Water in California:

The Confluence of Poverty, Health Disparities, and Inequity

Policy Recommendations to Increase Water Access and Improve Water Quality for Low-Income Californians

Hector Gutierrez
Tracey Patterson
George Manalo-LeClair

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California Food Policy Advocates

California Food Policy Advocates (CFPA) is a statewide public policy and advocacy organization dedicated to improving the health and well being of low-income Californians by increasing their access to nutritious, affordable food.

For more information about this report, please contact Hector Gutierrez at hector@cfpa.net or 213.482.8200 ext. 202.

For more information about CFPA, please visit www.cfpa.net.

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Table of Contents

Executive Summary

California's historic drought has brought a wave of new discussions about water access and water quality to the forefront of public policy discussions. In these discussions, long-standing problems with poverty, inequality, and health disparities continue to surface.

Building upon successful efforts to increase access to drinking water in schools, CFPA and partners explored new opportunities to improve access to safe water for California households living in poverty or at great risk of hunger.

We looked at what is happening in other states; we analyzed water quality and access data; we interviewed stakeholders; and we convened experts and community partners.

In summary, we learned

- **While water access and quality is generally good throughout the state, serious inequities exist.** Locations without access are often rural communities of color already facing economic challenges like high unemployment and poverty;
- **Emergency water solutions are needed while long-term solutions are pursued.** Long-term solutions are under development but there is an immediate need for water that can't wait for these solutions to be put in place;
- **There is continued support for a focus on schools, though other settings raise concerns.** Given the reach and importance of schools, stakeholders indicated that schools should continue be a target for action. However, given the special vulnerability of young children to harm from poor quality water, stakeholders also suggested addressing those settings that affect very young children, such as child care;
- **Existing data on water access and quality provides insights but remains inadequate.** Oversight and accountability for water safety and access is scattered between federal, state and local entities;
- **Given the desire to target resources for low-income Californians, there is interest in leveraging existing programs.** Stakeholders suggested that water access could be improved by utilizing WIC, CalFresh, and other means-tested programs.

In response to what was learned, we propose the following policy recommendations. (Specifics are contained in the full report.)

- **Make sustainable state budget investments to improve water access and water quality.**
- **Use existing programs, policies, and public places to address water access**

and affordability.

- **Improve the availability of water quality data to target resources for improvements and remediation.**

Background

Three events greatly shaped the development of this brief: California's historic drought; the catastrophe in Flint, Michigan; and the health crisis related to diet-related disease.

California's Historic Drought

California is now five years into one of the worst droughts in its history. The drought has triggered large-scale water conservation efforts, new investments in water infrastructure, and a renewed interest in protecting wildlife. While the drought is, at its core, about water, there is a critical economic component: water is vital to our agricultural economy and many jobs are at stake, including those of our low-wage agricultural work force.

Though the impact of the drought is felt statewide, among the hardest hit communities are some of California's poorest communities in the San Joaquin Valley watershed. Now five years later, many disadvantaged communities still do not have reliable access to potable water.

The drought and the competing demands for water for agricultural, industrial, and residential uses have lowered water tables, resulting in greater concentrations of some contaminants. For example, nitrate contamination from agriculture and naturally occurring arsenic are worsened by groundwater depletion.

The drought is impacting public water systems and private wells. Over 2,300 wells statewide have been identified as critical or dry.[i] The vast majority of these dry wells are in the Central Valley. According to data from the State Water Resource Control Board (SWRCB) more than one million Californians do not have reliable access to potable water.[ii]

The Public Health Catastrophe in Flint

In many ways, the water catastrophe in Flint, Michigan is unique. It involved the negligent, short-sighted change of a water source leading to the catastrophic failure of a public water system. It involved the dereliction of duty by public officials, leading to criminal charges in some cases. Despite these factors, there are lessons to be learned. The Flint crisis reminds us about the severe negative impacts of lead contamination, and raises needed attention to the importance of drinking water quality. It also elevates

the issue of environmental racism because those in Michigan without drinkable water are largely people of color (as is also the case in California). The response to the Flint crisis also provides some ideas for solutions, as programs like the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) expanded benefits to meet the need for safe water.

