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Ensuring Safe Drinking Water In Los Angeles County's Small Water Systems

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Executive Summary

Small water systems in Los Angeles County face difficult challenges in providing safe and affordable drinking water to customers. These include limited financial and personnel resources as well as reduced access to alternative water sources. Small water systems are particularly vulnerable to groundwater contamination and often struggle with regulatory compliance. As a result, they have a higher percentage of water quality problems and higher rates of noncompliance than larger systems. The lack of economies of scale often means that consumers pay more for water from small systems than from larger systems. Despite state efforts to provide funding and management assistance for small systems, small water systems often struggle with acquiring grants and loans, especially for operations and maintenance.

L.A. County's small water systems face their own specific challenges. There is enormous variation in the characteristics and capabilities of county water service providers, with over half of the county's systems serving 10,000 or fewer people. Those smaller systems more frequently rely on groundwater, which in L.A. County is often contaminated, requiring expensive treatment before the water is drinkable. Additionally, lead contamination from both pipes and industrial contaminants can be a problem for many of the county's small water systems.

Most of the challenges small water systems face are predominantly funding problems. Small water systems that struggle with water quality compliance or with reliability and affordability are often also undercapitalized entities. California thus needs not only to ensure adequate levels of funding, but to target funding and policy mechanisms so they meaningfully address the specific problems smaller systems face.

We recommend three approaches. First, the state should improve data collection and dissemination specifically targeting (1) water quality of small water systems; (2) water pricing and customer income levels; and (3) the benefits and drawbacks of water system consolidation. Second, the Water Board should make greater use of its authority to pursue water system consolidations, along with an increase in the scope of that authority and more funding to support consolidation. Third, the state must find ways to supply greater funding for small water system operations and maintenance, infrastructural improvements, and disaster planning.

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Introduction

Achieving water safety and affordability can be particularly challenging for small and disadvantaged communities.

The State of California has declared that every human has a right to safe, affordable, accessible drinking water.[1] Most water systems are able to fulfill this right for most members of the communities they serve. Small water systems, though, raise a series of concerns over adequate provision of safe and affordable water.[2] These difficulties have long been recognized. The National Research Council, for example, addressed them in a landmark report more than twenty years ago.[3] In 2016, the State Water Resources Control Board ("Water Board") stated that achieving water safety and affordability goals "can be particularly challenging for small and disadvantaged communities that lack the resources to fund basic capital costs, let alone the ongoing costs of maintenance, energy, treatment and personnel needed to operate" water systems.[4] This is especially true for small water systems in Los Angeles (L.A.) County, which is more populous than 41 states.

This Pritzker Brief explores the challenges facing small water providers in L.A. County. First, the brief describes the structure of water systems (both large and small) in the county. Second, it explains the particular management and capital challenges that small systems face. Third, the brief focuses on the threats posed to the county's small water systems by groundwater contamination and lead leached from older pipes and fixtures. Finally, the brief identifies recent trends in state law and sets out policy proposals to ensure safe provision of drinking water by small systems in L.A. County.

1 The California Water Code states that "every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Cal. Water Code § 106.3.

2 Small water systems, as described in the federal Safe Drinking Water Act, are water systems that serve more than 25 people and fewer than 10,000. 42 USC § 300g-1(b)(4)(E)(ii).

3 *See, e.g.* Nat'l Research Council, Safe Water From Every Tap: Improving Water Service to Small Communities (Washington, DC: The National Academies Press, 1997), *available at* https://doi.org/10.17226/5291.

4 Cal. Water Res. Control Bd., Frequently Asked Questions on Mandatory Consolidation or Extension of Service for Water Systems (Nov. 7, 2016), *available at* https://www.waterboards.ca.gov/drinking_water/programs/compliance/docs/fs082415_mand_consolid_faq.pdf.

Drinking Water Providers in L.A. County

There is enormous variation in the characteristics and capabilities of L.A. County water service providers. More than 200 systems range in size from the Los Angeles Department of Water and Power, which serves over 4 million people, to Winterhaven Mobile Estates in Antelope Valley, serving just 25 customers.[5] The table below details the size of systems and customers served. As a rough measure, over half of 213 county water systems supply drinking water to 10,000 or fewer people and cumulatively serve over 245,000 customers.[6]

Size distribution of L.A. County water systems[7]

	MINIMUM POPULATION SERVED	MAXIMUM POPULATION SERVICED	NUMBER OF SYSTEMS	TOTAL POPULATION SERVED
SMALL WATER SYSTEMS	25	500	66	9,473
	501	3,300	28	37,347
	3,301	10,000	32	207,594
LARGE WATER SYSTEMS	10,001	100,000	67	2,625,346
	100,001	>4,000,000	20	6,843,653

Large water systems serve most of urban L.A. County's population. Small systems are scattered throughout the county over a broad area, in both rural communities and urban neighborhoods in Los Angeles and other cities in the county. As the text box on page 4 explains, water systems operate under a range of management schemes. The diversity of water systems means they can serve different purposes with some amount of flexibility, but this diversity can also reduce the ability of state agencies to regulate or encourage action consistently across different types of water systems.[8]

The degree of dependence on imported water, local surface water, and local ground water varies from system to system. Overall, local groundwater provides as much as 38% of the county's total water supply.[9] Groundwater usage has been greatest during droughts, when groundwater recharge is reduced.[10] Importantly, the majority of L.A. County water systems that serve 3,300 or fewer people are *wholly* reliant on local groundwater.[11] By contrast, larger systems' supplies often consist of groundwater and surface water, providing redundancy when a particular supply is scarce.

5 Gregory Pierce & Henry McCann, Los Angeles County Community Water Systems: Atlas and Policy Guide 9 (UCLA Luskin Center for Innovation, Nov. 2015), *available at* http://innovation.luskin.ucla.edu/content/los-angeles-county-community-water-systems-atlas-and-policy-guide [hereinafter Water Atlas].

6 Ninety-four of 213 drinking water systems (44%) serve fewer than 3,300 customers. An additional 32 serve between 3,301 and 10,000. Thus 126 of 213 community water systems in the county, or about 59%, are small water systems under the EPA's definition. *Id.* at 9. Although the EPA and the Water Board count a total of 228 water systems in L.A. County, the systems in this table only count 213 of them because several listed systems included water wholesalers, had undefined boundaries, or were transitioning ownership at the time of the Water Atlas. *Id.* at 66 n.4.

7 *Id.*

8 *Id.* at 10.

9 Mark Gold, Stephanie Pincetl & Felicia Federico, 2015 Environmental Report Card for Los Angeles County 12 (UCLA Inst. of the Env't and Sustainability, 2015), *available at* https://www.ioes.ucla.edu/wp-content/uploads/report-card-2015-water.pdf.

10 *See* Mu Xiao et al., *How much groundwater did California's Central Valley lose during the 2012–2016 drought?*, 44 Geoph. Res. Lett. 4872 (2017); W.M. Alley, T.E. Reilly & O.L. Franke, Sustainability of Ground-Water Resources: U.S. Geological Survey Circular 1186 at p. 20-21 (U.S. Geol. Survey, 1999), *available at* https://pubs.usgs.gov/circ/circ1186/html/boxb.html.

Affordability of water and equity of pricing are also a concern in L.A. County. Although it is difficult to pin down the number of families for whom drinking water is unaffordable, water prices are almost certainly too high for many families in L.A. County.[12] Water bills for L.A. County residents often exceed $1,000 and can reach as high as $2,244 per family per year.[13] Pricing and customer income data are difficult to obtain for many individual small water systems, but due to the high prices that L.A. systems reach, and the possibility that systems with smaller customer bases will have to charge higher prices to compensate for higher costs per customer, affordability is almost certainly a significant concern for many of L.A. County's small water systems.[14] Because of the enormous disparities in income across L.A. County, and the enormous variance in pricing across water systems, equity merits special consideration when some systems are not meeting the expectations of the state's Right to Water goals.

Water System Types

- **MUNICIPAL UTILITIES. Municipal utilities are authorized by municipal codes and managed under city regulations. These include many city utilities, including the largest water provider in the county, the L.A. Department of Water and Power.**
- **PRIVATE WATER SYSTEMS. Private systems range from large investor-owned utilities to smaller systems that provide water as an ancillary service, such as a mobile home park's residential water system. The California Public Utilities Commission ("CPUC") regulates private water systems. More than half of the 66 water systems serving fewer than 500 people in L.A. County are privately owned.[15]**
- **MUTUAL WATER COMPANIES. These are created by private agreements among landowners or other entities to share water delivery responsibilities and benefits. Some were formed for agricultural irrigation purposes, others to facilitate real estate development outside of formal cities in L.A County.[16] Mutual water companies can be investor-owned. Many mutual water companies are not regulated by the CPUC, but instead fall under the California Corporations Code. They typically face few regulatory requirements governing public access to information, community participation, and water rate adjustments.[17] Almost one-third of the water systems serving fewer than 500 people in L.A. County are mutual water companies.[18]**
- **SPECIAL DISTRICTS. Typically set up by governmental action, special districts include irrigation districts and county water districts, and they often operate on unincorporated land. They are managed directly by governmental entities or by independent governing boards. The California Water Code regulates special districts.**

This categorization of water system types is primarily adopted from: Laurel Firestone, Guide to Community Drinking Water Advocacy at 105-27, (Community Water Center, 2009), available at https://www.communitywatercenter.org/cwc_community_guide.

11 Cal. Water Res. Control Bd., Communities that Rely on a Contaminated Groundwater Source for Drinking Water 34, table 1.3, (Report to the Legislature, Jan. 2013), *available at* https://www.waterboards.ca.gov/water_issues/programs/gama/ab2222/docs/ab2222.pdf [hereinafter Communities that Rely on Contaminated Groundwater].

12 *See* Water Atlas at 46.

