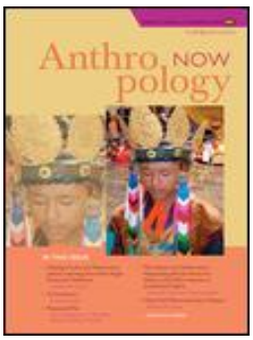

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The Politics and Ecology of Water

Notes on the Drought in California

Daniel Polk

California is great in size and diversity, the third largest state in the union, with the largest population. The state is comprised of distinct regions and countless enclaves, from Silicon Valley to Los Angeles, from arid basins to frigid peaks, from immense agricultural flatlands to unyielding urban growth. Proposals to split the territory have endured for over a century, often seeking to divide the state between north and south. A recent offer — a failed 2013 ballot petition — would have shattered California into no fewer than six separate states.

The current drought, however, rather than placing strain on lines of division, has resulted in the unchallenged perception of California as one whole. The drought has affected nearly every corner of the state. National and international media portray it as a uniquely California problem, threatening not only "the California lifestyle" but also the state's defining industries of agriculture and suburban growth. California officials have confronted the drought with new state laws and regulations, offering particularly state-bounded solutions. The drought helps to make California appear as a singular object of concern.

The drought highlights how seemingly disparate communities and geographies are connected. And beyond California, people measure lack of rain across the North American West, evident in fallowed fields, reduced fish runs, dried lawns and spreading forest fires. But the drought is not an apocalypse for the West. Although news reports present dire conditions, California will not burst into flames and slide off into the ocean. Difficult decisions, contested calibrations and major shifts in policy are occurring and lie ahead. Like other crises, the drought offers a view into the institutional and infrastructural relations that are normally not seen, relations that illustrated how the state is bound by political and ecological ties.

* * *

One place to explore the drought in California is the coastal city of San Diego. On an average afternoon, downtown can appear ideal, the blue water of the bay and swaying street palms offering a tropical air, with restaurants and hotels catering to the ubiquitous tourist. San Diego is at first glance a place apart. In the southern extremity of California, it is shielded by mountains to the east, a Marine base to the north, the Pacific to the west, and the heavily-guarded U.S./Mexico border to the south. Historically a rightwing stronghold, San Diego is also a political outlier in a deeply Democratic state. Yet San Diego remains tied to Los Angeles, its northern neighbor, by freeways, railroad and an aqueduct. San Diego leaders have long sought to be free of LA's smog and sprawl, signaling a staunch spirit of civic separateness. Boosters refer to their town as "America's Finest City."

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But even in idyllic, independent San Diego, the dry spell is a pressing problem.

During field research on California water politics in 2011, I got in touch with a former official who had been among San Diego's leading water managers. I found her office on an upper floor of one of downtown's skyscrapers. The building houses a high-powered legal firm that specializes in water law. Christine Frahm, a senior partner at the firm, served as the Chairwoman of the San Diego County Water Authority from 1997 to 1998.

Reflecting the neoliberal turn in water management a generation ago, Frahm was a leading supporter of a controversial farm-to-city "water transfer." Sometimes referred to as a "water market," the transfer allows San Diego to increase its allocation by drawing water normally used by farmers, who are then economically compensated. The water transfer is a decade-old agreement, linking San Diego's thirst to the abundant supply in the Imperial Valley, a poor farming sector in the desert beyond San Diego.

The water transfer is far from a straightforward exchange. "In the Imperial Valley, they got their shotguns to defend their water," Frahm said. "It's your life that you're defending." Among Imperial Valley farmers, some are descendants of white settlers who first established water rights a century ago. Often keyed in dramatic terms, water politics thrives on local identities and long-term legacies.

Water's political control rests on a complex of alliances and rivalries that are often unseen by the public. Although federal and state officials oversee policy, water management centers on discreet regional or local districts. From the 19th century to the 21st, water management has ignored popularly-recognized political markers; differences between conservative and liberal, Republican and Democrat, have remained irrelevant to regional histories and insistently local dynamics.

Rather, water politics is defined by distinctions such as agricultural or urban, developers or conservationists, and senior or junior water rights. As scholars Margaret FitzSimmons and Robert Gottlieb have written, California water management can be understood as a kind of "hidden government," whose opaque operations "have rarely stimulated extended controversy or intense debate."[1] Dictated by insular technical and legal expertise, water management only becomes subject to public scrutiny in times of crisis: floods, legal battles or drought.

The water transfer between San Diego and the Imperial Valley is one such controversy. Prior to the transfer, San Diego relied on Los Angeles for over 90 percent of its supply. Frahm characterized the water transfer as an attempt to achieve "independence" from LA. Drought in 1992 threatened to cut LA-conveyed water to San Diego by 50 percent. "The '92 drought was the birth of the transfer," Frahm told me.

