also be combined. The identification step informs the remediation step, so effectiveness of identification and remediation cannot be separated, as discussed later. Abatement and interim controls are not the same as renovation, remodeling and repainting. These latter activities typically occur without dust control or post-cleanup dust testing, resulting in significant exposures to children. Some forms of renovation and remodeling and repainting may also employ paint removal methods that are not allowed for abatement or interim controls, such as burning or torching lead paint, abrasive blasting and unlimited dry scraping. If scraping occurs as part of abatement or interim controls, it is done using wet methods to control dust (with the exception of scraping near electrical circuits, where wet methods could cause electrocution).

Evidence for abatement effectiveness can be gleaned from several studies: The largest is the Evaluation of the HUD Lead Hazard Control Grant program,⁶⁰ a study covering over 3,000 housing units in 14 jurisdictions. Blood lead levels declined 37% two years after treatment. But because blood lead levels are affected by all sources of exposure, dust lead levels are likely to be a better metric of abatement effectiveness because they are less confounded by other sources of lead. Blood lead and dust lead are well correlated with each other in numerous studies.^{61 62} Three years after intervention average (geometric

Assurance, Michael E. Beard and S.D. Allen Iske, Eds, American Society for Testing and Materials, Philadelphia, p. 175-187, 1995.

⁵⁸ Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations Committee On Measuring Lead In Critical Populations, Board On Environmental Studies And Toxicology, Commission On Life Sciences, National Academy Press, Washington, D.C. 1993

⁵⁹ Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. 2012. US Department of Housing and Urban Development.

http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/lbp/hudguidelines

⁶⁰ NCHH and University of Cincinnati. Dept. Environmental Health. (2004). Evaluation of the HUD Lead-Based Paint Hazard Control Grant Program Final Report

⁶¹ Lanphear, B. P., Matte, T. D., Rogers, J., Clickner, R. P., Dietz, B., Bornschein, R. L., Succop, P., Mahaffey, K. R., Dixon, S., Galke, W., Rabinowitz, M., Farfel, M., Rohde, C., Schwartz, J., Ashley, P.J., & Jacobs, D. E. (1998, October). The contribution of lead-contaminated house dust and residential soil to children's blood lead levels: A pooled analysis of 12 epidemiologic studies. *Environ Res* 79(1), 51-68.

mean) dust lead loadings on floors, window sills and window troughs were 9, 62 and 363 $\mu\text{g}/\text{ft}^2$, respectively (declines of 78%, 89%, and 95%, respectively compared to pre-intervention levels). These substantial declines were observed across all 14 jurisdictions in the study. The study also found that after controlling for other factors, full interior lead abatement was associated with the largest relative reductions in floor dust lead loadings over a year.

Another smaller scale study comparing interim controls and abatement⁶³ showed that immediately after intervention (intervention means lead hazard control) and at two years later, geometric mean dust lead loadings on floors and window sills in “Major Repair” houses (similar to abatement) were greatly reduced. Homes that received only minor repairs or cleaning had much smaller reductions in dust lead levels.

Another smaller scale study⁶⁴ compared three types of intervention and compared them to homes in two comparison groups. One type (which is similar to abatement) had median dust lead levels that declined dramatically before treatment to two years later. The interim control option had median dust lead levels that declined by an order of magnitude two years later. This study also measured blood lead and showed the same trend as dust lead. The interim control option showed children’s blood lead level declined from 17.9 $\mu\text{g}/\text{dL}$ to 10.3 $\mu\text{g}/\text{dL}$ two years later (a difference of 7.6 $\mu\text{g}/\text{dL}$). But the abatement option showed children’s blood lead level declined more (from 21.7 $\mu\text{g}/\text{dL}$ before treatment to 12.6 $\mu\text{g}/\text{dL}$ two years later, a difference of 9.1 $\mu\text{g}/\text{dL}$). Not surprisingly, trends in blood lead are influenced by many variables, including baseline (before treatment) blood lead level, other sources, season, endogenous bone lead levels and others. An EPA review⁶⁵ generally showed similar results across older studies, i.e., that more intensive treatments such as abatement were associated with greater declines in both blood and dust lead levels compared to less intensive treatments such as interim controls and that both interventions were beneficial.

A randomized controlled trial of lead hazard control reduced the dust lead loadings for the floor by 24%, windowsill by 40% and window troughs by 47%. Although some neurobehavioral test scores were not statistically different between children in the

⁶² Lanphear BP, Emond E, Weitzman M, Jacobs DE, Tanner M, Winter N, Yakir B, Eberly S. A Side-By-Side Comparison of Dust Collection Methods for Sampling Lead-Contaminated House Dust, *Environ Res* 68, 114-123, 1995.

⁶³ Farfel et al. 2000. An Extended Study of Interim Lead Hazard Reduction Measures Employed In The Baltimore Clinical Center of The Treatment Of Lead-Exposed Children (TLC)-Clinical Trial. April 2000. Prepared for US Department of Housing and Urban Development

⁶⁴ Farfel et al. 1997. Lead Based Paint Abatement and Repair and Maintenance Study. Environmental Protection Agency. EPA-747-R-97-005

⁶⁵ Review Of Studies Addressing Lead Abatement Effectiveness: Updated Edition, EPA 747-B-98-001, December 1998, Technical Programs Branch, Chemical Management Division Office of Pollution Prevention and Toxics, U.S. Environmental Protection Agency

intervention group than those in the control group, there was a significant improvement in anxiety scores. Blood lead concentrations in non-Hispanic black children were reduced.⁶⁶

Lead in Drinking Water

If lead is found in drinking water, the most likely reason is the corrosion of one of the following: 1. Lead Service Line (a pipe that connects homes to the water main in the street). A lead service line is the largest potential source of lead exposure in drinking water. 2. Lead Solder – solder commonly contains lead and is used to connect copper piping. 3. Brass Fixtures – almost all water meters, faucets, valves and fittings manufactured prior to 2014 may have brass components which contain lead.⁶⁷ Lead is present in plumbing infrastructure including lead service lines (LSLs), goose necks, lead solder, and brass fittings used in faucets and drinking water fountains. LSLs were installed in most houses built in the 1920s after which the use declined. LSLs were banned in 1986. Until 1986, brass fixtures and fittings could legally contain more than 8% lead, and solder could be made of more than 0.2% lead (most contained 40-50% lead). In 2014, federal regulations were updated so lead levels in brass fixtures and fittings had to be less than 0.25%. EPA recently updated its Lead and Copper Rule in 2020.

A recent study of lead in private wells in rural areas, which are not regulated by EPA, was widespread. It showed that lead was detected (>0.76 ppb) in tap water of 48.3% homes, and 3.3% exceeded 15 ppb.⁶⁸

Lead service lines were found to contribute 50 to 75% of the total lead mass in household tap water; premise plumbing was found to contribute an additional 20 to 35% (likely due to 'seeding' from LSLs); and faucets were found to contribute 1% to 3%.⁶⁹ The brass fittings and plumbing components have been implicated as the sources of lead in water at schools and large buildings, such as hospitals and universities, where LSLs are rarely present. Solder used to join various plumbing elements is known to be an occasional source of lead that can result in extremely high water concentrations.

