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NOTE

INDIANA'S PUBLIC HEALTH IS IN JEOPARDY: LESSONS TO LEARN FROM TOXIC CHEMICAL CONTAMINATION IN EAST CHICAGO

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I. INTRODUCTION

Life in government-subsidized housing is not always easy, especially for the residents of the West Calumet Housing Complex (WCHC) in East Chicago, Indiana. The WCHC is a 346-unit public housing complex that was built atop the former U.S. Smelter and Lead Refinery and was first occupied in 1973.¹ Post-industrialism and racially disparate housing patterns collided in this high-risk region to create a devastating public health crisis. For Akeesha Daniels, who moved with her children to the complex in 2004, the sinister secret of what lie within the soil was the difference between sickness and health.² From living at the WCHC, Daniels' two toddlers became sick with scarlet fever, a disease that has not been common since the 1950s, and struggled with health problems over the next ten years.³ When Daniels voiced her concerns about conditions at the WCHC to the East Chicago Housing Authority (ECHA), they did not take Daniels seriously and questioned whether she was keeping her unit clean enough.⁴ In the summer of 2016, Daniels received letters from the Environmental Protection Agency (EPA) and the mayor of East Chicago, informing her of the toxic chemical contamination in the housing complex's soil and that residents would be "temporarily" relocated due to the public health risk.⁵ After receiving the letters, Daniels and other residents of the complex were worried for their health and had many questions, such as who was going to pay for the move, where the

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1. *West Calumet – East Chicago Housing Authority Relocation Plan 3*, E. CHI. HOUS. AUTH., <http://echa-in.org/drupal/drupal-7.26/sites/default/files/WCal%20ECHA%20Relocation%20Plan%20Final%201-10-17.pdf> [https://perma.cc/94NB-FM2F].

2. Alex Zilenski, *An Indiana city is poised to become the next Flint*, THINKPROGRESS (Aug. 15, 2016, 12:33 PM) <https://thinkprogress.org/40-years-in-the-dark-public-housing-residents-have-been-living-on-toxic-soil-for-decades-4c6c3927edba#.9t27y18ex> [https://perma.cc/5GTZ-7Y76].

3. *Id.*

4. *Id.*

5. *Id.*

residents would be moved to, and why residents were not informed of the serious health risk sooner.⁶

A. The Issue

The condition of the environment impacts public health in numerous ways.⁷ Chemical contaminants such as lead are present in nearly all aspects of the environment; additionally, lead is reasonably anticipated to be a human carcinogen, meaning that exposure in high levels can affect the function of the body.⁸ The majority of lead exposure is caused by human actions such as manufacturing.⁹ Lead, arsenic, and other toxic chemicals are a threat to public health and the environment, especially when the chemical contaminants are not cleaned up properly and left to linger for several decades.¹⁰ Lead poses a serious threat to public health when people are not aware of its existence in their surroundings, such as the soil where their home is located. The Residential Lead-Based Paint Hazard Reduction Act defines lead-contaminated soil as “bare soil on residential real property that contains lead at or in excess of the levels determined to be hazardous to human health by the appropriate Federal agency.”¹¹ Lead poisoning disproportionately affects low-income people and minorities, and even low-levels of lead poisoning can adversely affect public health, especially the health of children.¹²

Studies indicate that lead in Indiana’s soil from past and current industry use has substantially affected the lead levels in children’s blood.¹³ In fact, soil in Indiana’s urban regions, like East Chicago, contains up to twice as much the natural amount of lead in the soil found in rural areas throughout the state.¹⁴ Unfortunately, significant legislative action has not yet been taken to address lead contamination problems in Indiana and protect vulnerable communities throughout the state.¹⁵

This Note will argue that few viable remedies are available to predominately

6. *Id.*

7. See Lauri Harvey Keagle, *Health concerns at center of EC lead, arsenic cleanup*, NW. IND. TIMES (Sept. 4, 2014), http://www.nwitimes.com/news/local/lake/east-chicago/health-concerns-at-center-of-ec-lead-arsenic-cleanup/article_bb6467a-e346-56fd-ac13-7a8948e0aa33.html [<https://perma.cc/7XCL-BGJ8>].

8. *Toxic Substances Portal: Lead*, AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=22> [<https://perma.cc/S4S6-W4JU>].

9. *Id.*

10. Keagle, *supra* note 7.

11. Residential Lead-Based Paint Hazard Reduction Act of 1992 § 1004(17), 42 U.S.C.A. § 4851b(17) (1992).

12. 42 U.S.C.A. § 4851(1), (2) (1992).

13. Carlton M. Waterhouse & Ravay Smith, *The Lingering Life of Lead Pollution: An Environmental Justice Challenge for Indiana*, 49 IND. L. REV. 99, 100-01 (2015).

14. *Id.* at 103.

15. *Id.* at 110.

poor, urban communities affected by lead contamination, focusing on the recent lead contamination crisis faced by the WCHC in East Chicago, Indiana. Although many environmental laws are now in place to address contamination issues and protect public health in heavily industrialized communities, the laws have neither been adequate nor effective to prevent WCHC residents from living in heavily poisonous community. Lastly, this Note will analyze past and current response mechanisms to toxic chemical contamination crises affecting public health and will recommend more appropriate and effective ways to respond, should another one arise in the future. In the end, this Note will suggest education, preventative action, and interdisciplinary efforts are required to keep people safe from instances of toxic chemical contamination.

B. Roadmap

This Note discusses the recent revelation of heavily contaminated soil underneath the WCHC in East Chicago, Indiana in July of 2016. In order to provide some background and analogy of the problem, Section II discusses the highly-publicized lead-contamination scandal in Flint, Michigan that preceded the scandal in East Chicago, and looks at the existing factors in East Chicago that likely lead to the contamination beneath the WCHC. Section III analyzes the problem and the government's response from a legal and sociological perspective, as well as past attempts to solve issues of environmental contamination and disparate impact. Section IV examines legal liability for responsible parties, including federal, state and local agencies and polluters. Section V outlines potential causes of action for victims of toxic chemical contamination with commentary on the likelihood of success for each cause of action. Finally, Section VI concludes with a call to action and a realization that changes must be made at the local, state, and federal level to ensure a timely and comprehensive response occurs should another toxic environmental contamination crisis arise.

II. BACKGROUND OF THE PROBLEM

A. Flint, Michigan: Indiana's Troubled Neighbor

One may easily draw comparisons between 2014's lead contamination disaster of water pipes in Flint, Michigan and the lead-contaminated soil in East Chicago, Indiana, which is 252 miles southwest of Flint. Both cities are historic industrial towns with majority-black populations and a high percentage of people living in poverty.¹⁶ Both cities have also had public health crises involving lead, which can cause health problems such as learning disabilities, mental retardation, and behavioral problems.¹⁷

In Flint, government officials sought to save money by switching the city's water supply from the Detroit Water and Sewerage Department to the Flint River

16. *Quick Facts*, U.S. CENSUS BUREAU, <https://www.census.gov/quickfacts/table/PST045216/2629000,1819486,00> [<https://perma.cc/4437-WY5Y>].

17. Zilenski, *supra* note 2.

in April 2014.¹⁸ However, the water drawn from lead pipes without corrosion-control poisoned residents in the post-industrial city and caused a widespread public health crisis.¹⁹ While many residents and businesses in Flint noticed that the water was contaminated soon after the switch was made, the city government did not issue a lead advisory to residents until September 2015, and the EPA did not issue an emergency order to take action until January 2016.²⁰ After the Flint crisis drew national attention for the government's failure to respond in a timely manner, the East Chicago crisis in Indiana came under close scrutiny because the city also falls within EPA Region 5.²¹ The fact that East Chicago falls under the same EPA Region as Flint is significant because, should another environmental health crisis arise (as it did this time in Indiana), the same officials within the same federal agency will handle the issue. Therefore, because cities can learn from the mistakes made by responders in other cities with similar demographics and problems, government officials in East Chicago may learn what to do, as well as what not to do, if they heed the lessons on protecting public health taught by the Flint water crisis.

B. East Chicago, Indiana: The Crisis Arises

1. Industrious Past

With the events of the Flint water crisis still making national news headlines, another highly publicized toxic chemical contamination made local and national headlines with the recent public revelation of heavily contaminated soil beneath the low-income WCHC in East Chicago.²² Like Flint, East Chicago is a highly industrialized town that has been known to use toxic chemicals in the production of steel, petroleum, cement, lead, zinc, aluminum, and tin.²³ Lake County, which encompasses East Chicago in Indiana's northwest region, is also home to one of the state's most concentrated populations with, or at risk of, lead poisoning.²⁴ Deadly chemicals, such as lead and arsenic, were produced by a lead refinery and lead smelter and deposited in the soil long before the WCHC was built on the same site in the 1970s.²⁵

18. Merrit Kennedy, *Lead-Laced Water In Flint: A Step-By-Step Look At The Makings Of A Crisis*, NPR (Apr. 20, 2016, 6:39 PM) <http://www.npr.org/sections/thetwo-way/2016/04/20/465545378/lead-laced-water-in-flint-a-step-by-step-look-at-the-makings-of-a-crisis> [<https://perma.cc/ZU3M-CSYQ>].

19. *Id.*

20. *Id.*

21. *About EPA: EPA Region 5*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/aboutepa/epa-region-5> [<https://perma.cc/TB9J-3WQU>].

22. David Rutter, *Generations paid for East Chicago's pollution, indifference*, CHI. TRIB. (Aug. 2, 2016, 12:12 PM) <http://www.chicagotribune.com/suburbs/post-tribune/opinion/ct-ptb-rutter-ecllead-st-0803-20160802-story.html> [<https://perma.cc/22YR-SWJP>].

