



## FLINT WATER CRISIS Issue Brief

### Introduction

Flint, Michigan, upon the decision of its Emergency Manager, switched its water supply from the Detroit River to the Flint River in April 2014. Flint has many old, lead pipes, and in large part because corrosion controls were not used upon the switch, lead leached into the city's water supply. After the switch, residents repeatedly complained about the taste and color of the water and shared concerns about potential negative health consequences, but response from any level of government was slow coming throughout 2014. In the absence of government action, private citizens intervened in 2015, testing both water and blood lead levels in Flint. In August of 2015, Professor Marc Edwards of Virginia Tech released a report indicating the corrosiveness of Flint's water was causing lead to leach into Flint's water supply. A few weeks later, pediatrician Dr. Mona Hanna-Attisha of Hurley Medical Center in Flint published a report showing an increase in lead exposure among children exposed to Flint's water. Finally, in October 2015, Flint switched back to the Detroit River; by this time, there was already significant damage to the health of Flint residents and to their water system infrastructure.

In 2016, as these events and their tragic consequences gained national media attention, they became known as the Flint water crisis. The Flint water crisis continues as multiple layers of government officials and community leaders are trying to determine how to fix Flint's damaged water pipes and how to address short and long term health consequences. Investigations, lawsuits, and commentary are plentiful, each trying to ascertain which people and/or entities are responsible for these events.

This issue brief is designed to give an overview of the factual context and allegations surrounding the Flint water crisis and to provide an introduction to some of the major legal and policy challenges that surfaced during the crisis and its aftermath. Many of the facts appear to be uncontested; however, to the extent litigants choose to contest certain allegations, final factual findings will ultimately be made by reviewing courts and administrative tribunals. In addition to helping a reader less familiar with the Flint water crisis gain a surface level understanding of what happened, the legal and policy challenges discussed in this brief may also apply to other communities facing lead contamination in water or other man-made environmental disasters. In the final section, we note several issues warranting further investigation, analysis, and attention to protect against similar situations occurring elsewhere in the state and across the country. Please note that this issue brief is by no means comprehensive and the Flint water crisis is still a rapidly developing situation.

### Timeline of Key Events<sup>1</sup>

The City of Flint has struggled economically for several decades, and it has struggled with how to control its water costs for many years. For a long time, Flint got its water from the Detroit Water and Sewerage Department ("DWSD"), which sources its water from the Detroit River. In October 2010, the Karegnondi Water Authority ("KWA") was incorporated to provide and distribute water from a closer and potentially cheaper water source, Lake Huron, to Flint and other nearby areas.<sup>2</sup> The KWA pipeline was scheduled to be operational in Flint in 2016.<sup>3</sup>



On April 16, 2013, under the direction of an emergency manager, Flint signed a contract with the KWA.<sup>4</sup> DWSD then terminated Flint's water service contract effective April 17, 2014.<sup>5</sup> Following unsuccessful negotiations with DWSD, the city sought an interim water source until the KWA project became operational.<sup>6</sup> Thus, on April 25, 2014, Flint switched its water supply from the Detroit River, treated by the DWSD, to the Flint River, treated by the Flint Water Treatment Plant (WTP).<sup>7</sup> The switch occurred amidst concerns by Flint's Department of Public Works that the newly upgraded plant was not ready for use.<sup>8</sup>

Many Flint residents opposed the switch, especially because of the Flint River's reputation of being highly polluted.<sup>9</sup> Contrary to federal law, the WTP did not employ corrosion controls upon the switch because the city could not afford the plant upgrades necessary for anti-corrosive agents to be added to the water; as a result, lead from Flint's pipes leached into the water supply.<sup>10</sup> Shortly after the switch, Flint residents began to complain about the color and taste of the water.<sup>11</sup> In October 2014, after General Motors' Flint plant discovered rust and corrosion on newly produced car parts, the company announced it would cease using water from the Flint River until the completion of the KWA.<sup>12</sup>

As 2014 progressed, Flint residents continued to complain and express concern about the water, and tensions grew. In August<sup>13</sup> and September<sup>14</sup> 2014, the city issued two boil water advisories after detecting the presence of bacteria in the water. A few months later, on January 2, 2015, the city notified water customers that excessive levels of total trihalomethanes (TTHM), a disinfection byproduct, were present in the Flint water system.<sup>15</sup>

In February 2015, the City of Flint tested water in the home of resident LeeAnne Walters, and test results indicated a high level of lead.<sup>16</sup> Subsequently, Walters called the Chicago office of the Environmental Protection Agency ("EPA"), where Miguel del Toral, regulations manager in the regional groundwater and drinking water department, deemed the results alarming. More residents continued to complain about the water, and regulatory agencies started to ask questions. In June 2015, Mr. del Toral wrote an internal EPA memo observing that the absence of corrosion control in the water was a public health concern and providing recommendations for further EPA action.<sup>17</sup>

Independent research and reports were released in 2015 identifying major problems with Flint's water supply and providing support to the claims and concerns of Flint residents. In August 2015, Marc Edwards, a professor of engineering and water resources at Virginia Tech, determined that the corrosiveness of Flint water was causing lead to leach into Flint's water supply.<sup>18</sup> Weeks later, Dr. Mona Hanna-Attisha, Director of the Pediatric Residency Program at Flint's Hurley Medical Center, released a report indicating that in communities affected by the switch to the Flint River, the proportion of infants and children with elevated levels of lead in their blood had nearly doubled since the switch.<sup>19</sup>

The local government took action after these reports were released. The City of Flint issued a health advisory on September 25, 2015, suggesting residents flush pipes and install filters to minimize exposure to lead.<sup>20</sup> On October 1, 2015, the Genesee County Health Department and Genesee County Board of Commissioners declared a public health emergency and urged Flint residents to stop drinking the water until they could be assured it was lead-free.<sup>21</sup> Amid the scrutiny, Flint reconnected to the Detroit River on October 16, 2015.<sup>22</sup> Newly-elected Flint Mayor Karen Weaver declared a state of emergency on December 14, 2015<sup>23</sup>, and the State of Michigan followed suit on January 5, 2016.<sup>24</sup>

The Flint water crisis started gaining national news attention in January 2016, prompting charitable responses from community organizations and individuals, as well as more scrutiny. On January 12, 2016, Governor Snyder issued an executive order, activating the National Guard<sup>25</sup> to provide assistance to Flint residents. On January 16, 2016, President Obama declared the existence of an emergency in Flint, Michigan, authorizing the Federal Emergency Management Agency (FEMA) to coordinate disaster relief efforts.<sup>26</sup> The declaration ordered that direct federal assistance was to be funded 75% federally, and emergency assistance, including providing water, filters, and cartridges, was limited to 90 days.<sup>27</sup>

On January 21, 2016, the EPA issued an Emergency Order under the Safe Drinking Water Act (SDWA), stating the EPA would begin sampling and testing lead levels in the water and may take additional actions under the SDWA.<sup>28</sup> The EPA also ordered a number of actions to be taken by the City of Flint, Michigan Department of Environmental Quality (MDEQ), and State of Michigan to improve transparency to the public and to address and mitigate harms caused by the contaminated drinking water.<sup>29</sup>



Investigations and litigation are ongoing and generated more attention in the spring of 2016. For example, the U.S. House of Representatives' Committee on Oversight and Government Reform conducted several hearings in March 2016, and Michigan Governor Rick Snyder participated in the March 17, 2016 hearing.<sup>30</sup> The Flint Water Advisory Task Force commissioned by Governor Snyder released its report on March 21, 2016, asserting the crisis was caused primarily by failures of the MDEQ and the Michigan Department of Health and Human Services ("MDHHS") as well as the lack of accountability for state-appointed emergency managers.<sup>31</sup> On June 24, 2016, the federal Centers for Disease Control and Prevention (CDC) released results from its investigation into the Flint water crisis, confirming that the proportion of elevated blood lead levels among children under 6 years old was significantly higher during the early period following the city's switch to Flint River water (from April 25, 2014, through the January 2, 2015 water advisory), as compared to levels immediately prior to the switch.<sup>32</sup>