13 *Id.* The EPA has previously stated that water costs should not exceed two percent of a community's mean household income ("MHI"). However that standard, and MHI-based thresholds in general, have come under widespread criticism for being arbitrary and not grounded in any empirical analysis. *See, e.g.* Nat'l Acad. of Pub. Admin., Developing a New Framework for Community Affordability of Clean Water Services 44-49 (2017). MHI-based estimates also miss many poorer people who may have affordability problems, such as those living in affluent communities; therefore examining actual household income may be a more useful approach. *See, e.g.* Juliet Christian-Smith, Carolina Balazs, Matthew Heberger, & Karl Longley, Assessing Water Affordability: A Pilot Study in Two Regions in California (Pac. Inst., 2013), *available at* https://www.waterboards.ca.gov/water_issues/programs/hr2w/docs/references/pacificinst_assessing_water_affordability.pdf.

14 "Community water systems for which we could not collect pricing data in Los Angeles County tended to be much smaller and serve populations with lower median incomes than those that did report pricing data. Affordability may be more of a concern among customers of these systems due both to the higher average cost of service provided by small water systems and the lower income levels among customers of these systems." Water Atlas at 47.

15 *Id.* at 10.

16 *About Mutuals*, Cal. Ass'n of Mut. Water Cos., *available at* https://calmutuals.org/about-mutuals/ (last visited on Feb. 22, 2018); Laurel Firestone, Guide to Community Drinking Water Advocacy 122–127 (Comm. Water Ctr, 2009).

17 Water Atlas at 10.

18 *Id.*

Why Focus on Small Water Systems?

Small water systems face unique challenges. They frequently fail to benefit from the efficiencies that flow from economies of scale. As a result, small systems often have fewer sources of water available to them and fewer financial and personnel resources. Small water systems possess less developed infrastructure and can struggle to raise money to fund improvements or address problems.

Small systems are scattered throughout the county over a broad area, in both rural communities and urban neighborhoods in Los Angeles and other cities in the county.

Because of their greater customer base and access to capital, large water systems tend to have advantages over small systems. These often include: (1) more customers to divide the cost of improvements between; (2) more technical expertise; (3) better management skills and knowledge; (4) increased ability to solve operational problems internally; and (5) dedicated financial and business staff. Larger systems tend to have more highly-trained treatment and distribution system operators, who are more likely to be present and prepared to address incidents or emergencies.[19] Small systems often lack such staff.[20]

For these reasons, small water systems struggle with compliance. They have a higher percentage of water quality issues and higher rates of noncompliance with water quality standards than larger systems.[21] Eight percent of the state's small water systems violated one or more health-based drinking water standards at least once over the period from 2002 to 2010.[22] In particular, water systems serving between 15 and 200 service connections have the greatest noncompliance rates with state standards, especially in disadvantaged communities.[23] Less than half of systems serving fewer than 200 connections meet state drinking water standards and requirements.[24] These compliance struggles can harm public health. In a 2006 report, U.S. Environmental Protection Agency ("EPA") noted that direct data on the health impacts of small water systems was limited and underreported, but that some data "show health outbreaks related to small water systems."[25]

Many of the struggles of small water systems are due to the types of challenges listed below.

19 "They often lack technical expertise, the ability to address many of the issues pertinent to operating a water system, as well as qualified management and financial and business personnel. In many instances, especially for very small water systems, the system operator may be just a part-time position." Cal. Water Res. Control Bd., Safe Drinking Water Plan for California: In Compliance with Health & Safety Code Section 116365 at p. 60 (June 2015), *available at* https://www.waterboards.ca.gov/publications_forms/publications/legislative/docs/2015/sdwp.pdf [hereinafter Safe Drinking Water Plan].

20 *Id.*

21 *Id.* at 15. There is a distinction between general water quality issues and noncompliance with water quality standards, in that contaminants can be detected at levels below a legal threshold, but within a recognized range at which there still may be risks to health, flavor, or color. One example contaminant for which there could be a water quality issue, but a system could still be compliant with standards, is lead, which is recognized to pose health risks at any level. *See Basic Information about Lead in Drinking Water,* EPA.gov (Mar. 2018), https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water. Another is manganese, which, in small amounts, may not pose a health threat but will affect color and taste. Safe Drinking Water Plan at 45.

22 Kristina Donnelly, *Financing Drinking Water Infrastructure – Updates from the Golden State*, Pac. Inst. (July 16, 2013), https://pacinst.org/financing-drinking-water-infrastructure-updates-from-the-golden-state/. Systems are not penalized for violating public health goals, but the goals do provide useful benchmarks for judging water quality and for designing regulatory standards. *Public Health Goals (PHGs)*, Cal. Office of Envtl. Health Hazard Assessment (2018), https://oehha.ca.gov/water/public-health-goals-phgs.

23 Safe Drinking Water Plan at 190.

24 *Id.*

25 EPA Office of the Inspector Gen., Much Effort and Resources Needed to Help Small Drinking Water Systems Overcome Challenges 32 (May 30, 2006, Report No. 2006-P-00026), *available at* https://www.epa.gov/sites/production/files/2015-11/documents/20060530-2006-p-00026.pdf.

Monitoring and reporting

Water systems serving 3,300 to 10,000 customers have over seven times more monitoring and reporting violations, per 1,000 customers, than larger systems.[26] Systems serving fewer than 3,300 people violate monitoring and reporting requirements at still higher rates.[27] Smaller systems have higher monitoring costs per capita.[28] Over time, the increase in the number of regulated contaminants means monitoring costs will continue to increase for water systems, making compliance even more burdensome.

There is a great deal of uncertainty about the performance of the smallest systems—called "state small systems"—because they fall beneath the thresholds of the federal Safe Drinking Water Act ("SDWA") and state safe drinking water law. The SDWA does not apply to private wells, systems serving fewer than 25 people, or systems with fewer than 15 service connections.[29] State small systems are regulated at the county level and have less extensive reporting requirements, resulting in a paucity of data. Outside of initial testing during system permitting, private wells are not regulated at all by the state and although L.A. County recommends continued testing, it does not mandate it.[30]

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26 EPA, National Characteristics of Drinking Water Systems Serving 10,000 or Fewer People 36 Exh. 2.48 and p. A-44 tbl. 38 (2011), *available at* http://dnrc.mt.gov/divisions/cardd/docs/resource-development/w2asact-docs/REVFINALNatCharacteJuly2011508compliant.pdf.

27 Systems serving from 501 to 3,300 customers have over 28 times as many monitoring and reporting violations per 1,000 customers as those with 10,000 or more customers. Systems serving fewer than 500 people commit monitoring and reporting violations over 350 times more—per 100 customers—than those with more than 10,000 customers. *Id.*

28 Shadi Eskaf, *Small Water Systems with Financial Difficulties are More Likely to Violate EPA Regulations*, The Environmental Finance Blog (Jan. 28, 2015), http://efc.web.unc.edu/2015/01/28/small-water-systems-financial-difficulties-likely-violate-epa-regulations/.

29 42 USC § 300f(4)(A); Cal. Health and Safety Code § 116275.

30 "The Department recommends that private wells be tested on a regular basis for nitrate, coliform bacteria, and primary inorganic chemicals (i.e. arsenic, lead, copper, etc.) to detect contamination problems early." Cnty. of Los Angeles Dep't of Pub. Health, Requirements and Procedures for Private and Commercial Water Wells Handbook 20-21, *available at* http://publichealth.lacounty.gov/eh/docs/ep_dw_Handbook.pdf (last visited on Sept. 18, 2018).

Treatment

In California, installing and operating water treatment is often difficult for small systems.[31] And, technological advances in treatment have not led to affordability for small and disadvantaged communities. Treatment facilities are technically challenging to maintain and operate, and the lack of affordable technologies for small systems impedes delivery of safe drinking water.[32] Per household, treatment costs are more than four times as high for systems serving 100 people or fewer than for systems serving greater than 10,000 people.[33]

One example of the difficulty in paying treatment costs can be found in Lanare, a small community in the San Joaquin Valley, where a treatment plant was constructed and paid for with $1.3 million in federal community development funds. In 2007, when the new plant went into operation, the cost of water for the community rose drastically and, within six months, the town was $100,000 in debt and the plant was shut down due to the higher-than-anticipated operating costs. The plant sat unused through 2017.[34] Eventually, the Water Board approved funding for the town to dig new wells,[35] partly because the town had never been able to obtain money for operating and maintaining the treatment plant.

Staffing

Small water systems lack resources and personnel for filling staffing needs. Volunteer utility boards often manage them; the members often lack formal training "and may lack skills in effective decision-making, dealing with conflict, working with groups, building consensus, and strategic planning."[36] High turnover can result in shifting priorities, lack of institutional memory, and less transfer of knowledge.

Small communities often cannot hire the professional staff they need.[37] If a small water system has a treatment facility, it will likely have a harder time acquiring and retaining water system operators with the necessary expertise.[38] Larger systems can pay higher salaries, and many small water systems are in smaller rural communities where the availability of certified operators—required by the EPA—is limited.[39] In L.A. County, many small systems are surrounded by larger systems that can pay higher wages.

