UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

In re Flint Water Cases

Civil Action No. 5:16-cv-10444-JEL- MKM
(consolidated)

Hon. Judith E. Levy Mag.
Mona K. Majzoub

Civil Action No. 5:16-cv-10444-JEL- MKM

Burgess v United States

DECLARATION OF ERIK D. OLSON

I. Introduction

I, Erik D. Olson, attest and declare as follows:

1. My name is Erik D. Olson and I am a resident of the Commonwealth of Virginia, and am legally competent to provide this declaration.

2. I have been retained as an expert in the structure, policies, rules and regulations related to the operation and responsibilities of the United States Environmental Protection Agency (EPA) including the Safe Drinking Water Act (SDWA), the Lead and Copper Rule and related rules and regulations.

3. My opinions in this report are based upon my education, training, employment and knowledge and are offered to a reasonable degree of certainty. My opinions are my own and do not necessarily represent the views of my employer the Natural Resources Defense Council.

4. I have been asked to evaluate EPA's actions and its failure to act in the context of the Flint Water Crisis, the facts and events that occurred during the crisis and EPA's regulatory and legal obligations. I am providing this declaration pro-bono at no cost. I have not testified at a deposition or trial in the last 4 years. A complete list of my publications from the last 10 years is included in my CV which is attached. (Exhibit 1).

II. Qualifications

5. I am currently the Senior Strategic Director for Health in the Environmental Health Program at the Natural Resources Defense Council (NRDC). I have authored or co-authored many reports, articles and other writings regarding safe drinking water issues and the SDWA, including those listed in my attached CV.

6. I have been employed at NRDC since 2013. Prior to that, I was Deputy Director of the Pew Health Group at The Pew Charitable Trusts from 2008 to 2013. Before my position at Pew, I was the General Counsel and Deputy Staff Director for the U.S. Senate Committee on Environment and Public Works. Prior to my Senate position, I held several positions at NRDC from 1991 to 2006, including serving as the Health Program Director, Director of the Advocacy Center, and Senior Attorney. Prior to my NRDC work, I was a staff attorney for the National Wildlife Federation from 1986-1991.

7. My first position after law school was as a staff attorney for the U.S. Environmental Protection Agency in the agency's Office of General Counsel from 1984 to 1986, where I litigated and served as an in-house counsel primarily on the SDWA, Clean Water Act, and hazardous waste issues.

8. In my work at NRDC, in the Senate, at the National Wildlife Federation, and EPA's Office of General Counsel, I have focused a substantial portion of my work upon the SDWA for nearly four decades. I was deeply engaged in the drafting of the 1996 SDWA Amendments, and led a large coalition of non-governmental organizations called the Campaign for Safe and Affordable Drinking Water which worked with Congress to overhaul the Act. I also tracked the SDWA Amendments of 1986 as an EPA Office of General Counsel staff attorney and have litigated numerous cases under the Safe Drinking Water Act. Among the cases I litigated and argued of relevance here were the challenge in the D.C. Circuit to the EPA's 1991 Lead and Copper Rule, consolidated under the caption *American Water Works Ass'n et al. v. EPA,* 40 F. 3d 1266 (1993), and a case involving EPA's rules with respect to drinking water primacy, *National Wildlife Federation v. EPA*, 980 F.2d 765 (D.C. Cir. 1992).

III. Summary Statement of Opinions.

9. As discussed in greater detail in this Declaration, it is my conclusion that if EPA had been engaging in appropriate oversight of the Michigan Department of Environmental Quality (MDEQ) and Flint, as required by the SDWA and EPA's regulations, the agency would have identified the serious problems with Flint's water, the failure to maintain optimized corrosion control, and the need for enforcement action far earlier than when it finally issued an administrative order in January 2016. The agency should have taken enforcement action likely by mid-2014 but certainly no later than April 2015. By mid-2014, EPA already had received citizen complaints about Flint's water and knew by May 2014 that the city had switched water sources to the polluted Flint River. A senior EPA Region 5 drinking water official speculated in May 2014 that complaints by local residents about very poor tap water quality might be attributable to the switch in water sources. This should have been sufficient to trigger a full review and discovery that Flint was in violation of the SDWA and EPA's rules including a lack of corrosion control.

10. If EPA had been properly overseeing the state and Flint as required by the SDWA and its regulations, it would have initiated an investigation to determine what was happening to the water and possible corrosion and water quality problems in one of Michigan's largest communities. EPA's failure to do so allowed the public to drink water with lead leaching into their system for about six months from the point at which EPA irrefutably knew Flint was violating the LCR in April 2015. Once EPA knew Flint was in violation by April 2015 and very likely much earlier, and that Michigan had failed to effectively and timely resolve the violation, the agency was legally obliged to initiate an enforcement action under the mandatory enforcement provisions of SDWA §1414. As I discuss later, in 1986 Congress responded to its concern that states and EPA were not effectively enforcing the SDWA, and amended this provision to change it from stating that EPA "may" enforce when a state fails to respond to a violation to EPA "shall" enforce, with the clearly expressed intent to make EPA enforcement mandatory.

11. EPA should have known that there was a serious lead problem in Flint and taken action far earlier than January 2016 when it finally issued a limited emergency administrative order. Flint citizens were allowed to drink lead-contaminated water without warning from EPA or the state until the issue reached public consciousness as a result not of EPA's action, but because of independent researchers' water lead testing and an independent pediatrician disclosing her study showing blood lead level increases in Flint children in areas with high levels of lead in tap water. This problem did not even begin to be meaningfully addressed by MDEQ and EPA until after these independent studies created extensive media coverage, a public outcry, a citizen petition for an emergency order under SDWA §1431 on October 1, 2015, and a notice of intent to file a citizen suit in November 2015. Flint's return to Detroit's water in October of 2016, after the proverbial "horse was out of the barn" and the system finally began to restore orthophosphates for corrosion control optimization, came not in response to an EPA or state enforcement action, but because of citizen and media attention.

