

# **The Glass is Half Full but Contaminated: An Analysis of the United States' Financial Investment in the Drinking Water Infrastructure System**

*Maya Marshall\**

## INTRODUCTION

In the United States of America, low-income neighborhoods, particularly communities of color, “bear a disproportionate burden of exposure to suboptimal, unhealthy environmental conditions.”<sup>1</sup> Scholars and activists categorize these disparities as environmental injustices.<sup>2</sup> Advocates of the environmental justice movement seek to rectify issues of environmental racism and deteriorating infrastructure through the enforcement of equitable laws, regulations, and policies that affect these disadvantaged communities.<sup>3</sup>

One issue this movement works to eradicate is the inequality in access to clean water.<sup>4</sup> Although there is a prevalent assumption that all residents of the United States have access to clean water, this is simply not the reality for many urban and rural low-income communities and communities of color.<sup>5</sup> Water is a basic necessity that holds a “special, but overlooked, place in our culture, history and laws.”<sup>6</sup> It is an essential element of every individual’s life and is critical to the underpinnings of every

---

\* Senior Staff, KY. J. EQUINE, AGRIC., & NAT. RES. L., B.S. Communication, 2018, Boston University; J.D. May 2021, University of Kentucky J. David Rosenberg College of Law.

<sup>1</sup> Marianne Engelman Lado, *No More Excuses: Building A New Vision of Civil Rights Enforcement in the Context of Environmental Justice*, 22 U. PA. J.L. & SOC. CHANGE 281, 282, 286 (2019).

<sup>2</sup> Juliana Maantay, *Mapping Environmental Injustices*, ENV'T. HEALTH PERSP. 161, 161, <https://ehp.niehs.nih.gov/doi/pdf/10.1289/ehp.02110s2161> (last viewed June 20, 2021) [<https://perma.cc/XSL9-BYYY>].

<sup>3</sup> Jasmine Bell, *5 Things to Know About Communities of Color and Environmental Justice*, CTR. FOR AM. PROGRESS (Apr. 5, 2016), <https://www.americanprogress.org/issues/race/news/2016/04/25/136361/5-things-to-know-about-communities-of-color-and-environmental-justice/> [<https://perma.cc/W323-62N2>].

<sup>4</sup> *Id.*

<sup>5</sup> Tamar Meshel, *Environmental Justice in the United States: The Human Right to Water*, 8 WASH. J. ENVTL. L. & POL'Y 264, 265, 266 (2018).

<sup>6</sup> Sharmila Murthy, *A New Constitutive Commitment to Water*, 36 B.C. J.L. & SOC. JUST. 159, 162 (2016).

successful society.<sup>7</sup> Despite the apparent importance of clean water, water continues to be distributed unequally across the United States.<sup>8</sup> The inadequate water quality, coupled with the lack of responsiveness to these issues, have forced low-income communities and communities of color to bear “disproportionate environmental burdens.”<sup>9</sup> These inequitable consequences indicate a need for reform in United States water policy, specifically that of water infrastructure systems.<sup>10</sup>

In 2015, the water quality issue made national headlines in Flint, Michigan.<sup>11</sup> Although this water crisis received national coverage and sparked nationwide outrage, Flint does not rank among the top cities in America with the most dangerous drinking water.<sup>12</sup> In Modesto, California, a school district restricted the use of water fountains and the use of tap water for food preparation due to the high levels of lead found in the water.<sup>13</sup> Milwaukee, Wisconsin also has a major lead-in-water problem.<sup>14</sup> In 2016, there were an estimated 176,000 lead pipes that provided at-risk drinking water to homes and businesses within the area.<sup>15</sup> However, water contamination is not only a problem found in low-income urban areas; similar issues are also present throughout low-income rural communities.<sup>16</sup> Residents of

---

<sup>7</sup> See *The Water Crisis*, WATER.ORG, <https://water.org/our-impact/water-crisis/> (last viewed June 20, 2021) [<https://perma.cc/RL4T-CGUK>].

<sup>8</sup> Meshel, *supra* note 5, at 269 (citing Radhika Fox, *How Water Agencies Are Tackling Inequity*, WATER DEEPLY (Nov. 1, 2017), <https://www.newsdeeply.com/water/community/2017/11/01/how-water-agencies-are-tackling-inequity> [<https://perma.cc/5XEA-CMHN>]).

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Flint Water Crisis Fast Facts*, CNN (Dec. 13, 2019), <https://www.cnn.com/2016/03/04/us/flint-water-crisis-fast-facts/index.html> [<https://perma.cc/ZWH2-QZKQ>].

<sup>12</sup> M.B. Pell & Joshua Schneyer, *Thousands of U.S. Areas Afflicted with Lead Poisoning beyond Flint's*, SCI. AM. (Dec. 19, 2016), <https://www.scientificamerican.com/article/thousands-of-u-s-areas-afflicted-with-lead-poisoning-beyond-flints/> [<https://perma.cc/MWF3-9KKM>].

<sup>13</sup> See Deke Farrow, *Why Gregori High has declared its water off-limits for drinking, cooking*, THE MODESTO BEE (Aug. 22, 2018), <https://www.modbee.com/news/local/education/article217129190.html> [<https://perma.cc/W2KT-RCHU>].

<sup>14</sup> Mariya Moseley, *7 Cities That Prove America's Problem With Contaminated Water Is Larger Than Flint*, ESSENCE (Mar. 22, 2017), <https://www.essence.com/news/us-cities-flint-contaminated-lead-water/> [<https://perma.cc/44JE-Y3R8>].

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

<sup>16</sup> Aria Bendix, *11 Cities with the Worst Tap Water in the U.S.*, BUS. INSIDER (Mar. 19, 2019) <https://www.businessinsider.com/cities-worst-tap-water-us-2019-3> [<https://perma.cc/946L-5TQF>].

Martin County, Kentucky, have reported that their faucets spout brown and cloudy water that smells like diesel.<sup>17</sup> There have also been reports of the faucet water looking like “blue Gatorade.”<sup>18</sup> This distinct color can be attributed to the high levels of trihalomethanes and haloacetic acids contained in the water.<sup>19</sup> The Martin County water crisis is an illustration of one of many rural communities struggling to maintain their aging water systems.<sup>20</sup> Americans living in both urban and rural areas across the nation find themselves dealing with the damaging consequences of an aging infrastructure that lacks sufficient funding.<sup>21</sup> Absent major emergencies and national coverage, “water utility managers will continue to deal with aging water systems by” deferring upgrades for as long as possible.<sup>22</sup>

The time to fully invest in the United States water infrastructure system is now. The federal government can no longer afford to ignore the decaying infrastructure that is poisoning its most vulnerable populations. Although the required investment is significant, “88 percent of Americans support increasing federal investment to rebuild our water infrastructure....”<sup>23</sup> Strong public support, coupled with the dire historical need for investment, should encourage the federal government to act promptly. Delaying this investment will only further degrade the aging infrastructure, increase the overall expense of investment, and most importantly, negatively impact public health.

---

<sup>17</sup> Nadia Kounang, *The Kentucky county where the water smells like diesel*, CNN (Mar. 30, 2018), <https://www.cnn.com/2018/03/30/health/kentucky-water-crisis/index.html> [<https://perma.cc/4WJJ-CP95>].