31 Safe Drinking Water Plan at 127.
32 *Id.* at 180.
33 Deb Martin, Affordability and Capability Issues of Small Water and Wastewaters Systems: A Case for Regionalization of Small Systems at 2 (Rural Cmty. Assistance P'ship), https://rcap.org/wp-content/uploads/2012/01/Regionalization-Great-Lakes-RCAP-final.pdf. (*citing* EPA, Handbook for Capacity Development: Developing Water System Capacity Under the Safe Drinking Water Act as Amended in 1996 at 32, (2001)).
34 Ezra David Romero & Jerry Klein, *They Built It, But Couldn't Afford To Run It—Clean Drinking Water Fight Focuses On Gaps In Funding*, Valley Public Radio (June 6, 2017), *available at* http://www.kvpr.org/post/they-built-it-couldn-t-afford-run-it-clean-drinking-water-fight-focuses-gaps-funding; Patricia Leigh Brown, *The Problem Is Clear: The Water Is Filthy*, New York Times (Nov. 13, 2012), *available at* http://www.nytimes.com/2012/11/14/us/tainted-water-in-california-farmworker-communities.html?pagewanted=1&hp.
35 Ezra David Romero & Jerry Klein, *They Built It, But Couldn't Afford To Run It—Clean Drinking Water Fight Focuses On Gaps In Funding*, Valley Public Radio (June 6, 2017), *available at* http://www.kvpr.org/post/they-built-it-couldn-t-afford-run-it-clean-drinking-water-fight-focuses-gaps-funding.
36 Deb Martin, Affordability and Capability Issues of Small Water and Wastewaters Systems: A Case for Regionalization of Small Systems 2 (Rural Cmty. Assistance P'ship, 2012), https://rcap.org/wp-content/uploads/2012/01/Regionalization-Great-Lakes-RCAP-final.pdf.
37 *Id.*
38 Safe Drinking Water Plan at 58.
39 *Id.*

Reliability, redundancies, standby equipment

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Small systems' water services can be less reliable and less sustainable than the services of larger systems. A smaller revenue base makes it harder to save for future infrastructural or emergency needs. Standby equipment and emergency redundancies are less common in small systems. Water distribution includes pipes, storage, pumps, and other equipment for which maintenance and operation is critical, especially during disasters.[40] Although some California water systems have worked on disaster preparedness, small water systems have done so less often.[41] Additionally, small water systems may not always be eligible for federal disaster funds. In one recent example from Sonoma County, a mutual water system serving fewer than 200 people was found ineligible for disaster relief from the Federal Emergency Management Agency because it was not included in local hazard mitigation plans and, as a private utility that did not serve the general public, did not classify as providing an essential government service.[42]

Rates

The systems least likely to be able to provide robust rate assistance are small systems and those serving predominantly disadvantaged communities.

Customers in small systems and systems serving disadvantaged communities often pay high rates[43] and have reduced access to rate assistance programs, which use rate payments from some customers to subsidize disadvantaged ones. Under state law, many systems are not obligated to provide rate assistance.[44] While large investor-owned utilities must do so, privately owned systems may choose to do so, or not.[45] The systems least likely to be able to provide robust rate assistance are small systems and those serving predominantly disadvantaged communities. In disadvantaged communities that lack economic diversity, rate assistance might not be an option because not enough ratepayers are able to subsidize others in need. And larger systems are much more likely to provide rate assistance to low-income customers than are small systems with small rate bases.[46]

40 "The maintenance and operation of the distribution system are critical to meet the demands for water, including during natural disasters such as earthquakes, floods, fires, power outages, etc." Safe Drinking Water Plan at 56.

41 *Id.*

42 *See* Cal. Office of Emergency Servs., Hazard Mitigation Grant Program (HMGP) DR-4382 Fact Sheet, *available at* http://www.caloes.ca.gov/RecoverySite/Documents/DR-4382%20HMGP%20Fact%20Sheet.pdf (last visited Aug. 24, 2018); Personal Communication, Max Gomberg, (Cal. Water Res. Control Bd., 2018).

43 The Luskin authors were unable to obtain pricing data for many smaller community systems that serve populations with lower median incomes. "Affordability may be more of a concern among customers of these systems due both to the higher average cost of service provided by small water systems and the lower income levels among customers of these systems." Water Atlas at 45.

44 The Pac. Inst., Water Rates: Water Affordability at 2-3 (2013).

45 *See* CPUC, Order Instituting Rulemaking Evaluating the Commission's 2010 Water Action Plan Objective of Achieving Consistency between Class A Water Utilities' Low-Income Rate Assistance Programs, Providing Rate Assistance to All Low – Income Customers of Investor-Owned Water Utilities, and Affordability (June 29, 2017); *see also, e.g.* CPUC, *Class A Customer Assistance Programs* (2018), http://www.cpuc.ca.gov/General.aspx?id=2417.

46 Water Atlas at 24. By state law, publicly owned water systems cannot redistribute funds among their customers, meaning that charging some customers to subsidize others may not be possible. Cal. Const. Art. XIII C and D; Cal. Const. Art. XIII A, § 3. However, privately owned systems may redistribute funds, and large investor-owned utilities must do so. *See* CPUC, Order Instituting Rulemaking Evaluating the Commission's 2010 Water Action Plan Objective of Achieving Consistency between Class A Water Utilities' Low-Income Rate Assistance Programs, Providing Rate Assistance to All Low – Income Customers of Investor-Owned Water Utilities, and Affordability (June 29, 2017); *see also, e.g.* CPUC, *Class A Customer Assistance Programs* (2018), http://www.cpuc.ca.gov/General.aspx?id=2417.

Financing

Many small water systems are not financially sustainable as currently operated.[47] They are often incapable of attracting investors. Their smaller size means that repair, upkeep, and regulatory compliance costs are proportionally higher than for a large system. Small systems typically have larger infrastructure funding needs; the cost per customer can be three times as high.[48] Raising customer rates or providing subpar service are often the only options available.[49] Operating expenses outpace revenue for about 30% of small water systems.[50]

Small systems typically have larger infrastructure funding needs; the cost per customer can be three times as high. Raising customer rates or providing subpar service are often the only options available. Operating expenses outpace revenue for about 30% of small water systems.

Obtaining funding from government sources can also be difficult for small systems. California has some state-managed loan and grant programs, but these are often challenging for small systems to access.[51] Other programs are specifically aimed at supporting small systems, but only those that state law defines as disadvantaged.[52] Of those small systems that qualify for loan pro-

47 Deb Martin, Affordability and Capability Issues of Small Water and Wastewaters Systems: A Case for Regionalization of Small Systems at 2, https://rcap.org/wp-content/uploads/2012/01/Regionalization-Great-Lakes-RCAP-final.pdf, (Rural Community Assistance Partnership (citing EPA, 2000 Community Water System Survey at 30 (2002)).

48 A 1999 nationwide EPA study projected that the small system (in this case, defined as fewer than 3,300 customers) need for infrastructure investments was more than $3,300 per household per year (through 2015, compared to $790 per household for large systems). EPA, Developing Water System Capacity Under the Safe Drinking Water Act as Amended in 1996, at p. 32 (EPA 816-R-99-012, July 1999), https://www.epa.gov/sites/production/files/2015-04/documents/epa816r99012.pdf.

49 *See* U.S. Water Alliance, An Equitable Water Future 13 (2017), *available at* http://uswateralliance.org/sites/uswateralliance.org/files/publications/uswa_waterequity_FINAL.pdf.

50 "Approximately 30 percent of small water systems have operating expenses greater than their revenues. Many are not financially sustainable as currently operated. This figure does not include debt service, nor does it take into account those systems that are barely making revenue meet expenses and thus have few reserve or emergency funds. Moreover, many systems delay needed maintenance because expenditures are based on current revenues rather than system needs." Deb Martin, Affordability and Capability Issues of Small Water and Wastewaters Systems: A Case for Regionalization of Small Systems 2 (Rural Cmty. Assistance P'ship, 2012), https://rcap.org/wp-content/uploads/2012/01/Regionalization-Great-Lakes-RCAP-final.pdf, (citing EPA, 2000 Community Water System Survey at 30 (2002)).

51 *See, e.g.* Cal. Water Comm'n, Small Water Systems Workshop 2 (Mar. 2014) https://cwc.ca.gov/-/media/CWC-Website/Files/Documents/2014/03_March/Small-Systems-Workshop-Meeting-Materials/SmallSystems_SummaryRecommendations_Final_7_14_14.pdf?la=en&hash=CFAC5B220551720380943F79A264E326104A6E7B; Ellen Hanak et al., Paying for Water in California 37 (Pub. Policy Inst. of Cal., 2014).

52 *See, e.g.* Cal. Water Res. Control Bd., Drinking Water State Revolving Fund Intended Use Plan (IUP) for SFY 2018-19 at 38-39 (June 19, 2018), *available at* https://www.waterboards.ca.gov/drinking_water/services/funding/documents/srf/iup_2018/dwsrf_iup_sfy2018_19_final.pdf.

grams, many cannot afford loan repayments on top of operation and maintenance costs. Due to the risk of fraud or abuse, most current federal and state funding programs prohibit use of their funds for operations and maintenance costs—but this significantly limits their utility. To obtain state funding for proposed projects, water systems need to show they will be able to manage operations and maintenance going forward, but small systems struggle with this. The scarcity of personnel at small water systems also makes it difficult to pursue grants and loans.

Diversity of water sources

Small systems in L.A. County are particularly vulnerable to contamination because they are more likely than large systems to be dependent on limited groundwater basins. In the county, 73% of very small systems use only groundwater, while larger systems depend less on groundwater in favor of more diverse water supplies.[53] Even for those systems that are not wholly reliant on groundwater, drought can make them more reliant.[54] And those L.A. County small systems that draw from some amount of contaminated groundwater are more likely to be wholly reliant on that groundwater. As a case in point, all the groundwater-dependent small water providers that have violated maximum contaminant loads "(MCLs")— the legal standards set by the EPA under the SDWA—at the tap rely wholly on groundwater.[55] Further, because smaller systems have fewer wells, they have fewer alternatives when a well is contaminated. Due to their typically smaller geographic bounds, many smaller systems may be unable to site new wells in a location that could draw from uncontaminated water. Even water systems that are larger than the EPA definition of a small system can struggle with finding new sources. Santa Fe Springs, serving 18,199 customers, had to close two wells due to contamination and unsuccessfully attempted to drill a third.[56] It then tried to fix one of the contaminated wells, which resulted in water with bad odors and high temperatures.[57] All of these efforts cost the city water system money without creating any real benefit.[58]

Due to their typically smaller geographic bounds, many smaller systems may be unable to site new wells in a location that could draw from uncontaminated water.

