

## Access to Clean Water in California

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at the  
National Institute of Black Journalists  
Conference on Health Reporting  
November 15, 2015  
UC Davis Comprehensive Cancer Center  
4501 X Street, Sacramento, California

I'd like to thank the organizers of today's conference for inviting me to participate. It's an honor for me to speak with you today about the issue of access to clean water in California.

The drought in California over the past three years has brought to the forefront an issue that many other parts of the world have been dealing with for a much longer period of time, and that is the issue of universal access to clean water. Access to safe, clean water to drink is one of our most basic human needs, second only to our need for clean air to breathe. There's a saying in California, "Water flows uphill – toward the money." There's also another saying that I think everyone here is more familiar with but which includes a four letter word that I'll paraphrase with a more polite term, and that saying is, "[Contamination] flows downhill." Both of these sayings are relevant to today's discussion given that individuals in low income and minority communities tend to live at the bottom of the hill.

Worldwide, it's estimated that over 2 billion people lack access to clean drinking water and basic sanitation and that over a million children under the age of five die every year as a direct result.<sup>1</sup> The United Nations General Assembly adopted a resolution in 2010 recognizing that access to safe, clean, and affordable drinking water should be considered a basic human right, and that governments should step up their efforts to ensure that all residents of their countries are guaranteed this right.<sup>1</sup> The UN resolution noted that lack of access to safe, clean drinking water is a particular problem in the poorest countries of the world. Unfortunately, as we meet here today in one of the richest states in one of the richest countries of the world, lack of access to safe, clean drinking water is also a problem for many residents of California. The lack of access to clean drinking water for many Californians is due in part to the drought that we've been experiencing over the past three years, but there are many other contributing factors, including the fact that the water that we do have, like the wealth,<sup>2</sup> is not evenly distributed. I'd like to talk a little today about the drought as well as some of these other factors and suggest some possible approaches to safeguarding the right of all Californians to access to safe, clean, affordable drinking water.

The drop in rain and snowfall that we've been experiencing in California over the past three years is unusual, but California isn't the only state that's been affected, and the current drought is not the worst in recent history.<sup>3</sup> Parts of neighboring states and even states as far away as Utah, Idaho, New Mexico, and Texas have also been experiencing

similar droughts over the past three years. The drought that occurred in California in the 1970's was actually worse than the current one. California reservoirs are currently filled to about 58% of their capacity. In 1977, the same reservoirs were only about 36% full, but the effects of the drought in the 1970's were not as severe as they are today, the main difference being that the population of California was 23 million in 1977, and today it's 38 million.<sup>4</sup> As a result of the growth in population and the growth in the California economy, the demand for water in California, both for domestic use and for industry, is much greater today than it was in the 1970's.

California is the nation's largest producer of food, and about 80% of California's fresh water withdrawals go to agriculture.<sup>3</sup> Less than 10% goes to domestic use, and the rest goes to other industries. It's estimated that the current drought has cost the California agricultural industry \$2.2 billion out of an average total annual revenue of about \$25 billion.<sup>3</sup> On the other hand, the Sacramento Bee just reported that the tomato harvest this year was the largest on record.<sup>5</sup>

What we currently consider to be drought conditions in California may in the not too distant future be considered the norm. Scientists at the Scripps Institute of Oceanography and the U.S. Geological Survey predict that as a result of global warming, the average snowpack in the Sierra Nevada mountains, which is the major source of fresh water for the state during summer and fall, will be only two thirds of recent historical averages by 2050 and only one third of 20<sup>th</sup> century averages by 2100.<sup>6</sup> To make matters worse, it's predicted that the population of California will increase by a third over the next 20 years.<sup>3</sup>

The distribution water resources in California and much of the rest of the country is determined by a confusing, fragmented, and illogical jumble of rules, regulations, and historical precedents, the interpretation of which is strongly influenced by political and economic clout. It's been noted that there are more separate water agencies than school districts in our country. The first attempt to produce a comprehensive system of water rights in California was done in 1914. The State Water Resources Control Board still refers to pre and post-1914 water rights. The system is extremely complex, but basically divides water users into two categories – those with “senior rights,” who are highest on the pecking order for the available water, and those with “junior rights,” who may lose access to water during times of drought.<sup>7</sup> An odd and perverse feature of this system is that senior rights holders may lose their place in the pecking order if they don't use all the water allotted to them. As a result, some communities which have more than enough water during the current drought are afraid to share their water with neighboring communities that are facing shortages.<sup>8</sup>

Until this year, there were no California regulations at all concerning pumping water from underground aquifers, which have been rapidly receding in California. Landowners could pump as much water as they wanted from wells on their land, even if the water they pumped drained aquifers underlying adjacent properties. In September of this year, the California Legislature passed the first ever rules for pumping groundwater in California, but these rules are not expected to put California on a path to ground water sustainability until 2040.<sup>9</sup>

Sections of the California Health and Safety Code<sup>10</sup> and the California Code of Regulations<sup>11</sup> require that water agencies must ensure that they provide a reliable and adequate supply of safe and clean drinking water at all times to the residents of their service areas. These portions of California law, though, are classic examples of unfunded mandates. This summer, the State Water Resources Control Board issued curtailments orders to 22 water agencies in California with “junior water rights,” ordering them to stop diverting water from their usual surface water sources. The letters noted that the agencies were in violation of California law in not having reliable, alternative sources of water to replace the sources that were curtailed due to the drought, but the SWRCB provided no help to these agencies in finding alternative sources. The end result was that some communities, such as portions of Porterville, near Bakersfield, ran out of drinking water.<sup>12</sup> Residents of these communities have had to resort to seeking private donations, in some cases, to get enough water to drink. As one Tulare County official stated, “There is a massive gap between the need and the resources to deal with it.” At the same time that residents of Porterville were scrounging for water to drink after their wells had run dry, the luxury golf courses in Palm Springs desert remained lush and green, thanks to irrigation with drinkable water being pumped from receding underground aquifers.<sup>13</sup>

