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Escaping the Abdication Trap When Cooperative Federalism Fails: Legal Reform After Flint

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ESCAPING THE ABDICATION TRAP WHEN COOPERATIVE FEDERALISM FAILS: LEGAL REFORM AFTER FLINT

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ABSTRACT

Flint has focused national attention on problems in drinking water and, more broadly, failings in our cooperative federalism regarding environmental regulation. This Article argues that, with respect to our federal regime for safe drinking water, what we observe is a triple abdication: abdication of responsibility on the part of the federal, state, and local governments. This Article proposes making states (and not just local water authorities) legally responsible for testing water for lead and for disclosing test results. In addition, the Article argues that water test results and other relevant information should be made available to residents in visually-powerful, interactive, on-line maps. Making states legally responsible and implementing new, substantive requirements for testing and disclosure would help motivate and empower citizens to lobby for public funding and would make citizen suit litigation a more effective tool to combat abdication.

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INTRODUCTION

Beginning in 2014, the residents of Flint, Michigan were poisoned by lead in their drinking water.[1] Federal, state, and local officials ignored citizen complaints about their drinking water, despite the fact that a university laboratory confirmed the presence of high levels of lead in the water in August 2015.[2] As a Task Force appointed by Michigan's governor concluded, "[t]he significant consequences of these failures for Flint will be long-lasting. They have deeply affected Flint's public health, its economic future, and residents' trust in government."[3]

Flint is one example of a larger phenomenon I label "the abdication trap." A great deal of health, safety, and environmental law in the United States comports with a model that has been dubbed "cooperative federalism," in which states are called upon to be regulatory partners with the federal government in the implementation of federal programs.[4] While much of the literature and the law of cooperative federalism focuses on federal-state relations,[5] the reality is that the key relationships often are not only between federal and state officials but also between state and local officials. Broadly speaking, the federal government delegates responsibility to the states, and the states delegate responsibility to a range of local entities.[6] With each delegation, there is supposed to be a commitment to ongoing supervision and, if need be, a re-assumption of authority by the delegator from the delegate in order

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1. *See* Cara Cunningham Warren, *An American Reset—Safe Water & A Workable Model of Federalism*, 27 DUKE ENVTL. L. & POL'Y F. 51, 52 (2016).

2. *Id.* at 52, 79.

3. FLINT WATER ADVISORY TASK FORCE, FINAL REPORT 1 (2016) [hereinafter TASK FORCE REPORT], http://flintwaterstudy.org/wp-content/uploads/2016/03/Flint-task-force-report_2438442_ver1.0.pdf [https://perma.cc/598N-TZU2].

4. *See* Ronald J. Krotoszyski, Jr., *Cooperative Federalism, The New Formalism, and the Separation of Powers Revisited:* Free Enterprise Fund *and the Problem of Presidential Oversight of State-Government Officers Enforcing Federal Law*, 61 DUKE L.J. 1599, 1602 (2012) (outlining a conception of cooperative federalism).

5. *See, e.g.*, Jessica Bulman-Pozen, *Federalism as a Safeguard of the Separation of Powers*, 112 COLUM. L. REV. 459, 472–79 (2012) (discussing cooperative federalism generally as a federal-state government dynamic).

6. *See* Justin Weinstein-Tull, *Abdication and Federalism*, 117 COLUM. L. REV. 839, 841 (2017) ("Much federal law regulates the conduct of states. States, in turn, delegate many of their federal responsibilities to local governments.").

to meet the aims of the relevant regulatory regime. Especially in the environmental context, as with the Federal Safe Drinking Water Act,[7] citizen suits add another layer of complexity to governance.

This Article argues that, with respect to our federal regime for safe drinking water, what we observe is not cooperative federalism but rather a triple abdication: abdication of responsibility on the part of the federal, state, and local governments.[8] As a result, some localities inadequately test for or fail to address problems in drinking water, including problems with lead, as in Flint, Michigan.[9] The triple abdication of responsibility for addressing lead in water is in large part due to the lack of political will at the federal and state level to provide localities with the funding they realistically would need to upgrade their infrastructure to remove lead pipes.[10] The relevant actors do not want to know, or do, anything about such problems because there is simply not enough political will to secure the funding to solve them.

This Article argues that the best way to address the deficit in political will would be legal reforms in our safe drinking water regime

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7. *See* 42 U.S.C.A. § 300j-8 (West 2017).

8. Scholars have largely ignored the question of how the Safe Drinking Water Act and other drinking water statutes fit within the larger framework of cooperative federalism. A notable exception is A. Daniel Tarlock, *Safe Drinking Water: A Federalism Perspective*, 21 WM. & MARY ENVTL. L. & POL'Y REV. 233 (1997) (arguing that the drinking water law embodies mixed, often conflicting conceptions of federalism).

9. *See* TASK FORCE REPORT, *supra* note 3, at 43–45 (detailing the failures in Flint).

10. *See* Warren, *supra* note 1, at 70 (discussing political will as a cause of failures of federal drinking water programs at the local level). In December of 2016, Congress did pass the Water Infrastructure Improvements for the Nation Act ("WIIN") in an effort to improve drinking water infrastructure and authorize funding for communities, like Flint, facing drinking water emergencies. *See* Pub. L. No. 114-322, 130 Stat. 1628 (2016); *see also* Press Release, Debbie Stabenow, U.S. Senator for Mich., Senate Passes Agreement to Provide Critical Help for Flint and Other Communities, Clearing Way for President's Signature (Dec. 10, 2016), https://www.stabenow.senate.gov/news/senate-passes-agreement-to-provide-critical-help-for-flint-and-other-communities-clearing-way-for-presidents-signature [https://perma.cc/5BFD-K8B7]. Though its passage was touted as a bipartisan success, WIIN and the funding that it provided fall staggeringly short of what will be necessary to ensure the public has access to drinking water that is free from lead contamination. *See* Auditi Guha, *Federal Funding for Flint Water Crisis 'Just a Tiny Start,'* REWIRE (Mar. 23, 2017, 5:28 PM), https://rewire.news/article/2017/03/23/federal-funding-for-flint-water-crisis-just-a-tiny-start/ [https://perma.cc/6ZY7-PVUC]; *see also* Christine Grimaldi, *Flint Activist: Federal Aid Won't Come Close to Addressing 'Human Cost,'* REWIRE (Dec. 13, 2016, 10:18 AM), https://rewire.news/article/2016/12/13/flint-activist-federal-aid-come-close-addressing-human-cost/ [https://perma.cc/772X-AYXZ].

that will provide those at risk of lead poisoning with clear, readily-understandable information regarding the risks they face. In particular, this Article proposes making not just local water authorities, but states legally responsible for testing water for lead and disclosing test results. In addition, the Article argues for water test results and other relevant information to be made available to residents in visually-powerful, interactive, on-line maps. Making states legally responsible and implementing new substantive requirements for testing and disclosure would help motivate and empower citizens to lobby for public funding and make citizen suit litigation a more effective tool to combat abdication. Prompted by the crisis in Flint, there have been calls for state-level reform, and some actual reform in Ohio, Michigan, Illinois, and California,[11] that suggest that the proposals in this Article, which would require legislation at the state level, might be politically achievable.

Part I of this Article reviews the current legal regime, which is governed by the Federal Safe Drinking Water Act and the Lead and Copper Rule, and the abundant evidence of abdication of responsibility within that regime. Part II addresses the question of why we see abdication of responsibility at the federal, state, and local levels, focusing on lead contamination's lack of political salience and hence the lack of political will as a primary explanation. Part III advocates measures to more reliably and effectively produce and disseminate information about lead in water directly to those who face risk of lead poisoning. Finally, the Article takes up some possible objections to its state-level, information-focused approach to reform.

I. THE DRINKING WATER REGIME IN THEORY AND IN PRACTICE

Although the Federal Safe Drinking Water Act ("SDWA")[12] has been the subject of Congressional revisions since its initial passage in 1974, the basic structure has remained the same. "The 1974 law established the current federal-state arrangement in which states may be delegated primary implementation and enforcement authority for the drinking water program."[13] Forty-nine states have assumed primary implementation and enforcement authority, and "[t]he state-administered Public Water Supply Supervision (PWSS) Program" has

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11. *See infra* text accompanying notes 114–18 (discussing state reforms in the wake of Flint).

12. 42 U.S.C.A. §§ 300f-300j-27 (West 2017).

13. MARY TIEMANN, CONG. RESEARCH SERV., RL31243, SAFE DRINKING WATER ACT (SDWA): A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 1 (2014).

been and "remains the basic program for regulating the nation's water systems[.]"[14]

States thus are the primary enforcers of the SDWA, but to achieve and maintain primacy under section 1413 of the SDWA, "states must adopt regulations at least as stringent as national requirements, develop adequate procedures for enforcement (including conducting monitoring and inspections), adopt authority for administrative penalties, and maintain records and make reports as the Federal Environmental Protection Agency ("EPA") requires."[15] As with all delegated authority arrangements, states, as the delegated enforcers of the SDWA, are not legally responsible or liable for substantive violations of the Act; the only liable parties are the "owners" and "operators" of "public water systems [that must] monitor their water supplies to ensure compliance with drinking water standards and to report monitoring to the states."[16] The state has obligations to the federal government as long as it remains the primary enforcer of the SDWA pursuant to a federal delegation of authority, but a state need not continue to occupy that role.[17]

The SDWA not only gives a state authority to enforce the Act when the federal government has delegated primacy to it, but it also allows for federal inspections and administrative and civil enforcement actions against owners or operators of local water authorities, after providing the prescribed notice to the appropriate state officials.[18] In addition, the SDWA includes a citizen suit provision whereby any citizen may sue "any person . . . who is alleged to be in violation of any requirement prescribed by or under this subchapter."[19]

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14. *Id.* Note that the EPA has never withdrawn primacy from a state after granting it.

15. *Id.* at 6; *see also* 42 U.S.C.A. § 300g-2 (West 2017).

16. TIEMANN, *supra* note 13, at 7; *see also* Reply Brief in Support of Motion to Dismiss for Defs. State Treasurer & Members of the Flint Receivership Transition Advisory Bd. at 3, Concerned Pastors for Social Action v. Khouri, 194 F. Supp. 3d 589, 605 (2016) (No. 16-10277) (explaining that "[t]he SDWA applies to 'owners' and 'operators' of a public water system.").

17. *See* Warren, *supra* note 1, at 62–63 (noting that as of 2016, all states except Wyoming have opted for primacy).

18. TIEMANN, *supra* note 13, at 7, 13 (discussing Sections 1444 and 1414 of the SDWA); *see also* 42 U.S.C.A. § 300g-3 (West 2017) (codifying Section 1414 of the SDWA and reflecting 2016 amendments that clarified and expanded notice requirements); 42 U.S.C.A. § 300j-3 (West 2017) (codifying Section 1444 of the SDWA).

