

COMMENTS SUBMITTED TO
U.S. ENVIRONMENTAL PROTECTION AGENCY
*Public Comment Draft of the EPA Strategy to
Reduce Lead Exposures and Disparities in U.S. Communities*
Docket EPA-HQ-OLEM-2021-0762 (Submitted via Regulations.gov)

March 16, 2022

By

Able-Differently • Achieving Community Tasks Successfully • Alaska Community Action on Toxics • Alliance for the Great Lakes • Alliance of Nurses for Healthy Environments • Amani United • American Public Health Association • Black Millennials 4 Flint • Black Warrior Riverkeeper • Break the Cycle of Health Disparities, Inc. • Buffalo Niagara Waterkeeper • Cahaba Riverkeeper • California Communities Against Toxics • California Safe Schools • Campaign for Lead Free Water • Center for Environmental Health • Center for Neighborhood Technology • Children's Environmental Health Network • Choctawhatchee Riverkeeper • Cities of Peace Detroit • Citizens Against Gillespie Expansion and Low Flying Aircraft • Citizens for Quiet Skies • Clean Air Council • Clean and Healthy New York • Clean Water Action • Cleveland Lead Advocates for Safe Housing • Coalition of Community Organizations • Coalition on Lead Emergency • Coming Clean • Conservation Voters of Pennsylvania • Defend Our Health • Detroit Hamtramck Coalition for Advancing Health Environments • Earthjustice • East Chicago Calumet Coalition Community Advisory Group • Ecology Center • Environment America Research and Policy Center • Environmental Health Leadership Foundation • Environmental Working Group • Family Farm Defenders • FLOW (For Love of Water) • Freshwater for Life Action Coalition • Friends of the Earth • Gas Free Seneca • Get the Lead Out Coalition • Green and Healthy Homes Initiative • Green Gas Movement • Healthy Babies Bright Futures • Idaho Conservation League • Illinois Council of Trout Unlimited • Immigrants and Minorities Unify Services Association • LDA of Minnesota • LEAD Agency, Inc. • League of Conservation Voters • Learning Disabilities Association of America • Learning Disabilities Association of Alabama • Learning Disabilities Association of Alaska • Learning Disabilities Association of Arkansas • Learning Disabilities Association of Arizona • Learning Disabilities Association of California • Learning Disabilities Association of Connecticut • Learning Disabilities Association of Delaware • Learning Disabilities Association of Florida • Learning Disabilities Association of Georgia • Learning Disabilities Association of Iowa • Learning Disabilities Association of Illinois • Learning Disabilities Association of Maine • Learning Disabilities Association of Michigan • Learning Disabilities Association of New Jersey • Learning Disabilities Association of New York • Learning Disabilities Association of North Carolina • Learning Disabilities Association of Ohio • Learning Disabilities Association of Oklahoma • Learning Disabilities Association of Pennsylvania • Learning Disabilities Association of South Carolina • Learning

Disabilities Association of Texas • Learning Disabilities Association of Utah • Learning Disabilities Association of Virginia • Learning Disabilities Association of West New York • Learning Disabilities Association of Wisconsin • Michigan Citizens for Water Conservation • Michigan State University and Hurley Children’s Hospital Pediatric Public Health Initiative • Michigan Welfare Rights Organization • Milwaukee Riverkeeper • Missouri Coalition for the Environment • Moms Across America • Montgomery-Gibbs Environmental Coalition • National Hispanic Medical Association • National Housing Law Project • Natural Resources Defense Council • NC Child • Neighbors for Clean Air • Newburgh Clean Water Project • New Jersey Citizen Action • New York League of Conservation Voters • New York State American Academy of Pediatrics, Chapters 1, 2, and 3 • North Carolina Conservation Network • North Carolina League of Conservation Voters • Northern Manhattan Improvement Corp. • OFT Labs LLC • Ohio Environmental Council • Oregon Aviation Watch • Pennsylvania Council of Churches • People’s Water Board Coalition • Quiet Skies Jefferson County • River Guardian Foundation • Safer States • San Francisco Bay Physicians for Social Responsibility • Science and Environmental Health Network • Seneca Lake Guardian • Shelby County Lead Prevention and Sustainability Commission • Shriver Center on Poverty Law • Sierra Club • Sisters of Mercy of the Americas Justice Team • Turner Environmental Law Clinic, Emory University School of Law • U.S. Public Interest Research Group • Union of Concerned Scientists • University of Chicago Abrams Environmental Law Clinic • UproarLA • Ward 6 Public Schools Parent Organization • Water Collaborative of Greater New Orleans • Water You Fighting For? • Waterway Advocates • WE ACT for Environmental Justice • Women for a Healthy Environment • Women’s Voices for the Earth • Zero Waste Washington

And 53 individuals identified at the conclusion of these Comments

TABLE OF CONTENTS

INTRODUCTION 1

WHY BOLD ACTION IS NEEDED NOW 1

KEY TAKEAWAYS 3

DISCUSSION 5

I. EPA MUST ADOPT NEW RULES AND POLICIES TO PROTECT PEOPLE FROM LEAD IN DRINKING WATER, RESIDENCES AND OTHER CHILD-OCCUPIED FACILITIES, AIR, AND SOIL 7

 A. EPA Must Promptly Revise the Lead and Copper Rule So People Are Not Exposed to Lead from Drinking Water 7

 B. EPA Must Adopt Health-Based Lead Hazard Standards, Enforce the RRP Rule, and Adopt Policies that Prioritize Testing and Remediation of Housing Before People Are Poisoned 9

 C. EPA Must Protect Local Communities from Industrial Sources of New and Ongoing Lead Pollution in the Air. 12

 D. EPA Must Prioritize Cleanup of Lead-Contaminated Superfund Sites 18

 i. EPA’s revised soil lead policy for contaminated sites should account for lead from all potential sources 19

 ii. EPA should base its risk assessments on health-protective blood lead level benchmarks and hazard standards 20

 iii. EPA should base its risk assessments on accurate blood lead level data 21

iv.	EPA must improve its risk communication, transparency, interagency coordination, and community engagement at contaminated sites	21
v.	EPA must acknowledge past harm to move forward more effectively	23
E.	EPA Must Begin to Prepare for Evaluating and Managing the Risks Presented by Lead Under TSCA	24
II.	EPA SHOULD DEVELOP CONCRETE PLANS FOR COLLABORATING WITH OTHER FEDERAL AGENCIES TO PROTECT PEOPLE FROM LEAD.....	25
A.	Federal Agencies – FDA, CPSC, and EPA – Must Adopt Rules that Prioritize Getting Lead out of Food and Other Consumer Products.....	25
i.	Lead in Food	25
ii.	Lead in Other Consumer Products.....	27
B.	EPA Must Work With HUD, Treasury, and USDA To Ensure Residents of Federally-supported Housing Are Not Exposed to Lead Hazards	28
C.	EPA Must Work With Centers for Disease Control and Prevention (CDC) and State Agencies to Ensure More Children Receive Lead Testing.....	29
III.	EPA MUST COMMIT TO CREATING THE STAFF CAPACITY AND RESOURCES NECESSARY TO FOLLOW THROUGH ON ITS COMMITMENT TO LEAD EXPOSURE	29
IV.	THE FINAL LEAD STRATEGY SHOULD CLARIFY UNANSWERED IMPLEMENTATION QUESTIONS IN THE DRAFT	29
	CONCLUSION.....	30

INTRODUCTION

It is long past time to finally end lead exposure—via all pathways and routes—to prevent the irreversible harms it causes, especially to children. As groups and individuals who work to protect communities from lead and who seek to lift up and support the work of colleagues and partners, we submit these comments on the *Public Comment Draft of the EPA Strategy to Reduce Lead Exposures and Disparities in U.S. Communities* (“Draft Lead Strategy”), prepared by the United States Environmental Protection Agency (“EPA”), to urge this Administration to take the bold and aggressive actions that are desperately needed so people are no longer harmed by lead.¹

We are grateful to the Biden-Harris Administration for its commitment to protecting people from lead with a focus on communities facing disproportionately high exposures—but commitment is not enough. For decades, new administrations have entered the White House, claiming that they will finally solve the lead crisis that plagues our children—especially in communities of color and low-wealth communities—only to leave office having accomplished little. We are more than one year into this Administration’s first term, and it has not yet stated publicly what concrete actions it will take, nor the timeframes by which it will take them, to protect the public from lead. Unless this Administration quickly identifies bold and innovative actions that dramatically reduce exposures to lead from all sources, and then aggressively starts to implement those actions, it too will fail. We implore you to rectify this situation as soon as possible by identifying the specific actions the Administration will take to eliminate lead exposure and creating the regulatory frameworks needed to reach the goal of ensuring that no human in the United States is harmed by lead.

WHY BOLD ACTION IS NEEDED NOW

The devastating and irreversible harms lead exposure causes cannot be disputed. Nor can it be disputed that children from communities of color and low-wealth communities suffer the most. According to EPA, among children with the highest blood lead levels in 2013-16, Black children’s blood lead levels were the highest.² Children living in homes below the federal poverty line had higher blood lead levels than children living above the poverty line, and Black children living below the poverty line had markedly higher blood lead levels than children in any other demographic reported. These disparities deprive many children of equal protection and of the bright future that all children deserve – increasing the likelihood of developmental delays and

¹ *Strategy To Reduce Lead Exposures and Disparities in U.S. Communities*, 86 Fed. Reg. 59,711-02 (Oct. 28, 2021); *Draft EPA Strategy to Reduce Lead Exposures and Disparities in U.S. Communities; Comment Request; Correction*, 86 Fed. Reg. 70,124-02 (Dec. 9, 2021); *Public Comment Draft of the EPA Strategy to Reduce Lead Exposures and Disparities in U.S. Communities*, EPA (Nov. 16, 2021) <https://www.epa.gov/system/files?file=documents/2021-11/updated-public-comment-draft-lead-strategy-11-16-2021.pdf> (“Draft Lead Strategy”).

² Indicator B2, Table in *ACE: Biomonitoring – Lead*, EPA, <https://www.epa.gov/americaschildrenenvironment/ace-biomonitoring-lead#B2> (last updated Aug. 24, 2021).

related harm, putting them at greater risk of multiple serious health problems, and subjecting them to significant lost earnings over their lifetime.³ This outrageous and blatant environmental injustice is unacceptable and must end.

Nonetheless, exposure to lead is not limited to children from communities of color or low-wealth communities. Although children living in areas with the highest percentages of pre-1950s housing and low incomes are at greatest risk of having high amounts of lead circulating in their blood, one out of every two children living in the United States under the age of six has detectable levels of lead in their blood.⁴ This is alarming because adverse health effects have been associated with the presence of lead in human blood at every measurable concentration. According to the World Health Organization:

At lower levels of exposure that cause no obvious symptoms, lead is now known to produce a spectrum of injury across multiple body systems. In particular, lead can affect children's brain development, resulting in reduced intelligence quotient (IQ), behavioural changes such as reduced attention span and increased antisocial behaviour, and reduced educational attainment. Lead exposure also causes anaemia, hypertension, renal impairment, immunotoxicity and toxicity to the reproductive organs. The neurological and behavioural effects of lead are believed to be irreversible.⁵

There is also an association between higher childhood blood lead levels and violent or anti-social behaviors resulting in entry into the criminal justice system later in life.⁶

The dangers posed by lead exposure are not limited to children and therefore EPA must take into account the serious risks to adults as it designs its policies and standards. Low-level lead exposure is a causal risk factor for hypertension and cardiovascular disease mortality, with a recent large-scale study finding that 400,000 deaths per year in the U.S. are attributable to adult

³ The lifetime earnings lost due to childhood lead exposure are estimated to be 46-55% higher for Black children than for white or Hispanic children. Joseph Boyle, et al., *Estimated IQ Points and Lifetime Earnings Lost to Early Childhood Blood Lead Levels in the United States*, 778 SCI. TOTAL ENVIRON. 146307, 146307 (July 15, 2021).

⁴ Marissa Hauptman et al., *Individual- and Community-Level Factors Associated with Detectable and Elevated Blood Lead Levels in U.S. Children: Results from a National Clinical Laboratory*, 175 JAMA PEDIATR. 1252, 1252–1260 (Dec. 1, 2021).

⁵ *Fact Sheet, Lead Poisoning*, WHO (Oct. 11, 2021), <https://www.who.int/en/news-room/fact-sheets/detail/lead-poisoning-and-health>.