Lead in Consumer Products

A large number of products have been reported to contain lead and only a few are discussed here. Products containing lead include (but are not limited to) the following:

⁶⁶ Braun JM, Yolton K, Newman N, Jacobs DE, Taylor M, Lanphear BP. Residential dust lead levels and the risk of childhood lead poisoning in United States children. *Pediatr Res.* 2020 Jul 28. doi: 10.1038/s41390-020-1091-3

⁶⁷ Lead in drinking water. Kellogg Foundation. <http://ww2.wkcf.org/2016/digital/Water-FS-Homeowner4.pdf>

⁶⁸ Geiger SD, Bressler J, Kelly W, Jacobs DE, Awadalla SS, Hagston B, Onwuta U, Panier C, Dorevitch S. Predictors of Water Lead Levels in Drinking Water of Homes With Domestic Wells. *J Public Health Manag Pract.* 2020 Nov 27. doi: 10.1097/PHH.0000000000001255. Epub ahead of print.

⁶⁹ Sandvig, A., Kwan, P., Kirmeyer, G., Maynard, B., Mast, D., Trussell, R. R., Trussell, S., Cantor, A., Prescott, A., (2008). Contribution of Service Line and Plumbing Fixtures to Lead and Copper Compliance Issues. Prepared for the American Water Works Research Foundation, Report 91229.

traditional folk remedies, toys, and other products with painted surfaces, including paint on plastic, fabric, or metal, key chains, cheap beads and artificial pearls, cultural or religious lead contaminated powders or products, new lead-based paint manufactured in other countries and metal jewelry for children. A list of lead in consumer products, including recalled products, is available from CDC and the Consumer Product Safety Commission (see:

https://cpsc.gov/Recalls?combine=lead&field_rc_date%5Bdate%5D=&field_rc_date_1%5Bdate%5D=

Several organizations have called for the elimination of non-essential uses of lead in consumer products, such as the American Public Health Association.⁷⁰ The elimination of the use of lead in new paint is addressed by the Global Alliance to End Lead Paint, led by the World Health Organization and the United Nations Environment Program (see: http://www.who.int/ipcs/assessment/public_health/gaelp/en/).

In 2010, over 1500 pieces of jewelry sampled from 42 major retailers in California over a one-year period, and found about 4% of the jewelry did not comply with California lead standards and 26 retailers were in violation.⁷¹ Effective August 2011, the current federal limit for the amount of total lead allowed in most new products for children 12 and younger is 90 ppm (parts per million). Lead in adult jewelry remains unregulated. Some hair dyes contain lead acetate. A 1991 review found that use of hair dye containing lead acetate can result in exposure to 600 µg of lead/use and 30.7 µg/day dermal absorption of lead. A 1997 study showed lead transferred to hands, objects and other surfaces (up to 436 µg/ft²), following controlled applications. The study found as much as 689 µg of lead/use on the hands and 26 to 79 µg of lead remaining even after washing.⁷²

Over the last decade, there have been several reports of adult poisoning from *ayurvedic* (Indian traditional) medicine, some of which (*Bhasmas* or *Rasa*) are prepared with high concentrations of several heavy metals, including lead. In 2012, there were 2 cases of children poisoned in US. Greta and Azarcon (also known as Alarcon, Coral, Luiga, Maria Luisa, or Rueda) are Hispanic traditional medicines taken for an upset stomach (empacho), constipation, diarrhea, and vomiting. They are also used on teething babies. Greta and Azarcon are both fine orange powders with lead content as high as 90%. Babaw-san is a Chinese herbal remedy that contains lead. It is used to treat colic pain or to pacify young children. Lead can also be present from earlier use, resulting in contaminated sites. Except for the EPA Superfund program, there is not a centralized listing of contaminated sites.⁷³ This can result in locating facilities (such as housing) on

⁷⁰ APHA Calling for a Global Ban on Lead Use in Residential Indoor and Outdoor Paints, Children's Products, and All Nonessential Uses in Consumer Products. Policy Date: 10/28/2008. Policy Number: 20084

⁷¹ Cox, C., & Green, M. (2010). Reduction in the Prevalence of Lead-Containing Jewelry in California Following Litigation and Legislation, *Environmental Science and Technology*, 44(16), 6042-6045.

⁷² Mielke, H. W., Taylor, M. D., Gonzales, C. R., Smith, M. K., Daniels, P. V. and Buckner, A. V., (1997). Lead-based hair coloring products: Too hazardous for household use. *Journal of the American Pharmaceutical Association*, 37(1); 85-89

⁷³ Lead at Superfund Sites. <https://www.epa.gov/superfund/lead-superfund-sites>

such sites, resulting in needless exposure. The most recent example of this problem is the East Chicago site in Indiana, the site of former lead facilities.⁷⁴

Conclusion

President Franklin Roosevelt, in dedicating the National Archives Building in 1941, said: “A Nation must believe in three things: It must believe in the past. It must believe in the future. It must, above all, believe in the capacity of its own people to learn from the past so that they can gain in judgment in creating their own future.”⁷⁵

Lead poisoning is ugly. It robs us of our most precious gift—our future and the children who inherit it. It has been over a century since the first medical diagnosis of lead paint poisoning in children occurred.⁷⁶ We have learned from that past by establishing the knowledge and systems to end the disease.

Our people’s capacity to solve the problem can be unleashed so that no child need face a future dimmed by inadequate unsafe and unhealthy housing. Lead hazards and other healthy home hazards belong in our past, not our future.

⁷⁴ Lyons C. Owners of former East Chicago lead factories named in suit. Chicago Tribune.

<http://www.chicagotribune.com/news/ct-ptb-east-chicago-class-action-st-1007-20161006-story.html>

⁷⁵ President Franklin Roosevelt. Dedication of the National Archives Building. Washington DC. 1941.

⁷⁶ Gibson L, Love W, Hardie D, Bancroft P, Turner AJ. Notes on lead poisoning as observed among children in Brisbane. Intercolonial Med Congress Aust 1892;78-83. Also: J. Lockhart Gibson, A Plea for Painted Railings and Painted Walls of Rooms as the Source of Lead Poisoning Amongst Queensland Children. Australasian Medical Gazette April 20, 1904. Also: Turner AJ. Lead poisoning among Queensland children. Australasia Med Gazette 1897;16:475-9.

PREPARED STATEMENT OF JENNIFER KEOGH

DEPUTY EXECUTIVE DIRECTOR, MINNEAPOLIS PUBLIC HOUSING AUTHORITY,
MINNEAPOLIS, MINNESOTA

JULY 20, 2021

The Minneapolis Public Housing Authority (MPHA) is the largest housing authority in the State of Minnesota and our mission is to promote and deliver quality, well-managed homes to a diverse low-income population and, with partners, contribute to the well-being of the individuals and families in the community we serve. MPHA provides rental assistance to over 26,000 people through our public housing and Housing Choice Voucher Programs. MPHA owns and operates over 6,000 units of public housing, including over 900 single family homes/townhomes and 42 highrise apartment communities. Our highrise population is over 60 percent elderly and disabled, over 80 percent identify as a person of color, and our average household income is under \$13K annually, which is approximately 18 percent of the Area Median Income.

I am also the Chair of the Legislative Network Advisory Committee of the National Association of Housing and Redevelopment Officials (NAHRO). NAHRO, which was established in 1933, is a membership organization of 20,000 housing and community development providers and professionals throughout the United States. NAHRO members create and manage affordable housing for low- and middle-income families and support vibrant communities that enhance the quality of life for all. They administer more than 3 million homes for more than 8 million people.

I come here today to support Sen. Tina Smith's and Sen. Amy Klobuchar's Public Housing Fire Safety Act (S. 265), which would provide needed resources to Public Housing Agencies (PHAs), including MPHA, to install fire sprinklers. Additionally, I am here to support the investment of at least \$70 billion to address the capital needs of public housing properties across the country.