19. 42 U.S.C.A. § 300j-8 (West 2017).

In theory, then, there is both delegation and accountability in the SDWA regime, as the model of cooperative federalism requires: localities must report testing data and noncompliance to the states, and the states must report such information to the EPA.[20] Both federal and state governments can bring informal or formal enforcement actions, and the EPA retains the right to cancel its delegation of primacy to a state and become the primary enforcer of federal drinking water law in a state.[21] In theory, the involvement of three levels of government in the problem of drinking water contamination guards against failure at any one level of government. As a number of federalism scholars have argued, having multiple and even redundant sources of government regulation can help ensure that an objective is achieved, since failure by one or more sources can be checked by others.[22] In an ideal world, the SDWA regime would work such that, if localities failed to meet their responsibilities, there would be distinct checks: the states and, if the states failed to act as checks, the federal government.

But in practice the SDWA regime does not operate at all like that, even though there are of course some federal, state, and local officials who work hard to safeguard the quality of drinking water and real improvements have been made in many localities. In actuality, to lesser or greater degrees in different parts of the Unites States, the SDWA regime resembles a collective abdication, rather than a cooperation, regime.[23] The federal government abdicates its

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20. ERIK OLSON & KRISTI PULLEN FEDINICK, NATURAL RESOURCES DEFENSE COUNCIL, WHAT'S IN YOUR WATER? FLINT AND BEYOND 13 (2016) [hereinafter NRDC Report]; TIEMANN, *supra* note 13, at 7.

21. For an example of the EPA threatening to exercise that right, see generally Lillian Reed, *State Could Lose Authority to Monitor Drinking Water*, EVENING SUN (Feb. 20, 2017, 1:50 PM), http://www.eveningsun.com/story/news/2017/02/17/state-could-lose-authority-monitor-drinking-water/97596042/ [https://perma.cc/2QP5-PWUU].

22. *See generally* William Buzbee, *Contextual Environmental Federalism*, 14 N.Y.U. ENVTL. L.J. 108 (2005) (explicating the argument for redundant enforcement authorities). The flip side of redundancy, arguably, is a lack of accountability, as each level or source of government can blame another for unpopular action or inaction. *See* David A. Dana, *The Case for Unfunded Federal Mandates*, 69 S. CAL. L. REV. 1, 8 (1995) (explaining the nonaccountability critique of blurring the roles of different levels of government, but also noting that "there is evidence that some voters do not carefully distinguish among federal, state and local governments," but rather vote based on their general levels of satisfaction with "government").

23. For an argument that abdication by states of responsibilities to localities is a broad phenomenon crossing many areas of federal law, both constitutional and statutory, see Weinstein-Tull, *supra* note 6, at 841 ("Much federal law regulates the conduct of states. States, in turn, delegate many of their federal responsibilities to

responsibility for safe drinking water, essentially leaving the states and localities on their own.[24] The states—or at least some of them—then abdicate their responsibility for safe drinking water, leaving the matter to the localities. Finally, some localities abdicate their responsibility to provide truly safe water to the owners and operators of public water systems. As a result of this three-step abdication, some water consumers, especially in poor and rural communities, are deprived of something we should all agree they deserve as citizens of a comparatively wealthy nation, if not simply as human beings—water that is safe to drink.[25] Nor has there been effective citizen suit litigation to check the abdication by federal, state, and local actors.[26] Thus, as shown in Figure 1, the SDWA regime radically departs from the ideal-type of cooperative federalism.

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local governments. This Article argues that states do more than delegate those responsibilities; they abdicate them. They do not monitor local compliance with those laws, they disclaim responsibility for the actions of their local governments, and they relinquish the legal capacity to bring their local governments into compliance."). Weinstein-Tull is addressing contexts where the law is reasonably clear that states have primary obligations under federal constitutional or statutory law but nonetheless lean heavily on the argument that localities should be the subject of any litigation brought by advocacy groups or aggrieved citizens. In the SDWA context, however, states (at least arguably) lack any primary legal obligations under federal law, so the abdication problem is not one merely of rhetoric and political argument, but rather is a problem in the law itself. *See id.*

24. To be fair to the EPA, it repeatedly has threatened states with removal of their primacy under SDWA, but the threats are just that, as the EPA currently lacks the resources to fulfill the role of the states as enforcers and regulators, however inadequate some states are in these roles. *See, e.g.*, David E. Hess, *DEP Lacks Resources to Enforce Minimum Federal Safe Drinking Water Regulations*, PA. ENVTL. DIG. BLOG (Jan. 31, 2017, 6:16 AM), http://paenvironmentdaily.blogspot.com/2017/01/epa-dep-lacks-resources-to-enforce.html [https://perma.cc/8GN8-657A] (highlighting repeated empty threats from the EPA and the corresponding inadequacy of the state agency's ability to remedy problems). *But see, e.g.*, Press Release, U.S. Envtl. Prot. Agency, EPA Awards $100 Million to Michigan for Flint Water Infrastructure Upgrades (Mar. 17, 2017), https://www.epa.gov/newsreleases/epa-awards-100-million-michigan-flint-water-infrastructure-upgrades [https://perma.cc/FB33-ELM2] (showing scenario in which funding was provided by federal agency to assist state agency in regulatory capacity).

25. *See generally* Warren, *supra* note 1, at 51–70 (documenting failures of SDWA regime).

26. *See infra* Part V.

Figure 1. Expectations of Cooperative Federalism and the Corresponding Realities of Abdication

Cooperative Federalism	The Abdication Trap
Effective federal oversight of states as regulators and localities as regulated entities	Federal abdication to states
Effective state oversight of localities as regulated entities	State abdication to localities
Localities as compliant regulated entities	Localities' failure to comply with regulation
NGOs/citizen groups checking federal, state, and/or local failures	NGOs unable to check failures

There is abundant evidence of abdication at all levels. Indeed, no one seems to contest the proposition that, at least as regards lead in water, the legal regime fails to fulfill its theoretical promise. One starting point for unpacking the pattern of abdication is the EPA's 1991 Lead and Copper Rule ("LCR"), which was intended to prescribe testing for and responses to lead in drinking water in approximately 68,000 public water systems nationwide.[27] From the outset, however, the LCR has been criticized as setting too low an action level for lead in water; for providing for too little and too infrequent testing for lead; for leaving too much discretion to local water authorities as to how, when, and where to test for lead; and for leaving too much discretion to authorities regarding corrosion control treatment.[28] Despite twenty-five years of intensive criticisms and near universal agreement among public health experts that the LCR is inadequate, the EPA has been unable to enact a stronger version of the LCR.[29] The EPA itself has recognized the many flaws of the LCR, and has agreed that there is a need for "clear and robust revised sampling requirements, strengthened reporting, [and] transparency

27. *See* NRDC Report, *supra* note 20, at 12.

28. *See generally* Brady Dennis, *The EPA's Lead-in-Water Rule Has Been Faulted for Decades. Will Flint Hasten a Change?*, WASH. POST (May 5, 2016), https://www.washingtonpost.com/national/health-science/epas-lead-in-water-rule-has-been-faulted-for-decades-will-flint-hasten-a-change/2016/05/04/8d25bb12-0de9-11e6-bfa1-4efa856caf2a_story.html?utm_term=.7604819be849 [https://perma.cc/4Y29-U5LH] (summarizing these criticisms and tracing the history of the Rule); *see also* NRDC Report, *supra* note 20, at 12–13 (discussing failures in the Rule and recommending reforms).

29. *See* Dennis, *supra* note 28 at 1, 3.

provisions that ensure consumers have rapid access to relevant information and public education materials."[30]

A recent report on lead in water by the Natural Resources Defense Council ("NRDC") documents that, even within the terms of the LCR, there is gross non-enforcement.[31] As the NRDC explains, based on the EPA's own violations and enforcement database, "in 2015, over 18 million people were served by 5,363 community water systems that violated the Lead and Copper Rule," including failures to test for lead.[32] In 2015, too, "1,110 community water systems serving 3.9 million people showed lead levels in excess of 15 parts per billion (ppb)"—the federal action level—"in at least 10 percent of the homes tested."[33] The geographic scope of LCR violations and lead level exceedances is "extraordinary."[34]

Moreover, the EPA database very substantially understates the problem; as the NRDC explains, "NRDC has documented underreporting problems in the EPA's drinking water database for 25 years," and "the EPA itself admits that 'audits and assessments have shown that violation data are substantially incomplete.'"[35] Even those violations that are documented are rarely subject to formal or informal enforcement actions, leading the NRDC to conclude that there is a "lack of accountability [that] sends a clear message to water suppliers that knowingly violate the Lead and Copper Rule, with state and federal complicity: [t]here is no cop on the beat."[36]

A *USA Today* investigative report, also drawing on the EPA's database, identifies almost 2000 water systems spanning all fifty states where testing has shown excessive levels of lead contamination over

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30. ENVTL. PROTECTION AGENCY, LEAD AND COPPER RULE REVISIONS WHITE PAPER 4 (2016) [hereinafter EPA WHITE PAPER]. Whether the EPA under the Trump Administration will continue to call for revisions to the LCR, however, is not yet clear. *But cf.* Mae Wu, *How Trump's Budget Drains Drinking Water Protections*, NRDC: EXPERT BLOG (June 19, 2017), https://www.nrdc.org/experts/how-trumps-budget-drains-drinking-water-protections [https://perma.cc/H6Z2-5WHD] (noting statements made by the administration and the current funding and policy priorities).

31. *See* NRDC Report, *supra* note 20, at 12–15.

32. *Id.* at 5.

33. *Id.*

34. *Id.*

35. *Id.* (quoting U.S. ENVTL. PROT. AGENCY, OFFICE OF ENF'T & COMPLIANCE ASSURANCE, NATIONAL PUBLIC WATER SYSTEMS COMPLIANCE REPORT 3 (2013), https://www.epa.gov/sites/production/files/2015-06/documents/sdwacom2013.pdf [https://perma.cc/T9CE-R34R]).

36. NRDC Report, *supra* note 20, at 6.

the past four years.[37] The water systems, which reported lead levels exceeding EPA standards, collectively supply water to 6 million people.[38] The investigation also found that at least 180 of these water systems failed to notify consumers about the high lead levels, as federal rules require.[39] It bears noting that the *USA Today* reporting, like the NRDC report, is based on the EPA's database of violations, but we know that localities sometimes do not test for compliance or report violations to the states, and states sometimes do not report to the EPA.[40] Indeed, as of June 2016, two years after the complaints of contamination began, the State of Michigan still had not officially reported to the EPA that Flint was in violation of the LCR.[41]

Experts agree that local water authorities have many tools available to them to avoid effective testing. "[I]f [the utility] want[s] to be clever, [it] can test when [it is] pretty sure there's not a problem and not find a problem."[42] The result is that the existing sampling protocol, even when it is nominally followed, can miss "high lead levels and potential human exposure."[43] The methods used to avoid adequate testing are various, including intentionally testing at sites where lead contamination is least likely and running water or flushing toilets before testing.[44] In many small water authorities that often

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37. Alison Young & Mark Nichols, *Beyond Flint: Excessive Levels Found in Almost 2000 Water Systems Across All 50 States*, USA TODAY (Mar. 11, 2016), https://www.usatoday.com/story/news/2016/03/11/nearly-2000-water-systems-fail-lead-tests/81220466/ [https://perma.cc/9AHW-BV54].

