

**DON'T DRINK THE WATER:
WHY THE SAFE DRINKING WATER ACT FAILED FLINT**

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INTRODUCTION

You wash your hands in it. You bathe your children in it. You make them mac ‘n’ cheese and chicken soup with it. You pour yourself a tall, cold glass of it. Water.

Quite possibly, you, like many other Americans, wake up every day and turn on your faucet or showerhead without considering whether the

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water pouring into your life, which you have worked and paid for, is safe. Imagine if the water you relied on to nourish yourself and your children suddenly became toxic, poisoning your children, without your knowledge.¹ The International Covenant of Economic, Social, and Cultural Rights recognizes water as necessary for our existence.² However, the recent lead-contaminated drinking water crisis in Flint, Michigan, demonstrated how even a necessity such as safe drinking water may become a commodity.³

This Note addresses in three parts how the Flint Water Crisis revealed inadequacies in current regulations under the Safe Drinking Water Act. Part I discusses the evolution of safe drinking water regulations and explains how standards are set and regulated under the Safe Drinking Water Act (SDWA) and the Lead and Copper Rule (LCR). Part II explains the roles of the Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ) in overseeing these rules in Flint. Part III will suggest actions to rebuild Flint and prevent similar crises from occurring elsewhere.

I. THE PURPOSE OF THE SAFE DRINKING WATER ACT

In the idyllic-sounding township of Toms River, New Jersey, the last twenty years have been filled with pain, heartache, and anger.⁴ The citizens of Toms River experienced a cancer cluster with many local children developing neuroblastoma.⁵ They soon discovered that a chemical company

1. See generally Molly Rauch, *When Your Water Poisons Your Children*, GOOD HOUSEKEEPING (Feb. 15, 2016), <http://www.goodhousekeeping.com/life/parenting/a36741/mothers-of-flint-michigan-contaminated-water/> [https://perma.cc/4YZE-FP2J] (depicting the story of a mother who was unaware her home's water was poisoning her and her family).

2. International Covenant on Economic, Social, and Cultural Rights, art. 11, Jan. 3, 1976, (showing that the United States has signed but not ratified the ICESCR); U.N. Economic and Social Council (ECOSOC), U.N. Committee on Economic, Social, and Cultural Rights (CESCR), General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant), (Jan. 20, 2003); see also *Status of Ratifications of ICESCR Interactive Dashboard*, OFFICE OF THE HIGH COMMISSIONER, UNITED NATIONS HUMAN RIGHTS, <http://indicators.ohchr.org/> [https://perma.cc/V7BC-P2FN] (last visited Mar. 16, 20128) (illustrating that the United States is active in applying those rights within its sovereign powers).

3. See generally Monica Davey & Mitch Smith, *What Went Wrong in Flint*, N.Y. TIMES (Mar. 3, 2016), <http://www.nytimes.com/interactive/2016/03/04/us/04flint-mistakes.html> [https://perma.cc/5ET7-J2EH] (discussing that the State gave Flint an emergency loan with conditions, one of which was continuing to use Flint River water).

4. MaryAnn Spoto, *Toms River Cancer Cluster Still a Mystery Despite 20 Years of Studies*, NJ.COM (Feb. 6, 2015, 12:59 PM), http://www.nj.com/ocean/index.ssf/2015/02/after_decades_of_studies_toms_river_residents_no_c.html [https://perma.cc/ZPC3-UTEU] (discussing the status of the Toms River community 20 years after the discovery of dangerous chemicals in the community's water and environment).

5. *Id.*

had secretly been dumping hazardous wastes into the river.⁶ The township still does not have answers as to how this could occur.⁷

Equally ravaging was the crisis in another seemingly idyllic town, Love Canal, situated near Niagara Falls.⁸ Citizens learned that the town built a local school where Hooker Medical Company had previously dumped chemical waste in the 1950s.⁹ Outbreaks of leukemia and other cancers, rises in miscarriages, and other health defects led to evacuations in 1978 and finally a declared health emergency in 1980.¹⁰ The public was rightfully upset at the slow reaction of the government in the face of a dire health emergency.¹¹ Love Canal sparked nationwide concern for ensuring safety from the wastes of this rapidly changing world.¹²

Welcome to the 21st century, where technological advances would lead one to think safe drinking water in the United States was a given.¹³ Flint, Michigan—a once-promising city near Detroit—would find that the mistakes of yesterday were too soon forgotten.¹⁴ The citizens of Flint brought the water crisis to the attention of the nation after they realized their water was poisoning them.¹⁵ After the City switched to a less expensive source for supplying public water needs, citizens noticed that the water was a rusty color and that it smelled.¹⁶ They were often told that the

6. *Id.* See generally DAN FAGIN, TOMS RIVER: A STORY OF SCIENCE AND SALVATION (2013) (telling the story, facts, circumstances, and response to the industrial pollution in Toms River that caused a neuroblastoma outbreak and other health epidemics).

7. Spoto, *supra* note 4 (recounting affected persons' confusion and anger at the lack of definitive answers as to the cause of their children's cancer).

8. See generally LOIS MARIE GIBBS, LOVE CANAL AND THE BIRTH OF THE ENVIRONMENTAL HEALTH MOVEMENT (Island Press 2011) (1998) (describing the impacts of the pollution in Love Canal).

9. *Id.* at 22 (discussing Hooker's admission to dumping chemicals).

10. *Id.* (demonstrating the dangerous effect of manmade pollutions and the need for quick response).

11. *Id.* (noting the government's slow response to the warning signs and public outcry).

12. *Id.* at 19–20.

13. See generally *Examples of Innovation in the Water Sector*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/water-innovation-tech/examples-innovation-water-sector> [https://perma.cc/CBD7-B7GF] (last updated Dec. 18, 2017) (referencing the progress that has been made in ensuring water resources are protected throughout the United States through recent innovations).

14. See generally Julie Bosman & Monica Davey, *Anger in Michigan over Appointing Emergency Managers*, N.Y. TIMES (Jan. 22, 2016), <http://www.nytimes.com/2016/01/23/us/anger-in-michigan-over-appointing-emergency-managers.html> [https://perma.cc/W6RU-XUBL] (explaining the community of Flint's opinion that emergency managers were more concerned with finances than public health).

15. Davey & Smith, *supra* note 3.

16. Brie D. Sherwin, *Pride and Prejudice and Administrative Zombies: How Economic Woes, Outdated Environmental Regulations, and State Exceptionalism Failed Flint, Michigan*, 88 COLO. L. REV. 653, 666 (2017).

water was safe, or were merely advised to boil the water before use.¹⁷ After almost two years of this, a doctor and researchers finally convinced officials that there was something bigger going on than normal effects of switching to a new water source.¹⁸ They made a disastrous diagnosis: lead poisoning.¹⁹ The slow discovery and remediation prompted some to believe that Flint is an example of environmental injustice because of the racial and economic status of the community.²⁰

Until Congress passed the SDWA, “the only enforceable federal standards for drinking water were directed at communicable waterborne diseases” under the Public Health Service Act of 1962.²¹ “Congress passed the [SDWA] in response to increasing indications of a serious threat to health from contaminants in . . . drinking water not related to communicable disease.”²² Thus, the focus of drinking water safety has shifted from a focus on waterborne diseases to controlling toxins in a world that is constantly finding new chemicals, new combinations, and new risks.²³

A. Overview of the Safe Drinking Water Act

The SDWA, codified at 42 U.S.C. §§ 300f–300j, is the primary federal law that protects drinking water from pollutants and contaminants.²⁴ Enacted in 1974, with key amendments in 1996, the SDWA includes mechanisms of regulations, funding for projects and improvements, and protection of underground sources.²⁵ Section 300g–1 gives the EPA the power to set national standards for drinking water to protect the public health and reduce or eliminate contaminants found in public water

17. 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/N5QD-QC6H>].

18. *See generally id.* (discussing the important dates of the Flint Water Crisis and when the government got involved).

19. Sara Ganim & Linh Tran, *How Tap Water Became Toxic in Flint, Michigan*, CNN (Jan. 13, 2016, 10:53 AM), <http://www.cnn.com/2016/01/11/health/toxic-tap-water-flint-michigan> [<https://perma.cc/M2ED-2C67>].

20. Catherine Millas Kaiman, *Environmental Justice and Community-Based Reparations*, 39 SEATTLE U. L. REV. 1327, 1328, 1367–68 (2016).

21. JEROME G. ROSE, LEGAL FOUNDATIONS OF ENVIRONMENTAL PLANNING 411 (2013).

22. *Id.*

23. WILLIAM H. RODGERS, JR. & ELIZABETH BURLESON, RODGERS' ENVIRONMENTAL LAW, § 4:20 (2017).

24. MARY TIEMANN, CONG. RESEARCH SERV., RL34201, SAFE DRINKING WATER ACT (SDWA): SELECTED REGULATORY AND LEGISLATIVE ISSUES 1 (2008).