⁶ John Paul Wright et al., *Association of Prenatal and Childhood Blood Lead Concentrations with Criminal Arrests in Early Adulthood*, 5 PLOS MED. e101 (May 27, 2008); Howard W. Mielke & Sammy Zahran, *The Urban Rise and Fall of Air Lead (Pb) and the Latent Surge and Retreat of Societal Violence*, 43 ENV'T INTL 48, 48–55 (Aug. 2012).

lead exposure.⁷ Lead is also a likely carcinogen, adding to the effect of other carcinogens in our environment.⁸

KEY TAKEAWAYS

1. We agree with EPA that lead exposure disproportionately impacts communities of color and low-wealth communities and remedying this disparity is morally compelled. We therefore fully endorse EPA’s goal of “reducing lead exposure in communities as a means to reduce persistent disparities in children’s blood lead levels and promote environmental justice.”⁹
2. The focus on communities that are most exposed is just the beginning. It is also imperative for EPA to set a goal of eliminating exposure to lead in *all* communities – for people of all ages, since the dangers of lead are not limited to children –and set in place standards, rules, and policies that will get the United States to that goal. We urge EPA to revise the Draft Lead Strategy to more clearly and specifically set forth its plans and its timeline for these necessary actions.¹⁰
3. EPA should commit to specific and swift revisions to existing policies, considering cumulative exposures to lead across all routes and pathways. This is imperative because lead is a *cumulative toxicant* that affects multiple body systems and many

⁷ Bruce P. Lanphear et al., *Low-level Lead Exposure and Mortality in US Adults: A Population-based Cohort Study*, 3 LANCET PUBLIC HEALTH e177, e177–e184 (Apr. 2018); Lauren Brown et al., *Developing a Health Impact Model for Adult Lead Exposure and Cardiovascular Disease Mortality*, 128 ENVIRON HEALTH PERSPECT. 097005-1, 097005-1–097005-12 (Sep. 2020).

⁸ “EPA has considered lead to be a probable human carcinogen, and, under more recent assessment guidelines, it would likely be classified as likely to be carcinogenic to humans.” See *Lead Compounds, Health Hazard Information*, EPA <https://www.epa.gov/sites/default/files/2016-09/documents/lead-compounds.pdf> (last updated Sept. 2011). The National Toxicology Program (“NTP”) has listed lead and lead compounds as “Reasonably Anticipated to Be Human Carcinogens.” See *15th Report on Carcinogens, Substances Listed in the Fifteenth Report on Carcinogens*, NTP (Dec. 21, 2021) http://ntp.niehs.nih.gov/ntp/roc/content/listed_substances_508.pdf. The International Agency for Research on Cancer has found that inorganic lead compounds are probably carcinogenic to humans. See Int’l Agency for Research on Cancer (IARC), World Health Organization, *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Inorganic and Organic Lead Compounds 378* (James A. Bond & Rosamund Williams eds., 2006) <https://monographs.iarc.fr/ENG/Monographs/vol87/mono87.pdf>.

⁹ Draft Lead Strategy at 6.

¹⁰ We recognize that the Draft Lead Strategy indicates that “target dates and measures of progress for action milestones and completion” will be part of the final Lead Strategy. See Draft Lead Strategy at 22. However, it is concerning and disappointing that EPA is not seeking public input on these essential components of its Strategy.

people are exposed to lead from multiple sources (e.g., water, indoor dust from lead paint, air, food, household products).¹¹

4. EPA will not prevent exposure to lead if it continues to view lead as a problem of a purely “legacy” nature resulting from historical uses of lead in pipes and paint. Many people continue to be exposed to lead that is being newly introduced into the environment via industrial sources, waste treatment, food, aviation gas and gas used in a variety of other motorized vehicles such as farm equipment and racing vehicles, and consumer products.¹² The introduction of “new” lead into the environment, our homes, and our bodies must be prevented.
5. EPA has a major opportunity to transform federal environmental protections from lead exposure as a result of statutory deadlines, court orders, settlement agreements, and voluntary commitments that require it to adopt at least the following rules over the next several years:
 - **Drinking water pathway of exposure:**
 - a. Strengthen the Lead and Copper Rule (“LCR”)
 - **Air pathway of exposure:**
 - a. Strengthen air toxics rules for all lead emitting industrial sources, as necessary to satisfy Clean Air Act section 112, including by assuring an ample margin of safety to protect public health, especially children’s health, from at least the following sources:
 - i. Secondary lead smelters;
 - ii. Lead acid batteries;
 - iii. Primary copper smelters;
 - iv. Coal and other power plants (Mercury and Air Toxics Standards (“MATS”) rule);
 - v. Steel manufacturers;
 - vi. Municipal waste and other incinerators;
 - vii. Evaluate all other lead-emitting sources and create a plan to eliminate or reduce lead emissions from all such sources.

¹¹ *Fact Sheet, Lead Poisoning*, WHO (Oct. 11, 2021), <https://www.who.int/en/news-room/fact-sheets/detail/lead-poisoning-and-health>.

¹² We note that lead in bullets used to hunt wildlife is also a major source of lead in the environment and food in some regions. We encourage EPA to consider what authorities it can use to limit or prohibit this source of lead. In addition, EPA should work with OSHA to protect workers in indoor firing ranges from lead exposure. See *Protecting Workers from Lead Hazards at Indoor Firing Ranges*, OSHA (June 2018), <https://www.osha.gov/sites/default/files/publications/OSHA3772.pdf>

- b. Finalize endangerment finding for leaded aviation gasoline (“avgas”), followed by regulatory phase-out;
 - c. Strengthen National Ambient Air Quality Standards for lead (“Lead NAAQS”).
- **Lead paint-related pathway of exposure:**
 - a. Update lead hazard standards for dust-lead so they are based exclusively on health effects;
 - b. Update lead hazard standards for soil-lead so they are based exclusively on health effects;
 - c. Update clearance standards for dust-lead to the lowest feasible levels;
 - d. Revise definition of lead-based paint to the lowest levels of detection;
 - e. Extend the Renovation, Repair, and Painting (RRP) rule to public and commercial buildings, and clarify that the rule applies to demolitions as well as renovations.
6. EPA is required by the Toxic Substances Control Act (“TSCA”) to designate lead and lead compounds as a “high-priority” substance that will undergo risk evaluation, and then it will have to adopt a risk management rule if it determines that lead presents unreasonable risk taking into account its full life cycle, with a focus on populations at greater risk, including children, pregnant people, and workers.¹³ EPA should begin planning for this risk evaluation, including gathering necessary data, without delay.
 7. EPA should take its “whole of government” approach seriously and engage in meaningful collaborations with other federal agencies – especially the U.S. Housing and Urban Development Agency (“HUD”) and the Food and Drug Administration (“FDA”) – to reduce lead exposure in HUD-assisted housing and from food.
 8. If EPA believes that shortages of staffing and/or other resources are an obstacle to its adopting the health protective rules and conducting the required evaluation identified above, or taking other actions necessary to meet its goal of protecting humans from lead exposure, it should provide the public with estimates of (i) the number of full time employees required to complete each rulemaking; (ii) the cost of completing each rulemaking; and (iii) the time required to complete each rulemaking.

DISCUSSION

We strongly support the Strategy’s primary goal of “reducing lead exposure in communities as a means to reduce persistent disparities in children’s blood lead levels and promote environmental justice.”¹⁴ We also appreciate EPA’s recognition that to protect communities from lead, the federal government must address multi-media exposure pathways addressing lead exposures

¹³ 15 U.S.C. § 2605(b).

¹⁴ Draft Lead Strategy at 6.

from paint, dust, soil, drinking water, air (ambient and in the workplace), food, and consumer products.

Despite identifying important goals and approaches for meeting them, the Draft Lead Strategy falls short of the transformational change in federal lead policy that is desperately needed. One of the most striking omissions is that EPA does not actually commit to making many of the essential regulatory and policy changes that are necessary to truly reduce communities' exposures to lead, many of which are in fact required by court orders, statutory deadlines, and EPA's commitments. Indeed, the Draft Strategy's discussion of the need to adopt protective standards is characterized primarily by tentativeness, not resolve. For example, in connection with lead-based paint hazards, EPA states only that it will "reconsider"¹⁵ its dust-lead hazard standards in renovation protocol, it will "revisit ... and, as appropriate, revise"¹⁶ the definition of lead-based paint, and it will "continue ... to evaluate risk from"¹⁷ renovations of public and commercial buildings. In connection with lead in ambient air, EPA states only that it will consider "whether to retain or revise the current NAAQS for lead. Similarly, despite the complete ineffectiveness of the LCR of the Safe Drinking Water Act, the Draft Lead Strategy simply says that EPA is "reviewing" the rule and the revisions it just allowed to go into effect.¹⁸ And despite acknowledging elsewhere that "there are significant opportunities to further improve upon [the revisions to the LCR] to achieve increased protection of communities from lead exposure through drinking water," EPA has only listed areas upon which it will "*focus*' and "*consider*."¹⁹ In sum, EPA is committing only to *considering* making changes to standards that plainly need to be strengthened.

The time has long passed for tentative half measures that delay action while children are poisoned. EPA must commit to revising its standards to align them with the current science; it cannot spend years reconsidering, evaluating, and studying. Then, once revised, health-based standards are in place, EPA must undertake cleanups and enforcement measures. We urge EPA to take heed of the recent Ninth Circuit Court of Appeals' decision that calls out EPA for its delay tactic of claiming to lack the information it needs to adopt health-protective lead standards, ruling that "EPA's continued reliance on inadequate information for approximately two decades" as an excuse for not updating its lead hazard standards is "arbitrary and capricious and in violation of its statutory obligation of scientific currency."²⁰ The message is clear: delay in protecting children from lead is unjustifiable and illegal.

¹⁵ Draft Lead Strategy at 8.

¹⁶ *Id.* at 9.

¹⁷ *Id.*

¹⁸ *Id.* at 12.

¹⁹ *Rev. of the Nat'l Primary Drinking Water Regul.: Lead and Copper Rule Revisions (LCRR)*, 86 Fed. Reg. 71574-01, 71,577 (Dec. 17, 2021).

²⁰ *A Cmty. Voice v. EPA*, 997 F.3d 983, 988 (9th Cir. 2021).

I. EPA Must Adopt New Rules and Policies to Protect People from Lead in Drinking Water, Residences and other Child-Occupied Facilities, Air, and Soil.

A. EPA Must Promptly Revise the Lead and Copper Rule So People Are Not Exposed to Lead from Drinking Water.

We welcome EPA’s goal to reduce exposure to lead in drinking water. The significance of drinking water as an exposure pathway is often underestimated. EPA modeling has shown that water can constitute up to 80% of U.S. children’s lead exposures.²¹ And lead poisoning of children as a result of drinking water has been documented throughout the U.S., not only by water systems that have a “lead action level exceedance” requiring corrective action under the LCR, but also by many that do not.²²

EPA is long on admirable goals for reducing lead in drinking water in the Draft Lead Strategy and elsewhere, but short on specifics or a timeline for transforming the utterly ineffective LCR. While the Draft Lead Strategy highlights the importance of replacing lead service lines and lead-bearing fixtures, soon after it was released, EPA inexplicably permitted revisions to the LCR to go into effect that took significant steps *backwards* with respect to such remediation. The revisions narrowed the rule’s definition of “lead service line” to exclude lead joints and connectors that can be up to several feet long, and that contribute to lead contamination in water.²³ This change will mislead some people into thinking they have no lead-bearing plumbing materials along the length of their service line when they do, and will allow lead-leaching connectors to transport drinking water indefinitely. The revisions also slowed down the rate at which water systems must replace lead service lines once they are required to under the rule,²⁴ and permitted over 90 percent of all water systems to avoid lead service line replacement

²¹ Lindsay W Stanek et al., *Modeled Impacts of Drinking Water Pb Reduction Scenarios on Children’s Exposures and Blood Lead Levels*, 54 ENVIRON SCI TECHNOL 9474, 9474–82 (Aug. 2020); Ronnie Levin et al., *The Urban Lead (Pb) Burden in Humans, Animals and the Natural Environment*, 193 ENVIRON RES (FEB. 2021).

²² See, e.g., Mona Hanna-Attisha et al., *Elevated Blood Lead Levels in Children Associated with the Flint Drinking Water Crisis A Spatial Analysis of Risk and Public Health Response*, 106 AM J PUBLIC HEALTH 283, 283–90 (Feb. 2016); Marc Edwards et al., *Elevated Blood Lead in Young Children Due to Lead-Contaminated Drinking Water: Washington, DC, 2001-2004*, 43 ENVIRON SCI TECHNOL 1628, 1618–23 (Mar. 2009); Mary Jean Brown et al., *Association Between Children’s Blood Lead Levels, Lead Service Lines, and Water Disinfection, Washington, DC, 1998–2006*, 111 ENVIRON. RES 67, 67–74 (Jan. 2011); Simoni Triantafyllidou et al., *Lead Particles in Potable Water*, 99 J AM WATER WORKS ASSOC 107, 107–17 (JUN. 2007); Rebecca Renner, *Out of Plumb: When Water Treatment Causes Lead Contamination*, 117 ENVIRON. HEALTH PERSPECT. A542, A542–A547 (Dec. 2009).

²³ *National Primary Drinking Water Regulations: Lead and Copper Rule Revisions*, 86 Fed. Reg. 4198-01, 4240 (Jan. 15, 2021) (to be codified at 40 C.F.R. pt. 141, 142).