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> Kat Lonsdorf, *You Just Don't Touch That Tap Water Unless Absolutely Necessary*, NPR (Oct. 3, 2018), <https://www.npr.org/2018/10/03/649850498/you-just-don-t-touch-that-tap-water-unless-absolutely-necessary>. [<https://perma.cc/L2BY-3XC2>]; Sydney Boles, *Water is Unaffordable For Nearly Half of Martin County, Ky. Residents, Report Finds*, 89.3 WFLP (Sept. 30, 2019), <https://wfpl.org/water-is-unaffordable-for-nearly-half-of-martin-county-ky-residents-report-finds/> [<https://perma.cc/Z2ZB-4Q7J>].

<sup>21</sup> *Id.*

<sup>22</sup> David Sedlack, *How Development of America's Water Infrastructure Has Lurched Through History*, PEW (Mar. 3, 2019), <https://trend.pewtrusts.org/en/archive/spring-2019/how-development-of-americas-water-infrastructure-has-lurched-through-history> [<https://perma.cc/BXY5-62QT>].

<sup>23</sup> WFM Staff, *Poll: 88 percent of Americans want more federal investments in water*, WATER FIN. & MGMT. (Apr. 23, 2018), <https://waterfm.com/poll-88-percent-americans-want-federal-investment-water/> [<https://perma.cc/A94G-8W28>].

This Note contends that the federal government must substantially and systematically invest more into the United States water infrastructure system to ensure clean drinking water for all Americans. Part I of this analysis provides an outline of the history of the United States water infrastructure system. Part II argues that it is essential for the federal government to invest substantially more than the current estimated water infrastructure funding through federal grants. Part III asserts that enforcement of federal mandates is necessary to ensure the equitable distribution of direct federal spending to the communities who need it most.

## I. HISTORICAL OVERVIEW

### *A. History of the Water Infrastructure System in the United States*

The creation of the United States water infrastructure system is primarily a result of the rapid population growth that took place during the Industrial Revolution.<sup>24</sup> In 1850, there were approximately eighty-three established water systems; by the turn of the 20<sup>th</sup> century, there were over 3,000 water systems in place.<sup>25</sup> As these water systems were established, the federal government took steps to protect the quality of the drinking water.<sup>26</sup> After the formation of the Environmental Protection Agency (“EPA”) in 1970, several acts were passed that implemented federal regulations and standards that addressed the country’s water quality.<sup>27</sup> These regulations were aimed at preventing the introduction and transmission of communicable diseases.<sup>28</sup> These standards are set at the national level, but are often monitored by state and local governments.<sup>29</sup>

---

<sup>24</sup> Patricia Buckley, Lester Gunnion & Will Sarni, *The aging water infrastructure: Out of sight, out of mind?*, DELOITTE INSIGHTS (Mar. 22, 2016), <https://www2.deloitte.com/us/en/insights/economy/issues-by-the-numbers/us-aging-water-infrastructure-investment-opportunities.html> [<https://perma.cc/ZK8D-MGBX>].

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> NAT’L RSRCH. COUNCIL, PRIVATIZATION OF WATER SERVICES IN THE UNITED STATES: AN ASSESSMENT OF ISSUES AND EXPERIENCE 32 (THE NAT’L ACAD’S PRESS, 2002) <https://www.nap.edu/read/10135/chapter/4#32> [<https://perma.cc/Q5BE-SL3M>].

<sup>29</sup> BUCKLEY ET AL., *supra* note 24.

Today, drinking water is delivered by approximately one million miles of underground pipes.<sup>30</sup> Although there are both private and public water systems in the United States, approximately 90 percent of Americans receive their drinking water from public water systems.<sup>31</sup> Many of these systems were built with the intention of being replaced after seventy-five to 100 years.<sup>32</sup> In 2017, the American Society of Civil Engineers (“ASCE”) gave the United States drinking water infrastructure a “D+” rating.<sup>33</sup> Water infrastructure systems in the United States have “exceeded their intended life spans and are breaking down.”<sup>34</sup> This overuse has led to flooding, wastewater overflows, contaminated water, and a daily loss of 6 billion gallons of treated water due to broken pipes.<sup>35</sup> Since the water infrastructure systems are underground, the need to upgrade and replace these systems is largely ignored.<sup>36</sup> To those who are unaffected by our aging infrastructure, the issue is “out of sight and, usually, out of mind” until there is a major water crisis that occurs and receives national coverage.<sup>37</sup> The United States can no longer afford to ignore the rotten water infrastructure systems that are killing its residents.

### *B. United States Water Infrastructure Funding and Policy*

According to the American Water Works Association, approximately \$1 trillion is needed over the next twenty-five years to maintain and repair the country’s water infrastructure system.<sup>38</sup> Currently, state and local governments bear the

---

<sup>30</sup> AMERICAN SOCIETY OF CIVIL ENGINEERS, 2017 INFRASTRUCTURE REPORT CARD, DRINKING WATER, <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Drinking-Water-Final.pdf> (last viewed Nov. 7, 2019), [<https://perma.cc/F648-ES5C>].

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

<sup>33</sup> AMERICAN SOCIETY OF CIVIL ENGINEERS, 2021 INFRASTRUCTURE REPORT CARD, FAILURE TO ACT: ECONOMIC IMPACTS OF STATUS QUO INVESTMENT ACROSS INFRASTRUCTURE SYSTEMS (2021), [https://www.infrastructurereportcard.org/wp-content/uploads/2021/01/FTA\\_Econ\\_Impacts\\_Status\\_Quo.pdf](https://www.infrastructurereportcard.org/wp-content/uploads/2021/01/FTA_Econ_Impacts_Status_Quo.pdf) [<https://perma.cc/3YXN-LQWA>].

<sup>34</sup> CLEAN WATER FOR ALL, WATER, HEALTH, AND EQUITY 1, 4 (2018), [http://bwhi.org/wp-content/uploads/2019/01/CWC\\_Report\\_Full\\_report\\_lowres.pdf](http://bwhi.org/wp-content/uploads/2019/01/CWC_Report_Full_report_lowres.pdf) [<https://perma.cc/VD3K-P7M7>].

<sup>35</sup> *Id.* at 3; 2017 INFRASTRUCTURE REPORT CARD, *supra* note 30.

<sup>36</sup> *See* BUCKLEY ET AL., *supra* note 24.

<sup>37</sup> *Id.*

<sup>38</sup> 2017 INFRASTRUCTURE REPORT CARD, *supra* note 30.

primary financial burden of maintaining and rebuilding the system.<sup>39</sup> Over the years, federal spending on water infrastructure has dramatically decreased.<sup>40</sup> Approximately 96 percent of all public spending on water and water utilities is provided by the state and local governments.<sup>41</sup> This increased gap between local spending and federal spending is largely attributed to the switch from federal grants to the use of federal loans in the 1990s.<sup>42</sup>

The Construction Grants Program was a major source of federal funding for water infrastructure during the 1970s and 1980s.<sup>43</sup> This program provided state and local governments with significant federal funding through grants.<sup>44</sup> During this period, federal spending on water utilities hit \$16.6 billion.<sup>45</sup> However, after President Ronald Reagan took office in 1981, water spending was no longer seen as a national priority and never regained momentum.<sup>46</sup> By 1987, funding for the Construction Grants Program was reduced to \$7 billion, and lawmakers created a new financing scheme that defined how the government would begin investing in water utilities.<sup>47</sup> Rather than providing direct grants to state and local governments, Congress began to provide capitalization grants to states who then provided loans to local communities.<sup>48</sup> This new financing scheme forced cities to take out loans and repay the money back to their state.<sup>49</sup> The change led to the extinction of the Construction Grants Program and the creation of the Clean Water State Revolving Loan Fund.<sup>50</sup>

---

<sup>39</sup> CLEAN WATER FOR ALL, *supra* note 34, at 6.