25. *Id.*

systems.²⁶ Section 300g-2 gives states the power to regulate and enforce regulations of the SDWA.²⁷ The EPA oversees compliance monitoring through Public Water System Supervision (PWSS) and Underground Injection Control.²⁸ Through PWSS programs, states have the authority to direct primary implementation and enforcement of the SDWA.²⁹ State drinking water standards need to be at least as stringent as the federal standards.³⁰ Michigan's Safe Drinking Water Act authorizes the MDEQ to enforce drinking water quality standards and to make capacity assessments and evaluations.³¹

B. Setting Standards

The Michigan SDWA adopted the federal standards for maximum contaminant levels in drinking water.³² The EPA sets these standards through a three-step process.³³ First, the EPA identifies contaminants that exist in public water at levels that threaten or already harm the public's health.³⁴ Second, the EPA determines the maximum contaminant level goal (MCLG) at a level below what is expected to harm public health, which allows a margin of safety.³⁵ Finally, the EPA specifies enforceable maximum contaminant standards for each contaminant in a public drinking water system in the form of maximum contaminant levels (MCL).³⁶ The MCL "must be set as close to the [goal] as is 'feasible' [assuming] the best technology or other means available, [but] taking costs into consideration."³⁷ Feasible means "the level that can be reached by large, regional drinking water systems applying best available treatment technology."³⁸

26. 42 U.S.C. § 300g-1(b)(1)(A) (2012); OFFICE OF WATER, U.S. ENVTL. PROT. AGENCY, EPA 816-F-04-030, UNDERSTANDING THE SAFE DRINKING WATER ACT 2 (2004), <https://www.epa.gov/sites/production/files/2015-04/documents/epa816f04030.pdf> [<https://perma.cc/H3X3-ZAVE>] [hereinafter UNDERSTANDING THE SAFE DRINKING WATER ACT].

27. 42 U.S.C. § 300g-2(a).

28. TIEMANN, *supra* note 24, at 1.

29. MARY TIEMANN, CONG. RESEARCH SERV., RL31243, SAFE DRINKING WATER ACT (SDWA): A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 4 (2008).

30. *Id.*

31. MICH. COMP. LAWS § 325.1003b (2017).

32. MICH. COMP. LAWS § 325.1006.

33. UNDERSTANDING THE SAFE DRINKING WATER ACT, *supra* note 26, at 3.

34. *Id.*

35. *Id.*; *see also* TIEMANN, *supra* note 24, at 6.

36. UNDERSTANDING THE SAFE DRINKING WATER ACT, *supra* note 26, at 3.

37. TIEMANN, *supra* note 24, at 7.

38. 42 U.S.C. § 300g-1(b)(4)(D) (2012); TIEMANN, *supra* note 24, at 6-7.

The Administrator may forgo the requirement of setting a MCL if it is not “economically and technologically feasible” to determine the appropriate amount of a particular contaminant in a public water system.³⁹ In these situations, the agency may proscribe a treatment technique that the Administrator knows will satisfactorily reduce the level of the contaminant.⁴⁰ The alternative standard or form of treatment must still minimize the overall health risk; but, it does not need to conform to what would be the preferred level of that contaminant.⁴¹ The EPA is required to make an executive decision about whether bringing a pollutant or contaminant into the determined safe zone is worth the cost.⁴² The EPA achieves this by balancing the benefits that would result from reducing the levels of the pollutant in the water system with the overall costs.⁴³ The Agency must then publish its findings as a proposed regulation and allow a notice and comment period before publication of the final rule.⁴⁴

Once a level is set, the EPA can grant variances and exemptions.⁴⁵ The Michigan SDWA limits the variances to two situations: (1) when the “supplier of water demonstrates that the characteristics of the raw water source . . . do not permit the public water supply to meet the [MCL] . . . [when] taking costs into consideration,” so long as the variance will not result in an unreasonable health risk, or (2) “a specific treatment technique is not necessary to protect the health of persons served by the public water supply.”⁴⁶ Variances can effectively abolish water quality standards and grant what comes to be a “perpetual exemption” by not requiring a specific time for compliance.⁴⁷ As noted in 42 U.S.C. § 300g-5(a)(1), a community that is struggling financially has a greater chance of being granted a variance, which leads to a greater risk of compromised drinking water.⁴⁸ This information is necessary to understand the background of the Flint

39. 42 U.S.C. § 300f(1)(C)(ii).

40. *Id.*

41. 42 U.S.C. § 300f(1)(C); TIEMANN, *supra* note 29, at 3 (stating that water systems “generally are required to comply only with regulations for contaminants that pose immediate health risks”).

42. 42 U.S.C. § 300g-1(b)(3)(C)(i).

43. TIEMANN, *supra* note 29, at 6.

44. A Guide to the Rulemaking Process, FEDERAL REGISTER, https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf [<https://perma.cc/Z57Q-R4KZ>] (last visited Mar. 16, 2018).

45. MICH. ADMIN. CODE r. 325.10304 (2017).

46. *Id.*

47. RODGERS & BURLESON, *supra* note 23, at § 4:20.

48. 42 U.S.C. § 300g-5(a)(1).

Water Crisis, but there is no evidence that the Flint water system had been granted any variances or exemptions from any aspects of the SDWA.⁴⁹

C. The Switch in Flint: Violations of the SDWA and LCR

Flint's experience with violations of the SDWA began in 2013.⁵⁰ The Flint Emergency Manager, the State Treasurer, the City Council, and the MDEQ concluded that the best option for Flint's water needs was to build a new pipeline with the Karegnondi Water Authority (KWA).⁵¹ The KWA claimed the new pipeline would save \$2 million over the 25 years after completion, and, after 25 years, water costs would be 25% less than the source from which Flint had been purchasing water.⁵² While the new pipeline was being built, the City officials decided to use old pipes from the Flint water treatment plant.⁵³ Flint River, the primary source of water in Flint until the 1960s, had been prepared as an emergency, back-up water supply for Flint in 2007.⁵⁴ The only upkeep was government-mandated water softening four times a year.⁵⁵ The MDEQ warned against using the Flint River as an interim water source due to "increased microbial risks to public health," an "increased risk of disinfection by-product (carcinogen) exposure to public health," and "additional regulatory requirements under the Michigan Safe Drinking Water Act."⁵⁶ Nevertheless, in April 2013, the

49. OFFICE OF DRINKING WATER & MUN. ASSISTANCE, MICH. DEP'T OF ENVTL. QUALITY, 2014 ANNUAL REPORT ON MICHIGAN PUBLIC WATER SYSTEM VIOLATIONS 5 (2015).

50. FLINT WATER ADVISORY TASK FORCE, FINAL REPORT 16 (2016) (providing background of the Flint Water Crisis) [hereinafter TASK FORCE FINAL REPORT].

51. See generally John Bebow, *A Flawed Idea*, in POISON ON TAP 25, 27 (Bob Campbell ed., 2016) (stating how multiple people weighed in on the decision to switch to the new pipeline); Ron Fonger, *Genesee County Starts on Design of Lake Huron Water Pipeline Intake*, MLIVE (Mar. 23, 2012, 8:51 AM), http://www.mlive.com/news/flint/index.ssf/2012/03/genesee_county_starts_on_desig.html [<https://perma.cc/2SRE-TMEE>]; Letter from Andy Dillon, State Treasurer, Dep't of Treasury, to Edward Kurtz, Flint Emergency Manager (Apr. 11, 2013) <https://assets.documentcloud.org/documents/2696669/2013-04-11-Michigan-Ltr-Flint-Kwa-Approval.pdf> [<https://perma.cc/ZGL9-6FHG>].

52. See generally Bebow, *supra* note 51, at 27 (describing the annual amount Flint would save by switching water sources); Fonger, *supra* note 51 (providing estimates for cost savings).

53. Bebow, *supra* note 51, at 30.

54. See John Floren, *Get Ready for a Nice Gulp of Flint River Water*, MLIVE (Dec. 20, 2007, 11:02 AM), http://blog.mlive.com/flintjournal/newsnow/2007/12/get_ready_for_a_nice_gulp_of_f.html [<https://perma.cc/88GF-BA82>] (discussing the procedures in 2007 to make the Flint River a valid back-up source).

55. Dominic Adams, *Flint River Now an Option for Drinking Water Following Detroit's Termination of Contract*, MLIVE, (July 23, 2013, 5:29 PM), http://www.mlive.com/news/flint/index.ssf/2013/07/city_readying_water_plant_to_t.html [<https://perma.cc/J5VX-U2ES>].

