POLICY BRIEF: Drought as Disaster – State Goals
Drought Response, Risk Reduction, Preparedness, Mitigation, & Climate Change Adaptation

Date: February 29, 2016
From: Ryan Alaniz, Gil Harootunian, and Laura Olson
Re: **"2021 Goal" - 5-year Plan: Taking Steps towards a Drought-Resilient Future**
Attachments: Table with Examples of Adaptation & Mitigation Measures

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Drought as Disaster: What Should State/Local Governments Do?

California is currently entering its fifth year of severe drought. 2015 enveloped the majority of the state in exceptional drought conditions. Given the length and severity of drought in California, the state needs to create a new 'water culture' that prompts stewardship of this limited vital resource and best practice adaptations that maintain and even increase the State's overall productivity. The Great California Drought should enter the future history books as an inflection point; the moment of positive change to a more sustainable future in terms of natural resource management. As of Feb. 9, 2016, the U.S. Drought Monitor forecasted the following conditions for California:

> Despite heavy rainfall in January, an above-average snowpack and rising reservoirs in many areas, the California State Water Resources Control Board recently approved an 8-month extension of existing drought-related emergency regulations. This is a reminder that although El Nino-related precipitation has been bountiful so far this winter, the drought situation in California remains very serious. Reservoir storage generally remains below-average and very significant groundwater shortages continue.

On Feb, 23, 2016 over 80% of the State remained in "severe" drought; over 60% remained in "extreme drought," and over 38% remained in "exceptional drought" (U.S. Drought Monitor).

This policy brief focuses on impacts in California as the basis for its analysis of state policy issues related to drought. The severity and length of the drought has created an opportunity for change. The "2021" goal is to be prepared for future multi-year droughts.

The impacts of recent droughts reveal that California faces significant human/ecosystem vulnerability and exposure to climate variability (such as disruption of food production and water supply, reductions in agricultural productivity, loss of rural livelihoods, consequences for human health and well-being, conflicts over the use of water resources). These impacts signal a significant lack of preparedness in many sectors: agriculture, the economy, public health, the environment, emergency management, natural resource management, climate change adaptation, and the mitigation of drought-related natural hazards such as wildfire and flooding. The extent of vulnerability to drought for human beings may well depend on the lens through which water is viewed: as a commodity or a human right.

<u>Water as a Human Right:</u>

There are many ways to frame water use. Throughout much of the American West, water has been treated as a commodity, or private property, due to the long-standing system of water rights. The constitution of California, for example, adopted riparian rights, which treat water as private property (November, 1849). The complexity of litigation and water claims over the past decades is too cumbersome to detail here: the seminal point is that thousands of stakeholders now hold water rights which allow them to treat water as inheritable private property. This is a root cause of the contemporary problems of water use in California and much of the American West. Breaking with the past, California has taken a first step in confronting the paradox of treating water as a

commodity to be bought and sold on open markers. It has set an important precedent for the rest of the country.

California is the first state in the U.S. to enact a Human Right to Water Bill (Assembly Bill 685)[i], which followed a visit by the United Nations Special Rapporteur for the Human Right to Safe Drinking Water and Sanitation. The Special Rapporteur expressed concern about serious challenges to access to safe drinking water, especially for the most marginalized populations.[ii] The need to view access to water as a human right and environmental justice issue is easily demonstrated by the Central Valley's many disadvantaged communities and vulnerable populations experiencing the effects of drought. One such community—an unincorporated area—is East Porterville, which for years now has been home to a rising number of households with no potable water, because their shallow domestic wells have dried up. As noted in Abraham Maslow's hierarchy of human needs, the most basic level are the biological and physiological needs, with water on the shortlist of the things needed to survive.[iii] While California's unique history makes the paradigm shift from water as private property to water as a shared resource and human right particularly difficult, the first steps have been taken.

To build on this ground-breaking step forward, the State needs to work to create a broad-based consensus among citizens that enables political action and promotes cohesiveness and political action through strong social bonds (e.g. "We are all in the same boat"). This approach would attempt to preempt divisive politics and individuals and sectors acting purely in their own self-interest (e.g., "I am in my life boat, and you are in yours"). Framing water as a human right entails an understanding of water as a natural resource that should be managed in a sustainable and transparent way. **The "2021" goal at all levels of government is that water be framed as a human right and protected as a public resource in United States.**

The other immediate adaptation measures that should be implemented at the state level to enhance preparedness and mitigation of drought conditions, protect water resources, and anticipate challenges, are listed here:

<u>State/local governments must work with academia/NGOs/private sector to implement best practices:</u>

- *Request Presidential Disaster Declarations for drought:* The Governor should direct his staff, emergency management, and agriculture agencies to request Presidential Disaster Declarations through the Department of Homeland Security/Federal Emergency Management Agency (FEMA) for severe or catastrophic droughts (D3/D4). This needs to occur early enough in the crisis to meet immediate/long-term needs. Drought warrants the full arsenal of structure, organization, resources, staff, and programs the federal government can put towards these crises.
- *Public education campaigns*: California needs a citizenry committed to a new water culture and informed public discussion. They should build knowledge in these target areas:
    - Clarifying the value of water (e.g., water is now more expensive than oil).
    - Addressing issues of water use and water supply
    - Enabling better consumer choices about limited supplies of water.