12. In sum, MDEQ failed to effectively or timely respond to the Flint crisis, and EPA did not do its job to oversee MDEQ, Flint, or to implement and enforce the law as was its legal and ethical duty.

IV. Facts and Data Relied Upon

13. The mission of EPA as stated in 2014 is "to protect human health and the environment." Its stated purpose during the Flint Water Crisis was: "[T]o ensure that all Americans are protected from significant risks to human health and the environment where they live and work."

14. EPA has long acknowledged that exposure to lead in public drinking water is a significant risk to human health, that there is no safe level of lead exposure to humans, and that lead is especially dangerous for children.

SDWA – Law and Enforcement Mechanisms

15. The Safe Drinking Water Act, 42 USC §300f *et seq*. was enacted in 1974 as the principal law in the United States to ensure safe drinking water for the public. Pursuant to the SDWA, EPA established national primary drinking water regulations and undertook an obligation to monitor and protect drinking water quality.

16. The SDWA in section 1413 and EPA's implementing regulations at 40 C.F.R. part 142 authorize the EPA to approve primary enforcement responsibility, or "primacy" for implementing and enforcing the Act. The EPA may authorize primacy for a state agency that has, *inter alia*, adopted regulations at least as stringent as the federal regulations; is implementing adequate procedures for the enforcement of such State regulations, including conducting such monitoring and making such inspections as the Administrator may require by regulation; will keep such records and make such reports with respect to its activities; and has demonstrated the legal authority and capacity to implement and enforce rules.

17. While EPA may approve primacy for implementation and enforcement for a state, it is not a complete delegation of responsibility. EPA maintains full authority over the state and public water systems in the state, as well as supervisory and enforcement responsibilities to ensure the safety of public drinking water.

18. EPA requires that a state which is granted primacy status must provide to the EPA regular quarterly reports of violations, enforcement actions, and certain other matters, in addition to certain annual reports under 40 C.F.R. 142.15.[1] EPA rules also require that the agency "shall" complete an annual review of the state's compliance with EPA's primacy regulations, including the adequacy of state actions with respect to responding to violations, in order to retain primacy status. 40 C.F.R. §142.17. If EPA determines that a primacy state has failed to comply with its obligations under EPA's rules at 40 C.F.R. part 142, the agency is required to initiate proceedings to withdraw the state's primacy status under SDWA section 1413 and 40 C.F.R 142.17. This was confirmed in a case I litigated, in which the D.C. Circuit held that when EPA determines that a state no longer meets the requirements for primacy, the agency must initiate withdrawal proceedings. *National Wildlife Federation v. EPA*, 980 F.2d 765 (D.C. Cir. 1992). Thus, if the problem is not remedied, these provisions require EPA to finalize withdrawal of state primacy, in which case EPA will implement and enforce the program in that state.

19. When authorizing primary enforcement responsibility for the state, EPA has multiple tools and oversight obligations and authority to ensure that the state properly enforces national primary drinking water regulations and ensures safe drinking water for the public. Additionally, upon approval of a state's primacy, the EPA incorporates state regulations and has an obligation to enforce them under SDWA section 1414.

[1] Throughout this declaration, I refer to provisions in EPA's LCR currently in effect until October 16, 2024. EPA's 2021 Lead and Copper Rule Revisions, promulgated at 86 Fed. Reg. 4198 et seq. (Jan. 15, 2021), modified some of these provisions, and will become effective on October 16, 2024 (under an EPA extension of the effective date promulgated at 86 Fed. Reg. 71,574 (Dec. 17, 2021)). Readers should beware that some online versions of the LCR may provide the new LCR revisions promulgated in January 2021 that are not yet in effect.

20. A state that fails to comply with primacy requirements including submission of mandatory quarterly violation and enforcement reports and annual reports of compliance as required by the rules, or otherwise violates regulations including those promulgated at 40 C.F.R. part 142 intended to ensure safe public drinking water, is subject to EPA's oversight authority and multiple enforcement tools.

21. EPA's oversight tools and responsibilities with respect to public water systems are numerous, including issuance of notices of violations, provision of technical advisors to address any violation, issuance of section 1414 administrative orders of compliance and/or orders imposing administrative penalties, initiation of civil actions under section 1414, or issuance of a section 1431 administrative emergency orders or civil actions. Section 1431 provides the EPA with sweeping authority to do whatever is necessary to bring a water system into compliance or to take whatever "actions as he may deem necessary in order to protect the health of such persons." 42 U.S.C. §300i(a). Importantly, a 1431 order may be issued whether EPA finds that there is a violation of SDWA rules or not

22. The EPA also is required to ensure that each primacy state is acting in accordance with the agency's primacy rules. The agency must conduct an annual review of the state's compliance with EPA's primacy rules under 40 C.F.R. §141.17. If EPA determines that a state is not complying with those rules, the agency "shall" issue a notification to the state of EPA's intent to withdraw primacy accompanied by the specific corrective actions that are required. 40 C.F.R. §141.17; *see also* SDWA §1413. Ultimately, after giving the state an opportunity to respond, EPA "shall" make a final determination as to whether the state no longer meets the requirements to maintain primacy under these statutory and regulatory provisions. EPA also is authorized to withhold grant funds that the state would otherwise obtain under the Public Water System Supervision Program if its performances were found to be lacking. SDWA §1443, 40 C.F.R. 35.115 & 2 C.F.R. 200.339. If EPA withdraws state primacy, the agency will assume direct oversight and implementation of public water systems, and can set aside funds from the state's allocation of the Drinking Water State Revolving Fund to implement and enforce the program in that state. SDWA §§1443(a)(9)(A) & 1452(a)(1)(F).