56. TASK FORCE FINAL REPORT, *supra* note 50, at 27 n.34.

City announced that it would switch to the Flint Water Plant.⁵⁷ In April 2014, after a delay due to a disinfectant system malfunction, the City made the switch.⁵⁸

Immediately, citizens of Flint began noticing that the water was odorous and rust-colored.⁵⁹ When Flint switched to the KWA, the MDEQ decided that corrosion control would not be required immediately.⁶⁰ Instead, Flint was told to complete two six-month monitoring periods, which would be followed by a decision about whether corrosion control was necessary.⁶¹ This decision was an incorrect interpretation of the Lead and Copper Rule, which will be analyzed in the next section.⁶² In July of 2014, the MDEQ began the first six-month testing and monitoring of Flint water.⁶³ Boil advisories were issued after *E. Coli* was found in the water in August and September of 2014.⁶⁴ However, news reports claimed that water from the Flint River met “all Safe Drinking Water Standards.”⁶⁵ In September, the MDEQ requested a preemptive evaluation for disinfection byproducts in the water.⁶⁶ Other issues with the water arose, with a Legionellosis outbreak being linked to the Flint water system, but there were no state-level examinations following the concerns.⁶⁷ In October, General Motors announced that it would no longer use Flint’s water for its engine operations facility due to corrosion concerns stemming from high

57. Adams, *supra* note 55.

58. See Dominic Adams, *Flint Disinfectant System Work Delays Switch to Flint River for Drinking Water*, MLIVE (Apr. 21, 2014, 10:45 AM), http://www.mlive.com/news/flint/index.ssf/2014/04/deq_says_flint_still_needs_to.html [https://perma.cc/FYM9-LD3K] (discussing the delay in resuming water service due to problems with the disinfectant system). See generally John Bebow, *The Short-Lived Toast*, in POISON ON TAP 33, 36 (Bob Campbell ed., 2016) (outlining events during 2014 leading up to the switch in water sources).

59. OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROT. AGENCY, MANAGEMENT ALERT: DRINKING WATER IN FLINT, MICHIGAN DEMONSTRATES A NEED TO CLARIFY EPA AUTHORITY TO ISSUE EMERGENCY ORDERS TO PROTECT THE PUBLIC 1 (2016); see also TASK FORCE FINAL REPORT, *supra* note 50, at 16 (noting complaints about “odor, taste and appearance”).

60. John Bebow, *They Are Basically Getting Blown off by Us*, in POISON ON TAP 77, 83 (Bob Campbell ed., 2016).

61. TASK FORCE FINAL REPORT, *supra* note 50, at 16.

62. See *infra* text accompanying notes 80–95.

63. Bebow, *supra* note 58, at 37.

64. Ron Fonger, *Tests Positive for Total Coliform Again in Water-Boil Area on Flint’s West Side*, MLIVE (Jan. 17, 2015, 10:25 AM), http://www.mlive.com/news/flint/index.ssf/2014/08/water_boil_area_in_flint_gets.html [https://perma.cc/TR8W-NUMK] (reporting the discovery of coliform in the tap water).

65. See, e.g., *id.* (reporting that Flint stated that the water did not show signs of dangerous bacteria).

66. TASK FORCE FINAL REPORT, *supra* note 50, at 17.

67. See *id.* at 18 (describing only county-level investigations); see also 40 C.F.R. § 141.71(c) (2017) (defining when a system has violated treatment requirements, which are demonstrated by the outbreak of these illnesses here).

chlorine levels found in the water.⁶⁸ Still, the MDEQ declared that the levels fell within public health guidelines.⁶⁹ This lead contamination implicated the Lead and Copper Rule.

1. The Lead and Copper Rule

The EPA promulgated the LCR to reduce the presence of lead and copper in water by setting the standard for permissible levels at or close to zero because these contaminants are extremely hazardous to human health.⁷⁰ The LCR is found in Title 40, Part 141, subpart I of the Code of Federal Regulations.⁷¹ First promulgated by the EPA in 1991, the LCR required the replacement of entire contaminated Lead Service Lines (LSLs) when monitoring revealed lead above action levels.⁷² The EPA modified the rule to allow for partial service-line replacement after a D.C. Court of Appeals decision found that service lines on private property were not under the control of the public water system.⁷³ Lead exposure is typically addressed with chemical corrosion treatment.⁷⁴ The water industry takes the position that LSLs and plumbing fixtures on private property are the responsibility of the utility customer.⁷⁵ However, consumers are typically unaware of this responsibility.⁷⁶

The LCR applies to community water systems that have “at least fifteen service connections used by year-round residents or regularly serves at least

68. TASK FORCE FINAL REPORT, *supra* note 50, at 17.

69. *Id.*

70. OFFICE OF WATER, ENVTL. PROT. AGENCY, EPA 816-R-08-009, LEAD AND COPPER RULE: 2007 SHORT-TERM REGULATORY REVISIONS & CLARIFICATIONS STATE IMPLEMENTATION GUIDANCE 1 (2008).

71. 40 C.F.R. § 141.80.

72. TASK FORCE FINAL REPORT, *supra* note 50, at 4 n.5; OFFICE OF WATER, ENVTL. PROT. AGENCY, EPA 816-R-06-001, LEAD AND COPPER RULE STATE FILE REVIEW: NATIONAL REPORT 1 (2006); *Drinking Water Requirements for States and Public Water Systems: Lead and Copper Rule*, ENVTL. PROTECTION AGENCY, <https://www.epa.gov/dwreginfo/lead-and-copper-rule#rule-history> [<https://perma.cc/5M67-9XAH>] (last updated Mar. 15, 2017).

73. *Am. Water Works Ass'n v. EPA*, 40 F.3d 1266, 1275 (D.C. Cir. 1994). *Contra* TASK FORCE FINAL REPORT, *supra* note 50, at 4 n.5 (showing that some reports indicate that partial service line replacement has caused increased blood lead levels in some areas).

74. OFFICE OF WATER, ENVTL. PROT. AGENCY, EPA 816-B-16-003, OPTIMAL CORROSION CONTROL TREATMENT EVALUATION TECHNICAL RECOMMENDATIONS FOR PRIMACY AGENCIES AND PUBLIC WATER SYSTEMS 22–23 (2016).

75. TASK FORCE FINAL REPORT, *supra* note 50, at 4 n.5; *see also* MICH. ADMIN. CODE r. 325.10604f(5)(c) (2017) (defining the requirements that apply to private lines).

76. *See infra* Part III.A (“Section 300g–3 of the SDWA requires that public water systems notify their customers if the system *fails in any way to comply* with: a maximum contaminant level or treatment technique, a national primary drinking water regulation, a testing procedure, or a monitoring requirement.”).

25 year-round residents.⁷⁷ Instead of setting a MCL, the rule established an “action level” for lead, which is exceeded when lead reaches 15 parts per billion in more than ten percent of the tested water samples.⁷⁸ The Flint Water Task Force and other sources have stated that the City of Flint should have implemented corrosion control immediately under the LCR.⁷⁹ However, the LCR’s arguably ambiguous requirements have resulted in inconsistent interpretations.

Section 141.81(a) states that water “systems should complete corrosion control treatments described in § 141.82,” which refers to the LCR’s initial corrosion-control requirements.⁸⁰ This exempts systems that have optimized corrosion control in one of the situations given in § 141.81(b).⁸¹ The language of § 141.86(1) could have caused the MDEQ to believe that a system does not need corrosion control until after two six-month monitoring periods.⁸² However, this optimization pertains to systems that have been functioning with corrosion control already and are stable enough to be considered safe from routinely high lead levels.⁸³ The EPA has stated that all large systems serving over 50,000 houses are required to complete corrosion control treatment steps, unless the system has optimized corrosion control.⁸⁴

The Detroit Water and Sewerage Department (DWSD) provided Flint with water until the switch to Flint River.⁸⁵ The DWSD was optimized for corrosion control for over 20 years and would have been on a cycle of reduced monitoring.⁸⁶ Flint changed to a completely new water source, or

77. 40 C.F.R. § 141.2 (2017) (defining community water systems).

78. 40 C.F.R. § 141.80(c); *see also* James W. Moeller, *Legal Issues Associated with Safe Drinking Water in Washington, D.C.*, 31 WM. & MARY ENVTL. L. & POL’Y REV. 661, 675 (2007) (explaining the action level established by the LCR).

79. TASK FORCE FINAL REPORT, *supra* note 50, at 50; John Bebow, ‘Wow! Did He Find the Lead!’, in POISON ON TAP 55, 59 (Bob Campbell ed., 2016).

80. 40 C.F.R. § 141.81(a).

81. *Id.* at § 141.81(a)(2).

82. *Id.* at § 141.81(b)(1) (“[A] small or medium-size system is deemed to have optimized corrosion control” and is not required to complete the applicable corrosion-control treatment steps “if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods conducted in accordance with § 141.86.”).

83. *Id.* at § 141.81(b)(2).