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> *IGMS Construction Grants Overview*, ENVTL. PROT. AGENCY, <https://www.epa.gov/enviro/igms-construction-grants-overview> (last viewed Jan. 7, 2020) [<https://perma.cc/D4V7-9GMQ>].

<sup>44</sup> *Id.*

<sup>45</sup> Danny Vinik, *Is Washington Creating More Flints?*, POLITICO (May 25, 2016, 4:59 AM), <https://www.politico.com/agenda/story/2016/05/water-funding-washington-flint-000128> [<https://perma.cc/92MM-VBAY>].

<sup>46</sup> *Id.*

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> *Id.*

<sup>50</sup> MICHAEL CURLEY, FUNDAMENTALS OF WATER FINANCE xi (2017) [https://books.google.com/books?id=ciUNDgAAQBAJ&pg=PR11&lpg=PR11&dq=reagan+administration+and+water+financing&source=bl&ots=Kdha\\_6jCub&sig=ACfU3U2O\\_wFnCCe8XAmKR7iyBFWQLIP9\\_A&hl=en&sa=X&ved=2ahUKEwiCqqbnvLHnAhWDWc0KHcc](https://books.google.com/books?id=ciUNDgAAQBAJ&pg=PR11&lpg=PR11&dq=reagan+administration+and+water+financing&source=bl&ots=Kdha_6jCub&sig=ACfU3U2O_wFnCCe8XAmKR7iyBFWQLIP9_A&hl=en&sa=X&ved=2ahUKEwiCqqbnvLHnAhWDWc0KHcc)

Today, the federal government continues to offer financial support in the form of low-interest loans primarily through the Clean Water State Revolving Loan Fund and the Drinking Water State Revolving Loan Fund.<sup>51</sup> Although investment through loans can be an effective way to distribute limited funding, loan-based financing schemes also have their shortcomings.<sup>52</sup> The large burden placed on state and local governments has led to the inability of small-to-midsized American cities to raise funds for infrastructure investments.<sup>53</sup> Despite having the means to borrow more money, these small-to-midsized American cities, who in recent years have suffered decreased revenue, have been unable to benefit from the loans.<sup>54</sup> Loan programs may also be detrimental to large cities. While these cities have the means to borrow more money, their infrastructure needs are so large they often consume a state's entire annual allocation for the year.<sup>55</sup>

In 2018, the Trump administration released a \$1.5 trillion infrastructure plan.<sup>56</sup> Although the bill presented investments totaling up to \$1.5 trillion, a closer look at the funding structure reveals that only \$200 billion would come from direct federal spending.<sup>57</sup> The \$200 billion direct federal spending investment is expected to be divided among all forms of infrastructure work.<sup>58</sup> The Trump administration's goal was to have state and local governments fund the remainder of the infrastructure plan, with state and local governments matching any federal allocation by at least a 4 to 1 ratio.<sup>59</sup> Despite the increase of local-level spending and the state and local governments' current inability to raise

---

ECRcQ6AEwCHoECAoQAQ#v=onepage&q=reagan%20administration%20and%20water%20financing&f=false (last viewed Jan. 14, 2021) [https://perma.cc/5ZDD-PUJF].

<sup>51</sup> 2017 INFRASTRUCTURE REPORT CARD, *supra* note 30. *See also Water Infrastructure Financing: History of EPA Appropriations*, CONG. RSCH. SERV. https://fas.org/sgp/crs/misc/96-647.pdf (last viewed Dec. 18, 2019) [https://perma.cc/TH6G-KQBP].

<sup>52</sup> *See* Vinik, *supra* note 45.

<sup>53</sup> CLEAN WATER FOR ALL, *supra* note 34, at 7.

<sup>54</sup> *Id.*

<sup>55</sup> Vinik, *supra* note 45.

<sup>56</sup> Erin Mundahl, *What Does Trump's Infrastructure Plan Mean for America's Water Works?*,

INSIDE SOURCES (Feb. 15, 2018), https://www.insidesources.com/what-does-trumps-infrastructure-plan-mean-for-americas-water-works/ [https://perma.cc/4AB2-72DP].

<sup>57</sup> Maegan Vazquez, *Trump Signs bipartisan water infrastructure spending law*, CNN (Oct. 23, 2018), https://www.cnn.com/2018/10/23/politics/america-water-infrastructure-act-donald-trump-signing/index.html [https://perma.cc/8PPL-JZ96].

<sup>58</sup> CLEAN WATER FOR ALL, *supra* note 34, at 19.

<sup>59</sup> Vazquez, *supra* note 58.

sufficient funding for infrastructure work,<sup>60</sup> the administration only wished to accelerate this trend.<sup>61</sup> Of the \$200 billion of direct federal spending, half would have been spent through the “infrastructure incentives program.”<sup>62</sup> In this program, the administration decided to fund projects that fit specific criteria.<sup>63</sup> The most important factor that established whether a project would be funded is “how the applicant will secure and commit new, non-Federal revenue.”<sup>64</sup> This factor accounted for 70 percent of a funding determination; thus the project applicants who were able to bring larger amounts of money to the table were much more likely to receive funding.<sup>65</sup> Consequently, it was unlikely that the administration would select an impactful project if it was unable to secure non-Federal revenue. Ideally, rather than focusing on the applicant’s ability to secure funding, the administration should focus on the project’s overall impact on the surrounding community.<sup>66</sup>

In addition to the problematic nature of the Trump administration’s plan as it relates to funding, the scheme also failed to provide meaningful protections for the country’s water infrastructure systems.<sup>67</sup> The plan did not include any money for the Clean Water and Drinking Water State Revolving Funds, which are programs that contain tested and reliable initiatives that fund water infrastructure projects.<sup>68</sup> This failure to allocate appropriate funds exacerbated the degradation of the United States water infrastructure system.<sup>69</sup> Furthermore, the administration’s plan weakened environmental law in order to complete infrastructure projects at a faster rate and it cut programs that supported rural water infrastructure.<sup>70</sup> The proposed changes in the current clean water protection laws will increase pollution by restricting the public’s ability to hold responsible individuals accountable for infrastructure

---

<sup>60</sup> Becky Hammer, *Trump’s Infrastructure Plan Underinvests in Water*, NAT. RES. DEFENSE COUNCIL (Feb. 14, 2018), <https://www.nrdc.org/experts/becky-hammer/trumps-infrastructure-plan-underinvests-water> [<https://perma.cc/V9GC-H6HR>].

<sup>61</sup> *Id.*

<sup>62</sup> CLEAN WATER FOR ALL, *supra* note 34, at 20.

<sup>63</sup> *Id.*

<sup>64</sup> *Id.*

<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

<sup>68</sup> CLEAN WATER FOR ALL, *supra* note 34, at 20.

<sup>69</sup> *See id.*

<sup>70</sup> Hammer, *supra* note 60.



development.<sup>71</sup> Every negative consequence of this plan had a direct and amplified impact on low-income communities and communities of color across the United States.