38. *Id.*

39. *Id.*

40. NRDC Report, *supra* note 20, at 14; Warren, *supra* note 1, at 68.

41. NRDC Report, *supra* note 20, at 7.

42. Dennis, *supra* note 28 (quoting Erik Olson of NRDC); *see also* Garrett Ellison, *Why Michigan Lead Reforms Don't Call for Even Lower Action Level*, MLIVE (Apr. 22, 2016, 10:08 AM), http://www.mlive.com/news/index.ssf/2016/04/michigan_lead_10ppb.html [https://perma.cc/UB4L-ZCDQ] (quoting Virginia Tech's Marc Edwards, to the effect that the EPA rule "has been diluted by . . . loopholes and utilities which 'cheat' and sample in a way that avoids" finding a violation of the federal standard). As Edwards explains, "[y]ou can focus on a number, but as we saw in Flint, the number is meaningless if you're not sampling in the right places." *Id.*

43. *See* Dennis, *supra* note 28 (quoting Tom Neltner of Environmental Defense).

44. The EPA addressed these various "cheating" methods in a recent memorandum. *See* U.S. Envtl. Prot. Agency, Office of Ground Water & Drinking Water, Memorandum on Clarification of Recommended Tap Sampling Procedures (Feb. 29, 2016), https://www.epa.gov/sites/production/files/2016-02/documents/epa_lcr_sampling_memorandum_dated_february_29_2016_508.pdf [https://perma.cc/H9N4-BKWB].

lack anything like the staff or expertise to do testing, there is not even a pretense of undertaking testing.[45]

The pattern of abdication is also evident in federal and state funding for localities seeking to upgrade infrastructure in order to improve water quality—or, to be more precise, the gross inadequacy of such funding. The text of the SDWA could be read to suggest that the federal government will bear seventy-five percent of the cost of all necessary infrastructure for clean water, with the states making up the difference.[46] But Congressional appropriations have, in fact, never been anything close to meeting that target for funding to the states.[47]

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45. As a *USA Today* investigative report showed, the federal and the state governments de facto allow very small local water authorities to ignore the SDWA altogether, apparently out of a recognition that these authorities simply lack the capacity to do much of anything. *See* Laura Ungar & Mark Nichols, *4 Million Americans Could Be Drinking Toxic Water and Never Know*, USA TODAY (Dec. 13, 2016), https://www.usatoday.com/story/news/2016/12/13/broken-system-means-millions-of-rural-americans-exposed-to-poisoned-or-untested-water/94071732/ [https://perma.cc/W7HZ-2BPX] (reporting that "[s]ome 4 million Americans get water from small operators who skipped required tests or did not conduct the tests properly, violating a cornerstone of federal safe drinking water laws. The testing is required because, without it, utilities, regulators and people drinking the water can't know if it's safe. In more than 2,000 communities, lead tests were skipped more than once. Hundreds repeatedly failed to properly test for five or more years."). It bears noting that the U.S. Department of Housing and Urban Development also has abdicated responsibility for lead in water as it affects federally-funded housing, claiming that any responsibility rests with the EPA. *See generally* Emily A. Benfer, *Contaminated Childhood: The Chronic Lead Poisoning of Low-Income Children and Communities of Color in Federally Assisted Housing*, 41 HARV. ENVTL. L. REV. 493 (2017).

46. *See* CLAUDIA COPELAND, CONG. RESEARCH SERV., R42467, LEGISLATIVE OPTIONS FOR FINANCING WATER INFRASTRUCTURE 3 (2016). Even with the Trump Administration's emphasis on infrastructure, it is clear that this interpretation of the SDWA will not find traction anytime soon. *See* Press Release, The White House, Office of the Press Secretary, Fact Sheet: President Donald J. Trump Works to Rebuild America's Infrastructure (Aug. 15, 2017), https://www.whitehouse.gov/the-press-office/2017/08/15/fact-sheet-president-donald-j-trump-works-rebuild-americas [https://perma.cc/QY22-ETLZ] ("Government will get out of the way to allow state and local governments to succeed at meeting their unique challenges. Only 1/5 of infrastructure spending comes from the Federal Government, the vast majority comes from the states, localities, and the private sector.")

47. COPELAND, *supra* note 46, at 5–6; Warren, *supra* note 1, at 67–68; *see also* DENISE SCHEBERLE, FEDERALISM AND ENVIRONMENTAL POLICY 126 (2d ed. 2004). With the passage of the Water Infrastructure Finance and Innovation Act ("WIFIA") in 2014, Congress authorized the creation of the WIFIA program, which was intended to support water infrastructure projects through financing of loans, but Congress did not appropriate funding to the EPA for these loans until December of 2016. *See* Paul Epstein, *Water Act a "WIIN" for Infrastructure*, SHEARMAN & STERLING, LLP (Jan. 3, 2017), http://www.shearman.com/en/newsinsights/publications/2017/01/water-act-a-wiin-for-infrastructure [https://perma.cc/U6UU-MWD8]. With appropriations since December 2016 granting the WIFIA program

Neither the federal government nor (generally) the states have provided localities with anything like the funding they would need to address problems of lead contamination.[48]

II. WHY DO WE OBSERVE ABDICATION?

Why do local water authorities fail to properly test for lead in drinking water, and even when they do test, why do they fail to report test results and take appropriate remedial action? At the local level, economies of scale are sometimes a problem, because some water authorities are so small it is not reasonable to believe that they will ever have the staff and sophistication to assess and address problems of lead in their water.[49] But for all local water authorities, there are strong incentives not to learn about problems with lead in their water. Simply testing for lead can cause concern among water users, who otherwise might not ever know to raise the issue of lead in water.[50] Moreover, testing for lead can result in demands that the problem of lead be remediated, which can be very expensive—so expensive that

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$25 million in budget authority, the EPA invites eligible entities to apply for "$2.3 billion in WIFIA loans to help finance $5.1 billion in water infrastructure investments." U.S. ENVTL. PROT. AGENCY, *How to Apply for WIFIA Assistance: Notice of Funding Availability*, https://www.epa.gov/wifia/how-apply-wifia-assistance#notice [https://perma.cc/AG8W-VTP5]. This amount, however, will not put a dent in the expected cost of necessary water infrastructure projects. *See infra* notes 58–65 and accompanying text.

48. *See* COPELAND, *supra* note 46, at 5 ("Perhaps the most critical concern is the fact that federal capitalization grants [for water quality projects] are entirely subject to appropriations, which generally have been flat or declining for more than a decade . . . ."); NRDC Report, *supra* note 20, at 21 ("Current congressional funding of $2.37 billion per year for water infrastructure falls far short of the enormous need. This investment must be substantially increased, to at least the approximately $8 billion per year stipulated by the American Recovery and Reinvestment Act of 2009."). The budget proposed by President Trump would entail no increase in annual funding to states to improve water infrastructure, and it calls for a reduction in funds for federal oversight. *See generally* Sarah Frostenson, *Trump's Budget Cripples the EPA's Ability to Keep Drinking Water Safe*, VOX (Mar. 17, 2017), http://www.vox.com/policy-and-politics/2017/3/16/14640972/budget-epa-enforcement-bad-drinking-water-trump [https://perma.cc/S5EH-6SJP].

49. For an extended discussion of the great difficulties of small water authorities in meaningfully complying with federal and state drinking water regulations, see SCHEBERLE, *supra* note 47, at 124–53. As Scheberle explains, an unquestionable problem with SDWA is that it seeks to apply the same regulatory regime to water authorities that vary dramatically in size. *Id.* at 136–38. The EPA has taken some actions to encourage very small local water authorities to consolidate, but the agency plainly has no authority to require that.

50. *See* Dennis, *supra* note 28 (quoting one Illinois water-operations manager as stating "[w]hen you do extensive sampling like this, you have to explain why, when in fact there might not be any problem . . . . No one wants to hide anything from anyone, but the PR factor is something that has to be dealt with.").

imposing the costs of remediation on water users might seem practically impossible and, at best, extremely problematic.[51] The local governments, of which local water authorities are a part or with which they are affiliated, have budgets that are already exhausted through the meeting of basic needs like police and schools. In financially strapped localities, there are no additional funds available for a response to any identified water quality problems that would *not* also mean politically problematic reductions in other, extant funding. Thus, it is simply better for local authorities *not* to know.

Most managers of local water authorities—most local officials—presumably do not want to think of themselves as responsible for exposing people to lead poisoning in the communities for which they work. Given the strong incentives of local water authorities to believe that their water is safe, it is unsurprising that they can also believe that avoiding testing (or avoiding accurate testing) is simply a pragmatic, harmless way to avoid needless entanglements with uncomprehending customers and officious state and federal bureaucrats.[52]

One possible way to understand abdication at the federal and state levels is as reflecting a normative view on the part of state leaders that local water quality is simply an issue for localities, as well as a normative view on the part of federal leaders that local water quality is an issue for the states and localities. These "it's-a-state" or "it's-a-local" problem views runs contrary to the text of the SDWA: the SDWA is an incomprehensible statute if, in fact, drinking water quality is not a subject of federal or national concern. So, too, state drinking water statutes and regulations are incomprehensible if drinking water is solely a matter of local concern. Nonetheless, these views that "it's-a-state" or "it's-a-local" problem do have some traction in political discourse, and may have some sway in the federal

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51. *See id.* (highlighting a statement from Tom Neltner of Environmental Defense Fund that "[u]tilities have no incentive to find the problem. That's not a good rule"); *see also* Malcom Duncan & Aja Brown, Opinion, *Commentary: Flint Shows the Need for Innovative City-State Partnerships*, AUSTIN AM. STATESMAN (Mar. 15, 2016, 12:00 AM), http://www.mystatesman.com/news/opinion/commentary-flint-shows-need-for-innovative-city-state-partnerships/ouNGQlwdCCQytUGtesPI9O/ [https://perma.cc/DE34-ZC9A] (explaining that poorer cities like Waco, Compton, and Flint realistically need state assistance and partnership to address public health and other problems they face).

