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TEN REGULATORY AND CULTURAL PRINCIPLES THAT IMPROVE CALIFORNIA'S DROUGHT PLANNING

*CHRIS SHUTES**

Forty-one of the past hundred years in California have been part of multi-year drought sequences. The 2012–2015 drought was one of the worst of the last hundred years, and there are increasing concerns that climate change will increase the frequency of drought in California. This article deals with ten regulatory and cultural principles developed in the last decade that are becoming embedded in drought planning in California. These principles can be summarized as follows:

1. Water users can and must reduce demand for water.
2. Data must replace the culture of secrecy in water use.
3. Water accounting is possible and must be improved.
4. The environment (public trust resources) cannot make up shortfalls to water users.
5. Groundwater can and must be regulated.
6. Water agencies must cooperate.
7. Regional planning is essential.
8. Planning must incorporate front-end buy-in from stakeholders.
9. Drought infrastructure requires expenditures that do not show benefits in every year.

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10. Expectations about water supply require a reset during drought.

I discuss some of the evolution and implementation of these principles below.

I. IN CALIFORNIA'S DROUGHT OF 2012–2015, THE IDEOLOGY OF PERMANENT WATER ABUNDANCE TURNED TO DUST

Permanent abundance of California water was always an ideology, but many aspects of the culture of water took it for reality. The general belief that abundance was real gave it practical consequences, and thus to some degree made it real. For decades, Californians plowed savings from water conservation back into developmental uses. In agriculture, efficiency savings were treated as an opportunity for new acreage or more lucrative cropping patterns. In cities and suburbs, efficiency savings provided the opportunity for new housing and business development. On multiple levels, including government planning, Californians believed that they could develop new water supplies whenever they needed them (they took the shortage to be money, not water).

As areas of California developed, the initial paradigm was for each water purveyor to independently secure water supply for its service area. Most areas of the state that rely on relatively local surface water have developed enough storage to allow delivery of two years of “normal” water supply, after which they have plans for various degrees of triage. As local supplies have struggled to meet growing demands, water agencies have been forced to increase risk for existing users during dry periods (yesterday’s drought reserve becomes today’s everyday supply), or to develop new water sources and storage.¹

The water agencies that pursued large-scale development relatively early had an enormous advantage. Well-financed but dry coastal areas with growing urban populations assured future water supplies by constructing large distant developments and associated conveyance: San Francisco with Hetch Hetchy Reservoir on the Tuolumne River and the

¹ For example, El Dorado County, whose population has increased from 85,000 in 1980 to an estimated 183,000 in 2014, has more aggressively sought to develop new supplies than Amador County, its less developed neighbor to the south whose population in the same time period increased by about 17,000. U.S. Census, STATE & COUNTY QUICKFACTS: EL DORADO COUNTY, CALIFORNIA, <http://quickfacts.census.gov/qfd/states/06/06017.html> (last modified Dec. 2, 2015); U.S. Census, STATE & COUNTY QUICKFACTS: AMADOR COUNTY, CALIFORNIA, <http://quickfacts.census.gov/qfd/states/06/06005.html> (last modified Dec. 2, 2015); Cal. Dep’t of Fin., REPORT 84 E-4: POPULATION ESTIMATES FOR CALIFORNIA COUNTIES AND CITIES: APRIL 1, 1976 THROUGH JANUARY 1, 1980, <http://www.dof.ca.gov/research/demographic/reports/estimates/e-4/1971-80/counties-cities/#tab76to80> (last visited Feb. 10, 2016).

Hetch Hetchy Aqueduct; the East Bay with Pardee Reservoir (and later Camanche Reservoir) on the Mokelumne River and the Mokelumne Aqueduct; Los Angeles with the development of the Mono Basin and Owens River and the Los Angeles aqueduct.

These three developments were substantially overbuilt relative to demand at the time of construction. This resulted in drought protection for many decades for the service areas of their owners, until development caught up with infrastructure capacity. These developments also created long-standing resentments (at the least) that often remain to this day, as well as reducing availability of water sources and development sites for local use. Local opportunities throughout the Western Sierra have been further limited by hydropower development, leaving many “counties of origin” with state-filed water rights applications for locations that have already been developed. In addition, water infrastructure costs many decades ago were smaller by orders of magnitude, and early developments confronted few environmental regulations, restrictions, and requirements.

The Central Valley Project (CVP) and the State Water Project (SWP) were enormous organized efforts to provide multiple geographic regions of California with water. However, they have been spectacularly unsuccessful in protecting large portions of their service areas against drought because they have contracted for far more water than they can deliver, and their thirst is basically insatiable.² In addition, they have appropriated water that might otherwise be available for use in droughts by others. By the beginning of 2014, after two years of drought, the CVP and SWP were tapped out, supplying water in 2014 and 2015 almost exclusively to those senior diverters (“settlement” and “exchange” contractors) that had established water rights on Project-affected rivers prior to the construction of the Projects.³ Project infrastructure provided

² As recently as July, 2015, the Bureau of Reclamation issued an Environmental Impact Statement that announced:

The purpose of the action considered in this Environmental Impact Statement (EIS) is to continue the operation of the Central Valley Project (CVP), in coordination with operation of the State Water Project (SWP), for the authorized purposes, in a manner that: . . . [e]nables the Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR) **to satisfy their contractual obligations to the fullest extent possible.**

U.S. Dep’t of the Interior, Bureau of Reclamation, DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR COORDINATED LONG TERM OPERATION OF THE CENTRAL VALLEY PROJECT AND STATE WATER PROJECT, 2-1, http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=22463 (last visited Feb. 10, 2016) (emphasis added).

³ For Central Valley Project deliveries, see U.S. Dep’t of the Interior, Bureau of Reclamation, Central Valley Operations, REPORT OF OPERATIONS MONTHLY DELIVERY TABLES by year, <http://www.usbr.gov/mp/cvo/14deliv.html> (last updated Jan. 27, 2016), <http://www.usbr.gov/mp/cvo/15deliv.html> (last updated Jan. 27, 2016). For State Water Project deliveries, see Cal. Dep’t of Water

opportunities for some northern California settlement contractors to sell water to the San Joaquin Valley and elsewhere in lucrative water markets in the “Drought Water Banks” of the first decade of the 21st Century, as well as in the most recent drought. However, one could well argue that the serial water “transfers” thus facilitated often provided water to entities with systemically unreliable water supplies than to those short on water due to drought *per se*.