The present era of water management is defined by increasing reliance on rules, regulations and contracts as well as, to a lesser degree, a free market ideology. Thirty years ago, water managers were usually engineers, "water buffaloes" who lobbied for, built, and maintained vast construction projects. A number of water managers today are not engineers but attorneys. Rather than infrastructural augmentation, reallocation of supply

through compacts and regulations lead current strategies to mitigate dwindling sources.

* * *

The current drought is part of a long boom-and-bust cycle of downpours and dry spells. Throughout California's history, drought has led to major changes. While drought helps to produce shifts in water usage, drought fundamentally is a political event, determined as much by social practice as by rainfall. The ranching economy of the Spanish and Mexican eras displaced indigenous peoples and flourished until drought struck in the 1860s. It decimated LA and San Diego's thriving cattle industry, transforming the economic landscape more than any drought since. After this, American settlers would establish private water operations here and throughout the West.

By the 20th century, public authorities began to overtake private water companies. Drought became a tool to justify public expansion of infrastructure. Public officials used drought to shore up voter support for the LA Aqueduct in 1905. Drought in the 1930s helped to instigate the building of the Central Valley Project, which supplies part of California's largest agricultural region. Droughts in the 1950s gave pretext to constructing the State Water Project, which spans the spine of California, connecting the wetter north to the arid south. This period was the golden age of Western waterworks, when local, state and federal officials poured countless dollars and labor hours into unprecedented feats of engineering.

This construction boom began to decline by the drought of the 1970s, when neoliberal solutions started displacing an emphasis on infrastructure. Water supplies became tapped to their limit, with few new dams left to build. This led to a focus on efficiency, innovation and market-oriented outcomes. The drought of 1987–92 reinforced this trend, with impact on Southern Californian cities. In years since, the region has launched numerous efforts, with the state's largest desalination plant, water conservation programs, a water-recycling facility, enlarged reservoirs and rural-to-urban water transfers. Today's all-hands approach, based on technologies to extend stressed supplies and regulations to reallocate existing sources, continues to inform how districts battle with drought.

* * *

The current drought has entered its fourth year, now one of the driest, warmest periods in recorded state history, hitting hard both farms and cities. Most farming in California occurs in the Central Valley, the 450-mile-long expanse of acreage supplied by the Central Valley Project and State Water Project. These two networks have dramatically cut "ag" water deliveries. To compensate, some farms carry out water transfers, purchasing extra supply from other farms. Also, farmers who can afford it have dug deep wells into dwindling aquifers. This backup supply has allowed the wealthiest farms to hold over, yet groundwater overdraft continues. In some cases, small Central Valley neighborhoods have seen taps run dry. Farmers also have fallowed nearly five percent of Central Valley fields. Poor farmworkers and middle-class farmers struggle while well-capitalized corporate farms are able to more readily absorb the costs of drought.

Agriculture uses approximately 80 percent of water in the state, yet the drought has not significantly affected food prices. Cattle feed including alfalfa, Bermuda grass and Sudan grass use approximately half of the farm water in California. Much of this sustains California's enormous dairy industry; milk and cream are the most lucrative farm commodities. California also exports forage crops to dairies and stockyards in other U.S. states and to countries like China and Japan, fueling a boom in global meat and dairy consumption. California does grow staple crops including rice, corn and wheat, but the state makes more money from cash crops including almonds, grapes and walnuts. California agribusiness serves more to satiate the desires of middle-class tastes than to meet the bare needs of the hungry. Droughts do not imperil the food supply as much as they signal shifts in the costs of producing relatively luxury foods.

Urban water is also constrained, though not with such harsh local impacts as for agriculture. Drinking supplies remain secure for cities. The state has ordered urban districts to practice greater efficiency with a mandate to reduce city water use statewide by 25 percent. The focus of conservation is the semi-tropical foliage adorning much of the state's cityscapes. Approximately 60 percent of urban water goes to landscaping.

The state has long developed with the ideal of lush lawns, towering palm trees and backyard swimming pools. These emblems of California are concentrated in wealthy zip codes, which consume more water than working-class cities. At 145 gallons per day, a resident in Beverly Hills uses 240 percent more water than a resident in Santa Ana, who averages 60 gallons a day. State officials have mandated urban water cuts with these disparities in mind, with wealthier, thirstier jurisdictions called upon to reduce a greater percentage of water usage. Water districts have begun charging tiered water rates, seeking to charge more if citizens use more water.

To meet cuts, water districts are actively promoting alternative landscaping such as drought-resistant plants or artificial lawns. Water districts frequently hold prizes for the most beautiful drought-resistant home gardens. Businesses in Palm Springs advertise services to remove lawns: "When in drought, turf out!" Yard signs in Sacramento proclaim of drying grass, "Gold is the new green." Billboards in San Diego announce, "Let your lawn get a tan." The question for urban water management is not how to quench human thirst, which remains well supplied, but how to articulate a new ethos of water conservation.

