

## **Introduction: Coping with Western Drought**

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Drought adaptation is not just a matter of hydrology and technology. It is at least as much about the way we govern. As John Wesley Powell and others explored and surveyed the territory west of the 100th meridian, they observed that it was distinctive in its aridity and topography. From a water management perspective, it might have been better had western state boundaries conformed more closely to the contours of river and groundwater basins. Perhaps then the West could have avoided such bitter interstate water disputes as between California and Arizona over the Colorado River.

Instead, state, county, and city boundaries were shaped in nonhydrological ways for sundry reasons. To make matters more complex, many states have since propagated special districts that cater to various water needs and the desire for local control. An excessive western enthusiasm for local control has all too often hampered potentially effective regulation and regional coordination of water resources.

Jurisdictional fracture can “satisfice” when water supplies are plentiful, but is highly problematic under drought conditions. Areas with ample ground or surface water are typically unwilling to share their resources with water poor communities. Projects that require several local communities to pool financial resources in order to construct facilities for capturing and recycling storm water have to enter into MOUs and ad hoc agreements like foreign nations in order to work together. And efforts to support regional water collaboration such as California’s Integrated Regional Water Management program have only enjoyed sporadic success, as many communities simply prefer to go about their business as usual. California fiddles as its forests burn and water resources dwindle.

The problems associated with jurisdictional fracture are compounded by regulatory complexity. Major water projects have to run a gauntlet of state and federal regulatory permits before they can begin construction. Each permit addresses a laudable concern such as clean water, endangered species protection, wetland conservation, and the like. But the path to securing permits can be confusing, expensive, and vulnerable to obstructive tactics.

There may be a shared urgency in the environmental community when it comes to slowing down and adapting to climate change, but the individual environmental causes of specific advocacy groups all too often take priority over long-range adaptive strategies such as building recycled water or flood control infrastructure. A project to protect the disadvantaged community of East Palo Alto with new flood walls, for example, took over 17 years to complete due to the extensive time and effort needed both to forge a JPA between a handful of communities along the San Francisquito Creek and then to overcome the many rounds of objections by environmental and neighborhood groups.

Water is a complicated political issue because it is inherently multifaceted. It is a private good when protected by riparian, appropriative, or correlative rights and traded in water markets. It is a common pool resource when shared and regulated by rules that prevent depletion and hoarding. And it is a public good when preserved for scenic beauty, recreational activities, and natural habitat.

The confusion about what water is underlies disputes over how it should be used. Farmers have private entitlements to water shares that date back to periods in time when western populations were much smaller. Environmentalists want to strengthen the public use doctrine to help their cause. Farm subsidies create distortions in the water markets that farmers fight to retain. Consumers demand low retail rates that do not reflect the true cost of the water they receive. Groundwater is frequently treated as a private correlative right to be depleted at will rather than preserved as a shared resource.

Politics further confuse water policy as Republicans tend to side with the farmers and Democrats with the fish. California's Proposition 218 limits the design of tiered rates that might encourage heavy water users to cut back. And no politician is anxious to jump into a debate over how to tie water to land use in order to match water supply with water demand rather than let people plant new orchards or build more exurban housing at will.

In the end, it is safe to predict that both the farmers and the fish will lose out the day that city and suburban voters are reduced to one shower a week. California's legal framework for water is particularly vulnerable to an initiative, with only the Federal Takings clause as a potential obstacle. Governor Brown's emergency declaration that overrode all existing rights and claims in order to impose mandatory water restrictions was a vivid reminder of that looming threat.

The papers in this edition of the CJPP touch on several of these themes. Monobina Mukherjee, Katie Mika, and Mark Gold take on the question of what is possible in terms of tiered rates given that Proposition 218 requires that the rates must be directly related to the cost of services at a given level of usage. Barbara Tellman reminds us that for the problems with water conflicts in the West, western states have had some success in developing innovative partnerships, introducing natural or green infrastructure to manage water resources, and using market transactions to reallocate water for commercial and environmental purposes.

A PPIC report on the western drought recommends how the federal government could better help western states prepare for prolonged drought based on 40 interviews with individuals at the federal, state and local levels. A second PPIC paper, "Accounting for California Water," assesses critical gaps and recommends ways to strengthen water accounting in California. It draws insights on best practices from a comparative analysis of water accounting practices in California, 11 other western states, and two countries (Australia and Spain), all of which share resource-management challenges common to advanced economies with dry, variable climates: allocating surface water in periods of scarcity, managing groundwater sustainably, and dedicating adequate water to support the natural environment. Many of these places have practices California can learn from as it envisions, designs, develops, and implements an accurate, consistent, and affordable water accounting system. The authors propose priorities to improve water accounting to address key management challenges and a technical appendix includes a comparative analysis and case studies summarizing accounting systems in California and the other jurisdictions.

Juliet Christian-Smith and Adrienne Alvord analyze California's new groundwater regulations, pointing out that data and model differences can greatly complicate transparency about the state's true groundwater situation. Doug Parker and Faith Kearns explain the water paradox—i.e. water always grows beyond the point of supply as long as agricultural needs and population

growth continue to rise just as newly constructed roads soon become congested—hence, as I say, the need is to tie land use and development policy.