

2018

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Rick Reibstein

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Recommended Citation

Rick Reibstein, *ENVIRONMENTAL LAW—RESUMING PROGRESS ON LEAD POISONING: A PRIME INDICATOR OF CIVILIZATION*, 40 W. New Eng. L. Rev. 59 (2018), <http://digitalcommons.law.wne.edu/lawreview/vol40/iss1/4>

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ENVIRONMENTAL LAW—RESUMING PROGRESS ON LEAD POISONING: A PRIME INDICATOR OF CIVILIZATION

*Rick Reibstein**

Failing to adequately protect citizens against the threat of lead poisoning is an indication that our society is not fully civilized. There are many compelling reasons to take concerted action against lead: the seriousness of its harm, the preventability of poisoning, that all of society is affected, and that many actions are economically feasible. Even the most costly action, removal of the source, has an excellent cost-benefit ratio. After reviewing the state of affairs and the reasons to take action, this Article provides an overview of some of the actions that can be taken. Mustering the ability to take action will be a symbolic and important exercise of democracy, strengthening the sense of common purpose, and illustrating that government exists to care for the people.

INTRODUCTION

The quality of the effort made to prevent lead poisoning is an indicator of whether a society has become civilized. There are many ways to determine whether a society merits being called civilized. However, it is hard to argue with the logic that, at the very least, a society must act to avoid foreseeable harms—particularly to its own members and to itself as a body—when it is reasonably within its power to do so. The dangers of lead have been known for centuries, but in recent times the evidence of its far-reaching impacts has become clearer. Lead significantly reduces so many kinds of human capacities that its injuries to body and spirit are threats to our collective well-being.¹ Lead

* Rick Reibstein is a lecturer of Environmental Law and Policy at Boston University Department of Earth and Environment; he is also an instructor in the Division of Continuing Education of the Faculty of Arts and Sciences at Harvard University.

1. The Agency for Toxic Substances and Disease Registry (ATSDR) lists impacts on these organ systems: “[c]ardiovascular ([h]eart and [b]lood [v]essels), [d]evelopmental (effects during periods when organs are developing), [g]astrointestinal ([d]igestive), [h]ematological ([b]lood [f]orming), [m]usculoskeletal ([m]uscles and [s]keleton), [n]eurological ([n]ervous [s]ystem), [o]cular ([e]yes), [r]enal ([u]rinary [s]ystem or [k]idneys), [and] [r]eproductive ([p]roducing [c]hildren)” and notes that the Environmental Protection Agency (EPA) and the International Agency for Research on Cancer classify lead as a

shows us that our common health is our common wealth, and because it persists, we must take action to address it—it will not take care of itself. The lead problem shows us that we need to develop democratic capacities—the ability to see common interests. Examining options for moving forward demonstrates and develops the practice of respectful deliberation, the essential process of democracy, and the idea that a civilized society is not only efficient, but also just.

Because we have taken actions on lead that have had great positive benefits, we know that legislative, regulatory and civic actions can be very effective.² But our systems of incentives and disincentives must be reviewed. We still find half a million children at dangerous levels and millions under threat of exposure. We have no effective tally on adult exposure—particularly relating to exposure from shooting firearms—and the impact thereof on emotional instability is not well recognized. We are failing to adequately test and we have never invested enough to remove lead from the environment, nor have we sufficiently discouraged placing lead into commerce. Our laws are outmoded; progress has been arrested. The problem of lead shows us that it is time to convene as a society to make our laws work for us. Lead is a primary example of

“probable human carcinogen” and the National Toxicology Program classifies it as “reasonably anticipated to be a human carcinogen.” *Toxic Substances Portal: Lead*, AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=22> (last updated Mar. 3, 2011). Impacts on neurological development have been associated with significant social impacts such as crime, lost income, lack of impulse control, violence, and dropping out of school. The National Institute for Occupational Safety and Health notes that people “exposed to lead over time may feel: abdominal pain[,] constipated[,] depressed[,] distracted[,] forgetful[,] irritable[,] nauseous[,] or sick,” and are at “risk for high blood pressure, heart disease, kidney disease, and reduced fertility.” See *Lead: Information for Workers*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/niosh/topics/lead/health.html> [<https://perma.cc/U3XU-NJGA>].

2. Significant reductions in lead poisoning since passage of major federal and state laws have been documented. When the 1992 Residential Lead-Based Paint Hazard Reduction Act was passed, Congressional findings were that “as many as 3,000,000 children under age 6” were affected. Residential Lead-Based Paint Hazard Reduction Act of 1992, Pub. L. 102-550, 106 Stat. 387-3926 (1992) (codified at 42 U.S.C. § 4851); *Blood Lead Levels in Children Aged 1-5 Years—United States, 1999-2010*, CTRS. FOR DISEASE CONTROL & PREVENTION: MORBIDITY & MORTALITY WEEKLY REPORT (April 5, 2013), https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm?s_cid=mm6213a3_e [<https://perma.cc/79GZ-WVD4>]. The threshold or “reference value,” the level of lead in blood above which action should be taken, has decreased from tens of micrograms per deciliter to the Centers for Disease Control’s (CDC) current recommendation of five micrograms. CDC notes this decrease is “most likely as a result of an intense coordinated effort to control or eliminate lead sources in children’s environments by government officials, health care and social service providers, and the communities most at risk.” *Learn More About CDC’s Childhood Lead Poisoning Data*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/nceh/lead/data/learnmore.htm> [<https://perma.cc/JLG2-T8ZH>] [hereinafter *Childhood Lead Poisoning Data*].

something that cannot be ignored. A society that fails to act as effectively as it can concerning an undeniable, heart-breaking, preventable problem like lead cannot be called a healthy democracy because it cannot accomplish the most basic function of a self-governing system.

We impose a standard of care upon individuals through statutory provisions and the common law action of negligence to make an effort to avoid foreseeable harm. This standard must be more fully realized, and is applicable to corporations and governments as well. We are not making sufficient use of the opportunities we have to avoid the indisputable and terribly damaging effects of lead, and our lack of action is an indication of the quality of the social organization we support with our assent. If more people understand that the failure to prevent further lead poisoning is a failure to be civilized, we might be able to direct more attention to the root causes of our failure: the misperception that the problem is limited to particular groups and the associated idea that they alone bear important blame for their misfortune; the misperception that the problem has been solved or that everything that can be done has already been done; the failure to impose liabilities on those who create the risks by putting lead into commerce; and the gross misperception that we cannot afford to act. By focusing on the many things we can do, we can help more people to understand that investing in prevention is smarter than failing to take care. A larger lesson is that moral considerations, which some consider peripheral (as Dick Cheney said, a sign of personal responsibility),³ are actually an excellent guide to stable, practical, and healthy social organization.

Turning attention to the unsolved problem of lead can illuminate long-standing issues—a fragmented national identity, a short-term immediate profit view of investment, and a constrained view of the purposes of government—that divide society and keep it from evolving ever-more civilized expectations. The idea of replacing the negative freedom of least government with the positive freedom of a government that acts for the general welfare is manifested by acting to resume progress in abating the hazards of lead. Because people can be helped to understand how lead affects everyone, that many feasible options for acting on lead exist, and that progress should resume, there is a good

3. In April of 2001, commenting on the Administration's energy plan, the Vice President said that conservation was a sign of personal virtue, but rejected it as a policy. James Carney & John F. Dickerson, *The Rocky Rollout of Cheney's Energy Plan*, TIME (May 19, 2001), <http://content.time.com/time/nation/article/0,8599,127219,00.html>.

chance that consensus can be found on how to move forward. The very act of considering forward movement helps to counter the inertial preference for doing nothing.