The problem of an inadequate quantity of fresh water related to the current drought in California has exacerbated pre-existing problems of poor water quality in many areas.<sup>14,15</sup> For a given amount of contaminants, if the volume of water is less, the concentration of the contaminants will be greater. Contaminants can include sediment, micro-organisms, and toxic chemicals, including chemicals known to be carcinogenic. This problem has been further exacerbated in the Central Valley by the recent introduction of the practice of hydraulic fracturing, commonly known as fracking, to open up previously inaccessible pockets of oil and natural gas. Fracking involves the injection of billions of gallons of water deep into the ground under high pressure. Nine fracking sites in the Central Valley were shut down in July of this year due to concerns that toxic chemicals in the water used in the fracking process were getting into underground aquifers.<sup>16</sup>

Up to now, I’ve been talking mainly about some of the obstacles to guaranteeing access to safe, clean, affordable drinking water for all Californians. I’d now like to turn to some of the possible solutions.

Californians recently approved Proposition 1 by two thirds margin, though less than a third of those eligible to vote bothered to do so. Proposition 1 authorizes the sale of \$7.5 billion in bonds to finance a variety of water related projects, many of which had been previously considered by the California State Legislature as far back as 2010, before the current drought, but rejected, largely due to budgetary considerations. Many of the measures in Proposition 1 are supported by environmental groups, including about half a billion dollars dedicated to increasing the availability of safe, clean drinking water; about \$1.5 billion to protect lakes, streams, coastal waters, and watersheds from environmental degradation; three quarters of a billion dollars for water recycling; about \$400 million to improve flood prevention; and \$800 million to improving drought preparedness through

improvements in existing infrastructure. The largest and most controversial part of Proposition 1, though, is the \$2.7 billion dedicated to increasing ground water storage through building new dams or increasing the capacity of existing ones. Opponents to Proposition 1 argue that building new dams will lead to further degradation of the environment and will only increase California's total water storage capacity by about 1%. They also argue that funding water projects through state bonds is much more expensive than a pay as you go approach, and that Proposition 1 will end up costing the state about \$14 billion, including the interest on the bonds, possibly leading to future budget shortfalls and cuts in vital services, such as those seen during the recent recession.

What we need more than anything else right now, of course, is a lot of snow and rain, but we're at the mercy of Mother Nature for that. In conclusion, though, I'd like to propose a set of general principles that I think might help guide us in improving our approach to managing the water that Mother Nature does provides for us.

Number one, I believe that we should formally declare that as a state, we are committed to the principle that access to safe, clean, affordable drinking water is a basic human right, and one that supersedes all other previously stated water rights. I believe that we also need to review the entire jumbled set of rules and regulations governing water rights in California and come up with a more logical, understandable, and fair method of allocating the state's water resources.

Number two, I believe that we need to continue to find new ways to conserve water. To our credit, the Sacramento region cut its water usage by almost 20% over the past summer, though the rest of the state, and particularly Southern California, didn't do as well. Also, to the credit of the California agricultural industry, they have steadily reduced the share of water they use since the 1980's through more efficient irrigation methods, at the same time that their total food production has increased. Even during the current drought, though, most of us have continued to water our gardens and flush our toilets with drinkable water. Clearly, though, there are many ways that we can all continue to do better to conserve water.

Number three, I believe that as a state, we need to continue to lead in the efforts to reduce the production of greenhouse gases and reverse global warming. While droughts are nothing new, the rate at which our planet has been heating up since the beginning of the industrial revolution is unprecedented, and there is irrefutable evidence that human production of greenhouse gases is contributing to this rapid rate of warming, which is in turn contributing to global climate change. As I've discussed previously, unless we can halt and eventually reverse global warming, droughts like the one we've been experiencing over the past three years in California are likely to become the norm rather than the exception.

Finally, I believe that we need to acknowledge that we live in a state and on a planet with finite natural resources, and that we cannot expect to have a continually expanding economy and a continually growing population without running short of these natural resources, including water. I believe we need to end our fixation with a rising Gross

Domestic Product, or GDP, as a measure of progress. The GDP goes up when a family's tap runs dry and they have to spend a fortune on bottled water, or when expensive cleanup operations are undertaken to remove toxic chemicals from underground aquifers. Instead of focusing on the GDP, I believe that we need to focus on what has been termed the GPI, or Genuine Progress Indicator,<sup>17</sup> which measures of our real progress as a society, including our progress toward ensuring that access to safe, clean water is a basic human right.

The challenge of providing safe, clean water for all of our residents is just one of the many challenges being discussed at this conference. To meet these challenges, we need an active, concerned, and educated citizenry; not an electorate that is so apathetic that less than a third of eligible voters turn out for an election or one that so lacks critical thinking skills that they are easily fooled into voting against their own best interests by SuperPAC's funded by billionaires.

And that's where you as journalists come in. Thanks for putting on this conference. And thanks for the work you do day in and day out in an effort to keep the public informed and engaged. Thank you for your attention. It's been an honor for me to speak to you today. At this point, I would welcome any questions or comments.

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- <sup>11</sup> Title 22, California Code of Regulations, section 64554
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