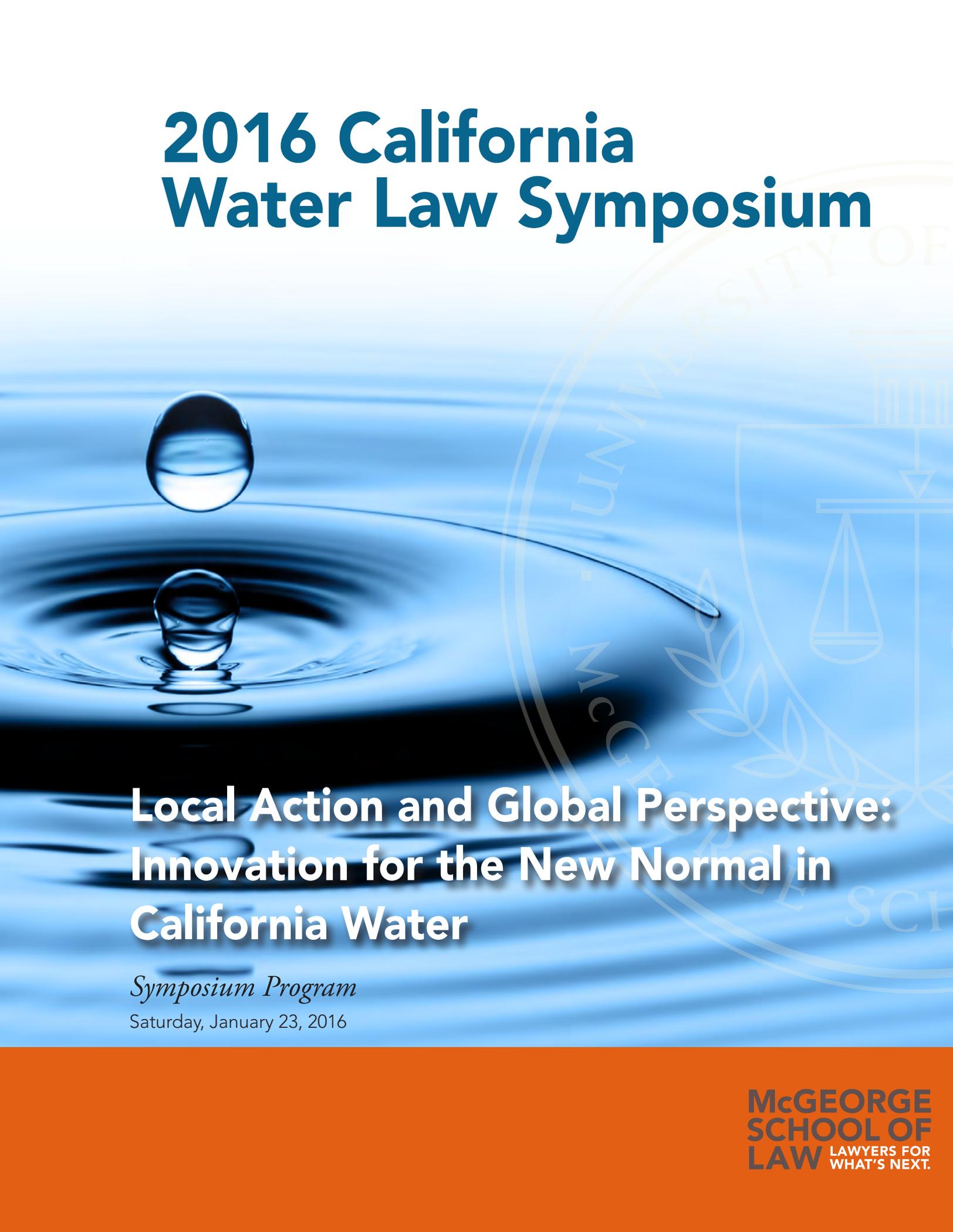


2016 California Water Law Symposium



Local Action and Global Perspective: Innovation for the New Normal in California Water

Symposium Program

Saturday, January 23, 2016

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WHAT'S NEXT.



ABOUT THE CONFERENCE

This award-winning event is produced by law students from McGeorge School of Law, UC Berkeley School of Law, UC Hastings College of Law, Golden Gate University School of Law, University of San Francisco School of Law, and UC Davis School of Law. This year we will explore innovations needed to address periodic drought as the new normal in California water via six exciting panels. The panels will examine the importance of “thinking globally, acting locally” in the context of key emerging issues.

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PROGRAM

Registration & Continental Breakfast 8:00 a.m. - 9:00 a.m.

Introduction 9:00 a.m. - 9:15 a.m.

*Dean Francis J. Mootz III, McGeorge School of Law,
Professor Jennifer Harder, McGeorge School of Law,
Kayla Cox and Jaclyn Shanahan, Symposium Co-chairs*

Panel I: 9:15 a.m. - 10:15 a.m.

***Regulatory and Technological Innovation in Water Use Information,
Measurement, and Data Analytics***

Panel II: 10:25 a.m. - 11:25 a.m.

***Expanding Supply and Reducing Demand-Alternative Sources,
Conservation, and Efficiency***

Panel III: 11:35 a.m. - 12:35 p.m.

Local Paths to Water Justice

Lunch and Keynote Speaker 12:35 p.m. - 1:35 p.m.

Justice Ronald Robie '67, Third District Court of Appeal

Panel IV: 1:45 p.m. - 2:45 p.m.

Water-Energy Nexus and the New Normal

Panel V: 2:55 p.m. - 3:55 p.m.

Local Storage and Infrastructure Projects

Panel VI: 4:05 p.m. - 5:05 p.m.

Implementing the 2014 Sustainable Groundwater Management Act

Reception: 5:15 p.m. - 7:30 p.m.

Please join us across campus in the McGeorge Student Center for complimentary drinks and hors d'oeuvres. Sponsored by: Briscoe Ivester & Bazel, Cline Cellars and Device Brewing Co.

Panel I

Regulatory and Technological Innovation in Water Use Information, Measurement, and Data Analytics

(Organized by UC Berkeley School of Law)

Moderator:

Nell Green Nysten, Research Fellow, Wheeler Institute for Water Law and Policy at Boalt Hall

Panelists:

Andy Sawyer, Assistant Chief Counsel, State Water Resources Control Board

Robb Barnitt, Founder and CEO, Dropcountr

Erick Soderlund, Attorney at Santa Clara Valley Water District

Panel Description

California faces considerable current and future water management challenges. Measurement, science, and data provide the foundation for innovative techniques and technologies that will play an important role in California's water management future. This panel highlights measurement, innovation, information, and data in multiple sectors: state regulatory agencies, water districts, and the private sector. The panel will begin by summarizing the current state of water use measurement information in California. Panelists will speak about innovations occurring in their areas of expertise, as well as the incentives and legal, economic, political, and technical barriers to innovation. Panelists will also discuss entities their organization shares data with, and long term plans or visions for increasing information flow.

Regulatory and Technological Innovation in Water Use Information, Measurement and Data Analytics

By Andrew H. Sawyer*

- I. Introduction: Information on Water Availability, Diversion and Use is Important for Effective Water Right Administration.
 - A. Factors such as diversion and use determine the extent of an appropriative right, and other factors, including availability of flows and the needs to other water right holders, determine when it can be exercised.
 1. The basic elements necessary to establish an appropriative right are:
 - intent to appropriate
 - diversion of water
 - application of the water to beneficial use(Hutchins, *The California Law of Water Rights* (1956) at pp. 108–109.)
 2. The conditions that define the nature and extent of an appropriative right are:
 - source
 - diversionary entitlement, measured as flow
 - point of diversion
 - place of use
 - purpose of use
 - priority(See Gould, *Water Rights Transfers and Third Party Effects* (1988) 23 *Land & Wat. L.Rev.* 1, 5–6.)
 3. Beneficial use is the measure of the right. (*Erickson v. Queen Valley Ranch Co.* (1971) 22 *Cal.App.3d* 578, 584 [“Plaintiffs’ existing appropriative right is measured not by the flow originally appropriated and not by the capacity of the diversion ditch, but by the amount of water put to beneficial use at the delivery point

* Assistant Chief Counsel, California State Water Resources Control Board (State Water Board). The views expressed in this article are those of the author, and do not necessarily reflect the views of the State Water Board, its individual members, or the State of California.

plus such additional flow as is reasonably necessary to deliver it.”]); see also *Casitas Municipal Water Dist. v. United States* (Fed. Cir. 2013) 708 F.3d 1340, 1356–58 [storage is a method of diversion, not a beneficial use].)