23. EPA recognizes that a primary source of lead in drinking water and dangerous exposure to the public is from the corrosion of plumbing materials including public distribution pipes and internal home plumbing. In 1991 the EPA promulgated the Lead and Copper Rule to monitor and control the release of lead and copper into the drinking water. Recognizing that there is no safe level of lead, the LCR established a maximum contaminant level goal (MCLG) of 0 ppb for lead and an action level of 1.3 ppm for copper. EPA also established an action level of 15 ppb for lead, measured as the 90^{th} percentile of 1-liter first-draw water samples taken from high-risk homes after a minimum 6-hour stagnation.

24. Generally, drinking water supplied by public water systems is required to be subject to treatment with the extent and type of treatment dependent upon the source water and certain other factors, including the characteristics of the distribution system. Recognizing that lead exposure is exceptionally dangerous to the public health, and that corrosion of plumbing is the primary source of lead in drinking water, especially in communities where the distribution pipes

for the public drinking water are comprised of lead, the Lead and Copper Rule provides that corrosion control treatment of drinking water is essential in addressing treatment of water from the source. EPA stated in issuing the 1991 Lead and Copper Rule, "the most important element of the final treatment technique is corrosion control treatment." 56 Fed. Reg. 26,460 at 26,479 (June 7, 1991).

25. The most accepted treatment technique for corrosion control is the addition of orthophosphates to the drinking water which acts to coat distribution pipes and other plumbing to prevent or reduce corrosion of pipes and delivery of lead into the drinking water.

Flint Water Crisis

26. According to the 2010 census, the City of Flint was one of seven communities in Michigan with a population that exceeded 100,000 people.

27. In 1967, the City of Flint abandoned the Flint River as a source of its drinking water due in part to its pollution, and joined the Detroit Water Distribution System, which drew water from Lake Huron. The DWDS supplied treated drinking water to the County of Genessee, including the City of Flint.

28. The drinking water provided by the DWDS was treated with orthophosphates as the structure of the distribution system in the City of Flint included a large number of lead and iron distribution pipes, including service lines under both public and private property. The housing and other buildings in Flint often have a significant number of lead or other pipes and fixtures that contain lead.

29. The state of Michigan was designated as a primacy state with the MDEQ having the primary responsibility for implementing, enforcing, and reporting to the EPA with regard to SDWA and LCR compliance. In 2010, the EPA and its contractor completed a program review of the primacy program at MDEQ. https://www.epa.gov/sites/default/files/2015-11/documents/program-review-mdeq-water-bureau-20100830-76pp_0.pdf This program review identified several "disinvestments" and some deficiencies in the MDEQ program that EPA recommended be corrected.

30. In 2009 Michigan issued revised Administrative Rules to comply with the requirement that its rules for ensuring safe drinking water and specifically for compliance with the LCR were at least as stringent as the federal rules at that time.

Source Water Switch

31. In 2013, EPA was notified by MDEQ that the source water for the City of Flint's public drinking water would be changed from the Detroit Water and Sewerage Department (DWSD) system's distribution of Lake Huron water to the City of Flint using a moribund Water treatment plant to distribute water from the Flint River as the source water for the City of Flint residents. The source water switch took place in April 2014.

32. Under the Lead and Copper Rule (LCR), a water system such as Flint that serves more than 50,000 people was "deemed" to have installed optimized corrosion control treatment (OCCT) if it already had treatment in place before the effective date of the 1991 LCR (that is, December 7, 1992) and had conducted "activities equivalent to" those included in 40 CRF § 141.81(b)(2). Such systems are referred to as "(b)(2) systems."

33. The Lead and Copper Rule is explicit with regard to the maintenance of optimized corrosion control treatment for a (b)(2) system that was operating under optimized corrosion control, such as Flint. 40 CFR 141.81(b)(2) & 141.82(g).

34. The City of Flint was receiving water from the DWSD which was reportedly fully optimized with the use of orthophosphates as required by the 1991 LCR requiring optimized corrosion control treatment unless treatment was in place prior to 1991. EPA knew or should have known that the City of Flint was a (b)(2) system while under the DWSD through the mandatory submission of monitoring, corrosion control. and other reports and findings which MDEQ was required to provide or make available to EPA to comply with the Lead and Copper Rule and associated state primacy reporting and review requirements. 40 CFR §§141.81, 141.82, 141.86, 142.14(d)(8), 142.15, 142.16(d), and 142.17.

35. When there is a source switch the rules specifically state that "all systems optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the State under paragraph (f) of this section, in accordance with this paragraph for all samples collected under §141.87(d) through (f)." 40 C.F.R.§141.82(f).

36. The regulations recognize that switching from one source of water to another cannot be done safely without maintaining existing parameters for corrosion control to prevent water from corroding pipes and the resultant leaching of lead into the public drinking water.

37. This was especially the case where EPA was aware that the City of Flint was switching to a source water (the Flint River) that was more corrosive than the water from Lake Huron. Indeed, the agency mentioned in emails sent to MDEQ as early as May 28-29, 2014, just a month after the switch to the Flint River, that the agency was aware that water quality problems in Flint's water that were causing citizen complaints could be due to the switch in water source to the Flint River. *See,* Email from Thomas Poy, EPA Region 5 Chief, Groundwater and Drinking Water Branch, to Jennifer Crooks, EPA and Mike Prysby, MDEQ, May 29, 2014; Email from Jennifer Crooks, EPA Region 5, to Mike Prysby, MDEQ, May 28, 2014.

38. Due to a series of delayed monitoring reports for which the EPA did not insist on compliance, lack of oversight and supervision, and failure to address the primacy agency's failure to issue appropriate notices of violations, EPA asserts they were unaware that corrosion control had not been maintained.