Literally underlying California’s Central Valley and its water users was the biggest bank of them all: groundwater that until 2014 was virtually unregulated. As the only water source in many areas of California (including numerous Central Valley cities), groundwater was also the permanent line of credit for surface water users whenever surface water was short because of drought, overappropriation, or both. The greatest feature of this bank was that the “borrowed” water apparently never had to be repaid; costs were limited to pumping costs, and access attached to ownership of overlying land. On a smaller scale, many other California valleys as well as northern California areas with Cascadian geology benefited from unregulated groundwater. The reserve formerly limited only by pumping expenses changed abruptly with the Sustainable Groundwater Management Act of 2014.⁴

In the last two years of the 2012-2015 drought, the State Water Resources Control Board (“State Board”) required mandatory municipal and industrial water conservation on a statewide scale.⁵ The statewide goal was 25 percent conservation, organized by water service provider: adjustments were made for providers who had already achieved substantial conservation. The results were impressive.⁶ Elizabeth Dougherty, Director of the organization Wholly H2O, blogged in October, 2015: “. . . [T]he most recent drought is one of the best things to happen in the state of California when considering not only the culture of water use,

Res., State Water Project Analysis Office, Water Deliveries webpage, <http://www.water.ca.gov/swpao/deliveries.cfm> (last visited May 4, 2016).

⁴ This new legal environment also created opportunities for functional groundwater banking and future drought management and planning. *See* Assemb. B. 1739, 2013–2014 Leg., Reg. Sess. (Cal. 2014), 2014 Cal. Stat. Ch. 347, http://www.leginfo.ca.gov/pub/13-14/bill/asm/ab_1701-1750/ab_1739_bill_20140916_chaptered.pdf; S.B. 1168, 2013–2014 Leg., Reg. Sess. (Cal. 2014), 2014 Cal. Stat. Ch. 346, http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_1151-1200/sb_1168_bill_20140916_chaptered.pdf; and S.B. 1319, 2013–2014 Leg., Reg. Sess. (Cal. 2014), 2014 Stat. Ch. 348, http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_1301-1350/sb_1319_bill_20140916_chaptered.pdf.

⁵ In ordering urban conservation during the drought, the State Board applied *Light v. State Water Resources Control Bd.*, 226 Cal. App. 4th 1463 (2014), which affirmed an expansive use of the Board’s authority to apply the Doctrine of Unreasonable Use.

⁶ For some of the reporting, *see* Cal. State Water Resources Control Bd., WATER CONSERVATION PORTAL-CONSERVATION REPORTING, http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml (last visited Feb. 10, 2016).

but the culture of water awareness, and individuals' relationship with water."⁷ Her contention has merit. While urban areas use on average only about 20 percent of the California's developed water supplies, the percent of the state's population that was directly affected was likely 80–90 percent.⁸ Even though the vast majority of municipal water users have no idea what comparable water conservation would mean for the agricultural sector that uses most of the state's developed water, the dominant expectation is that everyone needs to do his or her part.

II. YOU CAN'T MANAGE WHAT YOU DON'T MEASURE

The maxim “you can't manage what you don't measure” became popular as part of the ultimately successful legislative campaign to regulate groundwater in 2014. It also describes a deficiency that rapidly became critical in attempting to triage surface water diversions and water rights “curtailments” in the 2014 and 2015 drought years. The State Board quickly found, in early 2014, that it needed to make real-time decisions about who could divert water and who was too low in priority to be allowed to divert. However, the State Board didn't have anything approaching an accurate real-time accounting of who in most of the state was diverting how much water, where, and when. Historically, accounting by approximation has simply meant in practice that more water was removed from instream and aquatic resources: in legal terms, from the public trust.⁹ But in 2014 and 2015, the State Board ordered widespread curtailments of water rights: the environment did not have enough water to keep water users whole.¹⁰

⁷ Elizabeth Dougherty, *Silver Lining to the California Drought: New Cultural Norms of Engagement*, WHOLLY H2O, MAINSTREAMING LOCALIZED WATER (RE)USE, <http://www.whollyh2o.org/daily-stream/integrated-water-management/item/488-silver-linings-to-the-california-drought-new-cultural-norms-of-engagement.html> (last modified Oct. 8, 2015).

⁸ “Developed water” means water appropriated, diverted, stored, and/or otherwise managed for human use. Some water users argue that water that is not diverted should be counted as “environmental water” and thus considered as a qualitatively equivalent category to water that is used by humans. This is largely a framing exercise to make the amount of water used by humans seem relatively smaller. It reaches absurd conclusions when water users oppose “diverting water back to the river.” Under California water law, there is no water right for instream use, except for Water Code 1707, under which water that was *previously used consumptively*, e.g. for agriculture, municipal or industrial use, can be dedicated explicitly for instream purposes. Otherwise, a fish cannot obtain a water right. The public trust doctrine treats water for instream purposes as a right held in trust for everyone, not subject to the rule of priority that generally governs developed water use.

⁹ In relatively flush times, the State Board has largely relied on a cumbersome and painfully slow complaint system to enforce unauthorized or excessive diversions. This has been modified somewhat in the last several years by increased staffing in the Board's enforcement unit.

¹⁰ In the worst recent example of drought planning, the State Board in 2014 and 2015 squeezed aquatic resources to the breaking point: the Board weakened Delta water quality standards to the point that Delta smelt reached historic lows and may go extinct; the annual progeny of endan-

When the State Board curtailed water rights in 2014, and again in 2015 (this time extending curtailments to some pre-1914 water rights previously believed to be beyond the State Board's reach), representatives of dozens of water rights holders argued they were being treated unfairly due to incomplete or inaccurate information and/or to increased reporting costs.¹¹ That changed the dynamic. It is one thing to require accurate information to protect aquatic ecosystems. It is another when the absence of accurate information may lead to broad brush curtailment of water rights when more accurate information might provide a different outcome or even a delay in curtailment for some users of water.

In the short term, the State Board set several emergency water use reporting requirements during the current drought. It took a year and a half to pass legislation (SB 88, 2015) that requires increased measurement and reporting of water diversions.¹² It took another six months to pass an implementing regulation that allows the State Board to require monthly or more frequent electronic reporting of use in watershed where not enough water is present to supply all needs.¹³

For the longer term, the State Board has also used SB 88 to require annual reporting of water use by almost all water users.¹⁴ As described in the San Francisco Chronicle:

The new state rules, most of which will begin to be phased in at the end of the year, require those who draw at least 10 acre-feet of water from a river or creek annually — the equivalent of what about 15

gered winter-run Chinook salmon in the Sacramento River suffered two years of catastrophic mortality. The State Board nonetheless declared its decisions "reasonable." Cal. State Water Resources Control Bd., MEETING SESSION – DIVISION OF WATER RIGHTS, DECEMBER 15, 2015, ITEM 7, http://www.waterboards.ca.gov/board_info/agendas/2015/dec/121515_7_with_coverltr.pdf.

¹¹ See for example, comments to the State Board regarding agenda item in its May 20-21, 2014 meetings, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/comments052014/ (last updated May 20, 2014). See also comments to State Board in response to September 10, 2014 NOTICE OF SOLICITATION REGARDING IMPROVEMENTS TO THE IMPLEMENTATION AND ENFORCEMENT OF WATER RIGHTS DURING DROUGHT CONDITIONS, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/dryyear_report/comments2014oct/index.shtml (last updated November 17, 2014). See also the State Board's webpage on Drought Informational Orders, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/informational_orders.shtml (last updated Feb. 2, 2016).