23. Zilenski, *supra* note 2.

24. Waterhouse & Smith, *supra* note 13, at 111.

25. Rutter, *supra* note 22.

While the EPA had been monitoring lead in the soil since West Calumet's designation as a Superfund site,²⁶ recent testing revealed soil contamination levels above the acceptable threshold.²⁷ By 2014, the Indiana Department of Environmental Management (IDEM), the EPA, and the Department of Justice (DOJ) negotiated cleanup settlements with the corporate polluters.²⁸ However, residents of the WCHC were not notified of the health risk in the soil beneath their homes until two years later in the summer of 2016.²⁹ Notice came in the form of letters from the EPA and the mayor of East Chicago, telling residents they would be relocated due to toxic contamination and risk to public health.³⁰ In fact, the "extent of the contamination came as a shock to residents of the complex, even though it is just north of a former lead smelting plant and on top of a smaller former smelting operation, in an area that was designated as a superfund site in 2009."³¹ In 2010, the ECHA conducted a Physical Needs Assessment and discovered that the majority of housing units at the WCHC had reached the end of their useful life and that repairs to the units would be too costly.³² Residents of the WCHC were not formally informed of the ECHA's decision to remove residents until August 3, 2016,³³ and ECHA's relocation plan was not submitted to the Department of Housing and Urban Development (HUD) for approval until September 2016.³⁴ However, according to the initial relocation plan, residents were still required to pay rent up until November 1, 2016, and any residents remaining at the complex past March 31, 2017 were required to resume paying rent.³⁵ As of October 2017, all residents of the WCHC had moved out, and

26. *West Calumet Housing Complex – East Chicago, Ind.*, U.S. ENVTL. PROT. AGENCY (last updated Oct. 25, 2017), <https://www.epa.gov/uss-lead-superfund-site/west-calumet-housing-complex-east-chicago-ind> [<https://perma.cc/V3RR-TPT7>].

27. *West Calumet – East Chicago Housing Authority Relocation Plan*, E. CHI. HOUS. AUTH., (last updated Nov. 17, 2016) <http://echa-in.org/drupal/drupal-7.26/sites/default/files/WCal%20ECHA%20Relocation%20Plan%20Final%201-10-17.pdf> [<https://perma.cc/94NB-FM2F>].

28. Zilenski, *supra* note 2.

29. *Id.*

30. *Id.*

31. Abby Goodnough, *Their Soil Toxic, 1,100 Indiana Residents Scramble to Find New Homes*, N.Y. TIMES (Aug. 30, 2016), http://www.nytimes.com/2016/08/31/us/lead-contamination-public-housing-east-chicago-indiana.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=first-column-region®ion=top-news&WT.nav=top-news&_r=1 [<https://perma.cc/XT68-EDNP>].

32. *West Calumet – East Chicago Housing Authority Relocation Plan*, *supra* note 27, at 3.

33. *Id.*

34. Lauren Cross, *East Chicago's Lead Crisis: Questions, concerns raised about East Chicago Housing Authority relocation plan*, NW. IND. TIMES (Sept. 25, 2016), http://www.nwitimes.com/news/local/lake/questions-concerns-raised-about-east-chicago-housing-authority-relocation-plan/article_dbc02f33-7c76-53f1-b34f-ed0009d729ef.html [<https://perma.cc/42B8-77E4>].

35. *West Calumet – East Chicago Housing Authority Relocation Plan*, *supra* note 27, at 10.

HUD and the ECHA decided to demolish the tainted apartment complex.³⁶

2. *Superfund Designation*

A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and the environment.³⁷ Superfund sites, such as the WCHC, typically consist of abandoned plots of land that have been heavily contaminated in the past, perhaps by businesses that are no longer in operation.³⁸ Superfunds were created in 1980 by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which imposed a tax on certain polluting industries to provide funding for government actions in response to toxic releases or abandoned hazardous waste sites.³⁹ Arsenic and lead, two materials found in the soil at the WCHC Superfund site, are ranked first and second on CERCLA's priority list of hazardous substances.⁴⁰ The EPA acknowledged that "[l]ead contamination at Superfund sites presents a threat to human health and the environment . . . [that] can be harmful to humans (particularly children) when ingested or inhaled."⁴¹ Despite the harmful contaminants that exist at many Superfund sites, there is no time limit within which industry owners or potentially responsible parties must complete Superfund site cleanup.⁴² Cleanup at some Superfund sites may even last several decades.⁴³

In 2009, the site beneath the WCHC was listed on the National Priorities List of the worst contaminated Superfund sites in the country with lead and arsenic as the primary contaminants of concern.⁴⁴ Since July 2016, tests have shown that hundreds of children living in the housing complex have dangerously high levels of lead in their blood.⁴⁵ While the WCHC's location atop a Superfund site was

36. *West Calumet Housing Complex – East Chicago, Ind.*, *supra* note 26.

37. *What is a Superfund site?*, U.S. ENVTL. PROT. AGENCY (last visited Oct. 18, 2017), <https://superfund.zendesk.com/hc/en-us/articles/211634808-What-is-a-Superfund-site-> [https://perma.cc/XB8M-92D4]. See generally Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C.A. §§ 9601-9675.

38. *Id.*

39. *Id.*

40. *Priority List of Hazardous Substances*, AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY (last updated Sept. 25, 2017), https://www.atsdr.cdc.gov/spl/#modalIdString_myTable2015 [https://perma.cc/EFU6-R66K].

41. *Lead at Superfund Sites*, U.S. ENVTL. PROT. AGENCY (last updated May 26, 2017), <https://www.epa.gov/superfund/lead-superfund-sites> [https://perma.cc/5HU6-ZJ5C].

42. *How much time does an industry owner of a Superfund site have to clean the site up?* U.S. ENVTL. PROT. AGENCY (last visited Oct. 18, 2017), <https://superfund.zendesk.com/hc/en-us/articles/211635188-How-much-time-does-an-industry-owner-of-a-Superfund-site-have-to-clean-the-site-up-> [https://perma.cc/K2RF-WQA7].

43. *Id.*

44. *USS Lead Superfund Site*, U.S. ENVTL. PROT. AGENCY (last updated Jan. 10, 2018), <https://www.epa.gov/uss-lead-superfund-site?id=0501433> [https://perma.cc/8W98-NSS8].

45. Goodnough, *supra* note 31.

not a secret, one must ask why the ECHA continued to lease apartments to tenants at a location deemed one of the worst contaminated sites in the country for seven years after the WCHC's Superfund designation and National Priorities listing in 2009.⁴⁶ As of July 2016, East Chicago wanted to relocate 1,200 residents, including 600 children, living in the WCHC projects, but many residents were unsure of where else to go due to lack of money and few comparable low-income housing units available in East Chicago.⁴⁷ While East Chicago officials distributed housing vouchers and relocation counseling to WCHC residents, this solution was not effective.⁴⁸ Some residents felt that the ECHA dodged questions and offered vouchers in lieu of answers, while other residents who received vouchers still could not afford to pay a new security deposit to landlords.⁴⁹

3. Ineffective Local Solutions

Despite the voucher system, relocating affected WCHC residents outside East Chicago may not solve the housing issue for various reasons, including the residents' reluctance to uproot their lives and the lack of comparable housing in the immediate area.⁵⁰ Research conducted in late 2016 indicated that all of the families residing at the WCHC are unlikely to find housing options within the ECHA's jurisdiction, which adds to the struggle of finding comparable housing that adequately meets the residents' needs.⁵¹ Other issues that may discourage affected WCHC residents from leaving East Chicago are family members living nearby and the potential for gang violence in surrounding cities.⁵² Additionally, geographic immobility may plague low-income residents who may not be able to afford a personal car, and who may rely on public transit to get to and from work. Reliance on public transit may limit where a person can live and travel. Residents of the WCHC will likely face housing struggles whether they remain in East Chicago or leave.

C. Questions to Consider

Consider the relationship between federal, state, and local officials. Public health disasters often arise from a failure of government or as a consequence of poor policy choices at all levels.⁵³ A system of overlapping and shared responsibility among federal, state, and local governments is often required.⁵⁴ Ideally, each tier of government should play a unique role in a well-coordinated

46. Zilenski, *supra* note 2.

47. Rutter, *supra* note 22.

48. *West Calumet – East Chicago Housing Authority Relocation Plan*, *supra* note 27, at 4.

49. Goodnough, *supra* note 31.

50. *Id.*

51. *West Calumet – East Chicago Housing Authority Relocation Plan*, *supra* note 27, at 11.

52. Zilenski, *supra* note 2.

53. LAWRENCE O. GOSTIN & LINDSAY F. WILEY, *PUBLIC HEALTH LAW: POWER, DUTY, RESTRAINT* 76 (3rd ed. 2016).

54. *Id.*

effort to ensure the health and safety of all citizens.⁵⁵ Unfortunately, it seems that the government agencies involved in the East Chicago lead contamination crisis left the public in the dark about the public health and environmental issues around them.⁵⁶ Government agencies should be, and could have been, more cohesive in reacting to this environmental health crisis. Determining which entity had knowledge of the environmental contamination and resulting health crisis, and which one had the most resources to address the problem are important to think about in determining who should be held responsible. Identifying the responsible party and what remedies are available can streamline the compensation and remediation process should another toxic environmental crisis arise in the future.