The Health Crisis Related to Diet Related Disease

California spends an estimated $50 billion a year to treat diet-related disease like diabetes and heart disease. Over 55 percent of adults in California have diabetes or are pre-diabetic, according to the UCLA Center for Health Policy Research.[iii] A number of strategies are needed to address this crisis, including the proven strategy of reducing consumption of sugar-sweetened beverages.

Health experts single out sugar-sweetened beverages as a primary source of excess, empty calories.[iv] Most health experts advocate the replacement of these beverages with water – which may only be successful when low-income Californians have access to free potable water. Given the costs of diet-related disease, it important to recognize the impact that increased access to drinking water can have upon health.

Past Action on Water in California

As new policy opportunities are explored, past actions can provide some insights.

- **Pre-drought Actions:** CFPA led the state effort to require access to free drinking water for students in school food service areas in 2009. This led to a federal requirement that was put in place in 2010.
- **Drought-related Actions:** The 2016-2017 state budget included $109 million in General Funds to alleviate the state drinking water crisis. These allocations include $10 million to the Department of Water Resources to provide drinking water assistance in small disadvantaged communities; an increase of $26.7 million for the Office of Emergency Services to provide emergency drinking water response; an increase of $5.4 million to the General Fund and $16 million to the Cleanup and Abatement Account to provide water support and grants for emergency drinking water projects; and an increase of $18.4 million to the General Fund for the Drought Food Assistance Program, which delivers food boxes to the most drought-impacted communities.

A Drinking Water Advocates Coalition was formed to advance the human right to water in California. Thanks to the advocacy of this Coalition, which includes CFPA and close to thirty organizations and agencies, the 2016-17 State Budget provided additional funds through budget renegotiation to address private dry wells, to improve access to safe drinking water for schools in disadvantaged communities, along with increased

funds for the State Water Resources Board to assist schools and water systems with safety testing and reporting.

Our Approach

To develop the recommendations included in this report, we engaged in a number of strategies.

- **We scanned other states for policy actions**. We examined the policy actions of states like Oregon and New York who are leading efforts to make water quality data transparent and ensure school communities have access to safe drinking water. **See our policy scan here**: http://bit.ly/2hf6Crs
- **We compiled and analyzed data.** The Safe Drinking Water Information System (SDWIS) provided some historical insights into water systems that violated safe drinking water standards. A review of Environment Protection Agency data revealed school sites in water systems facing chronic water quality violations.
- **We interviewed stakeholders.** We talked with water policymakers and community partners, such as Community Water Center, Rural Community Assistance Corporation, National Health Foundation and others to learn about the challenges faced by the communities they serve to making safe drinking water accessible.
- **We convened stakeholders.** In August 2016, we convened water stakeholders from across the state, including representatives from the Environmental Protection Agency, state administrators, academic researchers, public health advocates, child nutrition experts, and community groups. We asked these stakeholders to prioritize policy actions.

What We Heard and Learned

What We Heard and Learned

With this varied approach, which included both data and discussions, we learned a lot about the state of water access and water quality in California – including what to do about it. Highlights of our findings are described below.

The Extent of the Access and Affordability Problem

- **Drought conditions are the 'new normal' in California.** The drought has reached a historic length. With climate change there are serious concerns that this is the "new normal" in California.
- **Water affordability is a growing concern for low-income residents.** Water districts throughout the state have slowly hiked the average cost of water, with an

eye toward maintaining and improving water systems. In some cases, household water rates have jumped 300 percent since 2006.

- **Some households have to pay twice for water.** When water systems fail to meet basic health standards, residents must still pay their water bill and buy bottled water for drinking.
- **Emergency action is needed.** Stakeholders were clear that we can't wait while long-term water solutions, such as infrastructure, are put in place. Emergency actions to provide water are needed right now – struggling households can't wait.