Community engagement

Finally, small water system customers often have less access to data about their water provider and reduced ability to participate in water system decision-making. For example, roughly forty percent of water systems in the county do not provide a public facing website, and those water systems that do not are more likely to serve very small or small populations.[59]

53 More than half of systems serving between 500 and 3,300 customers are wholly reliant on groundwater. For systems serving between 3,300 and 10,000 customers, nearly a quarter are wholly reliant on groundwater. Ten percent of large systems in the county rely only on groundwater. County-wide, 79 systems are wholly reliant on groundwater; 70 of them serve fewer than 10,000 customers. Water Atlas at 13.

54 *Id.* at 17.

55 The larger systems that have had MCL violations rely on a mix of groundwater and purchased water. Communities that Rely on Contaminated Groundwater at 138-141. Of the six L.A. County water systems that exceeded Lead and Copper Rule action levels between 2012 and 2015, four were small water systems, all serving fewer than 3,300 customers. Robert Hopwood and Barrett Newkirk, *Database: Lead in California drinking water*, The Desert Sun (Mar. 16, 2016) (citing data from EPA *via* USA Today), http://www.desertsun.com/story/news/data/2016/03/16/database-lead-california-drinking-water/81873012/.

56 Mike Sprague, *Santa Fe Springs looks for alternate sources of water after contamination forces closure of its only two wells,* (Oct. 19, 2017), https://www.whittierdailynews.com/2017/10/19/santa-fe-springs-looks-for-alternate-sources-of-water-after-contamination-forces-closure-of-its-only-two-wells/.

57 *Id.*

58 *Id.*

59 Water Atlas at 36.

The Story of Maywood and its Small Water Systems

The city of Maywood illustrates many of the problems that smaller systems face. With 26,000 residents, Maywood is an industrial city in southeastern L.A. County with two battery recycling plants and with federal Superfund sites. It is served by three small water systems, Maywood Mutual Water Companies Number 1, 2, and 3, each of which provides water to fewer than 10,000 customers. The water companies draw from both groundwater and purchased surface water.

For years, two of Maywood's water companies produced brown- or tea-colored water. At the time that water quality complaints became a public issue, each company was accountable only to its shareholders, the property owners in town.[60] In the 1990s, after trying to get the mutual water companies to test the water, community groups convinced the state Department of Toxic Substances Control to test their water. The testing found high concentrations of manganese, along with elevated concentrations of trichloroethylene ("TCE").[61] The TCE was generally below the regulatory limit. Manganese's primary effect is on taste and visibility. However, at least one study has noted the potential adverse effects of manganese exposure at high levels.[62]

The time since the discovery of these problems has been marked by remediation efforts and continued testing. In 2013, Governor Jerry Brown signed AB 240, forcing the Maywood water companies to comply with open meeting, public record, and budgetary requirements, making decision processes more transparent. However, the Governor also cut money intended for the system, reducing an appropriation of $7.5 million for cleaning Maywood's water to $1 million.[63]

Recent testing of both drinking water and untreated groundwater by researchers at UCLA found high levels of contamination in the untreated groundwater, with manganese in untreated groundwater at 1,000 times the EPA Secondary Contaminant Limit,[64] trichloroethylene at 2,500 times its MCL,[65] and lead at 5 times the action level that the EPA sets in its Lead and Copper Rule.[66] Although the drinking water in Maywood recently tested as within legal limits for all pollutants, the water still has aesthetic defects that result in many residents forgoing it as drinking water and buying bottled water instead.[67] This suggests that the treatment system has been effective in meeting current health standards, but if residents are still buying their drinking water instead of using the water from the tap, that level of effectiveness is very limited, with serious consequences for affordability.

One strategy that towns like Maywood could use, moving forward, is water system consolidation.[68] A single, larger provider could marshal more resources for treatment and would have more purchasing power, increased negotiation leverage, and the ability to set a water price that is consistent across the town.

60 Additionally, mutual water companies are generally not regulated by the CPUC. *See supra* p.4.

61 *See* UCLA Inst. of the Env't and Sustainability, Assessing Groundwater Contamination in Maywood, California (2016), https://www.ioes.ucla.edu/wp-content/uploads/Practicum_2015-16_Environment_Now_Maywood_Groundwater_Final_Report.pdf; *see also* Hector Becerra, *Maywood gets straight talk about its water quality*, Los Angeles Times (June 29, 2013), *available at* http://articles.latimes.com/2013/jun/29/local/la-me-maywood-water0629-20130630.

62 *See, e.g.* M.F. Bouchard et al., *Intellectual impairment in school-age children exposed to manganese from drinking water*, 119(1) Envtl. Health Perspec. 138 (Jan. 2011), *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018493/. Manganese is currently a secondary contaminant, meaning it is recognized as affecting taste, sight, or smell, but EPA does not enforce MCLs for manganese. *See Secondary Drinking Water Standards: Guidance for Nuisance Chemicals*, EPA.gov, https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-chemicals (last updated on March 8, 2017).

63 Paul, Glickman, *Gov. Brown signs bill enforcing transparency on Maywood water companies,* Southern California Public Radio (Oct. 8, 2013), http://www.scpr.org/blogs/politics/2013/10/08/14924/gov-brown-signs-bill-enforcing-transparency-on-may/.

64 UCLA Inst. of the Env't and Sustainability, Assessing Groundwater Contamination in Maywood, California 35 (2016), https://www.ioes.ucla.edu/wp-content/uploads/Practicum_2015-16_Environment_Now_Maywood_Groundwater_Final_Report.pdf.

65 *Id.* at 12.

66 *Id.*; *see also* Control of Lead and Copper, 40 C.F.R. § 141.80(c) (2018).

67 *Id.* at 111.

68 *See infra* pp. 18-19.

Water Quality Threats to L.A. County's Small Water Systems

L.A. County drinking water systems face contamination threats from a range of sources, including industrial waste and byproducts, lead from older pipes and fixtures, agricultural pollutants, and naturally occurring contaminants. Each water system faces different threats depending on its geography, development, and proximity to specific industries. In this section, we focus on water quality concerns related to groundwater contamination, as well as lead contamination within the drinking water delivery system. We address groundwater because arid Southern California has a high level of reliance on groundwater and will continue to do so. And we look at lead contamination because it has been a topic of national focus and local concern.

Groundwater contamination

Plumes of solvents or other toxics derived directly or indirectly from industrial activities can contaminate water supplies for decades. Similarly, agricultural products including nitrates and pesticides can lead to contamination.

Despite natural variation in its quality, groundwater has long been a valuable source of drinking water.[69] In southern California, where surface water is scarce for most of the year, groundwater can provide a reliable source in an otherwise arid region. Depending on basin geology and water chemistry, the host rock can contribute natural contaminants to groundwater such as arsenic or uranium.[70] Therefore, not all contaminated groundwater is due to human intervention.

Human pollution poses additional challenges to the management of drinking water aquifers. Plumes of solvents or other toxics derived directly or indirectly from industrial activities can contaminate water supplies for decades.[71] Similarly, agricultural products including nitrates and pesticides can lead to contamination.[72] One large plume, the San Gabriel Valley contamination plume, includes four separate Superfund sites[73] comprising 45 residential water suppliers,[74] many of which are smaller water systems.[75] Cleanup efforts have been ongoing for decades, will cost between $200 and $250 million over the next ten years, and will continue for another 50 to 60.[76]

Groundwater contamination is an especially important issue in L.A. County, where more water systems, and more people, rely on contaminated groundwater than in any other California county.[77] Thirty-nine percent of the county's water systems rely in whole or in part on groundwater that is contaminated. More than 900,000 people—11% of the county's population—are wholly reliant on contaminated groundwater.[78]

69 *USGS Water Quality Information, FAQ: How is water naturally filtered or purified?*, USGS (Dec. 28, 2016), https://water.usgs.gov/owq/FAQ.htm#Q23.

70 *Contaminants Found in Groundwater*, U.S. Geological Survey, https://water.usgs.gov/edu/groundwater-contaminants.html (Dec. 2, 2016); A. H. Welch, D. B. Westjohn, D.R. Helsel, & R. B. Wanty, *Arsenic in ground water of the United States-- occurrence and geochemistry* 38(4) Ground Water 589-604 (2000).

71 Alex N. Helperin, David S. Beckman & Dvora Inwood, California's Contaminated Groundwater: Is the State Minding the Store? at p. vi-viii (Natural Resources Defense Council, 2001), *available at* https://www.waterboards.ca.gov/gama/docs/nrdcgw_4_01.pdf .

72 *See* Karen R. Burow, Sylvia V. Stork & Neil M. Dubrovsky, Nitrate and pesticides in ground water in the eastern San Joaquin Valley, California: Occurrence and trends (USGS Water-Resources Investigations Report 98-4040-A, 1998).

73 *Superfund Sites in Southern California*, EPA (2016), https://archive.epa.gov/region9/socal/web/html/index-7.html.

74 Press Release, Reference News Release: EPA orders $20 million Northrop cleanup at San Gabriel Valley Superfund site, EPA (Sept. 4, 2011), *available at* https://www.epa.gov/enforcement/reference-news-release-epa-orders-20-million-northrop-cleanup-san-gabriel-valley.

75 *See* Safe Drinking Water Search for the State of California, EPA Safe Drinking Water Information System, https://iaspub.epa.gov/enviro/sdw_form_v3.create_page?state_abbr=CA (last visited July 22, 2018).

76 Steve Scauzillo, *Contaminated ground water in San Gabriel Valley gets $250 million boost, extending cleanup until 2027*, San Gabriel Valley Tribune (June 4, 2017), *available at* https://www.sgvtribune.com/2017/06/04/contaminated-ground-water-in-san-gabriel-valley-gets-250-million-boost-extending-cleanup-until-2027/.

77 Communities that Rely on Contaminated Groundwater at 12, fig. 1.

78 *Id.* at 32, 34.