Though federal officials with the EPA have announced that water filtered through properly installed, certified filters is safe to drink for all Flint residents, including pregnant women, nursing mothers, and children, Flint residents are wary to return to using tap water.<sup>33</sup> The EPA's announcement was met with skepticism and distrust in Flint, where residents are reluctant to believe government officials after being told for months that their lead-contaminated tap water was safe for consumption.<sup>34</sup> As national attention and media coverage decline, however, donations of water are decreasing,<sup>35</sup> many Flint residents not trapped by poverty are moving away from the city,<sup>36</sup> and there is still no timeline for replacing Flint's pipes.<sup>37</sup>

## Public Health Consequences

The Flint water crisis has created both immediate and long-term public health consequences, most notably lead exposure and potential lead poisoning. On September 24, 2015, Dr. Mona Hanna-Attisha, the Director of the Pediatric Residency Program at Hurley Medical Center in Flint, released a report summarizing her research on blood lead levels in children under five years old in Flint zip codes.<sup>38</sup> She compared blood lead levels in children from before and after Flint's water source was switched to the Flint River. She found that elevated blood levels increased from 2.1% in 2013 to 4.0% in 2015, a statistically significant change. Her analysis of blood lead levels from other children in Genesee County whose communities were not switched to water from the Flint River revealed no statistical change in elevated blood levels.<sup>39</sup>

Exposure to lead is highly dangerous, particularly to children. Children are "more sensitive to the health effects of lead than adults. No safe blood lead level in children has been determined."<sup>40</sup> "Young children absorb 4-5 times as much lead as adults (apart from pregnant women). Infants, young children (especially those less than 5 years of age) and pregnant women are most susceptible to the adverse effects of lead."<sup>41</sup> Lead exposure can negatively affect childhood development. Children who are exposed to high levels of lead may develop anemia, kidney damage, colic, and muscle weakness.<sup>42</sup> The primary target of lead poisoning is the nervous system. In a young child's developing nervous system, "[s]ubtle effects on intelligence quotient (IQ) are expected from blood lead level at least as low as 5 micrograms/deciliter, and the effects gradually increase with increasing levels of lead in blood."<sup>43</sup> High levels of lead exposure can lead to decreased performance of the nervous system and severe brain damage,<sup>44</sup> as well as comas, convulsions, or even death.<sup>45</sup> Lead exposure can also cause intellectual disabilities and behavioral problems.<sup>46</sup>

Lead exposure harms adults as well.<sup>47</sup> Lead poisoning may occur when a person is exposed to high levels of lead over a short period of time; symptoms may include: abdominal pain, constipation, fatigue, headache, irritability, loss of appetite, memory loss, weakness, pain or tingling in the hands and/or feet.<sup>48</sup> Very high exposure to lead may cause anemia, weakness, kidney or brain damage, or even death.<sup>49</sup> Prolonged lead exposure may increase an individual's risk for high blood pressure, heart disease, kidney disease, poor birth outcomes, and reduced fertility in both men and women, and lead is suspected of causing cancer.<sup>50</sup>

While the full extent of the health consequences of the Flint water crisis will not be known for years, many organizations and individuals are developing strategies and contributing resources to mitigate the short and long term effects of lead exposure and poisoning, especially among children. For example, the Community Foundation of Greater Flint has developed a Child Health and Development Fund to support these efforts.<sup>51</sup> Additional side effects of the Flint water crisis that have yet to be fully understood are significant mental health problems, including stress, anxiety, and depression.<sup>52</sup>



In addition to lead exposure and poisoning, deaths from Legionnaires' disease that occurred in or near Flint after the switch to the Flint River have prompted concerns that the switch may have caused, or at least contributed to, the outbreak.<sup>53</sup> *Legionella*, the bacteria associated with Legionnaires' disease, live in fresh water and do not usually cause illness; however, when water in man-made settings is not properly maintained, people may be exposed to *Legionella* when they breathe in mist or vapor.<sup>54</sup> Legionnaires' disease is usually successfully treated with antibiotics, but it can cause lung failure or death.<sup>55</sup> Though county health department officials suspected a link between Legionnaires' disease and the switch to the Flint River as early as October 2014, state officials did not inform the public of the outbreak until over a year later, in January of 2016.<sup>56</sup> As of April 11, 2016, twelve deaths were associated with the 91 confirmed cases of Legionnaires' disease in the Flint area during a 17-month period in 2014 and 2015.<sup>57</sup> In 2016, the first confirmed case of Legionnaire's disease in Genesee County was announced on July 6. As of that date, state health officials were working to determine the source of exposure to *Legionella*, but reported no indication that the victim's exposure occurred within Flint, nor any indication of an outbreak.<sup>58</sup>

## Legal Challenges

### The Safe Drinking Water Act and Lead and Copper Rule

The Safe Drinking Water Act (SDWA) is the primary federal law responsible for protecting the nation's 170,000 public drinking water systems from harmful contaminants, including lead. The Act requires the U.S. Environmental Protection Agency (EPA) to establish national drinking water standards for any substance that may pose health risks and is likely to be present in public water supplies. EPA sets a maximum allowable concentration for each designated contaminant, or in cases where this is not "economically or technologically feasible," establishes a treatment technique to control the contaminant.<sup>59</sup> The SDWA permits states to administer drinking water programs if they enforce EPA standards or adopt their own, more stringent standards. In addition, states must implement adequate enforcement procedures, maintain records and report activities to EPA, develop a safe drinking water plan for emergencies, and adopt administrative penalties for violators.<sup>60</sup> Forty-nine states, including Michigan, currently oversee and enforce their own safe drinking water programs. EPA makes annual grants to states to cover the cost of administering these programs and reviews testing data submitted by public water systems and states to ensure compliance.

In 1991, EPA designated lead as a contaminant and promulgated regulations to minimize its concentration levels in public water supplies. The so-called "Lead and Copper Rule" (LCR) requires public water systems to collect periodic drinking water samples at taps in homes and buildings that are at a high risk of lead contamination.<sup>61</sup> If the EPA-established action level of .015 mg/L is exceeded in more than 10 percent of the collected samples, the public water system must: (1) inform the public, (2) conduct enhanced testing, and (3) install a corrosion control treatment to reduce lead levels. Failure to meet the action level even after installing the corrosion control treatment can necessitate replacement of at least 7 percent of the lead service lines annually until the lead levels are reduced below .015 mg/L.<sup>62</sup>

The SDWA requires public water systems to monitor their water supplies and report the results to state authorities. States must also independently monitor system compliance and report this information to EPA. Most states authorize an executive agency to initiate an injunctive action or impose civil money penalties against any public water system exceeding drinking water standards. If the state fails to act within 30 days EPA may issue an administrative order requiring the public water system to comply with the drinking standard, initiate a civil action against the public water system, or impose civil money penalties. In addition, EPA may act immediately to address contaminants posing an "imminent and substantial endangerment" to the public's health.<sup>63</sup> The agency has used these emergency powers to provide alternative safe drinking water sources, require additional monitoring, data collection, and treatment, and otherwise mitigate the health risks associated with the contaminant.<sup>64</sup>

Since its inception in 1991, EPA has faced significant criticism that the rule is ineffective, unwieldy and ripe for abuse. Unlike most contaminants, lead primarily enters the drinking water supply after it leaves a treatment plant, which means testing must be conducted in resident's homes and results can vary greatly by location or test date. Typically, residents collect the sample, but the collection procedures and the manner in which households are chosen for testing are



determined by the public water system. The public water system is also responsible for reporting excessive lead levels as well as for any costs or sanctions associated with violating the rule, creating an incentive to game compliance in order to avoid penalties. These factors help make the LCR among the most complicated and difficult rules for public water systems to follow, and for EPA and state agencies to enforce. As evidence of this, a recent investigation indicates that 33 of the 81 most populous cities east of the Mississippi River have used testing methods in the last ten years that do not comply with EPA guidance.<sup>65</sup>