I. RELEVANT AMERICAN TRADITIONS OF GOVERNMENT

A. *Rationale for Legislative and Regulatory Action*

A diversity of opinions concerning the purposes of government exist, and may be described by first identifying the libertarian concept at one end, and “big government” at the other. The libertarian considers the most important aspect of a civilized society to be one in which the government rarely interferes in the free interactions of its citizens. This “laissez-faire” approach dominated American politics in the late 1800s and once again has become a powerful, if not dominant, strain.⁴ The perspective that the best government governs least elevates a negative vision of freedom, freedom from the assumed inevitable oppression of government. However, there is another strain in the American idea of freedom, and that is the freedom to have a government that provides services and assistance to its people.⁵

Abraham Lincoln in his Gettysburg Address spoke of a government of, by, and for the people, and when the Constitution was written, its Preamble stated the purposes of government included providing for the general welfare and securing the blessings of liberty for posterity.⁶ This cannot be accomplished by simply being absent from the scene. If the government of the people does not take feasible, available opportunities to reduce the scourge of lead poisoning, it fails to act as an agent of, by, and for the people, and the freedoms afforded by its nonfeasance are no better than the freedom to be harmed.⁷ To simply say government must

4. In its legal form, the economic concept of laissez faire is effectively embodied in the “Classical Legal Theory,” which regards the economy as “self-regulating.” For a history of its application in the United States, see generally WILLIAM M. WIECEK, *THE LOST WORLD OF CLASSICAL LEGAL THOUGHT: LAW AND IDEOLOGY IN AMERICA, 1886-1937* (1998).

5. See, e.g., Isaiah Berlin, *Two Concepts of Liberty*, in *THE LIBERTY READER* (David Miller ed., Paradigm Publishers 2006).

6. See U.S. CONST. pmb.; *Lincoln Home: Gettysburg Address*, NAT’L PARK SERV., <https://www.nps.gov/liho/learn/historyculture/gettysburgaddress.htm> [<https://perma.cc/8HML-B53F>] [hereinafter *Lincoln Home*]. Lincoln’s request that listeners resolve that our nation have “a new birth of freedom[—]and that government of the people, by the people, and for the people, shall not perish from the earth” is a concise statement of the concept of positive freedom. *Lincoln Home, supra*.

7. For a comprehensive review of the return of the laissez-faire philosophy and its contrast with “public interest law,” see generally THOMAS O. MCGARITY, *FREEDOM TO*

stay out of the way allows those with more resources than others to use them to increase inequalities—this leads to oligarchy, or dictatorship. A democracy respects the role of government in acting for the people and protecting common interests; an enlightened society recognizes the necessity of government action to protect individual freedoms. Elevating freedom from government as the highest value is equivalent to an abandonment of core American principles of democracy. We must see this as leading to such results as persistent lead poisoning.

Lead poisoning is avoidable in the long term through curtailing the use of lead, and in the short term by many actions—including very low-cost options such as increasing awareness of where lead is in the environment and how it can be left undisturbed. Modern society has made significant progress, which shows that the problem is not intractable and can be effectively addressed. Lead poisoning rates have drastically reduced since lead was banned in gasoline, residential paints, and food cans.⁸ But we have ceased moving forward. Lead poisoning persists because lead itself has not been removed from the environments in which people live, and new sources of lead continue to be introduced because lead is still used in ways that cause exposures. The steady trend of general disinvestment in environmental and public health efforts has worsened the problem.⁹

Ignorance is no excuse. On top of the pioneering work of

HARM: THE LASTING LEGACY OF THE LAISSEZ FAIRE REVIVAL (2013).

8. The 1971 Lead Poisoning Prevention Act prohibited lead in federally-supported housing. In 1978 the Consumer Product Safety Commission set limits on the use of lead in residential paints. The Food and Drug Administration banned the sale of food packed in lead-soldered cans in 1996. “By the early 1990s, data from FDA’s Total Diet Study showed that lead levels in the U.S. food supply had been dramatically reduced. For some age and gender groups, lead levels had decreased by more than 95% over a 20-year period.” Michael Kashtock, *Reducing Lead Exposure from Food*, FOODSAFETY MAG. (Oct./Nov. 2009) <https://www.foodsafetymagazine.com/magazine-archive1/octobernovember-2009/reducing-lead-exposure-from-food/> [<https://perma.cc/8B6G-47JX>]. The phase-out of lead in gasoline took place in three phases from 1973 to 1996. “By the early 1980s gasoline lead levels had declined about 80%.” Richard G. Newell & Kristian Rogers, *The U.S. Experience with the Phasedown of Lead in Gasoline*, RESOURCES FOR THE FUTURE 4 (June 2003), <http://web.mit.edu/ckolstad/www/Newell.pdf> [<https://perma.cc/7KUS-29TE>]. Joseph L. Annest, et al. found a correlation between this action and significant reductions in lead poisoning in children. See Joseph L. Annest et al., *Chronological Trend in Blood Lead Levels Between 1976 and 1980*, 308 NEW ENG. J. MED. 1373, 1373 (Jun. 9, 1983).

9. See generally, e.g., RENA STEINZOR & SIDNEY SHAPIRO, *THE PEOPLE’S AGENTS AND THE BATTLE TO PROTECT THE AMERICAN PUBLIC: SPECIAL INTERESTS, GOVERNMENT, AND THREATS TO HEALTH, SAFETY, AND THE ENVIRONMENT* (2010) (documenting the general disinvestment trend).

epidemiologists such as Herbert Needleman,¹⁰ lead's effects are well understood, undeniable, and we must now recognize that the effects are universal. It is still often thought that lead poisoning is a problem for poor children only. However, it is a problem for all because exposure is widespread, including those who are exposed at shooting ranges or on the job, those who are exposed to lead dusts from renovations or paint jobs, those who are unaware of lead in products they use, lead in soil, lead in water, and even items that they eat. Because whoever suffers serious lead exposure can experience degradation of capacity or health, and because these losses are associated with increases in crime, violence, and other social disruptions, higher rates of lead poisoning are a social problem that affects everyone.¹¹ In addition, when a neighborhood is perceived as having lead problems, its property values decline.¹² There are many ways to understand the lead problem as universal that do not require the extension of human empathy, simply a clear recognition of the significant economic impacts.¹³ If the goal of social organization

10. Dr. Needleman used baby teeth, which allows a precise measurement of lead in the body, to identify correlations with poor performance in school and reductions in IQ. His work withstood significant challenges. His findings about the impacts of lead have been confirmed by many, and supported by brain imaging, animal studies, and a new biochemical understanding of how lead behaves in the body. Herbert L. Needleman, et al., *Deficits in Psychologic and Classroom Performance of Children with Elevated Dentine Lead Levels*, 300 NEW ENG. J. MED., 689, 689–94 (Mar. 29, 1979).

11. See George Monbiot, *Yes, Lead Poisoning Could Really Be a Cause of Violent Crime*, THE GUARDIAN (Jan. 7, 2013), <https://www.theguardian.com/commentisfree/2013/jan/07/violent-crime-lead-poisoning-british-export> [<https://perma.cc/CA6V-XP5U>].

12. See, e.g., Daniel Goldstein, *Lead Poisoning Crisis Sends Flint Real-Estate Market Tumbling*, MARKETWATCH (Feb. 17, 2016, 3:18 PM), <https://www.marketwatch.com/story/lead-poisoning-crisis-sends-flint-real-estate-market-tumbling-2016-02-17>.