III. ANALYSIS OF THE PROBLEM

A. Threats to Public Health

Science has proven that toxic chemical exposure leads to illness, disease, and negatively affects mental processes.⁵⁷ As WCHC residents found out at a community meeting, “children [if exposed to lead at a young age] can be left with severe brain damage, resulting in irreversible mental disorders, seizures, behavioral disorders like ADHD, and stunted educational growth.”⁵⁸ Lead does not linger in the blood for long before being absorbed by bones and organs.⁵⁹ Thus, the damage of lead poisoning is irreversible and side effects will linger for the rest of an exposed person’s life.⁶⁰ A 2008 study found that children with high levels of lead in their blood end up with significant decreased brain volume as adults, indicating lead’s adverse effect on brain development and its alteration of the brain’s structure.⁶¹ Lead affects the brain’s gray matter, a region which is responsible for executive functions, mood regulation, and decision-making.⁶² Alteration to such crucial factors of the brain are significant because an affected child may have trouble with fine motor skills and may develop abnormal social behavior, such as aggression.⁶³ Other studies have found that this brain alteration, abnormal social behavior, and aggression can be linked with higher violent crime

55. *Id.*

56. Goodnough, *supra* note 31.

57. Zilenski, *supra* note 2.

58. *Id.*

59. Abby Goodnough & Diantha Parker, *The Facts About Lead Exposure and Its Irreversible Damage*, N.Y. TIMES (Jan. 29, 2016) <https://www.nytimes.com/2016/01/30/us/lead-poisoning.html> [<https://perma.cc/JJV4-UMGB>].

60. *Id.*

61. Kim M. Cecil, et al, *Decreased Brain Volume in Adults with Childhood Lead Exposure*, PLOS MED. (May 27, 2008) <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0050112> [<https://perma.cc/FC6M-XZ2T>].

62. *Id.*

63. *Id.*

rates.⁶⁴

Because lead affects the body's nervous system and cognitive development, childhood lead poisoning may also result in problems such as lower I.Q., hearing loss, reduced attention span, learning disabilities, and perhaps death.⁶⁵ Early childhood educators often see the aforementioned mental and physical effects of lead poisoning on child development.⁶⁶ The areas affected by lead poisoning will also pose negative consequences for children throughout their years in school, and may set them up for a lifetime of failure. Since the harm caused by lead poisoning is irreversible, the implications of lead poisoning on vulnerable young children should have been enough to spur the ECHA, IDEM, the EPA, and state and local governments into action.

While lead and other toxic chemicals pose health risks to all individuals who are exposed to them, recent headlines of the events in Flint and East Chicago have prompted government agencies to act to preserve public health and safety of vulnerable populations, such as children, whose "bodies absorb lead more quickly and efficiently than adults."⁶⁷ To combat permanent health problems suffered by children who are exposed to lead, the Centers for Disease Control and Prevention (CDC) implemented a Childhood Lead Prevention Program to protect this vulnerable population.⁶⁸ The CDC partnered with HUD and the EPA, as well as other agencies, to eliminate lead poisoning in children by the year 2020 in a plan called Healthy People 2020.⁶⁹

Although the Healthy People 2020 plan is targeted at lead poisoning stemming from house-related hazards – like lead paint – perhaps several of its measures can be aimed at tackling lead poisoning from other sources near or surrounding the home, such as soil. The Healthy People 2020 federal strategy to eliminate childhood lead poisoning as a public health problem includes measures such as identification and care for children with elevated blood levels, surveillance of elevated blood levels in children to monitor progress, and research to further improve childhood lead poisoning prevention methods.⁷⁰ A central goal of this plan is to eliminate elevated blood lead levels in children, especially in

64. Kevin Drum, *Lead: America's Real Criminal Element*, MOTHER JONES (Feb. 11, 2016) <http://www.motherjones.com/environment/2016/02/lead-exposure-gasoline-crime-increase-children-health> [https://perma.cc/5KAT-7USP].

65. Marco Beltran, *Impact of Lead Exposure in Very Young Children*, ADMIN. FOR CHILDREN & FAMILIES, <https://www.acf.hhs.gov/blog/2016/03/impact-of-lead-exposure-in-very-young-children-0> [https://perma.cc/FD6V-CC2V].

66. *Id.*

67. *Id.*

68. CDC's *Childhood Lead Poisoning Prevention Program*, HEALTHYPEOPLE.GOV, <https://www.healthypeople.gov/2020/prevention-portal-508/initiative/cdc-childhood-lead-poisoning-prevention-program> [https://perma.cc/XGA3-SHTB].

69. CDC's *Childhood Lead Poisoning Prevention Program*, CTRS. FOR DISEASE CONTROL AND PREVENTION, <https://www.cdc.gov/nceh/lead/about/program.htm> [https://perma.cc/U3N3-8WQ6] (last updated Feb. 9, 2015).

70. *Id.*

low-income housing where young children live.⁷¹ Hundreds of children residing at the WCHC could have benefitted from this plan had the toxic soil contamination crisis been publicized in time to prevent damage. If the EPA can learn from its past mistakes and failed initiatives, it may find success in forming a multi-agency partnership with the CDC and HUD to prevent lead poisoning resulting from lead exposures.

B. Negative Social Effects

Children who are at the highest risk for lead exposure are often low income, members of racial or ethnic minority groups, recent immigrants, have parents who are exposed to lead at work, or live in older, poorly maintained rental properties or areas with outdated plumbing.⁷² The children of the WCHC fall into at least three of the aforementioned categories: low income, member of racial or ethnic minority groups, and live in older or poorly maintained rental properties.⁷³ While racial and socioeconomic barriers to health are difficult to transgress, the variable that can be the most easily remedied is the type of housing in which the children live. However, low-income individuals of racial or ethnic minority groups have limited choices in where they can live due to the prevalence of environmental racism and housing discrimination.⁷⁴

Environmental racism signifies “any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color.”⁷⁵ This kind of racism is often reinforced through legal or governmental means, and is targeted toward people of color, working class people, and poor people.⁷⁶ The residents of the WCHC have historically been poor racial minorities who, due to their indigent status, may struggle to obtain adequate healthcare, hire a lawyer to file a lawsuit, or find suitable alternate housing.⁷⁷

In 2010, the EPA promised to make environmental justice a priority of the agency, alongside air and water quality and chemical safety.⁷⁸ The EPA defines environmental justice as “the fair and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the

71. *Eliminating Childhood Lead Poisoning: A Federal Strategy Targeting Lead Paint Hazards*, PRESIDENT’S TASK FORCE ON ENVTL. HEALTH RISKS AND SAFETY RISKS TO CHILDREN (Feb. 2000), <https://www.cdc.gov/nceh/lead/about/fedstrategy2000.pdf> [<https://perma.cc/E9YV-9R78>].

72. Beltran, *supra* note 65.

73. *Id.*

74. See Robert D. Bullard, *Essays on Environmental Justice: Environmental Racism and “Invisible” Communities*, 96 W. VAL. REV. 1037, 1038 (1994).

75. *Id.* at 1037.

76. *Id.*

77. Zilenski, *supra* note 2.

78. David M. Konisky, *Environmental Justice Delayed: Failed Promises, Hope for the Future*, 58 ENVTL. JUST. 2, 4 (March/April 2016).

development, implementation, and enforcement of environmental laws, regulations, and policies.”⁷⁹ When everyone has “the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work,”⁸⁰ environmental justice can be achieved. Environmental justice “involves issues and concerns around . . . lead poisoning . . . unequal protection, differential exposures, and unequal enforcement of environmental, public health, civil rights, and housing laws.”⁸¹

The existence of lead in the soil at the WCHC in East Chicago is an environmental justice issue because the residents were disproportionately exposed to a toxic environmental and health hazard based on the government housing resources available to them.⁸² The EPA has even labeled the WCHC as an environmental justice community due to the residents’ unequal degree of protection from environmental health hazards in their home.⁸³ However, this “health emergency . . . is a window into a larger environmental justice crisis playing out in neighborhoods across the country.”⁸⁴ Because the residents of the WCHC have suffered from lead-contaminated soil in their yards, the EPA did not meet its goal of providing equal protection from environmental and health hazards.

Distributive justice is the equitable distribution of environmental burdens and benefits.⁸⁵ Ideally, all groups of people (e.g. poor, wealthy, minority, white) would receive equal protection under the law from environmental health hazards and receive equal treatment (e.g. response time, cleanup efforts) in the event of an environmental health disaster. However, the “less politically powerful a community, and the lower the land values, the more likely it is that polluting industry will be sited in that community.”⁸⁶ As a result, distributive justice does not seem to be the case in East Chicago because as a poor community made up of mostly minorities, the city and the WCHC seem to bear disproportionate burdens of environmental health hazards.⁸⁷ Procedural justice has to do with the

79. *Environmental Justice*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/environmentaljustice> [<https://perma.cc/7DVQ-ZRRA>].

80. *Id.*

81. Bullard, *supra* note 74, at 1041.

82. See Brian Eason, Chelsea Schneider, & Maureen Groppe, *East Chicago Lead Pollution ‘a Potential Catastrophe’*, INDIANAPOLIS STAR (Aug. 22, 2016, 8:50 PM), <http://www.indystar.com/story/news/2016/08/22/east-chicago-lead-pollution-potential-catastrophe/89112984/> [<https://perma.cc/QDH8-LS86>].

83. *ATLANTIC RICHFIELD: Faces Suit over Arsenic Poisoning*, 18 CLASS ACTION REP. (Nov. 14, 2016) LexisNexis Legal News.

84. Zilenski, *supra* note 2.

85. Konisky, *supra* note 78, at 7.

86. Elizabeth B. Forsyth, *Solving Widespread Toxic Chemical Exposure: A Taxing Job*, 29 VA. ENVTL. L. J. 115, 122. (2011).

87. See Rutter, *supra* note 22.

fairness and transparency of decision-making processes.⁸⁸ Questions addressed by procedural justice include who makes the siting decisions for chemical polluters and for government-subsidized housing, and whether residents of government-subsidized housing know about environmental health hazards that may be affecting their lives. In the case of the WCHC, the environmental contamination and resulting health hazards beneath the feet of residents remained ignored until July 2016 because the government failed to act.⁸⁹ In turn, the WCHC residents had little decision-making power regarding environmental issues that posed a threat to their health and the health of their families. The story of Akeesha Daniels being “brushed off” by ECHA authorities and reprimanded for “not cleaning well enough”⁹⁰ when she confronted them with her concerns is a procedural justice issue because she was turned away by the very authority that should have been protecting her.