4. Appropriative rights are subject to forfeiture for nonuse. (*Erickson v. Queen Valley Ranch Co.* (1971) 22 Cal.App.3d 578, 582.)
 5. For appropriative rights initiated after the December 19, 1914 effective date of the Water Commission Act, a permit is required, and these conditions are set in the permit. (Wat. Code, § 1200 et seq.) To perfect the right, however, the water must be diverted and applied to beneficial use, consistent with conditions set by the permit, which include a period within which to perfect the right. (*Id.*, §§ 1395 et seq., 1410 et seq. 1600 et seq.)
 6. An appropriative water right holder may change the point of diversion, place of use, or purpose of use, provided that the quantity of water diverted and used does not increase and third party water right holders are not injured by the change. (See Wat. Code, §§ 1702, 1706.) The determination of whether other legal uses of water are injured may depend on factors such as hydrologic conditions, needs of other users, and changes in location or timing of diversions or return flows. (See *id.*, § 1727, subd. (b)(1); Gould, *Transfer of Water Rights* (1989) 29 Nat. Resources J. 457, 463–464.)
 7. As between appropriators, shortages are not shared: the rule is “first in time, first in right.” The senior appropriator is entitled to divert and use as much water as it has a right to before a junior appropriator is entitled to divert and use any water. (*United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 102.)
- B. A riparian right confers on an owner of land contiguous to a watercourse the right to the reasonable and beneficial use of water on that land, but does not include a right to store water in wet periods for use in dry periods. (*People v. Shirokow* (1980) 26 Cal.3d 301, 307 fn. 7 and accompanying text.)
1. As between a riparian and an appropriator, priority is first in time, first in right, determined by whether the priority date of the appropriation or the date on which the riparian land was patented is first. (*Ramelli v. Irish* (1892) 96 Cal. 214, 216–217 [31 P. 41, 42].) This means that riparian rights ordinarily are senior to appropriative rights. (See *In re Waters of Long Valley*

Creek Stream System (1979) 25 Cal.3d 339, 347 [the riparian right is “paramount”].)

2. Some of the features of and limitations on riparian rights include:
 - Unless adjudicated, the riparian right is not quantified. It extends to the amount of water that can be reasonably used on the riparian parcel. The right is not lost through nonuse.
 - The right extends only to the natural flow of the stream, and does not include flows of imported water or releases from seasonal storage.
 - Riparian rights are correlative. When natural flow is insufficient, riparians share in the shortage.

(See generally Attwater & Markle, *Overview of California Water Law* (1988) 19 Pac. L. J. 957, 970–971.) This means that the extent of an appropriative right is not so directly tied to measurable factors such as history of diversion and use as are appropriative rights. Nevertheless, data on historical diversion and use may be helpful in estimating water availability for appropriators and in determining a riparian’s correlative share.)

- C. A variety of information, in addition to water diversion and use data, is important to water right administration, including water availability and needs for instream beneficial uses. The determination whether water is available for diversion under a water right holder’s priority of right, or whether unappropriated water is available for a water right permit, depends on what water is available (including natural flows and abandoned water, including return flows) and how much water is needed for senior water right holders. In administering requirements for protecting instream beneficial uses, including requirements of the common law public trust doctrine, the needs for fisheries and other instream beneficial uses must also be considered.
- D. Lack of information makes administration harder, but the perfect is not the enemy of the good. Precise measures are not required; decisions may be made based on estimates. (Cf. *United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 102-03 [State Water Board’s determination that there is unappropriated water available for issuance of a permit for appropriation is based on an estimate of the needs of prior right holders]; *id.* at pp. 118-19 [in determining, for purposes of setting water quality objectives, what can be achieved through coordinated control of water diversion and use, State Water Board is not required to quantify all existing water rights, but need only arrive at a reasonable estimate].)

II. Focus Issue I: Urban Water Conservation Regulations

- A. Governor Brown issued Executive Order B–29–15 ((Apr. 1, 2015) https://www.gov.ca.gov/docs/4.1.15_Executive_Order.pdf) that includes a directive to the State Water Board to impose restrictions on urban water suppliers to achieve a statewide 25 percent reduction in potable urban usage, as compared to use in 2013, through February 2016.
- B. The State Water Board adopted emergency regulations, under Wat. Code, § 1058.5, on May 5, 2015. (http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/rs2015_0032_with_adopted_regs.pdf; 23 Cal. Code Regs., tit. 23, § 863 et seq.) The regulation established reporting requirements, including both 2013 and current water use. (23 Cal. Code Regs., tit. 23, § 865, subds. (b)(2) & (f)(2).)
- C. Executive Order B-36-15 ((Nov. 13, 2015) https://www.gov.ca.gov/docs/11.13.15_EO_B-36-15.pdf)) calls for an extension of the urban water conservation requirements until October 31, 2016, should drought conditions persist through January 2016.
- D. The State Water Board has circulated for public comment a proposed framework for extending the emergency conservation regulations, (http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/extended_reg_framework.pdf) and released a draft emergency regulation for public comment on January 15, 2016. (http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/draft_conservation_ex_emerg_reg_011516.pdf)

III. Focus Issue II: Water Diversion and Use Reporting

- A. Historically, reporting of water diversion and use was inadequate.
 - 1. Water right permits and license holders were required to report their diversion and use. (23 Cal. Code Regs., tit. 23, § 847.) But the Water Code included no penalty for failure to report.
 - 2. Since 1965, diverters under rights not subject to permit or license were required to file statements of water diversion and use. (Wat. Code, § 5100 et seq.) But there were broad exemptions, and no penalty for failure to report.
 - 3. Legislation enacted as part of the 2009 special session on water included reforms concerning the filing of statements of water diversion and use. (Stats. 2009, 7th Ex. Sess., ch. 2, §§ 4–7.) The reforms include elimination of exemptions, and penalties for failure to file. The reforms also require monitoring in accordance with “best available technologies and best professional practices,” but with an exemption

where those practices are not “locally cost effective.” The exemption undermined the intent of the legislation, with 70% of diverters claiming an exemption.

4. The 2009 legislation also authorized the State Water Board to require electronic filing. (Wat. Code, § 348.)
5. In 2015, the Legislature updated monitoring and requirements. (Stats. 2015, ch. 27, §§ 15–18.) The legislation:
 - Establishes measurement and reporting requirements for diverters subject to permits and licenses, and establishes penalties for violations. (Wat. Code, §§ 1840, 1846.) Authorizes the State Water Board to set additional requirements by regulation. (*Id.*, § 1841.)
 - Modifies the measurement and reporting requirements for statements of water diversion and use. Eliminates the “not locally cost effective” exemption, instead requiring compliance with State Water Board regulations. (Wat. Code, § 5103, subd. (e)). Also, reporting is now required annually, instead of every three years. (*Id.*, § 5104, subd. (a); see also *id.*, subd. (d) [State Water Board may require more frequent reporting].)
6. State Water Board adopted regulations at its January 19, 2015 board meeting.
http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/emergency_regulation.shtml) Significant features include:
 - Requirements concerning the accuracy of measurement devices.
 - Alternative compliance requirements, where strict compliance is infeasible, is unreasonably expensive, would unreasonably affect public trust uses, or would result in the waste or unreasonable use of water.
 - Provisions for monthly or more frequent in areas and at times where flows are insufficient to meet projected demand.
 - Requirements for telemetered reporting for large diversions (storage or direct diversion of 10,000 acre-feet per annum or more) and for fishery protection.

IV. Focus Issue III. Groundwater Management.

- A. Until recently, California law included limited groundwater extraction reporting requirements.
 - 1. Since 1959, reporting has been required for reporting of extractions in four Southern California counties. (Wat. Code, § 4999 et seq.)
 - 2. Efforts to extend this requirement statewide have been proposed, but not been enacted. (E.g., Sen. Bill No. 820 (2005–2006 Reg. Sess.).)
 - 3. Local reporting requirements have been established as part of groundwater adjudications or groundwater management proposals.