²⁴ 86 Fed. Reg. at 4216, 4219.

altogether, regardless of how high lead levels are.²⁵ Such provisions are in direct conflict with President Biden’s goal of removing 100% of lead service lines and the Draft Lead Strategy’s assertion that rapid progress will be made to achieve that goal.²⁶

In addition to the regressive provisions, the LCR revisions also merely tweaked the fundamentally broken LCR and failed to address its main weaknesses—starting with the fact that it is not intended to, and thus not designed to, protect individual households from lead by adopting a Maximum Contaminant Level as required by the Safe Drinking Water Act. The rule is premised on one-time water sampling at a miniscule number of homes and often only once every few years, even though lead levels are highly variable—levels in samples collected from the same tap may vary exponentially from one day to the next. The rule also requires no remediation until the lead levels in at least 10 percent of sampled homes exceed 15 parts per billion (“ppb”), a very high and non-health-protective level. That construct knowingly and systematically sacrifices up to 9 percent of homes—which in New York City, for example, equates to almost 800,000 households—regardless of how high the lead levels in their drinking water are at the time of sampling. The LCR also serves children no better than the general public. Schools and childcare centers present a unique set of circumstances that may increase lead exposure from drinking water. Nevertheless, the LCR revisions set up a weak and voluntary testing program after the first year, missing an opportunity to use strong incentives to protect children in the places they go for numerous hours each day to learn and play. The Draft Lead Strategy does not commit to strengthening those provisions.

The LCR and EPA have also failed the public in terms of education, allowing public water systems to hide behind statements of “compliance” with the complex and non-health protective LCR, misleading people into believing their water presents no significant risk of lead exposure. The Draft Lead Strategy does not commit EPA to affirmatively inform the public about the widespread nature of lead in drinking water, the shortcomings of the LCR/LCR compliance, and measures people can take to decrease exposure to lead at all times, whether or not their water system meets LCR requirements, whether or not they have a lead service line, and whether or not a one-time test showed any lead.

Further, the Draft Lead Strategy does not adequately connect exposures through lead-bearing plumbing to the Administration’s environmental justice goals. EPA acknowledges that many lead service lines are in low-wealth neighborhoods, and that exposure to lead in drinking water disproportionately affects those neighborhoods and communities.²⁷ Yet the Draft Strategy Plan fails to commit to rectifying the fact that consumers are often required to pay thousands of dollars for lead service line replacement, all but ensuring that such disparities continue.

²⁵ See 86 Fed. Reg. at 4221–22 (allowing compliance alternatives for small community water systems); *Safe Drinking Water Act (SDWA): A Summary of the Act and Its Major Requirements*, CONG. RSCH. SERV. (July 1, 2021) <https://sgp.fas.org/crs/misc/RL31243.pdf> (“Roughly 91% of [community water systems] serve populations of 10,000 or fewer . . .”).

²⁶ Draft Lead Strategy at 10–11.

²⁷ Draft Lead Strategy at 10; *Review of the National Primary Drinking Water Regulation: Lead and Copper Rule Revisions (LCRR)*, 86 Fed. Reg. 71574-01, 71575 (Dec. 17, 2021).

It is no accident that the lead crises in Washington DC, Flint, MI, Newark, NJ, and Clarksburg, WV all occurred while the water systems claimed their water was safe; the LCR itself is not anchored in science, is fundamentally broken, and is not properly enforced. EPA has acknowledged that there are “significant opportunities to further improve upon” the LCR and the recent revisions to it. Yet despite almost a year of further study and stakeholder feedback, neither EPA’s Federal Register notice permitting the LCR revisions to go into effect nor the Draft Lead Strategy provide any specifics on *how* EPA will improve its abysmal control of lead in drinking water and its anemic enforcement of its rules, and when such improvements will occur.

EPA, advocates, and elected officials worked together to procure a stunning and unprecedented \$15 billion dollar investment in lead service line replacement, provided by the Infrastructure Investment and Jobs Act. EPA’s Office of Water has taken admirable steps to engage community members on implementation of those funds, to help ensure that they reach communities that need lead service line removal the most. In the Draft Lead Strategy, EPA outlines helpful non-regulatory actions related to technical assistance, data collection, and oversight to complement the influx of funding. We applaud all those important actions. However, this combination of funding and non-regulatory policy in no way replaces the need for meaningful changes to the LCR. Instead of modifying a broken rule, EPA’s next iteration of a Lead and Copper Rule, and the associated approaches set forth in a final Lead Strategy Plan, should outline concrete steps to ensure that improvements to the LCR are justice-centered, transformative, and expeditiously proposed and finalized. EPA should shift to a proactive model consisting of the provision of filters or safe alternative water to residents currently serviced by lead service lines (until such lines can be removed) or known to have high lead levels in their water; accelerated full removal of all lead service lines at no expense to the consumer within 10 years for all systems of all sizes; and robust public education so that everyone can take measures to protect themselves, their families, and their communities.²⁸ Such a transformed LCR, together with the funding and non-regulatory initiatives for lead service line removal, would create a holistic and science-based framework for protecting the public from the harms associated with lead in drinking water.

B. EPA Must Adopt Health-Based Lead Hazard Standards, Enforce the RRP Rule, and Adopt Policies that Prioritize Testing and Remediation of Housing Before People Are Poisoned.

The Draft Lead Strategy correctly acknowledges that one of the core problems the government must address is that “[m]illions of people, especially those living in communities with environmental justice concerns, continue to be exposed to lead at home and in other buildings where lead-based paints are found in deteriorating condition.”²⁹ However, EPA’s plan falls far

²⁸ More detail about suggested regulatory measures that are central to a new and improved, equitable, and protective Lead and Copper Rule can be found in the comments submitted by Earthjustice et al., *See* Earthjustice et al., *Comments on Revision to the Lead and Copper Rule (LCRR) Virtual Engagements*, Docket ID No. EPA-HQ-OW-2021-0255-0070 (July 30, 2021), <https://www.regulations.gov/comment/EPA-HQ-OW-2021-0255-0070>.

²⁹ Draft Lead Strategy at 7.

short of the concrete action that is needed to address lead-based paint hazards – meaning lead exposures from lead in dust, soil and paint. (As noted above, the plan also falls short of what is needed to address the hazards posed by lead in water.)

The first actions the federal government must take to protect people from lead-based paint hazards are a) to correctly identify where they are occurring by adopting health-based lead hazard standards for dust, soil, and paint; and b) to revise its definition of “lead-based paint” so it captures all paint containing detectable levels of lead. In May 2021, the Ninth Circuit Court of Appeals directed EPA to update its lead hazard standards because the current standards “do not identify all levels of lead that lead to adverse human health effects,” noting that EPA’s failures to update its standards to account for new information about the dangers of lead violates TSCA.³⁰ Despite this court ruling, EPA’s Draft Lead Strategy does not commit to actually revising its lead hazard standards or lead paint definition, other than the soil-lead hazard standard. Instead, with respect to the dust-lead hazard standards and definition of lead-based paint, EPA commits only to “revisit[ing]” them without any commitment to make modifications, despite the fact that they are not set at health-protective levels.³¹ This is unacceptable.

In its Final Lead Strategy, EPA should commit to adopting dust-lead hazard standards of zero (0) $\mu\text{g}/\text{ft}^2$ for all surfaces – floors, windowsills, window troughs, and porches – because *any amount of lead* in dust in and around a residence or child-occupied facility is a “condition” that would result in adverse human health effects, which is how TSCA defines a lead hazard.³² In addition, it should commit to adopting a soil-lead hazard standard of zero (0) parts per million, and a definition of lead-based paint based on the lowest possible detection level.

EPA must also set clearance levels for dust-lead. These clearance levels may, per the Ninth Circuit’s ruling, take into account what concentration of lead in dust would be feasible for labs to test for and for contractors to meet. We urge EPA to set the clearance levels no higher than $< 5 \mu\text{g}/\text{ft}^2$ on the floor and $< 40 \mu\text{g}/\text{ft}^2$ on windowsills and troughs, as HUD has determined that these levels are currently being achieved in the vast majority of cases.³³ The Final Lead Strategy should set a date by which these rules will be completed of no later than May 2023—two years after the Ninth Circuit directed EPA to undertake these rulemakings.³⁴

³⁰ *A Cmty. Voice*, 997 F.3d at 986.

³¹ Draft Lead Strategy at 8-9.

³² 15 U.S.C. § 2681(10).

³³ *Lead Hazard Control Clearance Survey*, HUD, (Oct. 2015)
https://www.hud.gov/sites/documents/CLEARANCESURVEY_24OCT15.PDF

³⁴ This two-year timeframe is in accord with the timeframe in which EPA revised the dust-lead hazard standard pursuant to the Ninth Circuit’s mandamus ruling in *In re A Community Voice v. EPA*, 878 F.3d 779, 788 (9th Cir. 2017) (ordering EPA to propose and finalize a “well-conceived rule” within a year and a half of the court’s order).

We applaud EPA for its recent aggressive actions to enforce the Lead RRP rule,³⁵ to penalize routine violators – such as Home Depot, and to clarify that property management companies must comply with the rule.³⁶ However, the Draft Lead Strategy falls short when it comes to protecting people from lead during building renovations and demolitions, which is a major cause of lead poisoning. First, EPA indicates that its focus will be on 11 communities disproportionately affected by lead exposure where it will increase the number of RRP-certified firms and expand consumer demand for lead-safe work practices.³⁷ While this is laudable, focusing on only 11 communities will not achieve the goal of protecting people from lead as a result of renovation, repair and painting. EPA must also commit to ramping up inspections and enforcement in the 36 states where EPA is tasked with enforcing the RRP rule, and it must finally commit to applying RRP requirements to public and commercial buildings to protect workers and surrounding communities.³⁸

In addition, we urge EPA to clarify that the RRP rule applies to demolition projects, which are a major source of lead dust, as well as renovation projects.

While adopting truly health-based lead hazard standards is a critical predicate for protecting people from lead in their residences and in child-occupied facilities (such as nursery schools and child care centers), these standards will not be effective if residences and other child-occupied facilities are not assessed for lead hazards and then remediated as needed, or if they are not assessed until *after* a child has been diagnosed with elevated blood lead levels putting them at risk of life-long harm. It is imperative that the federal government protect people from lead *before they are exposed* by requiring science-based testing for the presence of lead in residences and child-occupied facilities, including in drinking water, followed by remediation or abatement where lead hazards are identified; we must stop using children’s bodies as “canaries in the coalmine” for identifying lead hazards. The fact that federal law does not currently require, or even incentivize, lead testing in private housing – even for homes built before 1978 (when residential lead paint stopped being sold) and even in communities where many children have elevated blood lead levels – is a major gap that should be filled. We urge EPA to work with

³⁵ *Home Depot Settlement Information Sheet*, EPA, <https://www.epa.gov/enforcement/home-depot-settlement-information-sheet> (last updated Apr. 23, 2021).

³⁶ *Withdrawal of Two Answers to Frequent Questions About Property Management Companies and the Toxic Substances Control Act Lead-Based Paint Renovation, Repair, and Painting Rule*, 86 Fed. Reg. 60,812-01 (Nov. 4, 2021).

³⁷ *Draft Lead Strategy* at 8.

³⁸ In August 2009, EPA entered into a settlement agreement under which it agreed to propose lead-protective work practice standards for renovations to exterior and interior work in public buildings built before 1978 and commercial buildings by March 31, 2017 – unless it determined that such renovations do not create a lead-based paint hazard. *See Status Report, N.Y. Coal. to End Lead Poisoning vs. EPA*, No. 08-1235 (D.C. Cir. Aug. 22 2017), ECF No. 1689643. EPA has missed this deadline by nearly five years. It is imperative that EPA propose a rule that will ensure lead-safe practices are used when public and commercial buildings undergo renovation.

Congress to adopt legislation that would require housing that is at risk of harboring lead-based paint hazards to be assessed and if hazards are found, to be remediated or abated.

We acknowledge that this will be expensive, but the economic costs of lead poisoning are also substantial; the estimated annual cost of childhood lead exposure in the United States is \$50 billion.³⁹ Experts have calculated that every \$1 spent to reduce lead hazards in housing alone would yield \$17-\$221 in economic benefit.⁴⁰ Moreover, the federal government has a moral and ethical responsibility to stop tolerating lead poisoning that disproportionately impacts Black children, other children of color, and children of low-wealth – regardless of the price tag.

C. EPA Must Protect Local Communities from Industrial Sources of New and Ongoing Lead Pollution in the Air.

A variety of industrial sources currently emit new lead pollution into the air, which fall on homes, schools, playgrounds, day care centers, and drinking water sources. Children’s exposure to lead from air pollution has not received the attention it deserves.⁴¹ Many industrial sources have operated for decades releasing lead into the air, and this has deposited or landed in soil, dust, and waterways. EPA also has failed for more than a decade to issue required federal plans implementing the emission guidelines for commercial and industrial incinerators, which emit lead. These regulatory gaps have caused serious longstanding contamination in many communities, while new lead continues to pollute the air and local environment. According to EPA’s Toxics Release Inventory, between 2018 and 2020, the reported industrial releases of lead and lead compounds into the environment totaled over 1.9 billion pounds. This adds dramatically to the widespread contamination remaining from past use and releases. EPA’s Lead Strategy

³⁹ David C Bellinger et al., *Establishing and Achieving National Goals for Preventing Lead Toxicity and Exposure in Children*, 171 JAMA PEDIATR. 616, 616–618 (July 2017).