13. The modern era of cost-estimation can be said to have begun in 1994 with a study by Joel Schwartz of the Harvard School of Public Health, who estimated that reducing blood lead levels by just one microgram per deciliter would save the U.S. \$17.2 billion annually. Joel Schwartz, *Societal Benefits of Reducing Lead Exposure*, 66 ENVTL. RES. 105, 119 (1994). Estimates of the full cost of failing to prevent lead poisoning are typically very large. For example, in 2006 the State of Vermont estimated it was losing \$80 million annually due to lead poisoning in the state, without accounting for indirect effects. CHARLOTTE CARLSON ET AL., DARTMOUTH CTR. FOR EVALUATIVE CLINICAL SCIS., *THE COSTS OF LEAD POISONING IN VERMONT* 13 tbl.1 (2006), <http://ago.vermont.gov/assets/files/The%20Cost%20of%20Lead%20Poisoning%20in%20Vermont.pdf> [<http://perma.cc/E422-DRWU>]. A 2009 assessment by Peter Muennig calculated savings ranging from \$341 billion to \$1.2 trillion, when lead blood levels are reduced. Peter Muennig, *The Social Costs of Childhood Lead Exposure in the Post-Lead Regulation Era*, 163 ARCHIVES PEDIATRICS ADOLESCENT MED. 844, 845–46 (2009), <http://jamanetwork.com/journals/jamapediatrics/fullarticle/382153> [<http://perma.cc/H5N9-9LH2>]. Leo Trasande and Yinghua Liu estimated in 2011 that the U.S. would save \$44.8 to \$60.6 billion annually by eliminating lead poisoning. Leonardo Trasande & Yinghua Liu, *Reducing the Staggering Costs of Environmental Disease in Children, Estimated at \$76.6*

was simply to maximize profit, ignoring the fact that the benefits of eliminating lead poisoning far exceed the costs would be reason to characterize that society as foolish. But because the governing authority in a democracy is the people itself, when we allow it to turn its back on the tragedy in which a child's development is stunted because of avoidable exposures, we should hesitate to call ourselves civilized.

Is it fair to level this charge of moral failing, of falling short of humane and sensible standards, when so much progress has occurred? Surveillance of lead poisoning by the CDC shows that in the period 1976–1980, the mean blood lead level of children ages 1–5 years in the United States was 15 micrograms per deciliter (three times the current recommended action level), and by the period 1991–1994 the average had dropped to 2.7.¹⁴

In 2015 that number was less than half a million, approximately half a percent of children.¹⁵ This is the achievement of a good society, worthy of being called civilized.

B. *Lead in Drinking Water*

After the widespread coverage of the lead contamination of drinking water in Flint, Michigan, it became apparent that thousands of other cities have similar issues. Even the conservative Scott Pruitt, famous for repeatedly suing the U.S. Environmental Protection Agency before becoming its administrator, acknowledged that there was a problem when he provided \$100 million in grants to Michigan for the replacement of lead pipes which were the result of the Water Infrastructure Investment Act, sponsored by Senator Deborah Stabenow of Michigan. In an opinion piece for MLive Michigan, Pruitt wrote that “Flint is not alone in grappling with aged, oversized infrastructure and a legacy of lead service lines.”¹⁶ Although Pruitt recognizes that the problem is widespread, the solutions are not. In 2016, a review by the

Billion in 2008, 30 HEALTH AFF. 863, 865 (2011).

14. CTRS. FOR DISEASE CONTROL & PREVENTION, SCREENING YOUNG CHILDREN FOR LEAD POISONING: GUIDANCE FOR STATE AND LOCAL PUBLIC HEALTH OFFICIALS 17 (1997), https://stacks.cdc.gov/view/cdc/13364/cdc_13364_DS1.pdf [<https://perma.cc/8MYG-GLDH>].

15. See CTRS. FOR DISEASE CONTROL & PREVENTION, U.S. TOTALS BLOOD LEAD SURVEILLANCE, 1997–2015 (2016), https://www.cdc.gov/nceh/lead/data/Chart_Website_StateConfirmedByYear_1997_2015.pdf [<http://perma.cc/2KHB-NGCU>] (comparing the lead levels from 1997 to 2015).

16. Susan Walsh, *EPA Administrator Pruitt: Flint Not Alone in Water System Problems*, MLIVE MICH. (Mar. 20, 2017), http://www.mlive.com/news/flint/index.ssf/2017/03/epa_administrator_pruitt_flint.html [<https://perma.cc/4DVT-F3N8>].

American Water Works Association found that fifteen to twenty-two million people might be receiving their drinking water through lead pipes.¹⁷ In 2017, the “Infrastructure Report Card” of the American Society of Civil Engineers (ASCE) recommended an additional annual investment of \$105 billion to fix the many problems facing our aging drinking water system.¹⁸ The ASCE’s report, “Failure to Act,” notes that failure to invest in the needed infrastructure “will cause the U.S. to lose nearly 500,000 jobs by 2025. . . . By 2025, the nation will have lost over \$508 billion in GDP, while the cumulative impact through 2040 is expected to be \$3.2 trillion of GDP.”¹⁹ These costs are in addition to the costs borne by those poisoned by the failure to act. The Natural Resources Defense Council found “more than 12,000 health-based violations in some 5,000 community water systems serving more than 27 million people.”²⁰ Recognition of the fact that Flint is not alone, or of the value of appropriate investment, has not led to the requisite action.

C. *Lead Paint*

Our response to lead in paint remains inadequate because the disclosure rule²¹ allows landlords and sellers to indicate that they have no knowledge about lead in the home. The renovation rule²² could protect many through greater awareness of the risks of creating lead dusts; however, the rule has not been authorized in very many states. Some states take no action with respect to this new rule (in force in 2010), not even adopting the practice of referring violations to the EPA,

17. David A. Cornwell et al., *National Survey of Lead Service Line Occurrence*, 108:4 J. AM. WATER WORKS ASS’N E182, E190, (Apr. 2016), <https://www.awwa.org/publications/journal-awwa/abstract/articleid/57880483.aspx> [<http://perma.cc/N2J6-39CT>].

18. AM. SOC’Y CIVIL ENG’RS, 2017 INFRASTRUCTURE REPORT (2017), <http://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Drinking-Water-Final.pdf> [<http://perma.cc/D4BJ-9ZX3>].

19. AM. SOC’Y CIVIL ENG’RS, FAILURE TO ACT: CLOSING THE INFRASTRUCTURE INVESTMENT GAP FOR AMERICA’S ECONOMIC FUTURE 16 (2016), <https://www.infrastructurereportcard.org/wp-content/uploads/2016/05/2016-FTA-Report-Close-the-Gap.pdf> [<https://perma.cc/GR9R-CPUM>].

20. KRISTI PULLEN FEDINICK ET AL., NAT. RES. DEF. COUNCIL, THREATS ON TAP: WIDESPREAD VIOLATIONS HIGHLIGHT NEED FOR INVESTMENT IN WATER INFRASTRUCTURE AND PROTECTIONS (May 2, 2017), <https://www.nrdc.org/resources/threats-tap-widespread-violations-water-infrastructure> [<http://perma.cc/5DS6-KQL2>].

21. 40 C.F.R. §§ 745.100–745.119 (requiring the disclosure of information about lead paint in residential structures).

22. 40 C.F.R. §§ 745.80–745.92 (requiring contractors to contain and clean up any dusts generated by the disturbance of paint that could contain lead).

or informing the regulated population of its existence.²³ There is no visible nationwide effort to take action on lead in soil, and although some contaminated sites are being cleaned up, there are still areas, such as the very large Bunker Hill Superfund site in Idaho, where there has been ongoing exposure in four towns for decades.²⁴ How do we learn about and avoid lead in products, such as paint in imported toys, or in folk medicines, or in cosmetics? By and large, unless we subscribe to various alerts from Departments of Public Health or the Consumer Product Safety Commission, the ordinary citizen does not hear about them. We could be doing far more than we are to avoid lead exposures, and the value of the investments we could make would far outweigh their costs—even by short-term estimation. In the long run, because eliminating lead from the world we live in would create permanent benefits lasting as long as people live, the value of this action is infinitely greater than the costs.

D. *Calling for Action*

What can we do about lead? One thing citizens can do is call upon governments to take further action. On April 6, 2017, participants in “A Public Conversation on Lead” held at the Springfield Fair Housing and

23. Research conducted by Boston University students (overseen by the author) found “tremendous variability” among the states. See *The Regulated Community Compliance Project*, BOS. U. GEOGRAPHY: REGULATED CMTY. COMPLIANCE PROJECT, <http://www.bu.edu/rccp/lead-project/> [<http://perma.cc/7FJD-DJ89>]. Only 10% of responses indicated that the state took action to inform potentially liable or affected parties of the existence of the new federal rule. *2014 RCCP Survey Results*, BOS. U. GEOGRAPHY: REGULATED CMTY. COMPLIANCE PROJECT, <http://www.bu.edu/rccp/lead-project/2014-rcpp-survey-results/> [<https://perma.cc/DP3S-AQZP>]. The explanation by the Kansas Department of Health and Environment (KDHE) as to why the state took delegation of the law is notable for its assumption that enforcement of the new rule would be excessively punitive, and for its failure to note the primary purpose of the rule, to prevent lead poisoning:

KDHE takes a cooperative approach to regulatory enforcement that encourages and rewards compliance and promotes the activities of business. In that spirit KDHE has taken enforcement action against willfully noncompliant entities but only as a last resort. It is to everyone’s advantage that KDHE work with Kansas business and not against it. This is the driving reason why KDHE chose to implement and enforce this provision of the Toxic Substance Control Act (TSCA) as opposed to requesting the EPA to enforce this rule in a punitive fashion in our state.