A few months after the release of the Trump administration's infrastructure plan, President Trump signed off on the America's Water Infrastructure Act.<sup>72</sup> This bipartisan act is a comprehensive law that seeks to protect and assist people in both urban and rural communities.<sup>73</sup> Among other things, the Act is aimed at addressing water contamination and authorizing water infrastructure projects.<sup>74</sup> America's Water Infrastructure Act has the potential to encourage more investment in drinking water infrastructure, make minor modifications to the current drinking water system, authorize intermediate policies to address lead contamination in tap water, and make a few restrictions to help small water systems.<sup>75</sup> Although this Act appears to be a positive step in the right direction,<sup>76</sup> some clean water activists argue that it will not create any meaningful change.<sup>77</sup> Those sharing this viewpoint assert that the Act simply reiterates the status quo, is too broad in scope, and only aims to make minor adjustments to certain acts.<sup>78</sup> Regardless of whether one is a proponent of this perspective, it is clear that more action must be taken to properly support the United States water infrastructure system.

---

<sup>71</sup> CLEAN WATER FOR ALL, *supra* note 34, at 21.

<sup>72</sup> John Barrasso & Tom Carper, *Water Infrastructure Act is a bipartisan win for all Americans, from farms to cities*,

USA TODAY (Oct. 23, 2018), <https://www.usatoday.com/story/opinion/2018/10/23/americas-water-infrastructure-act-protects-families-bipartisan-flint-flood-column/1669902002/> [<https://perma.cc/56QQ-NQFL>].

<sup>73</sup> *See id.*

<sup>74</sup> *Id.*; Vazquez, *supra* note 57; Barrasso & Carper, *supra* note 72.

<sup>75</sup> Erik D. Olson & Mae Wu, *New Water Infrastructure Bill: A Positive Step*, NAT. RES. DEFENSE COUNCIL (Oct. 10, 2018), <https://www.nrdc.org/experts/mae-wu/new-water-infrastructure-bill-positive-step> [<https://perma.cc/8NV9-8Y9H>].

<sup>76</sup> *Id.*

<sup>77</sup> Analies Dyjak, *America's Water Infrastructure Act of 2018*, HYDROVIV (June 11, 2019), <https://www.hydroviv.com/blogs/water-smarts/americas-water-infrastructure-act-of-2018> [<https://perma.cc/27PT-Q2UZ>].

<sup>78</sup> *Id.*

## II. INCREASING DIRECT FEDERAL SPENDING

*A. The Need to Increase Federal Spending*

Although the severity of the rotting United States water infrastructure system is increasing, the federal government is continuing to reduce its spending.<sup>79</sup> The federal government is currently using subsidized infrastructure loans as its primary source of investment.<sup>80</sup> The use of loans places a heavier burden on state and local governments.<sup>81</sup> Because many of these state and local communities “have already stretched their infrastructure spending to the limit,” they are unable to adequately fund the necessary improvements to their water infrastructure systems.<sup>82</sup> As the federal government reduces its spending on water infrastructure, state and local governments are forced to take on additional costs.<sup>83</sup> By 2014, state and local governments accounted for ninety-six percent of all public spending on water and wastewater utilities.<sup>84</sup> This forced increase in state and local government spending has led to water affordability crises across the nation.<sup>85</sup> For the last fifteen years, the cost of clean water services has increased faster than the rate of inflation, and is anticipated to continue as infrastructure ages.<sup>86</sup> As this trend continues, more American households will lose vital services because of increasing costs.<sup>87</sup> The federal

---

<sup>79</sup> CLEAN WATER FOR ALL, *supra* note 34, at 4.

<sup>80</sup> Jason Amirhadji, Rachel S. Taylor, & Katherine Nylund, *Tapped Out: Threats to the Human Right to Water in the Urban United States*, 7 HRI PAPERS & REP. 1, 21 GEORGETOWN L. HUMAN RIGHTS INST., [https://scholarship.law.georgetown.edu/hri\\_papers/7/](https://scholarship.law.georgetown.edu/hri_papers/7/) (last viewed Nov. 7, 2019) [<https://perma.cc/2G8M-UA28>].

<sup>81</sup> CLEAN WATER FOR ALL, *supra* note 34, at 6.

<sup>82</sup> *Id.* at 19.

<sup>83</sup> Shadi Eskaf, *Four Trends in Government Spending on Water and Wastewater Utilities Since 1956*, ENVTL. FIN. BLOG (Sept. 9, 2015), <http://efc.web.unc.edu/2015/09/09/four-trends-government-spending-water/> [<https://perma.cc/WM7V-ZYKZ>].

<sup>84</sup> *Id.*

<sup>85</sup> *The Cost of Doing Nothing: Why Investing in our Nation's Infrastructure Cannot Wait: Hearing Before the H. Subcomm. on Coast Guard and Maritime Transp.*, 116th Cong. 1, 8 (Feb. 7, 2019) (statement of Angela Lee, Dir. of Charlotte Water), <https://docs.house.gov/meetings/PW/PW00/20190207/108831/HHRG-116-PW00-Wstate-LeeA-20190207.pdf> [<https://perma.cc/W7CD-MPWM>].

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

government must increase its funding to protect the quality of life of its citizens.

Although the Trump administration's infrastructure plan created a glimmer of hope for the nation's water infrastructure, the plan's federal investments "would not fund any construction or repairs of water or wastewater facilities unless states, local governments, or private companies contributed the remaining 80 percent."<sup>88</sup> Federal grants are critical and necessary for the repair of this system. Given the federal government's potential to provide greater financial support, and the state and local governments' contribution of over "24 times as much as the federal government," it is "unreasonable to ask [state and local governments] to contribute even more."<sup>89</sup> It is essential for the federal government to invest substantially more than the amount currently estimated for water infrastructure funding through federal grants. The funding and repair of the United States water infrastructure system should be a national priority due to the major effects and implications the aging system has on our society.

Under the 1996 Safe Water Drinking Water Act Amendments, the EPA is required to conduct assessments on the country's water infrastructure systems every four years.<sup>90</sup> In 2018, its evaluation found that over the next twenty years, roughly \$473 billion is needed to improve drinking water infrastructure.<sup>91</sup> The estimated funds are primarily needed in four areas.<sup>92</sup> Approximately \$312.6 billion is needed to replace or refurbish aging and deteriorating pipelines; \$83 billion to construct, expand, or rehabilitate the systems to reduce contamination; \$47.6 billion to construct, rehabilitate, or cover water storage reservoirs; and \$21.8 billion to construct or rehabilitate intake structures, wells and spring collectors.<sup>93</sup> The estimated funding is not guaranteed to vastly improve our drinking water infrastructure systems, but would simply

---

<sup>88</sup> CLEAN WATER FOR ALL, *supra* note 34, at 19.

<sup>89</sup> *Id.*

<sup>90</sup> EPA: \$473 billion needed for drinking water, WATER FIN. & MGMT., (Apr. 9, 2018), <https://waterfm.com/epa-473-billion-needed-drinking-water/> [<https://perma.cc/S5QJ-BYXM5MJC-BVU9>].

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

maintain current levels of service.<sup>94</sup> Although the federal government and other federal agencies currently offer some financial support to local and state governments, larger investments are needed.

