

Infrastructural Exclusion and the Fight for the City: Power, Democracy, and the Case of America's Water Crisis

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INTRODUCTION

In 2013, government officials in Flint, Michigan, which had been placed under state-appointed emergency management following a long-standing budget crisis, imposed a variety of cost-cutting measures. One of these measures included switching the city's water supply temporarily to the Flint River. Another decision was made not to spend scarce dollars on treating the water with anti-corrosion agents. The result was a severe erosion of

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decades-old water pipes, poisoning the water supply with elevated lead levels, and causing one of the worst public health crises in decades.

The crisis in Flint is indicative of a national problem of declining access to clean and safe water resources.¹ But the water crisis also offers a window into the wider battles over economic, racial, environmental, and urban justice today. This paper uses our current debates about water equity as an example of a broader pattern of *infrastructural exclusion*—the way in which inequality and exclusion is produced through systems of public and private governance that operate to restrict access to foundational, infrastructural goods and services that make human flourishing and membership in the polity possible.

Concern about economic inequality has become widespread in recent years.² These anxieties have dovetailed with a revival of interest in the political economy of the city, highlighting in particular the ways in which economic and racial injustice are produced through the ways cities are structured by geography, urban planning, financial investment, and public policy.³ But as this paper—and the broader water crisis in America—suggest, inequality is not just about income. Nor is discrimination and exclusion about individualized cases of bias or mistreatment. Rather, both inequality and exclusion are often the products of deeper structural factors: the ways in which law and public policy systematically allocate well-being. The structural dimensions of racial and economic inequality have been long-standing themes in critical race studies, environmental justice, and sociological accounts of stratification.⁴ But focusing on foundational necessities and infrastructure like water highlights how the infrastructure and provision of basic goods is an especially critical front-line where systemic inequality is produced—and where it must be contested.

Water is a useful case study for infrastructural exclusion, and not just because of the vital importance of water to human life and communal well-being. The infrastructural nature of water and its provision has always been understood as a matter of public policy, politics, and morality. By exploring how infrastructure can produce exclusion—or inclusion—this paper aims to develop ideas that can extend to other kinds of infrastructure beyond the water crisis.⁵

Specifically, the paper makes three arguments. First, the paper argues that infrastructural exclusion arises out of a variety of strategies and systems

¹ See Section I.A, *infra*.

² See, e.g., THOMAS PIKETTY, *CAPITAL IN THE TWENTY-FIRST CENTURY* (2016).

³ See, e.g., RICHARD SCHRAGGER, *CITY POWER* (2016); DAVID HARVEY, *REBEL CITIES: FROM THE RIGHT TO THE CITY TO THE URBAN REVOLUTION* (2012).

⁴ See generally ANDREA FLYNN ET AL., *THE HIDDEN RULES OF RACE* (2017)

⁵ Several scholars including myself have turned to this idea of infrastructure as a broader concept to help analyze inequality and exclusion. For a recent example and accompanying citations to the larger literature, see Rahman, *Private Power: Public Values: Regulating Social Infrastructure in a Changing Economy*, *CARDOZO L. REV.*, forthcoming (2018) [hereinafter *Private Power: Public Values*].

beyond the immediate actions of the water utility or service provider itself (Part I). In particular, state institutions can produce exclusion through lax, captured, or overly exclusionary governance of infrastructure, for example failing to adequately regulate water quality or raising water fees too high. Localities can also produce exclusion through more subtle means: seceding from larger municipalities to restrict the “public” that is owed access to shared resources, or creating special districts and administrative regimes that might be more efficient in some ways, but also less accountable in others. Exclusion can also be produced through private actors, and through the relationship between public and private actors. Each of these forms of exclusion are at play in the water crisis, and arguably in most other kinds of infrastructure or public goods. This in turn suggests that assuring equitable access to core infrastructure requires a more dynamic look at the ecosystem of public and private actors that exercise varying degrees of power and control over infrastructure itself.

Second, the paper suggests that the central problem around infrastructure is not just one of access to the good; more fundamentally, it is a problem of *power* (Part II). By virtue of the critical importance of water (or any other infrastructural good) to users, whoever controls the terms of access to or provision of the good exercises tremendous power over those users and makes them vulnerable to the will of the provider. Viewed through the lens of power, assuring access to infrastructure is as much a *governance* problem—of assuring adequate contestation and checks and balances of such infrastructural power—as it is a traditional policy question of budgets, funding levels, and mandates.

Third, having highlighted the hidden techniques of infrastructural exclusion in Part I and the conceptual approach of highlighting the problems of power and contestability in Part II, the paper then sketches some preliminary ideas for what an inclusive approach to governing infrastructure might look like (Part III). Understanding infrastructure in this moral and political sense suggests that assuring access and equity in context of infrastructure requires more than simply regulating prices and physical access. Rather, it requires diagnosing and reworking the systems of power and control which comprise the *governance regime* for the infrastructural good itself. Here too the water context is both central for its importance and illustrative of applications to other types of infrastructural, natural resource, or public good contexts.

The paper concludes by connecting these ideas of infrastructural exclusion and inclusion to the wider debates under way about urban inequality, the fight for the city, and the attempts by social movements today to address structural economic and racial inequalities in 21st-century American capitalism (Part IV). In short, this paper suggests that in order to succeed, these battles for economic and racial inclusion in the face of systemic inequalities must be focused on questions of infrastructure and the ways in which law and institutions produce subtle forms of inequality in access to basic needs.

I. INFRASTRUCTURAL EXCLUSION

A. *The Flint water crisis*

Like many economically-struggling cities, Flint, Michigan has faced a long-running problem of deindustrialization, economic decline, and budget shortfalls pushing the city to the edge of bankruptcy. In 2011, the state of Michigan appointed an emergency manager to take control of the city and its operations.⁶ Emergency managers serve for an indefinite amount of time and are granted broad powers to displace locally elected officials, privatize government services, sell public assets, and break, negotiate, or enter into agreements on behalf of the municipality.⁷

In April 2013, the emergency management leadership of Flint departed from its previous arrangements with the Detroit Water and Sewerage Department (DWSD), instead agreeing to source its water from a newly established regional water authority.⁸ In the interim, Flint leadership chose to draw water on a temporary basis from the Flint River. As a cost-saving measure, this water was not treated with anti-corrosion agents.⁹ As a result, the lead pipes that comprise Flint's aging water system began to erode, causing a spike in lead levels in the water.¹⁰ Lead exposure has severe long-term health consequences, including potentially severe cognitive impairment, most significantly for children and infants consuming the tainted water.¹¹

The emergency management was not the only source of failure contributing to the crisis. For months, the Michigan Department of Environmental Quality (DEQ) insisted the water was safe. But later scrutiny indicates that DEQ's methodology of lead testing tended to test homes that were more modern and less likely to have lead pipes, an unrepresentative sampling leading the agency to erroneously pronounce the water lead-free.¹²

⁶ An emergency manager was appointed to oversee Flint, Michigan in November 2011. Kristen Longley, *Emergency Manager Michael Brown Appointed to Lead Flint Through Second State Takeover*, MICH. LIVE (Nov. 29, 2011), http://www.mlive.com/news/flint/index.ssf/2011/11/emergency_manager_michael_brow.html [https://perma.cc/6T58-2S26].

⁷ See MICH. COMP. LAWS § 141.1549(3)(d) (2017); MICH. COMP. LAWS § 141.1552 (2017).

⁸ Merrit Kennedy, *Lead-Laced Water in Flint: A Step-By-Step Look at the Makings of a Crisis*, NPR (Apr. 20, 2016), <http://www.npr.org/sections/thetwo-way/2016/04/20/465545378/lead-laced-water-in-flint-a-step-by-step-look-at-the-makings-of-a-crisis> [https://perma.cc/N4JT-G8EY]; see also Nikhil Anand, *The Banality of Infrastructure*, SOC. SCI. RESEARCH COUNCIL (June 27, 2017), <http://items.ssrc.org/the-banality-of-infrastructure/> [https://perma.cc/E8GL-YJH2].

⁹ Kennedy, *supra* note 8; see also Anand, *supra* note 8.

¹⁰ Kennedy, *supra* note 8; see also Anand, *supra* note 8.

¹¹ See, e.g., Libby Nelson, *The Flint Water Crisis, Explained*, VOX (Feb. 15, 2016), <https://www.vox.com/2016/2/15/10991626/flint-water-crisis> [https://perma.cc/2RF3-LSYA]; Samantha Raphelson, *Flint Residents Confront Long-term Health Issues After Lead Exposure*, NPR (Oct. 31, 2017) <https://www.npr.org/2017/10/31/561155244/flint-residents-confront-long-term-health-issues-after-lead-exposure> [https://perma.cc/94D6-7YE7].

¹² Anand, *supra* note 8; see also Anna Maria Barry-Jester, *What Went Wrong in Flint*, FIVETHIRTYEIGHT (Jan. 26, 2016), <https://fivethirtyeight.com/features/what-went-wrong-in->

While the crisis in Flint is especially tragic, it is not singular. Lead poisoning through faulty water systems is a problem in other cities as well, from Detroit to Baltimore. The national water infrastructure as a whole faces an estimated \$1 trillion shortfall in repairs and needed upgrades over the next twenty years.¹³ Yet federal funding for infrastructure investments has declined more than 70 percent in real terms since 1977.¹⁴ The Trump administration recently proposed halting a federal loan program that in the past has facilitated municipalities' access to financing for such infrastructure upgrades.¹⁵

There is also a widespread water affordability crisis. Water costs are rising faster than income and inflation,¹⁶ and estimates forecast that by 2022 as many as 41 million American households will have to pay unaffordable water rates of more than 4 percent of area median income.¹⁷ This broader problem of water affordability itself triggers troubling collateral consequences for poor households. For many residents, unpaid water bills can lead to a risk of foreclosure. In May 2017, for example, Flint itself—even under a new city government primarily focused on the water crisis—put 8,000 residents on notice that their unpaid bills would soon be transferred to tax liens, beginning a process that could result in foreclosure for those residents by the spring of 2018.¹⁸ While Flint's City Council approved a one-year moratorium on water liens, the state-appointed Receivership Transition Advisory Board rejected it.¹⁹ The City of Detroit, which has faced a similar water quality and affordability crisis, has imposed a controversial water shut-off policy for delinquent households that ramped up during the city's bankruptcy. Unsurprisingly, as in other domains of city fines and foreclosure practices, these punitive consequences are disproportionately enforced against, and concentrated among, poorer communities of color within metro regions like Detroit or Baltimore.

flint-water-crisis-michigan/ [https://perma.cc/VY6U-GR6K] (describing the failures of DEQ's statistical sampling methodologies leading to a misleadingly normal-seeming lead finding).