CONSTRUCTIVE ENGAGEMENT WITH THE REGULATED COMMUNITY, BOS. U. GEOGRAPHY: REGULATED CMTY. COMPLIANCE PROJECT (Apr. 2014), <http://www.bu.edu/rccp/lead-project/> [<http://perma.cc/7FJD-DJ89>].

24. Coalition, *Statements from Silver Valley*, COAL. FOR A PUB. CONVERSATION ON LEAD (Apr. 5, 2017), <http://leadconversation.net/statement-silver-valley/> [<http://perma.cc/GX2S-RBTA>].

Civil Rights Conference wrote to Ben Carson, the new Secretary of Housing and Urban Development, asking him to devote significant attention to the lead problem, which he spoke about with apparent sincerity during his confirmation hearings.²⁵ In mid-June, they received a response from the Secretary's Office of Congressional and Intergovernmental Relations noting that the Department of Housing and Urban Development (HUD) "is currently implementing some of the strategies" identified in the letter. The response noted that \$125 million in grants will go to about twenty-eight "states and units of local governments to identify and control lead-based paint hazards in eligible privately-owned housing."²⁶ These grants fund community outreach to promote awareness and prevention, research grants, and enforcement. While receiving a response is gratifying, the response does not answer the question of why only twenty-eight states and units of government should receive grants. In November, attendees of the Lead and Environmental Hazards conference in Philadelphia provided a list of recommendations for action to the federal task force on lead.²⁷ The Coalition for Public Conversation on Lead is organizing further such events, and is just one example of how concerned citizens can make their opinions known about the need to fully address unnecessary lead poisoning everywhere.

E. *Inadequate funding*

To evaluate whether the \$125 million is adequate, compare this statement from the National Center for Healthy Housing concerning federal appropriations for 2017, which called for

increasing HUD's Office of Lead Hazard Control and Healthy Homes program to \$230 million annually over 10 years. This is the amount the Presidential Task Force on Environmental Health Risks and Safety Risks to Children recommended in its Federal Strategy Targeting Lead Paint Hazards. Specifically, \$230 million over 10 years will provide lead hazard screening and lead hazard control of

25. See Coalition, *Statement from 2017 Fair Housing and Civil Rights Conference*, COAL. FOR A PUB. CONVERSATION ON LEAD (Apr. 7, 2017), <http://leadconversation.net/statement-2017-fair-housing-civil-rights-conference/> [https://perma.cc/5B45-HBVZ].

26. Letter from Ben Carson, Sec'y Hous. & Urban Dev., to Coal. for a Pub. Conversation on Lead (June 2017) (on file with author).

27. Coalition, *Statement of Lead Professionals to Federal Task Force*, COAL. FOR A PUB. CONVERSATION ON LEAD, (Nov. 13, 2017), <http://leadconversation.net/statement-lead-professionals-federal-task-force/> [https://perma.cc/2UH5-5LSA].

pre-1960 housing occupied by low-income families.²⁸

It is important to note that the \$230 million recommended in the year 2000 is a bare minimum, covering only “[p]re-1960 [h]ousing [o]ccupied by [l]ow-[i]ncome [f]amilies [n]ot [c]overed by HUD [r]egulation (230,000 units/year),”²⁹ and that amount is for interim controls, not full abatement of risks. To cover all pre-1960 housing at risk of lead paint hazards would cost an estimated \$1.84 billion, and to fully abate risks in low-income housing would cost \$2.1 billion. Before we say that is unaffordable, we must ask what the benefits would be. The Presidential Task Force estimated the net benefits of the screening and interim controls to be “\$8.9 billion at a 3% discount rate (or \$1.2 billion at a 7% discount rate),” and the “benefit of [full] abatement of low-income housing [was] estimated at \$37.7 billion at a 3% discount rate (\$20.8 billion at a 7% discount rate).”³⁰ In order to understand these numbers, it is necessary to know that a 7% discount rate takes much less account of the future value of preventing lead poisoning than does a 3% discount rate (the discount rate is used to assess the value of having money in your hands now, and a higher one values having it now more than a lower one). But lead poisoning persists, its harm persists, and the value of not being lead poisoned lasts your whole life. Children born generations from now will value the removal of lead from their environment, even though application of the discount rate produces a calculation that recognizes none of the value they receive.³¹ But no matter how you look at it, a relatively small investment of \$2.1 billion would produce savings of at least ten times that; this is just what can be quantified. The value to human social relationships of such an investment, the affirmation that each individual has the right not to be poisoned, and the sense that our society recognizes this right, cannot be calculated.

While it is sensible to recognize the common wealth in public

28. POLICY: BACKGROUND, NAT’L CTR. FOR HEALTHY HOUS., <http://www.nchh.org/Policy/National-Policy/Federal-Appropriations.aspx> [<http://perma.cc/REX6-9HGC>].

29. PRESIDENT’S TASK FORCE ON ENVTL. HEALTH RISKS & SAFETY RISKS TO CHILDREN, ELIMINATING CHILDHOOD LEAD POISONING: A FEDERAL STRATEGY TARGETING LEAD PAINT HAZARDS 5 tbl.2 (Feb. 2000), <https://www.cdc.gov/nceh/lead/about/fedstrategy2000.pdf> [<http://perma.cc/N26Z-Z7N4>].

30. *Id.* at 6.

31. The discount rate is applied to produce a calculation of the present value of investments. While it allows a comparison of the benefits of investing in today’s dollars, it does not provide an accurate assessment of future values, because it discounts them. A high discount rate will reduce future values to nothing in a few generations.

health, money is not the point. The point is whether or not we, as a society, consider everyone members—individuals worthy of respect. If you love your child, you do not hesitate to spend money to care for him or her. Perhaps you cannot legislate, as you cannot buy, love. But we should be able to expect sufficient effort to prevent poisoning. The manner in which we deal with the lead poisoning issue is an indication of the type of society we are.

F. *Responsive Governance*

Martha Albertson Fineman, a legal scholar at Emory University, is the founder of the Vulnerability and the Human Condition Initiative, which recognizes vulnerability as the primal human condition, something we all share.³² She points out that principles of autonomy, self-sufficiency, and the “restrained state” have led to the situation where “we have no guarantee of basic social goods such as food, housing, and health care, and we have a network of dominant economic and political systems that not only tolerate, but justify grossly unequal distributions of wealth, power, and opportunity.”³³ Instead, we can have a “responsive” government, which attends to people’s needs as part of its duties. The Vulnerability and the Human Condition Initiative states that vulnerability is “the characteristic that positions us in relation to each other as human beings and also suggests a relationship of responsibility between the state and its institutions and the individual.”³⁴

The common law of negligence, positing that the reasonable person would take care to avoid foreseeable harm to another, also sees each person in relationship to others.³⁵ The myths of autonomy and invulnerability characterize the extreme pursuit of self-interest as the purposes government must respect above all—and often this takes the form of abstracted profit replacing human lives. While these myths are valuable reminders of the importance of freedom from domineering governance and from unnecessary restrictions, they result in policies that

32. Martha Albertson Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, 20 YALE J. L. & FEMINISM 1, 1 (2008).

33. *Id.* at 3.

34. *Vulnerability and the Human Condition Initiative*, EMORY U., <http://web.gs.emory.edu/vulnerability/> [<http://perma.cc/67H3-TNU5>].