Why Sprinkler Systems Are Critical Infrastructure: Minneapolis Public Housing Authority's Story

In November of 2019, a fire occurred in one of MPHA's 42 highrises that took the lives of 5 MPHA residents. In April 2020, I was selected to serve as MPHA's new Deputy ED alongside Abdi Warsame, MPHA's new Executive/CEO. Despite overwhelming physical needs throughout the entire portfolio, we have made the installation of fire suppression systems a top priority. In doing so, constrained by a severe lack of funding, we are forced to ignore other critical needs of our aging building systems.

MPHA is implementing a plan to install sprinkler systems in 10 of its buildings in 2021 (16 are already retrofitted with sprinkler systems) and plans to complete installations in all remaining buildings within the next 3 years. Retrofitting a single sprinkler system can cost \$1 million or more, with the overall cost for this year's installation in ten additional highrises estimated at over \$9.3 million. Each of these buildings has many additional urgent needs that demand attention at the same time, but this work alone will consume more than one-half of all capital funds appropriated from Congress to MPHA for 2021. While we recognize that the investment in sprinklers is essential, the result of prioritizing the sprinkler work is that other crucial capital needs remain unmet.

Federal investment in public housing has declined for many years and there is a growing backlog of capital needs. These needs include not just sprinklers, but electrical, plumbing, heat, and other essential building systems. MPHA estimates a \$164 million capital repair backlog across our 6,000-unit portfolio and this figure does not include important upgrades to improve the housing we provide for the long-term.

Despite inadequate funding, MPHA has made progress on addressing the health and safety needs in our public housing buildings. We have installed radon mitigation systems in all new builds since the mid-late 2000s. This includes a few scattered sites, 350 Van White, Feeney Manor, and most recently Minnehaha Townhomes. Funding/dates as follows:

- 350 Van White: primarily HUD HOPE VI funds, 2005
- Feeney Manor: primarily Federal competitive stimulus dollars (ARRA), 2009/10
- Minnehaha: State, county, city, Federal Home Loan bank and MPHA/HUD resources, 2018/19

We have installed a few radon mitigation systems in existing scattered sites, as issues were identified in the course of major rehabilitation work. For the scattered sites rehab effort, we plan to test all units as part of lender due diligence and install

mitigation systems as part of construction in all units that have radon levels that require mitigation. We plan to test in fall 2021 and work from 2022–24. We have installed soil vapor mitigation systems at three highrise properties—the two Elliot Twins and Signe Burkhardt Manor. We received a Brownfield Gap grant from Hennepin County for the consulting/design work associated with the Elliot Twins.

Minnesota Statute 299F.50 requires approved carbon monoxide (CO) alarms in all single-family homes and multifamily apartment units. MPHA installed combo smoke–carbon monoxide (CO) detectors in all units in the mid-late 2000s and we replace in kind as required/needed in accordance with State requirements.

Finally, like all PHAs nationwide, in 1992 MPHA evaluated its scattered sites portfolio for lead-based paint hazards; remediation efforts were completed in the 426 homes where hazards were identified. In 2018, MPHA applied for and was awarded a \$1M HUD LBP capital grant to reevaluate and remediate identified LBP hazards in our scattered sites homes. MPHA identified and remediated LBP hazards in interiors/exterior of 26 units and the exterior only at 180 units. The exterior work identified was primarily soils remediation work.

In recent years, our Minnesota State lawmakers and Congressional delegation have been working on a variety of bills that would help address the need for fire sprinkler systems in highrise buildings. The Minnesota National Association of Housing and Redevelopment Officials has estimated that in addition to MPHA, at least 1,000 other public housing units in the State are not fully sprinkled. In July 2021, the MN Legislature passed a bill that will mandate sprinklers in public housing highrise apartments by 2033, but the bill did not include any type of funding to support this mandate. MPHA hoped that the State legislature would have recognized the scale of the expense and public housing's overall unmet capital needs along with its recognition of the need for sprinklers. The funding proposed in the Public Housing Fire Safety Act would help us address this unfunded State mandate.

Housing Is Infrastructure: Federal Disinvestment in Public Housing Is a National Problem

Minneapolis is not the only agency that struggles to keep up with growing capital needs and few Federal resources to preserve our affordable housing. The State of Minnesota has units in all 87 counties with a total estimated backlog of \$355M. The National Association of Housing and Redevelopment Officials estimates that the current backlog of capital needs for public housing properties nationwide exceeds \$70 billion.

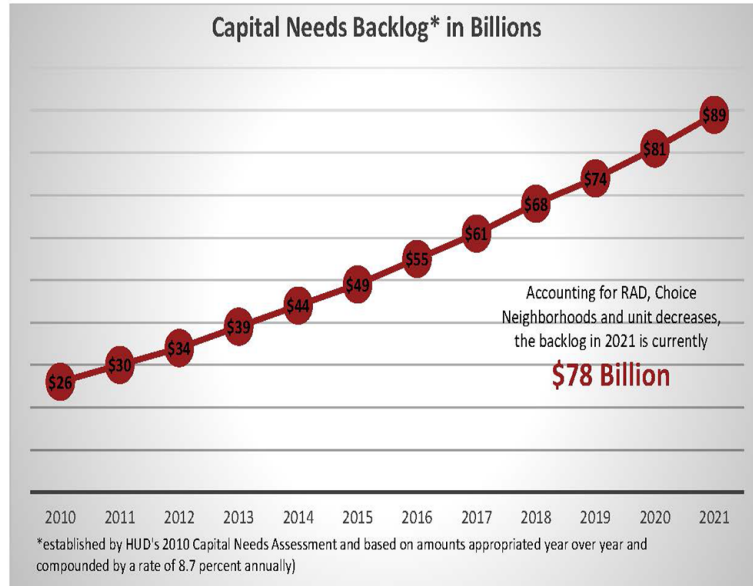
What Is the Capital Fund Backlog?

PHAs own and operate approximately one million units of federally subsidized public housing, providing affordable housing to families, the elderly, persons with disabilities, and veterans. Funding for public housing comes from two sources, the Operating Fund, which covers day-to-day maintenance and operations, and the Capital Fund. PHAs use Capital Fund dollars to repair and improve their public housing sites and buildings, address deferred maintenance needs, and replace obsolete utility systems. Sadly, chronic underfunding of the program has placed the inventory at risk, and Capital Fund appropriations lag dangerously behind accruing modernization needs.

In 2010, the national Public Housing Capital Needs Assessment showed that the total backlog for public housing capital funding was \$26 billion, with a projected growth rate of approximately \$3.4 billion per year. Furthermore, the report noted that each year the cost of the backlog compounds at a rate of 8.7 percent due to inflation and the increased cost of addressing deferred maintenance. As a result, even when accounting for other Federal capital programs, including the Rental Assistance Demonstration (RAD) and Choice Neighborhood Grants, NAHRO estimates the Capital Fund backlog was approximately \$70 billion in 2019.

NAHRO Capital Fund Backlog Methodology

Since 2010, the number of public housing units across the country has decreased from the 1,079,561 units included in the 2010 assessment to 957,971 units in 2020, based on HUD Picture of Subsidized Housing (POSH) data. This represents an 11.26 percent reduction in units. To address this, we have decreased the backlog by 11.26 percent, representing the percentage of units that have left the Public Housing program through RAD, demolition, disposition, and voluntary conversion since 2010. This places the backlog at \$78.828 billion.