The Extent of the of the Water Quality Problem

- **The vast majority of Californians have safe tap water in their homes.** 95 percent of Californians have access to safe, potable tap water in their residences.
- **One million people still lack safe drinking water.** The tap water of nearly one million Californians contains unsafe levels of nitrates, arsenic, and other contaminants.
- **Serious inequities exist.** While most Californians have access to safe water, those who don't are primarily in rural, low-income communities of color.
- **Poverty is a central issue.** Water quality problems most often exist in economically distressed communities with high unemployment, where residents are also experiencing drought-related problems such as a reduction in farmworker earnings.

The Availability and Reliability of Water Quality Data

- **Historical data exists -- with limitations.** The Environmental Protection Agency manages a Safe Drinking Water Information System (SDWIS) which contains information about public water systems and their drinking water violations since 1993. The EPA acknowledges issues with underreporting and inaccuracies with this data set.
- **The data is focused on the water system, not the tap.** Public water systems serve residences and institutions like schools. Existing water safety data largely focuses on violations in the water system – it does not adequately capture problems that might emerge on a school campus. Contamination (e.g. lead) can occur in campus pipes and faucets and not from the system itself.
- **It may not always be clear what the data is tells us in terms of policy solutions.** We have summarized the number of water system violations in California affecting schools in Appendix A. This data does not paint a clear path to policy action as data available represents a snapshot of water quality violations in California. Additional data is needed.

- **Data can be used strategically when presented geographically.** Appendix B displays a map of violations across the state. The data may be more useful when focusing on specific communities where additional information and local input can help paint a better picture. To support such efforts, CFPA has made a data dashboard available here: http://cfpa.net/childnutrition/waterinschools/interactive-dashboard-water-quality-violations-in-schools
- **Arsenic, nitrate, and uranium disproportionately affect small public water systems.** The largest number of violations for these contaminants were associated with small community water systems of which about 81 percent served less than 1,000 service connections and were located in disadvantaged communities.[v]
- **US EPA encourages states to enforce drinking water regulations and improve public access to data.** In early 2016, US EPA, prompted by the events in Flint, Michigan and other US cities, wrote to states about the need to enhance at all levels of government the oversight of implementation and enforcement of drinking water regulations and to enhance public transparency and public access to data and compliance information.

What We Learned About Water in Schools

- **Significant concerns about the quality and safety of water in schools persist.** One in four schools in the Central Valley and one in three schools in the Tulare Lake region were impacted by unsafe drinking water.[vi] This correlates to other disparities as many of the students in these same schools also suffer from some of the worst air quality in the country and other environmental health hazards.
- **There is great interest in policy action to expand access to free, safe water in schools.** This was a high priority for participants in the convening as water access in schools was seen as critical to the health and academic success of students.
- **Testing must be combined with support for amelioration.** New State Water Board Policy requires water systems to provide schools with free site testing. There was broad agreement among stakeholders that testing alone is not enough – we must make investments and take action to address the results of the tests when they compromise children's health.
- **Promotion is an effective strategy in many, but not all, schools.** Encouraging water consumption at schools with safe water was seen as an effective approach. However, challenges and concerns about promotional efforts in communities with unsafe or inconsistent water quality were raised by stakeholders.

- **Local infrastructure investments can be effective.** A number of schools are part of a safe water system but use old pipes and faucets. One-time investments in removing these lead-laden structures were seen by convening participants as an impactful, cost-effective action.

What we learned about other settings and programs

- **Though schools remained the priority, child care was a point of discussion.** Given the heightened vulnerability of young children to contaminants, a number of stakeholders expressed an interest in focusing on child care and other early learning environments. Others raised concerns about a child care focus given the high cost of care, the lack of infrastructure to support remediation for licensed care providers (particularly as compared to schools), and similar testing/amelioration concerns as arose with schools.
- **There is some interest in exploring other settings.** Stakeholders expressed some interest in looking at water access in public parks, transit locations, and community places.
- **Existing nutrition programs could be utilized to improve water access.** CalFresh (SNAP) was identified as a promising avenue, as it allows for water purchase and could help ensure water spending doesn't exacerbate food insecurity if benefits were adequate. Similarly, the Women, Infants and Children Program (WIC) was seen as having some promise, as benefits were expanded in Flint to mitigate impacts of lead and reach into the vulnerable population of very young children.

What Should Be Done and Why

Following the above analysis and the convening, we recommend the following priority actions to increase water access and quality in California.