Over the years, state and local governments have struggled to raise sufficient funds to maintain, let alone enhance, their drinking water infrastructure.<sup>95</sup> Consequently, state and local governments have been forced to increase local water utility rates on its citizens.<sup>96</sup> Despite the drop in residential water usage across the past three decades, rates have continued to rise.<sup>97</sup> This increase in utility rates has led to a water affordability crisis in cities across the nation.<sup>98</sup> According to the American Water Works Association, failure to properly invest in the nation's aging infrastructure will "only result in greater expenses tomorrow and pass a greater burden to our children."<sup>99</sup> The distribution of federal loans is an ineffective solution to restoring the drinking water infrastructure system. The best way to accomplish this task is through the use of federal grants. Federal grants will alleviate the financial burden on state and local governments and provide municipalities with sufficient funding to begin the revamp and replacement of the infrastructure. Many of the state and local governments receiving the least amount of funding are in fact the ones that need the most investment.<sup>100</sup> When these local municipalities are constrained by limited local funding sources, they are forced to increase customer utility rates.<sup>101</sup>

Providing federal grants not only alleviates financial burdens of local municipalities and its residents, it is also efficient. Federal grants would allow state and local governments

---

<sup>94</sup> *Water Infrastructure Investment & Financing*, ASS'N of METRO. Water Agencies, <https://www.amwa.net/water-infrastructure-investment-financing> (last viewed Jan. 15, 2020) [<https://perma.cc/3CNK-FCKA>].

<sup>95</sup> See CLEAN WATER FOR ALL, *supra* note 34, at 7.

<sup>96</sup> AM. WATER WORKS ASS'N, BURIED NO LONGER: CONFRONTING AMERICA'S WATER INFRASTRUCTURE CHALLENGE 1, 15 <http://www.climateneeds.umd.edu/reports/American-Water-Works.pdf> (last viewed Jan. 15, 2020) [<https://perma.cc/4V3U-7U45>].

<sup>97</sup> Murthy, *supra* note 6, at 166 (citing Kevin McCoy, *Nation's Water Costs Rushing Higher*, USA TODAY, Sept. 28, 2012, at A1).

<sup>98</sup> CLEAN WATER FOR ALL, *supra* note 34, at 7.

<sup>99</sup> AM. Water Works ASS'N, *supra* note 96, at 3.

<sup>100</sup> *Paying for Clean Water*, NAT'L ASS'N OF CLEAN WATER AGENCIES <https://www.nacwa.org/issues-in-depth/paying-for-clean-water> (last viewed Dec. 1, 2019) [<https://perma.cc/YVV2-9G9Q>].

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

to spend more time creating strategies to maintain and rebuild the water infrastructure, rather than scrambling to collect funding. The federal government is sometimes reluctant to provide funding in the form of federal grants due to the lack of economic return the investment may provide. However, investing in water infrastructure provides the nation's economy with a large economic return and protects public health.<sup>102</sup>

The Drinking Water State Revolving Fund (“DWSRF”), the Housing and Urban Development (“HUD”) Community Development Block Grants, and the United States Department of Agriculture (“USDA”) Rural Development Water and Environmental Program are the three main sources of federal funding for drinking water.<sup>103</sup> Additionally, the Water Infrastructure Finance and Innovation Act (“WIFIA”) Program, the Water Infrastructure Improvements for the Nation (“WIIN”) Act Grants, and the Public Water System Supervision (“PWSS”) Grant Program are other popular sources of federal funding.<sup>104</sup> Although all of these programs provide funding for the nation's drinking water infrastructure systems, only the HUD Community Development Block Grants, the WIIN Grants, and the PWSS Grant Program provide actual federal grant money to the states and local governments.<sup>105</sup> The current use of subsidized loan programs is no longer an effective means for renovating our aging systems.<sup>106</sup> The federal government must step up and provide state and local governments with federal grant money that is specifically directed toward improving our drinking water infrastructure system. Approximately forty years ago, the federal government contributed sixty-three percent of total capital spending on water infrastructure.<sup>107</sup> Contrarily, the federal government now funds only nine percent of our water

---

<sup>102</sup> CLEAN WATER FOR ALL, *supra* note 34, at 15.

<sup>103</sup> *Effective Funding Frameworks for Water Infrastructure*, EPA, <https://www.epa.gov/waterfinancecenter/effective-funding-frameworks-water-infrastructurepdf> (last viewed Jan. 15, 2020) [<https://perma.cc/X42A-7UV5>].

<sup>104</sup> *Drinking Water Grants*, EPA, <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-grants> (last viewed Jan. 15, 2020) [<https://perma.cc/LKZ6-UDFY>].

<sup>105</sup> *America's Aging Water Infrastructure*, BIPARTISAN POL'Y CTR., 1, 3 (Sep. 2016), <https://bipartisanpolicy.org/wp-content/uploads/2019/03/BPC-Aging-Water-Infrastructure.pdf> [<https://perma.cc/MVR9-WNUJ>].

<sup>106</sup> *See id.* at 4.

<sup>107</sup> U.S. WATER ALL., ONE WATER FOR AMERICA POLICY FRAMEWORK 1, 3 (2018) [http://uswateralliance.org/sites/uswateralliance.org/files/publications/uswa\\_listen\\_big3\\_FINAL\\_RGB.pdf](http://uswateralliance.org/sites/uswateralliance.org/files/publications/uswa_listen_big3_FINAL_RGB.pdf) [<https://perma.cc/G8XZ-DL6E>].

infrastructure spending.<sup>108</sup> Federal grants directed toward drinking water infrastructure systems will greatly reduce the financial burden placed on state and local governments, while also providing these municipalities with sufficient funding to truly renovate the systems throughout the nation. This federal investment is necessary, but it “should not come at the expense of reduction in federal funding for other environmental investments or regulatory programs.”<sup>109</sup> Federal budget and funding decisions must carefully reflect all economic, social, environmental, and cultural value each program offers to society.<sup>110</sup> Although many attempt to put environmental concerns on the back burner, protecting our environment safeguards humanity and is an essential investment in our future.

### *B. The Reallocation of Federal Spending*

Opponents may argue that the funding is simply unavailable, but this assertion is not valid. If the U.S. government shifted its priorities and adjusted the federal budget accordingly, more funding could become available for different government programs. In 2018, the United States directed more than half of its discretionary spending to defense related departments.<sup>111</sup> The United States allocates more money to military spending than the next 10 countries combined.<sup>112</sup> While defense spending is necessary and covers many important departments, reform within the United States defense establishment, specifically cuts to certain programs within that establishment, is a potential way to support an increase in federal funding directed toward deteriorating drinking water systems.<sup>113</sup> If the federal government created a spending cap for the Pentagon to prioritize and allocate funds, it would lock

---

<sup>108</sup> *Id.*

<sup>109</sup> CLEAN WATER FOR ALL, *supra* note 34, at 15.

<sup>110</sup> *Why Conservation Funding*, THE WILDERNESS SOC'Y, <https://www.wilderness.org/articles/article/why-conservation-funding> (last viewed Jan. 17, 2020) [<https://perma.cc/2TYY-EEAW>].

<sup>111</sup> *Breaking down the U.S. Federal Budget for the Fiscal Year 2019*, UP TO US (Nov. 12, 2019), <https://www.itsuptous.org/blog/breaking-down-us-federal-budget-fiscal-year-2019> [<https://perma.cc/AQ55-3XGG>].