¹² SB 88, passed in June, 2015 authorized the State Board to greatly expand measurement and reporting requirements for water diverters. It authorized the Board to create an initial emergency regulation to increase reporting of water use during the current drought. The State Board adopted a regulation on January 19, 2016, which remains in effect indefinitely. Cal. State Water Resources Control Bd, INFORMATION ON SENATE BILL 88 AND EMERGENCY REGULATION FOR MEASURING AND REPORTING THE DIVERSION OF WATER, http://www.waterboards.ca.gov/waterrights/water_issues/programs/measurement_regulation/ (last updated Mar. 2, 2016).

¹³ *Id.*

¹⁴ *Id.*

households use in a year — to install a meter. The type of meter and the measurement protocols vary with how much water a user draws. The regulation eliminates a loophole that now allows water-rights holders to cite economic hardship and forgo metering, something 70 percent have historically done, according to state estimates.¹⁵

The new regulation will require considerable infrastructure and expense. It will also mean more administration and maintenance for water users. The culture of water diverters — and even more of groundwater users — has long been one that prefers secrecy. When people are asked to report on diversions, their first question generally asks why the trouble and expense of additional reporting are warranted; but behind that is often distrust about who wants to know and why. Counterbalanced against potential additional administrative work by water users is the fact that more automated reporting requires less ongoing administration, but is more detailed (thus causing affront to the culture of secrecy). In a continuing nod to secrecy, the regulation the State Board passed on January 19, 2016 deleted a proposed provision that would have required real-time reporting of diversions by the state's largest water diverters.¹⁶

It is not only the water users who have concerns about comprehensive reporting of water use. The State Board's Division of Water Rights has never had anything near the bandwidth needed to review and analyze all of the water diversion data it already receives, let alone all of the data it might receive if the Board required, for instance, monthly electronic reporting of all water used under each water right. Actually using the data would require substantial numbers of engineers and auditors. It would also require modernizing and expanding database infrastructure that in some cases is still handled in paper files. This flies in the face of ongoing funding deficiencies for the Division of Water Rights, which is funded on a relative shoestring by water rights fees. Legislative appropriation of real money — tens of millions of dollars — is likely necessary to bring California's water accounting into line with the need.¹⁷

The accounting needs of the State Board described above don't even begin to address groundwater. The Sustainable Groundwater Management Act does not require reporting of groundwater extraction on a pump-by-pump basis. However, the Act does allow local entities

¹⁵ Kurtis Alexander, *Just Like City Folk, Water Rights Holders Will Have to Track Usage*, S.F. CHRON., Jan. 19, 2016, <http://www.sfchronicle.com/bayarea/article/Just-like-city-folk-water-rights-holders-may-6769950.php>.

¹⁶ See January 8, 2016 version of the resolution in redline mark-up, p. 20, http://www.waterboards.ca.gov/board_info/agendas/2016/jan/011916_7_draft_regs.pdf (last visited May 4, 2016).

¹⁷ The author, Chris Shutes, has discussed reporting and funding issues with staff from the State Board's Division of Water Rights on multiple occasions over the last ten years.

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(“groundwater sustainability agencies”) to require such reporting to these entities.¹⁸ This presents a huge opportunity for local agencies if they have the courage to stare down individual pumpers and proactively manage their groundwater resources. The incentive is that groundwater banking and recharge are much more likely to gain acceptance if there is accounting of what leaves the ground as well as groundwater levels. Ultimately, the State Board is the backstop for groundwater sustainability in case local agencies are not created and operated according to set timelines, or in case they do not stabilize groundwater levels at 2015 conditions. But, in the worst case, the Sustainable Groundwater Management Act allows local agencies to string out accounting and accountability enforced by the State Board until 2040.¹⁹

III. THE BAD OLD DAYS OF BAY AREA DROUGHT PLANNING WILL END: A TALE OF TWO AGENCIES.

A. SAN FRANCISCO

One of the oldest gambits in water advocacy is for water agencies to argue that streamflow increases in rivers during droughts would create severe shortages and related impacts, and that therefore any streamflow increases under any conditions at any time would be unreasonable. The City of San Francisco, which is otherwise one of the most progressive cities in the world, has relied on this argument for decades.

The City and County of San Francisco (“City” or CCSF) gets the majority of its water supply from sources in the Tuolumne River watershed. The most well-known (and historically controversial) of its facilities is Hetch Hetchy Reservoir on the mainstem Tuolumne River in Yosemite National Park. In addition, the City owns Cherry Reservoir, Lake Lloyd, and Eleanor Reservoir on Tuolumne River tributaries.²⁰ The City also has several Bay Area reservoirs that account for about 15 percent of its available water supply. Within the City proper, water is distributed by the San Francisco Public Utilities Commission (SFPUC).²¹

¹⁸ Sustainable Groundwater Management Act, CAL. WATER CODE § 10720 et seq. (Westlaw 2015).

¹⁹ *Id.*

²⁰ The tributary reservoirs are used primarily to produce hydropower, and as currently operated are potentially available to the City for water supply only in emergency or severe drought situations. Stirred to action by the drought, the City is currently restoring canals that would allow use of the tributary reservoirs for water supply. The group Restore Hetch Hetchy has advocated that these reservoirs could provide part of an alternative water supply arrangement to allow removal of Hetch Hetchy Reservoir.

²¹ S. F. Pub. Util. Comm’n, S. F. Water Power Sewer, <http://www.sfwater.org/>.

SFPUC also supplies water from its facilities under contracts with the Bay Area Water Supply and Conservation Agency (BAWSCA), which in turn wholesales water to twenty-four cities and two private water companies in the San Francisco Bay Area. Finally, the City has a water banking agreement for water in New Don Pedro Reservoir, which is downstream of the City's Tuolumne River facilities.²²

Between 2005 and 2008, several state and federal fisheries agencies, as well as a group of non-governmental organizations, advocated that the Federal Energy Regulatory Commission (FERC or "Commission") revisit the flow requirements in the lower Tuolumne River.²³ Flow requirements for the lower Tuolumne are mandated in the hydropower license for the Don Pedro Hydroelectric Project. While the Project is owned by Turlock Irrigation District and Modesto Irrigation District ("Districts"), the City has a water rights agreement with the Districts that requires the City to contribute just over half the water required in any flow increases ordered by FERC for the lower Tuolumne.²⁴ The City's share of additional flow would come from the City's Hetch Hetchy Project facilities in the Tuolumne watershed upstream of New Don Pedro Reservoir. In negotiations that set the flows in the lower Tuolumne in 1995–1996, the City was a major player, as it had been previously and has been ever since.

In 2009, FERC ordered an extraordinary proceeding to determine whether interim flow changes in the lower Tuolumne River were warranted prior to the relicensing proceeding for the Don Pedro Project scheduled to begin in 2011.²⁵ The City (as well as the Districts) argued in this proceeding that flow increases in drought years would deprive the San Francisco Bay Area of water, and this would have catastrophic economic impacts to the Bay Area's economy. The City argued that it would be required to meet half of any flow increases that FERC might

²² *The Fourth Agreement Between The City and County of San Francisco and The Turlock Irrigation District and the Modesto Irrigation District, June 1966*, http://www.sjtsp.org/resources/documents/reference_materials/FOURTH_AGREEMENT.pdf; see *infra* note 24.