Contaminated groundwater creates affordability and accessibility issues because water systems must pay the high cost of installing treatment infrastructure or importing cleaner water, and sometimes both. When groundwater is contaminated and not treated, some water systems continue to provide contaminated water and their customers end up buying bottled water, paying twice.[79] County-wide, groundwater treatment and other operational costs to supply clean water run in the billions of dollars.[80] Those costs are then passed on to customers through higher water rates and assessments, with smaller systems charging higher costs per household.

The State has made strides toward cooperatively managing groundwater, which could ensure that areas like L.A. County have adequate supplies of quality groundwater for longer. The Sustainable Groundwater Management Act (SGMA) of 2014 provides for local and regional Groundwater Sustainability Agencies to prepare sustainability plans for long-term groundwater management.[81] Although the SGMA focuses largely on recharge and supply of groundwater, it also provides for monitoring and maintenance of water quality, and it could aid water systems in working cooperatively to maintain supplies and avoid the high costs of importation.[82] Whether the law will be effective in this manner, though, remains to be seen.

Purchasing imported water is an alternative source to groundwater, but is expensive, and its price is likely to increase. One estimate for imported water puts the cost at $1,476 to $1,790 per acre foot, which is almost double the average cost of local groundwater ($739) even after treatment.[83] Metropolitan Water District's (MWD) rates for imported water increased 96% between

79 Stephen Stock, Michael Bott, Jeremy Carroll, and Felipe Escamilla, *'A Tragedy': Hundreds of Thousands of California Residents Exposed to Contaminated Water*, NBC Mar. 2, 2017), https://www.nbcbayarea.com/investigations/A-Tragedy-Hundreds-of-Thousands-of-California-Residents-Exposed-to-Contaminated-Water-415136393.html.

80 Mark Gold Stephanie Pincetl & Felicia Federico, 2015 Environmental Report Card for L.A. County: Water at 17 (2015), *available at* https://www.ioes.ucla.edu/wp-content/uploads/report-card-2015-water.pdf.

81 Governor's Office of Planning and Research, Sustainable Groundwater Management Act and Related Legislation (2014), http://opr.ca.gov/docs/2014_Sustainable_Groundwater_Management_Legislation_092914.pdf.

82 See Cal. Code of Regulations, Title 23, Chapter 1.5, Subchapter 2, Groundwater Sustainability Plans, https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/GSP_Emergency_Regulations.pdf.

83 Erik Porse at al., *The economic value of local water supplies in Los Angeles*¸1 Nature Sustainability 289, 292 tbl. 2 (2018).

2006 and 2012,[84] and MWD estimates rates will increase at 4.5% a year through 2026.[85] During California's last drought, L.A. Mayor Eric Garcetti cited the cost of water as one reason for an executive order to reduce Los Angeles's dependence on imported water 50% by 2024.[86] The Department of Water and Power's director of water quality has stated that the cost of imported water from the State Water Project and from the Colorado River "is just going to go up."[87]

Because small systems are more reliant on contaminated groundwater, they incur higher treatment costs. The smallest systems are more likely to be significantly or wholly reliant on groundwater,[88] and several of L.A. County's small systems rely on contaminated groundwater that requires extensive treatment, imposing higher water costs than systems with non-contaminated groundwater. For example, in the community of Hollydale, one of the Golden State Water Company's two wells draws from contaminated groundwater.[89] Three of four wells in Glendale's South Montebello Irrigation District, a medium-sized supplier, draw from contaminated water.[90] Much of the impact of groundwater contamination, whether through increased cost of treatment or quality problems, lands on small water systems.

Lead leaching from older water pipes and fixtures

Lead in piped drinking water is an issue nationwide and has been a topic of general concern in L.A. County, and L.A. County's small water systems may face particular challenges with respect to lead in drinking water. Data gaps leave open the possibility that vulnerable populations in the region face greater risk of exposure, as has been evident in communities such as Flint, Michigan.[91] Without more data on which groups are at risk, and about the level of risk, it is difficult to ascertain the extent of the possible problem. The lead action level—at which a water supplier must begin to work with consumers to lower exposure—is 15ppb.[92] Even at these low levels, lead can be harmful to children, especially for cognitive development.[93]

Lead testing occurs within individual water systems and is the only mandatory testing at the tap for community water systems. Small water systems test roughly the same proportion of taps as large ones each year, because the number of taps tested depends on population.[94] But waiver provisions enable some small water systems to test less frequently, which can result in emerging problems going unnoticed for longer. After submitting a certain number of uncontaminated samples, smaller systems may go up to nine years without lead testing.[95] While this

84 Register Staff Writer & Teri Sforza, *Imported water prices: Up 96 percent since 2006*, The Orange County Register (Apr. 15, 2012), *available at* https://www.ocregister.com/2012/04/15/imported-water-prices-up-96-percent-since-2006-2/.

85 Metropolitan Water District Ten-Year Financial Forecast 1 (Feb. 9, 2016), http://www.mwdh2o.com/PDF_Who_We_Are_Proposed_Water_Rates_n_Charges/02092016%20FI%209-2%20A-2.pdf.

86 Mayor Eric Garcetti, Executive Directive No. 5 (Oct. 14, 2014), *available at* https://www.lamayor.org/sites/g/files/wph446/f/page/file/ED_5_-_Emergency_Drought__Response_-_Creating_a_Water_Wise_City.pdf?1426620015.

87 Rong-Gong Lin II & Priya Krishnakumar, *Groundwater contamination a growing problem in L.A. County wells,* Los Angeles Times (May 23, 2015, 6:45 A.M.) *available at* http://www.latimes.com/visuals/graphics/la-me-g-drought-wells-20150520-htmlstory.html.

88 Sixty-three of 84 systems serving fewer than 3,300 customers are wholly dependent on groundwater. Water Atlas at 17.

89 Communities that Rely on Contaminated Groundwater at 138-51.

90 *Id.*

91 Justin Talbot-Zorn & Michael Shank, *What the Flint Crisis Reveals About Inequality in the U.S.*, Time (Feb. 9, 2016), *available* at http://time.com/4212941/flint-and-inequality/.

92 Control of Lead and Copper, 40 C.F.R. § 141.80(c) (2018); Cal. Code Regs. § 64678.

93 R.L. Canfield et al., *Environmental lead exposure and children's cognitive function*, 31(6) The Italian journal of pediatrics 293 (2005).

94 Generally, larger providers must test from 100 sites. Systems that serve under 3,300 customers must test 20 taps per year, and those that serve under 500 customers must test 10 taps per year. Systems serving under 100 customers must test five taps per year. Although both large and small water systems are at risk of lead contamination, this stepwise progression means that many smaller systems test a higher proportion of their taps. The smallest systems test at least 5 percent of taps, and the larger systems test under 1 percent of taps. Cal. Code Regs. tit. 22, § 64675, *available at* https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/lawbook/dwregulations-2017-09-14.pdf.

95 Cal. Code Regs. tit. 22, §§ 64675, 64675.5, 64678.5.

policy reduces burdens on some small systems, it may also permit contamination problems to remain undiscovered over time.[96]

Between 2012 and 2015, six L.A. County water systems exceeded state standards for lead and copper.[97] Four of those six were small water systems. And in L.A. County in 2012, blood tests found over 5% of children tested in four zip codes to have elevated blood lead levels, at above 4.5 micrograms per deciliter.[98] Many more zip codes showed between 3% and 5% of children had high lead exposure rates.[99] A 2017 Reuters analysis of blood tests in children found 323 L.A. neighborhoods to have a rate of elevated lead levels at least as high as the rate in Flint, Michigan. That analysis, however, was based on an L.A. County assessment that mischaracterized the data and overstated the number of elevated tests, highlighting a need for better information on lead contamination and on blood testing.[100] EPA estimates that for infants and small children, drinking water may cause 40 to 60% of exposure to lead.[101] It is not known how much of the elevated lead levels in L.A. County can be attributed to drinking water, and other sources, such as contaminated soils, lead paints, or consumer products can contribute. But, given the risks that lead poses, especially to children, the issue of lead in drinking water demands further study.

Given the risks that lead poses, especially to children, the issue of lead in drinking water demands further study.

96 Elizabeth Jones, *Drinking Water in California Schools: An Assessment of the Problems, Obstacles, and Possible Solutions*, 35 Stanford Environmental Law Review 251, 267, *available at* https://law.stanford.edu/wp-content/uploads/2017/01/jones.pdf.

97 Robert Hopwood & Barrett Newkirk, *Database: Lead in California drinking water*, The Desert Sun (Mar. 16, 2016) (citing data from EPA via USA Today), http://www.desertsun.com/story/news/data/2016/03/16/database-lead-california-drinking-water/81873012/.

98 "California is more protective than current national guidelines and regards blood lead values at and above 4.5 mcg/dL as equivalent to the Centers for Disease Control and Prevention reference value of 5 mcg/dL." Cal. Dep't of Pub. Health, California Zip Codes with Blood Lead Levels (BLLs) at and above 4.5 micrograms per deciliter, for children less than age 6, with at least 250 children tested pp. 2-6 (2012), *available* at https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/CLPPB/CDPH%20Document%20Library/zip_code_2012_250_tested.pdf.

99 *Id.*

100 Joshua Schneyer, *L.A. health officials misstated some cases of childhood exposure,* Reuters (June 1, 2017), https://www.reuters.com/article/us-usa-lead-la-idUSKBN18S66J.

101 *Basic Information about Lead in Drinking Water*, Epa.gov, https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water (last updated Aug. 21, 2017). Other sources of lead include paints, contaminated soils, and many consumer products. N.Y. State Dep. of Pub. Health, *Sources of Lead*, https://www.health.ny.gov/environmental/lead/sources.htm. (2010).