¹³ Elizabeth Douglass, *Towns Sell Their Public Water Systems—and Come to Regret It*, WASH. POST (July 8, 2017), https://www.washingtonpost.com/national/health-science/towns-sell-their-public-water-systems-and-come-to-regret-it/2017/07/07/6ec5b8d6-4bc6-11e7-bc1b-fddb8359dee_story.html?utm_term=.17595a0198a3 [https://perma.cc/X6GD-8NSW].

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ Sharmila L. Murthy, *A New Constitutive Commitment to Water*, 36 B.C. J.L. & Soc. JUST. 159, 165–68 (2016).

¹⁷ Sarah Frostenson, *America Has a Water Crisis No One Is Talking About*, VOX (May 9, 2017), <https://www.vox.com/science-and-health/2017/5/9/15183330/america-water-crisis-affordability-millions> [https://perma.cc/D2CU-6GBD].

¹⁸ See Jacey Fortin, *In Flint, Overdue Bills for Unsafe Water Could Lead to Foreclosures*, N.Y. TIMES (May 4, 2017), https://www.nytimes.com/2017/05/04/us/flint-water-home-foreclosure.html?_r=0 [https://perma.cc/B59E-QBGC].

¹⁹ See Leonard Fleming, *Flint Mayor, State Clash Over Tax Liens*, DETROIT NEWS (June 27, 2017), <http://www.detroitnews.com/story/news/michigan/flint-water-crisis/2017/06/27/flint-tax-lien-mortatorium-rejected/103235524/> [https://perma.cc/8W5X-QBHY].

This escalation of prices and loss of access is exacerbated by the privatization and financialization of water systems.²⁰ This privatization trend is further complicated by a related shift toward the financialization of water systems, where cities turn to Wall Street to finance critical infrastructure repairs in exchange for guaranteed return for investors. This results in similar increases in prices for users. In some towns like Bayonne, New Jersey, a deal with private equity firm Kohlberg Kravis Roberts financed water upgrades but led to a 28 percent price hike, generating double-digit returns for investors—all while households fell behind in bills and liens on houses tripled.²¹ In the Bayonne case, the city had meant to oversee the private equity firm's role in funding water upgrades, but ultimately had to shutter its own oversight office for a lack of resources and staff. Privatization and price escalation have thus increased exclusion and inequality in access to basic water services.

B. Mechanisms of infrastructural exclusion

The experience of water contamination in Flint is indicative of a problem facing water infrastructure more broadly. As Flint highlights, the legal construction and governance of infrastructure is a crucial site through which inequality and exclusion is constructed. These inequities are not just a matter of shut-offs or high prices imposed by service providers. Rather, the above account suggests four distinct mechanisms through which infrastructure can generate problematic forms of inequality.

First, infrastructural exclusion can arise through the *maladministration* of infrastructure itself, on the part of regulators, utilities, or service providers. Note how much of the crisis in Flint arose from the unaccountability and outright failures of public administrators, from the emergency management system to the inadequacies of Michigan's DEQ. The collateral consequences arising from failure to pay water bills is part of a larger problem that extends beyond the water context: how social welfare and social services agencies operate. Indeed, outside of the water context, there is a rich literature documenting exactly these patterns of bureaucratic exclusion.²² Throughout the social safety net, racially-charged attacks on beneficiaries portraying recipients as lazy or undeserving have been codified through state and local conditions on benefits. Similarly, conditioning benefits on strict requirements like

²⁰ See sources cited *supra* note 8.

²¹ Danielle Ivory, Ben Protes, & Griff Palmer, *In American Towns, Private Profits from Public Works*, N.Y. TIMES (Dec. 24, 2016), <https://www.nytimes.com/2016/12/24/business/dealbook/private-equity-water.html> [<https://perma.cc/37RZ-WJ4Z>] (reporting 8–18% returns for investors).

²² See, e.g., ANDREA CAMPBELL, TRAPPED IN AMERICA'S SAFETY NET (2014); KATHRYN J. EDIN & H. LUKE SHAEFER, \$2.00 A DAY: LIVING ON ALMOST NOTHING IN AMERICA 1–34 (2016); MICHAEL KATZ, THE UNDESERVING POOR: AMERICA'S ENDURING CONFRONTATION WITH POVERTY (1989).

employment, punitive paperwork, and regular reporting effectively harnesses the administration of public goods to exclude and restrict.

Second, the legal construction of municipal and special district boundaries can play a role in limiting access by defining the “public” that is entitled to access public infrastructure and public goods, whether it is water, electricity, or other public goods like schools and parks. As local government law scholars have noted, the legal secession of suburbs from urban cores in the late 20th century was largely driven by backlash against desegregation. Whiter and wealthier localities sought to preserve local control over property tax revenues and school funding in order to exclude racial minorities—and avoid sharing tax revenues accordingly.²³ In the Flint context, the structural weakness of Flint as a municipality and its dependence on other entities—from the metropole of Detroit, the state-created water utilities, or the state government itself—shapes much of Flint’s inability to provide adequate access to water and core infrastructure. By fragmenting local authority and allocating some communities to inferior and under-resourced water systems, this pattern thus defines who can access what quality of water services (or other public goods).

Third, exclusion can be facilitated through privatization of public infrastructure. Decades of conservative calls for fiscal restraint and low taxes—motivated in part by precisely a reaction against the provision of (desegregated) public goods—has starved state and local governments of much-needed revenue. This in turn has fueled the push to privatize public goods—such as the water utility at the heart of the crisis in Flint—as government agencies facing tight budgets are unable to maintain services. Desperate cities are scrambling to cut costs or to boost revenues by offloading city services to private companies—preferably in exchange for a fee or income stream from those private managers. Private control of water infrastructure is a problem globally: multinational corporations like Nestle and Coca-Cola have concentrated control over water infrastructure in many regions, raising significant concerns of environmental damage, human rights abuses, and water contamination and access.²⁴ In the United States, localities facing municipal bankruptcy or budget cuts engage in aggressive efforts to shrink their formal public sector footprint, by cutting services, privatizing, or deregulating.²⁵ The spread of such privatization over the last few decades has reshaped water infrastructure, and other kinds of critical urban infrastructure

²³ GERALD E. FRUG, *CITY MAKING: BUILDING COMMUNITIES WITHOUT BUILDING WALLS* 181–195 (2001); see also Nancy MacLean, *Southern Dominance in Borrowed Language: The Regional Origins of American Neo-Liberalism*, in *NEW LANDSCAPES OF INEQUALITY: NEOLIBERALISM AND THE EROSION OF DEMOCRACY IN AMERICA* 21 (Jane L. Collins et al. eds., 2008).

²⁴ See, e.g., Karen Bakker, *The ‘Commons’ Versus the ‘Commodity’: Alter-globalization, Anti-privatization and the Human Right to Water in the Global South*, 39 *ANTIPODE* 430, 430–55 (2007).

²⁵ See Michelle Wilde Anderson, *The New Minimal Cities*, 123 *YALE L.J.* 1118, 1157–79 (2014).

and services from transit to parking meters.²⁶ Once control over these vital goods and services has been privatized, end users are often faced with higher prices and service providers that are more opaque and less open to accountability. Poorer cities and communities are often hit hardest by these privatization efforts, reducing their ability to access and hold accountable these services.²⁷

Fourth, privatization has increasingly been accompanied by a parallel process of *financialization*.²⁸ Private equity and other financial investors have taken over public utilities, promising lower costs and better service. Water has thus become another securitized, financialized asset.²⁹ Private water companies like American Water Works or the global French-based firm Suez are themselves largely owned by water-focused investment funds operated by the major financial firms of the globe. These funds are incentivized to deliver returns to investors, generating those returns through the management of water systems.³⁰ Studies of financialization have highlighted this pattern as a broader trend in the last few decades, raising concerns about the dominance of shareholder and investor interests converting essential urban infrastructure—whether in the form of services like water or in real estate investments—into return-generating investments, with problematic implications for affordability and public policy.³¹ The risks of privatization and financialization for secure access to infrastructure extends to water and beyond. Studies by racial and economic justice organizations like In the Public Interest and the Action Center on Race and the Economy document how this privatization and financialization of formerly public services has spread like wildfire across state and local governments, including around water infrastructure.³² The result is higher fees for cities and end users, worsened labor conditions, and eroded services. Consequently, privatized services are less secure and reliable. Again, the variations in affordable and dependable access hit racial minorities and poorer neighborhoods especially hard.³³

²⁶ See IN THE PUB. INTEREST, HOW PRIVATIZATION INCREASES INEQUALITY 15–19 (Sep. 2016), https://www.inthepublicinterest.org/wp-content/uploads/InThePublicInterest_InequalityReport_Sept2016.pdf [<https://perma.cc/8DYE-B2HT>]; ACTION CTR. ON RACE & THE ECON., <https://www.acrecampaigns.org/about/> (last visited Aug. 25, 2017) [<https://perma.cc/AS3N-6A7S>].

²⁷ See, e.g., Anderson, *supra* note 25, at 1129–50; IN THE PUB. INTEREST, *supra* note 26.

²⁸ See, e.g., Kate Bayliss, *The Financialization of Water*, 46 REV. RADICAL POL. ECON. 292, 298–99 (2013).

²⁹ See *id.* at 300.

³⁰ See *id.* at 294–300.

³¹ See, e.g., RANA FOROOGAR, MAKERS AND TAKERS: THE RISE OF FINANCE AND THE FALL OF AMERICAN BUSINESS 210–36 (2016); Gerald Davis & Suntae Kim, *Financialization of the Economy*, 41 ANN. REV. SOC. . 203, 213 (2015).