<sup>112</sup> *Id.*

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

Congress in and force them to sort out the details.<sup>114</sup> An in depth analysis of the current spending patterns and a prioritization of programs within the defense category of the discretionary spending budget will allow Congress to make the appropriate cuts. This kind of strategy would satisfactorily eliminate wasteful and unnecessary military spending. A 2018 report released by the Institute for Spending Reform demonstrated that limiting unnecessary spending would be beneficial to national security and would allow the military to run more efficiently.<sup>115</sup> Budgetary restraints require strategic planning, prioritization among goals, and encourage interservice competition.<sup>116</sup> It has been reported that the Pentagon's military budget is far larger than required to defend against actual and potential threats to national security.<sup>117</sup> However, the United States's military spending is not so high due to the threats it must defend against, but instead preserves the ambitions of a former global superpower.<sup>118</sup>

The United States currently embraces a strategy of primacy, "which demands that the United States military be actively involved in all areas of the world simultaneously."<sup>119</sup> Even if the United States adopted only certain elements of the Grand Strategy of Restraint, substantial cost reductions in military spending would occur.<sup>120</sup> The Grand Strategy of Restraint "focuses U.S. military power on a narrow set of objectives, relies on 'command of the commons' to ensure global access, avoids entanglement in foreign conflicts, and actively encourages allies to look to their own defense."<sup>121</sup> Restraining military spending would not only save the country money that

---

<sup>114</sup> Benjamin Friedman, *A Plan to Cut Military Spending*, DOWNSIZING THE FED. GOV'T (Aug. 1, 2017), <https://www.downsizinggovernment.org/defense/plan-cut-military-spending> [<https://perma.cc/4YV5-W9UA>].

<sup>115</sup> Andrew Wilford, *Cut defense spending without harming national security*, WASH. EXAMINER (Mar. 1, 2018), <https://www.washingtonexaminer.com/cut-defense-spending-without-harming-national-security> [<https://perma.cc/VV9H-QV5G>].

<sup>116</sup> Friedman, *supra* note 114.

<sup>117</sup> *Id.*

<sup>118</sup> *Id.*

<sup>119</sup> *The military spending debate*, CHARLES KOCH INST., <https://charleskochinstitute.org/stories/the-military-spending-debate/> (last viewed Jan. 20, 2019) [<https://perma.cc/9H2V-P5XP>].

<sup>120</sup> *Id.*

<sup>121</sup> Joseph Baker, Book Note, 5 PRISM NAT'L DEF. UNIV. J. COMPLEX OPERATIONS 191 (2014) (reviewing BARRY POSEN, *RESTRAINT: A NEW FOUNDATION FOR U.S. GRAND STRATEGY* (2015)), [https://cco.ndu.edu/Portals/96/Documents/prism/prism\\_5-3/Book\\_Review\\_Restraint.pdf?ver=bOKW1Q0fSxoK17kD9rO20A%3d%3d](https://cco.ndu.edu/Portals/96/Documents/prism/prism_5-3/Book_Review_Restraint.pdf?ver=bOKW1Q0fSxoK17kD9rO20A%3d%3d) (last viewed June 7, 2020) [<https://perma.cc/6LTR-LET8>].

could be redirected to other departments, it could also keep United States forces out of unnecessary trouble.<sup>122</sup> Although the process of eliminating wasteful spending may take a lot of work, the failing drinking water infrastructure systems are vital to our public, economic, and environmental health, and can no longer be ignored.<sup>123</sup> Reductions in defense spending are often hotly contested. There is a delicate balance that must be maintained to ensure protection of Americans, while ensuring a proper allocation of funds that will not leave a larger debt for the future generations. If we do not act now and make the appropriate cuts, our country will experience grave financial and health consequences that could have been avoided.<sup>124</sup> Prioritized and gradual cuts to military spending are a realistic way to reallocate federal funding toward revitalizing the aging water infrastructure.

### *C. Public Health and Economic Benefits of Increased Federal Spending*

The restoration of the United States drinking water infrastructure systems is an issue which is often overlooked because it is an infrastructure system that is underground and never seen. The Association of Metropolitan Water Agencies states that, clean, consistent, and safe water service is essential to both protecting public health and ensuring economic growth.<sup>125</sup> When households have inadequate access to a healthy water supply, society at large is indirectly affected.<sup>126</sup> Families, businesses, schools, and hospitals need adequate water services to live and operate successfully.<sup>127</sup> Larger federal investments in the water infrastructure systems will provide major significant public health and economic benefits to the population.

A clean water supply protects public health by controlling and eliminating waterborne diseases and by reducing illnesses

---

<sup>122</sup> Friedman, *supra* note 114.

<sup>123</sup> See CLEAN WATER FOR ALL, *supra* note 34, at 11.

<sup>124</sup> See AM. WATER WORKS ASS'N, *supra* note 94, at 3.

<sup>125</sup> See NAT'L ASS'N OF METRO. WATER AGENCIES, *supra* note 100.

<sup>126</sup> See AM. WATER WORKS ASS'N, *supra* note 94, at 13.

<sup>127</sup> *The Cost of Doing Nothing: Why Investigating in our Nation's Infrastructure Cannot Wait: Hearing Before the H. Comm. on Transp. & Infrastructure*, *supra* note 85.



produced by water contamination.<sup>128</sup> The consumption of contaminated water can cause reproductive health issues, digestive disorders, increased rates of prostate cancer, behavioral and learning disabilities, adverse birth outcomes, and damage to the central and peripheral nervous system.<sup>129</sup> Some of the toxins that are responsible for producing waterborne diseases “have also been identified as a potential factor causing neurodegenerative diseases.”<sup>130</sup> Although many individuals believe that boiling tap water removes contaminants, this is not true.<sup>131</sup> When water with algal toxins receive ineffective treatment, the toxins released by the algal cannot be destroyed by boiling water but can, in fact, increase the amount of toxins in the water.<sup>132</sup> The Center for Disease Control and Prevention (“CDC”) reported that about half a million children in the United States between the ages of one and five years old, are poisoned and have “blood lead levels above the CDC reference level.”<sup>133</sup> There is also a presence of environmental lead poisoning in adults, which puts these individuals at a higher risk for disability and death from cardiovascular disease and ischemic heart disease.<sup>134</sup> Along with the onset of many illnesses, lead-poisoned water consumption also leads to adverse outcomes in cognitive developments.<sup>135</sup> These harmful cognitive developments have been linked to a reduction in lifetime earnings.<sup>136</sup>

Federal investments in infrastructure will lead to a reduction in waterborne and contamination based illnesses, which translate to significant healthcare savings.<sup>137</sup> A study conducted by the American Concrete Pressure Pipe Association (“ACPPA”) demonstrated that an investment of one dollar in water infrastructure would produce over \$100 in public health

---

<sup>128</sup> See *Report: Investment in America’s Drinking Water Infrastructure*, AM. CONCRETE PRESSURE PIPE ASS’N, <https://acppa.org/water-infrastructure-report/> (last viewed Jan. 16, 2020) [<https://perma.cc/85ZS-BEYV>].

<sup>129</sup> CLEAN WATER FOR ALL, *supra* note 34, at 9-10.

<sup>130</sup> CLEAN WATER FOR ALL, *supra* note 34, at 14.