⁴⁰ Elise Gould, *Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control*, 117 ENVIRON HEALTH PERSPECT. 1162, 1162–1167 (Jul. 2009); See generally David C. Bellinger et al., *Establishing and Achieving National Goals for Preventing Lead Toxicity and Exposure in Children*, 171 JAMA PEDIATR. 616, 616–618 (July 2017).

⁴¹ EPA has delayed action for years on critical rules covering lead pollution sources. For example, EPA granted reconsideration on the issue of health risk from lead in the 2012 secondary lead smelters rule, but still has not completed action over 9 years later. See Sierra Club et al., *Petition for Reconsideration of National Emissions Standards for Hazardous Air Pollutant Emissions From Secondary Lead Smelting*, Docket ID No. EPA-HQ-OAR-2011-0344-0211 (Mar.5 2012), <https://www.regulations.gov/document/EPA-HQ-OAR-2011-0344-0211>; EPA’s review of its standards for emissions of lead and other pollutants from large municipal solid waste incinerators is over ten years overdue, even though EPA admitted in 2007 that the current standards are inconsistent with the Clean Air Act. See *Petition for Writ of Mandamus at 16-17, In re: East Yard Communities for Environmental Justice et al.* (D.C. Cir. Dec. 12, 2021), ECF No. 1928045, https://earthjustice.org/sites/default/files/files/2021-12-21_petition_for_writ_of_mandamus.pdf.

must do much more to account for the full range of ongoing releases of lead into the environment.

EPA has not done anything to address this problem for at least a decade, though science on lead and its harm to children, and to communities of color and low-income communities, has evolved dramatically during this time. EPA should commit to make substantial progress on the problem of lead pollution in the air by implementing a plan to achieve three primary objectives.

First, EPA must work with and help communities to phase out lead pollution and shutdown individual industrial facilities that are releasing new lead into the air where local communities are seeking this protection. Second, EPA must follow and apply the science and its full statutory authority to ensure strong new lead emission and ambient standards before 2024 to ensure the most robust restrictions achievable apply to the largest and most harmful industrial source categories. Finally, EPA must protect another generation of children from grow up facing lead in air along with other pathways of exposure when it is well-known that this pollutant causes preventable but irreversible harm. Therefore, we ask that EPA commit to creating a plan and longer-term strategy that recognizes lead should be eliminated from the air to the maximum extent possible within the next decade, and to begin implementing that as soon as possible, no later than 2024.

We strongly urge EPA to commit in its final lead strategy to taking action on at least the following sources of lead pollution in the air:

National Emission Standards for Lead Smelters and Other Sources Identified in the

Strategy: It is positive to see EPA’s recognition that the lead emissions from copper smelters are causing unacceptable risks and EPA’s commitment to addressing emissions from lead acid battery manufacturing (area sources), and secondary lead smelters.⁴² Yet these rulemakings and actions are long overdue and, in prior rules, EPA has failed to recognize the need to account for the harm and health risks that lead emissions cause to communities near these facilities. For example, in the secondary lead smelters rule and others, EPA has tried to use the outdated 2008 lead NAAQS and the different legal test for NAAQS as a shield from the requirement to provide an “ample margin of safety to protect public health” from lead under section 112(f)(2), the air toxics provision.⁴³ That issue is currently under reconsideration – and has been awaiting EPA’s action since 2012.⁴⁴ EPA is also on a court-ordered deadline to review and determine whether to

⁴² Draft Lead Strategy at 17.

⁴³ *Contrast* 42 U.S.C. § 7412(f)(2) (requiring “ample margin of safety to protect public health” from hazardous air pollutants), *with* 42 U.S.C. § 7409 (requiring “adequate margin of safety to protect public health” from criteria pollutants).

⁴⁴ *See* Sierra Club *et al.*, Petition for Reconsideration of National Emissions Standards for Hazardous Air Pollutant Emissions from Secondary Lead Smelting and Supplements to this Petition, 77 Fed. Reg. 556 (Jan. 5, 2012), Dkt. ID Nos. EPA-HQ-OAR-2011-0344-0211 (Mar. 5, 2012), EPA-HQ-OAR-2011-0344-0189 (June 21, 2012) and Supplement to Granted Petition for Reconsideration of National Emissions Standards for Hazardous Air Pollutants from Secondary

update the new source performance standards pursuant to section 111(b)(1)(b) for these lead smelters by November 2023. And EPA is overdue in performing a section 112(d)(6) review to revise the national emission standards as “necessary,” including through restricting uncontrolled HAP emissions, removing the illegal loophole they contain for malfunction emissions, accounting for pollution control, monitoring, and practice developments, and all other updates needed to assure compliance with the Clean Air Act. These statutory authorities provide a strong basis, and the requisite authority, for EPA to eliminate lead pollution at some of the most dangerous sources harming local communities and dramatically strengthen controls and restrictions on lead overall.

EPA has also recognized the need to reduce emissions of lead from Primary Copper Smelting and Lead Acid Battery Manufacturing. On Primary Copper, it is important that EPA has proposed to recognize that the public health risk from these sources is currently “unacceptable” under section 112(f)(2), but the agency’s proposed rule would reduce lead from copper smelters far less than is necessary to protect people; it would allow one smelter to avoid installing control technology and continue emitting approximately 10-20 tons of lead each year into nearby communities that have already been bombarded with lead emissions for decades.⁴⁵

Similarly, EPA has failed to control lead emissions from integrated iron and steel mills. EPA’s own emissions estimates indicate that these 11 mills emit more than 80 tons of lead each year, with just four of the dirtiest mills that are concentrated in northwestern Indiana emitting more than 35 tons into nearby communities.

Lead Smelting (filed Jan. 31, 2014); *see also* EPA, Ofc. of Air Qual. Planning & Standards, Ofc. of Air & Radiation, Residual Risk Assessment for Secondary Lead Smelting Source Category (Dec. 2011), Dkt. ID No. EPA-HQ-OAR-2011-0344-0160. As an example of why EPA must strengthen protection further, in this and other risk assessments for lead under its air toxics authority, the Administration is using only the 2008 Lead NAAQS instead of performing a robust risk assessment as required (as described in the above-cited 2012 reconsideration petition). EPA should not rely solely on the Lead NAAQS, but should do an actual inhalation and multi-pathway cumulative risk assessment for lead-emitting sources under section 112 of the Clean Air Act. *See* 42 U.S.C. § 7412(f)(2) (health risk assessment, required for all major industrial sources of lead and other hazardous air pollutants, including those listed at <http://www3.epa.gov/ttn/atw/mactfnlalph.html>). Because, as described, the 2008 Lead NAAQS still allows an unacceptable amount of exposure and resulting neurodevelopmental harm to occur to children, EPA must recognize the need to do more to evaluate the full risks and impacts to children who are the most exposed to specific stationary sources of pollution under section 112 of the Act. Ensuring a full assessment, rather than relying solely on the NAAQS as if that were protective enough, should be part of the new Lead Strategy.

⁴⁵ *See National Emission Standards for Hazardous Air Pollutants: Primary Copper Smelting Residual Risk and Technology Review and Primary Copper Smelting Area Source Technology Review, Proposed Rule*, 87 Fed. Reg. 1616, 1642 (Jan. 11, 2022); TRI On-site and Off-site Reported Disposed of or Otherwise Released (in pounds), Trend Report for facilities in Freeport-McMoRan Miami Inc (TRI ID 85532NSPRTPOBOX) for Lead compounds chemical, U.S. 1998-2000, Exhibit A hereto.

Now it is essential that EPA finalize standards that fulfill the Act. EPA needs to finally meet its decades-overdue obligation to finally reduce lead emissions from all major lead emitters to the maximum degree that is achievable. As for secondary lead, EPA should not only rely on the Lead NAAQS, though that shows these sources are causing exceedances. EPA should actually assess the risks and impacts and should ensure the rules protect public health from these impacts. Similar problems are present in EPA’s proposal for Lead Acid Battery Manufacturing, where EPA is not using its full authority to protect communities from these sources, even though area sources emit significant amounts of lead and there is no safe level of exposure to lead.⁴⁶

Leaded Avgas: EPA must move swiftly to phase out leaded avgas under Clean Air Act section 231. While the Draft Lead Strategy conspicuously lacks a commitment for EPA to use its Clean Air Act authority to prohibit piston-engine aircraft from using leaded avgas, it is encouraging that EPA subsequently responded to a rulemaking petition of some of the undersigned groups,⁴⁷ and formally committed to proposing an endangerment finding for these lead emissions in 2022 and finalizing that finding in 2023.⁴⁸ But this is the third such rulemaking petition for an endangerment finding before EPA – with the first petition before EPA over 15 years ago – and EPA has already missed the deadlines for an endangerment finding that EPA committed to in response to the previous petitions. EPA’s delay in addressing lead emissions from aircraft is particularly egregious given that EPA’s own data shows that this is the single largest source of lead to the air, contributing about 70 percent of the National Emission Inventory in 2017.⁴⁹ Multiple studies have demonstrated that children living in close proximity to airports where leaded avgas is used have higher blood lead levels than children who do not.⁵⁰ Childhood blood

⁴⁶ *Review of Standards of Performance for Lead Acid Battery Manufacturing Plants and National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources Technology Review*, 87 Fed. Reg. 10,134-01 (Feb. 23, 2022).

⁴⁷ Petition on Leaded Aviation Gasoline from Earthjustice et al. to Michael Regan, Adm’r, EPA (Oct. 12, 2021), <https://www.epa.gov/system/files/documents/2022-01/aviation-leaded-avgas-petition-exhibits-final-2021-10-12.pdf>.

⁴⁸ Response to Petition on Leaded Aviation Gasoline from Michael Regan, Adm’r, EPA to Earthjustice et al. (Jan. 12, 2022), <https://www.epa.gov/system/files/documents/2022-01/ltr-response-aircraft-lead-petitions-aug-oct-2022-01-12.pdf>.

⁴⁹ Transp. Rsch. Bd. et al., *Existing Fuel Options for Piston-Engine Aircraft to Reduce Lead*, in *OPTIONS FOR REDUCING LEAD EMISSIONS FROM PISTON-ENGINE AIRCRAFT* 45–46 (National Academies of Sciences, Engineering, and Medicine, 2021) <https://www.nap.edu/read/26050/chapter/5> (noting that, in EPA’s 2017 National Emissions Inventory, piston-engine general aviation aircraft accounted for “roughly 70 percent of total lead emissions to air in the United States”).

⁵⁰ See Marie Lynn Miranda et al., *A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels*, 119 ENVIRON. HEALTH PERSPECT. 1513, 1513–1516 (Oct. 2011) (examining the relationship between proximity to airports in North Carolina where leaded avgas is used and blood lead levels in children and finding that “children living within 500 m, 1,000 m, or 1,500 m of an airport had average blood lead levels that were 4.4, 3.8, or 2.1% higher,

lead level increases from living downwind of an airport have been found comparable to, or even greater than, blood lead level increases from the Flint water crisis.⁵¹ And an MIT study estimates nationwide economic losses of over \$1 billion annually due to the IQ deficits caused by leaded avgas emissions alone.⁵² Phasing lead out of automobile gas in the 1970s was a huge public health advancement, and it is long past time for EPA to phase lead out of aviation gas. EPA must uphold its most recent commitment to issue the endangerment finding by 2023, and must subsequently and promptly promulgate regulations that will phase out the use of leaded avgas on an accelerated timeline.

Other major sources of lead pollution in the air: In addition to the sources the Strategy identifies for action, it is critical for EPA to recognize the need to reduce lead emissions and protect public health from other major sources of this air pollution – including steel manufacturing, and coal- and oil-burning power plants (which are regulated under the MATS rule). EPA has recognized that these sources emit substantial lead emissions along with other highly hazardous air pollutants, yet continues to fail to use its full authority to protect communities from the lead these sources emit. In particular, coal- and oil-burning power plants

respectively, than other children”); Sammy Zahran et al., *The Effect of Leaded Aviation Gasoline on Blood Lead in Children*, 4 J. ASS’N ENV’T & RES. ECONOMISTS 575–610 (Apr. 11, 2017) (examining the blood lead levels of children living within 2 kilometers of airports in Michigan and finding that “the odds that a child’s [blood lead levels] will eclipse CDC thresholds for concern increases dose-responsively in proximity to airports, declines measurably in neighborhoods proximate to airports in the months following 9/11” when there was less air traffic, and “increases dose-responsively in the flow of [piston-engine aircraft] traffic”); Mountain Data Group, *Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California* 37–67 (Aug. 3, 2021), <https://news.sccgov.org/sites/g/files/exjcpb956/files/documents/RHV-Airborne-Lead-Study-Report.pdf> (explaining that “children proximate to [the general aviation airport] Reid-Hillview Airport present with systematically higher [blood lead levels], net of other measured sources of lead exposure risk, child demographic characteristics, and observed and unobserved neighborhood conditions,” that children who live downwind of the airport had higher blood lead levels than those who did not, and that the blood lead levels “of sampled children increase with exposure to piston-engine aircraft operations at [the airport], net of all other factors” and ultimately “suggesting that child [blood lead levels] increase dose-responsively with [piston-engine aircraft] traffic”); cf. Won-Ju Park et al., *Blood Lead Level and Types of Aviation Fuel in Aircraft Maintenance Crew*, 84 *Aviat. Space Environ Med.* 1087–1091 (Oct. 2013) (analyzing the blood lead levels of aircraft-maintenance workers in the Republic of Korea, finding higher blood lead levels among maintenance workers that are based in airports that service propeller-driven aircraft and use leaded avgas relative to maintenance workers that are based in airports that service jets, which do not use leaded avgas, and concluding that leaded avgas emissions “could increase the [blood lead levels] of aircraft maintenance crews”).