- B. Reporting of groundwater levels has been initiated, but further progress is necessary.
 - 1. Like legislation to require extraction reporting, legislation to require monitoring and reporting of groundwater levels was initially unsuccessful. (Sen. Bill No. 1640 (2005–2006 Reg. Sess.).)
 - 2. Legislation enacted as part of the 2009 special session established the California Statewide Groundwater Elevation Monitoring (CASGEM) program. (Wat. Code, § 10920 et seq., Stats. 2009, 7th Ex. Sess., ch. 1.)
 - a. The system establishes what amounts to a voluntary program for reporting groundwater elevation levels. Specified entities may assume responsibility. (Wat. Code, § 10927.) If none of the specified agencies assumes responsibility for a groundwater basin, they lose eligibility for state water grants and loans, unless their entire service area is a disadvantaged community. (*Id.*, § 10933.7.)
 - b. The Department of Water Resources is responsible were no local agency assumes responsibility, but is not authorized to charge fees. (*Id.*, § 10933.5.) No other source of funding is provided.
 - c. The CASGEM program does not provide for measurement of inputs or extractions, which are also necessary for an effective groundwater management program.
 - 3. In 2014, the Legislature enacted the Sustainable Groundwater Management Act. (Wat. Code, § 10720 et seq.)
 - a. Local agencies may elect to become groundwater sustainability agencies. (Wat. Code, § 10723 et seq.)
 - b. The Act provides local groundwater sustainability agencies the authority to adopt and enforce groundwater sustainability plans, including authority to set reporting requirements and limits on

extraction. (Wat. Code, §§ 10275 et seq., 10728 et seq., 10732 et seq.)

- c. Groundwater sustainability agencies are authorized to conduct investigations and participate in the CASGEM program. (Wat. Code, §§ 10725.4, 10727, subd. (a)(3).
- d. After they adopt a groundwater sustainability plan, groundwater sustainability agencies are required to report specified information to the Department of Water Resources annually, including groundwater elevation, extractions, surface water used for groundwater recharge, and changes in groundwater storage. (Wat. Code, § 10728.) Only aggregated extraction reporting is required, however.
- e. The Act also provides local agencies the authority to impose extractions fees. (Wat. Code, § 10730.)
- f. The Department of Water Resources will provide technical assistance and review plan adequacy. (Wat. Code, §§ 10729 et seq., 10733 et seq., 10735.2, subds. (a)(3) & (a)(5)(A).) By June 1, 2016, the Department of Water Resources will adopt regulations for evaluating groundwater sustainability plans and the implementation of those plans. (*Id.*, § 10933.2.) These regulations may include provisions concerning reporting, monitoring, and appropriate methodologies for evaluating groundwater conditions.
- g. The State Water Board has authority to designate basins as probationary where no local agency elects to be the groundwater sustainability agency or the groundwater sustainability agency fails to adopt a groundwater sustainability plan before the deadlines set by the Act, or where the Department of Water Resources determines that the plan or plan implementation is inadequate. (Wat. Code, § 10735.2.) If local agencies do not correct the deficiency, the State Water Board may adopt and implement a groundwater management plan. (Wat. Code, §§ 10735.4, 10735.6, 10735.8.)
- h. If there is no groundwater sustainability agency for an area within a high- or medium priority basin, or the State Water Board declares a basin to be probationary, extraction reporting requirements apply. (Wat. Code, § 5200 et seq.) The State Water Board also has broad authority to require reporting and monitoring in connection with its authority to declare a basin probationary or adopt and an implement and interim plan. (*Id.*, § 10736.6.)

Panel II

Expanding Supply and Reducing Demand— Alternative Sources, Conservation, and Efficiency

(Organized by UC Hastings College of Law)

Moderator:

Dave Owen, UC Hastings College of Law, Professor

Panelists:

Noelle Patterson, State Water Resources Control Board, Water Resources Engineer

Anya Kamenskaya, DIG Cooperative, Chief Financial Officer

Aaron Ferguson, Somach Simmons & Dunn, Associate Attorney

Panel Description

UC Hastings will embrace this year's theme of "think globally, act locally" when our panel will look to at the best practices utilized by Israel and Australia. There, the water saving practices resulted in water independence. We hope that by exploring these practices, soon, California's cup will runneth over, through sheer delight, and with water.

Today's water practice standards will not be adequate for the future. California demands a lot of water for our vast agricultural areas and large population. A poor balance of supply and demand is California's most fundamental water problem. Our continued reliance on water transfers as a way to solve our water needs is similar to watching a lake slowly evaporate. We need innovation. The panel will focus on water conservation practices such as implementing greywater systems within homes, stormwater capture, and the water rights issues surrounding our water usage.

WATER LAW SYMPOSIUM - CLE Materials

Anya Kamenskaya - DIG Cooperative, Inc.

Currently, the residential institutional and small-scale commercial urban water recycling industry is in a rapidly evolving infancy. While the supply of water conservation services previously outpaced demand, the ongoing drought has dramatically increased buy-in. Gaps, however, still exist. On-the-ground service providers such as DIG Cooperative often find themselves between an underinformed public and code specifications that don't reflect the level of water scarcity that the state is experiencing. Education, financing and legislation are three major areas that need local, regional and statewide support in order to push water conservation implementation into a ubiquity parallel to that of the solar industry.

Education

Members of the general public, property/business owners & developers are often not aware of the severity of the drought. If they are, they are not empowered with knowledge on the the most appropriate and accessible way to contribute to smart water reuse. There is also a lot of misinformation about best practices. The scope of this conversation needs to go beyond just water use reduction (ie, fixing leaks, reducing landscape watering, etc), but will focus on the reuse of waste water in the home, in schools and by businesses.

Access

Unfortunately, many residents and small businesses are priced out of affording water re-use systems. Businesses such as my contracting cooperative can therefore primarily serve only clients of a certain income bracket, even though our core values and roots are geared towards including working class communities. Focusing on engaging people from a variety of communities as urban wastewater recycling becomes the norm is crucial.

Legislation

Often, access is directly related to legislation and other government support. Unlike the solar industry, which now has extensive subsidies, rebate/financing programs and even grassroots community initiatives that provide low-cost solar to residents, the water reuse/conservation industry is still in relative infancy and does not enjoy such support. We need the state-sponsorship equivalent of the ["CA Go Solar"](#) initiative, but for greywater and rainwater reuse.

Furthermore, some installers feel that the current CA Plumbing Code does not accurately reflect the high level of need for innovation during this severe drought. Aspects of the code present roadblocks to creating and installing systems that would increase the level of water reuse and savings on-site for residential, commercial and institutional clients. As high-volume water users, commercial and institutional clients have the potential to create the biggest water use reduction and savings for the Bay Area.

DIG Cooperative is a design/build, general contracting firm that specializes in comprehensive, on-site water catchment and reuse systems. The company was founded in 2005, when builders and ecologists converged in the Bay Area to create the first legally permitted demonstration greywater system at the Berkeley EcoHouse, a project of the Ecology Center. Since the success of the EcoHouse, DIG Cooperative has continued to pioneer permitted greywater and rainwater catchment systems throughout the Bay Area. Clients include homeowners, businesses and institutions such as the Chabot Space and Science Center.

Panel III

Local Paths to Water Justice

(Organized by McGeorge School of Law)

Moderator:

Stephen McCaffrey, McGeorge School of Law, Distinguished Professor of Law

Panelists:

Colin Bailey, Environmental Justice Coalition for Water, Executive Director

Tracey O'Reilly, Miller & Axline, Attorney

Debbie Franco, Governor's Office of Planning and Research, Community and Rural Affairs Advisor

Panel Description

This panel will build on the environmental justice and human right to water discussion at the 2015 symposium by focusing on water justice issues in geographic areas of California not yet explored. There are no less than six different agencies within California that oversee and regulate domestic water systems in California. The panel will discuss the reality that disadvantaged communities generally lack access to clean, safe, affordable, or reliable water due to a fractured oversight and regulatory system that does not adequately protect these communities.