52. *See* SCHEBERLE, *supra* note 47, at 140–47 (reporting the views of state water agency officials regarding the EPA). Scheberle's interviews of water managers suggest that they believe that they are doing a fully adequate job protecting public health, but that federal bureaucrats simply focus on non-existent problems and/or do not understand how water systems work in practice. *See id.*

or state political process. For example, these views were expressed by some in Congress in explaining their opposition to additional funding for Flint.[53] At the same time, even if one believes that basic human health and welfare are not a national concern, but rather something that should be left to the state and locality where any particular American lives, the social costs of lead poisoning do not stop at the boundaries of localities or states.[54] Moreover, a belief in a limited role for the federal government or state government does not explain why federal and state abdication appears to be more marked in the context of lead in drinking water quality than in some other contexts.

Another possible normative force behind abdication could be the view that public service lines made of lead are connected to private service lines made of lead.[55] To solve the problem of lead contamination, both public and private lead service lines need to be replaced. Further, partial replacement (of public lines only) could be even worse than no replacement, depending on how carefully the partial replacement is undertaken.[56] There is a real issue as to how

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53. *See, e.g.*, Phillip Wegman, *Here's Why Mike Lee Opposes Federal Aid For Flint*, DAILY SIGNAL (Mar. 7, 2016), http://dailysignal.com/2016/03/07/heres-why-mike-lee-opposes-federal-aid-for-flint/ [https://perma.cc/9ZVM-HJE5]; Press Release, Heritage Found., Senate WRDA Bill Creates New Programs, Lacks Reforms (Sept. 7, 2016), http://heritageaction.com/press-releases/senate-wrda-bill-creates-new-programs-lacks-reforms-s2848/ [https://perma.cc/5CHB-M3LZ] (claiming that drinking water issues are "best handled by state and local institutions"); *see also* CATO INST., CATO HANDBOOK FOR CONGRESS 184 (1995) https://object.cato.org/sites/cato.org/files/serials/files/cato-handbook-policymakers/1995/9/104-19.pdf [https://perma.cc/8LXC-VNUC] ("Federal 'one-size-fits-all' regulations not only impose unnecessary costs on providers of drinking water; they also force localities to devote resources to minor problems, which leaves fewer resources for major ones. Localities, not Washington, should determine their own standards and how to meet them."). *But see* WIIN Act, 114 Bill Tracking S. 612, LEXISNEXIS (Jan. 25, 2017) (showing ultimate passage in the House of Representatives, 360-61, and in the Senate, 78-21).

54. *See* NRDC Report, *supra* note 20, at 3, 11; Peter Muennig, *The Social Costs of Childhood Lead Exposure in the Post–Lead Regulation Era*, 163 ARCHIVES PEDIATRICS & ADOLESCENT MED. 844, 844 (2009) ("Reducing blood lead levels to less than 1 g/dL among all US children between birth and age 6 years would reduce crime and increase on-time high school graduation rates later in life. The net societal benefits arising from these improvements in high school graduation rates and reductions in crime would amount to $50,000 . . . per child annually[.]")

55. EPA WHITE PAPER, *supra* note 30, at 9.

56. *See* Darryl Fears & Brady Dennis, *One City's Solution to Drinking Water Contamination? Get Rid of Every Lead Pipe*, WASH. POST (May 10, 2016), https://www.washingtonpost.com/national/health-science/one-citys-solution-to-drinking-water-contamination-get-rid-of-every-lead-pipe/2016/05/10/480cd842-0814-11e6-bdcb-0133da18418d_story.html?utm_term=.01224541d9c7 [https://perma.cc/ZDS4-R8T3]; *see also* Michael Hawthorne & Peter Matuszak, *As Other Cities Dig Up Pipes Made of Toxic Lead, Chicago Resists*, CHI. TRIB. (Sept. 21, 2016, 7:12 AM),

best to divide financial responsibility for infrastructure upgrades between public and private actors, and how to deal with the problem of private owners who simply lack the funds to finance private line replacement.[57]

This private property problem, however, cannot plausibly justify federal, state, and local abdication as to testing and disclosure, which would at least allow private owners to know if they have exposure to lead contamination. Moreover, there is a strong argument that the dividing line between public and private service lines is largely arbitrary and should not dictate the scope of public responsibilities.[58] And many residents, such as renters and the children and guests of owners, may not even own the residences to which private lead service lines run.[59] As a normative matter, too, it is not clear why even adult owners, who are less at risk of being harmed from lead exposure, should be subject to the risk of lead poisoning simply because they cannot readily afford to replace private service lines.[60]

Federal and state abdication as to drinking water testing and treatment, then, does not seem to be readily explicable by normative conceptions regarding the proper boundaries between federal, state, and local governments, or between the public and the private sectors. Rather, federal and state abdication seems most explicable by raw

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http://www.chicagotribune.com/news/watchdog/ct-lead-water-pipes-funding-20160921-story.html [https://perma.cc/FAK3-JLU9].

57. *See* EPA WHITE PAPER, *supra* note 30, at 9.

58. Indeed, some members of an advisory group to the EPA have suggested that the EPA revise its rules to require a local water authority to replace both publicly and privately owned portions of water lines that are under effective control of the water authority. *See* LEAD & COPPER RULE WORKING GROUP, FINAL REPORT OF THE LEAD & COPPER RULE WORKING GROUP TO THE NATIONAL DRINKING WATER ADVISORY COUNCIL 18 (2015), https://www.epa.gov/sites/production/files/2017-01/documents/ndwaclcrwgfinalreportaug2015.pdf [https://perma.cc/5BV9-BZWV].

59. States have only recently begun to make available information to residents regarding whether pipes leading to their homes contain lead. *See generally Grading the Nation: Interactive Map*, ENVTL. DEF. FUND, https://www.edf.org/health/grading-nation-lead-pipe-disclosure-polices-map [https://perma.cc/7THB-PUKM] (grading states in terms of how much information they make available).

60. The EPA, in fact, has pointed to several cities that have successfully resolved the question of public-private responsibility in undertaking service line replacements. *See* EPA WHITE PAPER, *supra* note 30, at 9 ("To the extent water systems rely on homeowners to pay for replacement of privately-owned portions of lines, there are concerns about consumer's ability to pay and the possibility that lower-income homeowners will be unable to replace lines, resulting in disparate levels of protection. However, a number of cities and towns across the nation have successfully implemented full LSLR and have developed innovate approaches to addressing these challenges, including Lansing, Michigan; Madison, Wisconsin; and more recently, Boston, Massachusetts—and EPA is looking at this experience in the context of developing proposed revisions to the LCR.").

politics. That is, to appropriate a sum that would meaningfully address lead contamination, politicians would have to expend more political capital than would be gained by the ultimate abatement of lead in the nation's water.

The status quo of underfunding supports the system in which each government actor has two choices: point fingers at each other or bury its head in the sand. State officials do not press localities to test and report because they know localities will call upon states to pay for necessary responses, and most state legislatures have not allocated money for such work.[61] Federal officials do not press states to enforce, or localities to test and comply with testing and reporting guidelines because they know that states and localities will call on the federal government to pay for the necessary responses, and Congress has not allocated the funding for an appropriate response.[62] At the end of the day, federal and state abdication is a story of money—or the absence of it.

The magnitude of the funding absence is not small. Lead can leach from lead pipes including public service lines and the private service lines that connect homes and other buildings to the public lines.[63] The most comprehensive solution to the problem of lead in water would be the replacement of all public and private lead service lines, combined with special abatement and public health protections in place to guard against the contamination that can result during the replacement of the lines.[64] Short of wholesale replacement, and until it is completed, rigorous maintenance of road and sewer infrastructure, use of proper corrosion control chemicals in water, and public education are needed. Altogether, solving the problem of lead in water could cost upwards of $300 billion dollars.[65]

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61. *See* Warren, *supra* note 1, at 74–75.

62. *See id.* at 76; *see also* Guha, *supra* note 10.

63. NRDC Report, *supra* note 20, at 6; *see Lead Pipes: A Threat to Kids Across America*, ENVTL. DEF. FUND, https://www.edf.org/health/lead-pipes-threat-kids-across-america [https://perma.cc/FXZ3-CCE6].

64. California has, in fact, at least adopted a goal of full replacement of lead service lines, although even there the question remains whether there will be sufficient funding. *See* Tom Neltner, *California Requires Replacement of All Lead Service Lines—But Vigilance Needed on Implementation*, ENVTL. DEF. FUND: HEALTH BLOG (Jan. 19, 2017), http://blogs.edf.org/health/2017/01/19/california-sb1398-on-lsls/ [https://perma.cc/BZ4G-QE2F].

65. Estimates vary as to the costs of lead pipe replacement, but the sum involved would seem to be at least $300 billion. *See* Matthew Dolan, *U.S. Could Face a $300B Lead Pipe Overhaul, Agency Warns*, DETROIT FREE PRESS (Mar. 5, 2016, 6:14 PM), http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/03/04/flint-crisis-could-cost-us-300b-lead-pipe-overhaul-agency-warns/81316860/ [https://perma.cc/D9G8-K2DG].

Three hundred billion dollars is a great deal of money, but Congress and state legislatures could appropriate that amount over the period of a number of years to achieve complete lead abatement. Although there are many models and abundant scholarship regarding the appropriation process, there is no question that it is a highly political process. Legislators and political party leaders, at least in part, make the decision to support one funding item over another based on the expected political gains and political costs of their decisions.[66] The pattern of grossly inadequate funding for water infrastructure at the federal and state level—a pattern that drives the triple abdication—reflects the fact that federal and state legislators do not see sufficient political gain in pushing for more funding.

And that political calculation makes sense because lead contamination in water, generally, does not seem to be a politically salient issue. It is not an issue that drives people to organize, march, donate money or, most importantly, vote. Before Flint, and aside from Flint, lead in water does not make the news, with few exceptions.[67] It is not invoked at party conventions.[68] It is not the stuff of large protests and letter-writing campaigns.[69] Lead

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66. *See generally* D. Roderick Kiewiet & Mathew D. McCubbins, *Congressional Appropriations and the Electoral Connection*, 47 J. POL. 59 (1985) (testing and supporting an instrumentalist view of legislative votes regarding funding). For further background discussion on the underlying theory and the corresponding implications of cognitive psychology, see Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J. LEGAL STUD. 747, 748–49 (1990) ("We seek to identify how, in a democratic society, public attitudes about risk might influence the kinds of risk regulation programs that will be enacted, given that political officials, in their quest for electoral security, seek to satisfy the preferences of constituents. . . . We choose to proceed on the assumption that while cognitive theory accurately describes how citizens make decisions about risks to life and health, traditional decision theory can be aptly applied to the political actor's problem of calculating the best response to citizen demands for action.").

67. Pre-Flint, however, there was a steady stream of scientific, non-popular press articles exploring harms from lead and possible solutions and their costs. *See generally* Rebecca Renner, *Reaction to the Solution: Lead Exposure Following Partial Service Line Replacement*, 118 ENVTL. HEALTH PERSP. A202 (2010) (exploring whether partial replacement of lead service lines was a viable solution).