⁵¹ Mountain Data Group, *Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California* at xv–xvii (Aug. 3, 2021) (note 50, supra).

⁵² Philip J. Wolfe et al., *Costs of IQ Loss from Leaded Aviation Gasoline Emissions*, 50 *ENVIRON SCI TECHNOL* 9026, 9026–33 (Sept. 6, 2016).

emitted 43 tons of lead in 2014, according to the National Emissions Inventory. While those emissions have fallen by about half with implementation of the MATS rule, the power sector's lead emissions remain unacceptably high. EPA must act swiftly to strengthen the MATS rule to reduce the allowable emissions of lead and other hazardous metals (regulated through a surrogate limit on filterable particulate matter).

Steel mills are one of the nation's largest industrial sources of lead emissions. EPA data indicate that just 11 mills emit more than 70 tons of lead each year. Much of this lead comes in the form of fugitive emissions that remain completely uncontrolled. The impact of steel mills' lead emissions is particularly devastating in the northwestern Indiana communities along the shore of Lake Michigan from East Chicago to Gary. The four mills clustered in these communities, which are populated disproportionately by people of color and people with low incomes, emit almost 40 tons of lead each year. What is more, they have been doing so for decades, causing lead to deposit and build up on people's homes, schools and playgrounds. When EPA issued its updated air toxics rule for steel mills in 2020, the agency ignored the mills' lead emissions and did nothing to reduce them. Since then, the agency has recognized that its rule is legally defective and has undertaken to fix it. The agency needs to use the new rulemaking as an opportunity to set limits that require the maximum degree of reduction in emissions of lead (and steel mills' other hazardous air pollution) that is achievable.

EPA must also strengthen the regulation of lead and other pollutants from solid waste incinerators, which are regulated under Clean Air Act section 129. Municipal solid waste incinerators are allowed to pollute at rates that EPA admitted over a decade ago are inconsistent with D.C. Circuit precedent.⁵³ And EPA has failed for years to issue overdue federal implementation plans for commercial and industrial solid waste incinerators, even after completing the work to develop emission guidelines.⁵⁴ The Strategy must be updated to acknowledge the dangerous lead emissions from these sources and commit to assure an ample margin of safety to protect public health from lead pollution from these other types of industrial air pollution sources as well.

In parallel with the national rulemakings, EPA should listen to communities who have called to end all new lead air pollution from highly hazardous sources that are located in close proximity to neighborhoods that have already faced longstanding air pollution and lead deposition in soil and other media. In the rulemakings under section 112 and in direct communication with these communities, EPA should work to prevent expansions of existing lead emitters and to ensure a prompt and orderly shut down of such smelters to finally end and prevent further irreparable harm to these communities.

⁵³ See Petition for Writ of Mandamus at 16-17, *In re: East Yard Communities for Environmental Justice et al.* (D.C. Cir. Dec. 12, 2021), ECF No. 1928045, https://earthjustice.org/sites/default/files/files/2021-12-21_petition_for_writ_of_mandamus.pdf.

⁵⁴ See *Sierra Club v. Wheeler*, 956 F.3d 612 (D.C. Cir. 2020).

Lead NAAQS: Finally, the draft Strategy references the Agency’s work to review the lead NAAQS,⁵⁵ but fails to acknowledge that the agency missed its October 18, 2021 deadline for reviewing and revising NAAQS for lead. EPA has not strengthened the NAAQS for lead since the end of the Bush Administration in November 2008 – nearly 14 years ago – and has not reviewed these standards since 2016.⁵⁶ Meanwhile, for years the Children’s Health Protection Advisory Committee (“CHPAC”) has called for a stronger Lead NAAQS to protect children’s health.⁵⁷ The existing NAAQS has allowed and continues to allow a shocking amount of neurological harm to occur by using a population-level approach that fails to protect or prioritize the health and well-being of the most exposed communities near the largest ongoing sources of lead pollution. On top of this, exceedances of the NAAQS continue to occur without consequences or corrective action by EPA.⁵⁸ These exceedances are occurring not only within areas previously designated as nonattainment, but also in areas previously designed as under attainment or unclassifiable.⁵⁹ It is important for EPA to follow through with the Integrated Science Assessment as the draft Strategy discusses, and to commit to ensuring a strong update to this rule based on the best available, most current science. It is also important that this update be made expeditiously, no later than fall of 2024.

D. EPA Must Prioritize Cleanup of Lead-Contaminated Superfund Sites

We commend EPA’s commitment to reducing exposure to lead in soil by prioritizing the remediation of lead contaminated sites in communities with disproportionate exposure to lead; strengthening protective standards; and working across EPA and with other federal and state agencies to address multiple sources of lead (dust, drinking water, soil) when conducting cleanups. As EPA moves forward to advance these three approaches, it should (1) require the evaluation of all potential sources of lead as part of the remedial investigation and site

⁵⁵ Draft Lead Strategy at 17.

⁵⁶ National Ambient Air Quality Standards (NAAQS) for Lead (Pb), EPA, <https://www.epa.gov/lead-air-pollution/national-ambient-air-quality-standards-naaqs-lead-pb> (last updated Feb. 18, 2021).

⁵⁷ See, e.g., *National Ambient Air Quality Standards for Lead*, 73 Fed. Reg. 66964-01, 66999 (Nov. 12, 2008); CHPAC Letter regarding National Ambient Air Quality Standards for Lead from Sheela Sathyanarayana, M.D., M.P.H., Chair, CHPAC to Gina McCarthy, Adm’r, EPA (Jan. 8, 2015), https://www.epa.gov/sites/default/files/2015-01/documents/naaqs_for_lead_letter.pdf; Letter from Melanie A. Marty, Ph. D., Chair, CHPAC to Stephen L. Johnson, Adm’r, EPA (June 16, 2008), <https://www.epa.gov/sites/default/files/2014-05/documents/61608.pdf>.

⁵⁸ See *EPA Green Book Lead (2008) Area Information*, EPA <https://www.epa.gov/green-book/green-book-lead-2008-area-information> (last updated Oct. 8, 2021) (data showing areas in nonattainment for the 2008 Lead NAAQS); see, e.g., *EPA Green Book, Lead (2008) Designated Area/State Information*, EPA <https://www3.epa.gov/airquality/greenbook/mbtc.html> (last updated Feb. 28, 2002).

⁵⁹ *Id.* It is unclear what, if any, EPA enforcement action is in process to solve this problem and assure corrective action, or to engage the communities affected by these serious exceedances.

characterization for all residential lead-contaminated, Superfund sites and commit to addressing all sources of lead at these sites; (2) apply the most protective soil lead hazard and lead dust hazard standards and clearance levels across all EPA and HUD and other agency's lead programs; (3) confirm that its assessments of risk reflect accurate blood lead level data and apply updated blood lead level benchmarks; and (4) improve its transparency, risk communication, community engagement, and interagency coordination at contaminated sites.

- i. EPA's *Revised Soil Lead Policy for Contaminated Sites* should account for lead from all potential sources

As EPA revises its soil lead policy for contaminated sites,⁶⁰ it should pay particular attention to the Superfund Lead-Contaminated Residential Sites Handbook's expectation that EPA evaluate multiple exposure pathways when developing site-specific standards and identify ways to address all sources of lead:

Lead in the environment can originate from many sources. In addition to soil, the main sources to consider when performing clean-up activities are interior and exterior LBP, lead-contaminated interior dust, drinking water, and occupational exposure resulting in subsequent contamination of homes.⁶¹

While the Handbook states that EPA may not have the authority to include all of these lead exposures in the Superfund cleanup plan, it emphasizes that, “[u]ltimately, the project managers should strive to address any unacceptable lead-exposure risks at the residence.”⁶² The Handbook goes further to say that “[l]ead-contaminated interior residential dust presents a significant exposure pathway that can readily be addressed. Consequently, significant health benefit is gained by removal of contaminated interior dust as early in clean-up activities as possible.”⁶³

Despite the fact that the Handbook makes clear the imperative to address the interior lead dust, and EPA regularly commits to follow this guidance in its work plans and consent decrees for Superfund sites, EPA rarely evaluates or remediates interior lead dust. In a 2020 review of lead-contaminated Superfund sites, we could only find four sites where EPA initiated indoor lead dust sampling. The Handbook should be updated and EPA should require that all sources of lead—soil, paint, dust, and water—are addressed at Superfund sites, regardless of the potentially responsible party's liability. Water should be tested through sequential sampling that does not avoid testing hot water. To address all sources of lead at Superfund sites, OLEM will need to work with other teams at EPA to investigate and fund efforts not already covered by the Superfund program.

⁶⁰ Draft Lead Strategy at 14–15.

⁶¹ *Superfund Lead-Contaminated Residential Sites Handbook*, 49 EPA LEAD SITES WORKGROUP (Aug. 2003), <https://semspub.epa.gov/work/HQ/175343.pdf>.

⁶² *Id.* at 49.

⁶³ *Id.* at 51.

- ii. EPA should base its risk assessments on health-protective blood lead level benchmarks and hazard standards

The Draft Lead Strategy Plan states that it will “set new recommendations for screening sites and strengthen preliminary remediation goals to reduce lead exposure in communities and protect human health and the environment in accordance with the latest science.” EPA currently relies on the flawed Integrated Exposure Biokinetic Uptake (“IEUBK”) model, a method of estimating the impact of exposure to lead on blood lead levels, to determine the appropriate remedial action level for a specific site. The IEUBK model is problematic for multiple reasons. Most importantly, EPA continues to rely on the 10 micrograms per deciliter as the target that cleanup should be designed to achieve for 95% of children impacted by a Superfund site.⁶⁴ As a result of the use of the inappropriate blood lead level benchmark goal, the soil remediation action level at many Superfund sites was set inappropriately high at 400 ppm. We urge EPA to move away from a system that tolerates 5% of children being exposed to 10 micrograms per deciliter.⁶⁵

In the few cases where EPA has addressed interior lead dust at Superfund sites, it has developed the interior dust remedial action level standard by using the IEUBK model alone. One of the many problematic aspects of the IEUBK model is its reliance on dust-lead concentration values rather than loading levels as an input, even though the scientific community prefers dust-lead loading because dust-lead loading more accurately correlates to blood lead level increases.⁶⁶ Another concern with this EPA approach is that the regular use of a dust concentration value at Superfund sites precludes a comparison between EPA’s standards for the Superfund sites to EPA’s indoor-dust standards and standards set by HUD, which are both measured as dust loading values.

⁶⁴ Notably, a 2016 EPA Guidance Memorandum to Regional Offices acknowledges the appropriateness of considering current science, including the impacts of lead at blood lead levels less than 10 micrograms per deciliter, “in conjunction with the . . . IEUBK model to determine soil screening levels for residential cleanups.” Memorandum from OLEM Director Mathy Stanislaus to Regions I-X, “Updated Scientific Considerations for Lead in Soil Cleanup Levels,” (December 22, 2016), <https://semspub.epa.gov/work/08/1884174.pdf>. Yet, six years later, it is still extremely rare to find a Superfund site where EPA relied on a blood lead level less than 10 micrograms per deciliter to develop the soil screening standards.

⁶⁵ See *Poisonous Homes: The Fight for Environmental Justice in Federally Assisted Housing*, 39 (2020), https://www.povertylaw.org/wp-content/uploads/2020/06/environmental_justice_report_final-rev2.pdf.

⁶⁶ The distinction between conveying levels of lead in dust using concentration versus loading is important. Indeed, if there are 10 balls and 5 balls are lead and 5 are not lead, the concentration is 50%, and if there are 10,000 balls, and 5,000 are lead, the concentration remains 50%; dust-lead loading, in contrast, considers how likely it is that a child will come into contact with the lead, which means that the dust-lead loading varies based on total quantity. See, e.g., Bruce P. Lanphear et al., *A Side-by-Side Comparison of Dust Collection Methods for Sampling Lead-Contaminated House Dust*, 68 ENVIRON RES. 114, 114–123 (Feb. 1995).