84. John Bebow, *What Flows from Flint: An Introduction to this Book*, in POISON ON TAP 1, 5 (Bob Campbell ed., 2016) (stating that Flint has almost 100,000 residents); Leira Lew, *Flint Water Crisis Estimated to Affect 45,000 Homes*, CHIMES CALVIN C. (Oct. 25, 2015), <https://calvinchimes.org/2015/10/25/flint-water-crisis-estimated-to-affect-45000-homes/> [<https://perma.cc/65LJ-FMWJ>]; ENVTL. PROT. AGENCY, IN THE MATTER OF CITY OF FLINT, MICHIGAN, EMERGENCY ADMINISTRATIVE ORDER 7 (2016) [hereinafter EMERGENCY ADMINISTRATIVE ORDER].

85. *Flint Water Crisis Fast Facts*, CNN, (Nov. 28, 2017, 9:48 AM), <http://www.cnn.com/2016/03/04/us/flint-water-crisis-fast-facts/index.html> [<https://perma.cc/N8DY-4JA3>].

86. TASK FORCE FINAL REPORT, *supra* note 50, at 16.

rather an old one, which had not been used for years.⁸⁷ Thus, the optimization of DWSD should have indicated that the Flint River also required corrosion control.

Even so, the Michigan Administrative Code is similarly ambiguous about when corrosion control should begin, stating:

These rules establish a treatment technique that includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, *in some cases*, by lead and copper action levels measured in samples that are collected at consumers' taps.⁸⁸

The next section of the Administrative Code states that lead action levels are exceeded “if the ninetieth percentile lead level is more than 0.015 milligrams per liter (mg/l) in tap water samples collected during a monitoring period.”⁸⁹ This could have led the MDEQ to believe that they did not have to implement corrosion-control treatment until monitoring was complete. The EPA disagreed.⁹⁰ A memo from Marc Edwards, a Virginia Tech professor and water expert investigating the issue, stated in September 2015:

Effective July 1998, the federal Lead and Copper Rule (LCR) has required that all large public water systems maintain a program to control levels of lead in drinking water from corrosion. Moreover, the law also requires the City of Flint to have a state-approved plan, with enforceable regulatory limits for “Water Quality Parameters” including pH, alkalinity and/or corrosion inhibitor dose measured in the water distribution system. MDEQ never required Flint to have a corrosion control program, nor did it set water quality parameters for the new Flint River source water.⁹¹

In December 2014, the first six-month round of monitoring under the LCR was finished in Flint, revealing violations in some homes even higher

87. See Floren, *supra* note 54 (discussing how the Flint Water Plant was producing water for the first time in more than 40 years).

88. MICH. ADMIN. CODE r. 325.10604f(1)(b) (2017) (emphasis added).

89. *Id.* at 325.10604f(1)(c).

90. See EMERGENCY ADMINISTRATIVE ORDER, *supra* note 84, at 3–4 (explaining the disagreement between the MDEQ and the EPA).

91. Below, *supra* note 79, at 59.

than action levels at 15 parts per billion.⁹² The MDEQ did not properly inform Flint of this regulation.⁹³ The MDEQ did not tell the EPA that there were no corrosion controls in place until April of 2015, and by that time many Flint residents had been affected by lead poisoning.⁹⁴ Further questions arose concerning the manner that the MDEQ acquired samples for lead monitoring.⁹⁵

2. Collecting Samples

Michigan's Administrative Code delineates how Michigan water systems should collect samples during lead and copper monitoring.⁹⁶ A water system serving a city of Flint's size requires at least 100 samples from sites that meet the requirements listed under § 325.10710a(c), namely, homes that contain lead pipes or copper pipes soldered with lead or homes with lead service lines.⁹⁷ Some reports stated that the head of the MDEQ removed samples that violated federal regulations from its initial report.⁹⁸ These samples would have shown that the lead in the water exceeded federally mandated levels; removing them enabled the test to appear to meet the requirements.⁹⁹ The MDEQ explained that only 60 samples were acquired in the second six-month sampling period because the number of houses served by the water system was less than 100,000.¹⁰⁰ As such, 100 samples were not required by law.¹⁰¹ Other information indicates that systems were pre-flushed the night before collection of compliance samples, which clears particulate lead out of plumbing and eliminates the highest lead values.¹⁰² Flint failed to adequately monitor the new water supply's lead levels, even though the law required it, and failed to implement the mandated corrosion controls.¹⁰³

92. TASK FORCE FINAL REPORT, *supra* note 50, at 18.

93. *Id.*

94. *Id.* at 95.

95. *Id.* at 97.

96. MICH. ADMIN. CODE r. 325.10710(a) (2017).

97. *Id.* at 325.10710a(c).

98. TASK FORCE FINAL REPORT, *supra* note 50, at 99.

99. Kennedy, *supra* note 17.

100. TASK FORCE FINAL REPORT, *supra* note 50, at 18.

101. Bebow, *supra* note 60, at 83.

102. See Bebow, *supra* note 79, at 61 (referencing an email from Miguel Del Toral, the EPA Region 5 Ground Water and Drinking Water Regulations Manager, to an engineer in the MDEQ Community Water Supply Program and the Michigan program manager for the EPA Region 5 Ground Water and Drinking Water office describing the process of pre-flushing lead service lines).

103. TASK FORCE FINAL REPORT, *supra* note 50, at 28.

II. ENFORCEMENT UNDER THE SAFE DRINKING WATER ACT

The SDWA gives states the power to regulate and enforce provisions of the Clean Water Act and the SDWA.¹⁰⁴ The SDWA provides an opportunity for the federal government to step in and enforce the Act when a state is not following the law.¹⁰⁵ The Flint Water Crisis serves as a reminder to the EPA of the emergency actions it can take when a state does not adequately protect the public health.¹⁰⁶

A. State Primacy

The EPA may designate Public Water System Supervision (PWSS) programs to the states, giving them primary enforcement responsibility of the SDWA.¹⁰⁷ In Michigan, the MDEQ has primary enforcement responsibility, or “primacy.”¹⁰⁸ A state has primary enforcement responsibility as long as it meets certain requirements such as adopting drinking water regulations at least as strict as the national regulations, implementing procedures for monitoring and enforcing the regulations, and having a suitable emergency plan.¹⁰⁹ If the state fails to fulfill a requirement, then the Administrator would have the authority to step in and enforce a requirement under the EPA’s emergency power.¹¹⁰ Only as a last resort would the EPA withdraw primacy from states that are not following these standards.¹¹¹

The EPA should negotiate with a state and give it an opportunity to take corrective action before formally withdrawing primacy.¹¹² Even when the EPA has determined that the state is not compliant, the EPA must first provide notice and a public hearing before the withdrawal.¹¹³ When the

104. UNDERSTANDING THE SAFE DRINKING WATER ACT, *supra* note 26, at 2.

105. OFFICE OF INSPECTOR GEN., *supra* note 59, at 6.

106. See Nancy Derringer, *Felony Charges Filed Against Three with a Promise of More to Come*, in POISON ON TAP 277, 279 (Bob Campbell ed., 2016) (describing that the emergency plan had disastrous results that the EPA should remember when dealing with similar situations).

107. *Primacy Enforcement Responsibility for Public Water Systems*, ENVTL. PROTECTION AGENCY, (last updated Nov. 2, 2016) <https://www.epa.gov/dwreginfo/primacy-enforcement-responsibility-public-water-systems> [<https://perma.cc/M3P5-7QSA>].

108. UNDERSTANDING THE SAFE DRINKING WATER ACT, *supra* note 26, at 2 (“All states and territories, except Wyoming and the District of Columbia, have received primacy.”).

109. 42 U.S.C. § 300g-2(a) (2012).

110. See *infra* Part II.B (“The Administrator can take action to protect the health of the public . . .”).

111. 40 C.F.R. § 142.17 (2017).

112. Nat’l Wildlife Fed’n v. Env’tl. Prot. Agency, 980 F.2d 765, 771 (D.C. Cir. 1992).

113. *Id.*

EPA chooses not to withdraw primacy in a given situation, it can enforce a provision of the Act or issue emergency orders requiring specific action.¹¹⁴

B. Federal Emergency Authority

After receiving the test results, the MDEQ failed to inform the City of the corrosion-control requirement and failed to notify the EPA of the lacking corrosion control.¹¹⁵ The EPA finally questioned the MDEQ's compliance with the LCR and pushed for optimized corrosion control in Flint.¹¹⁶ When the MDEQ failed to comply, the EPA waited several months to respond.¹¹⁷ The EPA finally stated that the MDEQ should have implemented optimized corrosion control when it switched to the new water source.¹¹⁸ One of the many cases filed against public officials in Flint stated that "residents of Flint ha[d] been exposed to high levels of lead in their water" for two years, and many Flint children had elevated levels of lead in their blood, some double and triple what they had been before the switch to the new water source.¹¹⁹ The plaintiffs, citizens of Flint, petitioned the EPA for an emergency order under the SDWA in October of 2015.¹²⁰ Finally, on January 21, 2016, an Emergency Administrative Order recommended citizens not to drink the water in Flint.¹²¹ The order directed:

Flint and the State of Michigan [should] take certain steps to begin to address the crisis, including providing certain information to the public on a website and to the EPA, planning for optimization of water treatment to control corrosion, and retaining personnel qualified to ensure compliance with the SDWA's requirements. The purpose of the EPA Order was to "make sure" that the defendants take "actions to protect public health . . . immediately."¹²²

114. 42 U.S.C. § 300i(a).