Make Sustainable State Budget Investments to Improve Water Access and Water Quality

- **Use the state's Electronic Benefit Transfer (EBT) system to deliver interim, supplemental benefits to low-income California households without safe drinking water.** We heard loud and clear that efficient, effective emergency action is needed while other solutions are put in place. An emergency drinking water benefit that utilizes the reach and efficiency of the state's EBT system could provide that immediate relief.
- **Provide a sustainable funding stream to ensure access to safe water in California schools.** Long-term funding would ensure that all California

students have access to safe water in school by providing for both the repair of old and failing water infrastructure and the installation of drinking water stations that meet state and federal drinking water requirements. This was the highest priority for stakeholders. Such funding could also be used for increased water testing as we heard testing and amelioration support must go hand-in-hand.

Use Existing Public Programs, Policies, and Places to Increase Water Access and Affordability

- **Include water benefits and resources in existing programs.** While CalFresh benefits can be used to purchase water, WIC benefits cannot. Given the reach of WIC, it is worth exploring how expanded benefits can cover water and water testing kits. As many families with infants on WIC use formula, it is critical to ensure that the water used for formula is safe.
- **Use existing policies like the plumbing code to expand water access.** State requirements for new buildings and parks could be updated to increase water access points for communities.
- **Include direction in local General Plans, transportation plans, and policies to expand water access**. For example, there could be a minimum of one water access point for every 150 transit-dependent riders along high-density transportation corridors. Local policies and plans should prioritize investments in low-income communities that lack equitable access to water access points.

Improve the Availability of Water Quality Data to Target Resources for Improvements and Remediation

- **Make real-time water quality data readily accessible.** Timely and accurate water quality data is needed to protect public health and target resources for remediation
- **Develop a statewide water quality monitoring and reporting system for schools**. Coordinated water quality data should be used to direct resources to schools with unsafe drinking water. Schools should be proactive in testing water access points to identify issues that could harm student health.

Appendix A

Summary: Maximum Contaminant Level (MCL) Violations for Public Water Systems Serving California Schools 1981-2014

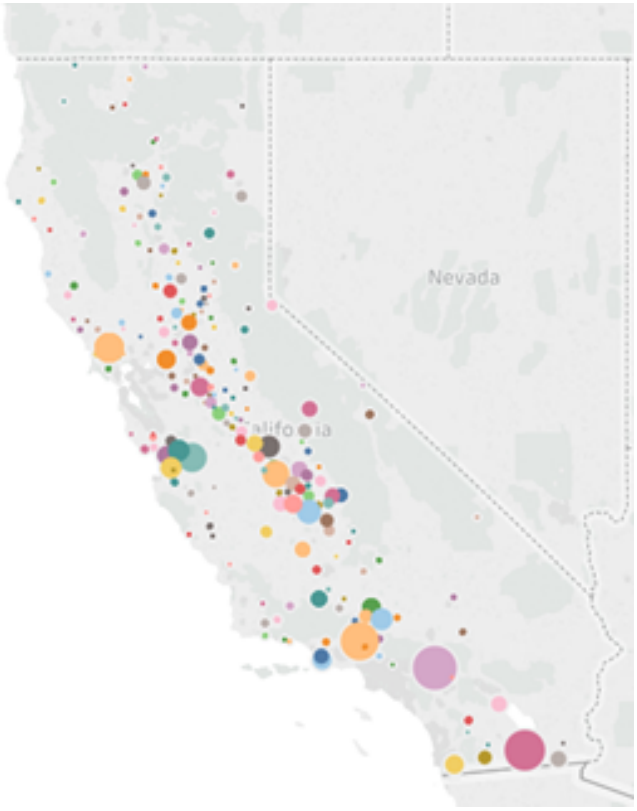
			Contaminant Violations															
Year	Total Number of Public Water Systems (PWS) facing MCL violations	Total Population Served by PWS serving schools	1,2—Dibromo-3-Choropropane	Arsenic	Cadmium	Coliform (Pre-TCR)	Coliform (TCR)	Combined Uranium	Fluoride	Gross Alpha Particle Activity	Iron	Manganese	Nitrate	Nitrate-Nitrite	Selenium	Total Haloacetic Acids (HAA5)	TTHM	Turbidity
1981	1	85											X					
1982	25	12,120				X							X					
1983	45	19,170				X							X		X			
1984	21	9,213				X							X					
1985	18	37,780		X		X												X
1986	16	11,693				X							X					
1987	16	6,641				X			X				X					X
1988	6	1,105				X												
1989	5	1,065				X												X
1990	2	260				X												X
1991	N/A	N/A																
1992	4	747																
1993	4	1, 834					X											
1994	8	3,548					X					X	X					
1995	18	4,952	X				X											
1996	41	38,819					X											X
1997	38	33,992					X						X					X
1998	65	33,827	X	X	X		X						X					X
1999	32	24,913					X						X					
2000	36	36,152					X	X					X					
2001	36	9,734					X						X					
2002	41	24,034					X						X					
2003	46	14,330	X				X						X					
2004	48	25,948		X			X						X					
2005	57	35,622	X	X			X	X			X		X	X				
2006	62	33,029	X	X			X					X	X				X	
2007	64	39,057	X	X			X	X	X		X	X	X					
2008	74	44,797	X	X			X	X					X			X	X	
2009	80	47,114	X	X			X	X	X				X			X	X	
2010	78	39,806		X			X	X	X					X				
2011	81	44,425	X	X			X	X	X	X			X			X		
2012	67	44,505	X	X			X	X	X	X			X					
2013	66	46.821	X	X			X	X	X	X			X					
2014	51	26,362		X			X	X	X	X			X					
Total	**1,252**	**704,891**	**11**	**13**	**1**	**9**	**22**	**10**	**8**	**4**	**2**	**3**	**24**	**2**	**1**	**3**	**3**	**7**