39. The EPA knew or should have known of the violations by the City of Flint and MDEQ in 2014, and certainly would have conclusively known if the Michigan agency had provided the required quarterly reports. Then the EPA could have issued a notice of violation and

visited Flint to determine what to do and offer technical assistance to resolve the violation, or initiated an enforcement action. Due to EPA's lackadaisical approach to acting upon Flint's problems from 2014 through early 2016, and its lack of effective oversight of MDEQ, however, and as a result of EPA's failure to follow its own rules requiring such oversight, *see* 40 C.F.R. §142.17, the agency failed to respond to Flint's violations as required by the SDWA.

40. It was clear that EPA knew that corrosion control must be maintained as they acknowledge that MDEQ lied about maintaining optimized corrosion control when Jennifer Crooks (EPA Region 5's regulations manager for the groundwater and drinking water branch) and Miguel Del Toral inquired about what Flint was doing for corrosion control in February 2015 after a resident notified EPA about high lead results in her tap water. MDEQ advised that they had optimized corrosion control which EPA says it took to mean compliance with the rules for maintaining "treatment in place" and "doing water quality parameter monitoring" as required by the rules. United States of America's Motion to Dismiss for Lack of Subject-Matter Jurisdiction Pursuant to the Federal Tort Claims Act's Discretionary Function Exception, at 6, filed in the In re FTCA Flint Water Cases, Case 4:17-cv-11218-LVP-C, filed Feb. 9. 2024.

41. The failure to maintain optimized corrosion control by continual use of orthophosphates and monitoring of water quality parameters, was a clear violation of the LCR. EPA should have been aware of this violation had MDEQ issued a notice of violation to Flint or initiated enforcement action, or had EPA obtained the required water quality monitoring reports and reviewed them in 2014.

42. In addition, the problem of Flint switching water sources and not maintaining optimized corrosion control is precisely the type of important information that EPA is required to review and evaluate when conducting its annual review of the MDEQ's implementation of its program, specifically including the LCR, pursuant to 40 C.F.R. §§142.17, 142.15 & 142.19. This is particularly the case when EPA was, by its own description, "inundated" by citizen complaints about the water quality in Flint. EPA Inspector General's Report, Management Weaknesses Delayed Response to Flint Water Crisis Report No. 18-P-0221 July 19, 2018, at 34.

43. EPA was aware of the violation of the LCR by at the latest April of 2015 when the primacy agency informed them that Flint was not in fact practicing corrosion control and had made the source switch a year earlier and had not maintained corrosion control for that year. Still, the primacy agency had not yet provided timely violations reports, and EPA apparently did not demand or obtain the water quality parameter monitoring reports that would have made clear the lack of corrosion control during the full year beginning in April 2014 when Flint switched its source water. However, no violation was issued by the primacy agency or by the EPA.

44. Flint is an extreme example of EPA's failure to address severe lead contamination of tap water, but it is not the only case where this has occurred. In the early 2000's, I worked on the serious lead contamination problems of tap water in Washington. D.C., which were triggered by a change in water treatment technology. This problem was initially covered up and allowed to continue for years, and EPA failed to resolve the issue in a timely manner even once it became public, nor did the agency impose any penalties on the water utility. Testimony of Erik D. Olson before the U.S. House of Representatives Committee on Government Reform, Hearing entitled

"Public Confidence Down the Drain: The Federal Role in Ensuring Safe Drinking Water in the District of Columbia," March 5, 2004, https://www.govinfo.gov/content/pkg/CHRG-108hhrg94596/html/CHRG-108hhrg94596.htm Similarly, in Newark, New Jersey EPA allowed a significant lead contamination problem to continue for over two years without bringing an enforcement action, causing NRDC to bring a citizen suit on behalf of local residents against the water system and state for failure to timely address the problem. See NRDC, Fighting for Safe Drinking Water in Newark, Jan. 26, 2001, https://www.nrdc.org/resources/fighting-safe-drinking-water-newark. Again, in Benton Harbor Michigan, the city was exceeding the lead action level for three years, causing widespread lead contamination problems, and EPA failed to enforce, and did not meaningfully press for a solution until local citizens represented by NRDC and other groups petitioned EPA to issue an emergency order under SDWA §1431. NRDC, Addressing Benton Harbor's Lead Water Crisis Took a Village—and Years, Aug. 9, 2022, https://www.nrdc.org/stories/addressing-benton-harbors-lead-water-crisis-took-village-and-years.

45. The EPA LCR regulations are clear. A large water system such as Flint that has been deemed to have optimized corrosion control must maintain that corrosion control. The system cannot switch its water source without ensuring prior to the change that ongoing optimized corrosion control will be continued during and after the switch. In my decades of work on lead in drinking water, I have never heard anyone suggest that a large water system is free to simply switch their water source at will without testing and confirming optimized corrosion control beforehand with its regulators. And I have never heard anyone suggest that such a water system can simply wait for over a year after it makes the switch of source water to decide whether they need to use corrosion control.

1414 Violation

46. Section 1414(a)(1)(A) of the SDWA provides in relevant part:

> Whenever the Administrator finds during a period during which a State has primary enforcement responsibility for public water systems…that any public water system… does not comply with any applicable requirement, he *shall* notify the state and provide such advice and technical assistance to such State and public water system as may be appropriate to bring the system into compliance with the requirement by the earliest feasible time. 42 USC 300 (g)–3(a)(emphasis added)

And section 1414(a)(1)(B)(emphasis added) then states:

> If, beyond the thirtieth day after the Administrator's notification under subparagraph (A), the state has not commenced appropriate enforcement action, the Administrator *shall* issue an order under subsection (g) requiring the public water system to comply with such applicable requirement or the administrator s*hall* commence a civil action under subsection (b).