In light of these criticisms and the crisis in Flint, EPA and the State of Michigan have taken immediate steps to improve testing, while simultaneously working on long term solutions to reduce lead concentrations in public drinking water. In April 2016, Governor Snyder announced his proposal to make Michigan's lead testing requirements more stringent.<sup>66</sup> Likewise, EPA issued an emergency order permitting the agency to sample, analyze and publish the lead levels in Flint's public water system.<sup>67</sup> The agency also announced its efforts to create a national action plan on drinking water in 2016, motivated in part by the Flint water crisis.<sup>68</sup> Finally, updates to the LCR, aimed at streamlining and strengthening the testing, reporting and enforcement processes, are expected in 2017.<sup>69</sup>

## Federal Disaster Response - Stafford Act

On January 16, 2016, President Obama declared an emergency in the State of Michigan in response to the Governor's request for federal aid pursuant to The Robert T. Stafford Disaster Relief and Emergency Act of 1988 (Stafford Act).<sup>70</sup> The Stafford Act authorizes federal assistance to state and local governments during emergencies and disasters when necessary response and relief efforts may exceed state and local resources.<sup>71</sup> Generally, before a declaration is made under the Stafford Act, the Governor of an affected state or territory must first execute the state's emergency plan and then certify in writing that the emergency or disaster exceeds the state's ability to respond and requires federal assistance.<sup>72</sup>

The Stafford Act applies in two primary types of events, emergencies and major disasters:

- An **emergency** is an event where federal assistance is required to save lives, protect property and public health, or reduce or avoid a threat of catastrophe.<sup>73</sup>
- A **major disaster** is a natural catastrophe (e.g., hurricane, tornado, and earthquake) that warrants federal assistance to alleviate loss, damage, and suffering caused by the disaster.<sup>74</sup>

Distinctions between these two types of declarations via the Stafford Act matter because different federal assistance is statutorily tied to each declaration.

- **Emergency declaration** – federal assistance is limited to technical and advisory assistance to affected governments for specific needs (e.g. provision of health and safety measures), debris removal, housing assistance, assistance in distribution of emergency assistance, medicine, and food, and local emergency assistance by federal agencies.
- **Major disaster declaration** – in addition to the same assistance noted above for emergency declaration, disaster declarations authorize additional federal assistance in the form of community disaster loans, hazard mitigation, emergency communications and public transportation, emergency grants to specific populations, unemployment assistance, and food coupons.<sup>75</sup>

Generally, federal emergency assistance is limited to \$5 million unless there is an immediate risk to life, property, or public health and necessary assistance is not otherwise available<sup>76</sup>; however this limit is often exceeded.<sup>77</sup> Under the Flint, Michigan Emergency Declaration, the President authorized FEMA to provide water, filters, and test kits for up to 90 days and to cover 75% of the cost through federal funding.<sup>78</sup> The extent to which the Stafford Act can be used to assist in the Flint water crisis is limited because it does not meet the definition of a major disaster, or a natural catastrophe, which is necessary to receive additional federal assistance under the Stafford Act.<sup>79</sup> While the global amount of funding needed to address the Flint water crisis has not been released publicly, it is clear that more assistance than that which the federal government has currently provided is required. Without additional assistance under the Stafford Act, Flint is forced to rely



more on specific acts by either the Michigan state legislature or the US Congress. This reliance can, and in this case has, yielded unpredictable results. For example, Senator Stabenow (D-MI), Senator Peters (D-MI), and Representative Kildee (D-MI) from Michigan have been requesting millions of dollars of funding to assist Flint since February 2016, but have been unsuccessful in securing that funding as of May 2016.<sup>80</sup>

## Michigan's Emergency Manager Law

For decades, Michigan has had legislation that specifically allows for the state government to put units of local government that face dire financial circumstances in a state of receivership. In 1990, the Michigan legislature passed the Local Government Fiscal Responsibility Act, also known as Public Act 72, allowing State officials to intervene in local governments experiencing serious financial problems or financial emergencies by appointing emergency financial managers.<sup>81</sup> Under Public Act 72, a variety of enumerated stakeholders (including a local government body or chief administrative officer, a creditor of a local government, or a specified percentage of registered electors residing in the local government's jurisdiction) could request a financial review of a local government if certain circumstances were present; if conditions indicative of serious financial distress were identified, the governor would appoint a team to review the unit's finances.<sup>82</sup> The review would determine that there was either no serious financial problem, a serious financial problem but an adopted consent agreement outlining a solution, or a local government financial emergency with no satisfactory plan to resolve the problem.<sup>83</sup> In the event of a financial emergency without a proposed solution, the governor was to assign responsibility for managing the emergency to a local emergency financial assistance loan board, which would appoint an emergency financial manager ("EFM").<sup>84</sup> The EFM would be responsible for writing and implementing a financial plan to resolve the emergency, and the governor would have the ability to revoke the declaration of financial emergency after receiving a recommendation from the local emergency financial assistance loan board.<sup>85</sup>

This power was used infrequently prior to 2011. Michigan's legislature passed Public Act 4<sup>86</sup> in 2011, repealing Public Act 72 and creating emergency managers ("EMs") that had more powers than the EFMs created by Public Act 72, including power to strip local officials of their authority and alter union contracts before their expiration. Public Act 4 was controversial and was rejected by a voter referendum in November 2012.<sup>87</sup> A month later, the legislature passed Public Act 436, which is largely identical to Public Act 4 but is immune from referendum because an appropriation from the general fund was added.<sup>88</sup> Public Act 436 is currently law in Michigan.

Governor Snyder appointed an Emergency Manager for Flint on November 29, 2011,<sup>89</sup> stripping Flint's local government of its powers.<sup>90</sup> Flint was still under emergency management in 2014, the year that Flint switched its water source to the Flint River. Thus, the role of the state government, particularly the emergency manager, in switching to the Flint River is a major source of contention in the Flint water crisis. As alleged in various pleadings and reported in outside reviews, the switch, combined with the city's failure to treat the water with anti-corrosive agents, resulted in lead contamination. Ed Kurtz, then-emergency manager of Flint, hired an engineering firm to study a switch to the Flint River, and his successor, Darnell Earley, ultimately decided to switch Flint's water supply to the Flint River.<sup>91</sup> Earley's successor, Jerry Ambrose, refused to act on the Flint City Council's March 23, 2015, vote to return to purchasing water from DWSD, deeming the vote "incomprehensible" due to cost and insisting Flint's water was safe.<sup>92</sup>

As scrutiny over the causes of the Flint water crisis has intensified, many have critiqued the emergency manager law. For example, the American Civil Liberties Union of Michigan argued in a letter to President Obama:

Using an anti-democratic measure known as the "emergency manager law," the state legislature stripped power from all of Flint's elected officials after voters enacted a referendum to repeal it and invested that power in a lone gubernatorial appointee. This unelected appointee, with no background or



experience in public health, was accountable to no one except the Governor. . . . With no elected officials that residents could hold accountable, the emergency manager was able to utterly disregard residents' complaints and, unbelievably, assure residents that the water was safe, despite its discoloration, foul smell and strange taste.<sup>93</sup>

In March 2016, Governor Snyder testified before the United States House Oversight Committee regarding the Flint water crisis.<sup>94</sup> In response to questioning about the role of the emergency manager law in creating the crisis, Governor Snyder stated "it would be a fair conclusion" that the law failed and "in this instance . . . you wish they would have asked more questions."<sup>95</sup>