RAD and Choice Neighborhoods help, but do not replace the Capital Fund

PHAs have been able to reduce the Capital Needs backlog through RAD and Choice Neighborhood Grants. PHAs have used \$12.6 billion through RAD and have received \$487.425 million in Choice Neighborhood Implementation Grants specifically for housing rehabilitation and new construction through those grants since 2010. RAD and Choice Neighborhoods have only reduced the backlog by about \$13.087 billion. In June 2020, MPHA completed their first RAD conversion, which enabled us to do a complete rehabilitation, including sprinkler retrofitting.

In addition, MPHA has turned to looking for resources outside of the Capital Fund to complete our sprinkler projects. In February 2020, I, along with Resident Commissioner Tamir Mohamud testified before the State legislature about the Capital Fund backlog and advocated for State dollars to fill the gap to allow for the completion of important health and safety projects. We have advocated and applied for dollars at the city, State, and Federal levels. Most recently we applied for Congressionally Directed Spending within all 3 of our MN delegation offices.

What Can Be Done To Save Public Housing?

Eradicating the public housing capital needs backlog is an investment in people and a cost-saving mechanism that prevents additional expenditures downstream. Each year the Capital Fund backlog grows, resulting in deferred maintenance costs add additional strains to the public housing portfolio. Accounting for underfunding, inflation, and the costs of deferred maintenance, the Capital Needs backlog has grown significantly in the past decade. Congress must provide the funding necessary to ensure communities can provide safe, secure housing to current residents of public housing and families who will need access to low-income housing in the future.

This is unlikely to happen through annual appropriations. Congress must make a large-scale investment in public housing to preserve this affordable housing asset for future generations. Congress must include at least \$70 billion for the Public Housing Capital Fund, including a robust allocation to Capital Fund formula funding.

Additionally, funding targeted specifically at health and safety issues in public housing would ensure that any issues with properties that could endanger residents' lives are quickly addressed. The Public Housing Fire Safety Act, in conjunction with a large-scale investment in the Public Housing Capital Fund, is needed to ensure that the critical needs of public housing across this country are being met.

MPHA cannot make these needed repairs without significant resources provided by Congress. My residents are depending on Congress to finally provide MPHA with the funding it needs to improve and preserve their units.

Public Housing Is Worth Preserving

Public Housing is a critical piece of the affordable housing landscape. It provides permanently affordable units to the lowest income families across our Nation. According to a recent report by the National Low-Income Housing Coalition, there were only about 37 affordable and available rental units for every 100 extremely low-income renter households prior to the COVID-19 pandemic. At that point, 70 percent of extremely low-income renters spent more than half of their incomes on housing costs. Preserving public housing for future generations is crucial to meeting the growing need for more affordable units in every community.

In Minneapolis, public housing is an integral part of the community, serving 5 percent of the city's population. In March, Minneapolis High Rise Representative Council Vice President Tamir Ali Mohammad testified before the House Financial Services Housing, Insurance, and Community Development Subcommittee on the importance public housing played in his community during the pandemic. I want to share with you his testimony that in his words shows the importance of having a safe and affordable place to call home:

When the pandemic hit and Gov. Walz issued the first stay-at-home order last March, MPHA closed the highrise community rooms and asked residents to stay in their apartments and only go out for appointments, necessary shopping, and exercise.

MPHA stopped staff from entering resident apartments for routine maintenance and instead had them do extra cleaning of building entrances and elevators. MPHA provided food boxes and boxed meals by working with community partners when congregate dining and mobile food shelves had to close, including providing halal meals during Ramadan. MPHA hosted a mask drive and through community donations, including Dunwoody Institute, they were able to provide masks for all residents and staff when that became a recommendation for preventing COVID. Through community donations and a grant from the Pohlad foundation, MPHA organized delivery of personal hygiene products to residents after many stores were looted and burned following the police killing of George Floyd in May.

MPHA posted informational signs about mask wearing and physical distancing and worked with Resident Council members and Security to enforce mask mandates. MPHA also restricted the number of visitors that could come into the buildings and added extra security guards to help control traffic and enforce the mask-wearing rules. Throughout the year, MPHA staff shared information and answered questions at ongoing resident meetings held via teleconference due to the pandemic.

MPHA organized onsite COVID testing throughout the pandemic and offered onsite flu shots in the fall. On March 8, MPHA, through its collaboration with the city health department, began vaccinations in highrises and today nearly all 1st round of COVID vaccination clinics have been completed at all 42 highrises at MPHA.

Not only has MPHA provided me with stable housing, MPHA has been an important partner with residents. Through resident councils and MHRC board and committee meetings, residents regularly communicate, and problem solve with MPHA staff on individual highrise and citywide issues, like safety and building maintenance. This partnership and cooperation has been invaluable in improving the quality of lives of people living in public housing highrises.

Public housing is a valuable resource to the city of Minneapolis as it means safe and affordable housing for the members of our community who have the greatest need. Homelessness has grown in Minneapolis. We see "tent cities" spring up all around us and there are not enough shelter beds to meet the need. Public housing is one answer to the housing shortage. It is critical that it is preserved and increased. We depend on Congress to provide enough funding to preserve and expand public housing. It has failed in this role for too long. It's time to provide sufficient funds so that existing public housing homes are no longer lost to disrepair and it's time to end the prohibitions on construction of new public housing.

Conclusion

In order for MPHA to make the needed investments in its public housing stock, including the addition of fire sprinklers in its towers, we need Congress to meet their obligation to provide safe housing to our residents and fully fund the \$70 billion Public Housing Capital Fund backlog. We also need targeted investments to help us quickly address this pressing safety issue through the passage of the Public Housing Fire Safety Act.

Chairwoman Smith, Ranking Member Rounds, thank you for the opportunity to testify today. I am happy to answer any questions.

PREPARED STATEMENT OF SHARON VOGEL

EXECUTIVE DIRECTOR, CHEYENNE RIVER HOUSING AUTHORITY, EAGLE BUTTE, SOUTH DAKOTA

JULY 20, 2021

Good afternoon, thank you, Chairwoman Smith and Ranking Member Rounds, and Members of the Subcommittee for the opportunity to testify before you today on preserving and improving our federally assisted homes. My name is Sharon Vogel, I am the Executive Director of the Cheyenne River Housing Authority located on the Cheyenne River Sioux Reservation. I am also the Chairwoman of the United Native American Housing Association (UNAHA), with 33 member tribally designated housing entities (TDHEs) from the States of North and South Dakota, Nebraska, Montana, Utah, Wyoming, and Colorado. I am also proudly serving my first term on the Board of Directors of the National Low Income Housing Coalition (NLIHC) and continue my service as a Board Member of the National American Indian Housing Council (NAIHC).

The Cheyenne River Housing Authority currently provides low-income housing to over 800 families. The Cheyenne River Housing Authority serves a primarily Native American population in communities throughout the Reservation. The Cheyenne River Housing Authority is the tribally designated housing entity for the Cheyenne River Sioux Tribe, and we currently manage 735 rental units, 86 home ownership units—with 42 new rental units under construction and we continue to build on our successful record of developing affordable housing by designing and financing rental and home ownership homes for eligible families.