47. Because EPA knew that a violation had occurred and was ongoing, the EPA was required by the SDWA to initiate action under SDWA §1414(a)(1), which they failed to do in this

case. EPA failed to take action as required under the SDWA despite the agency's knowledge that: (1) Flint was in violation; (2) MDEQ had lied about corrosion control having been optimized; (3) Flint was implementing no such corrosion control; and (4) the State was refusing to cure the violation within 30 days after EPA advised them to do so.

48. The EPA had a mandatory duty to initiate enforcement action no later than May 2015 based upon their becoming aware that there was no corrosion control and the state had failed to resolve this violation for over a year. Time was of the essence and EPA should have issued an administrative order or initiated civil suit no later than May of 2015 seeking immediate injunctive relief to ensure that corrosion control was immediately commenced.

49. It is my opinion that if EPA had been engaging in appropriate oversight of MDEQ and Flint, the agency would have identified the serious problems with Flint's water, the failure to maintain optimized corrosion control, and the need for enforcement action far earlier, likely by mid-2014. At that point, EPA had received citizen complaints about Flint's water, and by May 2014 knew that the city had switched water sources. A senior EPA Region 5 drinking water official even speculated in May 2014 that concerns of local residents about tap water quality might be attributable to the switch in water sources. An effective oversight operation at EPA would have initiated an investigation to determine what was happening to the water and possible corrosion and water quality problems in one of Michigan's largest communities. EPA's failure to do so allowed the public to drink water with lead leaching into their system for about six months from the point at which EPA irrefutably knew Flint was violating the LCR in April 2015. And in my opinion, EPA should have known that there was a serious lead problem in Flint and taken action earlier than that. Yet Flint citizens were allowed to drink this lead-contaminated water without warning until the issue reached public consciousness as a result not of EPA's action, but because of independent researchers' water lead testing and an independent pediatrician disclosing her study showing blood lead level increases in Flint children in areas with high levels of lead in tap water. This problem did not even begin to be meaningfully addressed by MDEQ and EPA until after these independent studies created extensive media coverage, a public outcry, and Flint's return to the DWSD's water in October of 2016 when the system finally began to restore orthophosphates for corrosion control optimization.

There is no Ambiguity in the Lead and Copper Rule's Requirements for Maintaining Optimized Corrosion Control

50. I am aware that the MDEQ attempted to argue that the LCR allowed Flint to source switch and begin two rounds of testing of 6 months each to assess whether it was necessary to add corrosion control to the Flint River water. To my knowledge, the rule has never been interpreted in that way.

51. When there is a disagreement between the primacy agency and EPA on the meaning of a federal regulation promulgated by EPA, the interpretation of the federal agency that promulgated the rule (and that has the responsibility under the SDWA and implementing regulations to ensure appropriate primacy state implementation) controls. Moreover, in this case the experts at EPA agreed that the MDEQ's attempt to delay the maintenance of corrosion control

had no support in the science, the practice nor the clear language of the rule that had always been interpreted to maintain corrosion control

52. Further, the Office of the Inspector General conducted a investigation of the Flint water crisis and concluded that the Flint water system was non-compliant within the meaning of §1414(a). EPA Inspector General's Report, Management Weaknesses Delayed Response to Flint Water Crisis Report No. 18-P-0221 July 19, 2018.

Section 1414 of the SDWA Clearly Mandates that EPA Enforce

53. I was in the Office of General Counsel of the EPA from 1984-1986, and then was counsel working extensively on the SDWA for the National Wildlife Federation and NRDC from 1986 and thereafter, and am well informed regarding the legislative history of the SDWA and Section 1414 specifically. The original SDWA, as enacted in 1974, provided that if EPA found a violation, it "may" initiate a civil action under §1414(a). Pub. L. No. 99-523, 88 Stat. 1660, at 1667 (Dec. 16, 1974)(previous SDWA §1414(a)(1)(B)). However, after the General Accounting Office documented widespread violations and weak state and EPA enforcement of the SDWA. Congress became extremely impatient with the lack of effective enforcement of the Act.

54. Therefore, in the 1986 SDWA Amendments, Congress changed this provision from saying EPA "may" take enforcement action under §1414(a) to require that EPA "shall" take such action. Pub. L. No. 99-339, 100 Stat. 642, at 647 (June 19, 1986). This was no accident: Congress was fed up with EPA's failure to effectively oversee feeble state enforcement, and made EPA enforcement mandatory if states fail to take action. This Congressional intent is clearly and expressly emphasized in the legislative history in the 1986 Amendments' Conference Report, H.R. Conf. Rep. No. 99-575, at 35, 99th Cong., 2nd Sess. (1986), 1986 U.S.C.C.A.N. 1592, at 1599 (1986)(legislation "require[s] the Administrator either to issue an order or institute a judicial action against a public water system in violation when the delegated State authority does not take appropriate enforcement action within 30 days of notification…."); Senate Report, S. Rep. No. 99-56, at 9, 99th Cong., 1st Sess. 1985, 1986 U.S.C.C.A.N. 1566, at 1574 (1986) (The bill "makes EPA enforcement actions mandatory. The bill provides that if a State has not commenced appropriate enforcement action 30 days after EPA has notified the State and water supplier of a violation, the Administrator is required either to issue a compliance order or institute judicial action."); House Report, H.R. Rep. No. 98-1034, at 23-24, 98th Cong. 2d Sess. (1984)(report on previous House bill that served as the basis of the House Amendment that passed in 1986 that was conferenced with the 1985 Senate bill)(to the same effect as Senate committee report).

55. I recall Senator Robert Stafford, then-Chairman of the Senate Environment and Public Works Committee (the Committee for which I later became General Counsel and Deputy Staff Director) expressing his concerns about this issue. *see, e.g.,* Statement during adoption of Conference Report by Senate Environment and Public Works Committee Chairman Robert Stafford, 132 Cong. Rec. at S. 6292 (daily ed. May 21, 1986)(Senate's lead conferee on the 1986 Amendments, noting that the final bill "requires the agency and states to move expeditiously against violators.").