## **Litigation**

Lawsuits are pending in both federal and state courts against various local and state officials. For example, the American Civil Liberties Union of Michigan (ACLU) and the National Resources Defense Council (NRDC), alongside others, have filed a suit in federal court alleging violations of the SDWA.<sup>96</sup> The National Association for the Advancement of Colored People (NAACP)<sup>97</sup> as well as other organizations and Flint residents are involved in class action lawsuits against government officials and private engineering firms involved in treatment of the Flint River water.<sup>98</sup> The class action lawsuits allege constitutional violations, tort and contract claims, and a number of statutory violations, including violations of the SDWA as well as the Civil Racketeer Influenced and Corrupt Organizations (RICO) Act and Michigan Consumer Protection Act.<sup>99</sup>

The state of Michigan also filed a civil lawsuit in June 2016 against water engineering services firms that performed work for the City of Flint related to treatment of water from the Flint River.<sup>100</sup> The suit includes allegations of professional negligence, fraud, and creation of a public nuisance.<sup>101</sup> In addition, both federal and state agencies are conducting criminal investigations into the water crisis.<sup>102</sup> In April 2016, Michigan Attorney General Bill Schuette announced the first criminal charges related to the crisis, filed against two officials of the MDEQ and one official of the City of Flint.<sup>103</sup>

## **General Discussion and Next Steps**

It is undeniable that the Flint water crisis reflects failures at many levels of government. And while the crisis has generated a significant amount of news attention, charitable assistance, and government scrutiny, there is no concrete plan to fully fix Flint's pipes and to relieve Flint residents of the need to rely on bottled water and water filters. Public health and healthcare professionals are working to ascertain the scope of problems that Flint residents will ultimately face, as the long-term effects of lead exposure, particularly to Flint's children, are still unclear and largely undefined. Looking ahead, the Flint water crisis highlights important legal and policy challenges that need to be addressed to prevent similar situations from occurring in other communities in Michigan and across the country.

## **Legal Issues**

In earlier sections, we described the legal landscape in which the Flint water crisis unfolded. A distressing aspect of this landscape is the absence of a public health voice. For example, Flint's contaminated drinking water was not officially recognized as a public health emergency until the Genesee County Health Department and Board of Commissioners declared a public health emergency on October 1, 2015, almost a year and a half after Flint switched its water supply to the Flint River and residents began noticing the discoloration and odor of their drinking water.<sup>104</sup> Our overall assessment is that a lack of accountability combined with government agencies' overlapping and unclear scopes of authority contributed to the disaster and delayed response. In retrospect, the Flint water crisis exposed jurisdictional gaps and inconsistencies in Michigan's legal framework that contributed to confused and ultimately deleterious policy responses.

Two key aspects stand out: no single agency had responsibility for safe drinking water monitoring and enforcement, and the Emergency Manager's jurisdiction over the City of Flint conflicted with the health department's county-wide authority. The de Beaumont Foundation has funded the Mid-States Region of the Network for Public Health Law to conduct an in-



depth analysis to address these issues, focusing on the following key legal question: given the appointment of an emergency manager, what legal authority could state, local, and federal public health and environmental agencies use to avert or mitigate the crisis?

Our project will answer this question in two phases. First, we will examine the relevant jurisdictional framework by mapping the existing legal roles of federal, state, and local authorities responsible for safe drinking water and the public's health. Second, we will examine how the emergency manager's authority conflicted with the existing jurisdictional framework, leading to decisions that ignored the community's long-term health. In addition to a report detailing our legal analysis, we will produce several practical tools and develop recommendations for communities and policymakers to ensure health is prioritized in policymaking, even in the face of financial crisis.

## Policy Implications

A comprehensive response to the Flint water crisis also requires consideration of the many upstream factors that both heightened Flint's vulnerability to a man-made environmental public health crisis and hampered the city's response. Chief among these is Flint's repeated fiscal challenges, arising in part from losses to its manufacturing base<sup>105</sup> and population<sup>106</sup> in recent years, as well as cuts in state revenue sharing amounting to over \$54 million from 2003 to 2014.<sup>107</sup> One result of such fiscal challenges—in Flint and many other U.S. cities—is an inability to upgrade poor and aging infrastructure including lead pipes.<sup>108</sup>

A lack of sufficient government resources committed to combating lead contamination is another chief challenge to properly responding to the Flint crisis.<sup>109</sup> Indeed, despite its central role in creating the crisis, the state government has not fully paid for the expenses of the crisis and is not legally compelled to do so. Flint has asked for help from the federal government, but the federal government's statutory authority to provide relief in a man-made disaster is limited. In the meantime, as the different levels of government do not act to fully fund a complete response to the Flint water crisis, the crisis continues.<sup>110</sup>

The lack of investment from state government is not new to Flint. To the contrary, the Flint water crisis follows “[d]ecades of hostility toward cities” in Michigan,<sup>111</sup> manifested by state fiscal policies that limit local governments' authority and capacity to raise revenue through local taxes while nevertheless providing only minimal state aid.<sup>112</sup> According to a 2015 study, these policies place Michigan among a handful of states that “effectively incubate[] financial distress” among local governments by depriving them of “space” for effective local policymaking.<sup>113</sup> As former Michigan treasurer Robert J. Kleine has observed, “Flint may never suffer another water crisis, but without structural changes to state and local government, its financial crises will never end.”<sup>114</sup>

Michigan's extremely powerful emergency management law should also be reexamined in light of the Flint water crisis, in part because it fails to address the underlying fiscal policies that cause local fiscal distress.<sup>115</sup> In addition, as tragically demonstrated in Flint, appointing an unelected official like an emergency manager to supplant local control without concomitant accountability to the community raises significant moral, ethical, and public health concerns. Indeed, the appointment of an emergency manager sacrifices foundational principles of democracy, accountability, and community participation in decision making. Moreover, because emergency manager laws are invoked in communities that are in significant financial distress, they disproportionately affect our most vulnerable populations. The Flint Water Advisory Task Force aptly noted, “the simple reality is that the Flint water crisis is a case of environmental injustice.”<sup>116</sup>

To ensure that we learn from the tragic events in Flint rather than allowing them to be repeated across the country, it is critical that we acknowledge, analyze, and address the failures of government and law that allowed the crisis to occur. Please periodically visit the Network for Public Health Law's webpage for future updates. Here is a short list of other online resources that you may visit to learn more about the Flint water crisis:

- State of Michigan, Taking Action on Flint Water: <http://www.michigan.gov/flintwater/>
- Virginia Tech Research Team, Flint Water Study Updates: <http://www.flintwaterstudy.org>

- MLive, Flint Water Crisis: <http://www.mlive.com/flintwater/>
- Detroit Free Press, Flint Water Crisis: <http://www.freep.com/news/flint-water-crisis/>

## SUPPORTERS



Robert Wood Johnson Foundation

**The Network for Public Health Law is a national initiative of the Robert Wood Johnson Foundation with direction and technical assistance by the Public Health Law Center at Mitchell Hamline School of Law.**

This document was developed by Elizabeth Lamoste, J.D., for the Network for Public Health Law–Mid-States Region at the University of Michigan School of Public Health, with assistance from: Colleen Healy, J.D., Staff Attorney, Network for Public Health Law–Mid-States Region; Peter D. Jacobson, J.D., M.P.H., Co-Director, Network for Public Health Law–Mid-States Region; William C. Tilburg, J.D., Senior Staff Attorney, Network for Public Health Law–Eastern Region, at the University of Maryland Carey School of Law; and Kim Weidenaar, J.D., Deputy Director, Network for Public Health Law–Western Region at the Sandra Day O'Connor College of Law at Arizona State University. The Network for Public Health Law provides information and technical assistance on issues related to public health. The legal information and assistance provided in this document does not constitute legal advice or legal representation. For legal advice, please consult specific legal counsel.