Resilient, Affordable, Safe Drinking Water for Disadvantaged Communities Framework



All Californians have a right to safe, clean, affordable and accessible water adequate for human consumption, cooking, and sanitary purposes. Yet some Californians are still unable to turn on their tap and enjoy this basic human right. Drought has exacerbated existing conditions and left new communities entirely without water. State, Federal, and local agencies, non-profits, and community groups continue to work to remedy this public health and safety problem, but existing tools are not sufficient to reach a solution in every case. For the most part, existing state and federal funding programs are available to cover the costs of rehabilitating or installing new infrastructure. The greatest challenge lies in the daily system operations when a system's service area is entirely disadvantaged and lacks the economy of scale and ratepayer base to cover the ongoing costs of operations and maintenance (O&M) without making the water rates unaffordable for the customers. Often these systems do not have sufficient technical, managerial, and financial capacity. And although there may be economies of scale developed through regionalization, no one is responsible for building the necessary economies of scale within a region and the lack of scale has continued to persist. This framework provides a responsible agency and pathway to ensuring that everyone in California has adequate, safe water for basic human needs.

Goal

Ensure that every Californian has access to an adequate supply of safe water for daily human needs. This goal will be achieved by:

- Making more strategic use of existing funding resources
- Improving technical, managerial, and financial capacity where possible, consolidating as a second option, and if neither of those work, contracting with a third party to manage the system with a commitment to transitioning the system to a sustainable condition
- Easing the burden on local governments by limiting the proliferation of new, unsustainable systems



Use Existing Funding Sources More Strategically

Existing funding comes from many sources, some listed below. Some of these funding streams can be used exclusively for infrastructure and a few can be used to cover the cost of O&M. There are opportunities to expand the use of some of these funding sources, particularly those that may be used to cover O&M, and there are opportunities to better leverage the infrastructure funds.

Use existing funding more strategically, including:

- State Grants and Loans: Proposition 1, Drinking Water State Revolving Fund, Cleanup and Abatement Account, Drought Funding, Housing and Community Development Funding Programs;
- Federal Grants: USDA Rural Development, US Bureau of Reclamation, CDBG (state and federal), and others;
- Polluter Funds: Discharge penalties, settlement amounts for groundwater cleanup, mitigation fees, alternative means of compliance fees (ie. UST);
- Local property tax assessments;
- Ratepayer dollars;
- Responsible Parties [Clean-up and Abatement Orders, settlements, etc.].

Address the Needs of Public and State Small Water Systems

This initiative will enhance the State Water Board's existing ability to provide technical assistance and add a management contract option tool. The State Water Board will work to bring a system into compliance through technical assistance first. If technical assistance fails the State Water Board will consider opportunities to consolidate the system, if appropriate. If consolidation is infeasible or impossible the State Water Board will include the system in a group management contract committed to moving the systems toward a sustainable outcome within ten years.



The State Water Board may opt for one or more of the following options:

1

Build Physical, Financial and Technical Capacity

In Option 1, the Board will use existing authority to seek to maintain existing systems whenever feasible and effective in providing adequate, safe drinking water. In these cases, the State Water Board would:

- Move unsustainable systems to sustainability through technical and financial assistance including funding for capital infrastructure needed to connect or improve system(s).
- Incentivize consolidation (physical or managerial) of systems that are not independently sustainable as described below under "Consolidation."

2

Consolidation, if Appropriate

In Option 2, the Board will use its new authority to require consolidation of water systems within disadvantaged communities, as defined, if voluntary measures do not result in assurance of adequate, safe drinking water and it is appropriate and feasible to consolidate the system with a public water system.

- The Board will first consult with the local agency formation commission, and with the California Public Utilities Commission, if appropriate.
- The Board will make various findings, hold a hearing, and provide adequate financial assistance for the needed infrastructure.
- Liability relief will be provided to the receiving system.

3

Grouped Management Contract Administrative Receivership for Sustainable Systems

In Option 3, the Board would be given new authority to provide management assistance via contracted services that would ensure delivery of adequate, affordable, safe drinking water. Contracted entities could be non-profit organizations, counties, special districts, investor-owned utilities, or others. Use of a contracted entity would provide technical and managerial capacity, economies of scale, and other efficiencies such as web-based operating systems. Financial capacity would be addressed through:

- Providing funding for capital infrastructure needed to provide adequate, safe water;
- Setting water rates at an affordable rate for basic needs;
- Providing funding (maximum duration ten years), through the contracted resources, for O&M costs to cover the gap between ratepayer dollars and the costs of O&M in a manner that prevents fraud, waste, and abuse; and
- Working with communities served by the contracted entity to equip them to transition to a sustainable structure by the end of the ten-year funding period.

Limit Proliferation of New, Unsustainable Systems

Ease the burden on local governments with new tools to limit the proliferation of new, unsustainable systems by:

- Requiring hookup to existing public water systems if feasible, rather than creation of new systems.
- Adding a requirement that the State Water Board must concur in permits issued by Local Primacy Agencies for the creation of a new water system.
- Reducing the threshold size of proposed residential development subject to Government Code 66473.7 from 500 to 15 dwelling units/service connections, to match the threshold for community public water systems.
- Barring approval of new communities that would rely on hauled water for a permanent water supply.



IMPLEMENTING THE HUMAN RIGHT TO WATER IN CALIFORNIA'S CENTRAL VALLEY: BUILDING A DEMOCRATIC VOICE THROUGH COMMUNITY ENGAGEMENT IN WATER POLICY DECISION MAKING

ROSE FRANCIS & LAUREL FIRESTONE[†]

I. INTRODUCTION

Consider this: even one of the wealthiest states in the wealthiest nation on the planet has not fully implemented the human right to water. This state is California, a place which holds a special position in our collective consciousness as the land of “milk and honey,” producing tremendous agricultural bounty that feeds the nation and the globe.¹ Yet despite boasting the eighth-largest economy in the world, with a state GDP of \$1.9 trillion, approximately one million Californians lack reliable access to safe, affordable drinking water on a daily basis.²

[†] Rose Francis is a staff attorney for the Community Water Center and graduated from Harvard Law School with a J.D. in 2005. Laurel Firestone is a Co-Executive Director and co-founder of the Community Water Center as well as a member of the Tulare County Water Commission. She graduated from Harvard Law School with a J.D. in 2004. The authors would like to thank Susana de Anda, Co-Executive Director of the Community Water Center, for her insight and inspiration, which we have tried to capture within this paper. Additionally, the authors would like to acknowledge Maria Herrera and our many community partners, allies, and supporters, who are doing the hard work to implement the human right to water every day.

1. Laurel Firestone, Alice Kaswan, & Sandra Meraz, Symposium, *Environmental Justice: Access to Clean Drinking Water*, 57 HASTINGS L.J. 1367, 1385 (2006). (Remarks by Sandra Meraz [hereinafter Meraz Remarks] (“[T]he land of milk and honey which is California--now the land of pollution and destruction and contamination. . . . Tulare County is the richest county, yet it’s the poorest county, because it doesn’t give its communities back anything but pollution.”). See Paola Ramos, Latino Issues Forum, *Promoting Quality, Equity, and Latino Leadership in California Water Policy: An Introduction to Water Issues Impacting Latino Communities in California*, 14 (June 2003).

2. See CAL. DEP’T OF PUB. HEALTH (CDPH), DIV. OF DRINKING WATER AND ENVTL. MGMT. (DDWEM), ANN. COMPLIANCE REP. OF PUB. WATER SYS. IN CAL., 5, Appendix C (Aug. 18, 2009), available at <http://www.cdph.ca.gov/certlic/drinkingwater/Documents/DWdocuments/2007%20Compliance%20Report%20Amended%20Aug%2018%202009.pdf>; CDPH, DDWEM, ANNUAL COMPLIANCE REPORT: PUBLIC WATER SYSTEMS IN CALIFORNIA, CALENDAR YEAR 2006, 18, available at <http://www.cdph.ca.gov/certlic/drinkingwater/>

The agricultural sector is a cornerstone of California's economic strength, producing \$39 billion worth of goods and services each year and occupying more than a quarter of the state's landmass.³ The vast majority of these farming receipts come from the Central Valley, which possesses some of the most fertile farmland in the world and produces a literal cornucopia of citrus, strawberries, grapes, lettuce, almonds, and milk, just to name a few.⁴ Unfortunately, this bounty comes with a steep price: the Valley's aquifers suffer from widespread nitrate and pesticide contamination as a result of more than half a century of intensive industrial agricultural practices.⁵ The Valley is densely populated

Documents/DWdocuments/AnnualComplianceReport2006.pdf;