68. The Flint crisis did prompt the Democratic Party to address water infrastructure in its 2016 platform, but the Republican platform continued to ignore the issue. *See* Andrew Farr, *GOP, Democratic Platforms Present Contrasting Visions for Infrastructure*, WATER FIN. & MGMT. (Aug. 1, 2016), https://waterfm.com/gop-democratic-platforms-present-contrasting-visions-infrastructure/ [https://perma.cc/3BU9-AAVZ].

69. One exception is the protest following a 2004 Washington Post article regarding the risk from lead in water. *See* Joseph Foti, *Lead in Our Water—A Washington, D.C. Mystery,* WORLD RESOURCES INST.: INSIGHTS BLOG

contamination has not even been prominent in academic discourse of environmental justice.[70]

But why is there not political agitation around—and corresponding demand for political action to address—the problem of lead in water? There are at least two plausible reasons. First, the lack of political capital targeting the issue of lead in water may reflect, in part, the issue's availability and its effect on voters' predictions that they will suffer from lead contamination in their water supply. Lead in water is invisible and tasteless.[71] Its effects may go unnoticed, and even when people do notice the effects, they may not attribute them to lead contamination. The water in Flint attracted residents' attention not because of lead, per se, but because of other contaminants that made the water brown and may have caused rashes and other immediate effects.[72] Moreover, the populations most vulnerable to the effects of lead in water—poor, minority, or geographically isolated populations—tend to be less capable than other populations of garnering attention that translates into political salience, in part because of their lack of resources to invest in politics and in part because of classism, racism, and other prejudices.[73]

(Mar. 21, 2008), http://www.wri.org/blog/2008/03/lead-our-water-washington-dc-mystery [https://perma.cc/C87M-RJE5].

70. For example, I could not locate any article in the Westlaw secondary journals database addressing the Federal Lead and Copper Rule as a problem of "environmental justice" prior to 2016. The most prominent environmental justice articles in the legal scholarship have focused on the siting of polluting facilities or waste disposal facilities in low-income, minority neighborhoods. *See generally* Vicki Been, *What's Fairness Got to Do With It? Environmental Justice and the Siting of Locally Undesirable Land Uses*, 78 CORNELL L. REV. 1001 (1993). Such facilities, unlike lead in drinking water, are highly visible to local populations.

71. *See* Young & Nichols, *supra* note 37.

72. *See* Abby Goodnough et al., *When the Water Turned Brown*, N.Y. TIMES, (Jan. 23, 2016), https://www.nytimes.com/2016/01/24/us/when-the-water-turned-brown.html [https://nyti.ms/2k5axs2] (recounting reactions to brown tap water); *see also* Nives Dolšak & Aseem Prakash, *It's Not Just Flint: Here's Why We Ignore Water Pollution*, WASH. POST (June 8, 2016), https://www.washingtonpost.com/news/monkey-cage/wp/2016/06/08/flints-contamination-and-victorias-secrets-heres-why-we-ignore-water-pollution/?utm_term=.f16a0fc43f58 [https://perma.cc/UA24-DEUW] ("Of course, water is key to human existence. But one important insight is that water pollution is not visible and therefore is overlooked. Citizens tend to focus on problems they can see and experience.").

73. *See* Dolšak & Prakash, *supra* note 72 ("If you are disadvantaged and face pollution problems, you are in jeopardy twice over, as the vast literature on environmental justice makes clear. The Flint contamination problem in part reflects income and racial disparities; city and state-level officials didn't have the incentives to respond sufficiently to complaints about water quality. This is a visibility issue, too — people may be invisible as well as problems."); *see also* EPA WHITE PAPER, *supra* note 30, at 17; NRDC Report, *supra* note 20, at 16–17.

Flint is exceptional in how politically salient it made the problem of lead in drinking water. There may be localities around the country with lead levels in water comparable to Flint's (until recently) extremely high levels. We know there are many localities with far too much lead in their drinking water.[74] But several aspects of the Flint story made it exceptionally gripping for the media: the state's unusual role under emergency powers;[75] how Flint's water became contaminated despite the traditional use of, and close proximity to, a completely safe water source;[76] the grotesque incompetence of the water managers who ignored the need for corrosion control, and egregious lying on the part of government officials;[77] the heroism of a local pediatrician in insisting that children were being poisoned;[78] and the state's intransigence, dismissiveness, and callousness even after the problem had come to light.[79] Flint garnered media attention of a sort that one cannot imagine other localities receiving. And thanks in large part to this media attention, Flint has led to some political mobilization to address lead contamination in Michigan and elsewhere.[80] But we cannot expect (and would not want) there to be more stories like Flint to keep pressure up for action on lead. As the press turns away from Flint, and time passes, the Flint effect on the politics of lead is likely to dissipate.

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74. *See* NRDC Report, *supra* note 20, at 5 ("Flint is not alone: over 18 million people were served by systems violating the Lead and Copper Rule in 2015.").

75. *See* TASK FORCE REPORT, *supra* note 3, at 39–42 (explaining the role of the state's emergency powers).

76. *See* Warren, *supra* note 1, at 77–78 ("For most, the shift to the Flint River was obviously ill advised before it occurred in April 2014.").

77. This conduct has given rise to criminal indictments. *See* Paul Egan & Elisha Anderson, *5 Michigan Officials Face Manslaughter Charges Over Flint Water Crisis*, USA TODAY (June 14, 2017), https://www.usatoday.com/story/news/nation-now/2017/06/14/flint-michigan-prosecutions/396195001/ [https://perma.cc/U2SM-Y7ZP]; *see also* NRDC Report, *supra* note 20, at 4.

78. *See* NRDC Report, *supra* note 20, at 10; Sanjay Gupta et al., *'Our Mouths Were Ajar': Doctor's Fight to Expose Flint's Water Crisis*, CNN (Jan. 22, 2017), http://www.cnn.com/2016/01/21/health/flint-water-mona-hanna-attish/index.html [https://perma.cc/ZN67-MG36].

79. Indeed, it has been argued that the outrageousness of the Flint story is its distinctive and legally salient feature. *See* Toni Massaro & Ellen Brooks, *Flint of Outrage*, NOTRE DAME L. REV. (forthcoming 2017).

80. *See infra* text accompanying notes 114–18 (discussing state reforms in the wake of Flint); *see also supra* note 10 and accompanying text (discussing federal legislative action).

III. THE RELATIONSHIP (OR LACK THEREOF) BETWEEN INFORMATION, POLITICAL MOBILIZATION, AND LAW

As Luke Cole argued years ago during the first wave of environmental justice literature, the project of achieving environmental justice requires more than talk, and more than law on the books. It requires political mobilization and political pressure.[81] Even if we had much better federal regulations and even if the EPA's famously inadequate LCR was finally revised after years of talk about such a revision, there would still need to be the political will to support real enforcement and remediation of the problem. Hence, the question that deserves attention, but cannot so readily be answered is: how can the problem of lead in water be made and kept more politically salient, such that there would be the political will for sustained action?

Better, more readily accessible, and more vivid information about who is exposed to lead in water would make the problem of lead more salient to those affected and could help foster and sustain political mobilization to address reducing lead exposures through government-funded infrastructure projects and other initiatives.[82] But to get better testing and more effective disclosure, there needs to be some political will in the first place to institute and enforce laws requiring better testing and more effective disclosure. For those concerned about the problem of lead in water, legal reform aimed at testing and disclosure may be more politically feasible than reform aimed at expensive, wholesale replacement of lead service lines. And the former kind of legal reform, in turn, ultimately may make it politically feasible to secure government funding for the latter (much more expensive) kind of reform.

The goal, then, is to create a kind of feedback loop on the way to full resolution of the problem of lead in water. Political mobilization, perhaps spurred by Flint, allows for reforms in law that result in the production of better information, which produces more political mobilization, which reinforces and even extends legal reform, which produces even better information, which produces more political

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81. *See* Luke W. Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 ECOLOGY L. Q. 619, 648 (1992); Luke W. Cole, *Environmental Justice Litigation: Another Stone in David's Sling*, 21 FORDHAM URB. L.J. 523, 541 (1994). *See generally* Noll & Krier, *supra* note 66, at 767–68.

82. And, even if that was not successful, better information would at least allow families to take self-protective measures such as running taps or buying and using filters.

mobilization, which ultimately becomes powerful enough to deliver the funding necessary for the infrastructure changes that are needed to safeguard public health. Admittedly this scenario is theoretical, but this is a moment when, broadly speaking, legal reform regarding issues of lead in water seems plausible, as evidenced by Governor Snyder's proposed new drinking water regulations in Michigan and the recent passage of legislation in Ohio, Illinois, and California.[83] The question then, is: what shape should this reform take?

IV. LEGAL REFORM AS INSTITUTIONAL RE-DESIGN: MOVING AWAY FROM COOPERATIVE FEDERALISM

Whatever the substance of testing and disclosure rules for lead should be, rules only matter if they are enforced, and we have seen a pattern of non-enforcement of the rules we already have. In the current regulatory regime, there are two sets of regulators and enforcers (the federal and state governments) and one set of regulated entities that are legally responsible for testing for and disclosing the presence of lead, and for treating drinking water if there is a violation (localities or local water authorities). The regime should be re-designed to expand the role of the federal government or state governments to make them primarily liable as regulated entities with respect to drinking water, as opposed to simply being regulators and enforcers. The expansion of legal responsibility could be total in theory, covering both testing, disclosure and treatment, or partial, covering only testing and disclosure. Since the role of localities is crucial for testing and treatment, the question then is whether the federal government or state governments should share that responsibility as co-legally-responsible actors, not whether sole responsibility should vest in the federal or state governments. Figure 2 shows some options for institutional re-design.

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83. *See* Jim Lynch & Michael Gerstein, *Snyder Plans Renewed Push for Stricter Lead Limit*, DETROIT NEWS (Feb. 13, 2017, 12:07 AM), http://www.detroitnews.com/story/news/michigan/flint-water-crisis/2017/02/13/snyder-plans-renewed-push-stricter-lead-water-limit/97828670/ [https://perma.cc/7BCU-9LN5]; James F. McCarty, *New Ohio Law Requires Mapping of Lead Pipes*, CLEVELAND PLAIN DEALER (Oct. 12, 2016), http://www.cleveland.com/metro/index.ssf/2016/10/new_ohio_law_requires_mapping.html [https://perma.cc/58YR-GQFL]; Tom Neltner, *California Requires Replacement of All Lead Service Lines—but Vigilance Needed on Implementation*, ENVTL. DEF. FUND: HEALTH BLOG (Jan. 19, 2017), http://blogs.edf.org/health/2017/01/19/california-sb1398-on-lsls/ [https://perma.cc/6HXM-TKMU]; Sophia Tareen, *Rauner Signs Lead Testing Law for Schools*, CHI. TRIB. (Jan. 16, 2017, 8:30 PM), http://www.chicagotribune.com/news/ct-rauner-school-lead-testing-law-20170116-story.html [http://perma.cc/9U6K-W6WP].