## Appendix A: Concise Timeline of Key Decisions

\*Timeline includes key decisions and events associated with the Flint water crisis. All entries are excerpted and/or summarized based on the Integrated Event Timeline prepared by the Flint Water Advisory Task Force.<sup>117</sup>

Date	Event
12/1/2011	Gov. Snyder appoints Emergency Manager (EM) to Flint.
Mar.-Apr., 2013	State Treasurer approves EM request to contract with Karegnondi Water Authority (KWA) for water supply. Then-water supplier, Detroit Water & Sewerage Department (DWSD), sends letter terminating Flint water service effective April 17, 2014.
4/25/2014	Flint switches to Flint Water Treatment Plant (WTP) as primary water supply source until completion of KWA pipeline in 2016. Switch occurs despite Department of Public Works' (DPW) concern that WTP is not ready. Complaints begin immediately.
8/15/2014	Flint issues boil water advisory ( <i>E. coli</i> bacteria). Boosts chlorine disinfectant use.
9/5/2014	Flint issues boil water advisory (coliform bacteria). Boosts chlorine disinfectant use.
10/17/2014	Genesee County Health Department (GCHD) concerned about Legionellosis outbreak in Flint and possible connection to water supply.
12/16/2014	MDEQ notifies Flint of quarterly violation of Safe Drinking Water Act (SDWA) Disinfection Byproducts (TTHM) requirements.
12/31/2014	Lead and copper monitoring shows 2 samples above lead action level.
1/2/2015	Flint issues press releases and mails notices to water customers stating the water system exceeds maximum contaminant level for TTHM.
2/26-27/2015	EPA tells MDEQ that lead sampling protocol (pre-flushing) may be biasing results. MDEQ informs EPA that Flint is using corrosion control.
3/5/2015	MDEQ issues second Disinfection Byproducts quarterly violation notice.
3/23/2015	Flint City Council votes to end Flint River service and return to DWSD. Vote is non-binding. EM refuses to act on City Council's vote.
4/24/2015	Contrary to prior statement, MDEQ informs EPA Flint is not using corrosion control.
4/29/2015	State Treasurer and EM sign emergency loan agreement stating Flint may not return to DWSD without state approval. Gov. Snyder returns control of Flint finances to Mayor and City Council under supervision of Receivership Transition Advisory Board.
5/29/2015	MDHHS reports 2014-15 cases of Legionellosis in Genesee County; "outbreak is over."
6/8/ 2015	MDHHS chastises GCHD for talking to Centers for Disease Control re Legionellosis.



6/9/2015	MDEQ issues third Disinfection Byproducts quarterly violation notice.
7/21/2015	EPA informs MDEQ that Lead and Copper Rule (LCR) requires corrosion control in Flint.
8/17/2015	MDEQ notifies Flint of lead and copper monitoring results, “scrubbed” to exclude two high lead results. Directs Flint to install corrosion control and phosphate treatment.
8/31/2015	Prof. Marc Edwards (Virginia Tech) reports on corrosive lead levels in Flint water.
9/24/2015	Dr. Mona Hanna-Attisha (Hurley Medical Center) releases findings of elevated blood lead levels in Flint children.
9/25/2015	Flint, with support of GCHD, issues lead advisory.
9/29/2015	GCHD demands fresh analysis by MDHHS of state blood lead level data; issues public health advisory.
10/1/2015	Genesee County Board of Commissioners and GCHD issue “Do Not Drink” Advisory. GCHD declares public health emergency.
10/2/2015	Gov. Snyder announces Flint Action Plan to address water system.
10/16/2015	Flint is reconnected to Detroit water system.
11/10/2015	EPA announces intent to audit State of Michigan's drinking water program.
12/14/2015	Flint Mayor Weaver declares state of emergency in Flint.
12/29/2015	Gov. Snyder issues apology for Flint water crisis via press release.
1/4/2016	Genesee County Commissioners declare state of emergency.
1/5/2016	Gov. Snyder declares state of emergency for Genesee County.
1/13/2016	Gov. Snyder/MDHHS issue first public notice of 2014-15 spike in Legionellosis in Flint.
1/16/2016	Pres. Obama approves declaration of emergency and request for federal aid.
1/22/2016	Gov. Snyder returns additional executive powers to Flint's mayor.

<sup>1</sup> See Appendix A for a concise timeline of key decisions contributing to the Flint water crisis.

<sup>2</sup> *About*, Karegnondi Water Authority, <http://www.karegnondi.com/#!/about/c20r9> (last visited Jul. 12, 2016).

<sup>3</sup> Dominic Adams, *Closing the valve on history: Flint cuts water flow from Detroit after nearly 50 years*, MLive, Apr. 25, 2014, [http://www.mlive.com/news/flint/index.ssf/2014/04/closing\\_the\\_valve\\_on\\_history\\_f.html](http://www.mlive.com/news/flint/index.ssf/2014/04/closing_the_valve_on_history_f.html) [hereinafter Adams, *Closing the valve on history*].

<sup>4</sup> Dominic Adams, *Flint spurns Detroit's last-ditch pitch, joins Karegnondi Water Authority*, MLive, Apr. 16, 2013, [http://www.mlive.com/news/flint/index.ssf/2013/04/flint\\_to\\_join\\_karegnondi\\_water.html](http://www.mlive.com/news/flint/index.ssf/2013/04/flint_to_join_karegnondi_water.html).

<sup>5</sup> Adams, *Closing the valve on history*, *supra* note 3.