Corrective justice refers to the degree of fairness with which punishments are levied for violations of environmental and public health laws, and how government agencies use legal tools to prevent and redress disparities.⁹¹ The main chemical polluters in East Chicago today, DuPont and Atlantic Richfield, reached a \$26 million cleanup agreement in 2014 with the state of Indiana, the EPA, and the DOJ to pay for remediation of the affected properties.⁹² However, this “penalty” outlined in the agreement pales in comparison to the \$1 billion profit DuPont made in 2015, and therefore does not represent much of a penalty at all.⁹³ In fact, the City of East Chicago has reported to the state that it needs an estimated \$56 million for cleanup costs associated with the lead contamination crisis.⁹⁴ Nevertheless, the polluters can still be held accountable for their pollution and may be found civilly liable for claims by the affected residents.⁹⁵

Social justice “emphasizes the roles of individuals and social arrangements as causes of environmental problems” and notes that environmental disparities are part of a larger scheme, including race and socioeconomic status that perpetuates social inequality.⁹⁶ Discriminatory housing practices on the basis of race, color, national origin, or familial status fall into the social justice category.⁹⁷ Social justice applies to the residents of the WCHC because HUD filed a formal complaint on behalf of the residents against the ECHA for discriminatory housing

88. Konisky, *supra* note 78.

89. Zilenski, *supra* note 2.

90. *Id.*

91. Konisky, *supra* note 78, at 7.

92. Rutter, *supra* note 22.

93. *Id.*

94. Nick Janzen, *East Chicago Estimates \$56 Million Needed For Lead Cleanup*, WFYI INDIANAPOLIS (Mar. 10, 2017), <http://www.wfyi.org/news/articles/east-chicago-estimates-56-million-needed-for-lead-cleanup> [<https://perma.cc/XE5G-WCFZ>].

95. *See infra* Section IV.

96. Konisky, *supra* note 78, at 7.

97. *Id.*

practices under federal law.⁹⁸ The complaint alleged that the ECHA discriminated against residents in its relocation efforts by attempting to relocate them into “poor, segregated communities with similar or serious levels of environmental contaminations.”⁹⁹

The WCHC is but one of many low-income communities that face issues of unequal protection when it comes to the environment and health, and is but one population for whom the consequences of environmental hazards and contamination have long been ignored.¹⁰⁰ Environmental racism, along with unequal enforcement of laws, places communities of color at risk.¹⁰¹ African American children are roughly three times more likely to suffer from lead poisoning than Caucasian children in families with similar income.¹⁰² Majority-white communities also tend to see more proactive governmental action, faster results, and stiffer penalties against violators of the law than do minority communities.¹⁰³ This vulnerable population has clearly fallen through the cracks and not received the protection they deserve from their government. Environmental protection from serious health hazards should be afforded to all communities in a non-discriminatory way.

C. The Government's Response

Government failure to act in response to environmental health crises that affect poor urban communities is not new. Federal studies done in the 1980s found evidence of lead poisoning in children living in a predominately black West Dallas, Texas neighborhood where residue from a lead smelting factory was dumped.¹⁰⁴ Although the Dallas Health Department knew of these findings, no action was taken to prevent future illnesses.¹⁰⁵ Although many officials among differing levels of government were involved, the public likely expected government officials to fulfill their duty of communication and candor to the public. The people of East Chicago certainly deserved communication and candor, as well.

While the EPA set up yard signs at the WCHC in East Chicago telling residents not to play in the contaminated dirt in August 2016, this warning came too late and did nothing to correct the damage that had already occurred to public

98. *Opinion Letter on Preliminary Voluntary Compliance Agreement and Title VIII Conciliation Agreement*, U.S. DEP'T OF HOUS. & URBAN DEV. (Sept. 7, 2016), <http://echa-in.org/drupal/drupal-7.26/sites/default/files/Executed%20VCA%20effected%20Nov%202%202016.pdf> [<https://perma.cc/P9DG-RW8A>].

99. *Id.*

100. Zilenski, *supra* note 2.

101. Bullard, *supra* note 74, at 1044.

102. *Id.* at 1042.

103. *Id.* at 1045.

104. *Id.* at 1043.

105. *Id.*

health, the residents themselves, and the environment.¹⁰⁶ Throughout August 2016, the EPA spread mulch in yards and playground areas as a “temporary barrier” to keep contaminated dirt from being tracked into homes.¹⁰⁷ The EPA claimed these efforts were “part of a larger effort to clean up the U.S.S. Lead Superfund Site.”¹⁰⁸ The December 2016 site update for East Chicago states that from August 2016 through the first week of November, EPA officials “surveyed homes [at the WCHC] to get access agreements to conduct indoor sampling; sampled around 270 homes to determine indoor lead levels; [and] temporarily relocated about 270 households to hotels and cleaned their homes.”¹⁰⁹ Thirty-seven residents declined the EPA’s offer to have their homes and furniture cleaned, and the remaining units in the complex were vacant.¹¹⁰ As of early 2017, the EPA announced it had shut down most sampling and cleanup activities in the residential areas of the WCHC for the end of 2016, and planned to continue sampling and cleanup in the spring of 2017.¹¹¹ By late 2017, the EPA announced it was accepting public comments on a sixty-million-dollar increase in its cost for cleanup of the WCHC site.¹¹²

Unfortunately, several experts have “consistently and repeatedly concluded” that the government and EPA’s efforts to redress environmental health hazards have fallen short of expectations.¹¹³ In fact, as of early 2017, there is no mention on the EPA’s website of compensating the victims for their lead exposure or struggles to find adequate housing.¹¹⁴ While the ECHA’s West Calumet Relocation Plan provided that residents may appeal to the ECHA for any disputes related to the housing relocation or the housing choice voucher program, no cause of action or other source of compensation stemming from the lead exposure was mentioned.¹¹⁵ Only time will tell if the EPA’s remedial measures of spreading mulch and cleaning the inside of homes in the WCHC will prove effective.

Rather than relying wholly on the EPA, Indiana law delegates responsibility for lead poisoning programming to local government agencies.¹¹⁶ However, state government agencies may not be efficiently coordinated in their efforts to combat wide-reaching public health problems. Some East Chicago residents hoped for more consistency in federal lead regulation as a result of the Flint crisis, but that did not occur.¹¹⁷ When residents of East Chicago reached out to the state for help,

106. Rutter, *supra* note 22.

107. *West Calumet Housing Complex – East Chicago, Ind.*, *supra* note 26.

108. *Id.*

109. *Id.*

110. *Id.*

111. *USS Lead Superfund Site*, *supra* note 44.

112. *Id.*

113. Konisky, *supra* note 78, at 9.

114. *USS Lead Superfund Site*, *supra* note 44 (discussing cleanup activities and progress but not financial compensation for victims).

115. *West Calumet – East Chicago Housing Authority Relocation Plan*, *supra* note 27, at 16.

116. IND. CODE ANN. §§16-41-39.4-1 to -9 (West 2016).

117. Zilenski, *supra* note 2.

IDEM responded “the EPA was ‘the lead agency with the authority and responsibility for this site.’”¹¹⁸ The EPA then stated that their delayed notification to the residents of the unsafe lead levels in the soil on “problems with the contractor the agency hired to tabulate the data and concerns about the data’s quality.”¹¹⁹

Media coverage of past environmental and housing disasters, like in Flint, likely affected the government’s response to East Chicago lead contamination crisis.¹²⁰ The national attention garnered by the water contamination crisis in Flint, Michigan may have ignited action for other contaminated communities like East Chicago.¹²¹ If Flint had not happened, the East Chicago crisis may have continued to be ignored.

D. Past Attempts to Correct Health Risks from Environmental Contamination

For decades, the law has struggled to right the wrongs of environmental contamination and its disparate impact. Some legal and policy solutions that have been passed to prevent and address lead poisoning will be discussed below.

1. Legal Solutions

Congress enacted CERCLA in 1980 to address serious environmental and health risks caused by industrial pollution.¹²² A probable failure of CERCLA’s effectiveness in the past is that it is complex, complicated, and leaves the ultimate responsibility for cleanup to a large, overburdened government agency. On the state level, Indiana has the benefit of drawing from the Hazardous Substances Trust Fund, which maintains a source of money collected from punitive damage awards or violations of Indiana environmental law.¹²³ The Trust Fund pays expenses related to the release of hazardous substances and contaminants where no responsible party can be found and invests money into an environmental remediation fund.¹²⁴ As seen in East Chicago, contaminated communities may get lost in the bureaucratic shuffle while waiting for much-needed aid from the EPA, which allows harm to continue for longer than necessary. One may argue both sides of whether this was a bureaucratic or monetary decision. It may be argued that placement of low income housing on the site of a dangerous Superfund site was both monetary and bureaucratic. The city may have wanted to save money by sacrificing the health of people living in the environmental justice community, and the decision to place low-income housing there was a simple and easy one to make.¹²⁵

The Residential Lead-Based Paint Hazard Reduction Act (RLPHRA) of 1992

118. Goodnough, *supra* note 31.

119. *Id.*

120. Zilenski, *supra* note 2.

121. *Id.*

122. *Supra* note 37.