115. TASK FORCE FINAL REPORT, *supra* note 50, at 8–9.

116. *Id.* at 9; Bebow, *supra* note 60, at 83.

117. TASK FORCE FINAL REPORT, *supra* note 50, at app. V. *See generally* John Bebow, 'Running Out of Ideas,' in POISON ON TAP 62, 62–69 (Bob Campbell ed., 2016) (describing, through a timeline, what occurred between the MDEQ failing to comply and the EPA taking action).

118. John Bebow, *Cleanup and Probes Begin*, in POISON ON TAP 147, 148 (Bob Campbell ed., 2016).

119. Concerned Pastors for Soc. Action v. Khouri, 194 F. Supp. 3d 589, 594 (D. Mich. 2016) (quoting EMERGENCY ADMINISTRATIVE ORDER, *supra* note 84, at 1).

120. *Id.* at 595.

121. *Id.*

122. *Id.*

Since the switch to the Flint pipelines in 2014, the MDEQ unjustifiably delayed its response to the lead presence and the need for corrosion treatment.¹²³ The MDEQ failed to meet primacy enforcement standards by failing to conduct proper monitoring and inspections as required by the LCR.¹²⁴ EPA Region 5, the local branch of the EPA, should have reacted more quickly to enforce the LCR by at least implementing corrosion control and providing alternative water.¹²⁵ It instead stated that the State's (albeit minimal) actions were a jurisdictional bar preventing the EPA from acting.¹²⁶ This was not an accurate statement of law. The Administrator can take action to protect the health of the public when she receives information that there is a contaminant in the water that (1) "may present an imminent and substantial endangerment to the health of persons, [and when (2)] appropriate state and local authorities have not acted to protect the health of such persons."¹²⁷

The Administrator can then take steps "as [s]he may deem necessary in order to protect the health of such persons."¹²⁸ Suggested actions include: (1) issuing public advisory warnings to protect the health of anyone using a non-complying public water system or (2) using a civil action such as a permanent or temporary injunction against the water system.¹²⁹

The Administrator can also take action in a non-emergency situation, but must first engage in a compliance dialogue with the state and public water system, giving advice on how the state could "bring the system into compliance with the requirement by the earliest feasible time."¹³⁰ If the state fails to act within 30 days of the Administrator's notification, the Administrator must issue an order requiring the public water system to comply with the requirement or face civil action by the Administrator.¹³¹ The order must state the nature of the violation with "reasonable specificity."¹³² Failing to comply with an order can result in a penalty of up to \$25,000 a day.¹³³

123. See generally *Bebow*, *supra* note 58, at 33–36 (describing, through a timeline, how Flint officials knew of the water issue yet did not take immediate action).

124. TASK FORCE FINAL REPORT, *supra* note 50, at 52.

125. OFFICE OF INSPECTOR GEN., *supra* note 59, at 1.

126. *Id.*; 42 U.S.C. § 300i(a) (2012).

127. 42 U.S.C. § 300i(a).

128. *Id.*

129. *Id.*

130. 42 U.S.C. § 300g–3(a)(1)(A)(ii); see also 42 U.S.C. § 300g–3(g)(2) (stating that the Administrator must provide "the State with an opportunity to confer with the Administrator" before the order takes effect).

131. 42 U.S.C. § 300g–3(a)(1)(B).

132. 42 U.S.C. § 300g–3(g)(2).

133. 42 U.S.C. § 300g–3(g)(3)(A).

The Flint Water Crisis was likely an “imminent and substantial endangerment to the [public] health” justifying the use of federal emergency power.¹³⁴ As soon as Flint switched from the existing water source to the Flint River, contaminants in the water necessitated boil advisories.¹³⁵ Many citizens had side effects; for instance, in the summer of 2014, a local Flint mother realized her children were breaking out with rashes and other ailments that seemed to result from their exposure to the water.¹³⁶ After persistent complaints, city officials finally tested her water and found high levels of lead—104 parts per billion.¹³⁷

The second part of the “imminent and substantial endangerment” test requires that local authorities failed to enforce measures of the SDWA.¹³⁸ In April 2015, the State officially informed the EPA that no corrosion control was in place for the new Flint drinking water system, with at least four homes containing lead above federal action levels.¹³⁹ State and local authorities had not taken affirmative action at this point and had not admitted or disclosed the risk of lead exposure to the public.¹⁴⁰ EPA Region 5 identified lead in Flint water systems in June 2015, but in July, the Flint mayor assured Flint residents that their water was safe to drink, even drinking a glass of Flint water on TV to illustrate his faith in the water.¹⁴¹ General Motors opted out of the Flint system because the water was corroding its manufacturing parts; yet, City authorities continued to advise Flint residents that their water was safe to drink.¹⁴²

The MDEQ and Flint argued that they had up to five years to optimize corrosion control.¹⁴³ This “minimalist” approach is not within the nature and purpose of the SDWA, which aims to protect public health as quickly and effectively as possible.¹⁴⁴ The SDWA cannot effectively protect public health if both the state and the federal agency are not enforcing critical provisions in a timely manner. The EPA should have stepped in and enforced the requirements of the LCR as soon as they became aware that the Flint River pipeline had not been properly treated with corrosion control.

134. 42 U.S.C. § 300i(a).

135. See *supra* text accompanying notes 70–95.

136. Ted Roelofs, *A Tenacious Flint Mom Warned, Rallied a Public*, in *POISON ON TAP* 125, 125 (Bob Campbell ed., 2016).

137. TASK FORCE FINAL REPORT, *supra* note 50, at 18.

138. 42 U.S.C. § 300i(a).

139. OFFICE OF INSPECTOR GEN., *supra* note 59, at 4.

140. *Id.*

141. *Id.* at 5.

142. Derringer, *supra* note 106, at 279.

143. OFFICE OF INSPECTOR GEN., *supra* note 59, at 5.

144. Bebow, *supra* note 60, at 83.

As a takeaway from Flint, EPA Region 5 should oversee lead requirements in Flint and should ensure lead monitoring and corrosion control is sufficient under the LCR.¹⁴⁵ But the MDEQ should enforce the LCR in its entirety.¹⁴⁶ If the MDEQ fails to perform again, the EPA should step in, or in the alternative, the MDEQ could share monitoring with the Department of Health and Human Services to better protect the health of the public.¹⁴⁷ With the help of a tenacious EPA official who believed something was wrong in Flint from the start, EPA Region 5 finally investigated Flint's and the MDEQ's actions therein, including the lack of optimized corrosion-control treatment at the Flint water treatment plant.¹⁴⁸

C. Citizen Suits

Under the SDWA, citizen suits are allowed but usually restricted.¹⁴⁹ In *Mattoon v. City of Pittsfield*, the public water system became contaminated with the *Giardia lamblia* pathogen, causing hundreds of cases of giardiasis after the city switched to an old reservoir to obtain water while city water facilities were undergoing construction.¹⁵⁰ Among other claims, the plaintiffs brought a claim for equitable relief and civil penalties under the SDWA, a public nuisance claim under federal common law, and a § 1983 claim for damages.¹⁵¹ The court held that the SDWA preempted common-law claims and placed the regulation of public water systems in the control of expert regulatory agencies, not the courts.¹⁵²

Citizens can initiate enforcement proceedings against any person who violates any part of the SDWA, including governmental agencies, or against

145. See generally Memorandum from Peter C. Grevatt, Dir., Office of Ground Water & Drinking Water, to EPA Reg'l Water Div. Dirs., Regions I-X (Nov. 3, 2015) (focusing on concerns about the LCR).

146. TASK FORCE FINAL REPORT, *supra* note 50, at 34; JOINT SELECT COMM. ON THE FLINT WATER PUB. HEALTH EMERGENCY, REPORT OF THE JOINT SELECT COMMITTEE ON THE FLINT WATER EMERGENCY 21 (2016).

147. TASK FORCE FINAL REPORT, *supra* note 50, at 6.

148. *Id.* at 18; Roelofs, *supra* note 136, at 127.