³² See IN THE PUB. INTEREST, *supra* note 26; ACTION CTR. ON RACE & THE ECON., *supra* note 26.

³³ See IN THE PUB. INTEREST, *supra* note 26; see also ACTION CTR. ON RACE & THE ECON., *supra* note 27 (providing an example of an organization working to address this issue). For an excellent example of privatization, financialization, and the corruption of basic city

These four mechanisms—bureaucratic exclusion, secession, privatization, and financialization—are not just passive conditions, but active policy decisions and tools through which the day-to-day management of infrastructure can produce systemic exclusion and inequality. These four mechanisms interact with one another to fuel what we might think of as a “public goods death spiral.”³⁴ The initial pressure to cut public budgets reduces available government resources and incentivizes the privatization and financialization of infrastructure. This in turn makes it more likely and possible for private actors to exploit and extract return through the management of crucial necessities like water. Meanwhile, the emaciation of governmental institutions, capacities, and personnel makes it ever less likely that these goods can be re-publicized in the future. Wealthier (and whiter) communities, by contrast, remain untouched by these pressures, able to both overlook higher fees and—having seceded from larger metro areas—maintain control over their higher property values and higher tax revenues.

The water crisis in Flint is indicative of how the legal construction and governance of water infrastructure, and infrastructure more broadly, can produce problematic forms of inequality, exclusion, and subordination. The central problem here is not just one of budgets and substantive policy; it is also one of power and accountability. The accountability problem arises in the context of private actors—like the firms responsible for managing privatized infrastructure, or the investor interests—as well as public actors, from public authorities to regulators to zoning and urban planning authorities. As we will see in the next Part, infrastructure is a particularly stark manifestation of the problem of disparate, arbitrary power. The challenge for equitable access to water infrastructure, then, is as much about creating mechanisms of accountability as it is about substantive policies around water management and investment.

II. TOWARD A POLITICAL THEORY OF INFRASTRUCTURE: POWER, DEMOCRACY, AND THE PUBLIC UTILITY TRADITION

Much of the difficulty arising from the mechanisms of exclusion and the systemic erosion of water access and equity described in Part I stems from the reality that water is not just an ordinary commodity to be optimized and managed cost-effectively. It is also a crucial necessity for human and

infrastructure, *see e.g.*, Danielle Ivory, Ben Protess, & Kitty Bennett, *When You Dial 911 and Wall Street Answers*, N.Y. TIMES (June 25, 2016), <https://www.nytimes.com/2016/06/26/business/dealbook/when-you-dial-911-and-wall-street-answers.html?rref=collection%2Fseriescollection%2Fprivate-equity-bottom-line-nation&r=0> [<https://perma.cc/YF6Z-Z3XP>].

³⁴ *See, e.g.*, Anderson, *supra* note 25, at 1208 (“Public employment, depth of regulation, and government spending relate to each other dynamically.”).

communal well-being.³⁵ The construction of water infrastructure and infrastructure more broadly—who gets access to what goods and services on what terms—in a very real way demarcates the boundaries of membership in the polity. Water systems are essential to the production and reproduction of economic inequality and racial subordination.³⁶ Water infrastructure is a central site where battles for inclusion and ideals of freedom, democracy, and equality are made real.³⁷ How then should water infrastructure be governed to assure equity, access, inclusion, and ultimately, membership? What legal structures are needed to overcome the mechanisms of exclusion described above?

In context of infrastructure, scholars and reformers have often turned to the language of the “commons” both as a way to describe the uniqueness of certain goods like water, parkland, or other kinds of infrastructure, and as a normative appeal to motivate the need for regulations that protect against discrimination and ensure fair and equal access. Thus, where goods are nonrival and nonexcludable, they might be seen as “common pool resources”—public goods that are best managed collectively to prevent private encroachment or appropriation.³⁸ For goods that are infrastructural in a broader sense—not just roads, bridges, water or electricity, but also information, knowledge, and telecommunications—the importance of these goods motivates a commons-style approach to governance emphasizing nondiscrimination, common carriage, and equal access.³⁹ The invocation of the idea of the commons operates as “a social imaginary rather than as a distinct set of institutional arrangements.”⁴⁰ Especially around water and other similar public resources, reformers today invoke the language of the commons to motivate opposition to the commodification and privatization of public ser-

³⁵ Other goods and services might also be viewed as necessities, which might then warrant similar scrutiny and protection. This is exactly the implication of a broad view of infrastructure implied in this Part. For a longer discussion of the potential expansions of infrastructure and utilities to cover other goods and services, see *Private Power: Public Values*, *supra* note 5.

³⁶ See, e.g., NIKHIL ANAND, *HYDRAULIC CITY: WATER AND THE INFRASTRUCTURES OF CITIZENSHIP IN MUMBAI* (2017) (discussing how water services is key site for constructing urban inequality in Mumbai); ANTINA VON SCHNITZER, *DEMOCRACY’S INFRASTRUCTURE: TECHNO-POLITICS AND PROTEST AFTER APARTHEID* (2016) (providing case of South African water infrastructure reaffirming racial hierarchies after the fall of apartheid).

³⁷ See, e.g., Susan Leigh Star, *The Ethnography of Infrastructure*, 43 *AM. BEHAV. SCIENTIST* 377 (1999); Colin McFarlane & Jonathan Rutherford, *Political Infrastructures: Governing and Experiencing the Fabric of the City*, 32 *INT’L J. URB. & REGIONAL RES.* 363 (2008); Malini Ranganathan, *The Environment as Freedom: A Decolonial Reimagining*, *SOC. SCI. RESEARCH COUNCIL* (July 13, 2017), <http://items.ssrc.org/the-environment-as-freedom-a-decolonial-reimagining/> [<https://perma.cc/34GD-MDMW>].

³⁸ See ELINOR OSTROM, *GOVERNING THE COMMONS* 30–41 (1990).

³⁹ See BRETT FRISCHMANN, *INFRASTRUCTURE* 253 (2012) (extending the concept of infrastructure and the commons to a wide range of goods and services including communications and knowledge, which all require similar nondiscriminatory open access governance).

⁴⁰ John Wagner, *Water and the Commons Imaginary*, 53 *CURRENT ANTHROPOLOGY* 617, 617 (2012).

vices.⁴¹ The invocation of the commons also has another connotation, suggesting the need for specifically democratic governance of these resources.⁴² This appeal to shared ownership, responsibility, and collaborative governance can also operate at a larger scale: the city itself, as some scholars have argued, represents a kind of larger “commons” that ought to be governed collectively and democratically.⁴³

The notion of the commons is a powerful one. But it leaves much underspecified. What institutional mechanisms do we need to enable this kind of commons governance? Moreover, the idea of the commons as a strategy, rather than as an aspiration, is of limited use. The kinds of infrastructural exclusion mapped in Part I above are not just products of a misconception of the nature and importance of water; they are the result of existing disparities of power as well as structural and institutional dynamics shaping the exercise of public and private authority over the water system. Thus, while the commons-style aspirations for fair and equal access and democratic governance are the right normative ideals, we need a further understanding of the dynamics of power and institutions in order to make those ideals real.

The concept of the public utility provides a useful starting point for shaping these aspirations of the commons into specific institutional and political regimes. Indeed, ideas of public utility have played a central role in shaping the law, institutions, and politics around water and other forms of infrastructure in American law for over a century. While some of the specific legal institutions and forms arising from public utility reformers have fallen short, playing a role in the failures described above, the underlying theory of public utility can help inform the reimagining of water governance and water infrastructure today.

Starting in the late nineteenth century, and facing the economic and social upheavals of industrialization, a cohort of legal thinkers, reformers, and policymakers operating especially at the state and local level developed the idea of public utility as a way to justify and design new regulatory regimes that would address the problems of inequality and private power in the new economy. The idea encompassed everything from rate-setting to public ownership to new forms of regulatory oversight.⁴⁴ As Novak writes,

⁴¹ Wagner, *supra* note 41, at 621; Sheila Foster & Christian Iaione, *The City as a Commons*, 34 *YALE L. & POLY REV.* 281, 284 (2016) (“Increasingly, progressive urban reformers are looking beyond the state (and for that matter the city) to sublocal forms of resistance, and cooperation, to make claims on urban resources and city space as a ‘commons.’ These claims consist not simply of the assertion of a ‘right’ to a particular resource; rather, they assert the existence of a common stake or common interest in resources shared with other urban inhabitants as a way of resisting the privatization and/or commodification of those resources. In other words, the language of the ‘commons’ is being invoked to lay claim to, and protect against the threat of ‘enclosure’ by economic elites, a host of urban resources and goods which might otherwise be more widely shared by a broader class of city inhabitants.”) [citations omitted]

⁴² OSTROM, *supra* note 38, at 45–55.

⁴³ Foster & Iaione, *supra* note 41, at 288.

⁴⁴ William J. Novak, *Law and the Social Control of American Capitalism*, 60 *EMORY L.J.* 377, 400 (2010) [hereinafter *Law and the Social Control of American Capitalism*]. See also

“progressives viewed the law of public utilities as a vibrant and expansive arena for experimenting with unprecedented governmental control over business, industry, and the market.”⁴⁵ The idea of public utility thus drove the creation of the modern regulatory state itself. The central focal point for public utility reformers was the need to establish public oversight of private actors who had centralized control over foundational goods and services: not just core infrastructure like water and transportation and electricity but also other necessities like milk, ice, banking, and much more. The concerns of Progressive Era reformers responding to industrialization parallel in many ways the challenges facing contemporary reformers struggling with problems of power and access in context of necessities like water.

Take for example the case of *Shepard v. The Milwaukee Gas Light Company*,⁴⁶ in Wisconsin in 1858. Granted a charter from the city to provide lighting to the town, a private gas company refused service to a store owner whose shop was already connected to the main gas line in the town. The Court rejected this denial of service. According to the court, while the company “has full right to govern itself,” it had “no right to govern the people at large, whether their dwellings happen to be lighted with oil or gas.”⁴⁷ The private company was fully capable of making its own rules and regulations for conditions of service, but those rules and regulations “must be reasonable, just, lawful, not capricious, arbitrary, oppressive, or unreasonable. Were it not so, the whole net work [sic] of pipes and machinery would be at the mercy of the careless, the fraudulent or the malignant.”⁴⁸ This language is indicative: the gasworks were not just another instance of an unfair contract. Rather the problem was really one of substituting *public* governance for *private* governance. By virtue of their control over an infrastructure that was now crucial for all social and economic life, the gasworks was structurally positioned to exercise arbitrary unchecked power over end users. By default it possessed an unfair advantage in negotiations. It was this disparity of power, more so than the particulars of price or terms of access, that was most troubling to public utility reformers.