When EPA revises the 2001 soil-lead hazard standards, in compliance with the Ninth Circuit’s May 2021 ruling in *In re A Community Voice v. U.S. EPA*,⁶⁷ it should consider developing standards that would serve as the floor for protection across all programs. That is, at Superfund sites and in Resource Conservation and Recovery Act (RCRA) corrective actions, EPA should use a standard that is at least as protective as the new soil-lead hazard standards; in some instances, based on the many different lead exposures, EPA may decide that it is appropriate to employ an even more protective standard. Similarly, the most protective dust lead hazard standards and clearance levels should apply broadly to all federal and state programs that involve indoor lead dust, including Superfund cleanups and RCRA corrective actions.

- iii. EPA should base its risk assessments on accurate blood lead level data

As part of EPA’s evaluation of risk posed at a Superfund site, the Agency for Toxic Substances and Disease Registry (“ATSDR”) prepares a public health assessment, which includes an evaluation of blood lead level data for the impacted community. ATSDR often relies on state public health data for its analysis, but most states are deficient in performing the requisite blood lead level testing which can lead to an incorrect assessment of the risk at a site. Indeed, at the USS Lead Site in East Chicago, ATSDR’s flawed public health assessment, which relied on inaccurate blood lead data, led to a tragic result: Based at least in part on ATSDR’s incorrectly assessment of risk at the USS Lead Site, EPA provided inappropriate assurances to impacted residents for several years—all while residents and their children were being continually exposed to extremely high levels of lead in the soil and in the interior dust in their homes. It is critical that as part of EPA’s efforts to protect communities, it must ensure that ATSDR obtains accurate blood lead level data. ATSDR should collect its own blood lead data in communities that have been impacted by living on or near Superfund sites; the costs of these studies constitute recoverable costs under the Superfund program.

- iv. EPA must improve its risk communication, transparency, interagency coordination, and community engagement at contaminated sites

Communication: A recent report from EPA’s Office of Inspector General Report concluded that “EPA did not consistently communicate human health risks . . . in a manner that allowed impacted communities to decide how to manage their risks of exposure to harmful contaminants.”⁶⁸ The report notes that sampling results were not communicated in a timely manner to impacted individuals. Considering the importance of avoiding exposure to lead in soil, it is critical that when sampling results identify lead, EPA should notify the impacted residents within 24 hours of receipt of the sampling results. Notification should not be limited to homeowners but should also extend to tenants. Notice of environmental contamination should also extend to other federal agencies that provide federally-assisted housing, including HUD,

⁶⁷ *A Cmty. Voice*, 997 F.3d at 994.

⁶⁸ *EPA’s Office of Land and Emergency Management Lacked a Nationally Consistent Strategy for Communicating Health Risks at Contaminated Sites*, EPA (Sept. 9, 2021), https://www.epa.gov/system/files/documents/2021-09/_epaig_20210909-21-p-0223.pdf.

IRS, and USDA; these agencies must ensure that notice is given to housing providers and, in turn, to tenants. The OIG report also noted the importance of an effective community involvement plan and the presence of a community involvement coordinator for risk communication and community engagement; this community engagement should begin as soon as a site investigation is launched and it should incorporate best practices for language access and account for literacy levels in the community.

Inter-agency coordination and transparency: In response to the public attention brought to the high levels of contamination found in public housing at the East Chicago site, HUD and the EPA entered into a Memorandum of Understanding (MOU) in 2017 to improve data sharing and interagency communication about environmental contamination.⁶⁹ The 2017 MOU encourages data sharing between EPA and HUD, but it does not (1) create binding or enforceable obligations; (2) include all federal agencies necessary to effectuate change; (3) include any involvement of state or local agencies; or (4) include directly impacted communities. The 2017 MOU should be expanded to include all federal agencies potentially involved in or impacted by decisions at Superfund sites and be regularly updated to identify highly contaminated areas on the EPA’s radar that encompass federally assisted housing. The MOU should also outline significant public health issues known to HHS and any disaster management issues governed by FEMA. Further, the MOU should mandate that these federal agencies share existing data in order to better identify health hazards and environmental contamination and to better inform impacted residents.

As part of the EPA-HUD collaboration emerging from the 2017 MOU, EPA identified 18,158 federally-assisted properties located within one mile of a lead-contaminated Superfund Site and another 12,070 properties near non-Superfund sites with potential lead contamination. Of the 18,158 properties, EPA identified 7,676 as the highest priority. To our knowledge, EPA has made little progress in addressing the lead contamination at these sites. The HUD Office of Inspector General’s February 14, 2021 report (“HUD OIG report”) notes that EPA and HUD were prioritizing remediation of seven sites,⁷⁰ but it is not clear how EPA or HUD selected those sites as priority sites or whether residents at these sites have been notified and given the opportunity to relocate as appropriate. Transparency and communication must be central to the collective efforts to address lead contamination in close proximity to housing.

⁶⁹ Memorandum of Understanding between HUD and EPA regarding *Improving Communication About Certain Public and HUD-Assisted Multifamily Housing Near Superfund Sites* (Jan. 11, 2017), <https://files.hudexchange.info/resources/documents/Memorandum-of-Understanding-between-HUD-and-EPA-Regarding-Improving-Communication-About-Certain-Public-and-HUD-Assisted-Multifamily-Housing-Near-Superfund-Sites.pdf>.

⁷⁰ Memorandum from Brian T. Pattison, Assistant Inspector General for Evaluation, HUD Office of Inspector General to Kevin Bush et al., Deputy Assistant Secretary for Grant Programs, Office of Community Planning and Development, *Contaminated Sites Pose Potential Health Risks to Residents at HUD-Funded Properties*, 2019-OE-0003 16 (Feb. 14, 2021), <https://www.hudoig.gov/sites/default/files/2021-02/2019-OE-0003.pdf>.

- v. EPA must acknowledge past harm to move forward more effectively

To advance environmental justice, EPA must fully confront its failures of the past. The use of the USS Lead Superfund Site as an example of expedited cleanup is quite concerning. The site was known to be a highly contaminated site by 1985, and by 1998, it was known that many children living in the West Calumet Housing Complex had extremely high blood lead levels. There was nothing expedited about the USS Lead cleanup.

It took nearly 40 years for residents to learn what government officials and polluters knew all along: The West Calumet Housing Complex, home to majority Black and Latinx residents, was intentionally built on the footprint of a lead smelter with extremely high levels of lead and arsenic in the soil. Generation after generation of residents suffered dangerously elevated lead levels and horrific health impacts, yet the residents were the last to know the cause.⁷¹

Indeed, the HUD OIG report identified many moments over more than thirty years when federal agencies should have identified and addressed contamination, communicated with each other so that, ultimately, residents living in housing on a toxic site would be informed about the contamination and provided comprehensive resources and protection.⁷² Indeed, housing choice voucher holders living on the contaminated site in East Chicago still have not received notification as of the date of these comments. Some of the residents who were relocated from the public housing complex on the contaminated site were moved to other lead-contaminated communities.

The “expedited” cleanup activity that was undertaken beginning in 2017 directly resulted from community pressure through activism and legal action. Even today, the cleanup is not complete—with contaminated groundwater remaining at the site and a remediation plan for the groundwater still outstanding.

⁷¹ See Earthjustice and National Housing Law Project, *Comments Re: Docket No. FR-6086-P-01 Economic Growth Regulatory Relief and Consumer Protection Act: Implementation of National Standards for the Physical Inspection of Real Estate (NSPIRE)*, Docket ID No. HUD-2021-0005-0072 (Mar. 15, 2021), <https://www.regulations.gov/comment/HUD-2021-0005-0072>; See also Earthjustice and National Housing Law Project, *Comments Re: Request for the Delay of 86 Fed. Reg. 2582 to Consider Environmental Justice Factors*, Docket ID No. HUD-2021-0005-0044 (Mar. 9, 2021), <https://www.regulations.gov/comment/HUD-2021-0005-0044>.

⁷² Office of Inspector Gen., U.S. Dep’t of Housing & Urban Dev., *Audit Rep. No. 2020-CH-004, HUD’s Oversight of Lead in the Water of Housing Choice Voucher and Public Housing Program Units*, at 7, Fig. 2 (Aug. 21, 2020) (“HUD OIG Report”), <https://www.hudoig.gov/sites/default/files/2020-08/2020-CH-0004.pdf>.

E. EPA Must Begin to Prepare for Evaluating and Managing the Risks Presented by Lead Under TSCA

EPA is required by TSCA to designate lead as a “high priority” substance, within the next several rounds of high-priority chemical designations because it is listed on the *TSCA Work Plan for Chemical Assessments 2014 Update* (“TSCA Work Plan”) with a high score for persistence and bioaccumulation.⁷³ The risk evaluation mandated by TSCA will require EPA to consider risks posed by lead and lead compounds (based entirely on health without consideration of costs or other non-risk factors) across the life-cycle of lead – including manufacture, processing, distribution, use, and disposal – with particular attention to subpopulations at greater risk due to either greater exposure or greater susceptibility, or both. This evaluation will need to consider whether lead is continuing to present unreasonable risk due to its combined presence in water, air, homes, consumer products, and workplaces – despite the fact that other federal laws and federal agencies already regulate lead in some environments or media. EPA must consider these unreasonable risks even if they result from a “legacy” use of lead, such as in pipes or paint, or from a legacy disposal that is resulting in ongoing exposure and risk.⁷⁴ Thus, for example, EPA will need to consider whether workers – and their families – face unreasonable risks from lead although the Occupational Safety and Health Administration (“OSHA”) is charged with worker safety. We urge EPA to begin the process of collecting exposure and release data related to lead in all media and from all products, including in the workplace (taking into account take home exposures), so that once it commences this risk evaluation, it has the information it needs to proceed expeditiously based on all reasonably available information, including information it can generate.⁷⁵

⁷³ 15 U.S.C. § 2605(b)(2)(B)(50% of chemicals undergoing risk evaluation must be drawn from the 2014 update of the TSCA Work Plan for Chemical Assessments); *id.*, § 2605(b)(2)(D)(i) (in designating high-priority chemicals from the 2014 Work Plan, EPA should give preference to substances with a persistence and bioaccumulation score of 3); EPA, *TSCA Work Plan for Chemical Assessments 2014 Update* (lead & lead compounds are listed on the Work Plan with a persistence and bioaccumulation score of 3), https://www.epa.gov/sites/default/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf.

EPA notes in the TSCA Work Plan that lead and lead compounds are “widely used in consumer products,” “present in biomonitoring, drinking water, indoor environments, surface water, ambient air, soil,” and have “high reported releases to the environment.” EPA, *TSCA Work Plan* at 17, https://www.epa.gov/sites/default/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf.

⁷⁴ *Safer Chems, Healthy Families v. EPA*, 943 F.3d 397, 425, 426 (9th Cir. 2019) (finding that “conditions of use” under TSCA includes “uses and future disposals of chemicals even if those chemicals were only historically manufactured for those uses” – such as lead pipes and lead paint – and finding that if past disposal remains ongoing due to spills, leaks or other uncontrolled discharges, it also constitutes a TSCA “condition of use”).

⁷⁵ 15 U.S.C. § 2625(k) (requiring EPA to base risk evaluations on all reasonably available information); 40 C.F.R. § 702.33 (defining reasonably available information to include information EPA can generate).

As soon as its risk evaluation is complete, EPA should move expeditiously to adopt TSCA risk management rules that eliminate unreasonable risk from lead, including from legacy uses, and from legacy disposal if it is resulting in ongoing exposure and risk.

II. EPA Should Develop Concrete Plans for Collaborating with Other Federal Agencies to Protect People from Lead

The Draft Lead Strategy outlines “three new approaches” that will guide its actions, including reducing exposure with a “whole of government” approach.⁷⁶ Yet despite the important role of other federal agencies, the strategy is woefully short of specifics on what EPA is going to do to collaborate with – and press – other agencies to take needed actions to stop lead exposures. The final strategy document should include more specifics, including timeframes for each action or activity EPA will undertake to assist other federal agencies to protect people from lead.

A. Federal Agencies – FDA, CPSC, and EPA – Must Adopt Rules that Prioritize Getting Lead out of Food and Other Consumer Products

The Draft Lead Strategy gives short shrift to lead exposures from food and other consumer products, with few details about EPA’s role other than that it will “collaborate” with FDA and CPSC to address exposure from these sources.⁷⁷ We urge EPA to reach out to these sister agencies immediately and offer technical assistance in helping them to fulfill their mandates to protect consumers from lead.

i. Lead in Food

EPA modeling indicates that food is a primary source of lead exposure for many children⁷⁸; yet FDA has not updated enforceable standards for how much lead is permitted in food, including baby food, in decades. A recent Staff Report from the U.S. House of Representatives’ Subcommittee on Economic and Consumer Policy reported that “commercial baby foods are tainted with significant levels of toxic heavy metals,” including lead.⁷⁹ And in late 2021, FDA announced its *Closer to Zero plan* for reducing the levels of lead and other heavy metals in baby

⁷⁶ Draft Lead Strategy at 3.