²³ "Lower Tuolumne" means the Tuolumne River downstream of La Grange Dam at River Mile 52.2, east of Modesto. La Grange Dam is two miles downstream of New Don Pedro Dam, and diverts water for irrigation in Stanislaus County.

²⁴ Fourth Agreement, *supra* note 22. The Fourth Agreement also provided that the City would pay for a substantial portion of the construction costs of New Don Pedro reservoir, which would nonetheless be owned by the Districts. It further stipulated that the City could divert and hold specified amounts of water in its reservoirs upstream of New Don Pedro Reservoir in spite of the Districts' senior water right priority. In addition, it established a "water bank account" in New Don Pedro Reservoir whose net effect was to provide the City the opportunity to divert more water upstream in drier years but keep the Districts whole with water that the City had previously released from its upstream reservoirs into New Don Pedro Reservoir. See *id.*

²⁵ Turlock Irrigation Dist. and Modesto Irrigation Dist., 128 *Federal Energy Guidelines: FERC Reports* 61,035 (July 16, 2009).

require, and that this would come out of its Hetch Hetchy storage. Others responded that the City would find alternative sources of water and/or would adapt. Unfortunately, the FERC-appointed Administrative Law Judge in charge of the proceeding accepted the City's argument:

§278. In determining financial, human, and other costs of implementing the Interim Flow Proposal measures, CCFS [sic] and the Districts limited their analyses to working from the 1987–1992 drought scenario. Use of this “worst case” scenario is reasonable and is commonly used by drought forecasters. Other available methodologies could provide some information and may be worth considering, but it is prudent to plan for the worst since it is not possible to predict future droughts with absolute accuracy.²⁶

In 2013, the City went before the State Board with a similar argument.²⁷ While in this case the City was slightly more expansive in its analysis of measures it would take to find alternative supplies in case of drought, it once again centered its criticism of proposed flow increases for the Tuolumne River on the drought of 1987–1992.²⁸

On May 6, 2014, the State Board wrote a letter to the City saying that it did not accept the City's assumptions.²⁹ This letter stated among other things that for the purposes of the Substitute Environmental Document (SED) for Phase I of the update of the Bay-Delta Water Quality Control Plan, “. . . State Board staff believes it is reasonable to evaluate CCSF's purchase of the required water from the Districts.”³⁰

The City responded, in a letter dated July 29, 2014, that it was right all along, affirming: “The Phase 1 SED Must Analyze Impacts from Reduced Water Deliveries throughout the Hetch Hetchy Regional Water System as a Result of Implementation of the Proposed Tuolumne River

²⁶ Turlock Irrigation Dist., 129 *Federal Energy Guidelines: FERC Reports* 63,015 (Nov. 20, 2009).

²⁷ Ellen Levin, Donn Furman, Dan Steiner & David Sunding, Argument before the Cal. State Water Res. Control Bd., *City and County of San Francisco Comments on the State Water Resources Control Board Substitute Environmental Document in Support of Potential Changes to the Water Quality Control Plan for the San Francisco Bay-Sacramento/San Joaquin Delta Estuary: San Joaquin River Flows and Southern Delta Water Quality*, http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/dsedoc/sanfranciscocity.pdf (Mar. 21, 2013); see also Dennis J. Herrera, Donn W. Furman, *Comment Letter - Bay Delta Plan SED* (Mar. 29, 2013), http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/baydelta_pdsed/docs/comments032913/dennis_herrera.pdf.

²⁸ Levin, *supra* note 27, at 10, 25, 33.

²⁹ Letter from Barbara Evoy, Deputy Director, Division of Water Rights, Cal. State Water Res. Control Bd., to Ellen Levin, Deputy Manager, Water Enterprise, San Francisco Water Power Sewer (May 6, 2014), http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/review/docs/sfwps050614.pdf.

³⁰ *Id.*

Flow Alternatives Because Reduction in Deliveries is the Reasonably Foreseeable Method of Compliance.”³¹

Finally, on October 8, 2014, several conservation groups responded to the exchange of letters between State Board staff and the City.³² This response not only suggested a suite of alternative measures the City could adopt in the face of drought, it also pointed out a new level of drought planning and cooperation with other Bay Area water agencies that the City had already begun.

B. THE EAST BAY

While the City of San Francisco in 2009 was telling the FERC-appointed administrative law judge that flow increases in the Tuolumne River would devastate the Bay Area's economy during a drought, the East Bay Municipal Utility District (EBMUD) was evaluating a drought protection plan that included raising a dam and thereby drowning two miles of the Mokelumne River.

EBMUD provides water to northern Alameda County and western Contra Costa County. EBMUD has a series of reservoirs in the East Bay hills, but gets the majority of its water supply from Pardee Reservoir on the Mokelumne River. In 2009, EBMUD was in the middle of updating its Water Supply Management Plan. For its planning purposes, EBMUD assumed increasing water demand over the next 30 years. EBMUD centered its drought planning around an assumed three year drought whose first two years were similar to the 1976–1977 drought and whose hypothetical third year had hydrology identical to 1977. EBMUD projected that such a drought would, by 2040, leave the District short of water, even though EBMUD was already constructing its Freeport Project to augment dry year water supply. EBMUD's Water Supply Management Plan 2040 and associated Program Environmental Impact Report considered a suite of options to fill the projected need. The largest and by far the most controversial option these documents analyzed was to raise Pardee Dam to increase the storage capacity in Pardee Reservoir.³³

³¹ Letter from Dennis J. Herrera, S.F. City Attorney, Jonathan P. Knapp, S.F. Deputy City Attorney, to Mark Gowdy, Cal. State Water Res. Control Bd., Division of Water Rights, at 2 (July 29, 2014), http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/review/docs/ccsf_response072914.pdf (capitalization in original).

³² Letter from Julie Gantenbein, et al., to Mark Gowdy, Cal. State Water Res. Control Bd., Division of Water Rights (Oct. 8, 2014), http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/review/docs/100814_resp2ccsf_sedimpacts.pdf.

³³ East Bay Mun. Util. Dist., Water Supply Management Program 2040 Environmental Documentation (2009), DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT, 3-1 (Feb. 2009), <https://www>

A collection of environmental groups, led by the Foothill Conservancy, vigorously opposed the Pardee raise. They wrote comment letters about the documents, wrote letters and organized mass mailings to the EBMUD Board of Directors, showed up with supporters and spoke at Board meetings and workshops, and solicited media coverage.