- 
- <sup>6</sup> Flint Water Advisory Task Force, Final Report 36 (2016), available at [https://www.michigan.gov/documents/snyder/FWATF\\_FINAL\\_REPORT\\_21March2016\\_517805\\_7.pdf](https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf)
- <sup>7</sup> Adams, *Closing the valve on history*, *supra* note 3.
- <sup>8</sup> Paul Egan, Todd Spangler, and Kristen Jordan Shamus, *Emails: Flint water plant was rushed into operation*, Detroit Free Press, Feb. 13, 2016, <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/02/12/e-mails-flint-water-plant-rushed-into-operation/80300220/>
- <sup>9</sup> See, e.g., Tim Carmody, *How the Flint River got so toxic*, The Verge, Feb. 26, 2016, <http://www.theverge.com/2016/2/26/11117022/flint-michigan-water-crisis-lead-pollution-history>.
- <sup>10</sup> Nancy Kaffer, *Why didn't Flint treat its water? An answer, at last*, Detroit Free Press, Mar. 31, 2016, <http://www.freep.com/story/opinion/2016/03/30/flint-water-crisis/82421546/>
- <sup>11</sup> See, e.g., Ron Fonger, *City adding more lime to Flint River water as resident complaints pour in*, MLive, June 12, 2014, [http://www.mlive.com/news/flint/index.ssf/2014/06/treated\\_flint\\_river\\_water\\_meet.html](http://www.mlive.com/news/flint/index.ssf/2014/06/treated_flint_river_water_meet.html)
- <sup>12</sup> Ron Fonger, *General Motors plant won't use Flint water until KWA pipeline complete*, MLive, Oct. 12, 2015, <http://www.mlive.com/news/flint/index.ssf/2015/10/gm.html>
- <sup>13</sup> Amanda Emery, *Flint issues boil water notice for portion of west side of city*, MLive, Aug. 16, 2014, [http://www.mlive.com/news/flint/index.ssf/2014/08/flint\\_issues\\_boil\\_water\\_notice.html](http://www.mlive.com/news/flint/index.ssf/2014/08/flint_issues_boil_water_notice.html).
- <sup>14</sup> Ron Fonger, *Flint issues boil water advisory for section of the city after positive test for total coliform bacteria*, MLive, Sept. 5, 2014, [http://www.mlive.com/news/flint/index.ssf/2014/09/flint\\_issues\\_boil\\_water\\_adviso.html](http://www.mlive.com/news/flint/index.ssf/2014/09/flint_issues_boil_water_adviso.html)
- <sup>15</sup> Ron Fonger, *City warns of potential health risks after Flint water tests revealed too much disinfection byproduct*, MLive, Jan. 2, 2015, [http://www.mlive.com/news/flint/index.ssf/2015/01/flint\\_water\\_has\\_high\\_disinfect.html](http://www.mlive.com/news/flint/index.ssf/2015/01/flint_water_has_high_disinfect.html).
- <sup>16</sup> *Events That Led to Flint's Water Crisis*, New York Times, [http://www.nytimes.com/interactive/2016/01/21/us/flint-lead-water-timeline.html?\\_r=0](http://www.nytimes.com/interactive/2016/01/21/us/flint-lead-water-timeline.html?_r=0) (last visited May 18, 2016)
- <sup>17</sup> Miguel A. Del Toral, High Lead Levels in Flint, Michigan - Internal Report (June 2015), <http://flintwaterstudy.org/wp-content/uploads/2015/11/Miguels-Memo.pdf>
- <sup>18</sup> Kim Kozlowski, *Virginia Tech expert helped expose Flint's water crisis*, Detroit News, Jan. 24, 2016, <http://www.detroitnews.com/story/news/politics/2016/01/23/virginia-tech-expert-helped-expose-flint-water-crisis/79251004/>
- <sup>19</sup> Pediatric Lead Exposure in Flint, MI: Concerns from the Medical Community (2015), available at <http://flintwaterstudy.org/2015/09/pediatric-lead-exposure-presentation-from-hurley-medical-center-doctors-concerning-flint-mi/>
- <sup>20</sup> Ron Fonger, *Flint makes lead advisory official, suggests water filters and flushing*, MLive, Sept. 25, 2015, [http://www.mlive.com/news/flint/index.ssf/2015/09/flint\\_makes\\_lead\\_advisory\\_offi.html](http://www.mlive.com/news/flint/index.ssf/2015/09/flint_makes_lead_advisory_offi.html)
- <sup>21</sup> Genesee Cnty Bd. of Comm'rs Public Health Emergency Declaration for People Using the Flint City Water Supply with the Flint Water as the Source (Oct. 1, 2015), available at [http://www.gc4me.com/docs/public\\_health\\_emergency\\_announcement\\_10\\_1\\_15.pdf](http://www.gc4me.com/docs/public_health_emergency_announcement_10_1_15.pdf) [hereinafter Genesee Cnty Emergency Declaration].
- <sup>22</sup> Amanda Emery, *Flint reconnects to Detroit water, may take 3 weeks to clear all pipes*, MLive, Oct. 16, 2015, [http://www.mlive.com/news/flint/index.ssf/2015/10/flint\\_reconnecting\\_to\\_detroit.html](http://www.mlive.com/news/flint/index.ssf/2015/10/flint_reconnecting_to_detroit.html)
- <sup>23</sup> City of Flint, *State of Emergency Declared in the City of Flint*, <https://www.cityofflint.com/state-of-emergency/> (last visited July 12, 2016)
- <sup>24</sup> Governor Rick Snyder, Proclamation, Declaration of Emergency, Jan. 5, 2016, available at [http://www.michigan.gov/documents/snyder/2016-01-05\\_Flint\\_Water\\_Governors\\_Declaration\\_Final\\_509966\\_7.pdf?20160105162343](http://www.michigan.gov/documents/snyder/2016-01-05_Flint_Water_Governors_Declaration_Final_509966_7.pdf?20160105162343).
- <sup>25</sup> Executive Order No. 2016-02, Activation of the National Guard to Assist in Responding to the Emergency Relating to the City of Flint's Water System, available at <http://www.legislature.mi.gov/documents/2015-2016/executiveorder/pdf/2016-EO-02.pdf>
- <sup>26</sup> The White House Office of the Press Secretary, *President Obama Signs Michigan Emergency Declaration*, Jan. 16, 2016, <https://www.whitehouse.gov/the-press-office/2016/01/16/president-obama-signs-michigan-emergency-declaration>
- <sup>27</sup> *Id.*
- <sup>28</sup> Environmental Protection Agency, Emergency Administrative Order in the Matter of City of Flint, Michigan; Michigan Department of Environmental Quality, and the State of Michigan, (Jan. 21, 2016), available at [https://www.epa.gov/sites/production/files/2016-01/documents/1\\_21\\_sdwa\\_1431\\_emergency\\_admin\\_order\\_012116.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/1_21_sdwa_1431_emergency_admin_order_012116.pdf) [hereinafter EPA, Emergency Admin. Order]
- <sup>29</sup> *Id.* at 11-15.
- <sup>30</sup> Hearing - Flint, Michigan Drinking Water Contamination, C-Span, Mar. 17, 2016, <http://www.c-span.org/video/?406540-1/hearing-flint-michigan-water-contamination>
- <sup>31</sup> Flint Water Advisory Task Force, *supra* note 7, at 1.

- 32 Chinaro Kennedy et al., *Blood Lead Levels Among Children Aged <6 Years—Flint, Michigan, 2013–2016*, 65 MMWR Morb. Mortal Wkly Rep. 650, 651 (July 1, 2016), <http://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6525.pdf>. See also Centers for Disease Control and Prevention (CDC), *CDC Investigation: Blood lead levels higher after switch to Flint River Water*, CDC Newsroom Releases (June 24, 2016, 11:00 AM), <http://www.cdc.gov/media/releases/2016/p0624-water-lead.html>.
- 33 Todd Spangler, *Feds: State water filters safe for Flint's pregnant women, kids*, Detroit Free Press, June 23, 2016, <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/06/23/michigan-flint-water-filters-safety/86285330/>.
- 34 Elisha Anderson, *Flint's broken trust: 'I just can't continue living like this'*, Detroit Free Press, July 3, 2016, <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/07/02/flint-water-crisis-summer-lead/86611654/> [hereinafter Elisha Anderson, *Flint's broken trust*].
- 35 Michael Kransz, *Flint Lives Matter overcomes funding challenges to give out more water*, MLive, July 9, 2016, [http://www.mlive.com/news/flint/index.ssf/2016/07/water\\_give-back.html](http://www.mlive.com/news/flint/index.ssf/2016/07/water_give-back.html).
- 36 Elisha Anderson, *Flint's broken trust*, *supra* note 35.
- 37 *Id.*
- 38 Pediatric Lead Exposure in Flint, MI: Concerns from the Medical Community (2015), available at <http://flintwaterstudy.org/2015/09/pediatric-lead-exposure-presentation-from-hurley-medical-center-doctors-concerning-flint-mi/>
- 39 *Id.*
- 40 Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine<sup>1</sup>, Public Health Statement – Lead 6 (2007), available at <http://www.atsdr.cdc.gov/ToxProfiles/tp13-c1-b.pdf>
- 41 World Health Organization, Exposure to Lead: A Major Public Health Concern 3 (2010), available at <http://www.who.int/ipcs/features/lead.pdf?ua=1>
- 42 *Id.*
- 43 *Id.*
- 44 Agency for Toxic Substances and Disease Registry, *supra* note 41, at 6.
- 45 World Health Organization, Lead poisoning and health, <http://www.who.int/mediacentre/factsheets/fs379/en/> (last visited May 18, 2016) [hereinafter WHO, Lead poisoning and health]
- 46 Centers for Disease Control, Developmental Disabilities and the Environment, <http://ephtracking.cdc.gov/showDevelopmentalDisabilitiesEnv.action> (last visited June 2, 2016).
- 47 WHO, Lead poisoning and health, *supra* note 46.
- 48 Centers for Disease Control, The National Institute for Occupational Safety and Health (NIOSH), Lead – Information for Workers, <http://www.cdc.gov/niosh/topics/lead/health.html> (last visited May 18, 2016)
- 49 *Id.*
- 50 *Id.*
- 51 See, e.g., Community Foundation of Greater Flint, <http://www.cfgf.org/> (last visited May 18, 2016).
- 52 See Abby Goodnough & Scott Atkinson, *A Potent Side Effect to the Flint Water Crisis: Mental Health Problems*, New York Times, Apr. 30, 2016, <http://www.nytimes.com/2016/05/01/us/flint-michigan-water-crisis-mental-health.html>; see also Genesee Health System, Water Crisis, <http://www.genhs.org/water> (last visited May 18, 2016).
- 53 Elisha Anderson, *Legionnaires'-associated deaths grow to 12 in Flint area*, Detroit Free Press, Apr. 11, 2016, <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/04/11/legionnaires-deaths-flint-water/82897722/>
- 54 Centers for Disease Control, *Legionella* (Legionnaires' Disease and Pontiac Fever): Causes and Transmission, <http://www.cdc.gov/legionella/about/causes-transmission.html> (last visited May 24, 2016).
- 55 Centers for Disease Control, *Legionella* (Legionnaires' Disease and Pontiac Fever): Treatment and Complications, <http://www.cdc.gov/legionella/about/treatment-complications.html> (last visited May 24, 2016).
- 56 Abby Goodnough, *Legionnaires' Outbreak in Flint Was Met With Silence*, New York Times, Feb. 22, 2016, <http://www.nytimes.com/2016/02/23/us/legionnaires-outbreak-in-flint-was-met-with-silence.html>. See also Ron Fonger, *Public never told, but investigators suspected Flint River tie to Legionnaires' in 2014*, Mlive, Jan. 16, 2016, [http://www.mlive.com/news/flint/index.ssf/2016/01/documents\\_show\\_agencies\\_knew\\_o.html](http://www.mlive.com/news/flint/index.ssf/2016/01/documents_show_agencies_knew_o.html).
- 57 Elisha Anderson, *Legionnaires'-associated deaths grow to 12 in Flint area*, *supra* note 54.