William J. Novak, *The Public Utility Idea and the Origins of Modern Business Regulation*, in *CORPORATIONS AND AMERICAN DEMOCRACY* 139 (Naomi R. Lamoreaux & William J. Novak eds., 2017) (describing the history of the public utility idea and how it drove the innovation of modern administrative governance) [hereinafter *The Public Utility Idea*]. For an earlier canonical account of the public utility concept as innovated by the influential legal thinker Robert Hale, see BARBARA FRIED, *THE PROGRESSIVE ASSAULT ON LAISSEZ FAIRE: ROBERT HALE AND THE FIRST LAW AND ECONOMICS MOVEMENT* 160–204 (1998). A number of scholars are now exploring the implications of public utility concepts for other areas of law and policy. See, e.g., William Boyd, *Public Utility and the Low-Carbon Future*, 61 *UCLA L. REV.* 1614 (2014); Nicholas Bagley, *Medicine as a Public Calling*, 114 *MICH. L. REV.* 57 (2015); Morgan Ricks, *Money as Infrastructure* (draft on file with author), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3070270 [<https://perma.cc/3F8J-SERN>]; *Private Power: Public Values*, *supra* note 5.

⁴⁵ *Law and the Social Control of American Capitalism*, *supra* note 45, at 399–400.

⁴⁶ *Shepard v. The Milwaukee Gas Light Co.*, 6 Wis. 539 (1858).

⁴⁷ *Id.* at 542.

⁴⁸ *Id.* at 548.

Another variation of this assertion of public control over infrastructure—one more analogous to the water problem—can be seen in the contemporaneous use of the “public trust” doctrine in the late nineteenth century. In the classic case of *Illinois Central Railroad Co. v. State of Illinois*,⁴⁹ the Supreme Court invalidated a state statute, the Lake Front Act of 1869, which granted title to the Harbor and adjacent Lake Park in Chicago (now Millennium Park) to the railroad for use for development of its shipping and transport system. Even though the conveyance was authorized by the state itself, and included several restrictions on water and property rights to ensure access for the public, the Court still found it an impermissible transfer of an intrinsically *public* matter—the control of the waterways—to a private actor. As the Court argued, private use of the waterways “could not be permitted except by license of the crown, which could alone exercise such *dominion* over the waters as would insure *freedom* in their use so far as consistent with the public interest.”⁵⁰ The Court based this ruling on a reading of English common law preserving to the Crown the control over seas and navigable waterways, extending it to freshwater domains like Lake Michigan. Despite the restrictions on the railroad placed by the Act, the Court reasoned that to uphold the Act and its conveyance “would sanction the abdication of the general control of the state” over navigable waters.⁵¹ “Such abdication is not consistent with the exercise of that trust which requires the government of the state to preserve such waters for the use of the public.”⁵² Crucially, the Court seemed to view the Act as a kind of impermissible private delegation, a transference of the essential sovereign functions of the public state to the private railroad.⁵³

Following the holdings of cases like *Illinois Central*, the modern public trust doctrine is viewed in limited contexts as applying to natural resources that are interconnected with navigable waters. But the doctrine has also been used widely to protect both environmental resources and urban spaces like public squares from private encroachment.⁵⁴ For some property law scholars, the public trust doctrine is seen in the familiar context of takings jurisprudence, emphasizing the need to optimize the economic productivity.⁵⁵ But as

⁴⁹ Ill. Cent. R.R.Co. v. State of Ill., 146 U.S. 387 (1892).

⁵⁰ *Id.* at 436 (emphasis added).

⁵¹ *Id.* at 452.

⁵² *Id.* at 453.

⁵³ As the Court continues:

A grant of all the lands under the navigable waters of a state has never been adjudged to be within the legislative power; and any attempted grant of the kind would be held, if not absolutely void on its face, as subject to revocation. The state can no more abdicate its trust over property in which the whole people are interested, like navigable waters and soils under them, so as to leave them entirely under the use and control of private parties.

Illinois Central, at 453.

⁵⁴ Foster & Iaione, *supra* note 41, at 315–6.

⁵⁵ See Molly Selvin, *The Public Trust Doctrine in American Law and Economic Policy, 1789-1920*, 1980 WIS. L. REV. 1403 (1980).

Illinois Central suggests, the deeper concern here is like the concern in *Shephard*: the fear of private control over infrastructure through which the private actor can exercise dominion over end users.⁵⁶

Indeed, nineteenth-century courts and state legislators drew on common law concepts of “public callings” and “common carriage” to require such infrastructural firms to comply with duties of nondiscrimination, providing their services to all users on fair and equal terms. Beyond courts, state legislatures created administrative bodies, which for the first time began to develop systematic forms of public oversight, transparency, enforcement, and even rate-setting. At the extreme, cities and states converted private utilities into public authorities, leading to the first municipal authorities for electricity, transportation, water, and more.⁵⁷ The industrializing economy created a central challenge for many of these municipal reformers: private actors had come to control many of these key necessities, exercising a kind of state-like coercive influence on the public. Yet these private actors were not subject to any of the checks and balances that, in a constitutional republic, accompany the exercise of similarly coercive state power.⁵⁸

As a central human necessity, water was a central locus for these efforts to counteract private power through new administrative institutions and legal doctrines. Bruce Wyman, one of the leading Progressive Era legal theorists of the public utility tradition, noted that it “has been always obvious” that water “is a public utility in the true sense of the term.”⁵⁹ Historically, water was a key domain where public utility ideas led to the creation of state-created administrative oversight bodies and outright municipalization of the utility itself.⁶⁰ State courts deployed the public trust doctrine in part to secure

⁵⁶ See Michael C. Blumm & Aurora Paulsen Moses, *The Public Trust as an Antimonopoly Doctrine*, 44 B.C. ENVTL. AFF. L. REV. 1 (2017). Some scholars have suggested that this expansive reading of the public trust doctrine is based on a historical error, a misunderstanding of the ancient common law, and a short-lived and not-very-influential moment in American legal doctrine. See James L. Huffman, *Speaking of Inconvenient Truths: A History of the Public Trust Doctrine*, 18 DUKE ENVTL. L. & POL'Y F. 1 (2007). But read in context of the public utility idea more broadly and the larger politics of the late nineteenth century efforts to create legal oversight of private power whether through judicial or new administrative means; see Bayliss, *supra* note 28; the concern about power seems central regardless of the historical accuracy of the Court's analysis.

⁵⁷ See Novak and accompanying citations, *supra* note 44.

⁵⁸ For a description of this critique of private power as central to Progressive Era reformers, see *Private Power: Public Values*, *supra* note 5, at 9–11.; see also K. SABEEL RAHMAN, *DEMOCRACY AGAINST DOMINATION* 54–77 (2017) [*hereinafter* *DEMOCRACY AGAINST DOMINATION*].

⁵⁹ Bruce Wyman, *The Law of The Public Callings as a Solution of the Trust Problem*, 17 HARV. L. REV. 156, 167 (1904).

⁶⁰ GAIL RADFORD, *THE RISE OF THE PUBLIC AUTHORITY: STATEBUILDING AND ECONOMIC DEVELOPMENT IN TWENTIETH-CENTURY AMERICA* 76 (2013). Though private waterworks were constructed at rapid rates in the early 19th century, and the municipalization of those water systems began sooner and proceeded more rapidly than in other sectors. See Scott Masten, *Public Utility Ownership in 19th-Century America: The 'Aberrant' Case of Water*, 27 J. L. ECON. & ORG. 604 (2011).

public control over water sources that in turn fueled these municipal water utilities.⁶¹

The public utility tradition is in many ways a success story—a series of doctrinal and administrative-institutional innovations through which nineteenth-century reformers asserted public control over, and therefore demanded accountability from, the arbitrary private control of water infrastructure in response to the upheavals and inequities of the industrializing economy. Yet at the same time, it is also true that the modern experience of infrastructural exclusion speaks to the *failures* of those public utility-inspired regimes. As noted in Part I above, it was the failure of state regulators, the existing water districts, city planning and zoning powers that helped contribute to the problem of water inequality in Flint and elsewhere. So what then can we take from this public utility history and tradition? As William Boyd suggests, public utility was less about a specific set of institutional regimes as it was about a “normative effort directed at ensuring that the governance of essential network industries . . . proceeds in a manner that protects the public from the abuses of market power,” an ethos that represented “a collective project aimed at harnessing the power of private enterprise and directing it toward public ends.”⁶²

The central conceptual innovation of the public utility idea is its emphasis on diagnosing the problem of *power*: by controlling infrastructure and the terms of access to necessities, entities charged with provision of basic goods had to be subjected to more stringent forms of accountability and oversight. Indeed, this concern about quasi-sovereign private power was a broader one that shaped the larger politics, reform agendas, and legal thought of the late nineteenth and early twentieth century.⁶³ Thus, appeals to concepts like “public trust,” “common carriage,” “public utility” were fundamentally about motivating the creation of checks and balances, catalyzing the innovation of legal and institutional regimes aimed at preventing concentration of arbitrary power exercised through the control of infrastructure. These ideas offer a compelling conceptual approach to the problems of structural inequality and disparate access to water and other forms of infrastructure as described in Part I above.⁶⁴

III. CONSTRUCTING INCLUSIVE INFRASTRUCTURE: WATER AND BEYOND

The public utility tradition provides some past examples of how law and institutional design structurally shifted the authority over key infrastruc-

⁶¹ Selvin, *supra* note 55, at 1429–34.

⁶² Boyd, *supra* note 44, at 1619.

⁶³ On this private power orientation of Progressive Era political and legal thought, see DEMOCRACY AGAINST DOMINATION, *supra* note 58, at 54–77.