At an EBMUD Board meeting on July 14, 2009, David Nesmith, facilitator for the Environmental Water Caucus, addressed the Board and advocated that the Board evaluate an alternative in which EBMUD would use storage in Contra Costa Water District's (CCWD) Los Vaqueros Reservoir as a drought reserve. The author of this article read a statement also advocating for a Los Vaqueros alternative that said, in part: "CCWD is a forward thinking entity just like EBMUD. You have more in common than you have differences. Work together." The minutes from that meeting describe the response of the Board. "In response to the comments made regarding Los Vaqueros Reservoir Board members pointed out that this alternative had been eliminated from consideration because of potential water quality issues, increased operational costs, growth inducing aspects, and environmental consequences."³⁴ This brief summary makes no mention of comments by one Board member that Contra Costa Water District was impossible to work with and could not be trusted.

On October 13, 2009, the EBMUD Board certified its Program EIR and approved the Water Supply Management Plan. On November 19, 2009, Foothill Conservancy, Friends of the River, and the California Sportfishing Protection Alliance filed suit in Amador County. The complaint attacked deficiencies of the Program EIR under CEQA.³⁵ On April 11, 2011, Judge Timothy Frawley of the Sacramento Superior Court found in favor of plaintiffs, in part on grounds of inadequate analysis of alternatives under CEQA. The judgment read in part:

The evidence in the record supports the assertion that the Los Vaqueros Reservoir project was sufficiently defined to be included as a "potentially feasible" alternative. The District abused its discretion in arbitrarily excluding the Los Vaqueros project for being "undefined" and "uncertain" while retaining other water supply components that

.ebmud.com/about-us/construction-my-neighborhood/water-supply-management-program-2040/water-supply-management-program-2040-environmental-documentation-2009/. More precisely, the option was to build a taller dam slightly downstream of the existing dam, but for purposes of discussion was more or less universally referred to as "raising Pardee" or the "Pardee raise."

³⁴ Minutes from EBMUD Bd. of Directors Meeting (July 14, 2009), http://www.gjbhzoqm.ebmud.com/sites/default/files/071409_regular_minutes%5B1%5D.pdf.

³⁵ Following a motion by EBMUD, the venue was changed to Sacramento (Foothill Conservancy v. East Bay Mun. Util. Dist., No. 34-2010-80000491 (Cal. Sacramento Super. Ct. Apr. 11, 2011).

are equally undefined and uncertain. The District's determination that the Los Vaqueros project is "infeasible" is not supported by substantial evidence in the administrative record as a whole. The District should have included the Los Vaqueros project as a potentially feasible alternative water supply component.³⁶

The court invalidated the EIR, finding:

While the Court has no objection to the conceptual range of portfolios described in the EIR, the Court finds there is insufficient variation in the composition of those portfolios to permit informed decision-making.³⁷

In the summer of 2011, EBMUD staff reevaluated its options for developing a legally compliant supplement to its Program EIR. By December, 2011, the Pardee raise was out and Los Vaqueros was in.³⁸ On April 24, 2012, EBMUD adopted a revised Program EIR that eliminated the option to raise Pardee Dam and included an alternative to store water in Los Vaqueros Reservoir.³⁹ Later in 2012, EBMUD concluded an agreement with CCWD to store 20,000 acre-feet of water in Los Vaqueros Reservoir, with a stipulation that the amount may be increased in the future. Since then, EBMUD has completed an intertie with CCWD and begun construction of treatment infrastructure so that water from Los Vaqueros can be integrated into EBMUD operations as the need arises. In discussing the decision to eliminate the raise Pardee option, Richard Sykes, EBMUD's director of water and natural resources, stated: "What changed, really, is we went back . . . and spent a lot of time looking at Los Vaqueros and talking to CCWD."⁴⁰

Two important broader policy swings are embedded in EBMUD's 2012 reversal on Los Vaqueros. First, EBMUD made the commitment to make major infrastructure investments in a project that would not have benefits in every year. In 2009, expense of infrastructure (for water treatment as well as storage and conveyance) was the EBMUD Board's

³⁶ *Foothill Conservancy v. East Bay Mun. Util. Dist.*, No. 34-2010-80000491, 29 (Cal. Sacramento Super. Ct. 2011).

³⁷ *Id.* at 30.

³⁸ See EBMUD Pub. Affairs, Press Release, EBMUD TO ISSUE REVISED ENVIRONMENTAL IMPACT STUDY ON ISSUES RAISED BY COURT ON WATER SUPPLY PLAN (Dec. 5, 2011), <https://www.ebmud.com/about-us/news/press-releases/ebmud-issue-revised-environmental-impact-study-issues-raised-court-water-supply-plan/>.

³⁹ Minutes from East Bay Mun. Util. Dist. Bd. of Directors Meeting (Apr. 24, 2012), https://www5.ebmud.com/sites/default/files/042412_regular_minutes.pdf.

⁴⁰ Mike Taugher, *Planned Expansion of Sierra River Dam Dropped*, SAN JOSE MERCURY NEWS (Dec. 5, 2011), http://www.mercurynews.com/science/ci_19474098.

most frequently vocalized objection to west-of-Delta storage of lower quality water diverted from the Delta. On the spectrum of the relative importance of expense and dry year reliability, EBMUD, in 2012, swung toward spending the money. The second policy swing was EBMUD's acceptance of lower quality Delta water itself. For many years, EBMUD (like its counterpart in San Francisco) acted as though it was entitled to pure Sierra snowmelt. EBMUD, at minimum, moderated that sense of entitlement.

IV. SUCCESSFUL DROUGHT PLANNING REQUIRES BOTH REGIONAL COOPERATION AND EARLY STAKEHOLDER INVOLVEMENT

In spite of the previous mistrust between EBMUD and CCWD expressed in EBMUD's July 14, 2009 Board meeting as described above,⁴¹ the two agencies had in fact begun working together in 2003 to evaluate a potential regional brackish water desalination plant in Suisun Bay.⁴² The initial effort also included SFPUC and the Santa Clara Valley Water District (SCVWD). It was joined in 2010 by Zone 7 Water Agency (Zone 7), which serves the Livermore and Pleasanton areas. This effort, though still alive, suffered from several problems. It was framed as a desalination project more than a drought reserve project, and was thus (rightly or wrongly) saddled with the baggage of ocean desalination projects. Perhaps more importantly, there was no up-front environmentalist buy-in: it too greatly followed the traditional water agency model in the sense that planning and significant engineering work was carried out by water agencies and consultants, with presentations of the outcomes presented at public forums to interested parties. By the time the Sierra Club organized a workshop on the brackish water desalination project in 2012, the lines were largely already drawn: environmentalists including the Sierra Club were generally skeptical if not outright opposed to a project. Since that time, the five Bay Area agencies who have worked on a Suisun Bay brackish water desalination project to date have apparently put the project on hold.⁴³

In addition to working cooperatively with other water agencies, EBMUD learned, in moving from Raise Pardee to Los Vaqueros, the importance of stakeholder consultation and buy-in on the front end. This requires much more than checking off all the boxes and reducing expo-

⁴¹ The sea change in the level of cooperation between the two agencies, in the opinion of this author, had much to do with personnel changes and with initiatives by forward-thinking personnel from both agencies.

⁴² Bay Area Regional Desalination Project, <http://www.regionaldesal.com/> (last visited Feb. 11, 2016).