CAL. DEP'T OF HEALTH SERV., DRINKING WATER PROGRAM, ANN. COMPLIANCE REP. FOR CAL. PUB. WATER SYS., CALENDAR YEAR 2005, 13-14, available at <http://www.cdph.ca.gov/certlic/drinkingwater/Documents/DWdocuments/AnnualComplianceReport2005.pdf> (total persons served drinking water with contaminants in excess of the Maximum Contaminant Level (MCL) in California, in violation of state and federal Safe Drinking Water Acts); *Numbers in the News, 2009 California Economy Rankings*, CENTER FOR CONTINUING STUDY OF THE CALIFORNIA ECONOMY (Dec. 2010), <http://www.ccsce.com/PDF/Numbers-Dec10-CA-Economy-Rankings.pdf> (California's GDP still the world's eighth-largest in 2009), Marc Lifsher, *California economy still world's eighth-largest, despite recession*, LOS ANGELES TIMES, Dec. 2, 2010, http://latimesblogs.latimes.com/money_co/2010/12/california-economy-ranking.html; *Sorry Arnold, California isn't sixth any more: State's economy drops to 8th-largest in world, despite conventional wisdom*, ASSOCIATED PRESS, (Jan. 12, 2007), http://www.msnbc.msn.com/id/16600877/ns/business-us_business/. See also Scott Kraft, *In tiny Seville, trouble on tap*, LOS ANGELES TIMES, Nov. 7, 2010, at A41, available at <http://articles.latimes.com/2010/nov/07/local/la-me-seville-water-20101107> ("More than 1 million people in California live in places where tap water isn't reliably safe to drink, and about a third of them are in small, mostly Latino towns such as Seville in the San Joaquin Valley."); Julia Scott, *Nitrate contamination spreading in California communities*, CALIFORNIA WATCH (May 13, 2010), <http://californiawatch.org/nitrate-contamination-spreading-california-communities>.

3. CAL. ENVTL. PROT. AGENCY, REG'L WATER QUALITY CONTROL BD., CENT. VALLEY REGION (CVRWQB), IRRIGATED LANDS REGULATORY PROGRAM LONG-TERM PROGRAM DEV., STAFF REPORT 11 (July 2010) [hereinafter ILRP STAFF REPORT], available at http://www.swrcb.ca.gov/centralvalley/water_issues/irrigated_lands/long_term_program_development/draft_program_eir_july2010/peir_app_a.pdf; Ramos, *supra* note 1, at 14.

4. Lisa M. Hamilton, *Water Vanishes on Western Farms*, THE ATLANTIC, Feb. 3, 2010, at <http://www.theatlantic.com/food/archive/2010/02/water-vanishes-on-western-farms/35133/>. See *State Fact Sheets: Cal.*, ECON. RESEARCH SERV., U.S. DEP'T OF AGRIC., (March 30, 2011), <http://www.ers.usda.gov/statefacts/ca.htm>; Ramos, *supra* note 1, at 14; ILRP STAFF REPORT, *supra*, note 3, at 10 ("California's Central Valley has been one of the most productive agricultural regions in the world for more than 60 years."); Ramos, *supra* note 1, at 15 ("Agriculture is particularly important to the Central Valley, where it represents 21% of all income, and 25% of all employment.").

5. See COMMUNITY WATER CENTER, NITRATE CONTAMINATION OF DRINKING WATER AND THE HEALTH OF SAN JOAQUIN VALLEY RESIDENTS, 2 (February 2011), available at

with irrigated crop farms, nurseries, and large-scale confined animal feeding operations (CAFOs or “factory farms”), including more than 1600 milk cow dairies.⁶ Wastewater discharges from these operations have transformed the groundwater below into a toxic stew of nitrates, pesticides, and pesticide byproducts, many of which persist for decades, even after their use has been discontinued.⁷ This is the same water that more than 50% of the Central Valley human population relies upon for domestic usage, including drinking, cooking, and bathing.⁸ In the arid San Joaquin Valley, which covers the southern half of the Central Valley,

<http://www.communitywatercenter.org/files/PDFs/2011%20Nitrate%20Health.pdf> [hereinafter CWC Nitrate White Paper]; Ramos, *supra* note 1, at 20-21, 45; ALEX N. HELPERIN, DAVID S. BECKMAN, & DVORA INWOOD, CALIFORNIA’S CONTAMINATED GROUNDWATER: IS THE STATE MINDING THE STORE? 41, 42, 44-45, 47, 48-49, 59 (Dana Foley ed.) (April 2001), available at <http://www.nrdc.org/water/pollution/ccg/ccg.pdf>; ERIK OLSON, WHAT’S ON TAP?: GRADING DRINKING WATER IN U.S. CITIES, EARLY RELEASE CALIFORNIA EDITION v, viii, 51, 52, 59 (Dana Nadel Foley ed.) (October 2002), available at http://www.nrdc.org/water/drinking/uscities/pdf/whatsontap_ca.pdf; ENVIRONMENTAL WORKING GROUP, NATIONAL DRINKING WATER DATABASE—FULL REPORT [hereinafter EWG Report], available at <http://www.ewg.org/tap-water/fullreport>; C.H. Pickett, L.S. Hawkins, J.E. Pehrson, & N.V. O’Connell, *Herbicide Use in Citrus Production and Ground Water Contamination in Tulare County*, PEST MANAGEMENT ANALYSIS AND PLANNING PROGRAM, at 1 (April 1990), <http://www.cdpr.ca.gov/docs/pestmgt/pubs/pm9001.pdf>; ILRP Staff Report, *supra* note 3, at 10 n.7 (“Intensive agriculture describes a system characterized by high inputs of capital, labor, and/or heavy usage of technologies such as pesticides and fertilizers relative to land area.”).

6. See ILRP STAFF REPORT, *supra* note 3, at 10, 13 (noting that as of 2007, the Central Valley was home to over 34,000 farms growing irrigated crops, and 7.5 million acres of irrigated crop land); Waste Discharge Requirements General Order for Existing Milk Cow Dairies, CVRWQB, Order No. R5-2007-0035, at 2 (May 3, 2007), available at http://www.swrcb.ca.gov/rwqcb5/board_decisions/adopted_orders/general_orders/r5-2007-0035.pdf; CWC Nitrate White Paper, *supra* note 5, at 4 (“In 2008, the San Joaquin Valley contained almost 1.6 million dairy cows and calves, and 161,000 beef cattle.”). See *Thirsty for Justice: A People’s Blueprint for California Water*, THE ENVIRONMENTAL JUSTICE COALITION FOR WATER (EJCW) 73 (June 2005), <http://www.ejcw.org/Thirsty%20for%20Justice.pdf>; Helperin, *supra* note 5, at 41.

7. SEE BRAD HEAVNER, TOXICS ON TAP: PESTICIDES IN CALIFORNIA DRINKING WATER SOURCES 6-7, 10-15 (1999), available at <http://pesticidereform.org/downloads/tap.pdf>; Helperin, *supra* note 5, at 27-53; Olson, *supra* note 5, at v, viii, 51-59; Ramos, *supra* note 1, at 20-21; Carolina Balazs, Rachel Morello-Frosch, Alan Hubbard, & Isha Ray, *Social Disparities in Nitrate-Contaminated Drinking Water in California’s Central Valley* 3, 5 (forthcoming) [hereinafter *Social Disparities*]; *Thirsty for Justice*, *supra* note 5, at 72, 76; EWG Report, *supra* note 5.

8. CVRWQB, GROUNDWATER QUALITY PROTECTION STRATEGY: A “ROADMAP” FOR THE CENTRAL VALLEY REGION 8 (August 2010), available at http://www.swrcb.ca.gov/rwqcb5/water_issues/groundwater_quality/2010aug_gwq_protect_strat_approve_d.pdf.

groundwater provides up to 95% of the domestic supply.⁹ Not every inch of the Valley floor rests on polluted aquifers—these contaminants move in plumes as a complex function of hydrogeology and human activity—but a significant percentage of Valley residents are paying the price for degradation of this resource.¹⁰ This burdensome distinction rests disproportionately on low-income communities of color.¹¹

Historical settlement patterns stemming from farm labor migration, lack of public transportation, racially exclusionary covenants, and discriminatory planning and public investment policies, among other factors, have resulted in a persistent and widespread pattern of small, under-resourced and under-served communities of color in rural, unincorporated areas of the Valley.¹²

9. Social Disparities, *supra* note 7, at 5; CWC Nitrate White Paper, *supra* note 5, at 2. See also *Thirsty for Justice*, *supra* note 6, at 76 (observing that groundwater supplies 95% of drinking water to California residents in rural areas); Ramos, *supra* note 1, at 21, 25. See Carolina Balazs, Snapshot of a Waterscape: Drinking Water Systems in the San Joaquin Valley, 3 (Oct. 22, 2010) (chapter of Ph.D. dissertation in preparation, University of California, Berkeley) [hereinafter Snapshot of a Waterscape] (“The Central Valley is generally divided into two regions: the Sacramento Valley, which covers the northern half of the Central Valley, and the [San Joaquin Valley] which covers the southern half of the Central Valley. The two valleys meet in the Delta, where the Sacramento and San Joaquin rivers meet.”).