Figure 2. Legal Responsibility of Government Entities for Implementation in Institutional Re-Design

Government Entity	SDWA Regime	"Radical Shift" Design	"Moderate Shift" Design
FEDERAL	Oversight	Oversight	Oversight
STATE	Oversight	Fully shared/joint with local	Shared/joint with local in testing and disclosure
LOCAL	Sole responsibility	Fully shared with state	Shared/joint with state in testing and disclosure
NGO/CITIZEN GROUP	Suits against local	Suits against state and local	Suits against state and local

In theory, one could imagine a federal law that made the federal government directly responsible for testing for lead and disclosing risks at the local level, and perhaps even for treatment.[84] But any proposal for such a statute would be greeted with claims that it represents a heavy-handed approach to a realm traditionally left to state and local governments. And, politics aside, direct testing for lead by the federal government may not be the most efficient approach, given the geographic distance between the federal government and the tens of thousands of localities where testing needs to be done.

A more plausible approach would be changes at the state level, as a matter of state law, whereby states legally assume responsibility, jointly with local water authorities, for drinking water testing and disclosure (in the moderate shift alternative set forth in Figure 2) or for drinking water testing, disclosure, *and* treatment (in the radical shift alternative in Figure 2). State legislatures would certainly flinch at the radical option for budgetary reasons alone, so in the current political climate the moderate shift is the most conceivable option.

One might ask, why would we expect state employees tasked with testing for lead in water to act with any greater fidelity to the law than local water authority employees? One reason is that localities have an even more immediate incentive to engage in avoidance than states do, as localities are currently the only entities legally responsible for

84. *See generally* David A. Dana & Deborah Turkheimer, *After Flint: Environmental Justice as Equal Protection*, 111 NW. U. L. REV. 93 (2017) (suggesting that there are possibilities for addressing problems like Flint under the broad conceptual rubric of federal Equal Protection).

addressing the problem—and they are, in theory at least, legally responsible for addressing the problem regardless of whether they can obtain federal or state funding.[85] Moreover, criticism from consumers as a result of any identified problem will be directed immediately at the local water authority and at the state only secondarily, if at all.[86]

In addition, making states legally liable for testing and disclosure may change the psychology of state legislatures to some degree. State legislators may feel that, given their legal responsibility, they must at least appropriate adequate funds for testing and disclosure. Legal liability for testing also may change the psychology of state water or environmental agencies. The bureaucracies might feel more empowered, to the extent they were already inclined to act, to address possible lead problems, because state legal responsibility for testing and disclosure would provide them some measure of rhetorical protection against claims by local actors that they were being overbearing or unduly intrusive. Even for state bureaucracies that are otherwise disinclined to address problems of lead in water, the possibility that they will be criticized publicly for failing to meet not only a regulatory oversight duty, but also a substantive legal duty to engage in testing and disclosure, might be enough to motivate them to devote resources to verifying representations by local water authorities regarding testing and disclosure, and to step in when local water authorities have not met applicable requirements.

This shift to shared responsibility by the state could be configured in a variety of ways to fit the political, economic, and physical circumstances in each state. The obligation by the state could be to test and disclose for all water authorities, to do so only for small and low-income localities where the risk of inadequate testing seems highest, or to audit local testing and disclosure practices, report the audit results, and then test in localities where audits showed local noncompliance.

In this reconfigured regime, local authorities still would be legally responsible for, and hence empowered to, test alongside the state, and thus would be able to determine if the testing proposed by the state

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85. Nothing in SDWA's text preconditions operators' legal duties on the availability of federal or state funding. *See generally* 42 U.S.C.A. §§ 300f-300j-27 (West 2017).

86. For consumers, their direct point of contact regarding drinking water is their local water authority and local government. That is the entity, most notably, that sends them water bills and informs them of any issues with water service, such as interruptions to service. It is only natural, therefore, that citizens would tend to voice their complaints to their local water authorities and local governments, and to blame them for any problems.

was inadequate. Localities could engage in more testing than the state on its own would deem adequate. The story of Flint illustrates why such local input is important, because there, the state managed Flint's water under emergency powers in a way that sidelined local control and acted with less regard for local welfare than local leaders might have had they retained effective control.[87] Failure to meet legal responsibilities is a risk for both state and local officials, which is why making them co-responsible, as a legal matter, is an attractive option.

Cara Cunningham Warren has recently suggested that a more collaborative, mutually respectful, more "polyphonic" kind of federalism may be what is needed to address the problem of lead in water.[88] But it is unclear how calls for greater collaboration among different levels of government will lessen the problem of triple abdication. Re-configuring legal responsibility to make states co-liable for testing and disclosure may have more impact than attempts to boost collaborative attitudes within the current cooperative federalism design—a design that, in the context of drinking water, has not worked all that well.

So far, none of the reforms proposed or adopted at the state level in the wake of Flint entail an acceptance of testing and disclosure responsibility on the part of a state, exclusively or shared with local water authorities—with one arguable exception. The Flint Task Force Report recommends the implementation of "a school and daycare water quality testing program (which could serve as a model for the United States), administered collaboratively by [the Michigan Department of Environmental Quality] and [the Michigan Department of Health and Human Services] that includes appropriate sampling and testing for lead contamination for all schools and daycare centers in the state and effective reporting of test results."[89] It is unclear whether Michigan's Governor's proposed reform package adopts this recommendation, or even if it does, whether such a program will actually be instituted. But if adopted and implemented, it would reflect a partial institutional re-design,

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87. *See* Claire Groden, *How Michigan's Bureaucrats Created the Flint Water Crisis*, FORTUNE (Jan. 20, 2016, 6:00 PM), http://fortune.com/flint-water-crisis/ [http://perma.cc/B3XX-6V3F] (noting that "detractors of the [state emergency powers] law say that the lack of democracy in Flint prevented the city from making careful decisions," and quoting one NGO leader as arguing that "[w]hen you remove all democracy, it's a system set up for failure, where they're not accountable to the people that they're serving . . . ").

88. *See* Warren, *supra* note 1, at 113–14.

89. *See* TASK FORCE REPORT, *supra* note 3, at 13, 59.

marking the first time a state would be the legally responsible actor for testing the drinking water supplied by publicly-owned local water authorities, albeit in a limited category of sites.[90]

V. THE ROLE OF CITIZEN SUITS

One of the possible benefits of making states legally responsible or co-responsible for testing and disclosure, is that doing so may make citizen suits more effective as a means of combatting abdication in our drinking water regime. There have been relatively few citizen suits under the SDWA,[91] and unlike in other statutory areas of environmental law, the SDWA law has not been notably shaped by the courts via citizen suit litigation.[92] There could be many reasons for the lack of SDWA or related state litigation: drinking water, for example, may not be as compelling an issue for environmental NGOs and their memberships, which have traditionally been focused on preserving offshore water quality and water quality in lakes and streams, and have been somewhat slow to turn their attention to the problem of poor, urban communities.[93]

Citizen suit litigation also is a clumsy tool for citizen groups given the current allocation of responsibility in our drinking water regime. Under current law, citizen groups are more or less limited to suing local water authorities for noncompliance,[94] but the local water authorities that are most noncompliant are also likely to be the ones that lack resources to improve compliance, precisely because their noncompliance may reflect their lack of resources to take on infrastructure improvements. These localities can argue to courts,

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90. In addition, a bill has been introduced in the Indiana Legislature that would require the state to assume responsibility for testing for lead in drinking water in the City of East Chicago, a city where shocking levels of lead soil contamination, lead building materials contamination, and lead contamination in the drinking water have been documented. *See generally* H.R. 1344, 120th Leg., 1st Reg. Sess. (Ind. 2017).

91. *See* Christine L. Rideout, *Where are All the Citizen Suits?: The Failure of Safe Drinking Water Enforcement in the United States*, 21 HEALTH MATRIX 655, 679 (2011) (discussing the paucity of citizen suit litigation under the SDWA).

92. *See id.*

93. *See* Elizabeth Miller, *Part One: Environmental Groups Slow to Seek Out Minorities*, WXXI NEWS (Sept. 25, 2017), http://wxxinews.org/post/part-one-environmental-groups-slow-seek-out-minorities [https://perma.cc/U69M-THU6].

94. *See* Concerned Pastors for Social Action v. Khouri, 194 F. Supp. 3d 589, 604–05 (E.D. Mich. 2016) (holding that state officials could be sued under SDWA in Flint because they had taken over control of the water system from local officials, but acknowledging that otherwise state officials could not be sued under SDWA, as they would be "immune from suit from the requirements of the SDWA because they are not responsible as a 'supplier of water,' since they do not 'own[ ] or operate[ ] a public water system.'").

powerfully, that they simply lack the staffing and funding to do much better. Moreover, a suit against a single local water authority by definition can only have an impact, if any at all, on the local area in question. To have broad impact, citizen groups would have to sue many local water authorities, which would mean many lawsuits or sprawling, unwieldy, multi-defendant lawsuits. Such litigation would necessarily entail high transaction costs, and citizen groups themselves typically have very limited resources they must try to leverage to produce the most benefit.

Under the current legal regime, a citizen suit usually can only be brought by residents against the owner or operator of a local water authority where that resident lives.[95] It is owners and operators that are the legally responsible actors under the SDWA, and the implementing state law.[96] Although there are at least a few successful SDWA citizen suits against states, these cases entailed unusual circumstances.[97] Generally, citizens face standing and merits problems in suing a state under the SDWA, because local authorities have primary obligations as regulated entities, whereas a state's obligations are merely those of a regulator.[98] As a regulator, a state presumptively has broad discretion to decide when and when not to take action regarding noncompliance on the part of local water authorities.

However, if, as a matter of state law, the state was legally responsible for testing for lead and for disclosure of test results, the state could be regarded as an "operator" of local water authorities under the SDWA, at least with respect to testing and disclosure operations.[99] States also could then be sued under state-version

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95. *See id* at 597.

96. *See id* at 604–05.

97. I searched Westlaw for published citizen suit decisions against a state under the SDWA citizen suit provision, and the only examples I found relate to 42 U.S.C. § 300j–24, which is unusual in imposing a direct obligation upon a state, to the effect that "[e]ach State shall provide for the dissemination of information regarding lead to local educational agencies, private nonprofit elementary or secondary schools and to day care centers . . . ." *See generally* Acorn v. Edwards, 842 F. Supp. 227 (E.D. La. 1993) (holding that citizen groups had standing to sue the state for an alleged violation of § 300j–24); Colo. Envtl. Coal. v. Romer, 796 F. Supp. 457 (D. Colo. 1992) (upholding fee award to environmental plaintiffs in suit alleging violations of § 300j-24).