<sup>131</sup> *Id.* at 12-14.

<sup>132</sup> *Id.* at 14.

<sup>133</sup> *Id.* at 9.

<sup>134</sup> *Id.*

<sup>135</sup> *Benefits of Water Infrastructure Investment*, CONCRETE CONSTR., (June 22, 2018), [https://www.concreteconstruction.net/projects/infrastructure/benefits-of-water-infrastructure-investment\\_o](https://www.concreteconstruction.net/projects/infrastructure/benefits-of-water-infrastructure-investment_o) [<https://perma.cc/UXJ6-XFJXF7JM-QVAC>].

<sup>136</sup> *Id.*

<sup>137</sup> CLEAN WATER FOR ALL, *supra* note 34, at 15.

benefits.<sup>138</sup> An investment with such a large return makes the idea of direct federal spending to maintain and repair our water infrastructure systems even more appealing.

Water infrastructure investments are also excellent for our nation's economy.<sup>139</sup> The same study conducted by the ACPAA also reported that a one dollar investment in these infrastructure systems could produce as much as \$2.20 in economic activity.<sup>140</sup> The maintenance and repair of these systems not only protects our residents; it strengthens our economy.<sup>141</sup> An investment of \$1 billion per year in water infrastructure, for the next ten years, would generate and sustain approximately 1.3 million jobs and would lead to a total of \$2.22 trillion in additional economic activity.<sup>142</sup> This estimated financial return is also reinforced by the outcome of past investments in the water infrastructure.<sup>143</sup> The federal government provided meaningful investments over the previous past century that led to a boost in economic growth, an improvement to public health, and protected the nation's waterways.<sup>144</sup> A similar form of federal investment is needed today. Failing to adequately invest in the water infrastructure systems also causes disruptions and inconveniences to many employees and businesses.<sup>145</sup> At the national level, a one-day disruption in water services would result in a \$22.5 billion loss in Gross Domestic Product ("GDP").<sup>146</sup> The United States and its residents will truly benefit from larger investments in water infrastructure.

---

<sup>138</sup> *Benefits of Water Infrastructure Investment*, *supra* note 135.

<sup>139</sup> *See* Hammer, *supra* note 60.

<sup>140</sup> *Benefits of Water Infrastructure Investment*, *supra* note 135.

<sup>141</sup> VALUE OF WATER CAMPAIGN, THE ECONOMIC BENEFITS OF INVESTING IN WATER INFRASTRUCTURE 1, 1, [http://thevalueofwater.org/sites/default/files/Economic%20Impact%20of%20Investing%20in%20Water%20Infrastructure\\_VOW\\_FINAL\\_pages.pdf](http://thevalueofwater.org/sites/default/files/Economic%20Impact%20of%20Investing%20in%20Water%20Infrastructure_VOW_FINAL_pages.pdf) (last viewed Jan. 16, 2020) [<https://perma.cc/TF26-49RU>].

<sup>142</sup> *Benefits of Water Infrastructure Investment*, *supra* note 135; *Id.* at 1, 7.

<sup>143</sup> *See id.*; VALUE OF WATER CAMPAIGN, *supra* note 141, at 7 ("The federal government was instrumental in the development of water infrastructure over the previous century.").

<sup>144</sup> *See id.*

<sup>145</sup> *Id.*

<sup>146</sup> VALUE OF WATER CAMPAIGN, THE ECONOMIC BENEFITS OF INVESTING IN WATER INFRASTRUCTURE – FACT SHEET, [http://thevalueofwater.org/sites/default/files/Fact%20Sheet\\_Economic%20Impact%20of%20Investing%20in%20Water%20Infrastructure%20FINAL.pdf](http://thevalueofwater.org/sites/default/files/Fact%20Sheet_Economic%20Impact%20of%20Investing%20in%20Water%20Infrastructure%20FINAL.pdf) (last viewed Jan. 16, 2020) [<https://perma.cc/7Q2K-QHYB>].

## III. ENSURING EQUITABLE DISTRIBUTION OF FUNDS

The majority of the United States water infrastructure systems need to be renovated. Once the federal government commits to increasing its investment in the nation's drinking water systems, the funds need to be distributed equitably. In 2018, "more than 27 million Americans [were] served by water systems violating health-based standards established in the Safe Drinking Water Act."<sup>147</sup> While America's outdated water infrastructure system affects many communities, the majority of affected Americans are those that live in low-income communities and communities of color.<sup>148</sup>

Over the years, the United States government has demonstrated a pattern of underinvestment in the communities that need the most funding.<sup>149</sup> Underinvestment in these communities can be attributed to decades of policy decisions that were rooted in racial bias, along with continuing prejudicial attitudes.<sup>150</sup> The federal government has also historically prioritized the use of water for economic purposes.<sup>151</sup> Because it appears that the revitalization of low-income communities will not produce a large economic return, there has never been a major focus in investing in these neighborhoods.<sup>152</sup> Although economic productivity is a major benefit of investing in our nation's water infrastructure, it should not be the government's sole motivation for investment.

Low-income communities and communities of color are facing major infrastructure needs but lack the financial resources and political power to make a significant change.<sup>153</sup> Studies demonstrate that "[a]s global climate patterns continue to shift, no resource will be affected more profoundly than water...[and] because low-income communities and communities of color are more frequently located in areas vulnerable to these impacts,

---

<sup>147</sup> CLEAN WATER FOR ALL, *supra* note 34, at 2.

<sup>148</sup> *Id.* at 8.

<sup>149</sup> CLEAN WATER FOR ALL, *supra* note 34, at 3.

<sup>150</sup> Chye-Ching Huang, *Infrastructure Investments Should Focus on Low-Income Communities*, CTR. ON BUDGET & POLY PRIORITIES, (Apr. 4, 2019), <https://www.cbpp.org/blog/infrastructure-investments-should-focus-on-low-income-communities> [<https://perma.cc/XK4C-LV56>].

<sup>151</sup> *Id.*

<sup>152</sup> *See id.*

<sup>153</sup> CLEAN WATER FOR ALL, *supra* note 34, at 4-6.

climate change will hit them especially hard.”<sup>154</sup> The deteriorating water infrastructure and the state and local governments’ inability to adequately invest are only making the current climate insecurity worse.<sup>155</sup> The individuals most exposed to hazardous effects of climate change have a diminutive ability to protect themselves. They need protection and must become a top priority in the allocation of federal funds.

Although access to clean and safe water is not a constitutionally recognized right, the necessity of clean water has gained a special status in our society.<sup>156</sup> Water is essential to the advancement of our society, but most importantly it is essential to human life. Clean water prevents disease, is essential to maintain good health, is needed for agriculture and food production, and is the number one source of nutrition.<sup>157</sup> Thus, the health and quality of life of American citizens should be a major concern and priority of the federal government. Our nation’s economic prosperity is important, but the health of our nation and its residents should take precedence.

There are currently a handful of grants and programs that prioritize low-income communities, but they are substantially underfunded.<sup>158</sup> The Drinking Water State Revolving Fund Loan Program,<sup>159</sup> the Community Development Block Grants,<sup>160</sup> the Economic Adjustment Assistance,<sup>161</sup> the Rural Utilities Service – Water and Waste Disposal Programs,<sup>162</sup> and the Public Works and Economic Development Facilities Program<sup>163</sup> are five programs directed by different federal agencies, that promote the restoration and development of low to moderate-income

<sup>154</sup> CLEAN WATER FOR ALL, *supra* note 34, at 5–6.