⁴³ *Id.*

sure under the California Environmental Quality Act. It is also more than a tactical decision not to bully opponents because sometimes those opponents successfully fight back. It is a question of incorporating the concerns and suggestions of diverse interests into a project as it is developed, and maybe even making the project a better project. At minimum, this creates better process. Ideally, it creates partnerships. On various levels, many of them informal, EBMUD staff has made a consistent effort to conduct such early consultation over the past four years.

On a formal basis, EBMUD and other Mokelumne River stakeholders recently completed a two year interregional integrated water management planning effort that engaged water agencies, local governments and non-governmental organizations from the upper Mokelumne watershed (Amador and Calaveras counties), the lower watershed (San Joaquin County) and the destination counties for EBMUD water (Alameda and Contra Costa counties).⁴⁴ Much of the impetus for this forum arose from advocates with the Foothill Conservancy, who were fatigued by sitting in meetings of water agencies and water forums where environmental advocates voiced opinions and concerns, but where water agencies thereafter made decisions that for the environmentalists were non-starters. The “MokeWISE” process was an effort to change the dynamic.

On several levels, MokeWISE was successful. It ambitiously sought to define how much water from the Mokelumne River was available for groundwater recharge or other consumptive use. While the stakeholders did not agree on a definition, they did agree that “unallocated” water was not necessarily “available” water.⁴⁵ The list of projects that were adopted as MokeWISE projects included some environmental projects and some water supply projects, as most integrated regional water management planning processes do. However, using a different approach, each project description included a preamble entitled “Problem Statement and MokeWISE Stakeholder Interests” that explained both stakeholder concerns and how the project in very general terms would try to address them. For projects that were non-starters, the outcome was not simply exclusion, but modification or development of alternative projects that opponents might be able to consider, if not support. For instance, in place of a proposed project to evaluate potential new reservoir sites, the stakeholder group developed projects to evaluate re-operation of storage in existing reservoirs and to evaluate a rebuild of several

⁴⁴ See Mokelumne Watershed Interregional Sustainability Evaluation (MokeWISE) Program, Documents Tab, <http://www.mokewise.org/documents> (last visited February 11, 2016).

⁴⁵ *MokeWISE Program Final Memorandum: Water Availability Analysis*, App. G, at 85-87, <http://www.mokewise.org/docs/MokeWISE%20-%20Water%20Supply%20Availability%20Analysis.pdf> (last visited January 9, 2015).

earthen dams that at present are not safe to carry storage over the winter.⁴⁶ Most stakeholders generally affirmed the principle that what is good for the river is also good for water users, not simply a constraint to be endured. Perhaps most importantly, MokeWISE opened doors of communication so that stakeholders can not only directly discuss concerns, but also know the person to whom they are speaking and generally understand his or her interests.

Though not directly, these opened doors already helped to create an atmosphere in which some conflicts have been resolved. On November 25, 2014, San Joaquin County, four water agencies in San Joaquin County, and EBMUD signed a settlement agreement in which they agreed to dismiss their respective water rights protests against pending water rights petitions and applications by other parties to the agreement. EBMUD agreed to store small amount of dry year water for North San Joaquin Water Conservation District and to coordinate its reservoir operations with that District's need. In addition, EBMUD agreed to fund and move forward on a joint pilot groundwater banking project in the County.⁴⁷

V. THE BAY AREA REGIONAL RELIABILITY PROJECT: A CHANCE TO GET DROUGHT PLANNING RIGHT

On May 5, 2015, the State Board issued an emergency drought regulation requiring urban water purveyors throughout California to reduce water use on an overall basis by 25 percent compared to 2013 levels.⁴⁸ The State Board required smaller reductions by water users in the service areas of EBMUD and SFPUC than the reductions it required of most other water purveyors, on the grounds that ratepayers in these areas had already substantially conserved.⁴⁹ During the 2007–2009 drought, EBMUD and SFPUC required water conservation by their customers; following that drought, water deliveries by these urban agencies did not rebound to pre-drought levels. This decline in water use was due in part to the economic downturn in 2008, but also to the aggressive conserva-

⁴⁶ The potential projects described here could help provide drought reserves in Amador County.

⁴⁷ San Joaquin Settlement Agreement (2014), https://d3n8a8pro7vnm.cloudfront.net/hetch/hetchy/pages/54/attachments/original/1417975235/2014_1125_San_Joaquin_settlement_agreement.pdf?1417975235. Groundwater banking in San Joaquin County is one of the potential measures that remains in EBMUD's Water Supply Management Plan to address dry year shortfalls.

⁴⁸ State Water Resources Control Board, Resolution No. 2015-0032, To Adopt an Emergency Regulation for Statewide Urban Water Conservation, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/rs2015_0032_with_adopted_regs.pdf (last visited Feb. 11, 2016).

⁴⁹ *Id.*, Regulation p. 3.

tion messaging by EBMUD and SFPUC and affirmative customer response.⁵⁰

Marin Municipal Water District (MMWD), whose reservoirs on the flanks of Mount Tamalpais were among the fullest in the state in both 2014 and 2015, and whose per capita household water use was also already relatively low, nonetheless reduced water use in 2014 by 13 percent compared to 2013.⁵¹ Alameda County Water Agency (ACWD), serving Fremont, Newark, and Union City, also started with relatively low per capita usage, and required 20 percent reduction in 2014.⁵² All of these entities met their June-November 2015 targets, which required reductions compared to 2013 use; Marin exceed its 20 percent requirement by conserving 21 percent, SFPUC exceeded its 8 percent requirement by conserving 16 percent, and EBMUD exceeded its 16 percent requirement by conserving 26 percent. ACWD exceeded its 16 percent conservation requirement impressively by conserving over 30 percent. To be fair, Bay Area conservation was also made easier by the urban landscape and the relatively cool climates in the Bay Area west of Berkeley/Oakland hills and the northern end of the Hamilton range.

Other Bay Area water agencies had a steeper hill to climb. In 2014, Zone 7 in the Livermore and Amador Valleys lost most of its State Water Project water, its primary source of supply. Even before the State Board required mandatory urban water in 2015, Zone 7 aggressively broadcast the need for conservation and imposed limitation on outdoor watering, and in 2014 achieved a 30–35 percent reduction in water use.⁵³ Santa Clara Valley Water District (SCVWD) achieved 27 percent conservation in 2015, compared to its 2013 water deliveries.⁵⁴ Contra Costa Water District's urban users reduced their use from June-December 2014 only

⁵⁰ SFPUC's wholesaling contractor, BAWSCA, also experienced reduced water demand after 2008. See Bay Area Water Supply & Conservation Agency (BAWSCA), *Long-Term Reliable Water Supply Strategy Phase II Final Report*, at 2-3, fig. 2-2 at: http://bawasca.org/uploads/userfiles/files/BAWSCA_Strategy_Phase_II_Final_Report_Vol_1.pdf (last visited Feb. 11, 2016). The State Board placed BAWSCA's municipal suppliers in conservation tiers based on individual retail supplier performance.