Appendix B

California Food Policy Advocates (CFPA) created this interactive dashboard to show Maximum Contaminant Level (MCL) violations for Public Water Systems (PWS) serving schools that did not meet safe drinking water standards set by the Environmental Protection Agency. The data dashboard was created using Tableau, an interactive analytical software used to visualize data.

The following filters are available on the interactive dashboards to manipulate and rearrange data:

- **http://cfpa.net/childnutrition/waterinschools/interactive-dashboard-water-quality-violations-in-schools**



1. **Sort by Year:**
   - Use this filter to sort violation data for any single year, or multiple years from 1981 to 2014.

2. **Sort by Contaminant Name:**
   - Use this filter to sort by the different types of drinking water contaminants

3. **Sort by Total Population Served by PWS:**
   - The information displayed by this filter illustrates the number of people served by a specific public water system. The bigger the dot the larger the number of people served.

4. **Sort by Zip Code:**
   - Use this filter to sort data using zip codes where MCL violations took place.

5. **Zip Code Represented:**
   - Zip Codes represented by different colors and circles on the map. The larger the circle the more people are served by the PWS.

References

[i] California Governor's Office of Planning and Research: Dry Well Reports January 2014 - July 2015

[ii] *Communities That Rely on a Contaminated Groundwater Source for Drinking Water*. Rep. State Water Resource Control Board, Jan. 2013. Web.

[iii] Baby SH, Wolstein J, Diamant AL, Goldstein H. Prediabetes in California: *Nearly Half of California Adults on Path to Diabetes.* Los Angeles, CA: UCLA Center for Health Policy Research and California Center for Public Health Advocacy, 2016.

[iv] Ogden CL, Kit BK, Carroll MD, Park S. Consumption of sugar drinks in the United States, 2005-2008 <. *NCHS Data Brief*. 2011:1-8

[v] Ibid II

[vi] Are we Providing Our Kids Safe Drinking Water? An Analysis of California Schools Impacted by Unsafe Drinking Water. Community Water Center and Environmental Justice Coalition. 2016

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www.cfpa.net

Oakland Office
1970 Broadway, Suite 760
Oakland, California 94612
T: 510.433.1122
F: 510.433.1131

Los Angeles Office
205 S. Broadway Street, Suite 402
Los Angeles, CA 90012
P: 213.482.8200
F: 213.482.8203