35. For a concise yet thorough review of the elements of negligence, see David G. Owen, *The Five Elements of Negligence*, 35 HOFSTRA L. REV. 1671 (2007). “Duty, obligation of one person to another, flows from millennia of social customs, philosophy, and religion. Serving as the glue of society, duty is the thread that binds humans to one another in community.” *Id.* at 1674.

justify neglect when they are elevated above other considerations that flow from acknowledgement of our mutual co-existence. The question of whether or not we have a duty to try to protect others, especially children, from the long-lasting effects of lead, has to do with whether we can recognize that we are each vulnerable living things, in a vulnerable ecosystem, with responsibilities for protection. Denial of this fundamental task cannot be sustained without incalculable damage to the very soul of a society.

II. ACTIONS WE SHOULD TAKE

There is much we can do about lead poisoning. The following is not exhaustive, but rather is intended to be an illustrative list.³⁶

A. Increase Testing

Although pediatricians recommend, and Medicaid is supposed to require, 100% of all children to be tested for lead,³⁷ this is not happening.³⁸ In 2000, the Advisory Committee on Childhood Lead Poisoning Prevention found that although most children with elevated blood lead concentrations are Medicaid eligible, “most young children enrolled in Medicaid have not been screened with a blood lead test as required by law.”³⁹ In 2005, the Committee on Environmental Health of

36. The ideas below were gathered for the purpose of discussion at the public conversations on lead and reflect the suggestions of various members of the Coalition. Very similar ideas can be found in the consensus document of Project TENDR’s (Targeting Environmental Neuro-Developmental Risks) call for the elimination of lead. Deborah Bennett et al., *Project TENDR: Targeting Environmental Neuro-Developmental Risks. The TENDR Consensus Statement*, 124 ENVTL. HEALTH PERSP., A118 (2016).

37. See *Lead Screening*, MEDICAID, <https://www.medicaid.gov/medicaid/benefits/epsdt/lead-screening/index.html> [<https://perma.cc/S4SN-3VV4>].

All children enrolled in Medicaid, regardless of whether coverage is funded through title XIX or XXI, are required to receive blood lead screening tests at ages 12 months and 24 months. In addition, any child between 24 and 72 months with no record of a previous blood lead screening test must receive one.

Id.

38. David Wahlberg, *Two-Thirds of Medicaid-Covered Children Not Getting Required Tests for Lead Poisoning in Wisconsin*, WIS. ST. J. (Oct. 26, 2017), http://host.madison.com/wsj/news/local/health-med-fit/two-thirds-of-medicaid-covered-children-not-getting-required-tests/article_759f1af6-a685-5318-bd89-dcf2a04d0e51.html [<https://perma.cc/ERK3-L52R>]. “In 2016, 32 percent of children on Medicaid were tested for lead poisoning at ages 1 and 2, according to a health department report released this month. In 2014, 42 percent of such children got the testing.” *Id.*

39. Advisory Comm. on Childhood Lead Poisoning Prevention, *Recommendations for Blood Lead Screening of Young Children Enrolled in Medicaid: Targeting a Group at High Risk*, 49 CTRS. FOR DISEASE CONTROL & PREVENTION: MORBIDITY & MORTALITY WKLY.

the American Academy of Pediatrics called for increased attention, noting that “[m]ost US children are at sufficient risk that they should have their blood lead concentration measured at least once.”⁴⁰ The testing of all pregnant women, just as important for healthy development, is also not taking place. Many states do not report to the CDC’s Lead Poisoning Surveillance System.⁴¹ Typically, we think of testing at very young ages, but older children can also be exposed. Although older children may be somewhat less vulnerable, they are still quite susceptible to the harm lead can cause, as are people of all ages.⁴² Testing children when risk indicators are present is appropriate at any age. Evaluation of the possibility of lead exposures should be much more widespread and routine. Specifically, more efforts should be made to detect indicators of causes such as occupational or recreational factors, consumption of game, or lead in products, foods, soils, water, or paint.

Testing of bodies is too late. Instead, we need to increase the testing of products, soil, water, and paint; evaluate where lead has been disseminated into the environment, such as at outdoor shooting ranges; and clean up the billions of lead bullets shot—some of it located in wetlands, slowly dissolving and entering the water of our ecosystem. We need more testing of residences. We could offer free testing, make sure that tenants know they have the right to test, even when their landlord declines to do it, and make sure that prospective purchasers know about—and use—their ten-day right to test.⁴³ We could establish public repositories where testing information could be submitted, create a registration process to ensure the information is legitimate, and build a test database of lead paint in neighborhoods.

B. *Remove or Make Safe the Source*

It is not adequate only to test. The American Academy of Pediatrics’ Committee on Environmental Health coupled their call for increased testing with the statement that “[t]he focus in childhood lead-

REP. 1, 11 (2000).

40. Comm. on Env’tl. Health, *Lead Exposure in Children: Prevention, Detection, and Management*, 116 PEDIATRICS 1036, 1036 (2005), <http://pediatrics.aappublications.org/content/pediatrics/116/4/1036.full.pdf> [<http://perma.cc/35EK-9HEP>].

41. Only 29 states and five cities report. See *Childhood Lead Poisoning Data*, *supra* note 2.

42. Lead’s impacts on so many organs, listed by the ATSDR in source cited *supra* note 1, are not only of concern when they happen to children.

43. 40 C.F.R. § 745.110 (2017).

poisoning policy . . . should shift from case identification and management to primary prevention, with a goal of safe housing for all children.”⁴⁴ In addition, it is not fair just to create a stigma about houses with lead and reduce their value. This is already the case—except that people are concerned, if they are concerned, about old housing in general. It would be more accurate and useful if more old homes in good condition could be valued accurately with better testing. But all old homes can be made safer with significant lead abatement. An increase in testing should be coupled with much greater access to funding and assistance for lead abatement. Programs thus far have proven effective as far as they go, justifying much larger investment in available practices. The payoff is revitalized neighborhoods; removal of stigma; reductions in health and tragic impact; reduced crime; better behavior and attention span; completion of education; a higher capacity workforce; and a more widespread sense that the system is just and fair, which increases social stability.

It is necessary to increase the ability of homeowners to access financial assistance, and to ensure funding for abatement (encapsulation as well as removal) where lead is found. A requirement to know whether a living space is lead safe, and informing of lead that is present—even if contained—would reveal where assistance for abatement is needed. We need to increase the ability of affected populations to access needed resources, and give renters special help. We can make places that have had repeated instances of children found with lead poisoning a focus of Community Reinvestment Act investment.⁴⁵ We could establish a revolving loan fund and grants from states to cities to establish healthy homes initiatives that could: conduct neighborhood investigations to identify unhealthy homes and target inspections; establish or support legal assistance to speed processes of enforcement; provide landlord-tenant mediation informed by a healthy homes perspective; coordinate relevant medical, social work, and legal services; provide public classes on healthy homes, grants for young people’s projects, and research; and provide favorable property insurance for healthy homes. Public recognition for realtors, developers, financial organizations, and other commercial entities that have

44. *Id.*

45. Title VIII of the Housing and Community Development Act of 1977 is intended to cause commercial banks and savings associations to help low- and moderate-income neighborhoods. Community Reinvestment Act of 1977, Pub. L. No. 95-128, tit. VIII, §§ 801–804, 91 Stat. 1147 (codified as amended at 12 U.S.C. § 2901).

contributed to the effort to eliminate lead poisoning would help people to see its central and universal importance. Because children who have elevated levels of lead need assistance,⁴⁶ money is needed to help enrich their development and overcome the obstacles presented by lead.