123. IND. CODE ANN. § 13-25-4-1(a)(9) (2014).

124. *Id.*

125. Bullard, *supra* note 74.

addresses lead exposure resulting from the use of lead-based paint and household dust in public housing, as well as lead exposure through contaminated soil.¹²⁶ The RLPHRA contains disclosure provisions that require the EPA to regulate disclosure of lead-based paint hazards in homes for sale or lease by providing the purchaser or lessee with lead hazard information and providing a lead hazard evaluation report about such housing.¹²⁷ Some actions for damages brought under this law were initially successful.¹²⁸ Unfortunately, this law does not allow for private rights of action under 42 U.S.C.A. § 1983, a law which is one potential legal remedy for WCHC residents.¹²⁹ This law should be interpreted more broadly by courts to more effectively meet its goal of reducing lead exposure, perhaps by allowing children affected by lead poisoning to bring actions or by permitting causes of action for violations of civil rights pursuant to 42 U.S.C. § 1983. While the RLPHRA expanded the definition of lead poisoning by including housing conditions that may cause harmful exposures, this law represents the extent of federal laws specifically addressing exposure to lead hazards in or around the home.¹³⁰

In 1994, President Clinton signed Executive Order 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations—to direct federal agencies, such as the EPA, to identify communities most at risk of environmental health hazards and address the disproportionately

126. Residential Lead-Based Paint Hazard Reduction Act of 1992, 42 U.S.C.A. §§ 4851-4856 (1992). See *supra* notes 11, 12.

127. 42 U.S.C.A. § 4852d (1992).

128. Minor children and their parents brought a class action against the Housing Authority of Louisville (HAL) seeking monetary and injunctive relief from violations of federal, state, and municipal codes to prevent and eliminate lead-based paint exposure in public housing. Charges included negligence, gross negligence, outrage, fraudulent concealment, punitive damage, and breach of contract between HAL and HUD, based on covenants that HAL properties were safe and in compliance with federal statutes for the prevention of lead-based paint exposure. The court found that the plaintiffs did not have standing to seek injunctive relief from HAL because they did not have constitutional standing, or a personal stake, in requiring HAL to take remedial action. The court found that the plaintiffs have constitutional standing to seek monetary relief from their damages, and the plaintiffs had prudential standing to seek damages under the RLPHRA. L.B. III v. Hous. Auth. of Louisville, 344 F. Supp. 2d 1009 (W.D. Ky. 2004).

129. See *Mair v. City of Albany*, New York, 303 F. Supp. 2d 237, 243 (N.D. NY 2004) (finding that the statute supporting plaintiffs' prayer for relief from the city of New York's lead-based paint abatement activities did not meet the requirements of a § 1983 claim, which are congressional intent, showing by proponent that the right assertedly protected by statute is not vague and amorphous, and the statute impose a binding obligation on the States). See also L.B. III v. Hous. Auth. of Louisville, 345 F. Supp. 2d 725 (W.D. Ky. 2004) (holding in a subsequent decision that minor children had no cause of action based on the RLPHRA because they were neither purchasers nor lessees, and RLPHRA's disclosure provisions did not create federal rights in residents of public housing properties that could be enforced pursuant to § 1983). See *infra* note 156 for more discussion of § 1983.

130. Waterhouse & Smith, *supra* note 13, at 109.

high adverse environmental or health effects of the agency's actions on minority or low-income populations.¹³¹ In response to this executive order, an official from the EPA confessed that the Agency neglected to consistently integrate environmental justice into its daily operations, had not clearly defined the populations that the Executive Order was supposed to cover, and failed to develop criteria for determining disparate impacts.¹³² Despite its idealistic aims, critical internal failures prevented this executive order from achieving its purpose and goals. Analysts of this executive order have found that incorporation of environmental justice principles into protective programs has been rare.¹³³ An additional failure of this Executive Order, alongside lack of implementation and failure to execute, was that it did not include state or local government officials and the affected populations in its plan to instill environmental injustice principles in solution-making.¹³⁴

2. Policy Solutions

The EPA developed Plan EJ 2014 as an agency roadmap to integrate environmental justice into programs, policies, and initiatives.¹³⁵ This plan indicated that the "EPA has taken serious strides to translate the principles and policy directives articulated in E.O. 12898 and other federal environmental justice pledges into a concrete and comprehensive strategy."¹³⁶ Scholars questioned whether this plan would actually help the EPA become more responsive to environmental justice concerns.¹³⁷ EJ 2014 provided the foundation for the EJ 2020 Action Agenda, which advanced the EPA's environmental justice agenda until the year 2020.¹³⁸ Through the EJ 2020 Action Agenda, the EPA wishes to integrate environmental justice ideals into its programs and partner with state and local governments, other federal agencies, and people in affected communities to correct environmental health hazards found in lead, drinking water, air quality, and hazardous waste sites.¹³⁹ EJ 2020 recognizes that low-income populations and underserved communities, such as the WCHC, are most vulnerable to adverse health effects resulting from exposure to environmental contamination.¹⁴⁰ This plan perhaps demonstrates a renewed commitment to implementing

131. *Laws and Regulations: Summary of Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actions-address-environmental-justice> [https://perma.cc/T29E-TGWX].

132. Konisky, *supra* note 78, at 5.

133. *Id.* at 9.

134. *Id.*

135. *Id.*

136. *Id.* at 10.

137. *Id.* at 6.

138. *Environmental Justice: About EJ 2020*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/environmentaljustice/ej-2020-action-agenda-epas-environmental-justice-strategy> [https://perma.cc/7DVQ-ZRRA].

139. *Id.*

140. *Id.*

environmental justice initiatives into the EPA's permitting, rule-making, and enforcement because these measures are important steps toward ensuring people in communities like the WCHC receive the attention and care they deserve during times of environmental and public health crises.

Despite its proactive aims, perhaps the EJ 2020 Action Plan inadvertently demonstrates the lack of care and concern shown to poor and at-risk communities in the past, despite numerous attempts at federal action to promote environmental justice initiatives.¹⁴¹ The EPA still has a few years to achieve the goals outlined in the EJ 2020 Plan. The probability of these federal initiatives trickling down into state environmental agencies remains to be seen. Hopefully the exposure of environmental health problems plaguing Flint and East Chicago will encourage agency administrators to stick to environmental justice initiatives and encourage full participation, something never before achieved.

IV. LEGAL LIABILITY

A. Liability for Federal Agencies

The East Chicago crisis was “a mind-numbing failure of government to hold polluters accountable.”¹⁴² The EPA considers lead concentration of 400 parts per million (ppm) to be safe for residential use, concentrations higher than 400 ppm to warrant cleanup, and concentrations exceeding 1200 ppm to require emergency removal.¹⁴³ In May 2016, the EPA and HUD provided updated lead levels to East Chicago city officials that reached 91,100 ppm in some areas of the complex, an astonishingly high level which is 228 times greater than the EPA's maximum-permitted lead level of 400 PPM for residential areas.¹⁴⁴ HUD, along with other federal agencies, has a statutory duty to conduct research to develop improved methods for testing for lead in soil, establish appropriate cleanup standards, and evaluate the effectiveness of testing techniques.¹⁴⁵

Judicial review of administrative action may hold federal agencies liable for inadequately addressing problems in comparison with legal standards.¹⁴⁶ Proposed legislation in Congress, called the Regulatory Accountability Act of 2017, amends the Administrative Procedure Act of 1982, reforms the procedure by which federal agencies analyze and form new regulations and guidance, and clarifies the nature of judicial review of agency actions.¹⁴⁷ The new Act states that agencies should consider whether their actions have created or contributed to the

141. See Konisky, *supra* note 78, at 5 (noting that the EPA “has long been criticized for making empty pledges on environmental justice.”).

142. Rutter, *supra* note 22.

143. Cross, *supra* note 34.

144. Zilenski, *supra* note 2.

145. 42 U.S.C.A. § 4854(a) (1992).

146. William H. Timbers & David A. Wirth, *Private Rights of Action and Judicial Review in Federal Environmental Law*, 70 CORNELL L. REV. 403, 407 (1985).

147. Regulatory Accountability Act, H.R. 5, 115th Cong. (2017); 5 U.S.C.A. § 701 (2011).

problem, and whether the agency's rules or procedures could be amended to address the problem.¹⁴⁸

Many federal environmental laws expressly allow citizens to bring civil suits on behalf of themselves against any other person, federal agency, or the United States Government.¹⁴⁹ If a federal act does not expressly provide an enforcement mechanism, courts have interpreted the existence of implied private rights of action in many federal laws.¹⁵⁰ However, the barrier of governmental immunities limits private rights of action against the federal government because the federal government has sovereign immunity and cannot be sued unless it waives its sovereign immunity or consents to suit.¹⁵¹ Additionally, private right of action suits brought against governmental entities based on federal environmental laws have not been successful in the past.¹⁵²

B. Liability for State Agencies

IDEM tested forty soil samples taken from the WCHC in 2004.¹⁵³ Finding dangerous levels of lead and arsenic but faced with limited resources, IDEM turned the site over to the EPA.¹⁵⁴ IDEM's act of turning over cleanup

148. Regulatory Accountability Act, H.R. 5, 115th Cong. § 103 (2017).

149. Timbers & Wirth, *supra* note 146, at 405-06. *See, e.g.*, Toxic Substances Control Act, 15 U.S.C.A. § 2619 (West 1982) (authorizing any person to commence a civil action against any person, including the United States or any other governmental agency in violation of the Toxic Substances Control Act).

150. Timbers & Wirth, *supra* note 146, at 406. *See* Cort v. Ash, 95 S. Ct. 2080, 2088 (1975) (determining that an implied cause of action is to be discerned from relevant factors, such as the statute creating an especial benefit for a class of which the plaintiff is a member, legislative intent to create a remedy, the remedy is consistent with the underlying purpose of the legislative scheme, and whether the cause of action is traditionally relegated to state law so that it would be inappropriate to infer a cause of action based solely on federal law). *See also* Transamerica Mortg. Advisors, Inc. v. Lewis, 100 S.Ct. 242, 252 (1979) (finding that "[o]nce it is recognized that a statute creates an implied right of action, courts have wide discretion in fashioning available relief.").