The incidence and degree of contamination could be higher than test results indicate. For example, EPA researchers have found that current sampling protocols will often "considerably underestimate the peak lead levels and overall mobilized mass of waterborne lead in a system with lead service lines."[102] EPA has also warned that there are cases in which typical lead sampling procedures "may not adequately protect" the public from lead exposure.[103]

Lead in schools

Most of the public attention in L.A. County regarding lead in drinking water has focused on schools.[104] Schools in small systems, or that constitute their own water systems, may face hurdles in addressing such contamination due to lack of resources. The Water Board announced in January 2017 that it would test and provide technical support to schools if they requested it.[105] Within L.A. County, as of January 31, 2018, only 165 of 2,222 schools had tested for lead.[106] Water quality expert Marc Edwards noted that schools often "feel it's almost better not to sample, because you're better off not knowing."[107] For cash-strapped school districts, there is the risk of incurring the cost of further monitoring, plus the responsibility for reducing contamination that is found.[108]

Beginning in 2018, AB 746 made lead testing mandatory in any California school built before 2010, and the legislature is considering a similar statute that applies to all licensed daycare centers.[109] Although lead in schools is not a problem unique to small water systems, as with many issues, smaller systems are less likely to have the resources to pay for remediation or to undergo active monitoring. AB 746 helps by providing for reimbursement of costs to local communities.

102 Miguel A. Del Toral, Andrea Porter & Michael R. Schock, *Detection and Evaluation of Elevated Lead Release from Service Lines: A Field Study*, 47 Envtl Sci. Tech. 9303 (2013).

103 EPA Office of Water, Lead and Copper Rule White Paper at 3 (Oct. 2016), *available at* https://www.epa.gov/sites/production/files/2016-10/documents/508_lcr_revisions_white_paper_final_10.26.16.pdf.

104 *See, e.g.* Barret Newkirk, *Don't drink the water: Lead found in California schools*, The Desert Sun (Mar. 16, 2016.), *available at* http://www.desertsun.com/story/news/health/2016/03/16/california-lead-water-schools/81343492/.

105 *Lead Sampling of Drinking Water in California Schools*, Cal. Water Res. Control Bd. 2018), https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadsamplinginschools.shtml; Press Release, Cal. Water Res. Control Bd, Water Boards, California Water Systems to Provide Lead Testing For Schools (Jan. 17, 2017), *available at* https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/leadsamplinginschools/pr011717_lead_test_schools.pdf.

106 *Number of School Requests as of January 31, 2018*, Cal. Water Res. Control Board (2018), https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/leadsamplinginschools/map_school_lead_requests.pdf; *Los Angeles County Schools*, Public School Review, https://www.publicschoolreview.com/california/los-angeles-county (last visited Jan. 13, 2018).

107 Michael Wines, Patrick McGeehan & John Schwartz, *Schools Nationwide Still Grapple With Lead in Water*, The New York Times (Mar. 26, 2016), *available at* https://www.nytimes.com/2016/03/27/us/schools-nationwide-still-grapple-with-lead-in-water.html?_r=0.

108 Elizabeth Jones, *Drinking Water in California Schools: An Assessment of the Problems, Obstacles, and Possible Solutions*, 35 Stanford Environmental Law Journal 251 (2016).

109 AB 2370 (2018), *available at* https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB2370 .

Recent State Action on Drinking Water

California has taken several steps to aid water systems, some of which help small systems. Recently enacted statutes have articulated Californians' right to clean drinking water; developed resources for struggling water systems; and enhanced the power of the Water Board to consolidate struggling systems with better-resourced systems. None of these actions, however, has been sufficient to overcome the challenges faced by small water systems in L.A. County.

Recognition of a human right to water

In 2012, the State passed a statute affirming that citizens have the right to safe, affordable drinking water. Though important for articulating California's values and goals, the law does not create enforceable rights.[110] It does not require the state to provide safe water. Instead, it requires "[a]ll relevant state agencies" to "consider this state policy when revising, adopting, or establishing policies, regulations, and grant criteria when those policies, regulations, and criteria are pertinent to the uses of water described in this section."[111] The bill does not provide funding to achieve the promised right to water, nor guidance to agencies charged with implementing the statute.[112] Although it does commit to an important goal, the state cannot make significant progress toward that goal without additional policy and resources.

Funding for water systems

More funding is necessary to address water reliability and contamination.[113] Small water suppliers generally have fewer resources than larger systems and are therefore especially reliant on outside sources of funding for treatment systems, new infrastructure, and other improvements that enhance water quality, reliability, and affordability.

Some money for these purposes is available from the federal government. Under the SDWA, EPA may award grants to state revolving funds, which pay to improve water access and quality. The revolving funds provide low- or no-interest loans to communities for infrastructure projects. But this source of funding is limited; only twenty-two small water systems in California received funding in the 2016-2017 fiscal year, none in L.A. County.[114]

California has stepped in to grow the pot of money available for water programs. Proposition 1 created a $7.1 billion bond for water improvements. It makes $520 million available for projects to help provide "clean, safe, and reliable drinking water to all Californians." Currently, Proposition 1 funds two drinking-water projects in L.A. County, both in water systems that serve fewer than 10,000 customers. The first, for Maywood Mutual Water Company No. 2, includes wellhead treatment to provide cleaner water to more than 7,000 customers. A similar project will help the 7,500 customers of the Tract 349 Mutual Water Company of Cudahy.[115]

110 Senate Committee on Natural Resources and Water, AB 685 Bill Analysis 3 (July 7, 2011).

111 Cal. Water Code § 106.3(b); *see also* Cal. Water Code § 106.3(c)–(e) (further detailing the boundaries of this requirement).

112 Berkeley Law International Human Rights Law Clinic, Summary Report: Convening on the Implementation of the Human Right to Water (AB 685) at 2 (Nov. 2013).

113 *See, e.g.* Communities that Rely on Contaminated Groundwater.

114 Cal. Water Res. Control Bd., The Drinking Water State Revolving Fund Annual Report, State Fiscal Year 2016-2017, at 42 (2017), https://www.waterboards.ca.gov/drinking_water/services/funding/documents/srf/dwsrf_annual_report_1617.pdf.

115 Cal. Water Res. Control Bd., *CA Drinking Water Watch, Water System Details: Tract 349 Mutual Water Co.* https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=2599&tinwsys_st_code=CA&wsnumber=CA1910160 (last visited June 14, 2018).

Still, much more funding is needed. Peter Gleick, President Emeritus of the Pacific Institute, cautioned that Proposition 1 was "an expensive down-payment on a broad set of important projects that have been underfunded for years,"[116] but that more was necessary, including funding for operations and maintenance and for consolidation of ineffective systems.[117] According to the Water Board, California's drinking water needs are more than $2.2 billion per year for the next 20 years, far more funding than is available from current programs.[118]

The state government has made organizational changes to aid small systems with both funding and technical support. For example, in 2015, Assembly Bill 92 created an entire unit within the Water Board's Division of Financial Assistance—the Office of Sustainable Water Solutions—dedicated to providing financial and technical assistance to small and disadvantaged systems, and to promoting water system consolidation for unserved or underserved communities.[119] The Office of Sustainable Water Solutions works within the constraints of the Proposition 1 funding system, but provides an access point through which anyone from a small or disadvantaged water system can apply for assistance.[120] While financially strapped water systems theoretically have access to large amounts of funding for certain activities, the limitations discussed above on accessing money for operations and maintenance make the existence of those funding streams insufficient.

Merged systems provide access to a larger resource base and create efficiency gains. Costs of infrastructure improvements, operations, and maintenance can be spread among more ratepayers. A combined system can also enhance reliability and affordability by accessing larger, cleaner sources of water within system bounds.

Water system consolidation

Recently, water system consolidation has emerged as an increasingly important strategy for improving conditions in smaller systems. Under state law, consolidation means "joining two or more public water systems, state small water systems, or affected residences not served by a public water system, into a single public water system."[121] EPA has identified the benefits of consolidation as: (1) improved economies of scale; (2) increased financial opportunities for water systems; (3) reduced duplication of services; (4) increased reliability; (5) increased system flexibility; and (6) enhanced protection of public health, skill improvements, and service efficiency.[122] Merged systems provide access to a larger resource base and create efficiency gains. Costs of infrastructure improvements, operations, and maintenance can be spread among more ratepayers. A combined system can also enhance reliability and affordability by accessing larger, cleaner sources of water within system bounds.

116 Peter H. Gleick, *The California Water Bond is a Beginning, Not an End: Here's What's Next*, Huffington Post (Nov. 15, 2014), http://www.huffingtonpost.com/peter-h-gleick/the-california-water-bond_b_6104908.html.

117 *Id.*

118 Cal. Water Res. Control Bd., State of California Drinking Water State Revolving Fund Intended Use Plan: State Fiscal Year 2016-2017 p. 2 (2016), *available at* https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2016/final_dwsrf_iup_report_062116_with_cover.pdf; *see also* EPA, Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress 36 (EPA Office of Water, EPA 816-K-17-002, Mar. 2018), *available at* https://www.epa.gov/sites/production/files/2018-10/documents/corrected_sixth_drinking_water_infrastructure_needs_survey_and_assessment.pdf.

119 Cal. Water Code § 189(a); *Office of Sustainable Water Solutions*, Cal. Water Res. Control Bd. (Apr. 30, 2018), https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/.

120 Cal. Water Res. Control Bd., *Proposition 1 Technical Assistance Fact Sheet* (Mar. 2018), *available at* https://www.waterboards.ca.gov/water_issues/programs/grants_loans/proposition1/docs/prop1_ta_fact_sheet.pdf.

121 Cal. Health and Safety Code § 11681(e). Others favor a broader definition of consolidation that includes physical consolidation along with non-physical ones. "Physical consolidations involve the merging or sharing of physical infrastructure, such as distribution pipelines or water treatment facilities. Non-physical consolidations (sometimes described as "managerial" or "operational") involve sharing financial, managerial or technical capacity, such as through shared billing, equipment sharing, and shared staff or consultants. In practice, consolidations can combine elements of both." Nell Green Nylen et al., Learning from California's Experience with Small Water System Consolidations: A Workshop Synthesis at 2, (Berkeley Law, May 2018), https://www.law.berkeley.edu/wp-content/uploads/2018/05/SmallWaterSystemConsolidation_2018-05-02.pdf.