We could call on businesses and banks to make healthy homes a priority investment. We could ask the Federal Reserve in our region to foster an effort to invest in the Commonwealth. Such actions are needed to provide the money necessary for threats that do not come from the interior of the house, such as lead in soil and water. Information about lead water service lines has been developed in some locations, but funding for full replacement—because partial is insufficient—is spotty. Information about how to test properly is needed. Increased awareness campaigns, such as making sure people know they should not drink the water that has sat in their pipes for hours—unless the pipes are unleaded—can make a difference. But this should only be part of a larger effort to remove the pipes. Harm from lead in soil can be reduced with projects that provide free soil to cover leaded ground, bushes to be planted next to homes with leaded exteriors, as well as information about the need to test for lead in soil—especially when gardening. In some places, the leaded soil can and should be removed, but in many places it may be sufficient to simply cover the soil.⁴⁷ Increased awareness campaigns can help people to protect themselves by reducing what is brought into the house, but should be part of an overall effort to reduce the source of the harm. Why not provide health insurance reductions for all these abatement activities? The significant reductions in lead poisoning rates show that abatement works.

C. *Improve Impact of Existing Laws*

Interpreting a requirement for ensuring lead safety in the warranty of habitability—and enforcing that requirement—is an example of using existing laws. Interpreting a failure to inform tenants or purchasers that work in a residence may have caused the dispersion of lead dusts as

46. Although the neurological damage of lead is considered permanent, many experts point to the benefits of stimulation and enrichment. A 2015 report by the CDC recommends “[s]trengthened access to developmental assessment, intervention and special education services.” CTRS. FOR DISEASE CONTROL & PREVENTION ET AL., EDUCATION INTERVENTIONS FOR CHILDREN AFFECTED BY LEAD, vii (April 2015), https://www.cdc.gov/nceh/lead/publications/Educational_Interventions_Children_Affected_by_Lead.pdf [<https://perma.cc/Q6BH-YGJ3>].

47. See generally *Lead*, SOIL SCI. SOC’Y OF AM., <https://www.soils.org/discover-soils/soils-in-the-city/soil-contaminants/lead> [<https://perma.cc/6BXL-QJ8M>].

negligence—because it should have been performed in compliance with the Renovation, Repair and Paint Rule (RRP)⁴⁸ but was not—is another example. In states that have not taken delegation of the rule, officials could still inform both the regulated and the affected populations of its existence and the importance of doing work lead-safe. Officials could let people know that they would refer knowledge of violations to the EPA. Even without the direct authority to enforce the law, any jurisdiction could be using the prospect of federal enforcement to foster the implementation of lead-safe work practices. At the very least, states owe it to their regulated populations to reduce their risk of federal enforcement or suits in negligence because the rule has now lent force to the argument that lead-safe work practices are essential.

Those states that have delegation, (authorization to implement the federal law) or the federal government itself, could greatly increase enforcement by checking documentation of safe practices. Because the use of lead-safe practices must be documented, enforcement is relatively simple: finding out where work has occurred or is ongoing, and checking documentation are far easier than having to catch people in the act of violating those practices. Cities and states could easily institute drive-around inspections, note where exterior (and some interior) work is occurring, conduct random checks, and encourage the reporting of violators. Campaigns to inform customers of the importance of using certified professionals—and make clear that failing to contain and clean up lead dusts is the opposite of home improvement—could make a difference. Notice of RRP certification could be required in permit applications, and local inspectors could be empowered to give citations as well as to report offenses.

The RRP has a strange way of providing assurance that a job is done: a method of cleaning dusts in interior spaces with white cloths is prescribed; the cloths are then compared to a “cleaning verification” card. If the cloths are not visibly darker than the picture on the card, the cleaning is complete.⁴⁹ This practice avoids the costly and time-consuming method of having a certified lab test samples, which is the method used by abatement professionals. The test can even work better if customers are present at the time the cleaning verification is done. Without requiring that the cleaning verification step be performed while customers are present, contractors can simply claim that they thought the

48. *Lead: Renovation, Repair and Painting Program*, EPA, <https://www.epa.gov/lead/renovation-repair-and-painting-program> [<https://perma.cc/X5PA-8MYW>].

49. 40 C.F.R. § 745.85 (2017).

cloths were lighter than the picture. Customers should be informed that they have the right to be there, and they should be advised of that right to ensure full compliance with the RRP for work that might disturb paint. Their contracts should also include the provision that they be present during the cleaning verification and the cleaning must be performed to their satisfaction.

D. *More Focus on the Exercise of Rights*

Know Your Rights education for tenants and homebuyers can be offered in churches, health centers, and workers' centers for immigrants in order to ensure that undocumented immigrants know that they should test for lead, deserve lead-safe homes, and can litigate if their homes are not lead free.⁵⁰ Tenants should be trained to ask questions of landlords, and residents to ask questions of agencies. Fear of retaliation can be overcome by training in the resources and practices that can be used to prevent or respond to it. Governments should bolster this training with reminders that they are there to ensure the application and enforcement of the law. Outreach to affected and regulated populations through information sheets in multi-language formats can be increased. Know Your Rights workshops should be a priority for neighborhoods that have high incidence of elevated lead, old homes, known leaded soil, or water problems. Such programs will not only raise awareness among the potentially affected, but also among the regulated community; many will respond to the prospect of increased liability by doing the right thing.

Communities can institute programs to assist with property and law for ordinary people—so they understand the responsibilities of landlords, sellers, agents, and relevant agencies. This would increase their ability to fully utilize the means they need to ensure compliance with the laws intended to protect them. Programs of affirmative engagement—concerted outreach to affected communities—can be implemented not just to inform people of their rights and the regulated community of its responsibilities, but also to increase opportunities for the affected population to provide input on policy and local resources. Free legal consultation and representation could be targeted to areas and people in need. Action against discrimination—such as when families with children are refused rentals—is necessary. William Berman of Suffolk University wrote in 2013 that a testing program at Suffolk University found twenty-seven facially discriminatory advertisements for housing

50. See, e.g., *The Rights of Tenants in Maine*, PINE TREE LEGAL ASSISTANCE, <https://ptla.org/sites/default/files/tenants.pdf> [<https://perma.cc/ERG4-BZB6>].

in Boston, and then confirmed that twenty-five out of twenty-seven cases were in fact discriminatory.⁵¹

E. Increase Awareness

Gun users clearly need to be educated about lead exposure from using guns, and hunters need to know about lead fragments in game.⁵² Until lead is completely banned from all but essential and containable uses, those engaged in using it—whether it be for sport shooting, hunting, or fishing—should not be ignorant of how they are harming wildlife and themselves, and how they can mitigate the harm. Lead bullets at shooting ranges should be cleaned up, since they are often left simply lying on the surface of the ground. Ventilation at indoor shooting ranges should be enhanced,⁵³ and shooters should be encouraged to get tested for lead in their blood. Police forces should be educated about the importance of keeping lead exposure down so that officers are better able to make decisions—it has been well established that lead poisoning affects the ability to make judicious decisions.⁵⁴

51. William Berman et al., *Lingering Lead: Strategies for Eliminating Familial Status Discrimination Due to Lead Paint*, 2 BEARING WITNESS J. L. & SOC. RESP. 22, 22–23 (2014), <http://www.suffolk.edu/documents/BearingWitness/volumeTwo/files/assets/common/downloads/publication.pdf> [<http://perma.cc/UHR8-RHUS>]. The report contains additional recommendations specific to Massachusetts, but examples of many of the same recommendations—and further actions—are included in the paper.

52. See Ziba Kashef, *Research in the News: Rise in Lead Exposure Linked to Firearms*, YALENEWS (Oct. 19, 2015), <https://news.yale.edu/2015/10/19/research-news-rise-lead-exposure-linked-firearms> [<https://perma.cc/926M-NEKC>]. For a more detailed treatment, see Mark A. S. Laidlaw et al., *Lead Exposure at Firing Ranges—A Review*, 16 ENVTL. HEALTH 34, 46 (2017), which found levels above the reference level of concern in “nearly all” subjects. Primarily because of lead aerosols released by firing lead bullets, “firing ranges, regardless of type and user classification, currently constitute a significant and unmanaged public health problem.” *Id.*

53. The National Institution for Occupational Health and Safety found in 2014 “serious lead exposure from indoor firing ranges” and recommended using lead-free bullets and improving ventilation systems. Catherine Beauchum et al., *Indoor Firing Ranges and Elevated Blood Lead Levels—United States, 2002–2013*, CTRS. FOR DISEASE CONTROL & PREVENTION: MORBIDITY & MORTALITY WEEKLY REPORT (April 25, 2014), https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6316a3.htm?s_cid=mm6316a3_w [<https://perma.cc/LZA3-AA9Q>].