⁷⁷ Draft Lead Strategy at 9.

⁷⁸ Neltner T, *Children’s lead exposure: Relative contributions of various sources* (Dec. 15, 2017) (explaining that for the average child 1 to 6 years old, food is the largest source of lead exposure), <https://blogs.edf.org/health/2017/12/15/childrens-lead-exposure/>.

⁷⁹ U.S. House of Representatives, *Baby Foods Are Tainted With Dangerous Levels of Arsenic, Lead, Cadmium, and Mercury* (Feb. 4, 2021), <https://oversight.house.gov/sites/democrats.oversight.house.gov/files/2021-02-04%20ECP%20Baby%20Food%20Staff%20Report.pdf>; see also Consumer Reports, *Heavy Metals in Baby Food: What You Need to Know*, <https://www.consumerreports.org/food-safety/heavy-metals-in-baby-food-a6772370847/>

food.⁸⁰ However, FDA has not updated its regulatory limits for lead in baby food. Baby food is not the only food that contains lead, and children eat food that is not sold as “baby food.” In 2020, FDA announced that it had lowered its *target* minimum daily intake levels for lead in food,⁸¹ acknowledging that its prior target (which had been in effect for decades) was too high. However, FDA has not updated its regulatory limits for lead in candy, juice, dried fruits, spices, and other common food ingredients to bring it into line with its new targets.

Moreover, FDA still allows lead to be added to food contact articles such as metal cans and to brass and bronze components of equipment used to dispense water and brew tea and coffee despite the fact that these uses are contrary to the Federal Food Drug and Cosmetic Act.

In addition, the FDA has not updated its 1994 limit of five parts per billion (ppb) of lead in bottled water. At these levels, a child drinking two bottles of water (24 ounces) would exceed the agency’s new interim limit for daily lead in the diet.⁸²

FDA needs to move forward as expeditiously as possible to set enforceable, health-protective regulatory limits for lead in baby food, food, food contact articles, and bottled water. In December 2020, FDA received a citizens’ petition asking it to do so,⁸³ but FDA’s only formal response so far has been to say that it has not been able to reach a decision on the petition “because of other agency priorities and the limited availability of resources.”⁸⁴ As part of its whole of government approach to reducing lead exposure, we urge EPA to provide assistance to FDA in setting health-protective standards for lead in food, bottled water and articles that come in contact with food.⁸⁵

⁸⁰ FDA, *Closer to Zero: Action Plan for Baby Foods* (released Nov. 18, 2021), <https://www.fda.gov/food/metals-and-your-food/closer-zero-action-plan-baby-foods>

⁸¹ The new targets are 3 micrograms of lead per day for children and 12.5 for adults. See Brenna M Flannery et al., *U.S. Food and Drug Administration's Interim Reference Levels for Dietary Lead Exposure in Children and Women of Childbearing Age*, 110 REGUL TOXICOL PHARMACOL. 104516 (Feb. 2020).

⁸² Citizen Petition on Interim Response Letter from EDF et al. to FDA CFSAN, Docket ID No. FDA-2020-P-2276-0001 (Dec. 10, 2020), <https://www.regulations.gov/document/FDA-2020-P-2276-0011>.

⁸³ *Id.*

⁸⁴ Letter from Mark A. Moorman, Ph.D., Dir., Office of Food Safety, FDA CSFAN to Tom Neltner, J.D., Chem. Pol’y Dir., EDF, Docket ID FDA-2020-P-2276-0011 (June 3, 2021), <https://www.regulations.gov/document/FDA-2020-P-2276-0011>.

⁸⁵ We applaud FDA’s decision in late 2021 to withdraw its approval for use of lead acetate in hair conditioning and hair dye products. This decision was long overdue, but nonetheless critically important. *FDA to Repeal Color Additive Approval for the Use of Lead Acetate in Hair Dyes*, FDA <https://www.fda.gov/food/cfsan-constituent-updates/fda-repeal-color-additive-approval-use-lead-acetate-hair-dyes> (last updated Oct. 7, 2021).

FDA should also issue an advisory on lead in bullets used for hunting, which can contaminate game and expose people who rely on subsistence hunting.⁸⁶ Lead in hunting shot may disproportionately affect Indigenous populations who rely on traditional diets. Many hunters may not even be aware of this health hazard – FDA should issue an advisory and provide the necessary information for hunters to protect themselves and their families.

ii. Lead in Other Consumer Products

Although federal law administered by the Consumer Product Safety Commission (“CPSC”) bans lead in excess of 90 ppm in “children’s products,” lead is still used in other common household products, including ones used by children but which do not fall within the definition of “children’s products,” such as novelty jewelry. In addition, any product that is made with lead and is used by a pregnant or nursing person also presents an exposure hazard to fetuses and infants. Many products made with lead are sold in dollar stores,⁸⁷ which are disproportionately concentrated in low-income communities and communities of color.⁸⁸

EPA and CPSC both have authority to prohibit the sale of consumer products containing lead with EPA having broader authority that encompasses, inter alia, lead in wheel weights.⁸⁹ We urge EPA to work with CPSC to protect children by banning lead in *all* household products and especially in jewelry. In addition, we urge EPA to work with CPSC to use its recall authority

⁸⁶ The Alaska State Division of Epidemiology noted that: "Reasons for the higher prevalence of elevated BLL among children aged <18 years in the Southwest region are unknown, but might include higher routine screening rates and/or more frequent use of bullets containing lead shot for hunting game." *Blood Lead Surveillance in Children Aged <18 Years — Alaska, 1995–2012*, State of Alaska Epidemiology (Apr. 8, 2014), https://dhss.alaska.gov/dph/epi/eph/documents/bulletins/docs/b2014_04.pdf

⁸⁷ For example, a 2015 report on toxic substances in items sold in dollar stores identified earrings sold at Family Dollar containing 6,500 ppm of lead. See Ecology Ctr., *2015 Dollar Store Report* (Feb. 4, 2015), <http://www.ecocenter.org/healthy-stuff/reports/dollar-store-report>.

⁸⁸ For example, a 2015 report on toxic substances in items sold in dollar stores identified earrings sold at Family Dollar containing 6,500 ppm of lead. See Ecology Ctr., *2015 Dollar Store Report* (Feb. 4, 2015), <http://www.ecocenter.org/healthy-stuff/reports/dollar-store-report>; Marie Donahue And Hannah Bonestroo, *Maps Show Alarming Pattern of Dollar Stores’ Spread in U.S. Cities*, INSTITUTE FOR LOCAL SELF-RELIANCE (Feb. 20, 2019), <https://ilsr.org/new-maps-dollar-stores-spread/>.

⁸⁹ In a 2006 report, the U.S. Geological Survey estimated that 2,000 tons of lead in wheel weights were lost on the Nation’s roads each year, where they may become abraded and then dissipate into the environment due to weather. See Donald I. Bleiwas, *Stocks and Flows of Lead-Based Wheel Weights in the United States, Open File Report 2006-1111*, USGS at 4 (2006), <https://pubs.usgs.gov/of/2006/1111/2006-1111.pdf>. While the amount of lead that enters the environment from wheel weights is likely lower now than in 2006 because most domestically manufactured wheel weights are not made with lead, there is no prohibition on lead wheel weights, so there is almost certainly some lead still entering the environment due to ongoing use of lead wheel weights.

under the Federal Hazardous Substances Act to protect children from lead in products that remain in many homes, even if they are no longer sold in this country, such as vinyl mini-blinds and other kinds of plastic that contain lead, which release lead-contaminated dust as the plastic breaks down.

B. EPA Must Work With HUD, Treasury, and USDA To Ensure Residents of Federally-supported Housing Are Not Exposed to Lead Hazards

HUD has an important and distinct role to play in ensuring that residents of federally-supported housing – predominantly very low-wealth households, consisting largely of elderly individuals and families with children under the age of eighteen – are not exposed to lead hazards.⁹⁰ People in these demographic groups are more susceptible than the general population to harm from lead exposure. As part of its “whole of government” approach, EPA must work with HUD and other housing agencies in a truly collaborative way to ensure residents of HUD-supported housing are not exposed to lead hazards in dust, paint, soil or water.⁹¹

We are pleased that EPA’s plan commits to collaborating with HUD to “revisit” the definition of “lead-based paint” and revise it “as appropriate”⁹² – though we believe it is clear the definition must be revised since, as the Ninth Circuit Court of Appeals noted, under the current definition “lead paint is not hazardous until it is over fifty-five times higher [in lead content] than the CPSC’s definition.”⁹³ However, much more collaboration with HUD is needed to protect residents of federally-supported housing from lead.

EPA should work with HUD and other housing agencies to address the thousands of federally-assisted properties located within one mile of a lead-contaminated Superfund site, which is discussed in detail in Section I, D above. In addition, EPA should collaborate with HUD in designing a system under which EPA receives notice whenever renovation, repair or painting occurs in any federally-assisted housing or housing owned by other public agencies so EPA can coordinate RRP compliance inspection to ensure that residents, workers and people who live and work nearby are not exposed to lead-dust. In addition, EPA should work with HUD and other housing agencies to ensure that residents of federally-supported housing are drinking water that is free of lead. A recent HUD Office of the Inspector General report concluded that agency has failed to protect residents from lead in drinking water “because HUD relied on [EPA] to ensure

⁹⁰ *Who Lives in Federally Assisted Housing? Characteristics Of Households Assisted by Hud Programs*, NATIONAL LOW INCOME HOUSING COALITION (Nov. 2012), <https://nlihc.org/sites/default/files/HousingSpotlight2-2.pdf>.

⁹¹ While HUD is the largest federal agency supporting federally-assisted housing, interagency collaboration must also include Treasury and USDA in order for a whole government approach to be successful. The Internal Revenue Service administers the Low-Income Housing Tax Credit program which is one of the largest generators of affordable housing development and preservation. USDA’s Rural Development also oversees low-income housing programs through its Rural Housing Service.

⁹² Draft Lead Strategy at 9.

⁹³ *A Cmty. Voice*, 997 F.3d at 993.

that public water systems provided water that was safe to drink.”⁹⁴ This is unacceptable. EPA must work with HUD to clarify each agency’s role in exposure prevention going forward.

C. EPA Must Work With Centers for Disease Control and Prevention (“CDC”) and State Agencies to Ensure More Children Receive Lead Testing

Currently, early childhood lead testing requirements are largely determined by state-level regulations. Millions of children are not being tested due to insufficient testing requirements or because they are falling through the cracks of their states’ existing requirements.⁹⁵ Because of this, CDC is missing crucial data on the breadth of the lead poisoning crisis, and many families are not receiving the information they need to protect their children. It is important for EPA to work in coordination with CDC and with state agencies in order to test as many children as possible, with the goal of eventually testing *all* children to eliminate all lead exposures.

III. EPA Must Commit to Creating the Staff Capacity and Resources Necessary to Follow Through on its Commitment to Lead Exposure Prevention

As should be clear from these comments, communities cannot wait any longer for protection from lead, yet on many fronts, the EPA Draft Lead Strategy fails to commit to concrete timelines for a number of vital rulemakings. The agency has articulated that it is financially constrained by the funding levels allotted by the current Continuing Resolution of FY21 funding levels. While the President’s FY22 budget request includes funding for more than 1,000 full time employees across the EPA, in various communications, EPA officials have said that the realities of the Continuing Resolution have resulted in an understaffing of many EPA offices key to completing a wide-ranging set of rulemakings that will reduce lead poisoning.

We appreciate that the draft strategy addresses numerous sources of lead poisoning, but would like the agency to commit to concrete, immediate timelines for several lead-related rulemakings. To better understand the resources needed by the agency to complete such rulemakings, we ask that, for each of the rulemakings that EPA is committed to undertaking [*see Key Takeaways, supra*], EPA provide the public with estimates of (1) the number of full time employees required to complete each rulemaking; (2) the cost of completing each rulemaking; and (3) the time required to complete each rulemaking.

IV. The Final Lead Strategy Should Clarify Unanswered Implementation Questions in the Draft

The Draft Lead Strategy is lacking in many critical specifics regarding the policy changes it identifies, including (1) aggressive timeframes for action; (2) clarification on how this Draft Lead Strategy intersects with the Biden-Harris Lead Pipe and Paint Action Plan that was released

⁹⁴ HUD OIG Report, *supra*, at 5.

⁹⁵ Joshua Schneyer & Michael B. Pell, *Millions of American Children Missing Early Lead Tests*, REUTERS INVESTIGATES: UNSAFE AT ANY LEVEL (June 9, 2016), <https://www.reuters.com/investigates/special-report/lead-poisoning-testing-gaps/>.

on December 16, 2021⁹⁶; (3) explanation for how EPA is going to move forward with health-protective rulemakings and clean up actions when the Draft Plan indicates that the Agency is still in the early stages of developing national standards, policies, analytical tools and research; (4) how EPA intends to incentivize states to join EPA in the effort to ensure funding goes to communities which need it most, and (5) what actions EPA will take to broadly interpret its existing authority under SDWA and under laws to more equitably distribute funds.