151. *See* Price v. United States, 174 U.S. 373, 375-376 (1899) (noting that the government is not liable to suit unless it consents thereto). *See also* Schillinger v. United States, 155 U.S. 163, 166 (1894) (finding that the United States cannot be sued in federal courts without its consent, and in consenting Congress has discretion to specify the types of cases in which governmental liability may be brought before the courts).

152. Timbers & Wirth, *supra* note 146, at 406. *See* California v. Sierra Club, 451 U.S. 287, 295 (1981) (finding that Congress was not concerned with the rights of individuals in the environmental law cited by petitioners, and "there is no 'indication of legislative intent, explicit or implicit, either to create such a remedy or deny one.'"). *See also* Middlesex Cty. Sewerage Auth. v. Nat'l Sea Clammers Ass'n, 453 U.S. 1, 22 (1981) (finding that there was no implied right of action under the federal environmental laws).

153. Rutter, *supra* note 22.

154. *Id.*

responsibility of the WCHC property may have confused the community about which party was leading the cleanup efforts. Companies acting without fair warning that their actions are valid under federal law, such as IDEM, are entitled to the presumptive validity and immunity from liability.¹⁵⁵ While Indiana law does not provide immunity from civil liability for an act or omission that constitutes gross negligence or willful or wanton misconduct,¹⁵⁶ IDEM should not be allowed by law to shift the full burden onto the EPA in an attempt to escape liability or discharge a duty to act. As a result of the toxic environmental contamination crisis at the WCHC, a change should be made in the law to prevent state agencies such as IDEM from turning over a matter to the EPA without expressly notifying affected victims or releasing knowledge of existing contamination. Turning over a contaminated property is not the answer because it may prevent timely remediation, rehabilitation, and notification to the public.

C. Liability for Local Agencies

The ECHA may have knowingly placed the WCHC on top of a contaminated site that was known to contain toxic chemicals in the soil. If so, the ECHA may be subject to a civil rights claim by the affected residents.¹⁵⁷ In fact, a resident of East Chicago included a § 1983 claim in a lawsuit that she brought individually and on behalf of her children against the City, the ECHA, East Chicago Mayor Anthony Copeland, and polluters DuPont and Atlantic Richfield.¹⁵⁸ The lawsuit brought numerous claims against the defendants, including a violation of 42 U.S.C. § 1983, the 14th Amendment, rights to due process and bodily integrity, contractually-created property rights in the WCHC, conspiracy, personal injury, breach contract, breach of implied warranty of habitability, fraud and misrepresentation, and trespass.¹⁵⁹ The lawsuit also alleged that when the polluters entered into a consent decree with the city of East Chicago in 2014, residents should have been notified that an agreement to clean up the lead and arsenic contamination had been reached and in not being notified, federal, state,

155. *Wis. Resources Prot. Council v. Flambeau Mining Co.*, 727 F.3d 700, 708 (7th Cir. 2013) (finding that although the polluting party's permit was not valid under EPA regulations, the permit was presumptively valid because it relied on the state EPA Administrator's directions).

156. IND. CODE ANN. § 34-30-6-2(2) (West 2016).

157. Any person who subjects or causes to be subjected the deprivation of privileges and immunities secured by the Constitution or other laws shall be liable to the injured party in an action by law, suit in equity, or other proper proceeding for redress. 42 U.S.C.A. § 1983 (1996). *See* *Maine v. Thilbottot*, 448 U.S. 1, 4 (1980) (holding that a plaintiff can sue under § 1983 for violations of federal law in addition to violations of constitutional rights). *See also* *Blessing v. Freestone*, 520 U.S. 329, 340 (1997) (holding that only violations of federal rights, not mere violations of federal statutes, will give rise to a § 1983 action).

158. *Walker v. City of E. Chi.*, No. 2:16 CV 367, 2017 U.S. Dist. LEXIS 160729 (N.D. Ind. Sept. 29, 2017) (LEXIS, *Indiana Resident: City, Makers Of Lead Paint Liable For Contamination, Injuries*, 25:11 MEALEY'S EMERGING TOXIC TORTS 12 (2016)).

159. *Id.*

and local authorities condoned wrongdoing and maliciously exposed WCHC residents to harmful contaminants through their wrongdoing.¹⁶⁰

In the ECHA's act of not providing timely replacement housing to affected residents of the WCHC and siting federally-assisted housing atop contaminated land, the ECHA is likely liable for a disparate impact claim under the Civil Rights Act of 1964.¹⁶¹ This Act provides "[n]o person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance."¹⁶²

D. Liability for Polluters

Environmental risk disparities often result from discriminatory decisions, made intentionally or unintentionally, by private actors.¹⁶³ Civil liability for violations of environmental law is strict.¹⁶⁴ Nevertheless, it is still difficult to hold industrial polluters accountable, especially when the initial polluters are no longer in operation.

A solution to this issue is the legal theory of successor in interest, which provides a way for victims to recover from businesses that are no longer solvent or in operation by holding the defunct business' successors or assigns liable so long as the ownership of a business is carried on and controlled substantially as it was before the transfer.¹⁶⁵ Under the theory of successor in interest, Atlantic Richfield and DuPont are liable based on their connection to operators of the plants that produced and released lead and arsenic contaminants in the affected WCHC location.¹⁶⁶

An additional road to remediation of the WCHC land is through a consent decree between government authorities and the polluting party. The United States filed a complaint under CERCLA of 1980 on behalf of the EPA, IDEM, and the State of Indiana to recover past cleanup costs incurred by the EPA, DOJ, and the

160. *Id.*

161. *See Villanueva v. Carere*, 85 F.3d 481, 486 (10th Cir. 1996) (finding that certain regulations promulgated pursuant to Title VI of the Civil Rights Act prohibit actions that have a disparate impact on protected groups, even in the absence of discriminatory intent). *See also* *Guardians Ass'n v. Civil Serv. Comm'n of N.Y.C.*, 103 S.Ct. 3221, 3235 (1983) (holding that proof of discriminatory intent is not required to establish a violation of the Civil Rights Act, but unless discriminatory intent is shown, declaratory and injunctive relief should be the only available remedies).

162. Civil Rights Act of 1964, 42 U.S.C.A. § 2000d (West 1964). *See supra* note 76 (noting that the residents of the West Calumet Housing Complex were predominantly minorities).

163. Konisky, *supra* note 78, at 13.

164. *See, e.g.*, Clean Water Act, 33 U.S.C.A. § 1319. *See also* *Kelly v. U.S. EPA*, 203 F.3d 519, 522 (7th Cir. 2000) (holding that civil liability under the Clean Water Act is strict, and good faith or lack of knowledge is not a defense).

165. *Successor in interest*, BLACK'S LAW DICTIONARY (10th ed. 2014).

166. Keagle, *supra* note 7.

state in responding to the U.S.S. Lead Superfund site and requested the performance of response actions by Atlantic Richfield and DuPont.¹⁶⁷ The primary objective of the consent decree, drafted in 2014, is to protect the public health and welfare or the environment by designing and implementing cleanup and response actions by Atlantic Richfield and DuPont.¹⁶⁸ The consent decree binds Atlantic Richfield, DuPont, and their successors and assigns to ensure that any change in ownership of the contaminated property where the WCHC currently stands would not change the terms of the consent decree.¹⁶⁹ The terms of the consent decree also require the polluters to submit monthly progress reports and release report to the EPA and the state of Indiana, and post a \$21 million surety bond with the EPA as a performance guarantee.¹⁷⁰ In the interest of transparency, these reports from polluters also should have been available or easily accessible to affected WCHC residents. However, despite the consent decree, Indiana law provides for immunity for a person who implements or completes an approved response action, such as a consent decree, from claims concerning matters addressed in the response action.¹⁷¹ Thus, additional claims filed against the polluters with subject matter already covered by the consent decree may not succeed in Indiana courts.

If a consent decree with a polluting party is not successful, the EPA's Superfund enforcement program comes into play under the authority of CERCLA.¹⁷² The EPA begins enforcement and monitoring of Superfund cleanup by identifying potentially responsible parties and asking them to perform cleanup before using Superfund money.¹⁷³ If the responsible polluting party does not agree to cleanup, the enforcement program works to bring the contaminating party into compliance with an order or settlement, such as a consent decree.¹⁷⁴ The EPA may issue an order compelling the parties to clean up the site, assess penalties, take over the work themselves, or partner with the DOJ to file a civil complaint against the responsible party in federal court.¹⁷⁵ The Superfund enforcement program exempts state and local governments from liability for costs resulting from emergency response to a hazardous substance release and offers

167. Consent Decree at 1, *U.S. v. Atl. Richfield Co. & E. I. DuPont de Nemours and Co.* (N.D. Ind. 2014) (No. 2:14-cv-312), <https://semspub.epa.gov/work/05/919701.pdf> [<https://perma.cc/C9JD-96MW>].

168. *Id.* at 10.

169. *Id.* at 1.

170. *See also id.* at 14, 17.

171. IND. CODE ANN. § 13-25-4-27(b) (West 2016). *See also* IND. CODE ANN. § 34-30-2-51.6 (West 2016).

172. *Superfund Enforcement*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/enforcement/superfund-enforcement> [<https://perma.cc/6D6K-MH84>]. *See generally* Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C.A. §§ 9601-9675.

173. *Superfund Enforcement*, *supra* note 172.