54. See, e.g., *In What Ways Does Lead Damage the Brain?*, COLUM. U. (Feb. 29, 2012), <https://www.mailman.columbia.edu/public-health-now/news/what-ways-does-lead-damage-brain> [<https://perma.cc/9S96-484C>]. The National Institutes of Health reported in 2014 that “U.S. studies have reported that lead exposure causes what psychologists call externalizing behavior problems, such as aggressiveness and bullying, which may lead to truancy and even jail time as children get older.” *Lead in Kids’ Blood Linked with Behavioral and Emotional Problems*, NAT’L INSTS. OF HEALTH (June 30, 2014), <https://www.nih.gov/news-events/news-releases/lead-kids-blood-linked-behavioral-emotional-problems>

Workers in industries using lead should be educated about the importance of getting their blood tested as a check on whether the workplace protections are sufficient. If medical monitoring is required by OSHA, they should know that they have the right to it. In order to provide a strong justification and framework for lead education, it is essential to understand the importance and value of awareness.

Awareness is the primary mechanism for addressing lead today. We do not generally require that leaded paint pipes or soil be removed; rather, Congress and state legislatures have generally taken a “right-to-know” approach. This can either provide a foundation for further progress, or an insufficient end to progress. The tension created by the focus on awareness instead of removing the source of the problem can be resolved, however, with an understanding that awareness is the necessary beginning to addressing the problem, and by pursuing both ends assiduously.

Concerted efforts to make people more aware of the problem can begin with the recognition that the intent of the Residential Disclosure Rule has not been realized. When a pamphlet that contains information on how to protect your family from lead is handed over to tenants and purchasers, it does not necessarily lead to greater awareness—it might remain unread. When a real estate agent signs on the disclosure form that they have informed their client of the responsibility to disclose all information about lead, that does not necessarily entail the understanding of both the agent and the client that this does not just mean proof of lead. It should also include any information pertaining to the presence or possible presence of lead. When the agent fulfills that requirement, he or she may not realize that they have gained liability protection.⁵⁵

Convincing real estate professionals of the importance of informing the potentially affected is not as hard as one might think, as there are clear business and legal arguments in addition to moral ones.⁵⁶ Much of

[<https://perma.cc/ALK7-CL44>].

55. As a result of providing classes to thousands of real estate professionals on the disclosure rule through EPA-funded courses from 2004 through 2010, the author learned that his students were almost completely ignorant of the fact that they are jointly and severally liable for the failure of a client to disclose information on lead—even if the realtor did not know about it—if the realtor has failed to inform the client of their responsibilities. RICK REIBSTEIN, BOS. U. GEOGRAPHY: REGULATED CMTY. COMPLIANCE PROJECT, ENGAGEMENT WITH THE SOURCE: REASONING WITH TARGETS OF LEAD PAINT ENFORCEMENT TO ELICIT WILLING COMPLIANCE AND REDUCE LEAD EXPOSURE RISKS 10 (2010), <https://www.bu.edu/rccp/files/2014/04/Read-the-reports-of-the-RCCP.pdf> [<http://perma.cc/U7GK-52KD>].

56. Avoidance of liability, reputational risk, and costs of response all are reduced by

the ignorance and neglect of the issue, which leads to increased risks, can be reduced with attention to logic. For example, if a landlord is asked what concerns him about lead, he may say that he is worried that a tenant will misuse the situation and withhold rent or sue him. But the right to withhold rent is generally limited to situations where it is justified, and the chances of being sued for harm from lead exposure are mitigated by reducing the chances of that harm occurring. This means that it is more effective to inform people about the risks of lead and how they may avoid them, than to pass over the issue without emphasis. Doing the latter may seem to reduce the chances for liabilities, but in fact increasing attention—for example, opening up the pamphlet and ensuring people see the sections on how to protect their children and do-it-yourselfers—can reduce concerns for everyone. Awareness of lead in soil can lead to such actions as the practice of removing shoes. Awareness can increase the use of testing and the decision to invest in source removal. As long as awareness is not regarded as the end-point, and is seen as insufficient, it can and should be used as a tool that can be very effective.

F. *Raise Money to Complete the Job Once and For All*

One suggestion that occasionally arises is to put a small charge on the transfer of large estates. While we live in a time in which taxes are being reduced, it is sensible to posit that those who have done well should give a hand to others so they might do well. Perhaps a more politically doable transitional approach would be to conduct a survey of property values and then make a projection of what the property values would be after abatement of paint in the homes, replacement of lead service lines, and covering or removal of soil. A community could then bid out for proposals for the remediation, using an expert advisory committee board to select the strategy that appropriately uses encapsulation and maintenance of safe conditions where removal is infeasible, and report on results. Because it would preserve and enhance property values, the community would be preserving and enhancing its tax base. This effort could be coupled with financial mechanisms to provide funding for those who would use it to improve property values.

Most important is to reframe the situation we are in as a tax on everyone—a tax on our collective health. If that can be understood, then a tax *for* health is preferable. If funding is created to help smaller, local

increasing the awareness of what tenants and buyers can do to protect themselves and their families.

ventures, the effort can provide local jobs and thus benefit the local economy in many other ways.

These are local and state initiatives. The National Center for Healthy Housing's call for investments of \$230 million at HUD, \$50 million for the CDC's lead surveillance program (now serving only half the country), and \$25 million for the EPA's programs is tiny compared to the estimate that we spend about \$50 billion annually to address lead, and the recognition that half a million children have elevated levels of lead, six to ten million have lead water pipes, and twenty-three million are estimated to have homes with lead paint in dangerous, deteriorated condition.⁵⁷ Because lead does not break down but persists in our environment, affirmative action is needed to reduce its constantly recurring risks, which affect many more than the numbers show. Because serious harm occurs at low levels of exposure, including impaired cognition, attention deficit disorder, psychiatric disorders, increased blood pressure, and arrhythmia, Joel Schwartz of the Harvard School of Public Health stated at the 2013 annual meeting of the American Association for the Advancement of Science (AAAS), "[W]e have to stop thinking about the problem as a small number of people who have an acute exposure, and start thinking about the problem as a large number of people who have a chronic exposure."⁵⁸

III. CREATE DISINCENTIVES FOR PUTTING LEAD IN COMMERCE

Although dozens of cases⁵⁹ have been filed by personal victims and

57. NAT'L CTR. FOR HEALTHY HOUS., NAT'L LEAD POISONING PREVENTION WEEK, OCTOBER 22–28, 2017: POLICIES IN ACTION (2008), <http://www.nchh.org/> [<http://perma.cc/7GRA-RU58>].

58. Mark Fishetti, *Lead Exposure on the Rise Despite Decline in Poisoning Cases*, SCI. AM. (Feb. 17, 2013), <https://www.scientificamerican.com/article/lead-exposure-on-the-rise/> [<https://perma.cc/4LDS-7V64>].