⁶⁴ See Ivan Kaplan, *Does the Privatisation of Publicly Owned Infrastructure Implicate the Public Trust Doctrine? Illinois Central and the Chicago Parking Meter Concession Agreement*, 7 NW. J. L. & SOC. POL'Y 136, 138–40 (2012) (noting the potential radicalism of public trust doctrine in an era of municipal privatization).

tural goods like water away from private hands and placed them in public institutions that, in theory, were more accountable and public-spirited. The public utility tradition itself suggests that the response must be an attempt to reinvent mechanisms of public, democratic oversight and accountability that is capable of addressing the modern loci of power over key infrastructure like water. Despite the very real failures of public (and private) actors contributing to the water crisis today—as Part I suggests, infrastructural exclusion today in some ways originates from the failures of the bodies constructed in the public utility tradition—the public utility ethos offers us a way to conceptualize a response to the kinds of structural exclusions mapped in Part I above. Specifically, it suggests the need to build institutional checks and balances responsive to concentrations of arbitrary power over infrastructure.

After first reviewing the current patchwork of legal proposals and structures around water equity, this Part suggests two further areas for legal innovation and reform. Drawing from the public utility tradition, equitable water infrastructure requires more than legal mandates for water access. It also requires *new public institutions* that have first the authority to address the kinds of exclusionary mechanisms mapped in Part I above, and second accountability systems to ensure that this oversight authority is used effectively.

A. *Mandating water equity*

In the aftermath of the Flint crisis, state legislators, legal advocacy groups, and scholars have proposed a number of legal remedies. A court order in November 2016 required the city to deliver bottled water to residents.⁶⁵ A class action lawsuit led by the National Association for the Advancement of Colored People (“NAACP”) to challenge the water poisoning, as well as an American Civil Liberties Union (“ACLU”) suit alleging violations of the federal Safe Drinking Water Act,⁶⁶ and criminal charges against former Flint public officials are already under way.⁶⁷ To achieve a more systemic protection of equal access to water, scholars and activists have pro-

⁶⁵ Concerned Pastors for Soc. Action v. Khouri, 217 F.Supp.3d 960, 980 (E.D. Mich. Nov. 10, 2016); see also Paul Egan, *Federal Judge Orders Delivery of Bottled Water in Flint*, DETROIT FREE PRESS (Nov. 10, 2016), <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/11/10/delivery-bottled-water-flint/93613760/> [https://perma.cc/A5TP-RYE4].

⁶⁶ See 42 U.S.C. §§ 300f–300j (1974). The Act authorizes the EPA to set standards for all public water systems to ensure their safety for drinking and consumption, considering risks and potential costs.

⁶⁷ Complaint, *Gilcreast v. Lockwood*, No. 2:16-cv-11173, 2016 WL 1258320 (E.D. Mich. Mar. 31, 2016); Complaint, *Concerned Pastors for Soc. Action v. Khouri*, 217 F.Supp.3d 960 (E.D. Mich. Jan. 27, 2016); see also Monica Davey & Mitch Smith, *2 Former Flint Emergency Managers Charged Over Tainted Water*, N.Y. TIMES (Dec. 20, 2016), <https://www.nytimes.com/2016/12/20/us/flint-water-charges.html> [https://perma.cc/YJX7-E667] (describing criminal charges brought against former Flint emergency managers).

posed a range of statutory and constitutional rights claims aimed at bolstering the legal status of the right to water. But the need to create administrative and governance institutions capable of implementing and enforcing these legal standards presents a central challenge to city and state leadership.

In international human rights law, the essential nature of water has fueled a push for viewing water as a foundational human right.⁶⁸ Yet a constitutional protection for access to water has not gained much purchase in American constitutional doctrine. While some scholars have argued for Due Process and Equal Protection defenses of a right to water, courts have for the most part been unwilling to follow this route—including in the case of access-to-water battles in present-day Michigan.⁶⁹ Despite legal challenges to water shutoffs, affordability, and contamination in Detroit and Flint, courts have held that there is no affirmative right to water in these cases.⁷⁰ One way to understand this hesitancy is to see the right to water, like other socioeconomic rights, as implicating complex budgetary and public policy questions of the sort that courts are uncomfortable interfering with. As with other socioeconomic rights, then, the primary action for assuring legal access to water has moved from the constitutional to the statutory realm.⁷¹

Statutory and regulatory measures can attempt to codify a “right to water” through a combination of legal mandates and protections.⁷² At the federal level, relevant provisions include the Clean Water Act and the Safe

⁶⁸ The United Nations General Assembly affirmed in 2010 an international right to water. See G.A. Res. 64/292 (July 10, 2010). For a discussion of the international right to water and its limits in the US context, see Murthy, *supra* note 16, at 205–07. See also Rhett Larson, *The New Right in Water*, 70 WASH. & LEE L. REV. 2181, 2187–89 (2013).

⁶⁹ See *In re City of Detroit*, 841 F.3d 684, 699–700 (6th Cir. 2016), affirming in part a lower court ruling, including the lower court’s view that there is no constitutional or fundamental right to water service. For a survey of constitutional cases on access to water, see Murthy, *supra* note 16, at 188–200. See also Larson, *supra* note 68, at 2241–42, 2259.

⁷⁰ See, e.g., *In re City of Detroit*, 841 F.3d at 700 (“This is the case for plaintiffs’ alleged property right to continued water service—or continued *affordable* water service. A right of this nature is not rooted in our nation’s traditions or implicit in the concept of ordered liberty.”).

⁷¹ Rosalind Dixon, *Creating Dialogue About Socioeconomic Rights: Strong-form Versus Weak-form Judicial Review Revisited*, 5 I-CON 391, 406–08 (2007). Whether or not such judicialized and constitutionalized review of socioeconomic rights does in fact increase on-the-ground access to basic necessities is a matter of some dispute. Some scholars have suggested that it does little to actually change the level of funding and public investment in basic goods. See, e.g., Adam Chilton & Mila Versteeg, *Rights Without Resources: The Impact of Constitutional Social Rights on Social Spending*, COASE-SANDOR WORKING PAPER SERIES IN LAW AND ECONOMICS, 5–6 (2016).

⁷² In California, advocacy groups have offered different frameworks that they argue should drive state agencies’ interpretation and implementation of the statutory right to water. The Community Water Center in Central California has argued that state agencies should interpret the statutory right to water to be comprised of distinct dimensions such as affordability and nondiscrimination and participation. See, e.g., Rose Francis & Laurel Firestone, *Implementing the Human Right to Water in California’s Central Valley: Building a Democratic Voice Through Community Engagement in Water Policy Decision Making*, 47 WILLAMETTE L. REV. 495, 513–18 (2011). For another different, but overlapping, breakdown, see U.C. BERKELEY INT’L HUM. RTS. L. CLINIC, *THE HUMAN RIGHT TO WATER BILL IN CALIFORNIA: AN IMPLEMENTATION FRAMEWORK FOR STATE AGENCIES* 67 (2013).

Drinking Water Act, which provide for minimum federal standards for water quality, as well as civil rights laws that might extend to require nondiscriminatory access to public services such as water.⁷³ Other statutory and administrative systems address further dimensions of the problem of water provision and access.⁷⁴ As Martha Davis suggests, civil rights laws might provide an “alternative legal infrastructure to ensure baseline water and sanitation equality—that is, equal access to levels of water necessary to meet minimum daily needs.”⁷⁵ Civil rights statutes could address the racialized impact of water disparities, for example through disparate impact claims under the Fair Housing Act, to address discrimination in service provision and facilities to a dwelling.⁷⁶ Other civil rights statutes, like the Rehabilitation Act of 1973, § 504, or Title II of the ADA, include provisions applying to dwellings that could be applied to issues of water access and safety.⁷⁷ But these statutes all depend on a robust administrative regime to be enforced and implemented effectively—and enforcing these provisions in the water context would require a similarly active and creative enforcement approach.⁷⁸

State governments have attempted to codify their own version of water rights. While there is a complex legal regime governs the allocation of groundwater rights, riparian and property rights, and drought water limits, California has also experimented with an affirmative right to water access. In 2012, California enacted a Human Right to Water bill that calls on “all relevant state agencies” to pursue the policy goal that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.”⁷⁹ But even here, the statutory provision explicitly states that it does not “expand any obligation of the state to provide water or to require the expenditure of additional resources to develop water infrastructure.”⁸⁰ To the extent that this provision has had an impact, it has been through an informal shift in how state-level regulatory agencies approach their planning, regulation, and further development of the state’s water infrastructure, for example by engaging in addi-

⁷³ For an overview of various statutory and regulatory tools for access to water, see Martha Davis, *Let Justice Roll Down: A Case Study of the Legal Infrastructure for Water Equality and Affordability*, 23 GEO. J. ON POVERTY L. & POLY 355, 366–85 (2016); Derrick Howard, *The Appearance of Solidity: Legal implementation of the Human Right to Water in the United States*, 11 APPALACHIAN J.L. 123, 134 (2011); Larson, *supra* note 68, at 2258; Murthy, *supra* note 16, at 206.

⁷⁴ See Davis, *supra* note 73, at 363–64; Justin Lee, *Information Drought: Bringing Knowledge About Groundwater to the Surface in California Water Policy*, 38 ENVIRONS ENVTL. L. & POLY J. 191, 198–201 (2015); Murthy, *supra* note 16, at 219.

⁷⁵ Davis, *supra* note 73, at 358.

⁷⁶ See 42 U.S.C. § 3604; Davis, *supra* note 73, at 379–82.

⁷⁷ Davis, *supra* note 73, at 382–85.

⁷⁸ See, e.g., Howard, *supra* note 73, at 132 (noting the inadequacy of statutory mandates as a substitute for a robust right to water).

⁷⁹ CAL. WATER CODE §106.3(a)–(b) (2012).