149. See generally *Mattoon v. City of Pittsfield*, 980 F.2d 1, 6 (1st Cir. 1992) (discussing how Congress has construed the SDWA's citizen suit provision to only cover "continuous or intermittent violation[s]") (quoting *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Found., Inc.*, 484 U.S. 49, 64 (1987)).

150. *Id.* at 2.

151. *Id.* at 3; see 42 U.S.C. § 1983 (2012) (granting citizens a right to sue for their alleged deprivation of rights); see *Kaiman*, *supra* note 20, at 1328 (explaining that citizens in environmental suits may be victims of environmental injustices, especially in instances where minorities are discriminated against, and that the law often lacks adequate remedies).

152. See generally *Mattoon*, 980 F.2d at 5–6 (reasoning that in the absence of congressional intent to "preserve a right of action under section 1983," appellants could not pursue their § 1983 claims).

the Administrator of the EPA for a failure to perform non-discretionary duties under the SDWA.¹⁵³ The courts have held that this exhibits a “clear congressional intent to preempt relief” of claims under § 1983 and federal common-law claims.¹⁵⁴ The court held that the plaintiffs must address an ongoing violation to allege a claim under the SDWA.¹⁵⁵ Standing requires pollutants in the water to be at levels known to cause injury, or higher than MCL levels.¹⁵⁶ This could be too strict to provide relief for injured citizens when erroneous test results show that lead is below MCL levels, as in Flint, or when a variance has been granted to that public water system.¹⁵⁷

Citizens in Flint have brought several lawsuits against the city, governmental authorities, emergency managers, and the EPA, but citizen suits face many challenges.¹⁵⁸ The case of *Boher v. Early* was dismissed in early 2016 for lack of subject-matter jurisdiction because the plaintiffs brought suit under other federal law instead of the SDWA.¹⁵⁹ One scholar recognized the importance of citizen suits, describing their intended purpose as follows:

Congress recognized the many problems with existing enforcement mechanisms and sought to supplement the EPA's enforcement ability by partially delegating enforcement power to concerned citizens. Congress' idea was to allow for multiple enforcers of the environmental statutes. Furthermore, Congress hoped that the provision would prompt the government to enforce on its own, while still allowing a citizen redress in federal court in the absence of government enforcement. Congress thought of citizen suits as a way to encourage the meaningful participation of citizens in the

153. *Id.* at 6; 42 U.S.C. § 300j-8(a).

154. *Mattoon*, 980 F.2d at 6.

155. *Id.*

156. *See* *Emerald Coast Util. Auth. v. 3M Co.*, 746 F. Supp. 2d 1216, 1228, 1232 (N.D. Fla. 2010) (holding in favor of defendant's argument that there was no injury for standing purposes because chemicals in the water “did not exceed federal or state MCL”).

157. *See* RODGERS & BURLESON, at § 4:20 (discussing the holding in *Emerald Coast* where the court adopted the defendant's position that because the PFOA and PFOS levels did not exceed MCL levels, plaintiffs had not suffered an injury sufficient for standing).

158. *See generally* Jennifer Chambers, *Hundreds of Flint Lawsuits at Standstill*, DETROIT NEWS (Oct. 17, 2016, 11:59 PM), <http://www.detroitnews.com/story/news/michigan/flint-water-crisis/2016/10/17/hundreds-flint-lawsuits-standstill/92333444/> [https://perma.cc/B27D-JXA5] (discussing the more than 450 civil lawsuits related to the Flint Water Crisis); Teresa Lo, *Flint Class Action Lawsuit Thrown Out by Federal Judge*, JD J. (Feb. 3, 2017), <https://www.jdjournal.com/2017/02/03/flint-class-action-lawsuit-thrown-out-by-federal-judge/> [https://perma.cc/4Z8A-2ZTS] (discussing how a class-action suit was dismissed from federal court based on a finding that the suit would circumvent the procedures of the SDWA).

159. *Boher v. Early*, No. 16-10323, 2016 U.S. LEXIS 51866, at *10 (E.D. Mich. Apr. 19, 2016), *rev'd*, 865 F.3d 391 (6th Cir. 2017).

administrative process, as well as a means to perform a public service, and thus encouraged courts to be receptive to these suits.¹⁶⁰

In order for the SDWA to sufficiently protect the needs and health of citizens, citizen suits should be more accessible. Citizens must first satisfy federal standing requirements, which require them to prove: (1) that they have suffered an “injury in fact”—an injury that is concrete and particularized, actual or imminent, and not speculative; (2) a causal relationship between the injury and the conduct alleged to be harmful; and (3) redressability, which is not speculative.¹⁶¹ The citizens of Flint were forced to drink and use lead-contaminated water for nearly two years before action was taken, which should show that there was an injury in fact.¹⁶² The EPA, the MDEQ, and city officials had a responsibility to take measures to avoid the harm and failed in various ways to do so.¹⁶³ The effects of this are still felt today, and a judge could rule that damages or equitable relief is justified, which satisfies redressability.¹⁶⁴ Therefore, citizen suits brought by Flint residents have the potential of being successful.

There are multiple actions pending against state actors. For example, citizens of Flint are currently pursuing an action against city officials in *Concerned Pastors for Social Action v. Khouri*.¹⁶⁵ The defendants moved to dismiss, alleging that the Eleventh Amendment barred the claims because the plaintiffs could not sue the defendants in their official capacities for retrospective relief without a federal-law violation.¹⁶⁶ However, the court stated that the harm was the leaching of lead pipes into the water system, which would not be remedied until all pipes were replaced due to continuing medical problems and health violations; therefore, it was not retrospective relief.¹⁶⁷ Further, the citizens alleged violations under the LCR

160. Christine L. Rideout, *Where Are All the Citizen Suits?: The Failure of Safe Drinking Water Enforcement in the United States*, 21 HEALTH MATRIX 655, 676 (2011) (citations omitted).

161. *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560–61 (1992).

162. See TASK FORCE FINAL REPORT, *supra* note 50, at 17–18 (providing a timeline of the Flint Water Crisis).

163. Kennedy, *supra* note 17; see OFFICE OF INSPECTOR GEN., *supra* note 59, at 2 (explaining that EPA had “national oversight responsibility for state administration and enforcement of SDWA”).

164. See *generally id.* at 8–9 (recommending next steps to prevent another Flint Water Crisis).

165. *Concerned Pastors for Soc. Action v. Khouri*, 194 F. Supp. 3d 589, 589 (E.D. Mich. 2016).

166. *Id.* at 601.

167. *Id.* at 603.

and other sections of the SDWA, which were federal laws, enabling the citizens to sue the defendants in their official capacities.¹⁶⁸

Under the Clean Water Act, citizen suits enable plaintiffs to obtain monetary compensation and injunctive relief for violations.¹⁶⁹ However, the SDWA does not contain a provision allowing for citizens to pursue civil penalties from defendants,¹⁷⁰ possibly because public water systems are often implicated and would not have the funds to compensate citizens.¹⁷¹ Citizen suits brought by Flint residents under the SDWA may further the process of pipe replacement and force an injunction against continued contamination but will not alleviate residents' monetary needs.¹⁷²

III. PREVENTING REOCCURRENCES

To rebuild Flint and prevent similar avoidable water crises, there must be adequate funding, revised reporting requirements under the LCR, and more accountability for city officials and drinking water systems. Michigan senators and other concerned representatives have introduced several bills suggesting needed updates and improvements to the SDWA and, specifically the LCR, in 2016.¹⁷³ None of these bills have yet to gain traction in the House or the Senate.¹⁷⁴ Laws that recommend lowering lead allowances to five parts per billion have been suggested and could be a

168. See *id.* (reasoning that Eleventh Amendment sovereign immunity does not bar suits alleging violations of federal law).

169. See 33 U.S.C. § 1365 (2012) (discussing the provision in the Clean Water Act that allows for citizen suits and the related section that allows for damages and injunctions).

170. See 42 U.S.C. § 300j-8 (discussing that citizens may not bring civil actions for violations against public water systems).

171. See *Rideout*, *supra* note 160, at 692 (discussing the possibility of congressional intent to exempt public water systems because Congress did not want to bankrupt small municipal governments).

172. See *Concerned Pastors for Soc. Action v. Khouri*, 194 F. Supp. 3d 589, 603-04 (E.D. Mich. 2016) (holding that the remedy plaintiffs sought for replacement of lead pipes and an injunction were proper, yet monetary relief is barred by sovereign immunity); see also *Rideout*, *supra* note 160, at 688 (discussing that greater publicity through citizen suits may lead to much needed improvements in Flint's drinking water). See generally *Boler v. Early*, No. 16-10323, 2016 U.S. Dist. LEXIS 51866, at *4 (E.D. Mich. Apr. 19, 2016), *rev'd on other grounds*, 865 F.3d 391 (6th Cir. 2017) (finding that state-law claims may contain provisions providing for recovery of damages).