98. *See supra* notes 16–18 and accompanying text (explaining that states act as regulators under the SDWA when they assume primacy over implementation and enforcement).

99. *See generally* United States v. Bestfoods, 524 U.S. 51 (1998) (holding that a parent corporation can be held liable under the Comprehensive Environmental Response, Compensation, and Liability Act as operators of a facility owned by a

administrative procedure acts for failing to comply with non-discretionary duties to test and disclose.[100] Figure 2, above, shows the shift regarding citizen suits with a partial, moderate re-design of the SDWA regime.

Suits against states could be very effective in checking any abdication by states with respect to testing and disclosure requirements. In such suits, citizen groups could collect a great deal of information in a highly efficient way through discovery, since the state being sued, by definition, would have information about what testing and disclosure it undertook for all the local water authorities under its purview. As compared to a local water authority, a state could much less convincingly argue poverty and lack of resources to a court in response to a citizen suit.[101] Additionally, such suits would create a forum in which citizen groups and the state could negotiate as to where it would be most rational for testing and disclosure resources to be invested. A single settlement agreement encompassing a state thus could yield much greater net public health benefits than a handful of suits against local water authorities.

Suits by citizen groups against states for failing to test children enrolled in the Medicaid program for lead poisoning provides something of a model for the kind of litigation citizen groups could bring against states for failing to test drinking water and provide disclosure. There is a history of Medicaid suits in which advocates pressed for a state to expand and improve its lead testing procedures (although the suits were generally aimed at other deficiencies in the state's Medicaid program as well).[102] A 1991 settlement of a suit

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subsidiary if the parent corporation directed waste management decisions at the facility).

100. The Model State Administrative Procedure Act, which many states follow, provides for review of final agency action and further provides that "[a] court may compel an agency to take action that is unlawfully withheld or unreasonably delayed." REVISED MODEL STATE ADMIN. PROCEDURE ACT § 501(d) (UNIF. LAW COMM'N 2010).

101. Of course, there are some states that are financially strapped (such as Illinois, at present), but state budgets are always going to be an order of magnitude greater than the budget of any local water authority and thus will appear to have more room for funding compliance with a court order. Moreover, at the end of the day, local water authorities and localities generally are limited by state law and regulation as to their unilateral ability to impose new taxes or rate increases to fund compliance with a court order. By contrast, States qua States have greater latitude in generating new sources of funding. *See* Erin Adele Scharff, *Powerful Cities?: Limits on Municipal Taxing Authority and What to Do About Them*, 91 N.Y.U. L. REV. 292, 301 (2016).

102. *See*, *e.g.*, Ellis *ex rel.* Ellis v. Wetherbee, No. 96-60434, 1997 U.S. App. LEXIS 43306, at *2 (5th Cir. May 5, 1997) (discussing the State of Mississippi's prior settlement agreement to change the policy and procedures of its Early and Periodic

against California required California to test at least 500,000 poor children for lead poisoning, after three years of failing to do so in its Medicaid clinics.[103] Most recently, after a settlement, all children in Washington covered by Medicaid will be eligible for lead-poisoning testing if their parents request it, they live in old buildings, they are recent immigrants, or they face other exposure risks.[104] In addition, the State of Washington committed to make available a new online map that lets residents zoom in on their neighborhoods, down to census tracts, to see their relative risk of lead exposure ranked on a scale of one to ten, based on income levels and age of housing.[105]

VI. MAKING LEAD CONTAMINATION INFORMATION SALIENT

There is a consensus among commentators that, regardless of who is responsible for testing for lead in water, there must be changes to the substance and procedures for testing.[106] For one thing, the federal action level for finding "too much lead" must be lowered from 15 parts per billion (ppb) to a lower level that reflects the actual health risks posed by lead.[107] Michigan's Governor has proposed lowering the standard to 10 ppb, which would be the lowest of any state.[108]

Screening, Diagnosis and Treatment ("EPSDT") program); Memisovski *ex rel.* Memisovski v. Maram, No. 92 C 1982, 2004 WL 1878332, at *49 (N.D. Ill. Aug. 23, 2004); Thompson v. Raiford, No. 3:92-CV-1539-R, 1993 WL 497232, at *2 (N.D.Tex. Sept. 24, 1993); N.Y.C. Coal. to End Lead Poisoning v. Giuliani, 720 N.Y.S.2d 298, 299 (N.Y. Sup. Ct. 2000).

103. *See* Philip J. Hilts, *California to Test for Lead Poisoning*, N.Y. TIMES (Oct. 12, 1991), http://www.nytimes.com/1991/10/12/us/california-to-test-children-for-lead-poisoning.html [https://perma.cc/XM5Z-WURL].

104. Sandy Doughton, *More Children Will Be Tested for Lead Under Settlement*, SEATTLE TIMES (Dec. 10, 2015, 3:27 PM), http://www.seattletimes.com/seattle-news/health/more-children-will-be-tested-for-lead-under-lawsuit-settlement/ [https://perma.cc/UZR4-XHDA].

105. *See id.*

106. *See* Dennis, *supra* note 28.

107. *See* Tom Neltner, *Household Action Level for Lead in Water: EPA Needs to Release Health-based Estimate*, ENVTL. DEF. FUND: HEALTH BLOG (Mar. 25, 2016), http://blogs.edf.org/health/2016/03/25/lead-hal/ [https://perma.cc/5EEF-6YVU]; *see also* Laura Unger, *Lawmakers Urge the EPA to Reduce Its Standard for Lead in Drinking Water*, USA TODAY (July 1, 2016, 10:23 AM), https://www.usatoday.com/story/news/2016/06/30/lawmakers-urge-epa-reduce-its-standard-lead-drinking-water/86576032/ [https://perma.cc/8LTS-DSSA].

108. *See* Chad Livengood, *Snyder Proposes Tougher Regulations for Lead in Water*, DETROIT FREE PRESS (Apr. 15, 2016), http://www.detroitnews.com/story/news/michigan/flint-water-crisis/2016/04/15/michigan-urge-toughest-lead-test-rules/83071228/ [https://perma.cc/52TR-Z6BG] ("The proposal appears to be 'the lowest state standard in the country,' said Doug Farquhar, program director for environmental health at the National Conference of State Legislatures."); *see also* Ellison, *supra* note 42 (quoting Virginia Tech's Marc Edwards as explaining that

Moreover, testing must be done more frequently and expansively in each locality, and with fewer possibilities for manipulation, if the data is to have any integrity.[109]

For information about lead in water to matter, both in influencing people's personal behavior and in politics, it must be salient to people—it must be something they can readily access, understand and integrate. Dry, technical information available in a form letter or buried in a report on file with a government office will not be effective in communicating to people the need to take action.[110] In other words, for testing and disclosure to increase political salience, the public disclosure itself must be salient to the intended audience: residents, community members, and the media.

It seems obvious that salience presupposes at least ready availability: the easier the information is to access, the more salient it may be, whatever its form. The available social science also suggests that salience of disclosure is enhanced when it takes the form of graphics or other visual representations: a bright flashing warning light may be more effective than numbers or text stating that a test shows a contaminant level exceeds federal or state action levels.[111] Risk communication is also more effective when the recipient of the

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advocates believe the standard ideally should be 5 ppb, but acknowledge that the costs of achieving that standard would be too high given other demands for public funds).

109. To this end, the EPA's National Drinking Water Advisory Council has recommended "that a voluntary customer-initiated sampling program based on a more robust and targeted public education be substituted for the current LCR tap sampling requirements." EPA WHITE PAPER, *supra* note 30, at 13.

110. The EPA White Paper recognized the need for more effective communication with the public. *See id.* at 15 ("EPA is considering modifications to the rule to strengthen the public education requirements by requiring ongoing, proactive and targeted public education to effectively communicate drinking water lead risks . . . ").

111. Dolores J. Severtson & Jeffrey B. Henriques, *The Effect of Graphics on Environmental Health Risk Beliefs, Behavioral Intentions, and Recall*, 29 RISK ANALYSIS 1549, 1549–50, 1563 (2009) ("Findings show moderately strong positive relationships between water test results, safety beliefs, and mitigation behavior . . . . [A] test result compared to a safety standard provides concrete evidence of an unseen risk and is therefore more powerful than abstract risk information . . . . Graphical representations can make abstract information more concrete and have been recommended for conveying environmental monitoring information as it relates to safety standards or benchmarks . . . . Typically used phrases such as 'exceeds the standard' or 'above the standard' were sometimes misunderstood . . . . Visualization can make information easier to understand . . . . The strategic use of evidence-based visual features can address literacy and numeracy barriers by facilitating automatic comprehension . . . . Results suggest that images designed to convey the meaning of risk information can close the gap between the intended and imparted meaning of environmental health risk information.").

information is offered a depiction that shows how close he or she lives and works to sites where tests have shown contamination.[112]

Recent and proposed reforms in lead testing of water might enhance the salience of disclosures to some degree. These reforms need to be actually implemented and strengthened to ensure that better testing for lead produces not just more information, but more impact on the recipients of the information and, ultimately, greater political salience.

The LCR does not require any testing for lead at the ninety percent of schools or day care centers that receive water from a public water system.[113] In the wake of the uproar over Flint, Michigan's Governor has proposed annual testing at schools and day care centers, and recently enacted legislation in Ohio and Illinois require such testing.[114] Such testing, of course, is plainly sensible, as schools and day care centers are potential exposure sites for children. But the testing data from schools and day care centers is also notable because it is likely to be more salient in communities than data from selected individual homes. A letter sent to your home regarding testing at a number of houses in the general community—but not at your house—is much more readily overlooked than a notice that the water at your child's school has a level that violates the federal standard. Moreover, notices to parents about such data can spark conversations and mutual exchanges among parents and educators, so that even parents who might not understand or pay attention to notices can come to appreciate what they mean. Neighborhood schools, which often have established parents' groups and large meeting spaces, are

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112. *See*, *e.g.*, Dolores J. Severtson & James E. Burt, *The Influence of Mapped Hazards on Risk Beliefs: A Proximity-Based Modelling Approach*, 32 RISK ANALYSIS 259, 259–60 (2011) ("The use of maps to communicate environmental risk to the public is rapidly expanding . . . . Maps illustrate the geographic distribution of risk, a key advantage over other formats of risk information. Viewers can see how the location of their home or community is configurationally related to mapped information . . . . Participants' beliefs about risks associated with the hazard (risk beliefs) were strongly influences by participant's perceived map locations relative to the distribution and magnitude of the mapped hazard.").

113. Laura Unger, *Lead Taints Drinking Water in Hundreds of Schools, Day Cares Across USA*, USA TODAY (Mar. 17, 2016), https://www.usatoday.com/story/news/nation/2016/03/17/drinking-water-lead-schools-day-cares/81220916/ [https://perma.cc/UH4W-3EEE].