⁸⁰ CAL. WATER CODE §106.3(c) (2012).

tional discussions to address issues of accessibility, affordability, nondiscrimination, and public engagement.⁸¹

In response to the crises in Flint, Detroit, and throughout Michigan, state legislators are considering a similar package of bills aimed at assuring equal access to and affordability of water in the state. House Bill 5101, for example, declares that “each individual has the right to safe, clean, affordable, and accessible water for human consumption,” and that “all state departments and agencies shall employ all reasonable means to implement this section,” including revisions of existing regulations, the imposition of water affordability requirements, and other measures.⁸² But like the California statute, the proposed bill “does not expand any obligation of the state to provide water or to require the expenditure of additional resources.”⁸³

A common thread across these different legal strategies is the disjuncture between affirmative legal mandates on the one hand, and on the other, the lack of an administrative regime that can enforce these mandates—and do so in a way that overcomes the problems of unaccountability, fragmentation, privatization, and financialization as noted in Part I. This is where the public utility tradition can offer a valuable complement to these discussions. Like public utility reformers a century ago, today water access advocates must develop institutional mechanisms that can effectively and responsively administer the water infrastructure in an inclusive way. The public utility tradition suggests two specific institutional design strategies here: first, the reinvestment in *public* water utilities and special districts that restore public control over private and semi-private water systems; and second, the creation of new administrative bodies empowered to exercise broad oversight and enforcement authority at a macro level, capable of addressing the exclusionary dynamics described above.

B. Restoring public (and democratic) utilities

One public utility-style response to the problem of exclusionary water infrastructure is to re-publicize the provision of water. In general, public provision differs from ordinary private provision in its visibility, control, and distribution, offering potentially more transparent, accountable, and equitably-distributed goods and services.⁸⁴ Certainly there are budgetary and fiscal requirements for this approach—state and local governments would need to generate sufficient revenues to sustain public infrastructure, a bar that many state and local governments have been unable to meet in recent decades. Yet some policy analysts suggest that state and municipal bond markets are ro-

⁸¹ See generally sources cited in note 73, *supra*.

⁸² See H.B. 5101, 98th Leg., Reg. Sess. (Mich. 2015).

⁸³ *Id.*

⁸⁴ See JACOB S. HACKER, *THE DIVIDED WELFARE STATE: THE BATTLE OVER PUBLIC AND PRIVATE SOCIAL BENEFITS IN THE UNITED STATES* 35–36 (2002).

bust and affordable enough to finance these kinds of infrastructure investments.⁸⁵

Furthermore, even in an era of privatization, there remains a significant public role in structuring water infrastructure through state-chartered special districts, utilities, and authorities. But the question in these contexts is whether and to what extent these quasi-public bodies are themselves accountable and responsive to the public at large. Here we can see a second implication of the public utility idea. If public utility at its core is about the accountability of power over infrastructure (see Part II above), and if part of the problem of water infrastructure today is the unaccountability of *public* as well as private actors (see Part I above), then it follows that a modern-day water utility will have to develop more robust institutions for *internal* accountability. In Detroit, for example, the Great Lakes Water Authority (GWLA) took over operations in Eastern Michigan in January 2016, with a state-appointed board comprised of officials from Detroit and the surrounding counties, with authority over rates and capital investment.⁸⁶ But as the negotiations between Flint and the GWLA continue, it is unclear how responsive or transparent this new authority will be.

Under the Fourteenth Amendment of the US Constitution, water districts themselves have limited powers and geographic scope, and are therefore not obligated to accord voting or participation rights to all residents—the one-person/one-vote requirement that applies to state and local governments.⁸⁷ These holdings seem to run counter to a string of precedents extending the one-person/one-vote requirement to all affected residents of other state-chartered local bodies that exercised “public functions,” such as school boards.⁸⁸ Courts have distinguished these different local entities in terms of the scope of their authority—special districts, according to the Court, exercise more limited functions and scope of authority and thus need

⁸⁵ See generally KEVIN DEGOOD, CHRISTIAN WELLER & ANDREW SCHWARTZ, CTR. FOR AMERICAN PROGRESS, AN INFRASTRUCTURE PLAN FOR AMERICA: HOW INVESTING IN INFRASTRUCTURE WILL LAY THE FOUNDATION FOR PROSPERITY, ADVANCE ENVIRONMENTAL GOALS, AND REBUILD THE MIDDLE CLASS 51–52 (July 2016).

⁸⁶ See, e.g., GREAT LAKES WATER AUTHORITY, ABOUT US, <http://www.glwater.org/about-us/> (last visited Mar. 11, 2018) [https://perma.cc/G5LJ-NGGC].

⁸⁷ See *Ball v. James*, 451 U.S. 355, 368 (1981) (declining to extend one-person-one-vote to Arizona special district due to its merely ‘nominal’ public status); *Salyer Land Co. v. Tulare Lake Basin Water Storage Dist.*, 410 U.S. 719, 728 (1973) (declining to extend one-person, one-vote to a water storage district because “of its special limited purpose and of the disproportionate effect of its activities on landowners as a group.”); *Kessler v. Grand Cent. Dist. Management Ass’n, Inc.*, 158 F.3d 92, 94 (2d Cir. 1998). See also Richard Briffault, *Who Rules at Home?: One Person/One Vote and Local Governments*, 60 U. CHI. L. REV. 339 (1993).

⁸⁸ See *Kramer v. Union School District No. 15*, 395 U.S. 621, 633 (1969) (requiring extension of franchise to all residents of a school board area, including those without children); *Avery v. Midland County*, 390 U.S. 474, 476 (1968) (extending one-person/one-vote to Texas Commissioned Court); *Fumaloro v. Chicago Board of Education*, 566 N.Ed.2d 1283, 1299 (Ill. 1990) (requiring one-person/one-vote for all residents in a school system on grounds that all were affected by the authority of the school board); see generally *Reynolds v. Sims*, 377 U.S. 533 (1964) (establishing the one-person/one-vote standard).

not be saddled with the one-person-one-vote requirement. Special districts thus often have weighted voting schemes instead that allocate vote shares by property ownership in the districts.

Despite these doctrinal holdings, it is plausible that these districts themselves could facilitate greater transparency and democratic accountability internally. Ostrom herself argued that the creation of special water districts in Los Angeles would encourage self-organized collective action by members of these water districts.⁸⁹ By Ostrom's account, the existence of the district itself would make it easier for residents to overcome the difficulties of collective action: by providing a formal political structure, special districts could house greater participation and collaborative governance of water resources.⁹⁰ But this seems overly optimistic; most water districts are hidden from residents' view, and in their day-to-day operation relatively opaque. Even municipal representation of the kind employed by the GWLA, which allows some form of accountability to member municipalities, is at best a partial solution. Outside of highly politicized contexts like Flint where water provision has become a central focal point of local politics, it is unlikely that these institutions will be subject to robust public engagement and monitoring.

But states retain the ability to structure these authorities and special districts however they please. And it is here that the democratic potential of utilities, authorities, and special districts emerges. Indeed, some scholars have suggested the need for more flexibility in the types of accountability required of special districts that go beyond property-based voting, as currently required for such quasi-governmental bodies.⁹¹ In studies of regulatory capture and failure, administrative law scholars have suggested a range of institutional designs that can be readily adapted to special districts and water utilities through state legislation. Some scholars suggest various forms of consumer, user, or stakeholder representation through advisory bodies, or through dedicated consumer representative offices;⁹² these measures could be easily incorporated into the design of water utilities. Others have suggested processes for policymaking that pro-actively engage stakeholders in collaborative deliberation, debate, and participation.⁹³

⁸⁹ OSTROM, *supra* note 38, at 133–42.

⁹⁰ *Id.*

⁹¹ See Thomas Merrill, *Direct Voting by Property Owners*, 77 U. CHI. L. REV. 275, 307 (2010). See also Camille Pannu, *Drinking Water and Exclusion: A Case Study from California's Central Valley*, 100 CAL. L. REV. 223, 245 (2012) (critiquing the fragmentation and insulation of water districts). For a similar critique of municipal utility districts in Texas, see Sara C. Galvan, *Wrestling with MUDs to Pin Down the Truth About Special Districts*, 75 FORDHAM L. REV. 3041, 3068 (2007).

⁹² See, e.g., Dan Schwarz, *Preventing Regulatory Capture Through Consumer Empowerment Programs: Some Evidence from Insurance Regulation*, in PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT 365 (Daniel Carpenter & David Moss eds., 2013).

⁹³ See, e.g., Lisa B. Bingham, *The Next Generation of Administrative Law: Building the Legal Infrastructure for Collaborative Governance*, 2010 WISC. L. REV. 297, 350–56 (2010)

These measures would help provide a more visible and empowered institutional foothold for participation. Indeed, in the past, grassroots participation in public utility governance had been facilitated by “Citizens’ Utility Boards” (CUBs), which enrolled members through flyers printed on utility bills by state mandate and operated as third-party monitors of utility policies and decisions. This practice of requiring utility companies to include the CUB enrollment flyer on their own printed materials was barred by the Supreme Court as a form of impermissible compelled speech.⁹⁴ CUBs have since continued to exist in some states as nonprofit advocacy organizations with varying degrees of formal support such as public funding, and informal support such as norms of participation in utility policy decisions.⁹⁵ Institutionalizing stakeholder representation and engagement within the utility itself would help overcome these reductions in direct stakeholder influence.

C. Public oversight over the broader water infrastructure

Re-publicizing, and democratizing, water authorities offers one way to restore public utility-style oversight of the water system and assure more equitable access. But as the discussion in Part I suggests, modern mechanisms of exclusion involve a range of actors that extend well beyond the formal boundaries of the water utility itself, however democratized it might be. The fragmentation of jurisdictions as well as the privatization and financialization of water systems raise further challenges for the goals of assuring equity and access. In response to these modern-day challenges, water equity could be achieved through a variation on the public utility idea: the establishment of more centralized, and empowered forms of public oversight, aimed at the larger domain of water infrastructure broadly construed.

1. The importance of strategic and system-wide public oversight

In some sense, the modern administrative state with its generalized powers to regulate commerce, provide for consumer protection, and prevent discrimination is a product of how public utility models led to the mainstreaming and institutionalization of regulatory authority.⁹⁶ But it is also true that not all forms of regulatory oversight are equally influential on the larger dynamics of equality, inclusion, and access to basic goods. As several recent historical accounts suggest, much of the mid- and late-twentieth century

(proposing language for a new Federal executive order that would prioritize management of collaborative and participatory processes).

⁹⁴ See *Pacific Gas and Elec. Co. v. Public Utilities Com’n of California*, 475 U.S. 1, 18 (1986).