⁵¹ Marin Municipal Water District, Drought Information, <https://www.marinwater.org/318/Drought-Information> (last visited Feb. 11 2016). Scroll to bottom of page for "Past Updates."

⁵² Alameda Cal., Ordinance 2014-01 (Mar. 13, 2014), <http://www.acwd.org/DocumentCenter/View/631>.

⁵³ Kurtis Alexander, *California Drought: Big Water Cuts by Many Northern Californians*, S.F. CHRONICLE (Oct. 8, 2014), <http://www.sfgate.com/bayarea/article/Drought-Some-Bay-Area-water-users-save-big-5807594.php>. See also Amanda Aguilar, *Zone 7 Reminds Tri-Valley to 'Stay the Course' During Drought*, PLEASANTON WEEKLY (Apr. 16, 2015), <http://www.pleasantonweekly.com/news/2015/04/16/zone-7-reminds-tri-valley-to-stay-the-course-during-drought> (last updated Apr. 19, 2016).

⁵⁴ Santa Clara Valley Water Dist., Drought Watch 2016, <http://www.valleywater.org/drought/> (last visited Feb. 11 2016).

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by about 16 percent. However, after mandatory cuts were imposed in 2015, CCWD's urban users reduced their June-January use 35.4 percent.⁵⁵

In January 2014, the five Bay Area agencies that were involved in the brackish water desalination project decided to expand the scope of their collaboration, and to include three other Bay area water agencies. In May, 2014, the eight Bay Area water agencies issued a "fact sheet" about what they termed the "Bay Area Regional Reliability Project."⁵⁶ The fact sheet cited a series of projects that might serve as a foundation for future cooperation, including Freeport and Los Vaqueros, several interties, groundwater projects and large scale water purification of otherwise non-potable water sources.⁵⁷ It also suggested ten potential future cooperative projects, including the Suisun Bay regional brackish water desalination project. In May and June 2014, the agencies adopted the Guiding Principles for the Project.⁵⁸

In June 2015, EBMUD submitted, on behalf of the eight agencies, a grant request to the Bureau of Reclamation ("Bureau") under the Bureau's Drought Response Program for 50 percent funding to develop an eight agency Drought Contingency Plan.⁵⁹ Also in June 2015, the eight agencies executed a Memorandum of Agreement that, among other things, required each agency to equally contribute to the balance of funding for the development of the Plan.⁶⁰

In November, 2015, EBMUD released a Request for Proposal (RFP) for a consultant to manage the development of the Bay Area Drought Contingency Plan.⁶¹ The RFP described public participation as follows: "Consultant is NOT expected to conduct public outreach efforts required for the BARR DC Plan. Partner Agencies will conduct their own public outreach. Consultant shall prepare a brief presentation summarizing the BARR DC Plan process, scope, and findings."⁶² However,

⁵⁵ Statistics published on Contra Costa Water Dist. Website were removed in March 2016. For June 2015-January 2016 compliance, see State Water Resources Control Bd., *supra* note 6. "June 2015 - January 2016 Cumulative Savings and Compliance Dataset," scroll to line 326.

⁵⁶ EBMUD, SFPUC, BAWSCA, CCWD, ACWD, MMWD, SCVWD, and Zone 7.

⁵⁷ IMPROVING BAY AREA WATER SUPPLY RELIABILITY - A REGIONAL APPROACH, https://www.5.ebmud.com/sites/default/files/pdfs/bay_area_regional_reliability_2014-fact_sheet-5-6-14.pdf (last visited Feb. 11 2016).

⁵⁸ Contra Costa Water Dist., Operations and Engineering Committee Meeting Agenda: Apr. 8, 2015, Ex. 2, <http://www.ccwater.com/AgendaCenter/ViewFile/Agenda/04082015-2>.

⁵⁹ See Minutes from EBMUD Bd. of Directors Meeting (June 23, 2015), https://www.ebmud.com/files/5314/3517/5148/062315_action_summary.pdf.

⁶⁰ S. F. Pub. Util. Comm'n, S. F. Water Power Sewer, Agenda from June 23, 2015 Meeting, <http://sfwater.org/modules/showdocument.aspx?documentid=7398>.

⁶¹ EBMUD, REQUEST FOR PROPOSAL (Nov. 6, 2015), https://www.ebmud.com/index.php/download_file/force/3218/2035/?BARR-DCP-SOW_RFP_Final.pdf.

⁶² *Id.* at p. 11 (emphasis in original).

the Bureau's Drought Response Program Framework, to which the RFP links, states a more inclusive requirement for stakeholder involvement in projects funded by the Program:

Drought contingency plans will be developed through a collaborative process that is inclusive of interested stakeholders within the planning area. Collaboration with multiple stakeholders representing diverse interests in water resources is required. Anticipating that stakeholders will seek different levels of involvement, this Framework describes two different opportunities for involvement, including: (1) Participation on the Drought Planning Task Force ("Task Force") (Section II.D.6 Required Steps to Initiate a Drought Contingency Plan) by stakeholders who want to actively participate in developing the drought contingency plan or plan update; and (2) opportunities to provide input and seek information by stakeholders who do not seek an active role on the Task Force. The planning lead will develop an outreach and communication plan (Section II.D.6 – Required Steps to Initiate a Drought Contingency Plan) to be attached to the detailed work plan, to provide all interested stakeholders opportunities for input at key stages of the planning process and to keep them informed of progress as the plan is developed.⁶³

Accordingly, the Bureau found the initially proposed level of stakeholder involvement insufficient and required a modification of the project's outreach component.⁶⁴ On January 11, 2016, seven conservation groups and the Environmental Water Caucus sent a letter to the general managers of the eight Bay Area water agencies and their respective project leads requesting unified outreach and the opportunity to provide input as the Drought Contingency Plan is developed. On February 19, 2016, Alexander R. Coate, EBMUD General Manager, sent a letter to 28 "Prospective Task Force Members" with the subject "Invitation to Participate in Drought Task Force for the Bay Area Regional Reliability Drought Contingency Plan." The addressees included climate action organizations and business coalitions as well as environmental advocacy organizations.⁶⁵ The letter proposed several meetings and periods of review between March 2016 and September 2017.

A confluence of factors creates both the need and the opportunity to improve drought planning in the Bay Area.

⁶³ U. S. Bureau of Reclamation, *DROUGHT RESPONSE PROGRAM FRAMEWORK: WATER-SMART PROGRAM*, § II.D.4 at 8 (May 2015), <http://www.usbr.gov/drought/docs/FY15DroughtResponseProgramFramework.pdf>.

⁶⁴ East Bay Municipal Utility District staff, pers. Communication (Dec. 2015).

⁶⁵ The author was one of the addressees.

The era of water purveyor self-sufficiency is over. There are no sites left for appreciable further water development in California. Major sites either do not exist or are so interconnected with other already water-starved systems that the impacts of development assure at best a litigated outcome. Infrastructure costs are ever-increasing and interagency cooperation is no longer a novelty, but a necessity. In the Bay Area, the doors to that cooperation were thrown open by four years of drought.