    - New tools for public understanding: create user-friendly public dashboards showing current levels of the drought, water supply, and water infrastructure (e.g., how limited water is being transferred and used, how water systems work).
    - Earthquake education as a model: the citizens of California understand earthquake hazards and preparedness. Earthquake drills are conducted regularly, and the topic is discussed and studied in primary and secondary schools. In addition, universities throughout the state have developed course curricula and research centers focused on improving earthquake safety, preparedness, and risk mitigation.
- *Investment in science and technology and export of American ingenuity:* Many drought-stricken states house incredible scientific and technological expertise—from universities to private industry. California is a global hotspot of innovation and has the brain power and intellectual infrastructure to produce sustainable solutions, both high-tech and low-tech. Better techniques and technologies for efficient water use can serve drought-prone areas across the globe and provide an export market for California.
- *Conduct a long-term assessment of each state's sustainable water supply*: California must begin this process and incorporate results into all relevant state plans. This work must address falsely separating ground/surface water resources, aquifer/reservoir recharge, and land subsidence issues.
- *Draft a state-wide water budget*.[iv] Using sustainable water supply assessment data, states should draft a state water budget that is transparent and arrived at through a public, deliberative process. Transparency will allow all citizens, sectors, and stakeholders to know and understand their water budgets and engage in discussion and democratic decision-making about "acceptable use" of water for all sectors. For example, farmers who know farming best can make decisions about how to use their water budgets to maximize crop or livestock production.
- *Monitor water use*: Many agriculture and business companies do not have meters on their wells and so do not know how much water they use on any given day or year. Investigate the use of water metering on agricultural, industrial, and residential wells. The state's assessment can be neither credible nor reliable without knowing actual water use by all stakeholders and sectors.
- *Sponsor state legislation promoting needed changes and implement current laws:* Examples of implementation issues include how the State will protect any water basin at-risk of permanent damage if local and regional entities do not carry out their duties (for any reason) and the means by which the State Water Resources Control Board will implement California Senate Bill 88 that empowers it to require municipalities to extend their water systems to the disadvantaged communities within or bordering them. States must put in place processes to ensure disadvantaged communities have equitable access to potable water, e.g., regulations such as California's aforementioned Senate Bill 88. These are proactive strategies to ensure healthy coping and adaptation to the risk of future droughts.
- *Continue to revisit legislation that must be enacted quickly to reduce risk of drought and greatly diminished water supplies for state citizens*: In September 2014, the California State Sustainable Groundwater Management Act was signed into law. California has never counted its groundwater—how much it has or how much it is withdrawing, and the Act stipulates that California authorities will not even begin counting groundwater withdrawals

for a decade. In addition, the state is barred for 10 years from any effort to "remedy a condition where the groundwater extractions result in significant depletions of interconnected surface waters."[v] This legislation was a breakthrough that involved hard wrought compromises from multiple stakeholders and got important issues on the books, but the action outlined is glacial in comparison to what is urgently needed. Delays threaten the ability of the state to enhance drought preparedness and enact critical mitigation measures.

- *Develop inter-regional compacts for water use and reuse*: as these are essential to deal with slow onset disasters and provide a better approach than crisis-driven stop-gap measures and self-interested strategies. The assessment of long-term sustainable water supply can inform the development of these compacts, which are especially important in times of drought.
- *Recognize drought as more than an agricultural emergency*: drought raises issues of environmental justice and human rights, and increases the vulnerability of disadvantaged communities and populations, which experience harsh impacts. Drought not only damages crops, but can adversely affect rural economies, drive up food prices, and have cascading effects within the economy beyond those dependent on agriculture sector business.

Conclusion

Failed attempts to move the country towards the adoption of a coherent national drought policy go back 18 years to the National Drought Policy Act of 1998. The potential risk of many years of consecutive drought has taken hold in the last decade with the likelihood that this trend will continue. While scientific models cannot predict with certainty what the future will hold, predictions are aligning in the direction of extended droughts and more arid baseline conditions in the Western United States. The possibility of mega-droughts in the future presents a challenge to existing public policy responses and are the contingency we must plan and prepare for.

According to scientific projections, such as those found in the IPCC 5th Assessment Report, it is likely that climate change will result in significant reductions in renewable sources of surface and ground water. Conflicts over water resources and their scarcity are certain to drive public debate. A national approach to drought should be based on preparedness and mitigation. All levels of government, private, and non-governmental sectors must work together to put programs and policies in place that will help reduce drought impacts and make them more manageable. Adaptation to climate change will enhance innovation and change the way we prepare for and prevent conditions of extreme and exceptional drought.

The National Drought Policy Commission report of 2000 noted, "Each time drought occurs, many of the same issues are raised. Principally, how much damage was inflicted, on whom, and where? Who is going to pay for it? How can we prevent or at least reduce damages and their costs in the future?" It is time that we begin to find answers to these questions.

[i] The bill was enacted on September 25, 2012.
[ii] University of California-Berkley, International Human Rights Law Clinic. May 2013. The Human Right to Water Bill in California: Implementation Framework for State Agencies. Retrieved from https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL.pdf.
[iii] Abraham Maslow's list of physiological and biological needs: water, food, breathing, sex, homeostatis, excretion.
[iv] Zelezny, L., Fu, X., Harootunian, G., Drexler, D., Avalos, A., Chowdhury, N., Pasha, F., Sherchan, S., Therkelsen, J., Wang, C., Zoldoske, D., Green, S., Edmonson, C. (2015). *Impact of the Drought in the San Joaquin Valley of California.* Retrieved from http://www.fresnostate.edu/academics/drought/
[v] The Sustainable Groundwater Management Act (2014). California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. Retrieved from: http://www.water.ca.gov/groundwater/groundwater_management/legislation.cfm The act consists of three legislative bills, Senate Bill SB 1168 (Pavley), Assembly Bill AB 1739 (Dickinson), and Senate Bill SB 1319 (Pavley).