56. All of this legislative history makes crystal clear that Congress's intent was to *require* EPA to bring enforcement actions if a state fails to do so. Indeed, the title of the provision of the 1986 Amendments requiring EPA to bring enforcement where states fail to do so is "Prompt Federal Enforcement." Pub. L. No. 99-339 §102(b) (June 19, 1986), 100 Stat. 642, at 647. At the time the government argued against the language in the 1986 Amendments making enforcement mandatory, urging that EPA should have discretion as to when to invoke their authority after a violation had occurred including discretion on when to initiate litigation after 30 days of continued noncompliance, to bring the act within the discretionary function realm.

57. Congress squarely rejected the government's push for discretion and intended and did make this provision mandatory, as the conferees expressly confirmed. Conf. Rept. No. 99-575, 99th Cong. 2d Sess. at 35 (1986).

58. Based on my involvement in the history and my work in this area I am unaware of any case or circumstances in which Section 1414 has been held to be discretionary.

59. When EPA found the violation of the LCR they had a mandatory obligation to invoke §1414.

60. I also have never heard of a state primacy agency or water provider suing the EPA over its invocation of Section 1414 for issuing a notice of violation. Nor have I ever heard of a state primacy agency suing EPA for issuing an administrative order or for initiating a civil action under Section 1414. It has not to my knowledge ever occurred.

61. I am aware that EPA officials, specifically Marc Pollins, the former head of EPA's Headquarters Office of Enforcement and Compliance Assurance's Water Enforcement Division, testified that any attempt to find ambiguity in the LCR on this point was a political decision to attempt to defend the indefensible delay in taking action in this matter.

Additional Violations that Should have Resulted in Invoking 1414—and Public Notice

62. There were multiple violations as early as 2014 that EPA was aware of that should have resulted in invocation of a section 1414 Order or civil action, including the following issues upon which EPA should have initiated enforcement action:

a. MDEQ's failure to file accurate quarterly reports indicating violations of the Lead and Copper Rule as required by 40 C.F.R. §142.15(a). Failure to file these accurate quarterly reports constitutes a violation of "applicable requirements" as defined by SDWA §1414(i), because this EPA regulation is applicable to MDEQ as a recipient of federal grants, and was promulgated pursuant to SDWA §1445 (see note regarding EPA's "Authority" to issue part 142 immediately above 40 C.F.R. §142.1, stating that this part was issued pursuant to, *inter alia*, §1445).

b. Flint's failure to timely submit water quality parameter reports.

c. Flint's TTHM and e coli violations, of which EPA was fully aware and for which the state failed to bring its own enforcement action. EPA failed to intervene with a careful review of Flint's ongoing compliance problems and to provide technical assistance, which would have disclosed the lack of corrosion control treatment in 2014. EPA should have been aware of the potential link between coliform violations, TTHM violations, and possible lead/corrosion control issues after its past experience with, for example, Washington D.C., which experienced coliform violations and later very high lead levels that were triggered in the early 2000's by a switch in water disinfection practices intended to reduce TTHM levels. An audit or careful evaluation of the treatment and conditions in Flint, particularly in light of the known switch in water source, the strong citizen complaints about water quality immediately after the switch, and the lack of provided water quality parameter monitoring reports would have identified the lack of effective corrosion control immediately.

d. Flint's sampling, monitoring and reporting deficiencies. EPA's Lead and Copper Rule monitoring and reporting guidance for public water system document dated March of 2010 is very clear about not flushing, using 1-liter jars, and sample selection. This guidance and EPA rules also explicitly require testing at appropriately selected Tier 1 sites, and not inappropriately "invalidating" high samples or avoiding retesting at sites with high lead levels. Flint did not comply with these regulatory requirements, and MDEQ and EPA failed to ensure that Flint was complying with these fundamental LCR provisions. EPA has clear guidance on this in their March 2010 document for primacy agencies. MDEQ's failure to require Flint to comply with these regulatory monitoring requirements, as EPA's Miguel del Toral pointed out, resulted in test results that biased downwards he levels of lead reported to MDEQ and EPA. This meant that it falsely appeared that Flint was below the lead action level regulations.

63. EPA also joined MDEQ in providing false reassurances to the public about the supposed safety of Flint's drinking water, responding to public complaints and stating or clearly implying that the water was safe, using language such as "The Michigan Department of Environmental Quality (MDEQ) has been working closely with the Operator-in-Charge at the City of Flint's Water Treatment plant to ensure that the citizens of Flint are provided drinking water that meets health standards." Letter from Tinka Hyde, EPA Region 5 Water Division Director, to Stephanie Pumphrey, Flint, undated. These reassurances were offered notwithstanding the agency's knowledge, at least as of April 2015 if not earlier, that Flint was not using corrosion control and had a large number of lead service lines, making is absolutely clear, as Miguel del Toral pointed out, that widespread serious lead contamination of Flint's water was highly likely. Indeed, in my opinion, high lead levels in Flint's water were essentially a physical certainty when the city switched to corrosive Flint River water and failed to have an optimized control program in place. Anyone familiar with the data on corrosion would be aware of this.

EPA Region 5

64. EPA's Region 5 was colloquially known as an enforcement region up to 2008, for example when Mary Cade was the Regional Administrator. However, Mary Cade reportedly was fired for what she publicly asserted was her strong enforcement mentality and her aggressive

pursuit of enforcement in Michigan when violations occurred and Region 5 took steps to enforce EPA's regulations. Associated Press, "EPA official resigns, cites Dow Chemical." May 2, 2008. https://www.nbcnews.com/id/wbna24428213 ("Mary Gade, regional administrator of EPA Region 5, told the Chicago Tribune she resigned as regional administrator of EPA Region 5 after two top EPA officials stripped her of her powers and told her to quit or be fired", noting allegations that this was because of her aggressive enforcement.)