* * *

From my conversation with Frahm, I better appreciated how representative San Diego's efforts have been. The water transfer marks the unique challenges of combating drought: negotiating new partners, setting new rules and collaborating with state and federal officials. The transfer also mirrors strong environmental concerns that are coupled with water management. The most significant obstacle to the water transfer is environmental impact on the Salton Sea, the largest inland body of water in California, which lies north of the Imperial Valley. Depopulated towns dot the waterfront, appearing as relics of the lake's once-promising former days. Yet for the endangered Yuma Clapper Rail and more than

400 other species of birds, the Salton Sea is a vital haven. Nearly 90 percent of California's wetlands have been lost to development. The Salton Sea remains one of the state's most important wetland habitats for migratory birds, a critical stopover on the Pacific Flyway that extends from Canada to Mexico and further south. The Salton Sea is thus tied to a regional and hemispheric ecology, an often forgotten waterscape closely tied to places far beyond its shores.

In spite of its ecological value, the Salton Sea today appears plagued by constraints. Lying below sea-level in its enclosed basin, it has no ocean outlet, with increasing concentrations of salts, pesticides and fertilizers. Thus the Salton Sea is a highly-saline, eutrophic lake with periodic algae blooms and immense fish "die-offs."

The water transfer will divert farm water that normally drains into the lake. Once the water transfer goes into full effect by 2017 and San Diego begins to receive its full allotment of Imperial irrigation water, local officials anticipate the Salton Sea will irreversibly collapse. Further, its shrinking shoreline will expose fine sediment dust to harsh desert winds, imperiling the air quality and public health of at least one million local residents.

Frahm acknowledged the problem of the Salton Sea, once a side concern that is now a pressing complication. "During negotiations over the water transfer, throughout this whole thing, the Salton Sea has been lurking in the background," she said. The many connections between water management and the environment are well encapsulated in debates around the Salton Sea.

Like other urban officials, Frahm questions the ecological importance of the Salton Sea while recognizing the need to control dust pollution. A solution is required by stipulation of the water transfer agreement. The Imperial Valley and San Diego's water management are thus tied to the fate of the Salton Sea. In the end, Frahm explained, lakebed dust control may be feasible but complete habitat restoration might not be. "In these times," she said, "people have to get realistic about environmental mitigation."

* * *

Today's water use regime is inevitably tied to environmental challenges. These challenges are a question not simply of "water resource scarcity" but how to manage the many users of water beyond humans. Simply within California, countless examples proliferate — migratory birds displaced by a dwindling Salton Sea, salmon runs arrested by Klamath River dams or the Bay Delta's fish population threatened by the California Aqueduct. The modern era of water use started with claims to control and reengineer nature. Concerns for environmental consequences helped lead to new scientific disciplines such as ecology, and new governance tools, including environmental impact reports. Diverting water became an exercise in management as well as mitigation.

Drought highlights these underlying conditions of water policy, founded on notions of separation from nature but grounded in close reliance. San Diego's drive for "independence" from LA's water supply has resulted in an intimate reliance on the Imperial Valley's water. The current drought has heightened this dependence, as other sources shrink. With the possibility of more frequent and se-

vere dry spells, the links among institutions, infrastructures and habitats are of growing importance.

Anthropologist Clifford Geertz, writing nearly four decades ago, compellingly addressed modern ecological questions. So-called "natural" systems are inextricably bound with cultural practices, as anthropologists have long shown. Geertz explains, "Though perhaps more apparent in so-called 'traditional' civilizations, this sort of infolding of setting and society is hardly confined to them." He continues:

> It used to be thought that, although environment might shape human life at primitive levels, where men were, it was said, more dependent upon nature, culture-evolutionary advance, especially technical advance, consisted of a progressive freeing of man from such conditioning. But the ecological crisis has divested us all of that illusion; indeed, it may be that advanced technology ties us in even more closely with the habitat we both make and inhabit, that having more impact upon it we in turn cause it to have more impact upon us.[2]

In relation to climate change, such a viewpoint is more relevant today than ever before.

The drought demonstrates how California, a state typically defined as socially fragmented, remains a place woven by political and ecological ties. San Diego exists by virtue of such ties, as efforts to combat drought have linked it more closely with communities such as the Imperial Valley. Even San Diego's wealthy downtown districts remain bound to the fate of the dusty shores of the Salton Sea. Throughout California and beyond its state borders, drought reveals the shared circumstances of disparate people, places, forces and forms of life, bound by both interconnection and interdependence.

Notes

1. Robert Gottlieb and Margaret FitzSimmons. *Thirst for Growth: Water Agencies as Hidden Government in California* (Tucson: University of Arizona Press, 1991), xvi–xvii.
2. Clifford Geertz. "The Wet and the Dry: Traditional Irrigation in Bali and Morocco." *Human Ecology* 1, no. 1 (1972): 23–39.

Daniel Polk is a postdoctoral scholar at Stanford with the Bill Lane Center for the American West. Trained in socio-cultural anthropology, he is interested in the political and social aspects of ecological crisis. His research examines water politics in the borderlands of California, with a focus on how struggles for power are writ large in the "natural" landscape.