⁹⁵ See, e.g., CUB of Minnesota, <http://cubminnesota.org/about-us/> [<https://perma.cc/5PDR-DAH3>]; Oregon CUB, <https://oregoncub.org/about-us/> (last visited Mar. 3, 2018) [<https://perma.cc/E3JY-BBVG>]; CUB of Wisconsin, <http://www.wiscub.org/about> [<https://perma.cc/8NFV-MAHB>].

⁹⁶ See *Law and the Social Control of American Capitalism*, *supra* note 44.

achievement of norms of nondiscrimination and equal access in areas like healthcare, welfare, and equal employment in fact depended on the creative and strategic application of regulatory authority in ways that maximized the larger impact of public oversight to create a more widespread private acceptance of these norms.⁹⁷ Thus, the 20th century establishment of laws and norms of anti-discrimination and universal access to entitlements like Medicare all owe a great deal to the background efforts by administrators to create new offices and techniques of oversight, enforcement, and even organizational cultural change.⁹⁸ Through strategic use of federal authority over spending grants,⁹⁹ and by creating new offices charged with oversight and monitoring of racial discrimination charges, federal agencies could resist efforts by state regulators to restrict access to these safety net programs on the basis of race or ethnicity.¹⁰⁰ Similarly, norms of equal employment in private industry spread in part where federal agencies like the Federal Communications Commission (“FCC”) deployed their licensing powers strategically.¹⁰¹ In particular, the FCC began to require internal equal employment practices on the part of communications firms as a condition for receiving FCC licenses.¹⁰² This had a tremendous impact on broader employment practices as these firms were themselves major employers in the mid-century.¹⁰³

A full exposition of these rich and revealing historical accounts is beyond the scope of this paper, but these examples indicate a key theme: to the extent that regulatory authorities can exercise control over key “linchpins” of the modern economy—through control of federal grantmaking to states, leveraging licensing authorities over economically-significant firms, and the like, regulators were able to catalyze a much wider ripple effect across the

⁹⁷ See, e.g., DAVID BARTON SMITH, *THE POWER TO HEAL: CIVIL RIGHTS, MEDICARE, AND THE STRUGGLE TO TRANSFORM AMERICA’S HEALTH CARE SYSTEM* 104–40 (2016) (describing the inner battles between bureaucratic reformers, critics, and the civil rights movement to ensure racially nondiscriminatory application of Medicare in what at the time remained a racially-segregated healthcare system).

⁹⁸ See *id.*

⁹⁹ On the use of grants and funding conditions as a key policy tool for federal agencies, see Eloise Pasachoff, *Agency Enforcement of Spending Clause Statutes: A Defense of the Funding Cut-Off*, 124 *YALE L. J.* 248, 317 (2014). For a critical analysis of how such funding conditionality could be used to create new entitlements beyond statutory intent and Congressional oversight, see Mila Sohoni, *On Dollars and Deference: Agencies, Spending, and Economic Rights*, 66 *DUKE L.J.* 1677, 1688 (2017).

¹⁰⁰ See SMITH, *supra* note 97; see also Karen Tani, *Administrative Equal Protection: Federalism, the Fourteenth Amendment, and the Rights of the Poor*, 100 *CORNELL L. REV.* 825, 863 (2015) (documenting how bureaucrats pioneered rationality-review models of equal protection through which restrictive state welfare rules were evaluated and often overturned by federal counterparts in the 1940s and 1950s).

¹⁰¹ See SOPHIA Z. LEE, *THE WORKPLACE CONSTITUTION FROM THE NEW DEAL TO THE NEW RIGHT* 155–74 (2014)

¹⁰² See *id.* at 164.

¹⁰³ See *id.* at 155–74, 197–203 (exploring the evolution of equal employment rights through battles over the hiring and promotion practices in regulatory agencies like the Federal Communications Commission and the Federal Power Commission); Sophia Z. Lee, *Race, Sex, and Rulemaking: Administrative Constitutionalism and the Workplace, 1960 to the Present*, 96 *VA. L. REV.* 799, 841 (2010).

social and economic landscape. Furthermore, by investing in monitoring and enforcement capacities, these effects could be further expanded and consolidated. In context of water and infrastructural inclusion, this theme suggests that, as the larger water infrastructure implicates a wider ecosystem of public and private actors through privatization, financialization, and the fragmentation of municipal authorities, policies assuring fair and equal access can be implemented more effectively if regulators can establish leverage over similarly critical “linchpins” in the larger water system. To put it another way, strategic regulatory enforcement that targets influential firms is more effective than enforcement regimes which focus on surface—or individual-level—harms.¹⁰⁴

This view of strategic enforcement suggests the need for specific enforcement agencies that are empowered to oversee—and pressure if needed—a wide range of actors involved in shaping the water infrastructure: multiple municipal bodies, utilities, state regulators, private providers, and investors. Indeed, the idea of environmental justice and environmental racism which informed not only social movements but also the creation of the Environmental Protection Agency’s Office of Environmental Justice (“OEJ”) can play an important role here in facilitating more strategic and macro-level policies to address systematic forms of infrastructural exclusion¹⁰⁵—provided the Office is given more established powers, budgets, and insulation from political pressure and recurrent attempts to weaken or eliminate it.¹⁰⁶

In addition to strengthening administrative bodies like OEJ, addressing systematic forms of water exclusion would require more robust regulatory oversight of private actors that are not themselves directly involved in the administration of water systems. First, agencies overseeing water equity would have to address the realities of privatization. Given the realities of privatization and “government by contract”¹⁰⁷ scholars have suggested the

¹⁰⁴ This is a key insight that shaped parallel attempts by the Obama Administration’s Department of Labor to enforce labor laws in a similarly fragmented and diffuse modern economy where many workplace policies are set not by the formal employers themselves, but by “lead firms” who through outsourcing and franchising agreements exercise outsized influence on the labor practices of a whole sector. See DAVID WEIL, *THE FISSURED WORKPLACE* 222 (2014).

¹⁰⁵ On the environmental justice movement and the creation of the Office, see, e.g., Richard Lazarus, *Pursuing ‘Environmental Justice’: The Distributional Effects of Environmental Protection*, 87 Nw. U. L. REV. 787 (1992); Executive Order 12898, *Federal Actions to Address Environmental Justice* (February 11, 1994); and LUKE COLE & SHEILA FOSTER, *FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE ENVIRONMENTAL JUSTICE MOVEMENT* (2001).

¹⁰⁶ See Talia Buford, *Has the Movement for Environmental Justice Been Lost?*, PROPUBLICA (July 24, 2017, 8:00 AM), <https://www.propublica.org/article/has-the-moment-for-environmental-justice-been-lost> [https://perma.cc/M5JM-L8VK] (describing the potential elimination of the Office for Environmental Justice and its precarious position under the Bush and Trump administrations).

¹⁰⁷ On the larger pattern of privatization and possible solutions to it, see, e.g., *GOVERNMENT BY CONTRACT: OUTSOURCING AND AMERICAN DEMOCRACY* (Jody Freeman & Martha Minow eds., 2009).

implementation of public law standards of accountability through procurement offices and outsourcing contracts. These contracts could, for example, mandate transparency, public participation, third-party monitoring, and performance benchmarks. These contracts could also include termination or governmental takeover provisions, reverting the service back to public provision under conditions to prevent more extreme abuses of power.¹⁰⁸ For this to work, governments would need to create robust enforcement agencies to monitor compliance even if the contracts themselves were rewritten along these lines.

Second, regulatory oversight would have to expand to address the role of investors and the financialization of water systems. Indeed, it is notable that one of the key implications of the public utility critique of private power and concern over infrastructure was precisely such an effort to limit outsized investor power. After an exhaustive study documenting a hidden oligarchy of investors who, through holding companies had acquired dominant control over gas and electric utilities, Congress passed the Public Utility Holding Company Act of 1935 (PUHCA).¹⁰⁹ The Act required all holding companies that owned electric and gas utilities to register with the Securities and Exchange Commission (“SEC”), which in turn was empowered to mandate where it deemed appropriate restructuring of the corporate ownership structure. PUHCA was part of the larger Progressive Era ethos attacking concentrated private power over public utilities. Unsurprisingly, PUHCA was controversial when implemented, and though it became institutionalized for much of the 20th century, it was repealed in 2005.¹¹⁰ PUHCA could be reinstated at the federal level, applied to water utility holding companies, and extended to private equity investors in water systems.¹¹¹ Requiring greater transparency of investor ownership of utilities, and simplifying the chain of ownership, would have a number of benefits: first in making clear who actually owns the utility and thus who has ultimate responsibility and control for the utility’s actions; and second in reducing potential conflicts of interest and misaligned incentives that could arise if the utility were held by different types of investors with other financial stakes.

2. Institutionalizing strategic enforcement

Recall that the public utility idea and public trust concept both operated as a way to rebalance the power differential between private actors with

¹⁰⁸ See Alfred C. Aman, Jr. & Joseph C. Dugan, *The Human Side of Public-Private Partnerships: From New Deal Regulation to Administrative Law Management*, 102 IOWA L. REV. 883, 923 (2017); Laura Dickinson, *Public Values/Private Contract*, in GOVERNMENT BY CONTRACT, *supra* note 107, 335, 336.

¹⁰⁹ Pub. L. No. 74-333, 49 Stat. 803 (1935) (codified at 15 USC §§ 79–79z-6 (2016)).

¹¹⁰ Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 § 1263 (2005).