10. See Heavner, *supra* note 7, at 12, 15; Ramos, *supra* note 1, at 16:

The inadequate treatment of water may also have adverse economic effects on a community. These include economic loss due to disablement of ill people who cannot perform their work, the loss of education of developmentally disabled or ill school children, increased healthcare costs, and the creation of a polluted environment impacting economic activities such as tourism

see also DEB MARTIN, RURAL COMMUNITY ASSISTANCE PARTNERSHIP, AFFORDABILITY AND CAPABILITY ISSUES OF SMALL WATER AND WASTEWATERS SYSTEMS: A CASE FOR REGIONALIZATION OF SMALL SYSTEMS 2, <http://www.rcap.org/sites/default/files/rcap-files/Regionalization%20Great%20Lakes%20RCAP%20final.pdf> (last visited April 2, 2011); EWG Report, *supra* note 5.

11. See Social Disparities, *supra* note 7, at 5-6, 16-17, 19; see also Snapshot of a Waterscape, *supra* note 9, at 4; Ramos, *supra* note 1, at 11, 16, 37, 42-43, 46; *Thirsty for Justice*, *supra* note 6, at 71, 72, 73, 76.

12. See COUNTY OF TULARE GENERAL PLAN, General Plan Policy Summary, Section 2.D.3 (Dec. 1971), http://generalplan.co.tulare.ca.us/documents/gp_issues_summary/02-Water-LiquidWasteMgmt.pdf (last visited April 2, 2011). (“Public commitment to communities with little or no authentic future should be carefully examined before final action is initiated. These non-viable communities would, as a consequence of withholding major public facilities such as sewer and water systems, enter a process of long-term natural decline as residents depart for improved opportunities in nearby communities.”) (emphasis added); see also Caroline Farrell, *SB 115: California’s Response to Environmental Justice—Process Over Substance*, 1 GOLDEN GATE U. ENVTL. L.J. 113, 124 (2007) (“The 1971 General Plan contains a provision stating that communities that do not have a viable or authentic future will be denied public services, with the expectation that these communities will enter a period of

These communities are located close to the farms that are the economic engine of the region, but as a result, they also suffer some of the highest levels of groundwater contamination.¹³ Many of these same communities are gripped with poverty and struggling to improve poor public service infrastructure, including water services distribution and treatment.¹⁴ The most impoverished residents of these communities are forced to choose between buying bottled water to avoid the nitrate- and pesticide-contaminated water flowing from their faucets or exposing themselves and their loved ones to the risk of cancer, reproductive problems, and other health impacts so that they can afford other necessities, such as food and medicine.¹⁵ Agricultural contamination of the Valley's groundwater therefore has

'natural decline' and wither away. Many of the communities considered not to have an authentic future are predominantly low-income Latino communities."); Ramos, *supra* note 1, at 15; *Thirsty for Justice*, *supra* note 6, at 71; Social Disparities, *supra* note 7, at 5-6; Michelle Wilde Anderson, *Mapped Out of Local Democracy*, 62 STAN. L. REV. 931, 937, 940-41 (2010); Michelle Wilde Anderson, *Cities Inside Out: Race, Poverty, and Exclusion at the Urban Fringe*, UCLA L. REV. 1095, 1115-18 (2008); Conversation with Kara Brodfuehrer, Staff Attorney, California Rural Legal Assistance, Dec. 13, 2010. Many of these communities originated as settlements for low-income, politically marginalized farm workers, including Caucasian dust bowl refugees, Asian immigrants, and African Americans; today, they are largely populated by Latino farm-worker families. See DOUGLAS B. GWYNN, YOSHIO KAWAMURA, EDWARD DOLBER-SMITH, & REFUGIO I. ROCHIN, THE CALIFORNIA INSTITUTE FOR RURAL STUDIES (CIRS), CALIFORNIA'S RURAL POOR: TRENDS, CORRELATES, AND POLICIES, 8-14 (Feb. 1989), <http://www.cirsinc.org/Documents/Pub0289.7.PDF>; ISAO FUJIMOTO, CIRS, BUILDING CIVIC PARTICIPATION IN CALIFORNIA'S CENTRAL VALLEY, BOOK ONE, GETTING TO KNOW THE CENTRAL VALLEY, 5-6, 12, 14, 19-20, 22 (Sept. 1998), <http://www.cirsinc.org/Documents/Pub0998.1.PDF>; Anderson, *supra* note 12 at 937.

13. See Ramos, *supra* note 1, at 15, 25, 36; *Thirsty for Justice*, *supra* note 6, at 72, 73; Snapshot of a Waterscape, *supra* note 9, at 4; Helperin, *supra* note 5, at 47; Social Disparities, *supra* note 7, at 5, 16-17.

14. See *Thirsty for Justice*, *supra* note 6, at 72; Laurel Firestone, Alice Kaswan, & Sandra Meraz, Symposium, *Environmental Justice: Access to Clean Drinking Water*, 57 HASTINGS L.J. 1367, 1378 (2006) (remarks by Laurel Firestone) [hereinafter Firestone Remarks].

15. See CWC Nitrate White Paper, *supra* note 5, at 4-10 (discussing health outcomes associated with nitrate contamination of drinking water and the disproportionately high incidents of those outcomes in Tulare County, where 20-30% of small systems serve water with nitrate over the legal MCL); see also CWC, *Dibromochloropropane (DBCP) fact sheet* (2009), http://www.communitywatercenter.org/files/trainingmaterials/CWC_GFS_DBCP.pdf (last visited April 2, 2011) (discussing health outcomes associated with consumption of drinking water with high levels of the pesticide DBCP). Many communities, with which CWC has worked, such as Seville and Tooleville, have median household incomes around \$14,000-16,000 per year, according to surveys done by Self Help Enterprises. Based on interviews by CWC staff with residents in these communities, it is not uncommon for families to spend 6-10% of their household income on water alone.

significant negative environmental justice implications.

II. THE RELATIONSHIP BETWEEN ENVIRONMENTAL JUSTICE AND HUMAN RIGHTS

Environmental justice is the prevailing or accepted term for describing the disproportionate impacts that environmental pollution has on the health and well-being of low-income communities and communities of color as compared with other populations.¹⁶ Accordingly, environmental justice communities are those “communities bearing the greatest share of environmental and social problems associated with polluting industries.”¹⁷

This is evident in the Central Valley, where many rural, low-income, largely Latino communities are both “disproportionately affected by exposure to drinking water contaminants”¹⁸ and bear “a disproportionate burden of environmental health risks from other sources.”¹⁹ These risks include air pollution created by routine spraying of pesticides on the crops near their homes and occupational hazards from laboring in the farms directly where these chemicals are applied.²⁰

From the perspective of the global water justice movement, groundwater contamination in the Central Valley’s rural, low-

16. David Monsma, *Equal Rights, Governance, and the Environment: Integrating Environmental Justice Principles in Corporate Social Responsibility*, 33 *ECOLOGY L.Q.* 443, 444 (2006).