173. See, e.g., National Opportunity for Lead Exposure Accountability and Deterrence Act of 2016, H.R. 6311, 114th Cong. (2016) (outlining a proposal to improve transparency under the national primary drinking water regulations for lead and copper); Protecting Families from Lead Act of 2016, H.R. 5110, 114th Cong. (2016) (outlining a proposal to amend the SDWA to lower the action level for lead to 5 parts per billion).

174. See generally H.R. 6311 (114th): *National Opportunity for Lead Exposure Accountability and Deterrence Act of 2016*, GOVTRACK, <https://www.govtrack.us/congress/bills/114/hr6311> [<https://perma.cc/8F8K-FT83>] (last visited Mar. 17, 2018) (outlining the progress and eventual failure of H.R. 6311).

helpful step to prevent dangerous lead levels from being released.¹⁷⁵ Laws should also be passed to revise notice requirements on a federal level. Congress should also ensure that the provisions detailing enforcement of the SDWA, specifically those pertaining to lead, are clear and concise to prevent confusion.¹⁷⁶

A. Revising Notice Requirements

Citizens have a right to be informed of changes and updates in their public water supply systems.¹⁷⁷ The 1996 amendments to the SDWA ensured that citizens would have access to information regarding changes within their water systems.¹⁷⁸ The amendments require state or community water systems to publish “consumer confidence reports” for citizens, informing them of regulated contaminants that were found in the water system.¹⁷⁹ Michigan recently amended its counterpart of this requirement, with the changes coming into effect on March 29, 2017.¹⁸⁰ Until that date, the law stated:

- (1) If water delivered by or the operation of a public water supply is found not to be in compliance with the state drinking water standards, the department shall require the supplier of water to notify its users of the extent and nature of the noncompliance. Notification of users shall be in a form and manner prescribed or otherwise approved by the department.
- (2) Notification received pursuant to this section or information obtained from the notification may not be used against a person in a litigation, except a prosecution for perjury or for giving a false statement.¹⁸¹

The amended statute now says that notification of users in subsection (1) “*must* be in a form and manner prescribed.”¹⁸² Subsection (2) became

175. H.R. 5110.

176. *Id.* See generally Safe Drinking Water Act Improved Compliance Awareness Act, H.R. 4470, 114th Cong. (2016) (suggesting added improvements that failed to pass).

177. MICH. COMP. LAWS § 325.1014 (2017).

178. See 42 U.S.C. § 300g-3(c)(3)(A)(i) (2012) (outlining requirements of states to provide information regarding violations of national drinking water regulations by the public water system to the public).

179. 42 U.S.C. § 300g-3(c)(4)(A).

180. MICH. COMP. LAWS § 325.1019.

181. MICH. COMP. LAWS § 325.1019 (2004) (amended 2017).

182. MICH. COMP. LAWS § 325.1019 (1) (2017) (emphasis added).

subsection (3) and a new subsection (2) was inserted, devoted specifically to notification of lead violations.¹⁸³

When a test reveals that the water system has violated federal levels of a substance such as lead that “has the potential to have serious adverse effects on human health, the public water system is to give notice to all persons served by the system of the failure to comply with the applicable MCL or treatment or testing requirements or monitoring requirements.”¹⁸⁴ City officials did not notify Flint residents of the possibility of contaminants after switching to a new water supply, other than a brief boil warning with no explanation.¹⁸⁵

In fact, they were told their water was perfectly safe.¹⁸⁶ The plaintiffs in *Concerned Pastors for Social Action v. Khouri* petitioned the EPA for an emergency order in response to the water crisis in October of 2015.¹⁸⁷ It was not until January of 2016 that the EPA issued an emergency order requiring Flint and Michigan to begin addressing the crisis by informing the public, planning optimization of the water to control corrosion, and ensuring qualified personnel oversaw the situation.¹⁸⁸

Section 300g–3 of the SDWA requires that public water systems notify their customers if the system *fails in any way to comply* with: a maximum contaminant level or treatment technique, a national primary drinking water regulation, a testing procedure, or a monitoring requirement.¹⁸⁹ The Administrator of the EPA must take into account the seriousness of the violation and could prescribe notice in certain ways such as publication in prominent newspapers.¹⁹⁰ Not only that, but if it is a violation with “the potential to have serious adverse effects on human health”¹⁹¹—and a violation of a lead requirement almost definitely meets this standard—then notice should be given “no[] later than 24 hours after the occurrence of the violation.”¹⁹² Notice includes “a clear and readily understandable explanation” of the violation, its potential adverse effects, steps taken to

183. *Id.*; see MICH. ADMIN. CODE r. 325.10410 (2017) (proscribing administrative procedures in accordance with Michigan’s amended SDWA).

184. 42 U.S.C. § 300g–3(c)(2)(C); MICH. ADMIN. CODE r. 325.10410.

185. Jeremy C.F. Lin et al., *Events that Led to Flint’s Water Crisis*, N.Y. TIMES (Jan. 21, 2016), <https://www.nytimes.com/interactive/2016/01/21/us/flint-lead-water-timeline.html> [https://perma.cc/9MHQ-9S5W].

186. Bebow, *supra* note 58, at 36.

187. *Concerned Pastors for Soc. Action v. Khouri*, 194 F. Supp. 3d 589, 595 (D. Mich. 2016).

188. *Id.*

189. 42 U.S.C. § 300g–3(c)(1).

190. 42 U.S.C. § 300g–3(c)(2)(C)(iv)(II).

191. 42 U.S.C. § 300g–3(c)(2)(C).

192. 42 U.S.C. § 300g–3(c)(2)(C)(i).

correct it, and the need to acquire alternative water supplies in the interim.¹⁹³

These provisions make clear that the legislature intended to inform the public of potential risks in their drinking water as quickly as possible. In Flint, it took months of diligent work by a Virginia Tech professor and persistent outcry from a local mother to even expose the dangerously high lead levels to the public.¹⁹⁴ That mother had her water tested after complaining at a public hearing.¹⁹⁵ The first test reported lead levels of 104 parts per billion and the second reported 397 parts per billion—26 times the accepted level.¹⁹⁶ The MDEQ and city officials maintained that the water was safe until a Flint pediatrician released a study showing that the amount of lead in young children in the Flint area had doubled since the switch to the KWA water source.¹⁹⁷ This was hardly the quick, direct public notice that the SDWA requires.¹⁹⁸

Many of the children of Flint have been exposed to irreversible lead poisoning.¹⁹⁹ The MDEQ should have quickly responded to the allegations of the lack of corrosion control and high lead levels instead of trying to evade the LCR requirements to provide a more financially friendly way to support Flint's water system. This clearly violates the citizens' right to the monitoring of the public water system. This violation should not have occurred.

The Copper and Lead Evaluation and Reporting Act of 2016 (CLEAR Act of 2016), which failed to achieve support in the House, would have amended 42 U.S.C. § 300g-1(b) by requiring the Administrator of the EPA to adopt detailed reporting requirements whenever lead levels were found that would cause an infant's blood lead level to exceed five micrograms per deciliter.²⁰⁰ Action must be taken within 28 days of a household report

193. 42 U.S.C. § 300g-3(c)(2)(C)(ii).

194. John Bebow, *Edwards: Don't Drink the Water Without Filters*, in *POISON ON TAP* 97, 99 (Bob Campbell ed., 2016); John McQuaid, *Without These Whistleblowers, We May Never Have Known the Full Extent of the Flint Water Crisis*, SMITHSONIAN.COM (Dec. 2016), <https://www.smithsonianmag.com/innovation/whistleblowers-marc-edwards-and-leeanne-walters-winner-smithsonians-social-progress-ingenuity-award-180961125/> [<https://perma.cc/3ME6-JK2G>].

195. John Bebow, *The Persistent, Heroic Four . . . and Others*, in *POISON ON TAP* 123, 126 (Bob Campbell ed., 2016).

196. *Id.*

197. *Id.* at 127.

198. See 42 U.S.C. § 300g-3(c)(2)(C) (requiring specific information dissemination within 24 hours after the violation).

199. John Bebow, *The Doctor Changes Everything*, in *POISON ON TAP* 108, 117 (Bob Campbell ed., 2016).

200. Copper Lead Evaluation and Reporting Act of 2016, H.R. 4806, 114th Cong. § 2 (2016).

indicating illegal lead levels.²⁰¹ These actions include notifying consumers through public health agencies and multimedia, reporting to public health agencies, examining all affected lines in the public water system, and initiating the removal of faulty lines.²⁰² This legislation would have also modified lead monitoring requirements, provided frequent updates to vulnerable populations of the risks of lead contamination, and provided an opportunity for consumers to request lead sampling and information on how to reduce risks of lead contamination.²⁰³ This bill failed to achieve much recognition in Congress.²⁰⁴ Congress should implement similar legislation on a federal level to promote consumer confidence, giving citizens a better opportunity to be informed about the status of their lead lines and the potential of water contamination. By fostering awareness of lead contamination in public drinking water systems, citizens can take steps to control their own health as soon as there is a potential problem in their water system. They would not have to wait for disastrous consequences or health effects before abstaining from drinking or using their tap water. Though Michigan recently updated their citizen notification law in recognition of lead violations, other states may not have adequate laws in place yet.²⁰⁵ Using multimedia and social media services to disseminate local drinking water test results would promote consumer safety and peace of mind. Because of the seriousness of health problems when there are high lead levels in drinking water, citizens should be able to readily access the lead test results of local public water systems to seek additional water supplies as soon as possible.