- <sup>58</sup> Gary Ridley, *Flint-area's first Legionnaire's disease case confirmed for 2016*, Mlive, July 6, 2016, [http://www.mlive.com/news/flint/index.ssf/2016/07/flint-areas\\_first\\_legionnaires.html](http://www.mlive.com/news/flint/index.ssf/2016/07/flint-areas_first_legionnaires.html).
- <sup>59</sup> 42 U.S.C. § 300f(1).
- <sup>60</sup> 42 U.S.C. § 300g-2(a).
- <sup>61</sup> 40 C.F.R. §§ 141.80-141.91.
- <sup>62</sup> 40 C.F.R. § 141.84.
- <sup>63</sup> 42 U.S.C. § 300i.
- <sup>64</sup> H.R. Rep. No. 93-1185, 1974 U.S.C.C.A.N. 6454, 6487 (1974); In re Yakima Valley Dairies, Admin. Order on Consent (U.S. EPA Region 10, Mar. 5, 2013), [https://www3.epa.gov/region10/pdf/sites/yakimaqw/consent\\_order\\_yakima\\_valley\\_dairies\\_march2013.pdf](https://www3.epa.gov/region10/pdf/sites/yakimaqw/consent_order_yakima_valley_dairies_march2013.pdf)
- <sup>65</sup> Marc Edwards et al., *Gaps in the EPA Lead and Copper Rule That Can Allow Gaming for Compliance: DC WASA 2003-2009*, [http://mediad.publicbroadcasting.net/p/michigan/files/201511/Gaming\\_the\\_LCR\\_WASA\\_2003-2009\\_Oct\\_2009.pdf](http://mediad.publicbroadcasting.net/p/michigan/files/201511/Gaming_the_LCR_WASA_2003-2009_Oct_2009.pdf); Marc Edwards, *Failure of the US Centers for Disease Control (CDC) and the US Environmental Protection Agency (EPA) to Protect Children from Elevated Lead in Drinking Water: 2001-present*, <https://oversight.house.gov/wp-content/uploads/2016/03/Marc-Edwards-Final-3-15-2016.pdf>; See, e.g., Brady Dennis, *The EPA's lead-in-water rule has been faulted for decades. Will Flint hasten a change?*, The Washington 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](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)
- <sup>66</sup> Flint Water Interagency Coordinating Committee, *Lead and Copper Rule Reform (2016)*, available at [http://www.michigan.gov/documents/snyder/FWICC\\_LCR\\_KeyTakeaways\\_V3\\_521969\\_7.pdf](http://www.michigan.gov/documents/snyder/FWICC_LCR_KeyTakeaways_V3_521969_7.pdf)
- <sup>67</sup> EPA, Emergency Admin. Order, *supra* note 29, at 1.
- <sup>68</sup> Joel Beauvais, *Environmental Protection Agency, Moving Forward for America's Drinking Water*, Apr. 26, 2016, <https://blog.epa.gov/blog/2016/04/moving-forward-for-americas-drinking-water/>
- <sup>69</sup> WaterWorld, *EPA Announces Enhanced Oversight of Lead and Copper Rule Implementation*, Mar. 3, 2016, <http://www.waterworld.com/articles/2016/03/epa-announces-enhanced-oversight-of-lead-and-copper-rule-implementation.html>
- <sup>70</sup> The White House Office of the Press Secretary, *President Obama Signs Michigan Emergency Declaration*, Jan. 16, 2016, <https://www.whitehouse.gov/the-press-office/2016/01/16/president-obama-signs-michigan-emergency-declaration>
- <sup>71</sup> The Stafford Act, 42 U.S.C § 5121 (2013); Robert T. Stafford Disaster Relief and Emergency Assistance Act, ASTHO, <http://www.astho.org/Programs/Preparedness/Public-Health-Emergency-Law/Emergency-Authority-and-Immunity-Toolkit/Robert-T--Stafford-Disaster-Relief-and-Emergency-Assistance-Act-Fact-Sheet/> (last reviewed May 2013)
- <sup>72</sup> 42 U.S.C. §§ 5170, 5191.
- <sup>73</sup> 42 U.S.C. § 5122.
- <sup>74</sup> *Id.*
- <sup>75</sup> 42 U.S.C. §§ 5170 – 5187.
- <sup>76</sup> 42 U.S.C. § 5193.
- <sup>77</sup> Hearing on “Post-Katrina: What it Takes to Cut the Bureaucracy and Assure a More Rapid Response After a Catastrophic Disaster”, H. Comm. On Transportation and Infrastructure (July 23, 2009) 2, fn. 4, <http://usmayors.org/chs/uploads/SubcommitteeMemo.pdf>
- <sup>78</sup> Federal Aid Programs for the State of Michigan Emergency Declaration, HQ-16-004-FactSheet, Department of Homeland Security, Jan. 16, 2016, <http://www.fema.gov/news-release/2016/01/16/federal-aid-programs-state-michigan-emergency-declaration>
- <sup>79</sup> For more discussion of this distinction, see Congressional Research Service, *Would an Influenza Pandemic Qualify as a Major Disaster under the Stafford Act?* (2008), available at <https://fas.org/sqp/crs/misc/RL34724.pdf>
- <sup>80</sup> Todd Spangler, *Senate Dems propose water bill in wake of Flint crisis*, Detroit Free Press, Apr. 20, 2016, <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/04/20/senate-dems-propose-water-bill-wake-flint-crisis/83294992/>; Melissa Nann Burke, *Mich. Senators reach \$220M proposal affecting Flint*, Detroit News, Feb. 24, 2016, <http://www.detroitnews.com/story/news/michigan/flint-water-crisis/2016/02/24/michigan-senators-stabenow-peters-flint-aid/80863454/>.
- <sup>81</sup> M.C.L. § 141.1201 *et seq.* (1990) (repealed).
- <sup>82</sup> M.C.L. §§ 141.1212-1213.
- <sup>83</sup> M.C.L. § 141.1215(1)(a)-(c).
- <sup>84</sup> M.C.L. § 141.1218.
- <sup>85</sup> M.C.L. §§ 141.1220-141.1225.

<sup>86</sup> M.C.L. §§ 141.1501-141.1531 (2011) (repealed).