114. *See* Ohio Legislative Service Commission, Bill Analysis, H.B. 512, 131st Gen. Assemb., at 5–6, https://www.legislature.ohio.gov/download?key=5070&format=pdf [https://perma.cc/V95E-DCGF]; Lynch & Gerstein, *supra* note 83; Sophia Tareen, *Rauner Signs Lead Testing Law for Schools,* CHI. TRIB. (Jan. 16, 2017, 8:30 PM), http://www.chicagotribune.com/news/ct-rauner-school-lead-testing-law-20170116-story.html [http://perma.cc/6XUQ-C4B4].

natural focal points for community organizing, including organizing for action regarding the problem of lead.

No jurisdiction has moved toward a highly salient way of depicting lead testing results, such as an interactive map that would show how close or far testing sites are from one's own home and how much the results at each site exceeded the legal limit for lead. For its part, in its October 2016 White Paper, the EPA reported that it was considering "[r]equiring drinking water utilities to post all LCR sampling results and sample invalidation justifications on their publicly accessible website in a form that protects the privacy of customers."[115] But the EPA has not taken any action in this regard, and neither have the states.

The EPA, however, has called on local water authorities to map what they know regarding the location of public and private lead service lines, and to make those maps available to the public.[116] Ohio has taken the lead in this regard. A recent Ohio law, enacted in June 2016, requires that "every public water system in the state identify and map the locations of lead piping in their entire service areas."[117] Public water authorities in Ohio have been given discretion as to how to achieve mapping, and at least one—Cincinnati—has undertaken it in a way that is well-designed to make the information as available and vivid, and hence salient, as possible.[118] Cincinnati chose to follow the approach already in place in Washington, D.C., which makes it easy for a resident to check whether his or her residence is connected to a public service line containing lead by using a detailed online map.[119] The map also allows the resident to see whether there is information indicating that the private service line for his or her home also contains lead.[120] All a resident needs to do is enter his or her

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115. EPA WHITE PAPER, *supra* note 30, at 15.

116. *See generally* Alison Young, *Some States, Utilities Balk at Disclosing Locations of Lead Water Pipes*, USA TODAY (Apr. 21, 2016, 4:20 PM), https://www.usatoday.com/story/news/2016/04/21/lead-water-service-line-location-transparency/83201228/ [https://perma.cc/TH9F-ZW8E] (explaining that the response from local water authorities has been variable).

117. Peak Johnson, *Ohio Requires Mapping of Lead Pipes in Water Systems*, WATER ONLINE (Oct. 24, 2016), https://www.wateronline.com/doc/ohio-s-requires-mapping-lead-pipes-water-systems-0001 [https://perma.cc/8UYU-NPNP].

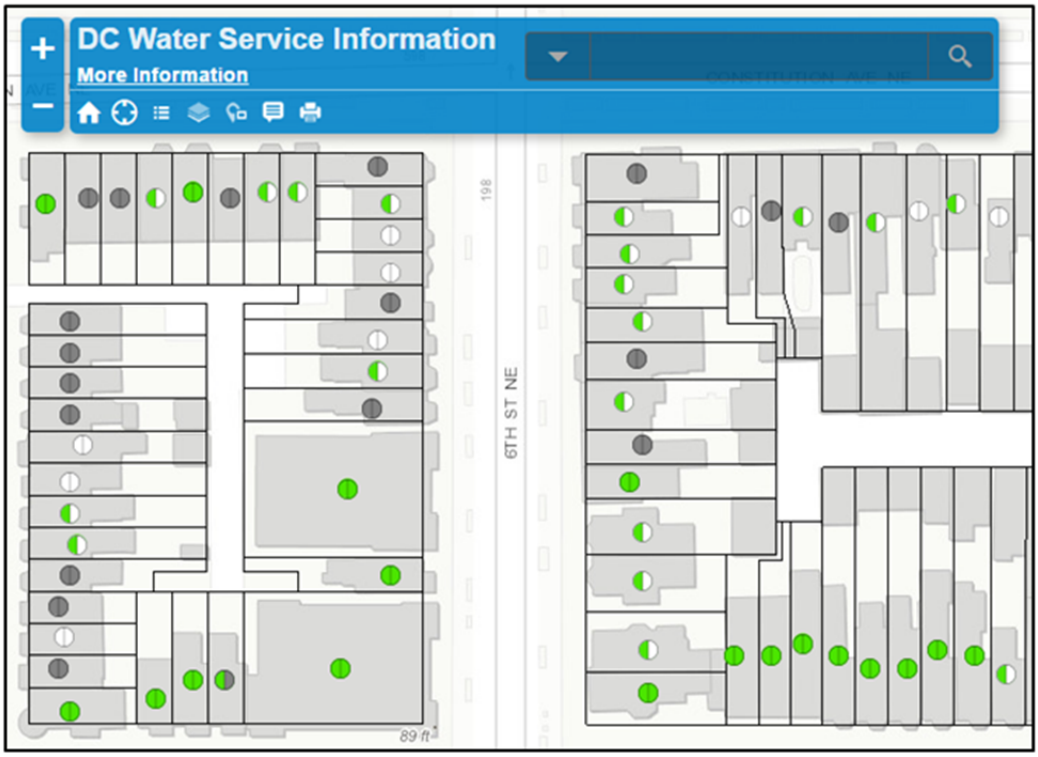
118. *See* Tom Neltner, *Cincinnati and Ohio Show Leadership in Identifying and Disclosing Lead Service Lines*, ENVTL. DEF. FUND: HEALTH BLOG (Jan. 9, 2017), http://blogs.edf.org/health/2017/01/09/cincinnati-and-ohio-show-leadership-on-lsls/ [https://perma.cc/Y88B-MAAZ.]

119. *Id.*

120. *Id.*

address.[121] Cincinnati, again following the Washington, D.C. approach, invites customers to submit updated information to the utility by email.[122] As one commentator notes, "[t]his level of detail allows any consumer to make informed choices whether they are buying or renting a home, picking a child-care facility, or deciding whether to use a filter."[123] Figure 3, below, is a screen shot of the widely-praised interactive map used in Washington, D.C., in which a green dot signifies a lead-free service line; a grey dot signifies a lead service line; and a white dot indicates a lack of information as to whether the line contains lead.[124]

Figure 3. Map of Public Service Lines in Washington D.C.[125]



121. *Id.*
122. *Id.*
123. *Id.*
124. Lyndsay McCormick, *Mapping Lead Service Lines: DC Water Offers a Model for Utilities Across the Nation*, ENVTL. DEF. FUND: HEALTH BLOG (July 25, 2016), http://blogs.edf.org/health/2016/07/25/mapping-lead-service-lines-dc-water-offers-a-model-for-utilities-across-the-nation/ [https://perma.cc/9SKX-WZQD].
125. *Id.*; *see DC Water Service Information*, D.C. WATER, https://geo.dcwater.com/Lead/ [https://perma.cc/VS8M-4WWM].

While there have been a few improvements in making information regarding lead testing more salient to affected residents, and hence more likely to form the basis of meaningful personal and political action, there is still much more that could be done. Most states do not have testing at schools on a regular basis or at all; test results are not communicated in accessible maps; and effective mapping regarding the location of public and private lead service lines is in place in some, but by no means most, jurisdictions. Even if states did accept greater legal responsibility for testing, and if testing were to improve, the issue of lead in water may not gain political salience unless there is more effective, more salient disclosure of test results.

CONCLUSION

The preceding analysis builds on the recognition that our regime for drinking water regulation entails a triple abdication—by the federal and state governments as regulators and by local authorities as regulated entities serving water consumers. A lack of political salience surrounding the problem of lead in water best explains this abdication. This Article proposes an institutional re-design (making states directly, legally responsible for testing and disclosure) as well as a change in testing disclosure (making it more accessible and vivid) as ways to heighten the political salience of the lead problem and perhaps make possible the kind of federal and state funding needed to fully address it.

This approach depends on legislative and regulatory action at the state level, and the political climate in some states may make that impossible. However, while it is true that states sometimes engage in races to the bottom, other times there are races to the top with states copying best practices adopted elsewhere. We could see such a phenomenon regarding lead in water.[126] If nothing else, should one or more states adopt a "model" state-based regime with effective testing and disclosure, advocates in other states could point to that model as part of their own advocacy. Moreover, if a number of states adopted the strategy proposed in this Article, it might change the

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126. *See generally* Lincoln Davies, *State Renewable Portfolio Standards: Is There "A Race" and Is It "To The Top"?*, 3 SAN DIEGO J. CLIMATE & ENERGY L. 3 (2011–2012). In addition to the reforms noted in Michigan, Ohio, Illinois and California, there are bills being introduced in various state legislatures where lead in water is clearly a problem, such as Pennsylvania. *See* Paul Vigna, *Flint 'Tragedy' to Prompt Pa. Legislation That Requires More Testing for Lead*, PENN LIVE (Feb. 11, 2016), http://www.pennlive.com/politics/index.ssf/2016/02/legislation_would_increase_lea.html [http://perma.cc/G7NS-JKSV].

political economy at the federal level to make it more likely that Congress would amend the SDWA and require states to share testing and disclosure responsibilities with localities in return for federal infrastructure funding.[127]

This approach also relies heavily on the power of information, and informational approaches have their limits. Particularly for otherwise distressed communities, more information simply may not be something they have the wherewithal to fully absorb and act upon. Conversely, information about health risks can also prompt overreactions or non-adaptive reactions—such as not running one's tap at home except when absolutely necessary because of a fear of lead, which has the effect of increasing lead concentrations in the water that one does use.[128] Public education can address the problem of such reactions, and that too has to be part of the response to the problem of lead in water.[129]

Continuing with our current regime is simply not a tenable option, because lead is one clear danger we can identify and eliminate. Too little has been done to address the problem of lead in water under the current institutional design, so a re-design is needed, not just a tweaking of current rules. In re-designing the regime for lead contamination in water, moreover, we may gain a better understanding of how to address the broader problem of abdication in environmental law.

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127. Notably, state actors in states that already had assumed responsibility for testing at the local level might not lobby their Congressional delegation against a federal mandate; indeed, they might feel that if they are accepting that responsibility, other state governments should too.

128. For a discussion of the need to take account of how people will react to information about risks in order to improve health and safety in situations like Flint, see Sarah Stillman, *Can Behavioral Science Help In Flint?*, NEW YORKER (Jan. 23, 2017), http://www.newyorker.com/magazine/2017/01/23/can-behavioral-science-help-in-flint [https://perma.cc/QG7S-W6E3].

129. Public education efforts are now underway in Flint, although efforts there are impeded by the understandable lack of trust on the part of the public. *See* Elisse Ramey, *Mayor, CORE Workers Hope to Ease Concerns for Flint Residents*, ABC 12 (Mar. 15, 2017, 1:18 PM), http://www.abc12.com/content/news/416214843.html [https://perma.cc/RL8A-CVV4]; Stillman, *supra* note 128.