The Bay Area's wealth, as well as its geography, allows regional opportunities. As the Fact Sheet for the Bay Area Regional Reliability Project describes, Freeport is on line, and Los Vaqueros has been expanded (and could be expanded again).⁶⁶ Freeport and CCWD's Delta diversions, unlike those of the CVP and SWP, don't entrain fish. The improvement in culture at EBMUD combines with the fact that EBMUD is in the geographic center of the eight Bay Area agencies. EBMUD is successfully working with CCWD, with San Joaquin County, and with environmental stakeholders. Finally, though one step removed, it is important to the Bay Area that groundwater is on its way to regulation; San Joaquin County is moving to manage its groundwater resources, and is actually talking not only to EBMUD but also to environmental stakeholders.⁶⁷

VI. DIVERSIFYING THE STRATEGIES OF ENVIRONMENTAL ADVOCACY

Some will question why conservation organizations should spend their time and limited resources working with water agencies on drought planning. An obvious answer is that planning is a far better option than fighting at the State Board to protect public trust resources once the water-short consequences of bad drought planning have become a crisis. But there is more.

Working jointly on a planning process implies a different, proactive relationship of conservation groups with the agencies whom they seek to influence: it is not only a question of criticizing a project after a plan is done, but also potentially taking some ownership. From the outside, one can succeed by pointing out flaws. In a collaboration, one has to make choices, and those choices aren't always ideal. But inside a process one can also deflect bad ideas and directions, replace them with better solutions, and keep them from becoming building blocks to an unacceptable

⁶⁶ Water Supply Reliability, *supra* note 57.

⁶⁷ San Joaquin County, "Notice of Election to Become a Groundwater Agency for the Eastern San Joaquin Subbasin Within San Joaquin County" Minutes and Resolution of the San Joaquin County Board of Supervisors, pp. 453-464 (December 15, 2015), <http://sanjoaquincountyca.iqm2.com/Citizens/FileOpen.aspx?Type=12&ID=1015&Inline=True>.

outcome. A good process provides the opportunity to vote early and often.

Another benefit of working in a planning process is that it creates a better understanding of how agencies and their infrastructure function. In the world of water agencies, principles alone (such as “conservation”) don’t cut it. One has to drill down into the numbers and dollars of demand and efficiency. Whether one ultimately agrees or disagrees with the work product, ignorance and approximation rarely improve advocacy.

There are objective environmental benefits to creating a good Bay Area drought plan. It is especially in the interest of public trust resources and those who support and defend them to reduce demand by Bay Area water agencies for water delivered through the SWP and CVP’s south Delta pumping facilities, and to reduce the allure to Zone 7 and SCVWD in particular of building the environmentally disastrous Delta tunnels. It remains to be seen whether these Bay Area agencies will change their positions on building the tunnels. But regardless of the politics, it is absolutely possible to eliminate their dependence on tunnel construction as an outcome they need.⁶⁸

A regional Bay Area drought plan can also help answer the canard of “worst case” planning on the Tuolumne River as the hydroelectric projects on the lower Tuolumne are being relicensed and the debate about Tuolumne River flow also takes place in the update of the State Board’s Bay-Delta Water Quality Control Plan. The lower Tuolumne River desperately needs more flow; helping San Francisco to manage that reality can reduce a significant element of opposition. Six years ago, EBMUD thought it was out of the question to capture and store water in Los Vaqueros Reservoir for eventual delivery to EBMUD’s customers. It is no longer far-fetched to suggest that the City may be able to capture some of its Tuolumne River water in the Contra Costa Water District’s Old River intake, store it in Los Vaqueros, and deliver it to its customers or contractors as well. The infrastructure either exists or it soon can. And this is only one of many opportunities.

Mitigating the impacts of drought to the Bay Area also provides an answer to the Modesto and Turlock irrigation districts, which have used potential drought impacts to San Francisco to shield themselves from confronting their own overuse of Tuolumne River water. Agricultural

⁶⁸ On March 24, 2016, CCWD signed a settlement agreement with DWR that would provide CCWD water from the new Delta tunnels should those tunnels be constructed. See <http://restoredelta.org/blog/wp-content/uploads/2016/03/CCWD-DWR-Agreement-3-24-16.pdf>. This has greatly complicated the conditions under which the Bay Area Regional Reliability Project will begin.

users have questioned why they should reduce when San Francisco is taking water from their area. The moral equity argument evaporates when the Bay Area is a leader in urban water efficiency, and even more if it can keep long term demand stable or even reduce it.

VII. AGRICULTURAL DEMAND REDUCTION: THE FINAL SUBSTANTIVE FRONTIER IN CALIFORNIA'S DROUGHT PLANNING

Reducing demand and keeping it down is always good drought planning, arguably the best. The urban water users have made a start, not only in the current drought, but also in the legacy from the 2007–2009 drought: the “20 by 2020 Plan” to reduce urban water use statewide 20 percent by the year 2020.⁶⁹ However, the biggest challenge facing water planning in California remains. Agriculture accounts for about 80 percent of the use of developed water resources in California. Ultimately, drought planning on a statewide level has to address the overallocation of the state's water resources, and the urban users can't make up the shortfall. The truth of the signs that say “Man Made Drought” in the San Joaquin Valley is this: droughts happen more frequently because the state gives away too much water in good water years. As a consequence, large sections of California are tapped out after a couple of dry years.

Generally speaking, there are three ways to address the overallocation of water resources to California agriculture. California's agriculture can continue the boom or bust cycle until a series of disastrous dry year sequences puts large areas of agriculture out of business. The state can step in and take 20 years or so to adjudicate the water throughout (at least) the Central Valley. Or irrigation districts can change their business models and reduce demand in good years in order to save themselves and most of their way of life. Most likely, it will be a combination of all three.

In mid-January, 2016, the Governor embraced “conservation” as the number one element of his 2016 update of the California Water Action Plan. However, he missed the opportunity to require demand reduction parity from agriculture. Instead, the 2016 update notes only a requirement that large agricultural water districts create drought plans “that describes the actions and measures the supplier will take to manage water demand during drought.”⁷⁰ As the urban areas have shown over the last ten years, managing demand only in times of scarcity does not cut it.

⁶⁹ 20x2020 Water Conservation Plan (Feb. 2010), http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/docs/20x2020plan.pdf.

⁷⁰ Cal. Nat. Res. Agency, CAL. WATER ACTION PLAN 2016 UPDATE, at 6 (2016), http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf.

VIII. WHAT'S IN YOUR DROUGHT PLAN?

The beginning of this article introduced ten principles that improve California's drought planning: demand reduction; data over secrecy; improved water accounting; ending abuse of the public trust; groundwater regulation; interagency cooperation; regional planning; front-end stakeholder buy-in; spending for dry year infrastructure; and resetting expectations.

These principles have developed from multiple sources: court rulings, regulations, legislation, policy actions, and simply better working relationships. Although getting to them has been rocky, and some are more completely implemented than others, these principles are changing the scope and substance, and the overall context, of drought planning in California.