<sup>155</sup> See Adie Tomer, Joseph Kane & Lara Fishbane, *To fix our infrastructure, Washington needs to start from scratch*, BROOKINGS (Dec. 4, 2019), <https://www.brookings.edu/research/to-fix-our-infrastructure-washington-needs-to-start-from-scratch/> [https://perma.cc/A4LQ-WT6D].

<sup>156</sup> Murthy, *supra* note 6, at 161.

<sup>157</sup> *5 Reasons Why Everyone Needs Clean Drinking Water*, AID & INT’L DEV. FORUM (Oct. 24, 2017), <http://www.aidforum.org/topics/health-and-wash/5-reasons-why-everyone-needs-clean-drinking-water/> [https://perma.cc/9MFU-UPPY].

<sup>158</sup> Huang, *supra* note 150.

<sup>159</sup> Jonathan L. Ramseur et al., RL30487, *Federally Supported Water Supply and Wastewater Treatment Programs*, CONG. RSRCH. SERV., 1, 25 (May 3, 2019), <https://fas.org/sgp/crs/misc/RL30478.pdf> [https://perma.cc/G3FV-AWE9].

<sup>160</sup> *Id.* at 30.

<sup>161</sup> *Id.* at 41.

<sup>162</sup> *Id.* at 15.

<sup>163</sup> *Id.* at 40.

communities.<sup>164</sup> Of the five programs, all but the Drinking Water State Revolving Fund Loan Program use grants to support the communities that need the most development.<sup>165</sup> Each program has specific eligibility requirements that allow for an equitable distribution of funds.<sup>166</sup> Although each of these programs has the potential to make significant change in these communities, the programs lack sufficient funding.<sup>167</sup> Substantial federal funding is needed in every area of the country, but is especially necessary in low-income communities. The federal government must increase their total spending for water infrastructure, with low-income communities and communities of color receiving top priority.

The most effective way to distribute federal funding equitably, besides investing more into programs similar to those stated above, is to create a federal mandate that focuses on providing funds to the communities that need it most. The mandate would require states to rank the areas with the worst water infrastructure systems in order to equitably distribute the funds. The increased federal spending would ensure that all communities had requisite resources to repair and maintain their aging water systems. The proposed federal mandate would simply be a mechanism that holds states accountable. This accountability is essential, given the government's history of underinvestment in these communities.<sup>168</sup> To verify that the grants are being used properly, each state will have to produce an annual reports detailing state and local goals, along with additional information with respect to the progression of each project. Additionally, the states will be required to fulfill a bi-annual financial reporting requirement. These reports will allow the EPA to closely track the maintenance and repair of each water system, along with the effectiveness of the funding.

America's Water Infrastructure Act of 2018 added a few provisions to The Safe Water Drinking Act that, on the surface, appears to aid those in low-income communities.<sup>169</sup> These

---

<sup>164</sup> See Ramseur, *supra* note 159, at 15–40.

<sup>165</sup> *Id.*

<sup>166</sup> See *id.* at 32, 18.

<sup>167</sup> *Id.* at 1.

<sup>168</sup> Huang, *supra* note 150.

<sup>169</sup> Elena H. Humphreys, R45656, *America's Water Infrastructure Act of 2018 (P.L. 115-270): Drinking Water Provisions* 11, CONG. RSRCH SERV., (Mar. 28, 2019), <https://crsreports.congress.gov/product/pdf/R/R45656> [https://perma.cc/ALS3-7CFUVD3K-P7M7].

amendments authorize the EPA and other federal agencies to make grants to help assist underserved communities.<sup>170</sup> Although the authorization of this grant program sounds beneficial, ultimately, the EPA does not have sufficient funds to provide meaningful grants. In 2019, the EPA received roughly \$8.8 billion<sup>171</sup> of the \$1.4 trillion available within the discretionary budget.<sup>172</sup> The EPA must stretch the \$8.8 billion to cover all programs that protect human health and the environment.<sup>173</sup> If there is barely enough money to support the current programs, there is certainly not enough to fund these newly authorized grant programs.

From an international perspective, it appears that the United States is a staunch advocate of equality, freedom of life, and the fight for clean water.<sup>174</sup> Unfortunately, the reality is that many residents within the country's borders only have access to water that violates its own federal standards.<sup>175</sup> The federal government must practice what it preaches and must lead by example. Some of the federal government's most important jobs include protecting its citizens and ensuring all citizens are treated equally. When it comes to funding infrastructure improvements for low-income communities and communities of color, the federal government has the potential to play a critical role.<sup>176</sup> Prioritizing underinvested areas can finally allow communities to have access to safe living conditions and an access to economic opportunities.<sup>177</sup> If the federal government does not adequately prioritize and invest in low-income communities, America will be a place where only the wealthy get safe and clean water, while the "less well-to-do get second class

---

<sup>170</sup> *Id.* at 13.

<sup>171</sup> Clare Foran, *House Democrats Reject Trump's Proposed 31% EPA Budget Cut*, CNN POL. (May 14, 2019), <https://www.cnn.com/2019/05/14/politics/house-democrats-epa-budget-trump/index.html> [<https://perma.cc/S5HY-SAZS>].

<sup>172</sup> Kimberly Amadeo, *U.S. Federal Budget Breakdown*, THE BALANCE (Dec. 31, 2019), <https://www.thebalance.com/u-s-federal-budget-breakdown-3305789>. [<https://perma.cc/EPA9-5DQ5>] (last updated Oct. 29, 2020).

<sup>173</sup> *Our Mission and What We Do*, EPA, <https://www.epa.gov/aboutepa/our-mission-and-what-we-do> [<https://perma.cc/2SFK-JMZC>] (last viewed Jan. 16, 2020).

<sup>174</sup> *See generally* U.S. Agency for Int'l Dev., <https://usaid.gov> (last viewed Aug. 9, 2021) [<https://perma.cc/ZD85-MEMZ>].

<sup>175</sup> Sara Schwartz, *Raising the Bar for Federal Investments in Water Infrastructure*, VALUE OF WATER CAMPAIGN (May 15, 2018), <http://thevalueofwater.org/media/raising-bar-federal-investments-water-infrastructure> [<https://perma.cc/7Y7F-DVUX>].

<sup>176</sup> Huang, *supra* note 150.

<sup>177</sup> *Id.*

water systems that pose risks to their health and environment.”<sup>178</sup> This two-tiered system is utterly unacceptable for a nation founded on equality.

### CONCLUSION

More than one million miles of pipes that provide the residents of this nation drinking water are due for replacement.<sup>179</sup> This Note calls for the federal government to substantially and equitably invest in the nation’s drinking water infrastructure and proposed a feasible way in which to accomplish this task. An increase in federal spending ensures that our “water utilities can continue to reliably and cost-effectively support the public health, safety and economic viability of [all] our communities.”<sup>180</sup> If the federal government does not act now, “the harder the job will be when the day of reckoning comes.”<sup>181</sup>

---

<sup>178</sup> Hammer, *supra* note 60.

<sup>179</sup> AM. Water Works ASS’N, *supra* note 94, at 3.

<sup>180</sup> *Id.* at 14.

<sup>181</sup> *Id.* at 3.