122 EPA Office of the Inspector Gen., Much Effort and Resources Needed to Help Small Drinking Water Systems Overcome Challenges 26 (May 30, 2006, Report No. 2006-P-00026), https://www.epa.gov/sites/production/files/2015-11/documents/20060530-2006-p-00026.pdf.

Towns like Maywood, for example, could benefit from water system consolidation. For its purchased water, one company negotiating with MWD would have more leverage, as a larger consumer, than would each water company working on its own behalf. And a larger customer base could increase available resources for treating water or for responding to infrastructure issues that arise. Additionally, it would lead to more consistent, equitable pricing for town residents. Currently the town's residents pay three different water prices for water, depending on which company services them.[123]

Consolidation does have risks. First, smaller systems subsumed within larger ones face the prospect of losing local control. Though significant, this risk can be overstated, especially for small systems that already fail to provide meaningful local control to most residents. Second, consolidation can lead to greater financial risk for the healthier of two consolidating systems, which may not welcome shouldering the financial and maintenance burdens of a weaker system. Finally, consolidations may lead to loss of jobs because of greater efficiencies. Because of these concerns, mandatory consolidation of smaller systems has been controversial.

In 2015, the California legislature granted the Water Board authority to mandate consolidation of water systems in some circumstances. SB 88 permits the Water Board to order consolidation—or an extension of service to an unserved area—when a system consistently fails to provide an adequate water supply. The Water Board has stated that consolidation could benefit many systems in the state, especially smaller systems and those serving disadvantaged communities.[124] But it has been slow to use its new consolidation powers. Most consolidations in California remain voluntary, supported by the carrot of funding from the Drinking Water State Revolving Fund or from water bonds. The Water Board typically will invite a failing system and a receiving system to merge, notifying them that they have six months to develop a consolidation plan. If they do not do so within that period, the Water Board may then order consolidation. There are several procedural hurdles which exist to safeguard water systems from abuses of Water Board authority. In addition to working through the voluntary consolidation process first, the Water Board must conduct a feasibility study, must work with county authorities, evaluate alternative enforcement remedies, and hold public hearings. These all take funding and time.

The Water Board has used its power to mandate consolidation or extension of services in only one case and has sent a letter urging voluntary consolidation and expressing an intent to mandate in 12 others.[125] Estimates for the total number of consolidations—mandatory and voluntary— in progress throughout the state range between 32 and 50.[126]

In L.A. County, consolidations remain exceedingly rare. In fact, in over forty years, only one consolidation has occurred in the county.[127] In April of 2018, the Water Board issued its first consolidation intent letter to a L.A. County small water system, the Desert Breeze Mobil Home Estate in Encino, which serves 82 people and has consistently had high levels of uranium.[128]

123 *See* Karen Foshay & Alice Walton, *Does tiny Maywood need three private water companies?* Southern Cal. Pub. Radio (Oct. 4, 2013), *available at* http://www.scpr.org/blogs/politics/2013/10/04/14894/does-tiny-maywood-need-three-private-water-compani/ (last visited June 7, 2018).

124 Cal. Water Res. Control Bd., Frequently Asked Questions on Mandatory Consolidation or Extension of Service for Water Systems (Nov. 7, 2016), https://www.waterboards.ca.gov/drinking_water/programs/compliance/docs/fs082415_mand_consolid_faq.pdf.

125 *Mandatory Consolidation or Extension of Service for Disadvantaged Communities*, Cal. Water Res. Control Bd. (last updated July 16, 2018), https://www.waterboards.ca.gov/drinking_water/programs/compliance/index.html.

126 Matt Weiser, *Dozens of Water Systems Consolidate in California's Farming Heartland*, KQED.com (June 11, 2018), https://www.kqed.org/science/1925560/dozens-of-water-systems-consolidate-in-californias-farming-heartland.

127 Larry Lai, Adopting County Policies which Limit Public Water System Sprawl and Promote Small System Consolidation at 17 tbl. 3 fn. (Luskin Center for Innovation, 2017), http://innovation.luskin.ucla.edu/sites/default/files/051917%20Adopting%20County%20Policies%20which%20Limit%20Public%20Water%20System%20Sprawl%20and%20Promote%20Small%20System%20Consolidation.pdf.

128 Carl Carlucci (Supervising Sanitary Engineer), State Water Resources Control Board Notice Regarding Mandatory Consolidation (Apr. 6, 2018), https://www.waterboards.ca.gov/drinking_water/programs/compliance/docs/2018/desert_breeze_mandatory_letter.pdf.

Law and Policy Options for Improving Small Water Systems

California has progressed in improving water access and quality for small water systems, but it can do more. By improving data access, supporting system consolidations, and expanding funding for small water system operation and maintenance, the state and other entities can help small water systems in L.A. County improve access to safe, affordable water.

Collect and publish more and better data

Data gaps make it difficult to evaluate the challenges faced by small water systems and the benefits of potential solutions. California should take steps to fill data gaps in at least three realms.

First, communities and policymakers lack sufficient data on water quality in small water systems. Water quality data is available for small systems under the SDWA, but those systems often do not test as often as larger systems. Small systems face increased burdens from frequent testing, due to their typically smaller resource pool. Policymakers have responded to this burden by allowing some small systems to test infrequently. But allowing any system—even an exemplary one—to go as much as nine years without lead testing increases the chance that deteriorating conditions go undiscovered in that period. Instead of extending the period between tests, the state could reduce burdens by funding testing. And although the state has taken steps towards ensuring lead testing in schools, more testing of drinking water in homes could lead to better understanding of where lead contamination is coming from and to eventual reductions in harm. Many of the smallest systems collect and publicly report far less water safety data than do larger systems.[129] Less data are available because many of these systems fall beneath the thresholds of the federal SDWA and the state Safe Drinking Water Act, which do not apply to systems serving fewer than 25 people or systems with fewer than 15 service connections.[130] Data on the health impacts of small water systems are also limited and underreported, but what exists is sufficient to warrant concern and to suggest that better assessment and reporting would be helpful both for evaluating the seriousness of the problem and for addressing it.[131]

Systems need better data on water pricing and customer income levels, especially in small water systems that serve disadvantaged communities.

Second, systems need better data on water pricing and customer income levels, especially in small water systems that serve disadvantaged communities. Researchers at the UCLA Luskin Center noted the difficulty in drawing out income levels across residential customer classes due to the lack of overlap between census tract data and the geographic bounds of water systems, especially small systems.[132] The same report noted the importance of figuring out water system customer income "for designing sustainable rate structures, conservation strategies, and low-income assistance programs."[133] It found that the California's environmental health screening tool might underrepresent disadvantaged communities, especially in smaller systems.[134] And it was

129 Jelena Jezdimirovic, Caitrin Chappelle & Ellen Hanak, Information Gaps Hinder Progress on Safe Drinking Water, Pub. Policy Inst. of Cal. (Jan 16, 2018), http://www.ppic.org/blog/information-gaps-hinder-progress-safe-drinking-water/ (*last visited* June 11, 2018).

130 2 USC § 300f(4)(A); Cal. Health and Safety Code § 116275.

131 EPA Office of the Inspector Gen., Much Effort and Resources Needed to Help Small Drinking Water Systems Overcome Challenges 33 (May 30, 2006, Report No. 2006-P-00026), https://www.epa.gov/sites/production/files/2015-11/documents/20060530-2006-p-00026.pdf.

132 Water Atlas at 24.

133 *Id.*

134 According to results from the Screening Tool, most L.A. County community water systems serving high percentages of disadvantaged communities are larger systems, such as those in densely populated areas. Because the Screening Tool performs its analysis by census tract, the tool blends small rural communities with larger population groups. For example, a poor, small, rural mobile home park may have its own water system, but in the census data, its mean household income data will be blended with a much larger surrounding community. The result would be a masking of its disadvantaged status. Water Atlas at 22.

unable to obtain pricing data for many smaller community systems that serve populations with lower median incomes.[135]

Third, California needs better data on the potential benefits and drawbacks of system consolidation. A recent Berkeley Law report identifies four areas of data gaps when considering consolidations. They are: (1) data on quality and quantity for private wells and some state water systems; (2) water rates and affordability; (3) the benefits of consolidations, including changes in property value, cost-savings, reliability improvements, and health benefits; and (4) effects on small system autonomy.[136] Given the Water Board's recently-expanded powers to consolidate systems, it is important to understand these aspects of consolidation much better than we do.

Acquiring data on both the harms that the smallest systems face, and the benefits and risks of consolidation, would enable the Water Board, decision makers at municipal and county levels, and water systems themselves to make better decisions.

Data gaps in each of these areas increase the risk of unsafe water and make it hard to assess the magnitude of that risk. Lack of data also makes it difficult for communities and policymakers to craft, compare, and decide on solutions, where needed. To remedy these gaps, the Water Board could collect, organize and publish data on small water systems, focusing on enhanced water quality testing and on pricing and affordability questions. Additionally, the Legislature could require the Water Board to gather data on costs and benefits of different types of water system consolidations in different local contexts. Acquiring data on both the harms that the smallest systems face, and the benefits and risks of consolidation, would enable the Water Board, decision makers at municipal and county levels, and water systems themselves to make better decisions.

To be sure, it can be difficult, expensive, and time consuming to collect data on small systems, but there are cooperative fixes. If action at the state level alone is infeasible, the Water Board could partner with counties—including L.A.—and community groups, universities, and nongovernmental organizations to collect, organize, and publish data about small systems. Alternately, the state, through the Legislature or the Water Board, could make one-time funding available to small systems to digitize data so that it is easier to track pricing, quality, and other relevant metrics. More modest than a long-term data collection initiative, such a program could increase the capability of small systems to self-monitor and to publish water quality data.