174. *Id.*

175. *Id.*

protection from liability to state and local governments that “involuntarily” acquired a Superfund site so long as no negligence or intentional misconduct is involved and the government did not cause or contribute to the contamination.¹⁷⁶ Thus, assuming the city of East Chicago involuntarily acquired the former U.S.S. Lead site and did not intentionally place public housing there, the ECHA, and IDEM likely will not be found financially liable for cleanup of the WCHC.

V. CAUSES OF ACTION

A. State Statutory Remedies

The lack of environmental protection laws in the early twentieth century allowed heavily industrialized cities, like East Chicago, to become contaminated quickly.¹⁷⁷ Indiana law now provides for several ways for the state to recover from toxic chemical contamination. One avenue for recovery is an environmental remediation loan program to assist and encourage the remediation, rehabilitation, and reuse of contaminated land (commonly called “brownfields”), created with the intent that cities and local government entities will actively engage in brownfield remediation and development.¹⁷⁸ Contaminated lands located in areas of poverty or socioeconomic distress, such as East Chicago, are supposed to have a priority ranking in receiving financial assistance.¹⁷⁹ Perhaps if these laws were in place in the 1970s when the WCHC was built, East Chicago would have acted to rehabilitate and revitalize the contaminated land instead of building low-income housing on top of it.

Indiana law also provides for enforcement and legal actions on behalf of the state for the unchecked environmental pollution by companies.¹⁸⁰ Under this law, it is illegal to “[d]ischarge, emit, cause, allow, or threaten to discharge, emit, cause, or allow any contaminant or waste . . . either alone or in combination with contaminants from other sources, into the environment.”¹⁸¹ Another Indiana law mandates that a person who violates any provision of Indiana’s environmental laws, permits, or orders is liable for a \$25,000 civil penalty per day of violation, and may be enjoined by the IDEM from continuing the violation.¹⁸² The \$25,000 per day of violation civil penalty would have a significant deterrent impact on companies who polluted on the WCHC site for decades.¹⁸³ The statute’s penalty,

176. *Id.*

177. See Eason, Schneider, & Groppe, *supra* note 82 (noting that the 1970s, when the WCHC was built, was an era of lax environmental regulations).

178. Environmental Remediation Revolving Loan Program, IND. CODE ANN. § 13-19-5-1 (2007). See also *Cooper Indus., LLC v. City of South Bend*, 899 N.E.2d 1274, 1284 (Ind. Ct. App. 2010) (discussing the purpose of the Environmental Remediation Revolving Loan Program).

179. IND. CODE ANN. § 13-19-5-8 (2016).

180. IND. CODE ANN. § 13-30 (2016).

181. IND. CODE ANN. § 13-20-2-1(1) (2016).

182. IND. CODE ANN. § 13-30-4-1 (2016).

183. See Rutter, *supra* note 22.

if applied to U.S.S. Lead, Atlantic Richfield, and DuPont also exceeds East Chicago's estimated cleanup cost of \$56 million, which amounts to roughly six years of violations.¹⁸⁴

The Indiana Environmental Legal Action (ELA) statute provides another cause of action for environmental disasters that allows individuals to bring suit against a person that caused or contributed to the release of a hazardous substance, and recover costs of a removal or remedial action.¹⁸⁵ Indiana law defines an environmental legal action as "any legal action brought to recover reasonable costs associated with removal or remedial action involving a hazardous substance . . . released into the surface or subsurface soil . . . that poses a risk to human health and the environment."¹⁸⁶ The Indiana legislature enacted this statute "to shift the financial burden of environmental remediation to the parties responsible for creating contaminations" in the hopes to overcome barriers to redevelopment and economic renewal.¹⁸⁷ ELA claims have a ten-year statute of limitation.¹⁸⁸ Indiana courts have also ruled that a cause of action accrues and the statute of limitation period begins to run when a claimant knows, or should know, that the damage of a negligent act has occurred.¹⁸⁹ Because IDEM, the EPA, and the state of Indiana were parties to a consent decree with Atlantic Richfield and DuPont in 2014,¹⁹⁰ the parties had actual knowledge that environmental damage had occurred and have until the year 2024 to bring ELA claims.

Another Indiana environmental law allows a citizen to bring a suit against polluters or government officials in the name of the state.¹⁹¹ The statute provides:

[A] citizen of Indiana . . . may bring an action for declaratory and equitable relief in the name of the state of Indiana against . . . a company, a corporation . . . a state agency or an officer of the state, a city, a town, a county, a local government unit, and agency, or an official of a city, a town, a county, a local government unit, or an agency, or another legal entity or their legal representative, agent, or assigns for the protection of the environment of Indiana from significant pollution, impairment, or

184. Janzen, *supra* note 94.

185. IND. CODE ANN. § 13-30-9-2 (West 1997). *See* Reed v. Reid, 980 N.E.2d 277, 289 (Ind. 2012) (interpreting the plain and ordinary meaning of "caused" or "contributed" to require some involvement by the actor which produces a result). *See also* JDN Prop., LLC v. VanMeter Enter., Inc., 17 N.E.3d 357, 363 (Ind. Ct. App. 2014) (finding that the ELA does not require a plaintiff to sue *the* person who caused or contributed to pollution, just *a* person).

186. IND. CODE ANN. § 13-11-2-70.3 (West 2016).

187. Cooper Indus., LLC v. City of South Bend, 899 N.E.2d 1274, 1284 (Ind. 2009).

188. IND. CODE ANN. § 13-30-9-2.5 (West 2011). *See* IND. CODE ANN. § 34-11-2-11.5 (West 2011) (providing that a person may seek to recover costs incurred for a removal action, a remedial action, or a corrective action incurred not more than ten years before the date the action is brought).

189. Wehling v. Citizens Nat'l Bank, 586 N.E.2d 840, 842 (Ind. 1992).

190. *See* Consent Decree, *supra* note 167.

191. IND. CODE ANN. § 13-30-1-1 (West 2016).

destruction.¹⁹²

This law gives courts discretion to grant temporary and permanent equitable relief for pollution.¹⁹³ However, this chapter of the law is geared toward remediation and rehabilitation of the land, not to provide compensation for personal injury, and is intended to benefit the environment of the state, not an individual.¹⁹⁴

B. Individual Victims

Independent causes of action may be unsuccessful for individual residents of the WCHC due to the high cost involved in hiring a lawyer and bringing an independent tort claim against a major chemical polluter that has considerable financial resources. Constitutional due process does not require the provision of counsel in all civil cases, but only presumes a right to counsel in cases involving incarceration.¹⁹⁵ Thus, since the victims' right to counsel is limited, the victims may have to rely on pro bono services to bring their claim or find a lawyer willing to work on a contingency-fee basis.

If individual victims overcome the high cost associated with lawsuits, they may face additional barriers on the path to recover from the negative effects of living in the WCHC, such as proving causation and overcoming a statute of limitations. Causation can be difficult for an individual victim to prove because harm from toxic chemical exposure is often not noticed right away and may have come from multiple polluters.¹⁹⁶ If a victim develops cancer from toxic chemical contamination, it is difficult to prove that the toxic chemical exposure was the proximate cause of the cancer.¹⁹⁷

By the time a victim learns of the toxic chemical exposure as the cause of the victim's harm, the statute of limitations may have run out.¹⁹⁸ For most civil claims, Indiana residents only have a six-year statute of limitation.¹⁹⁹ Nevertheless, since illness stemming from toxic chemical contamination may go undiscovered for several years, Indiana law provides some leeway on the statute of limitations for torts related to toxic chemical contamination in the environment.²⁰⁰ Indiana has a longer statute of limitations for deficiency in

192. IND. CODE ANN. § 13-30-1-1 (West 2016).

193. IND. CODE ANN. § 13-30-1-11 (West 2016).

194. Walling v. Appel Serv. Co., Inc., 641 N.E.2d 647, 652 (Ind. Ct. App. 1994).

195. *In re Gault*, 387 U.S. 1 (1967).

196. Elizabeth B. Forsyth, *Solving Widespread Toxic Chemical Exposure: A Taxing Job*, 29 VA. ENVTL. L. J. 115, 122 (2011).

197. *Id.* at 123.

198. *Id.* at 124.

199. IND. CODE ANN. § 34-11-2-7 (2016).

200. See *Cooper Indus., LLC v. City of South Bend*, 899 N.E.2d 1274, 1284 (Ind. 2009) (reasoning that a "statute of limitation does not begin to run against a cause of action before that cause of action exists, *i.e.* before a judicial remedy is available to the plaintiff."). See also *Pflanz v. Foster*, 888 N.E.2d 756, 758-59 (Ind. 2009) (determining that a cause accrues when all the elements of a cause of action can be shown and that it is not necessary for the full extent of damage

improvements to real property, benefitting claimants by giving them more time to bring claims.²⁰¹ The statute provides for recovery of damages, whether based on contract, tort, nuisance, or another legal remedy for:

(1) a deficiency or an alleged deficiency in the design, planning, supervision, construction, or observation of construction of an improvement in real property; (2) an injury to real or personal property arising out of a deficiency; or (3) an injury or wrongful death of a person arising out of a deficiency; may not be brought against a designer or possessor unless the action is commenced within the earlier of ten (10) years after the date of substantial completion of the improvement or twelve (12) years after the completion and submission of plans and specifications to the owner if the action is for a deficiency in the design of the improvement.²⁰²

Thus, the WCHC residents have ten years to bring a claim against their landlords who had possession and supervision of the housing complex at the time any of the residents contracted lead poisoning.