17. See Monsma, *supra* note 16, at 489.

18. Social Disparities, *supra* note 7, at 6, 16-17, 19.

19. Ramos, *supra* note 8, at 32.

20. *Thirsty for Justice*, *supra* note 6, at 80. See also Neil A.F. Popovic, *Pursuing Environmental Justice with International Human Rights and State Constitutions*, 15 *STAN. ENVTL. L.J.* 338, 339 (1996) (“Manifestations” of “environmental racism in the United States” include the “use of dangerous pesticides in industrial agriculture.”); BAY AREA ENVIRONMENTAL HEALTH INITIATIVE, ET AL., UNITED STATES OF AMERICA, SUBMISSION TO THE UNITED NATIONS (U.N.) UNIVERSAL PERIODIC REVIEW, NINTH SESSION OF THE WORKING GROUP OF THE UPR, HUMAN RIGHTS COUNCIL 2, 3-4, 7 (Nov. 2—Dec. 3, 2010) [hereinafter Submission to U.N. UPR] (“It is well-established that U.S. communities of color and low-income communities are disproportionately burdened by environmentally harmful human activities and their individual and cumulative adverse health consequences”) (submitting to the U.N. that a number of U.S. environmental justice issues are themselves human rights violations) (emphasis added).

income communities constitutes a human rights abuse.²¹ Human rights are “the basic standards without which people cannot live in dignity as human beings”²² and are premised on the philosophy that there exists a “fundamental nucleus of values” around which “different cultures, juridical expressions and institutional models” converge.²³ There is growing acknowledgment in international law and policy circles of the existence of a human right to water, despite the fact that it is not (yet) codified explicitly in any treaties.²⁴ The water justice movement draws on both

21. See Maude Barlow, *Advice for Water Warriors*, YES! MAGAZINE ONLINE, Nov. 8, 2008, available at <http://www.yesmagazine.org/planet/advice-for-water-warriors>. In fact, when the U.N. Independent Expert on the right to water and sanitation conducted her recent fact-finding mission to the United States in early March 2011 “to examine the way in which the human right to water . . . is being realized in the United States[,]” she visited the Central Valley during her tour and met with and listened to the drinking water challenges being faced by residents from local communities. Press Release, United Nations Human Rights, Catarina de Albuquerque, U.N. Independent Expert on the right to water and sanitation, Mission to the United States of America from 22 February to 4 March 2011, (Mar. 4 2011) [hereinafter Independent Expert End-of-Mission Press Release], available at <http://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=10807&LangID=E>. Although her formal report to the United Nations is still forthcoming at the time of publication, the press release issued at the immediate conclusion of her mission expresses concerns about racially and socioeconomically discriminatory impact, water quality, and affordability in this region. See *id.*; see also Mark Grossi, *Tulare Co. water draws UN critique*, FRESNO BEE, Mar. 5, 2011, at A3, available at <http://www.fresnobee.com/2011/03/04/2297039/tulare-county-water-draws-un-critique.html#storylink=misearch>; Mark Grossi, *U.N. studies Tulare Co. town's tainted water: International attention to be focused on Valley town's water woes*, FRESNO BEE, Mar. 1, 2011, available at <http://www.fresnobee.com/2011/03/01/2292513/sevilles-water-probed-by-un.html#storylink=misearch>; Mike Hazelwood, *U.N. expert told of Seville water issues: Official studying water rights around world*, VISALIA TIMES-DELTA, Mar. 2, 2011, at A1, available at <http://www.visaliatimesdelta.com/apps/pbcs.dll/article?AID=2011103020317>.

22. Dinara Ziganshina, *Rethinking the Concept of the Human Right to Water*, 6 SANTA CLARA J. INT'L L. 113, 117 (2008) (internal quotation marks and alterations omitted).

23. See Mary Ann Glendon, *Justice and Human Rights: Reflections on the Address of Pope Benedict to the UN*, 19 EUR. J. INT'L L. 925, 925-26 (2008) (quotation marks omitted).

24. See Comm. on Econ. & Soc. & Cultural Rights, *Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights, General Comment No. 15*, 29th Sess., Nov. 29, 2002, U.N. Doc. E/C.12/2002/11 (2002) [hereinafter G.C. 15]; U.N. HUMAN RIGHTS COUNCIL (H.R.C.), OFFICE OF THE HIGH COMMISSIONER FOR HUMAN RIGHTS (O.H.C.H.R.), REPORT BY THE OFFICE OF THE HIGH COMMISSIONER ON THE SCOPE AND CONTENT OF THE RELEVANT HUMAN RIGHTS OBLIGATIONS RELATED TO EQUITABLE ACCESS TO SAFE DRINKING WATER AND SANITATION UNDER INTERNATIONAL HUMAN RIGHTS INSTRUMENTS, U.N. Doc. A/HRC/6/3 (Aug. 2007) [hereinafter OHCHR Rep.]; G.A. Res. 64/292, ¶ 1, U.N. Doc. A/RES/64/292 (July 28, 2010) [hereinafter G.A. Res.]; U.N. Hum. Rts. Council Res. 15/9, ¶ 3, U.N. Doc. A/HRC/RES/15/9 (Sept. 30, 2010) [hereinafter H.R.C. Res. 15/9]; U.N. Hum. Rts. Council Res. 16/L.4, ¶ 1, U.N. Doc. A/HRC/RES/16/L.4 (Mar. 18, 2011) [hereinafter H.R.C. Res. 16/L.4].

environmental justice and human rights as conceptual tools in the struggle to achieve universal access to safe drinking water, but it is worth noting that the two concepts are analytically distinct. The human right to water refers to a substantive right to the underlying environmental resource—and this universal right extends to all people by virtue of being human—whereas environmental justice refers to disproportionate environmental impact on a discrete population group.²⁵ This impact could take the form of the imposition of an environmental burden, such as inequitable exposure to *unsafe* drinking water, or the deprivation of an environmental benefit, such as inequitable access to a sufficient *quantity* of drinking water.²⁶ In the discourse of water justice practitioners, however, environmental injustice and environmental human rights violations converge, because it is politically marginalized populations around the world who overwhelmingly fall victim to this human rights abuse—lack of sufficient access to safe, affordable drinking water.²⁷ In other words, the groups

25. Hari M. Osofsky, *Learning from Environmental Justice: A New Model for International Environmental Rights*, 24 STAN. ENVTL. L.J. 71, 89 n.75 (2005) (identifying this intellectual distinction between “environmental rights, which focus on the environmental standards that apply to *all people*” and “environmental justice, which focuses on the disproportionate nature of the harm” on discrete categories of people); Kristen Martila Gast, Note, *Environmental Justice and Indigenous Peoples in the United States: An International Human Rights Analysis*, 14 TRANSNAT’L L. & CONTEMP. PROBS. 253, 270 (2004) (“[E]nvironmental justice focuses on the intersection between environmental harm and historically disadvantaged groups.”).

26. See, e.g., Andrea Waye, *An Environmental Justice Perspective on African-American Visitation to Grand Canyon and Yosemite National Parks*, 11 HASTINGS W.-N.W. J. ENVTL. L. & POL’Y 125, 126 (2005) (“While the environmental justice movement initially focused on the inequitable distribution of environmental burdens, the focus has recently been extended to include the inequitable distribution of environmental benefits, especially in the natural resources context.”); see *id.* at 126 n.10 (“[E]nvironmental inequity is not solely the result of the pollution burdens that first galvanized the environmental justice movement. Our natural environment also bestows many benefits on those able to use and enjoy it. Failure to provide equitable access to . . . natural resources can also constitute injustice.”) (quoting JUSTICE AND NATURAL RESOURCES xxxi (Kathryn M. Mutz et al., eds., 2002) (alterations omitted)).

27. See Osofsky, *supra* note 25, at 101, 104-05, 107; Timothy J. Schorn, *Drinkable Water and Breathable Air: A Liveable Environment As a Human Right*, 4 GREAT PLAINS NAT. RESOURCES J. 121, 124 (2000) (“Environmental degradation, its resulting negative impact on quality of life, and the ultimate violation of a person’s human rights are more strongly felt by those who exist at the lower rungs of the international socio-economic ladder. People living in lesser-developed areas are more apt to live in conditions of environmental disarray.”). See also Press Release, Water and Sanitation: A Human Right for all, even slum-dwellers and the homeless, United Nations Human Rights (Mar. 22, 2011), available at <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=10875&LangID=E> (“Time and again, we see that those without access to water and sanitation are also those who

around the planet who are not fully realizing their human right to water are largely the world's environmental justice communities.²⁸

A. *The Human Right to Water in International Law*

1. *A Human Right to High-Quality Water*

As most recently articulated in a July 2010 resolution by the United Nations (U.N.) General Assembly, there is a human right to water recognized in international law, and it consists of “the right to *safe and clean* drinking water and sanitation that is essential for the full enjoyment of life and all [other] human rights[.]”²⁹ One of the contours of this human right to water is that it encompasses not just quantity, but also quality.³⁰ “Providing low-quality water would vitiate the fundamental rationale that undergirds the right to water[.]” as “[a]ny quantity of water is meaningless if its quality causes it to be unfit for use or consumption.”³¹ Both logic and developing international law support this proposition. The U.N. Human Rights Council (HRC) has issued a subsequent resolution

are marginalized, excluded, or discriminated against. Their inadequate access to safe water and sanitation is not simply an unfortunate by-product of their poverty, but rather a result of political decisions that exclude them . . .”).