Native Americans living in tribal areas and remote Alaskan villages experience some of the greatest housing needs in the country, with high poverty rates, low incomes, overcrowding, lack of plumbing and heat, and unique development issues. Due in part to these unique conditions, Native American households have been especially hard hit by the pandemic and its resultant economic downturn—being more likely to develop serious illness as a result of the pandemic. But overcrowding of available housing stresses both the occupants and the structures themselves—homes on the Cheyenne River Reservation require much more maintenance than the average wear-and-tear to remain safe and livable—this is not for lack of property management, it is because there are not enough homes to go around. A three-bedroom house is designed for a family of 5 or 6, but often because of overcrowding these units are occupied by three or more families—sometimes as many as 15 individuals sharing the house. Preserving limited Indian housing resources nationwide makes it essential that Indian housing be remembered in the upcoming infrastructure legislation, including the \$70 billion being targeted for rehabilitation of federally assisted housing.

We strongly support the recently introduced bill to reauthorize the Native American Housing Assistance and Self-Determination Act (NAHASDA) sponsored by Senators Smith and Rounds. In particular the proposed provisions reinstating the highly successful Drug-Elimination program and the long-awaited changes to the NAHASDA program requirements, many of which were originally proposed by the UNAHA region.

In order to bring NAHASDA resources where they are needed the most, we also support the proposed \$1B increase for the competitive IHBG program.

The pandemic has exposed significant gaps in our Federal housing safety net. Housing inequities contributed to the spread of COVID-19 cases and deaths, and the lack of universal housing assistance placed tens of millions of renters at risk of losing their homes and with them, the ability to keep themselves and their families safe. We can build back better by closing gaps in our safety net so that our tribal governments and our Nation are better prepared for the next crisis.

Severe substandard housing exists on Native lands in a much higher percentage than anywhere else in the Country. These conditions have been confirmed by nearly

every Indian and Alaska Native housing study, and were highlighted in HUD's most comprehensive and recent "Housing Needs of American Indians and Alaska Natives in Tribal Areas: A Report From the Assessment of American Indian, Alaska Native, and Native Hawaiian Housing Needs", by HUD PD&R and the Urban Institute, January 2017—which was commissioned by Congress and funded through HUD several years ago. Although these housing conditions exist in many Indian communities and Alaska Native villages throughout the country, they are rampant in three particular regions: Arizona/New Mexico, the Northern Plains, and in Northwest Alaska Native villages. Not surprisingly, these three regions also have the highest poverty levels in Indian country. The Report summarizes that "[H]ousing problems of American Indians and Alaska, particularly in reservations and other tribal lands are extreme by any standards." We are aware of these conditions and their impact on Native reservations and communities—in part because a majority of our UNAHA members are suffering from extremely poor housing conditions. We understand and live with these conditions and their consequences even when there is not a devastating global pandemic. It should be unacceptable that our Country inadequately funds its Indian housing program and continually fails to address both the severe shortage of housing and the unhealthy and unsafe conditions that continue unabated. Tribes and TDHEs battle each day to provide decent, safe, and sanitary housing to their people, but many of us simply do not have the necessary financial resources to address these conditions.

The effects of the pandemic and the housing crisis have also persisted all throughout the United States. Last week, NLIHC and State partners around the country, including the Cheyenne River Housing Authority, released *Out of Reach*, the annual, national report that determines the housing wage—or hourly wage a full-time worker would need to earn in order to afford their housing—for every State, metropolitan area, combined nonmetropolitan area, and county in the United States. For individuals working at the minimum wage in South Dakota a person must work 51 hours to afford a modest 1-bedroom rental home at Fair Market Rent—thus highlighting the need for Cheyenne River Housing Authority to continue to increase its stock of subsidized affordable housing.

The 2021 national housing wage is \$24.90, for a full-time worker to afford a modest two-bedroom apartment. This is more than three times the Federal hourly minimum wage of \$7.25. A full-time minimum-wage worker can afford a one-bedroom rental home at fair market rent in just 218 of the Nation's 3,000 counties. All of these 218 counties are located in States with a minimum wage higher than the Federal minimum. On the Cheyenne River Reservation the average general assistance (GA) recipient gets only \$278 a month or \$3,336 annually—well below the amount necessary for them to be housed without a deep subsidy.

Early this year NLIHC's *The Gap* report, the annual, national report that measures the availability of rental housing affordable to extremely low-income households and other income groups was released. Based on the American Community Survey Public Use Microdata Sample (ACS PUMS), *The Gap* presents data on the affordable housing supply and housing cost burdens at the national, State, and metropolitan levels. The report also examines the demographics, disability and work status, and other characteristics of extremely low-income households most impacted by the national shortage of affordable and available rental homes. The U.S. has a shortage of 7 million rental homes affordable and available to extremely low-income renters, whose household incomes are at or below the poverty guideline or 30 percent of their area median income. Only 37 affordable and available rental homes exist for every 100 extremely low-income renter households. 72.5 percent of extremely low-income households are severely housing cost-burdened, meaning that these households are spending more than 50 percent of household income on housing costs. In South Dakota, there are 58 affordable and available rental homes for every 100 extremely low-income renter households with 61 percent of these renter households being severely cost burdened with housing expenses. While the State as a whole does a bit better than the rest of the Nation, we know that there are unique challenges for not only Native Americans, but also African-American and Latino households who often face systemic and racial discrimination, tend to be worse off than White households.

Policy Solutions

This year we have an enormous opportunity to invest in not only the future of Native American Tribes but the future of housing in America. Housing is Infrastructure and it is time that Congress can come together to undo the decades of discrimination and inequity for the most marginalized groups in the United States. While we do appreciate that Congress has allocated money under both the CARES Act and the Appropriations Act of 2021, including the Emergency Rental Assistance Program

(ERAP), to alleviate the short-term effects of the COVID-19 pandemic. We can confirm that this money had an immediate and vital impact on preserving and protecting housing services and resources in our tribal communities. Our proposal is to now address the more long-term and sustainable solutions to improving Indian housing.

First, we support the bipartisan legislation reintroduced by Senators Brain Schatz (D-HI), Lisa Murkowski (R-AK), Mike Rounds (R-SD), and Tina Smith (D-MN) that would reauthorize the Native American Housing Assistance Self-Determination Act of 1996. Funding under NAHASDA programs is the main source of Federal assistance to ensure American Indians, Alaska Natives, and Native Hawaiians have access to safe, accessible, and affordable housing. Authorization for most NAHASDA programs expired in 2013, although Congress has continued to fund them. The Indian Housing Block Grant (IHBG) under NAHASDA the main source of housing assistance for Native communities, primarily benefits low-income American Indian families. This bill also includes new provisions to address the housing crisis in tribal areas including the reinstatement of the highly successful HUD Drug Elimination program and would permanently authorize the Tribal HUD-VASH veteran's housing program which is currently a demonstration. Such formal reauthorization is long overdue.

Since the inception of NAHASDA in 1997, Indian Housing Block Grants have had an average flatline funding of approximately only \$625,000,000 a year. Because no adjustment has ever been made for inflation, the value of that funding has sharply declined over the past 25 years. In addition, the amounts received by individual tribes have further been reduced by more previously nonfunded tribes joining the program. Adding to this is that Native populations have increased and TDHEs have had to divert development funding to the rehabilitation of existing units to keep their aging units from disrepair.

Tens of thousands of new units are needed. Thousands of existing units, some of which are currently boarded up because of lack of funding and severe methamphetamine contamination, are also in need of substantial rehabilitation. The simple fact is that \$2,000,000,000 (two billion dollars) of additional new funding is needed for the each of the next 7 years if these conditions are going to be effectively addressed. This funding is vitally needed for Tribes and their TDHEs to build and rehabilitate their housing. Most observers know and most studies show, including the Report, that TDHEs have, or if needed can quickly reacquire, the capacity to build housing and other related infrastructure construction on this scale. TDHEs are prepared to quickly gear up to produce a substantial number of new units. This will help tribes and Alaska villages generate for their communities and the country postpandemic economic recovery—just as they did successfully 10 years ago after the Great Recession with American Recovery and Reinvestment Act (ARRA) moneys.