65. This reputation as being strong on enforcement did not survive Mary Cade's firing. Region 5 no longer enjoyed the reputation of being strict about compliance and enforcement, especially in Michigan in 2014-2016. Region 5 retreated into emphasizing what was euphemistically called "cooperative federalism," but which generally meant EPA would not enforce when the state failed to act or resisted EPA intervention.

Notice to the Public

66. If a violation occurs the public water system is responsible for informing the public. SDWA §1414(c)(1) & (2), 40 C.F.R, 141.201 *et seq*. If the violation "has the potential to have serious adverse effects on human health as a result of short-term exposure," notification is required within 24 hours; otherwise, additional time may be provided. SDWA §1414(c)(2)(C), 40 C.F.R, 141.202, Table 1, ¶9 (24-hour notification required for violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the primacy agency either in its regulations or on a case-by-case basis.) If the water system does not perform its public notification and public education responsibilities, the primacy state is to do so. And if the primacy state agency fails, it is incumbent upon EPA in its capacity of ensuring water system compliance with public notification requirements under SDWA §1414, and as part of its responsibility for overseeing primacy state programs to provide notice and inform the public.

67. The serious adverse effects from lead, particularly on fetuses, bottle-fed infants and young children after short-term exposure warranted immediate 24-hour notification of the risks posed by the significant lead contamination that was occurring in Flint. After both Flint and MDEQ failed to effectively inform and educate the public about the potential impacts on health of lead in the tap water, EPA failed to provide notice to the public of the violation of the LCR despite its awareness and the fact that Flint and the primacy agency failed. Indeed, as noted before, EPA offered false reassurances about the safety of Flint's water.

EPA Improperly Delayed Issuing a Section 1431 Order Despite Their Knowledge of an Imminent and Substantial Endangerment and the Fact that MDEQ had Lied and Resisted Compliance with LCR and SDWA

68. EPA failed to timely issue an administrative emergency order under section 1431, and instead waited until Jan 2016 to issue a limited order, despite having information of the ongoing serious violation of the LCR in Flint at least as early as April 2015.

69. A 1431 Order provides EPA with broad sweeping powers to protect the public health and EPA could have either ordered Flint to begin immediate corrosion control in mid-2015 or ordered Flint to reconnect to the Detroit water distribution system as early as April 2015.

70. I understand that one excuse EPA provided for not issuing a 1431 order earlier was that it could have been sued by the state primacy agency for doing so. I see no legal basis for any such an imagined legal action by MDEQ. Moreover, I have never heard of a primacy agency suing EPA for issuing a 1431 order, or a primacy state challenging a 1431 civil action for that matter.

71. EPA also could have initiated a civil action under section 1414 or 1431, seeking to enjoin Flint to immediately implement corrosion control measures or reconnect to the Detroit system. It failed to do so.

72. Further, I concur with the EPA Office of Inspector General's conclusion that there was no basis for EPA's failure to take such an action.

73. In addition, EPA could have pressured MDEQ into more aggressive action by initiating primacy withdrawal proceedings under 40 C.F.R. 142.17, and/or imposing specific conditions and withholding substantial funds from MDEQ's annual federal grants for implementing the Public Water System Supervision program due to its inadequate performance, as is authorized by regulations for federal grantees. 40 C.F.R. §35.115 & 2 C.F.R. §200.339.

74. If EPA had withdrawn MDEQ's primacy, EPA could have utilized state revolving funds that would otherwise have been allocated to the state to ensure public safety and assume direct implementation of primacy in Michigan. Congress specifically addresses this eventuality, if a state were to not obtain primacy or were to have it revoked, EPA is specifically authorized to use these State Revolving Fund dollars to implement the program in that state. SDWA §§1443(a)(9)(A) & 1452(a)(1)(F). EPA also could have used its authority to withhold some or all of the Public Water System Supervision grant to MDEQ to ensure that the state took adequate steps to address the Flint situation but did not do so.

The Role of and Commitment to Environmental Justice Which Failed Here

75. On Feb 11th 1994, the president signed Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," with an accompanying Memorandum. The Order requires all covered agencies, which includes the EPA, to "make achieving environmental justice part of its mission." In 2010 the EPA issued Interim Guidance on Considering Environmental Justice, to integrate environmental justice considerations into their work.

76. There is no dispute that the City of Flint is home to a population of individuals to whom the commitment was made to address adverse human health effects of the programs, policies and activities of EPA.

77. One of the central commitments of the Executive Order and EPA's implementing policy is to meaningfully engage minority and low-income populations in addressing

environmental and public health impacts in their communities in order to help strengthen EPA's "mission to protect our environment and every American's fundamental right to breathe clean air, *drink clean water* and live on clean land." *See*, EPA, Memorandum on Final Guidance on Considering Environmental Justice During the Development of a Regulatory Action, May 29, 2015 (emphasis added).

78. EPA has consistently defined environmental justice as the "fair treatment and meaningful involvement" of all individuals and specifically to allow minority and low-income communities to have an opportunity to participate in decisions about a proposed activity that will affect their environment and health. See EPA Guidance on Considering Environmental Justice. May 2015.

79. The EPA's commitment to environmental justice was nowhere on display in the City of Flint where, the community was not advised of the implications or impacts on their health of switch of water to the Flint River which EPA acknowledged was a more corrosive source.

80. EPA failed to involve the community in what they knew about the public water source; never advised the community when they became aware that the state had lied to them about corrosion control being present in the water; failed to follow up on complaints to advise the community of significant health risks; responded improperly to the large volume of citizen complaints by assuring the community that there was nothing to be concerned about and the water was safe.

81. Nor to the best of my knowledge, did the EPA region ever meaningfully engage the Environmental Justice division during the Flint Water Crisis, at any time.