CONCLUSION

For too long, lead poisoning has plagued communities across the country, robbing children of bright futures and causing irreversible health harms for people of all ages. We know that no level of lead in the body is safe and that children and adults alike face cumulative exposures from multiple sources of exposure—particularly those living in low-income communities and communities of color, many of which are also burdened by exposures to other toxic pollutants. Yet administration after administration has failed to take the holistic approach and concrete actions needed to end this disparity and make progress toward eliminating *all* lead exposures.

Developing a Final Lead Strategy will be an indispensable opportunity for the Biden/Harris Administration to follow through on its commitments to eliminate lead exposure and its devastating health effects. The Draft Lead Strategy is a strong start in many ways—we applaud its attention to measuring success on a community level, with a focus on communities facing disproportionately high exposures. To successfully prevent lead exposures, EPA must go a step farther—ensuring its plan fully considers all sources of exposure, moving quickly to adopt science-based and health-protective regulations, working closely with other agencies on concrete and holistic measures, and backing its commitments with the staffing and resources necessary to realize them.

We are grateful to this Administration for prioritizing this work. We respectfully submit these comments in hopes that EPA will take bold and decisive action to finally end this public health crisis. If you would like to discuss any aspect of these comments, please feel free to contact Eve Gartner, Managing Attorney, Toxic Exposure & Health Program, Earthjustice, egartner@earthjustice.org.

Organizations

Able-Differently

Achieving Community Tasks Successfully

Alaska Community Action on Toxics

⁹⁶ Press Release, White House Briefing Room, FACT SHEET: The Biden-Harris Lead Pipe and Paint Action Plan (Dec. 16, 2021) <https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/16/fact-sheet-the-biden-harris-lead-pipe-and-paint-action-plan/>.

Alliance for the Great Lakes

Alliance of Nurses for Healthy Environments

Amani United

American Public Health Association

Black Millennials 4 Flint

Black Warrior Riverkeeper

Break the Cycle of Health Disparities, Inc.

Buffalo Niagara Waterkeeper

Cahaba Riverkeeper

California Communities Against Toxics

California Safe Schools

Campaign for Lead Free Water

Center for Environmental Health

Center for Neighborhood Technology

Children's Environmental Health Network

Choctawhatchee Riverkeeper

Cities of Peace Detroit

Citizens Against Gillespie Expansion and Low Flying Aircraft

Citizens for Quiet Skies

Clean Air Council

Clean and Healthy New York

Clean Water Action

Cleveland Lead Advocates for Safe Housing

Coalition of Community Organizations

Coalition on Lead Emergency

Coming Clean

Conservation Voters of Pennsylvania

Defend Our Health

Detroit Hamtramck Coalition for Advancing Health Environments

Earthjustice

East Chicago Calumet Coalition Community Advisory Group

Ecology Center

Environment America Research and Policy Center

Environmental Health Leadership Foundation

Environmental Working Group

Family Farm Defenders

FLOW (For Love of Water)

Freshwater for Life Action Coalition

Friends of the Earth

Gas Free Seneca

Get the Lead Out Coalition

Green and Healthy Homes Initiative

Green Gas Movement

Healthy Babies Bright Futures

Idaho Conservation League

Illinois Council of Trout Unlimited

Immigrants and Minorities Unify Services Association

LDA of Minnesota

LEAD Agency, Inc.

League of Conservation Voters

Learning Disabilities Association of America

Learning Disabilities Association of Alabama

Learning Disabilities Association of Alaska

Learning Disabilities Association of Arkansas

Learning Disabilities Association of Arizona

Learning Disabilities Association of California

Learning Disabilities Association of Connecticut

Learning Disabilities Association of Delaware

Learning Disabilities Association of Florida

Learning Disabilities Association of Georgia

Learning Disabilities Association of Iowa

Learning Disabilities Association of Illinois

Learning Disabilities Association of Maine

Learning Disabilities Association of Michigan

Learning Disabilities Association of New Jersey

Learning Disabilities Association of New York

Learning Disabilities Association of North Carolina

Learning Disabilities Association of Ohio

Learning Disabilities Association of Oklahoma

Learning Disabilities Association of Pennsylvania

Learning Disabilities Association of South Carolina

Learning Disabilities Association of Texas

Learning Disabilities Association of Utah

Learning Disabilities Association of Virginia

Learning Disabilities Association of West New York

Learning Disabilities Association of Wisconsin

Michigan Citizens for Water Conservation

Michigan State University and Hurley Children's Hospital Pediatric Public Health Initiative

Michigan Welfare Rights Organization

Milwaukee Riverkeeper

Missouri Coalition for the Environment

Moms Across America

Montgomery-Gibbs Environmental Coalition

National Hispanic Medical Association

National Housing Law Project

Natural Resources Defense Council

NC Child

Neighbors for Clean Air

Newburgh Clean Water Project

New Jersey Citizen Action

New York League of Conservation Voters

New York State American Academy of Pediatrics, Chapters 1, 2, and 3

North Carolina Conservation Network

North Carolina League of Conservation Voters

Northern Manhattan Improvement Corp.

OFT Labs LLC

Ohio Environmental Council

Oregon Aviation Watch

Pennsylvania Council of Churches

People's Water Board Coalition

Quiet Skies Jefferson County

River Guardian Foundation

Safer States

San Francisco Bay Physicians for Social Responsibility

Science and Environmental Health Network

Seneca Lake Guardian

Shelby County Lead Prevention and Sustainability Commission

Shriver Center on Poverty Law

Sierra Club

Sisters of Mercy of the Americas Justice Team

Turner Environmental Law Clinic, Emory University School of Law

U.S. Public Interest Research Group

Union of Concerned Scientists

University of Chicago Abrams Environmental Law Clinic

UproarLA

Ward 6 Public Schools Parent Organization

Water Collaborative of Greater New Orleans

Water You Fighting For?

Waterway Advocates

WE ACT for Environmental Justice

Women for a Healthy Environment

Women's Voices for the Earth

Zero Waste Washington

Individuals Affiliated with [Project TENDR](#)

Dr. Laura Anderko PhD, RN*
M. Fitzpatrick College of Nursing
Villanova University

John R. Balmes, MD*
Prof. of Medicine, UCSF; Prof. Environmental Health Sciences, UC Berkeley
Director, Northern Calif Center for Occupational & Environmental Health
UC Berkeley-UC Davis-UCSF

David C. Bellinger, PhD, MSc*
Research Director, Boston Children's Hospital
Professor, Harvard Medical School and Harvard T.H. Chan School of Public Health

Linda S. Birnbaum, PhD, DABT, ATS*
Scientist Emeritus and Former Director
National Institute of Environmental Health Sciences and National Toxicology Program
Scholar in Residence, Nicholas School of the Environment Duke University

Asa Bradman, PhD, MS*
Professor, Department of Public Health
University of California, Merced

Charlotte Brody, RN
National Director
Healthy Babies Bright Futures

Carla Campbell, MD, MS*
Former Medical Director, The Lead Evaluation Clinic
The Children's Hospital of Philadelphia,
Philadelphia, PA

Robert M. Gould, MD*
Associate Adjunct Prof, Program on Reproductive Health and Environment,
UCSF School of Medicine
Past President, Physicians for Social Responsibility

Tracy Gregoire
Healthy Children Project Director
Learning Disabilities Association of America

Russ Hauser, MD, ScD, MPH*
Frederick Lee Hisaw Professor of Reproductive Physiology,
Professor of Environmental and Occupational Epidemiology,
Harvard T.H. Chan School of Public Health
Professor of Obstetrics, Gynecology and Reproductive Biology, Harvard Medical School

Irva Hertz-Picciotto, PhD, MPH*
Director, UC Davis Environmental Health Sciences Center
Professor, Dept. of Public Health Sciences & Medical Investigations of Neurodevelopmental
Disorders (MIND) Institute, University of California, Davis

Deborah Hirtz, MD*
Professor, Neurological Sciences and Pediatrics
University of Vermont School of Medicine

Katie Huffling, RN, MS, CNM
Executive Director
Alliance of Nurses for Healthy Environments

Margaret R. Karagas, MS, PhD*
Professor & Chair, Department of Epidemiology
Director, Children's Environmental Health & Disease Prevention Research Center
Geisel School of Medicine, Dartmouth College

Tanya Khemet Taiwo, PhD, CPM, MPH*
Assistant Professor, Department of Midwifery, Bastyr University
Co-Director, Environmental Health Sciences Center, UC Davis

Arthur Lavin, MD, FAAP*
Pediatrician
Cleveland, Ohio

Pamela Miller, MS
Executive Director, Alaska Community Action on Toxics
Co-Chair, International Pollutants Elimination Network

Mark A. Mitchell MD, MPH, FACPM*
Co-Chair, Commission on Environmental Health
National Medical Association

Rachel Morello-Frosch, PhD, MPH*
Professor, Department of Environmental Science, Policy and Management
Professor, School of Public Health
University of California, Berkeley

Heather B. Patisaul, PhD*
Associate Dean for Research and Professor, College of Sciences,
Center for Human Health and the Environment, WM Keck Center for Behavioral Biology
NC State University

Jerome A. Paulson, MD, FAAP*
Professor Emeritus, Pediatrics and of Environmental & Occupational Health
George Washington University School of Medicine and Health Sciences
George Washington University Milken Institute School of Public Health

Frederica Perera, DrPH, PhD*
Professor of Public Health
Director, Translational Research
Founding Director, Columbia Center for Children's Environmental Health,
Mailman School of Public Health, Columbia University

Beate Ritz, MD, PhD*
Professor of Epidemiology, Environmental Health, and Neurology
Fielding School of Public Health and School of Medicine, UCLA

Leslie Rubin, MD*
Assoc. Prof., Dept. of Pediatrics, Morehouse School of Medicine
Co-director, Southeast Pediatric Environmental Health Specialty Unit, Emory University
Founder, Break the Cycle of Health Disparities, Inc.

Susan L. Schantz, PhD*
Professor Emeritus of Toxicology and Neuroscience
Beckman Institute for Advanced Science and Technology
University of Illinois, Urbana-Champaign

Ted Schettler, MD, MPH
Science Director
Science and Environmental Health Network

Maureen Swanson, MPA*
Director of Environmental Risk Reduction & Project TENDR
The Arc of the United States

Tracey J. Woodruff, PhD, MPH*
Alison S Carlson Endowed Professor and Director,
Program on Reproductive Health and the Environment
Dept. Ob/Gyn, PRL Institute for Health Policy Studies
University of California, San Francisco

R. Thomas Zoeller, PhD*
Professor Emeritus, Biology Department
University of Massachusetts Amherst

Ami Zota, ScD, MS*
Assistant Professor, Dept. of Environmental and Occupational Health
Milken Institute School of Public Health
The George Washington University

Individuals

Matthew Chachere
Staff Attorney
Northern Manhattan Improvement Corp.

Akeeshea Daniels
East Chicago Calumet Coalition Community Advisory Group

Brian Gardner*
Communications Director
Washington County Democrats

Mary Gant*
Former Policy Analyst
National Institute of Environmental Health Sciences

Matthew A. Grisius
Michigan

Mona Hanna-Attisha, MD, MPH, FAAP*
Director, Pediatric Public Health Initiative
C.S. Mott Endowed Professor of Public Health, Division of Public Health
Associate Professor, Department of Pediatrics and Human Development
Michigan State University College of Human Medicine
Hurley Children's Hospital at Hurley Medical Center

Fred Huttsell

Adrienne Katner, D.Env, MS*
Associate Professor
New Orleans School of Public Health
Louisiana State University

Gary Keyes
Middleton, Wisconsin

Juleen Lam*
Assistant Professor
California State University, East Bay

Bruce Lanphear, MPH, MD*
Professor
Faculty of Health Sciences
Simon Fraser University
Clinician Scientist
Children's Hospital Research Institute
University of British Columbia

Lori Locklear
East Chicago Calumet Coalition Community Advisory Group

Maritza Lopez
East Chicago Calumet Coalition Community Advisory Group

Kathryn Rifkin
Hanscom, Massachusetts

Charlie Schlinger
Michigan

Father Philip Schmitter*
Board Member
St. Francis Prayer Center
Flint, Michigan

Teresa Tse*
Member
Oregon Aviation Watch

Julia Varshavsky*
Assistant Professor
Northeastern University

Robert Weinstock*
Assistant Clinical Professor of Law
Abrams Environmental Law Clinic
University of Chicago

Debi Wagner*
Member
Quiet Skies Puget Sound

Ellen Widess
Director/ Former Chief of Cal /OSHA

Quentin C. Yates
President
Montgomery-Gibbs Environmental Coalition

Paul Zettel*
Riverside University High School
Wisconsin

**Affiliations are provided for identification purposes only and do not imply institutional endorsement or support.*