It is our recommendation and opinion that these new funds should be evenly divided between HUD's Indian Housing Block Grants (IHBG) and its IHBG Competitive Grants. Using the existing IHBG program to deliver some of this money would allow some of the grants to be allocated using the NAHASDA allocation formula. By this method, half of the money would be divided up among all the tribal and Alaska Native TDHEs. Then using IHBG Competitive Grants, HUD can award the other half of the funds to those TDHEs that have the greatest need, but who also have the capacity required to quickly and effectively deliver this badly needed housing and to contribute to economic resurgence. This is exactly how TDHEs were successful when called upon a decade ago to use ARRA moneys.

We also recommend and support the passage of the Native American Rural Homeownership Improvement Act introduced by Chairwoman Smith (D-MN) and Ranking Member Rounds (R-SD). The Section 502 program is credited with building more than \$40 billion in wealth for our Nation's poorest families, while also being one of the most cost-effective Federal housing programs. The program provides low and very low-income applicants with payment assistance so that they can purchase safe, decent, and sanitary housing in eligible rural areas. This program could help address the relatively low home ownership rates in rural Native communities, however, from 2016–2021 only 2.6 percent of those loans were made to borrowers who identified as Native Americans. USDA currently operates a pilot program in South and North Dakota, where the Department has partnered with Four Bands Community Fund located on the Cheyenne River Reservation and Mazaka located on the Pine Ridge Reservation, two Native Community Development Financial Institutions (CDFIs), to leverage their deep ties in local communities and deploy Section 502 loans to eligible Native borrowers. The pilot program has demonstrated that Native CDFIs can help the Department reach Native homebuyers more effectively, especially homebuyers living on Tribal land. This bipartisan legislation would expand this pilot program federally and create a national relending program within the Sec-

tion 502 Direct Loan these mortgage loans for Native American Families. This year we have a great opportunity to redress the damage caused by discriminatory housing practices and the housing crisis through once in a generation infrastructure legislation. Congress has to not only improve housing and home ownership rates but to eliminate homelessness for the future. Housing is Infrastructure, and there is no better time for Congress to act on that message than right now. Congress should include in any infrastructure bill the HoUSed campaign's top priorities. These include:

- A major expansion of Housing Choice Vouchers to pave the way toward universal rental assistance for all eligible households. Our members, who are working directly with people experiencing or at risk of homelessness, report to us that this would be the biggest achievement needed to ensure everyone has a home.
- \$70 billion to repair and preserve public housing for current and future generations. Public and Indian housing is home to some of the lowest-income renters in America. Over the years, we have seen a drastic reduction in funding going for repair and a reduction in the number of homes available. People who live in federally assisted housing deserve quality housing.
- \$45 billion for the national Housing Trust Fund (HTF) to build and preserve new homes affordable to America's lowest-income and most marginalized households. The HTF is the only Federal housing program exclusively focused on providing States with resources targeted to serve households with the clearest, most acute housing needs. In 2016, the Cheyenne River Housing Authority was the first TDHE recipient of an HTF grant and received a second grant in 2018—which resulted in construction of a total of 24 units of affordable housing for very-low and low-income families.

The American Jobs Plan proposal included two of these three priorities along with the \$2 billion to meet the housing needs of tribal communities. All three of the HoUSed campaign's top priorities and the \$2 billion for the Native American Housing Block grants are included in House Financial Services Committee Chair Maxine Waters' (D-CA)—bills "Housing is Infrastructure Act" and "Ending Homelessness Act", both of which we support and still encourage that at least \$1 billion allocated for Native American housing go through competitive funds.

Finally, The FY22 House Appropriations bill also saw an increase for NAHASDA programs, up increasing by \$75 million from FY21 levels for formula programs and \$150 million for the competitive programs. We, of course, support these significant increases and the priority consideration within the competitive program to projects that would improve water and energy efficiency or increase resilience to natural disasters, we will continue to encourage the highest possible allocation.

If the Country fails now to address the plight of Indian housing, it would be disastrous to tribes and Alaska Native communities, and to those hundreds of thousands of Native people and families who suffer so greatly with overcrowded and severely substandard housing. Most tribal and Alaska Native people that today live in Indian areas, their Governments, and their TDHEs, have no other option but to look to the Federal Government for the housing funds that they so badly need. For the United States to continue, at this particular moment, to ignore these tribal needs would be nothing short of a tragedy and sadly yet another abandonment by the United States of longstanding concerns and obligations to tribal sovereigns, Indian people, and Alaska Natives.

The pandemic has exposed significant gaps in our Federal housing safety net. Housing inequities contributed to the spread of COVID-19 cases and deaths, and the lack of universal housing assistance placed tens of millions of renters at risk of losing their homes and with them, the ability to keep themselves and their families safe. We can build back better by closing gaps in our safety net so that our tribal governments and our Nation are better prepared for the next crisis.

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

STATEMENT OF CAPTAIN JOHN GARDELL, PITTSBURGH BUREAU OF FIRE

On behalf of the International Association of Fire Fighters, General President Edward A. Kelly, and the over 324,000 professional fire fighters and emergency medical personnel who serve as this nation's all-hazards emergency response force, I submit this statement for the record. Over the last 100 years, the IAFF has been and continues to be the nation's leading voice on fire safety, especially as it impacts the health and well-being of our nation's fire service professionals. My name is John Gardell, and I am a Fire Captain with the Pittsburgh Bureau of Fire assigned to Truck 8 in the East Liberty section of the city. I joined Pittsburgh Bureau of Fire in 2005 after serving as a fire fighter and Lieutenant in the neighboring Borough of Wilkinsburg. Additionally, was a member of the Pennsylvania Air National Guard, where I also served as a fire fighter.

I share my comments on the importance of fire safety measures in residential housing. In 2020, the National Fire Protection Association (NFPA), a leader in research and fire code development, released a detailed study of all fires occurring in the United States over the five preceding years. During this period, U.S fire departments responded to an average of 1.3 million calls for emergency services, including 353,100 residential fires each year. Fires caused an annual average of 2,620 civilian deaths, 11,030 civilian fire injuries, and \$7.2 billion in direct property damage.

The stark reality is that many fire injuries and deaths are completely preventable through the application of simple fire safety measures such as sprinklers. Proper building maintenance, including well-maintained egress features allowing occupants to escape in case of fire, are also important to keep both civilians, and the fire fighters who respond to residential building fires, safe.

Before coming to Pittsburgh Fire, I was an engine company Lieutenant (Lt.) with the Wilkinsburg Fire Department, serving a borough of 16,000 people in suburban Pittsburgh. During my several years with the Department, I regularly responded to emergencies and performed fire inspections at multi-resident dwellings within the borough. Through emergency responses and inspections, I became very familiar with the floor plans and features of high-rise residential structures throughout the borough and developed working relationships with property managers and the maintenance staff of the buildings.

In my first year with Pittsburgh, I responded as a member of a truck company assisting my former department on a fire in a high-rise with an occupant trapped. In the fire department, teamwork is essential, and you quickly learn the strengths of your crew members. On this response, my truck company officer recognized my detailed knowledge of the eight-story building we were responding to in Wilkinsburg. The officer turned to me to share my expertise, and I quickly briefed the crew on exactly where we would find the unit on fire relative to our egress point. Simultaneously, we heard radio communications that the trapped victim was

confined to a wheelchair on the fifth floor. I knew this particular building to be un-sprinklered, so time was of the essence.