<sup>87</sup> Jonathan Oosting, *Michigan Proposal 1: Voters reject measure, repeal controversial emergency manager law*, Nov. 07, 2012, [http://www.mlive.com/politics/index.ssf/2012/11/election\\_results\\_michigan\\_vote.html](http://www.mlive.com/politics/index.ssf/2012/11/election_results_michigan_vote.html)

<sup>88</sup> While Michigan voters can generally repeal laws by referendum, the Michigan Constitution provides an exception for bills that appropriate money. See MI. Const. Art. IV. Section 34 (“Any bill passed by the legislature and approved by the governor, except a bill appropriating money, may provide that it will not become law unless approved by a majority of the electors voting thereon.”) See also Rick Pluta, *Some laws shielded from voter referendum*, Michigan Radio, June 27, 2011, <http://michiganradio.org/post/some-laws-shielded-voter-referendums>

<sup>89</sup> Kristin Longley, *Flint emergency: Timeline of state takeover*, MLive, Dec. 1, 2012, [http://www.mlive.com/news/flint/index.ssf/2012/12/flint\\_emergency\\_timeline\\_of\\_st\\_1.html](http://www.mlive.com/news/flint/index.ssf/2012/12/flint_emergency_timeline_of_st_1.html)

<sup>90</sup> See Khalil AlHajal, *Flint city council president: Strong dialogue led to emergency manager’s partial restoration of role for mayor, council*, MLive, Dec. 20, 2011, [http://www.mlive.com/news/flint/index.ssf/2011/12/flint\\_city\\_council\\_president\\_s.html](http://www.mlive.com/news/flint/index.ssf/2011/12/flint_city_council_president_s.html).

<sup>91</sup> The Center for Michigan, *Michigan Truth Squad: Who approved switch to Flint River? State’s answers draw fouls*, MLive, Jan. 21, 2016, [http://www.mlive.com/politics/index.ssf/2016/01/michigan\\_truth\\_squad\\_who\\_appro.html](http://www.mlive.com/politics/index.ssf/2016/01/michigan_truth_squad_who_appro.html)

<sup>92</sup> Ron Fonger, *Emergency manager calls City Council’s Flint River vote ‘incomprehensible’*, MLive, Mar. 24, 2015, [http://www.mlive.com/news/flint/index.ssf/2015/03/flint\\_emergency\\_manager\\_calls.html](http://www.mlive.com/news/flint/index.ssf/2015/03/flint_emergency_manager_calls.html).

<sup>93</sup> ACLU to Obama: Emergency Manager law helped create Flint Water Crisis, MLive, May 4, 2016, [http://www.mlive.com/opinion/index.ssf/2016/05/aclu\\_to\\_obama\\_emergency\\_manage.html](http://www.mlive.com/opinion/index.ssf/2016/05/aclu_to_obama_emergency_manage.html).

<sup>94</sup> Jonathan Oosting, *Snyder admits EM law failed in Flint water issue*, Detroit News, March 17, 2016, <http://www.detroitnews.com/story/news/michigan/flint-water-crisis/2016/03/17/snyder-testifies-flint-water-crisis/81901738/>

<sup>95</sup> *Id.*

<sup>96</sup> American Civil Liberties Union of Michigan, *Groups File Federal Lawsuit to Secure Safe Drinking Water in Flint*, Jan. 27, 2016, <http://www.aclumich.org/article/groups-file-federal-lawsuit-secure-safe-drinking-water-flint>

<sup>97</sup> National Association for the Advancement of Colored People (NAACP), *NAACP Files Lawsuit Over Flint Water Crisis*, May 18, 2016, <http://www.naacp.org/press/entry/naacp-files-lawsuit-over-flint-water-crisis>

<sup>98</sup> Colleen Healy, *Civil Litigation Arising from the Flint water crisis*, Network for Pub. Health L. (last updated July 5, 2016), [https://www.networkforphl.org/\\_asset/12x7ul/Flint-Litigation-Summary-Table.pdf](https://www.networkforphl.org/_asset/12x7ul/Flint-Litigation-Summary-Table.pdf)

<sup>99</sup> See *id.*

<sup>100</sup> Office of the State of Michigan Attorney General Bill Schuette, *Schuette Files Civil Suit against Veolia and LAN for Role in Flint Water Poisoning*, June 22, 2016, [http://www.michigan.gov/ag/0,4534,7-164-46849\\_47203-387198--,00.html](http://www.michigan.gov/ag/0,4534,7-164-46849_47203-387198--,00.html)

<sup>101</sup> *Id.*

<sup>102</sup> See, e.g., Ron Fonger, *Gov. Snyder ask auditor general to suspend Flint water crisis investigation*, Mlive, May 26, 2016, [http://www.mlive.com/news/index.ssf/2016/05/gov\\_snyder\\_asks\\_auditor\\_genera.html](http://www.mlive.com/news/index.ssf/2016/05/gov_snyder_asks_auditor_genera.html)

<sup>103</sup> Paul Egan and Matthew Dolan, *Criminal charges today in Flint water crisis*, Detroit Free Press, Apr. 20, 2016, <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/04/19/criminal-charges-coming-wednesday-flint-water-crisis/83251574/>

<sup>104</sup> See Genesee Cnty Emergency Declaration, *supra* note 22.

<sup>105</sup> Shaun Byron, *U of M-Flint professor: GM employment in Genesee County likely to never hit 80,000 again*, MLive, Feb. 8, 2013, [http://www.mlive.com/business/mid-michigan/index.ssf/2013/02/gm\\_1.html](http://www.mlive.com/business/mid-michigan/index.ssf/2013/02/gm_1.html).

<sup>106</sup> Ron Fonger, *Flint’s population falls below 100,000 for first time since the 1920s*, MLive, May 22, 2014, [http://www.mlive.com/news/flint/index.ssf/2014/05/flints\\_population\\_falls\\_below.html](http://www.mlive.com/news/flint/index.ssf/2014/05/flints_population_falls_below.html).

<sup>107</sup> Anthony Minghine, *The Great Revenue Sharing Heist*, The Review 28 (Mar./Apr. 2014), available at <http://mml.org/resources/publications/mmr/issue/mar-apr2014/review-mar-apr2014-low-res.pdf>

<sup>108</sup> See, e.g., Darryl Fears, *It’s not just Flint. Lead taints water across the U.S., EPA records show*, Washington Post, Mar. 17, 2016, <https://www.washingtonpost.com/news/energy-environment/wp/2016/03/17/its-not-just-flint-lead-taints-water-across-the-u-s-the-epa-says/> and Darryl Fears and Brady Dennis, *One city’s solution to drinking water contamination? Get rid of every lead pipe.*, Washington 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](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)

<sup>109</sup> See, e.g., Ron Fonger, *Flint mayor says city didn’t create water crisis, needs help ending it*, MLive, June 17, 2016, [http://www.mlive.com/news/index.ssf/2016/06/flint\\_mayor\\_says\\_city\\_didnt\\_cr.html](http://www.mlive.com/news/index.ssf/2016/06/flint_mayor_says_city_didnt_cr.html)

---

<sup>110</sup> See, e.g., Matthew Dolan, *Replacing Flint's lead pipes is double the estimate*, Detroit Free Press, May 28, 2016, <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/05/27/flint-lead-lines-water-crisis/85032096/>

<sup>111</sup> Robert J. Kleine, *Rick Snyder isn't the only Michigan leader who abandoned Flint*, Washington Post, Feb. 1, 2016, <https://www.washingtonpost.com/posteverything/wp/2016/02/01/rick-snyder-isnt-the-only-michigan-leader-who-abandoned-flint/>.

<sup>112</sup> Joshua Sapotichne, Erika Rosebrook, Eric A. Scorsone, Danielle Kaminski, Mary Doidge, and Traci Taylor, *Beyond State Takeovers: Reconsidering the Role of State Government in Local Financial Distress, with Important Lessons for Michigan and its Embattled Cities* 3 (2015), available at <http://bridgemi.com/wp-content/uploads/2015/11/msu-study.pdf>.

<sup>113</sup> *Id.* at 15.

<sup>114</sup> Kleine, *supra* note 112.

<sup>115</sup> See *id.*

<sup>116</sup> Flint Water Advisory Task Force, *supra* note 7, at 54.

<sup>117</sup> *Id.* at Appendix V.