B. Monetary Remedies

The influence of money is a key factor in public water debates, which disproportionately affects minority communities.²⁰⁶ The price of household water in large cities has continued to rise in recent years as conservation efforts have resulted in a backwards supply and demand.²⁰⁷ Thus, public

201. H.R. 4806 § 2(16)(A)(i).

202. H.R. 4806 § 2(16)(A).

203. H.R. 4806 § 2(16)(E).

204. *All Information (Except Text) for H.R.4806 - CLEAR Act of 2016*, CONGRESS.GOV, <https://www.congress.gov/bill/114th-congress/house-bill/4806/all-info> [<https://perma.cc/QPM7-QQKU>] (last visited Mar. 17, 2018).

205. MICH. COMP. LAWS § 325.1019 (2017).

206. Martha Davis, *Let Justice Roll Down*, 23 GEO. J. POVERTY L. & POL'Y 355, 356 (2016).

207. Brett Walton, *Price of Water 2017: Four Percent Increase in 30 Large U.S. Cities*, CIRCLE BLUE (May 18, 2017), <http://www.circleofblue.org/2017/water-management/pricing/price-water-2017-four-percent-increase-30-large-u-s-cities/> [<https://perma.cc/VL9G-XDE2>].

water systems raise prices and “punish” conservation in the process.²⁰⁸ It was the high price of water and low income of Flint citizens that led to the Flint Water Crisis in the first place, and there have been many issues with financing recovery from the lead contamination.²⁰⁹ Prioritizing money over health adds fuel to the environmental injustice outcry, demonstrating a need for a source of funding that is less likely to be affected by politics.

The 1996 amendments to the SDWA established the Drinking Water State Revolving Loan Fund (DWSRF) program to finance public water systems and projects that needed assistance in complying with SDWA regulations.²¹⁰ The EPA grants money to a state’s revolving loan fund, and the state must then match 20% of the grants and develop a plan that specifies how it will use the funds each year.²¹¹ States are to direct up to 30% of DWSRF loans toward economically struggling communities such as Flint.²¹² However, money from these loans does not seem to be sufficient to prevent struggling communities from compromised drinking-water quality.²¹³ Funds from private donors have been pouring in, but bringing long-lasting change requires larger comprehensive action.²¹⁴ Many pipes in the United States have been in place since the 1950s—before the understanding that lead lining was dangerous.²¹⁵ To help prevent lead contamination, the City will need to completely replace lead pipes, including in private homes, and Flint does not have the money to do it.²¹⁶ Private action has been one of the most successful and immediate forms of

208. Brett Walton, *U.S. Urban Residents Cut Water Usage; Utilities Are Forced to Raise Prices*, CIRCLE BLUE (Apr. 19, 2010), <http://www.circleofblue.org/2010/world/u-s-urban-residents-cut-water-usage-utilities-are-forced-to-raise-prices/> [<https://perma.cc/EV6U-6QA5>].

209. Davis, *supra* note 206.

210. TIEMANN, *supra* note 24, at 14.

211. *Id.*

212. TIEMANN, *supra* note 29, at 11.

213. MARY TIEMANN, CONG. RESEARCH SERV., RS22037, DRINKING WATER STATE REVOLVING FUND (DWSRF): PROGRAM OVERVIEW AND ISSUES 6 (2008).

214. See Emmanuel C.M., *10 Hip-Hop Artists Donating to Help Flint Water Crisis*, XXL (Jan. 28, 2016), <http://www.xxlmag.com/news/2016/01/rappers-donating-water-flint-michigan/> [<https://perma.cc/H7K2-K48M>] (detailing one example of private donors to the Flint Water Crisis).

215. John Wisely & Todd Spangler, *Where Are the Lead Pipes? In Many Cities, We Just Don't Know*, DETROIT FREE PRESS (Feb. 28, 2016, 7:52 AM), <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/02/27/lead-water-lines-lurk-unknown-many-cities/80551724/> [<https://perma.cc/M2Y2-JMBQ>].

216. See Matthew Dolan, *Replacing Flint's Lead Pipes Is Double the Estimate*, DETROIT FREE PRESS (May 28, 2016, 9:04 AM), <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/05/27/flint-lead-lines-water-crisis/85032096/> [<https://perma.cc/P9A4-LTQ3>] (discussing that Flint faces a \$460 million shortfall when the estimated replacement cost of pipes is around \$55 million); see also Daniel C. Vock, *Flint Crisis Calls to Replace All Lead Pipes in America*, GOVERNING (Feb. 3, 2016), <http://www.governing.com/topics/transportation-infrastructure/gov-flint-water-crisis-replace-all-lead-pipes.html> [<https://perma.cc/577L-PMHZ>] (explaining the need for full replacement of lead pipes in Flint).

relief in Flint²¹⁷ since many citizens could not even afford the estimated \$100 to replace their faucets.²¹⁸ The EPA should provide extra funding from the DWSRF to Flint and place a priority on financing lead-inflicted communities.

Finally, cities should avoid appointing emergency managers in financially burdened communities such as Flint. It was an emergency manager who decided to switch to the Flint River as Flint's primary water supply source.²¹⁹ As identified in the Flint Taskforce Report, "Emergency Managers charged with financial reform often do not have, nor are they supported by, the necessary expertise to manage non-financial aspects of municipal government."²²⁰ The Emergency Financial Manager erroneously put more emphasis on the benefit of a cheaper water supply than the cost of protecting public health.²²¹ Emergency managers should not be used in this capacity, not only because of the risk of decisions that compromise health, but also because they are not publicly elected officials and therefore not accountable to the people.²²²

CONCLUSION

The situation in Flint has demonstrated that the EPA needs to better enforce the provisions of the SDWA that require state environmental quality regulators to notify the public of any change in the public water systems that serve them. Congress could replicate the revision to the Michigan Administrative Code at a federal level to ensure adequate notification to citizens. The Flint Water Crisis also has revealed the need for the EPA to step in when a state agency is slow to conform to the requirements of the SDWA. There should also be federal funding on reserve for communities that encounter lead or copper contamination in

217. See generally Eric Lacy, *Plumbers Descend on Flint to Install Water Filters*, USA TODAY (Feb. 3, 2016, 10:00 AM), <http://www.usatoday.com/story/news/nation-now/2016/02/03/flint-water-crisis-plumbers-install-filters/79746044/> [<https://perma.cc/WQ6Z-8ZGN>] (describing one example of private action and support of Flint when union plumbers volunteered their time to install filters and replace faucets in affected Flint homes).

218. Elyse Wanshel, *300 Plumbers Poured into Flint, Michigan, to Install Water Filters for Free*, HUFFPOST (Jan. 24, 2017), https://www.huffingtonpost.com/entry/300-union-plumbers-flint_us_56b0e3c3e4b0a1b96203ce9e [<https://perma.cc/S2BK-8AN8>].

219. TASK FORCE FINAL REPORT, *supra* note 50, at 7.

220. *Id.* at 8.

221. Bebow, *supra* note 51, at 27; see Bosman & Davey, *supra* note 14 (explaining the community of Flint's opinion that emergency managers were more concerned with finances than public health).

222. See Bosman & Davey, *supra* note 14 (explaining the managers' lack of accountability to the public).

order to replace pipes and water lines as quickly as possible, especially in financially disadvantaged communities.

Further, the MDEQ needs to update or clarify its drinking water regulations so that corrosion control begins immediately upon a switch to a new drinking water system or a change in the drinking water system. Citizens can also be more involved with the process of determining the safety of their water to ensure that local officials are held accountable to their actions and cost-benefit analyses do not become the center of the public water debate. We do not want another Love Canal or Toms River situation.²²³ Every person can become involved in obtaining clean water access for all by monitoring the safety of their own water and not being afraid to question the systems that are in place to protect them when it seems the system is failing.

223. See generally FAGIN, *supra* note 6, at (explaining the situation of chemical pollution in the Toms River that caused an outbreak in childhood cancer); GIBBS, *supra* note 8 (discussing the health impacts that the environmental pollution of Love Canal had on New York residents).