C. Class Action

Class action lawsuits require plaintiffs to meet certain criteria to bring a claim.²⁰³ In theory, a class action suit against polluting businesses may be a viable alternative for residents of the WCHC because the criteria for class actions are met.²⁰⁴ Joining over one thousand residents in a single suit is not practicable, the residents all lived in contaminated housing units, the claims of the representatives would be typical of the claims of the class, and the representative parties will surely fairly and adequately protect the interests of the class.²⁰⁵ While class actions can reduce costs to the individual in bringing the lawsuit, these types of cases are not received well in mass tort cases because the members of the class may be suffering from different afflictions from diverse sources, thus rendering all members of the class unable to be treated as a single plaintiff.²⁰⁶ On the other hand, a class action may not work for WCHC residents because, in large-claim situations where individual harms may differ, courts find individual lawsuits to be superior because they allow each plaintiff their day in court.²⁰⁷

be known or ascertainable).

201. IND. CODE ANN. § 32-30-1-5(d) (2016).

202. *Id.*

203. One or more members of an affected class sues on behalf of all members, the class is so numerous that joinder of all members is impracticable, questions of fact or law are common to the class, the claims or defenses of the representatives are common to those of the class, and the representatives will fairly and adequately protect the claims of the class. FED. R. CIV. P. 23.

204. *Id.*

205. *Id.*

206. Forsyth, *supra* note 196, at 123.

207. WILLIAM B. RUBENSTEIN, NEWBERG ON CLASS ACTIONS § 4:88. COMPARING CLASS

D. Mass Tort

Mass torts are another way for common claims to be heard at once, preserving fairness and efficiency.²⁰⁸ Mass tort cases often treat each plaintiff individually, and may be an alternative to a class action suit if the claimants do not meet the requirements of a class action, such as having common claims or defenses among the entire class. In a case of mass exposure to a toxic chemical, “individual issues of causation and injury are likely to vary among potential class members” which may prohibit the filing of a class action.²⁰⁹ The outcome of a mass tort action may differ from the outcome of a class action due to how plaintiffs are treated procedurally.

E. Risk Tax

Some scholars suggest a risk tax should be levied on the production of certain chemicals.²¹⁰ Revenue generated by that tax would then go into a fund to compensate victims for harms resulting from toxic chemical exposure.²¹¹ A benefit of this tax would be that it helps a wider group of people affected by toxic chemical exposure rather than providing a remedy for a few individuals who brought a tort claim.²¹²

A portion of the fund could be used for Medicaid, which provides healthcare to poor populations who are often disproportionately exposed to environmental health hazards and have little resources to combat the problem.²¹³ Another portion of the fund could also be used for monitoring and treatment of health problems that result from environmental health hazards and toxic chemical exposure.²¹⁴ The fund could also be used to finance programs that “decrease exposure pathways [including cleanup of contaminated sites], educate the public, and better treat chemically-related diseases.”²¹⁵

VI. CONCLUSION

Since news of the lead contamination beneath the WCHC broke in 2017, the EPA has been faced with legal action, cleanup orders, and settlements.²¹⁶ These

ACTIONS TO ALTERNATE FORMS OF LITIGATION – LARGE CLAIMS CASES (5th ed. West 2016).

208. *Id.*

209. Forsyth, *supra* note 196, at 124.

210. *Id.* at 132.

211. *Id.*

212. *Id.*

213. *Id.*

214. *Id.*

215. *Id.*

216. See generally *Technical and Legal Documents: USS Lead*, U.S. EPA <https://www.epa.gov/uss-lead-superfund-site/technical-and-legal-documents-uss-lead> [https://perma.cc/H67P-BQD4] (last updated Jan. 17, 2018).

remedial actions are certainly warranted and long overdue. Perhaps what we know now will lessen the likelihood of another lead-induced public health crisis occurring in the future.

A. What Have We Learned?

Based on this recent public health disaster and the government's poor track record of timely responses to environmental health crises, it is likely that public perception regards government agencies and actors as unhelpful and untrustworthy. Indiana residents may not have confidence in the government after seeing what happened in Flint and East Chicago. As a solution, some scholars call for a replacement of "the current system which trades human health for profit, that places the burden of proof on the 'victims' as opposed to the polluting industries, legitimize human exposure to harmful chemicals . . . exploits economically and politically vulnerable populations, [and] delays cleanup activities based on race, class, and geographic location."²¹⁷ However, a complete overhaul of an unjust system is not something that is likely to happen. Encouraging government transparency, communication, and cohesive action would be more effective in combating public health crises stemming from environmental contamination. From an interdisciplinary perspective, the EPA should not be the only government agency involved in the West Calumet Housing Complex cleanup process. "As the recent situation in Flint, MI has shown us, health emergencies can be unexpected and require a public health approach to address the needs of the community."²¹⁸

B. Preventative Action Must be Taken

It is the responsibility of humanity to look after the health and wellbeing of future generations, especially once we become aware of problems to be treated. Because past environmental wrongs and health problems cannot be solved, preventative action must be taken to preserve the health of the environment and communities in the state of Indiana. The government must take actions to ensure the most vulnerable populations are protected and made aware when they are subject to serious health hazards like lead poisoning. Indiana should be responsive and proactive in remedying the ill health effects of the East Chicago crisis; we do not want to be "another Flint." Going forward, rules and regulations that aim to prevent the disparate health effects of environmental racism must be enforced.

1. Comprehensive and Concrete Response Strategy

The City Attorney for East Chicago encountered inconsistencies in federal agencies' regulation for lead levels, which was confusing in trying to find out whether those laws were violated and whether compensation to victims was necessary.²¹⁹ A more comprehensive version of the already-existing laws is

217. Bullard, *supra* note 74, at 1041-42.

218. Beltran, *supra* note 65.

219. Zilenski, *supra* note 2.

needed to streamline and expedite the process of discovering contamination, notifying residents, and cleaning up the problem. The EPA cannot be the only agency involved; state and local agencies are needed to reach a solution, too.

Would the creation of an emergency law for environmental chemical disasters such as this, in addition to CERCLA, help matters? In my opinion, an interdisciplinary emergency response law modeled after CERCLA but with an emphasis on public health and a plan to locate safe housing would have greatly assisted the victims of the WCHC. Legislative responses to environmental health crises have played an effective role in responding to the occurrence of environmental health hazards in other situations. H.R. 4479, also known as the “Families of Flint Act,” was introduced in 2016 as a bill to provide emergency assistance related to the Flint water crisis and amends the Safe Drinking Water Act.²²⁰ Indiana should follow Michigan’s lead and create similar legislation to help the affected families of East Chicago.

Indiana recently introduced Senate Bill 322 to help identify lead poisoning in children.²²¹ This bill would require the State Department of Health to develop and distribute to primary health care providers a series of questions about a child’s exposure to lead, and may trigger a recommendation for blood lead testing depending on the family’s responses.²²² This bill, requires reporting of the blood lead test results to the state health commissioner, who must then conduct a public health investigation of the child’s home and school if the child has a blood lead level of at least ten micrograms per deciliter.²²³ This bill also gives the state health commissioner authority to order the property manager or owner to control existing lead hazards, and to issue noncompliance orders prohibiting the use of the property if the lead hazard is not controlled.²²⁴ If passed, this bill is a wonderful example of an interdisciplinary approach to help residents solve lead hazards existing in their homes or schools.

2. Review of Residential Ordinances and Permitting Requirements

Residential communities, especially ones that are government-subsidized, should not be built on top of contaminated soil. The statutory creation of a multi-agency task force combining officials with HUD, the EPA, and the Department of Health to review strategies to annually review federal programs to combat lead poisoning is another avenue where governmental agencies can do their due diligence to make sure public health of populations are protected.²²⁵ However, these programs must be enforced and the government must be held accountable for inter-governmental task forces to work.

3. Educational Outreach

The health of entire generations of children growing up on contaminated soil

220. H.R. 4479, 114th Cong. 2nd Session (2016). As of January 2018, the Families of Flint Act has not yet been passed.

221. S.B. 233, 112th Gen. Assemb., Reg. Sess. (Ind. 2018).

222. *Id.*

223. *Id.*

224. *Id.*

225. 42 U.S.C.A. § 247b-3 (1992) (West 2016).

should no longer be sacrificed. The EPA acknowledged that when it comes to lead poisoning at Superfund sites, “education is the key.”²²⁶ Statutes that provide for expansion of community education programs about lead poisoning may be a step in the right direction.²²⁷ If people in the community are taught about lead poisoning, they may recognize its indicators and be more empowered to take the appropriate steps to seek medical or legal assistance. Grants for lead poisoning related activities, which include community outreach and education targeted at people with lead contamination with the goal of reducing ongoing exposure may also help affected communities heal, as well as providing an outlet to have their issues redressed.²²⁸

In some instances, results of environmental investigations of toxic chemicals are only communicated to government officials and not the public,²²⁹ as evinced by East Chicago in regards to the WCHC situation. A solution to toxic chemical contamination that involves the community and focuses on “[i]mplementing community-based programs . . . allow citizens to be informed of the findings and learn the skills to combat lead actively in their communities” and would likely achieve great results.²³⁰ Lower levels of government and the people affected need to be notified of what is happening in their community. If someone in power, like the mayor of East Chicago, is notified, they must be compelled to take action. If everyone is involved and participating to find a solution, environmental health disasters will be solved faster and more efficiently. It is “the adoption of a new paradigm of decision making altogether that is more democratic and participatory, that empowers communities to more effectively engage, and that incorporates changes to the very social structure of American society.”²³¹ Only with a new point of view and an interdisciplinary approach to toxic chemical contamination crises can communities like the WCHC be safe from crises related to public health and environmental contamination in the future.

226. *Lead at Superfund Sites*, *supra* note 41.

227. 42 U.S.C.A. § 247b-1 (2016). *See also* 42 U.S.C.A. § 247b-3 (2016).

228. 42 U.S.C.A. § 247b-16 (2016).

229. Waterhouse & Smith, *supra* note 13, at 113.

230. *Id.*

231. Konisky, *supra* note 78, at 13.