Support consolidation of failing small water systems

The Water Board has used its power to consolidate water systems sparingly to date, and it can aid small water systems by using this authority more aggressively. Consolidation is a complex process, and (as noted above) the Water Board does not yet have all the data it might want about the benefits and drawbacks of consolidation.

But experiences to date suggest that consolidations can greatly benefit those who rely on small water systems. Consolidation can be useful not only for water systems that currently fail to deliver safe water, but also for those at high risk of providing unsafe water in the future, of losing their supply due to contamination or drought, or of charging customers unsustainable and unaffordable rates. Other experts agree. One recent workshop on consolidation concluded that the Water Board should be more willing to mandate consolidation, especially "where there has been historic underinvestment or significant tension between the presumptive receiving system and the non-compliant system and voluntary consolidation is not occurring."[137]

135 Water Atlas at 47.

136 Nell Green Nylen et al., Learning from California's Experience with Small Water System Consolidations: A Workshop Synthesis at 9, (Berkeley Law, May 2018), https://www.law.berkeley.edu/wp-content/uploads/2018/05/SmallWaterSystemConsolidation_2018-05-02.pdf.

137 *Id.* at 14.

The Water Board's current authority is broad enough to begin this expansion, but California should also consider increasing the Water Board's authority and funding for consolidation, such as by expanding the Water Board's authority to include systems at high risk of providing unsafe water in the future, or producing unaffordable water, or of losing their supply due to contamination or drought.

Either the Legislature or the Water Board itself should create additional guidance on the criteria the Water Board must use to assess a water system as failing. Creating consistent and transparent criteria would enhance the fairness of consolidation procedures and alert communities early to the need for improving their level of service. These criteria could include metrics on current water quality, access, and affordability, and potentially also future risks such as encroaching groundwater contamination.

With or without these regulatory changes, the pace of consolidations will continue to be slow absent additional funding. Larger or better-performing water systems will still be loathe to take on the administrative and financial burdens associated with consolidating with those systems that are struggling. The Legislature should appropriate more money to fund consolidation efforts, which could both supplement needed infrastructural or managerial changes and reduce the need for a larger system to hike customer rates following consolidation. In enacting new water bonds and in legislation, policy makers could more explicitly marry a portion of future funding to the consolidation procedures authorized by SB 88 and SB 552. Such a move could make consolidations more feasible because the Water Board could use the money to build supplemental infrastructure for combining water systems or to backstop larger systems that fear absorbing a smaller system due to the potential costs.[138]

Increase operations and maintenance funding for small and medium water systems

For those systems for which consolidation is not a feasible option, funding is also needed to maintain existing systems and to support infrastructure and operations. No current funding source in California does much to aid smaller systems in paying for operations and maintenance of existing infrastructure, necessary improvements, or disaster planning. This should be remedied. For example, a fee-based system to fund water infrastructure and system maintenance could contribute to long-term access to safer water. One proposed bill, SB 623, aimed to address such issues and provide year-to-year funding for water projects.[139] SB 623 would have created a Safe and Affordable Drinking Water Fund for the Water Board to disburse to water projects, paid for by fees on ratepayers, dairy producers, and fertilizer manufacturers. The drafters of the bill described it as an attempt to secure safe drinking water access for the state's citizens, and to

138 The State Water Board is not the only agency that can act to address a failing system. The L.A. County Local Agency Formation Commission ("LAFCO") oversees changes to local government, including certain special districts that provide water. This year, it voted to dissolve a local water district in Compton, the Sativa Los Angeles County Water District, after years of mismanagement, alleged nepotism, and the production of brown, odorous water. The district had served about 6,800 people and had been unable to afford infrastructural repairs. The dissolution is subject to legal challenge and can be overturned by election. LAFCO's powers are limited in other ways, too; it lacks the authority to consolidate public agencies with private utilities, unlike the Water Board. Reducing the regulatory hurdles for county bodies, such as LAFCO, to implement dissolutions and consolidations could be pursued at both the state and the county levels. *'This Looks Like Urine': Brown Water From Faucets Has Compton Residents Seeing Red*, CBS, (May 2, 2018), *available at* https://losangeles.cbslocal.com/2018/05/02/compton-willowbrook-brown-water-sativa-county-water-district/; Angel Jennings & Ruben Vives, *Agency that delivered brown, smelly water to customers should be dissolved, board rules*, L.A. Times, http://www.latimes.com/local/lanow/la-me-ln-sativa-water-district-20180711-story.html.

139 SB-623, Water quality: Safe and Affordable Drinking Water Fund (re-referred to Cal. Senate Comm. on Rules Sept. 1, 2017).

ensure the long-term health of drinking water infrastructure and sustainability of service. The bill was delayed in 2017, and the legislature abandoned it in 2018.[140]

Moving forward, it is critically important for California to create a sustainable source of funds for smaller water systems in L.A. County and throughout the state.

Moving forward, it is critically important for California to create a sustainable source of funds for smaller water systems in L.A. County and throughout the state. Two recently proposed bills, SB 844 and 845, would have allowed ratepayers to elect to pay a water bill fee that would go to the Safe and Affordable Drinking Water Fund.[141] The bills would also levy fees on dairy and fertilizer interests. Such a fund could be used to support small water systems and to address many of the issues identified in this report. But, as with SB 623, SB 844 and 845 were not brought to a vote in the 2018 legislative session. SB 844 would have taxed fertilizer and dairy producers, and therefore required a two-thirds vote to pass.[142] SB 845 would have established a voluntary charge on ratepayers, requiring a majority vote in the legislature.[143] The Association of California Water Agencies argued that the increase in administrative costs from SB 844 would outweigh any benefit.[144] Additionally, lawmakers were reported to be hesitant to approve a tax increase, even a voluntary one, in an election year.[145] Moving forward, the Legislature and governor of California should move to enact similar statutes that create stable funding for small water systems.

Conclusion

California has set laudable goals for ensuring that all residents have access to clean, affordable drinking water. Though the state has taken steps toward achieving these goals, they remain largely aspirational for many communities, particularly those that depend on small water systems in L.A. County and throughout California. Most of the challenges that small water systems face are fundamentally funding problems. Those small water systems that struggle with water quality compliance or with reliability and affordability are generally undercapitalized. Of course, California needs not only to provide funding, as it does under mechanisms such as Proposition 1, but to structure funding and policy mechanisms so that they can address meaningfully the unique challenges smaller systems face.

To help smaller systems become more resilient, California should pursue: (1) improved data collection and dissemination essential to tracking small water systems; (2) greater use of the Water Board's current authority to pursue water system consolidations, along with an increase in the scope of that authority and more funding to support consolidation; and (3) greater funding for small water system operations and maintenance, infrastructural improvements, and disaster planning. These steps would benefit L.A. County's small water systems and help fulfill the promise of the state's right-to-water mandate.

140 Dale Kasler & Adam Ashton, *California drinking water tax dies in budget compromise*, The Sacramento Bee (June 8, 2018), *available at* https://www.sacbee.com/latest-news/article212827809.html; Guy Marzorati and Marisa Lagos, *Closely Watched Bills Killed by Legislative Spending Committees*, KQED.org (Sept. 1, 2017), https://ww2.kqed.org/news/2017/09/01/closely-watched-bills-killed-by-legislative-spending-committees/.

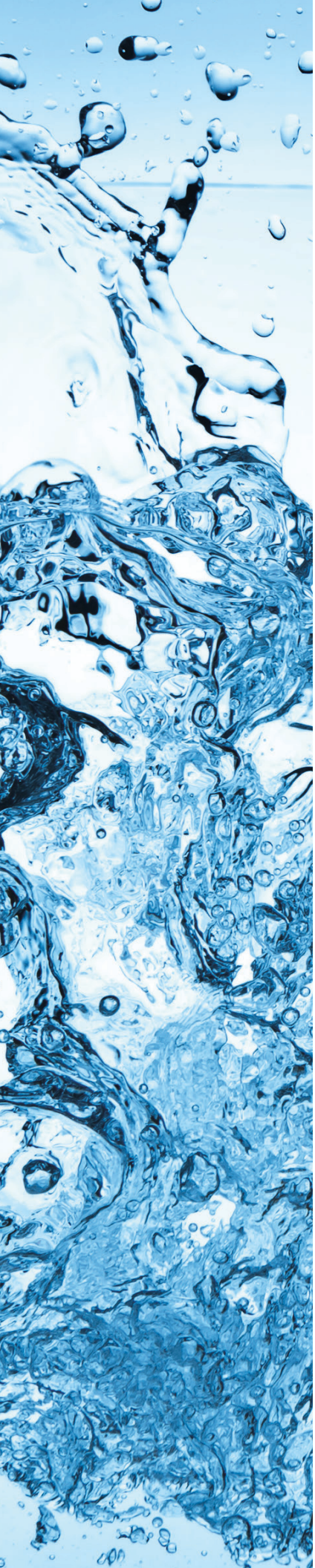
141 SB 844 (proposed 2018); SB 845 (proposed 2018).

142 SB 844 (proposed 2018).

143 SB 845 (proposed 2018).

144 *#Nowatertaxcampaign*, Association of California Water Agencies (Feb. 1, 2018), https://www.acwa.com/our-work/delivering-safe-drinking-water/no-water-tax/; *see also* Cindy Tuck, *My turn: Last-minute twist on the water tax won't work*, (*in Pro-con: A new tax to provide clean water*) Calmatters.org (Aug. 24, 2018), https://calmatters.org/articles/commentary/my-turn-last-minute-twist-on-the-water-tax-wont-work/.

145 Taryn Luna, *Push for drinking water tax dies in the California Legislature*, The Sacramento Bee (Aug. 24, 2018, updated Aug. 31, 2018), https://www.sacbee.com/news/politics-government/capitol-alert/article217664960.html.



Pritzker Briefs

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