Upon my truck's arrival, we grabbed our tools and immediately set out to rescue the civilian. For just a minute, I want you to think about fire behavior. A fire will grow, doubling in size every minute. As the fire grows, it will consume any available oxygen surrounding the fire. The fire will rapidly generate an intense amount of blinding smoke and superheated gasses, which will cause the room temperature to climb beyond 800 degrees in only a couple of minutes. Thick black smoke is loaded with airborne particles from burning materials, accompanied by toxic gasses and airborne chemicals. Breathing the blinding superheated smoke takes your breath away and is at a minimum disorienting and frequently deadly. The enemy in such a fire is time.

Arriving at the door of the apartment, my crewmates and I made entry into the residence. Through thick black smoke and elevated temperatures, we located the victim and extracted her from the building. Once outside, we turned her over to the on-scene paramedics. Alive but in critical condition, she received advanced life support medical care on-scene and while being transported to the hospital. Sadly, our rescued fire victim didn't survive; she died in the hospital a few days later.

I tell you this story because I have thought about this call many times over my career, and I am very confident this fire death was preventable. I am certain that had an automatic fire sprinkler system been present in the building, the victim would have likely survived.

Fire sprinklers are designed to activate automatically when the air at the sprinkler head reaches a designated activation temperature of 135 to 165 degrees Fahrenheit. Four out of five fires are controlled by one activated sprinkler head containing the blaze until the arrival of the fire department. Nearly all fires are controlled by five or fewer sprinkler head activations. According to the NFPA, residential fire sprinklers effectively controlled fire ninety-seven percent of the time. Further, in ninety-six percent of the fires where sprinklers are present, sprinklers kept the fire from spreading beyond the room of origin. By slowing the growth and controlling the spread of fire, the automatic sprinkler system limits property damage while buying time for occupants to escape and fire fighters to respond..

In the case of the Wilkinsburg fire, I truly believe that a sprinkler system activated in the kitchen upon detecting the initial fire would have been lifesaving. Fire sprinkler systems have been around for more than 100 years. Codes and regulations that require the installation of fire sprinkler systems were first put into place in the 1960s. Today's model fire codes require fire sprinkler systems in most new construction of multi-family and high-rise residential buildings as well as certain buildings undergoing renovation but must be adopted by state and local governments as law. Since various local governments use these codes as a model and adopt

them in various iterations, the result is a patchwork of laws which provide varying protection to residents, depending on the community in which they live.

In Pittsburgh, we are advocating for new codes to require sprinklers in multi-story buildings. Following a fatal 2017 fire that displaced over one-hundred residents, the city is considering an ordinance which would mandate the owners of all existing buildings 75 feet or taller install automatic fire sprinkler systems by 2030.

In addition to saving lives, fire sprinklers also limit property destruction. When a fire strikes a residential structure equipped with fire sprinklers, eighty percent of the time the damage caused by the fire is limited to two hundred square feet or less. The cost to remove water, smoke, and odor throughout a sprinklered home is typically between \$2,000-\$3,000, while room repairs and the replacement of personal property averages nearly \$62,000. Repairs in unsprinklered residential structures frequently rise to amounts three to five-time greater than this due to the fire's spread and more extensive damage. It is not uncommon for a fire in an unprotected home to result in the total loss of the home and its contents.

Sprinkler systems are a sound investment in saving lives and limiting property damage and should be required in every multi-story residential building. The federal government should incentivize the installation of sprinklers. To that end, we strongly support Chairwoman Smith's Public Housing Fire Safety Act. By providing grants to retrofit public housing with sprinklers, this important legislation will reduce property damage and save lives.

Residents of fire sprinkler-protected buildings aren't the only ones benefiting from the presence of fire sprinklers. Fire fighters gain a measure of safety too. While preventing the fire's spread and growth, sprinklers also slow the release of toxic, carcinogenic smoke. Frequent and repeated exposure to carcinogenic smoke has been proven to be very harmful to the health of fire fighters, leading to multiple occupational illnesses, including cancer. Cancer is the single greatest killer of fire fighters today; responsible for nearly 70% of line of duty deaths. A fire controlled by sprinkler systems results in smaller fire, requiring fewer fire fighters to extinguish the blaze and faster suppression. Sprinklers thus limit both traumatic injuries due to uncontrolled fire and exposes fewer fire fighters to debris and toxic, carcinogenic smoke.

In addition to fire sprinklers, other simple, effective measures can measurably improve safety in residential buildings. Working smoke detectors are critically important to providing occupants of the home with valuable time to attempt to control and extinguish a fire, or when that isn't possible, to escape from the dangers of a raging fire. Costing as little as \$12 each, three to five well-placed smoke detectors covering the bedrooms and located on every floor of the home can be lifesaving.

Building maintenance is also a critical factor in occupant safety. Ensuring a building has well-maintained electrical and heating systems reduce a building's fire risk significantly. Similarly, buildings must be maintained to ensure they have proper and working means of egress to allow occupants, and fire fighters, the ability to escape in case of a fire. Operational fire doors, stairwells, and windows all contribute measurably to fire safety in residential buildings.

Carbon monoxide detectors are another important safety tool we believe should be installed in any residence equipped with fuel-burning appliances. In the United States, there are approximately 430 deaths each year due to accidental carbon monoxide poisoning. Additionally, more than 40,000 people visit hospital emergency rooms each year for treatment resulting from carbon monoxide exposure. For a minimal investment of \$20 to \$30 each, carbon monoxide detectors can help save lives. Last year, the Congress passed legislation to require CO detectors in public housing. This is a good start. Congress should also pass legislation which further incentivizes the installation of CO detectors. The Nicholas and Zachary Burt Memorial Carbon Monoxide Poisoning Prevention Act of 2021 would award grants to states to install carbon monoxide alarms in the homes of low-income families and older adults and facilities that commonly serve children or older adults. Having passed the House, this bill awaits Senate action. We urge its adoption immediately.

Finally, in recent days HUD has indicated the agency is preparing to release a revised National Standard for Physical Inspection of Real Estate (NSPIRE). We have serious concerns with the proposal as it fails to meet the requirements of national fire and life safety codes. Specifically, the proposal rolls back current standards by establishing less frequent and irregular inspections intervals with weakened inspection criteria. Sound fire prevention policies require regular inspections in compliance with national consensus standards. The regressive standard proposed by HUD is likely to result in more residential fires leading to injury, death, and loss of property. NSPIRE must continue to advance sound fire prevention and inspection policies for the benefit of the public.

The need to continually invest and maintain safe residential buildings is more relevant today than ever before. As our nation's infrastructure ages, Congress has a unique opportunity to make significant investments to improve residential safety. Taking these economical and effective safety measures, including incentivizing the installation of sprinklers, carbon monoxide detectors, and well-maintaining building systems will save lives. I urge this body to include significant investments in such safety measures in any potential infrastructure bill.

Thank you to the Committee for continuing to advance fire safe conditions and supporting our nation's fire fighters and emergency medical responders.