¹¹¹ Cf. Roberta Karmel, *Is the Public Utility Holding Company Act a Model for Breaking Up the Banks That are Too-Big-to-Fail?*, 62 HASTINGS L. J. 821, 856–62 (2011) (describing the applicability of PUHCA for addressing systemic financial risk).

control over infrastructure and the public at large. These strategies for monitoring the wider water infrastructure would require a similar creation of dedicated water oversight and enforcement. Formal bodies for “proxy advocacy” such as ombudsmen or dedicated offices charged with advocating for end users could be valuable in this context.¹¹² In Michigan, some legislators have already proposed the creation of citizen-based oversight commissions, and a “water ombudsmen.”¹¹³ Notably, the city of Flint has responded to the water crisis in part by creating a dedicated city “health officer” whose job is primarily to interface and negotiate with other state-level authorities like the Michigan DEQ, the state legislature, and special districts to ensure Flint’s concerns were not being overlooked.¹¹⁴ These are important first steps, but these offices would need to be made much more powerful and imbued with greater resources and capacities to employ the kinds of oversight tools suggested above, for example through greater budget allocations and statutory changes in state law. Such consolidated authority can help overcome problems of fragmentation and regulatory failure noted in Part I above.¹¹⁵

While new administrative bodies at the state or federal level could be authorized with such powers, it will also be important that these offices are themselves democratically accountable. Accountability is crucial to preventing the regulatory failures of the kind noted in Part I above. But it is also important that participation be situated in these kinds of bodies that exercise macro, system-wide authority. Too often, participatory reforms in urban planning focus on a hyper-local view of participation, such as through community boards and other local forums. This focus further fragments the urban polity and cabins participation in bodies that have little influence on the larger economic structures producing urban inequality.¹¹⁶ A similar problem arises in context of environmental permitting, which takes place at too small

¹¹² On the general idea of proxy advocacy and dedicated institutional representatives, see Schwarz, *supra* note 92, at 366; Mariano-Florentino Cuellar, *Rethinking Regulatory Democracy*, 57 ADMIN. L. REV. 411, 491 (2005); Margo Schlanger, *Offices of Goodness: Influence Without Authority in Federal Agencies*, 36 CARDOZO L. REV. 53, 55 (2014).

¹¹³ See H.R. 4201, 99 Leg. (Mich. 2017) and 4214 § 3102, 99 Leg. (Mich. 2017) (together proposing creation of a Water Resources Commission with significant representation by members of the public); H.R. 4375, 99 Leg. (Mich. 2017) (proposing establishment of a Water Ombudsman).

¹¹⁴ Interviews with Ford Foundation staff (Nov. 2017). The health officer position was created last year drawing resources from philanthropic donors like the Ford Foundation to cover staff salary and administrative costs. This remains an early experiment in direct government capacity-building.

¹¹⁵ See also Sabeel Rahman, *Policymaking as Power-Building*, 27 S. CAL. INTERDISC. L. J., (forthcoming 2018) (describing the Consumer Financial Protection Bureau as an example of such institutionalized proxy advocacy and institutionalized representation). It should be noted however, that as the CFPB’s experience suggests, this concentration of authority might also make the body a more visible target for opposing interest groups. The net result is unclear. I suspect that the gains to enabling collective action and representation outweigh this heightened risk of backlash, but this would require further analysis to explore.

¹¹⁶ Authors considering reforms to increase participation by creating hyper local bodies often miss this flaw. See, e.g., Nadav Shoked, *The New Local*, 100 VA. L. REV. 1323 (2014).

a scale and too late in the process to represent genuine community influence on the larger patterns of environmental inequality.¹¹⁷

One way accountability and participation can be assured in these expanded enforcement authorities would be through proxy advocacy and interest representation of the kind described in Part III.B above.

A second approach would be to engage communities in the process of enforcement itself. The countervailing power of affected constituencies can be expanded by providing them with greater points of leverage to assure the monitoring of environmental harms and enforcement of standards of equal access. This in turn can help democratize and hold accountable both the regulators themselves, and the larger water infrastructure. In contrast to participation in *ex ante* permitting or licensing measures such as in the context of the National Environmental Policy Act (NEPA) which creates a process for reviewing the environmental impact of major development projects, or through local level zoning decisions, this approach would provide civil society actors with greater influence on the ongoing day-to-day governance and administration of safety and access standards. Concretely, this kind of empowered participatory monitoring can be accomplished through policy designs that enable third parties to trigger enforcement and inspection procedures on the part of regulators, combined with the publication of available data and metrics on current water and environmental quality.¹¹⁸

In Mumbai, Johannesburg, and other urban areas in the Global South, where water and urban infrastructure have been placed under severe strain by economic development, this kind of participatory monitoring has been key in organizing, power-building, and governance strategy employed by marginalized communities to make greater claims for environmental justice and to insert themselves in the governance of urban infrastructure. The Shack/Slum Dwellers International (SDI), a global coalition of poor, landless residents in particular has pioneered the use of such “pavement census,” monitoring its own neighborhoods to document inadequacies of urban infrastructure, and leveraging that as an advocacy tool to pressure local governments.¹¹⁹ Similar forms of participatory monitoring have been used to shift power over local infrastructure and development governance in the United States as well. Similar strategies were deployed by grassroots organizers

¹¹⁷ Similarly, proponents of hyper-local environmental participation fail to consider this drawback. Cf. Sheila Foster, *The City as an Ecological Space: Social Capital and Urban Land Use*, 82 NOTRE DAME L. REV. 527, 530–43 (2006) (describing a hyper-local fight to preserve community gardens).

¹¹⁸ On this idea of “citizen audits,” See Rahman, *supra* note 115, and Rahman, *From Civic Tech to Civic Capacity: The Case of Citizen Audits*, 50 POL. SCI. & POLITICS 751, 751–52 (2016).

¹¹⁹ On SDI, see XAVIER DE SOUZA BRIGGS, DEMOCRACY AS PROBLEM SOLVING: CIVIC CAPACITY IN COMMUNITIES ACROSS THE GLOBE 91–99 (2008)(documenting the rise of SDI and its use of such participatory monitoring techniques).

under the Community Reinvestment Act and during the War on Poverty.¹²⁰ More recently, the Partnership for Working Families has worked with cities like Oakland to create city-chartered oversight bodies in which local representatives play a major role in auditing and overseeing major urban development projects.¹²¹ Furthermore, the innovation of new forms of “civic technology” through the transparency of data and metrics and the rise of “citizen science” can facilitate this kind of participatory monitoring.¹²² By making public data on environmental quality, and by offering a way for residents to input their own information about on-the-ground infrastructure conditions, state and local government bureaucracies can become more responsive to local conditions.¹²³

IV. CONCLUSION

The tragedy in Flint, Michigan and the larger context of inequality in access to water points to a deeper pattern of structural injustice, exclusion, and inequality in the contemporary American political economy. While much of the public discussion on the inequality crisis focuses on wages, income, and taxes, the water crisis highlights an often hidden but equally urgent dimension of inequality, operating through the governance of basic infrastructure. A combination of bureaucratic failures, fragmented public authorities at the state, local, and federal levels, and the problems of privatization and financialization produce systemic forms of exclusion, inhibiting the ability of many communities to access core infrastructure and goods needed for survival and well-being. Such infrastructural inequality effectively excludes communities from full membership in the polity, by undermining the kinds of basic goods and necessities they can access on free and equal terms, while maintaining ease of access for other constituencies instead. While this paper has highlighted these patterns in context of the water crisis, the same dynamics apply to other kinds of “infrastructure” as well, from the legal construction of urban and exurban geography, to the administering of other necessities beyond water, like internet access, access to finance, and access to housing.¹²⁴

¹²⁰ See Tara J. Melish, *Maximum Feasible Participation of the Poor: New Governance, New Accountability, and a 21st Century War on the Sources of Poverty*, 13 YALE HUM. RTS. & DEV. L.J. 1, 3 (2010).

¹²¹ See Rahman, *supra* note 115, at Part IV (describing the Partnership for Working Families’ model for community monitoring and enforcement of developer commitments to local hiring and neighborhood investment).

¹²² See, e.g., BETH NOVECK, SMART CITIZENS, SMARTER STATE: THE TECHNOLOGIES OF EXPERTISE AND THE FUTURE OF GOVERNING 6 (2015); Hollie Russon Gilman, *The Moment for Participatory Democracy*, STAN. SOC. INNOVATION REV., available at https://ssir.org/articles/entry/the_moment_for_participatory_democracy [<https://perma.cc/Y5CY-CZYX>].

¹²³ See, e.g., NOVECK, *supra* note 122; Gilman, *supra* note 122.

¹²⁴ For a discussion of inequality and public utility-style solutions in these other contexts see e.g. *Private Power: Public Values*, *supra* note 5; Sabeel Rahman, *Constructing Citizenship*:

However, as the public utility tradition suggests, inclusive governance of water infrastructures, and others, is possible, through restored public control and enforcement authorities, and by democratizing those public authorities to make them more responsive and accountable. Indeed, this focus on infrastructure as a key site for inequality on the one hand and the production of *equality* on the other represents a critical front-line for contemporary battles over equality, inclusion, and membership. These are needs felt across racial, gender, urban/rural lines. They represent deep and durable forms of inequality; addressing them would create an equally transformative shift to greater equality of opportunity and inclusion.

It should be no surprise then that social movement organizations like the Partnership for Working Families are beginning to organize around the concept of infrastructure, using it to link together a multi-racial coalition for urban and economic justice.¹²⁵ Like contemporary progressive attempts to assert the “right to the city,” infrastructural inclusion tackles corporate power, urban injustice, and racial exclusion.¹²⁶ But these ideas of infrastructural inclusion also transcend the structural fragmentation of the city itself. Infrastructure also provides a way to address concerns of urban, exurban, and rural constituencies alike. The ideas for infrastructural inclusion developed in context of the water crisis thus represent a crucial dimension of equality advocacy and policymaking—a form of “utility populism” that can play an important role in addressing current concerns about systemic inequality, racial and gender exclusion, and the erosion of democracy itself.¹²⁷

Exclusion and Inclusion through the Governance of Basic Necessities, 118 COLUM. L. R. (forthcoming 2018).

¹²⁵ PARTNERSHIP FOR WORKING FAMILIES, *Our Work*, <http://www.forworkingfamilies.org/campaigns> (last visited March 3, 2018) [<https://perma.cc/U42N-5P5H>](corroborated by author interviews).

¹²⁶ See, e.g., Schragger, *supra* note 3, at 1–5; Harvey, *supra* note 3; Foster & Iaione, *supra* note 41, at 283.

¹²⁷ Kate Aronoff, *Bringing Power to the People: The Unlikely Case for Utility Populism*, DISSENT (Summer 2017), <https://www.dissentmagazine.org/article/the-unlikely-case-for-utility-populism-rural-electric-cooperatives> [<https://perma.cc/A9WL-DNP5>] (coining the term “utility populism” and exploring it in context of electric coops and public utilities).