82. It is my opinion that had EPA followed their mandate and guidance with regard to Environmental Justice, that the community would have been engaged and informed at an early stage and would have taken steps to protect themselves and insist on action to ensure safe drinking water.

EPA Resists Increasing Pressure from Citizens, Including a Petition for 1431 Emergency Order and a Notice of Intent to File Citizen Suit

83. In response to the ongoing drinking water crisis in Flint and the lack of effective response by the City, State and EPA, on October 1, 2015, a coalition of local citizens and other groups including NRDC petitioned the EPA to take emergency action under section 1431 of the SDWA to secure safe, lead-free water for the City's children and families. The petition sought to trigger the EPA to launch a comprehensive federal response to the ongoing crisis and to stop "imminent and substantial endangerment to human health" such as the elevated lead levels in Flint's drinking water. The petition urged that EPA immediately order the City and MDEQ to reconnect Flint's water system with water from the Detroit Water and Sewerage Department, and to provide Flint residents with an alternative, free source of safe drinking water that meets EPA standards. It also requested that EPA immediately order the City to advise all Flint water customers to avoid consuming unfiltered water from the City's water system and to warn customers not to use unfiltered Flint water to make baby formula or for children. Additionally, the petition requested

that EPA use its authority to review MDEQ's determinations concerning corrosion control requirements for the Flint water system, and issue a federal order establishing the optimal corrosion control treatment requirements for the Flint water system and requiring Flint to immediately comply with these requirements. The petition also asked EPA to order the City to conduct extensive additional monitoring and to comply with LCR monitoring requirements, and to order the City to comply with the public education and supplemental monitoring requirements, including but not limited to immediately notifying consumers of the results of tests completed at their homes or places of business, and providing the public education, monitoring, and notification established in those rules. Finally, the petition urged EPA to order any other additional relief that EPA determines is "necessary to protect the health" of Flint residents from lead contamination in drinking water.

84. After receiving no response for a month and a half from EPA to our section 1431 petition for emergency action, on November 16, 2015, NRDC—representing residents of Flint together with the ACLU of Michigan—announced our intention to file a citizen suit under the SDWA against state and city officials for ongoing violations of the SDWA, amid the city's widespread lead contamination crisis. The lawsuit threatened to force officials to address repeated, systemic failures to follow federal rules designed to protect the public health from dangerous levels of lead exposure. The 60-day waiting period under the SDWA for filing a citizen suit expired in late January 2016.

85. The citizen petition and notice of intent to sue made a strong case for EPA to immediately step in and issue an emergency order or bring a civil action. However, the agency continued to dawdle. Just as the 60-day notice was about to expire in late January 2016, and a few days after the President of the United States had issued a declaration of an emergency for Flint, finally the EPA issued an order, which was much more limited than the petitioners had requested, on January 21, 2016. This order was issued over three and a half months after the emergency petition was filed, and more than a year and a half after EPA initially learned of the switch of Flint's water to the polluted and corrosive Flint River that triggered citizen complaints about water quality referred to EPA.

The Office of Inspector General's (OIG) Findings

86. In its October 20, 2016 report, "Management Alert: Drinking Water Contamination in Flint, Michigan, Demonstrates a Need to Clarify EPA Authority to Issue Emergency Orders to Protect the Public." Project No. 17-P-0004, the US Environmental Protection Agency's Office of the Inspector General (OIG) issued a report which contained findings and conclusions about the EPA's failures in the Flint Water Crisis, including, *inter alia*:

- EPA Region 5 had all the information needed to issue an emergency order in June 2015 (if not sooner) based on a February 2015 sampling indicating a requirement for corrosion control, notification from Michigan in April 2015 that no corrosion control was in place and notice in June 2015 that homes had lead in drinking water above action level, but took no action;

- EPA failed to issue an emergency order because it said it believed the State was taking action, but Section 1431 does not require a failure to act by the State before a 1431 order is issued; and

- There were a series of actions that the EPA could have taken in Flint which were never considered or implemented which would have ameliorated the crisis including requiring the city and state to provide alternative water supplies to affected residents, studying the extent and severity of lead contamination within the water system, or immediately beginning corrective actions to reduce and eliminate lead contamination in the drinking water system. However, EPA Region 5 did not intervene under SDWA Section 1431 to require immediate actions to protect human health, and the conditions in Flint continued.

87. In July 2018, the OIG issued a follow-up report on the Flint Water Crisis addressing additional matters concerning the agency's management control when responding to the contamination of Flint's water supply. "Management Weaknesses Delayed Response to Flint Water Crisis." Report No. 18-P-0221. In this report, the OIG made additional findings about the EPA's failures. Specifically, the report concluded, *inter alia,* that:

- The EPA retains oversight and enforcement authorities to provide assurance that primacy states comply with the SDWA. However, timely oversight interventions rely on effective management systems that govern how and when the agency should intervene. EPA Region 5 did not manage its drinking water oversight program in a way that facilitated effective oversight and timely intervention in Flint. EPA Region 5 did not:
  - Establish clear roles and responsibilities with the MDEQ.
  - Communicate clearly and effectively.
  - Use effective risk assessment protocols.
  - Proactively use available SDWA authorities and oversight tools to intervene in Michigan's drinking water program.

- These weaknesses limited Region 5's ability to monitor, adapt and respond to changing situations in Michigan and the city of Flint.

88. Thus, the OIG's conclusions in its 2016 and 2018 reports are consistent with my views with respect to EPA's failure to effectively bring an enforcement action and take other appropriate actions in Flint. It was unjustifiable and failed to carry out the agency's duties under the SDWA to protect the citizens of Flint.

I reserve the right to amend my expert report and update my opinions if new or additional information becomes available.

I declare under penalty of perjury that the statements above are true based upon my own personal knowledge, information and belief.

Erik D. Olson, J.D.