JOINT STATEMENT OF THE LEADING ORGANIZATIONS OF THE NATION'S FIRE AND EMERGENCY SERVICES

Common Voices / Congressional Fire Services Institute / International Association of Arson Investigators /
International Association of Fire Chiefs / International Association of Fire Fighters / International Code
Council / International Society of Fire Service Instructors / National Association of State Fire Marshals /
National Fallen Firefighters Foundation / National Fire Protection Association / National Fire Sprinkler
Association / National Volunteer Fire Council / North American Fire Training Directors

July 19, 2021

The Honorable Tina Smith
Chair
Subcommittee on Housing, Transportation
and Community Development
Senate Banking Committee
Washington, D.C. 20510

The Honorable Mike Rounds
Ranking Member
Subcommittee on Housing, Transportation
and Community Development
Senate Banking Committee
Washington, D.C. 20510

Dear Chair Smith and Ranking Member Rounds:

As leading organizations of the nation's fire and emergency services, we are writing to you today regarding the state of life safety in America's public housing. Specifically, we would like to discuss the need for funding to install fire sprinklers in Department of Housing and Urban Development (HUD) housing. We also want to express concern regarding both HUD's proposed approach to implementing its National Standards for the Physical Inspection of Real Estate (NSPIRE), as well as proposed changes to the NSPIRE inspection standards. These proposals fall short of established life safety requirements in national codes and standards.

I. Funding must be provided for fire sprinklers in public housing.

Regarding the need for sprinklers in public housing, we appreciate the Biden Administration's proposal to devote \$40 billion to the Department of Housing and Urban Development (HUD) Capital Fund. As you consider this proposal, we respectfully ask that not less than \$350 million of such funding being provided to the Public Housing Capital Fund be allocated specifically for the installation of fire sprinklers. This request is consistent with the Public Housing Fire Safety Act (S. 265), which would provide a grant program for the installation of fire sprinklers in public housing. Such funding will save the lives of the citizens that we protect and the firefighters who protect them.

Years of disinvestment have left public housing across our country in disrepair. The overall goal of this infusion to the Capital Fund is to address critical life safety concerns, mitigate imminent hazards to residents, and undertake energy efficiency measures that will significantly reduce ongoing operating expenses.

In 1992, Congress passed the Federal Fire Safety Act, which required newly constructed multi-family housing units to have fire sprinklers. HUD estimates that there are approximately 570,000 multi-family public housing units still in the inventory that were constructed prior to the sprinkler requirement. HUD also estimates that the total cost of retrofitting these units with fire sprinklers ranges from \$1 billion to \$5 billion.

There is no single investment HUD can make when it comes to addressing life safety issues that is more important than retrofitting public housing with fire sprinkler systems. The National Fire

Protection Association (NFPA) reports that -- in buildings with sprinkler systems -- the death rate per fire can be reduced by at least 87 percent and the property damage decreased by up to 68 percent. In fact, the risk of death to firefighters is nearly eliminated and the injury rate is lowered by 67 percent in structures with fire sprinklers. The widespread adoption of fire sprinklers in the last 40 years is one of the elements that have led to an almost 50 percent reduction in fire deaths in this country.

In addition, the investment in fire sprinklers will be needed to help support the safer implementation of energy efficient measures proposed. We support the investment in additional energy efficient measures such as new windows, doors, roofing, and insulation. However, these upgrades dramatically increase the need for fire sprinklers because these investments create a tighter building envelope. This tighter envelope increases a building's heat retention during a fire and heat accelerates a fire's ability to fully engulf an apartment or an entire building. Fire sprinklers are one of the most effective solutions for mitigating the fire-related impacts of a tighter building envelope.

II. HUD's NSPIRE Standards must adhere to critical life safety codes and standards.

As the Committee considers the state of federally assisted housing, we must also express our concerns about HUD's proposed approach to implementing NSPIRE, as well as recent changes to HUD's NSPIRE inspection standards. The proposed implementation includes a lengthy and infrequent rulemaking process that does not appropriately bridge the gap between HUD's current codes and the regularly updated codes and standards that more meaningfully protect life safety. Furthermore, HUD has proposed to weaken certain inspection requirements, which would act counter to the public interest.

Organizations such as NFPA and International Code Council, among others, develop modern codes and standards -- including property maintenance and life safety codes -- that are intended to ensure the safety of both residents and first responders who may be called to residences in the event of an emergency. When buildings do not adhere to up-to-date versions of these codes and standards, the lives of both civilians and fire and EMS personnel are put at risk. As the Committee continues to consider the condition of public housing in America, we ask that you look to ensure life safety by promoting the use of up-to-date codes and standards.

Thank you for giving us the opportunity to share our perspective and with kindest regards we are,

Sincerely yours,

Common Voices
Congressional Fire Services Institute
International Association of Arson
Investigators
International Association of Fire Chiefs
International Association of Fire Fighters
International Code Council

International Society of Fire Service
Instructors
National Association of State Fire Marshals
National Fallen Firefighters Foundation
National Fire Protection Association
National Fire Sprinkler Association
National Volunteer Fire Council
North American Fire Training Directors

**STATEMENT OF MARY MCGOVERN, PRESIDENT, MINNEAPOLIS
HIGHRISE REPRESENTATIVE COUNCIL**



**Minneapolis
Highrise Representative Council**
1015 Fourth Avenue N., Suite 203
Minneapolis, Minnesota 55405
(612) 342-1330

July 13, 2021

Senator Tina Smith
720 Hart Senate Office Building
Washington DC, 20510

Dear Senator Smith:

As president of the Minneapolis Highrise Representative Council (MHRC), the citywide public housing highrise tenant organization representing the interests of some 5000 low-income residents living in Minneapolis' 42 public housing high-rises, I want to thank you for introducing legislation that would provide funds to help cash-strapped housing authorities to retrofit public housing properties with much-needed sprinkler systems. Automatic fire sprinkler systems covering every high-rise apartment could prevent tragic fires like the one at 630 Cedar in Minneapolis that that resulted in the death of five residents.

I want to share some comments from Cedars residents who still have flashbacks from the deadly fire:

"It is one and a half years since we lost five loved people. It was before Thanksgiving on November 27, 2019. We can see still where the fire happened on the 14th floor because some windows are boarded up and part of the outside of the building is charred. Water was everywhere including elevators and apartments. We also lost many precious possessions that can't be replaced. I am very supportive of the need to install sprinklers in all of our buildings. There was a shred of hope on that day in the way Minnesotans rallied around those impacted by this fire. I have been reflecting on how the community came together, and the recovery efforts were strong in the first few months following the fire, but everything quickly changed when COVID-19 hit."

Halimo Shire, 630 Cedar resident council vice president

"We still feel the loss of five beloved community members and every day we can still see where the fire happened. It's time to require the retrofitting of sprinklers in the high-rises and it's time for the federal government to provide the funds to make this happen. We don't want to see any more lives lost to fire. There are many other repairs also needed to protect residents' health. All of the windows need to be fixed in

our building since during the cold winter residents feel very cold air coming from the edges. Other things such as the air-conditioning sleeves need to be repaired as cold air comes in during the winter. We need help from the government so the housing authority can fix these things."

Hawo Geyre, 620 Cedar resident council vice president

MPHA has been able to retrofit 16 of the 42 high-rises with sprinklers, but there are 26 yet to go. Contributions from the federal government would allow this to happen much faster and would add greatly to residents' feeling of safety. The high-rises are all over 50 years old and many of their systems are in drastic need of major repairs or replacement. MPHA has a backlog of \$152 million in unmet capital needs, including failed plumbing, leaking roofs and deteriorating facades. We urge Congress to pass the Public Housing Fire Safety Act and to provide sufficient funds to address the \$70 billion backlog of public housing capital needs across the country.

Sincerely,

Mary McGovern

Mary McGovern, President
Minneapolis Highrise Representative Council