59. Some notable cases include: *Gibson v. Am. Cyanamid Co.*, 760 F.3d 600, 611 (7th Cir. 2014) (concerning the "risk contribution theory" where the paint company would be held liable without having to trace harm to a specific source); *Santiago v. Sherwin Williams Co.*, 3 F.3d 546, 549 (1st Cir. 1993) (rejecting plaintiff's attempt to hold defendants liable under a "market share theory" as she could not trace the harm of lead to a specific manufacturer); *California v. Atlantic Richfield Co.*, No. 1-00-CV-788657 (Cal. Super. Ct. 2014) (ordering paint manufacturers to pay damages to local governments); *Allen v. Dackman*, 991 A.2d 1216, 1228 (Md. 2010) (concerning whether an LLC can be liable for the poisoning of illegal occupants); *City of St. Louis v Benjamin Moore*, 226 S.W.3d 110, 117 (Mo. 2007) (requiring the tracing of specific products to manufacturers to find them liable); *Perez v. 2246 Holding Corp.*, 71 A.D.3d 751, 751 (N.Y. App. Div. 2010) (reducing multimillion dollar jury verdict for a child's loss of mental capacity from lead paint in a rental unit); *State v. Lead Industries Association*, 951 A.2d 428, 458 (R.I. 2008) (overturning a nuisance decision against paint manufacturers).

public officials attempting to obtain compensation for the costs of removing lead or the costs of addressing lead poisoning, the courts have yet to find that those responsible for putting lead into the products we use must pay. There are many reasons for this but foremost among them is the outmoded idea that in order for someone to be found responsible for such an act, it is necessary to tie the consequences to their actions in a tightly reasoned chain of causation. Proving causation is a bedrock concept for finding that someone was at fault for harm.⁶⁰ Making people liable for harms they did not cause is unfair. But being unable to tie the causation of particular harm directly to a particular plaintiff should not be a reason for letting people who caused that harm off the hook. The people who were the root cause—if not the immediate cause—of that harm were those people who profited from selling lead to be used in commercial products. Lead is a necessary ingredient for very few products, for example, radiation shielding. Safer alternatives have always been available for the vast majority of uses, such as in paint (zinc, for example) and gasoline (ethanol). It should not be necessary to link the actions of manufacturers directly to the harm experienced, when they choose to incorporate lead in products that do not require the use of lead and which pose significant risks.

An example of how the law evolved beyond the outmoded idea of the need to trace harm to a specific source is the 1916 case of *MacPherson v. Buick Motor Co.*⁶¹ In *MacPherson*, the plaintiff was able to recover from the Buick company for an accident in which the wheel of his car fell off—although he had not bought his car from the Buick company but from a dealer—because a car with a defective wheel “would become imminently dangerous.”⁶² Lead is an inherently dangerous thing, and putting it into paint, or as Rick Rabin points out, marketing it for use in water service lines long after knowledge of its dangers is known,⁶³ should be reason for the application of some form of strict liability.

The idea of market share liability was used in the 1980 case of *Sindell v. Abbott Laboratories*.⁶⁴ In that case, defendants were manufacturers of the drug diethylstilbestrol (DES), which was found to

60. For a discussion of how courts differ in the application of this principle, see *Note, Causation in Environmental Law: Lessons from Toxic Torts*, 128 HARV. L. REV. 2256 (2015).

61. See generally *MacPherson v. Buick Motor Co.*, 111 N.E. 1050 (N.Y. 1916).

62. *Id.* at 1054.

63. Richard Rabin, *The Lead Industry and Lead Water Pipes “A Modest Campaign,”* 98 AM. J. PUB. HEALTH 1584, 1590 (2008).

64. *Sindell v. Abbott Laboratories*, 607 P.2d 924, 937 (Cal. 1980).

be a possible cause of cancer.⁶⁵ Despite the fact that the chain of causation from the producers of risk to specific plaintiffs experiencing harm could not be established, the court found that justice required that liability be apportioned amongst the manufacturers according to their market share of the drug.⁶⁶ The precedent has been followed in some jurisdictions for DES; the Wisconsin Supreme Court, however, expanded the market-share liability theory to include white lead carbonate used in paint in *Thomas v. Mallett*.⁶⁷ The State has since passed a law limiting the application of the theory in *Mallett* by adding, among other things, a statute of limitation on when a suit can be brought.⁶⁸ There is nothing stopping states from passing legislation allowing—indeed, encouraging—risk contribution to be used in litigation. If this were widely instituted or made federal law, there would be a strong disincentive in place to put inherently dangerous materials into products that would cause exposures.

A companion strategy is for public officials to group their cases and sue jointly. This increases the chances that a court will view them as representatives of the public generally. It also allows the recovery to go to public purposes exclusively, instead of the entire recovery going only to the particular plaintiffs in the case. Because of the sense that it is unjust to reward only particular plaintiffs (or their attorneys), it is preferable for the settlement to have benefits enjoyed by a wider set of

65. The court found in Section 1 of the opinion that “estimates of the number of women who took the drug during pregnancy range from 1 1/2 million to 3 million. Hundreds, perhaps thousands, of the daughters of these women suffer from adenocarcinoma, and the incidence of vaginal adenosis among them is 30 to 90 percent.” *Id.* at 927.

66. The court found in Section 4 of the opinion that

[t]he most persuasive reason for finding plaintiff states a cause of action is that advanced in *Summers*: as between an innocent plaintiff and negligent defendants, the latter should bear the cost of the injury. Here, as in *Summers*, plaintiff is not at fault in failing to provide evidence of causation, and although the absence of such evidence is not attributable to the defendants either, their conduct in marketing a drug the effects of which are delayed for many years played a significant role in creating the unavailability of proof.

From a broader policy standpoint, defendants are better able to bear the cost of injury resulting from the manufacture of a defective product.

Id. at 936.

67. *Thomas v. Mallett*, 701 N.W.2d 523, 533 (Wis. 2005), *abrogated by statute*, Wis. Stat. § 895.046 (finding that the risk contribution theory was too expansively applied—and “raised substantial questions of deprivation of due process, equal protection. . .”). *See generally* *Collins v. Eli Lilly Co.*, 342 N.W.2d 37 (Wis. 1984) (discussing risk-contribution criteria).

68. *See* Wis. Stat. § 895.046 (2016). *See generally* *Gibson v. Am. Cyanamid Co.*, 760 F.3d 600 (7th Cir. 2014); *Clark v. Am. Cyanamid*, 877 N.W.2d 117 (Wis. 2016).

plaintiffs, and to be used to prevent future harm.

We have spent more time pursuing immediate causes, as when the landlord or seller does not do what they should. But more attention must be paid to the root causes in order to truly address the issue, which is that lead is persistent, and the dangers cannot be effectively removed unless lead is removed. Certainly, it should no longer be introduced except where there are assurances it can be controlled. Putting it into products that are widely disseminated does not fit that description.

Right now, in order to keep up with knowledge about lead in products, one must subscribe to various consumer alerts, or simply hope to become informed by hook or crook. A variety of products, including children's toys, have frequently been found to contain lead.⁶⁹ There is no widely used system for making sure we know that what is sold does not have lead in it. Yet, it has been found in a variety of products, including food, ceramics, cosmetics, medicines, and children's toys. The answer to this lack of awareness is to increase inspections and testing, and to ensure that there is a widely used system for sending out alerts. We must also ensure that there is liability on the part of those who put lead products in commerce.

CONCLUSION

We can reduce the risk by making people aware. We can remember Flint, instead of allowing the memory of unnecessary poisoning to fade. We can even live safely in a home that has lead paint if we keep it in good condition and know how to manage disturbances of the paint. We can avoid leaded products if we know what they are. We can even live safely with lead in the water if we understand that it is present and know what to do about it. To do this we must always remain aware, and take sustainable actions. If we fail to remain aware, then the lead that is underneath the current coat of fresh paint may someday be sanded off with the latest coat. Failure means that the water will sit in the pipe long enough to become seriously leaded, and someone will drink it. It also means that the knowledge that lead is contained in an imported product

69. For example, *Consumer Reports*, reported that worrisome levels of lead can still be found in children's products. In December 2011 nearly 140,000 children's travel cases sold at Target and Target.com were recalled because the surface coating contained excessive levels of lead. And in January 2012 about 7,000 packs of Super Luchamania Action Figures were recalled due to excessive levels of lead in their paint.

Reducing Your Child's Lead Levels: Here's What You Can do to Protect your Child Now, CONSUMER REPORTS (Sept. 2013), [<https://perma.cc/C8MF-JV7E>].

will never arise or be communicated. If we fail to take effective action, we do not have the excuse that we did not know about the dangers of lead. There will be no way to avoid the conclusion that we were dysfunctional.

But this can be avoided. There is no need for the continuing rate of tragic exposures, when there are so many things we can do. We need to have more discussion of these options and generate the political will to implement them.