28. See Submission to U.N. UPR, *supra* note 20, at 5. This breathes life into Professor Gerald Torres' assertion that “environmental justice is not [just] the result of mere parochial concerns, even though domestically most of its power comes from the local expression of injustice. Rather, it is part of a global concern with issues of fairness and equitable access to the resources of the earth.” Gerald Torres, *Environmental Justice: The Legal Meaning of a Social Movement*, 15 J. L. & COM. 597, 621 (1996).

29. G.A. Res., *supra* note 24, at ¶ 1 (emphasis added).

30. See Ling-Yee Huang, Note, *Not Just Another Drop in the Human Rights Bucket: The Legal Significance of a Codified Human Right to Water*, 20 FLA. J. INT'L L. 353, 369 (2008) (“A human right to water incorporates two primary aspects, accessibility and adequacy.”); Malgosia Fitzmaurice, *The Human Right to Water*, 18 FORDHAM ENVTL. L. REV. 537, 545 (2007) (“[N]ot only does this provision characterize the right as fundamental, it also specifies that it is not only water, but healthy water to which humans have a right.”) (internal quotation marks omitted); Amy Hardberger, *Whose Job is it Anyway?: Governmental Obligations Created by the Human Right to Water*, 41 TEX INT'L L.J. 533, 535 (2006) (“All water supplied or accessed must be of an acceptable quality to protect public health.”); Erik B. Bluemel, Comment, *The Implications of Formulating a Human Right to Water*, 31 ECOLOGY L.Q. 957, 994 (2004) (“[Water] pollution, if severe enough, can constitute a violation of the right to water.”). It bears noting, however, that quantity and quality are not the only contours of a human right to safe drinking water. Other commonly accepted contours of this right include physical accessibility, affordability, and even reliability of supply. See G.C. 15, *supra* note 24, at ¶¶ 10-12; OHCHR Rep., *supra* note 24, at pp.13-16; H.R.C. Res. 15/9, *supra* note 24, at ¶ 9(b); H.R.C. Res. 16/L.4, *supra* note 24, at ¶5(a).

31. Hardberger, *supra* note 30, at 541 (emphasis added).

“affirm[ing]” that the human right to water is, among other things, “inextricably related to the right to the highest attainable standard of physical and mental health”³² As Professor Erik Bleumel once observed:

[T]he right to health . . . requires the assurance of environmental hygiene. In turn, ensuring environmental hygiene requires States to ‘prevent threats to health from unsafe and *toxic water conditions*,’ including protection of water resources from contamination The right to health thus ensures not only access to clean and safe water to drink, but also . . . *the protection of existing bodies of water from contamination*.³³

Along a similar vein, General Comment No. 15, issued by the U.N. Committee on Economic, Social, and Cultural Rights (ECOSOC), includes a significant water quality component.³⁴ This 2002 document was “the first recognition by a United Nations human rights body of an independent and generally applicable human right to water.”³⁵ It interprets the human right to water as imposing an obligation on states to “protect” the resource,

32. H.R.C. Res. 15/9, *supra* note 24, at ¶3. According to Richard Glick, the International Covenant on Civil and Political Rights (ICCPR) “establishes the Human Rights Committee to examine and facilitate the compliance of state parties with Political Covenant norms.” Richard D. Glick, *Environmental Justice in the United States: Implications of the International Covenant on Civil and Political Rights*, 19 HARV. ENVTL. L. REV. 69, 93 (1995).

33. Bluemel, *supra* note 30, at 969 (quoting G.C. 15, *supra* note 24, and U.N. Econ. & Soc. Council, Comm. On Econ., Soc. & Cultural Rights, General Comment No. 14, The Right to the Highest Attainable Standard of Health, 22nd Sess., Agenda Item 3, at 3-5, 11-13, 15, U.N. No. E/C.12/2000/4 (2000)) (emphasis added).

34. ECOSOC is “a body of 18 independent experts that monitors the implementation of the [International Covenant on Economic, Social, and Cultural Rights (ICESCR)] in member states.” George McGraw, Note, *Water for Life: The Challenge Posed by the Un-codified Human Right to Water in International Law*, 1(1) THE UNIV. FOR PEACE L. REV. 39, 42 (2010). “General Comments issued by ECOSOC are non-binding interpretations of ICESCR rights and obligations, but may be relied upon by various international bodies when deciding whether a State has met its obligations under ICESCR. . . . The value of the General Comment [15] lies in relating the right to water to various international human, economic, social, and cultural rights instruments.” Bluemel, *supra* note 30, at 971-72. *See also* Ziganshina, *supra* note 22, at 115 (“General Comment No. 15[] . . . is a non-binding but authoritative interpretation of Articles 11 and 12 of the ICESCR[] . . . and interprets the human right to water to be an economic and social right.”).

35. Stephen C. McCaffrey and Kate J. Neville, *Small Capacity and Big Responsibilities: Financial and Legal Implications of a Human Right to Water for Developing Countries*, 21 GEO. INT’L ENVTL. L. REV. 679, 682 (2009).

including “adopting the necessary and effective legislative and other measures to restrain[] . . . third parties from . . . polluting . . . water resources[,]”³⁶ and it encourages States to adopt strategies and programs “to ensure that there is sufficient and *safe* water for present and future generations[,]” such as by “reducing and eliminating contamination of watersheds . . . by substances such as . . . harmful chemicals”³⁷

Unsafe levels of industrial pollution, including agricultural pollution, leave water resources “unfit for direct human consumption and use.”³⁸ The human right to water thus, at least in theory, requires States to address “the dilemma between industrial development and water quality[,]” because the right entails “adequate supplies of *safe* water[,]” thereby obligating governments “not only to ensure access to water, but also to enact environmental regulations to protect the water supply.”³⁹ Setting aside for the moment the question of whether there is in fact an *enforceable* international human right to water, and assuming that these instruments are authoritative interpretations of this right,

36. U.N. Committee on Economic, Social, and Cultural Rights’ General Comment No. 15, ¶ 23 (2002). *See also* Bluemel, *supra* note 30, at 973 (explaining that the “[o]bligation[] to protect the right to water[,]” which is a component of an international human right to water, “require[s] that States implement permitting procedures or other regulatory systems to control private-actor behavior that might interfere with the right to water[,]” such as pollution of the water source).

37. G.C. 15, *supra* note 24, at ¶ 28 (emphasis added). “As a matter of international law, state action includes the acts of the federal, state, and local governments of the United States. . . . The various governmental organs of the United States and its subdivisions are involved, directly or indirectly, in the regulation of matters concerning clean water[.] . . .” Glick, *supra* note 32, at 91.

38. Bluemel, *supra* note 30, at 982 (referencing bauxite mountain-top mining in India that has polluted downstream waters and destroyed the drinking water source for thousands of indigenous residents). It should be noted, furthermore, that activities that pollute aquifers relied upon by communities for drinking water further deplete the available *quantity* of potable water, exacerbating the growing water scarcity crisis in California. *See* Heavner, *supra* note 7, at 14:

Contamination of water supplies will further exacerbate water shortages around California. As removing pesticides from a contaminated water body is often prohibitively expensive [if not impossible], the most common response to pesticide contamination of water supplies has been to abandon the polluted sources and search for new ones. With water already in short supply [and groundwater overdraft on the rise], California communities cannot afford to take this approach any longer.

See also Huang, *supra* note 30, at 354, 358; McGraw, *supra* note 34, at 39, 41, 49; Stephen C. McCaffrey, *A Human Right to Water: Domestic and International Implications*, 5 GEO. INT’L ENVTL. L. REV. 1, 7 (1992); Jason Astle, *Between the Market and the Commons: Ensuring the Right to Water in Rural Communities*, 33 DENV. J. INT’L L. & POL’Y 585, 585 (2005).

39. Bluemel, *supra* note 30, at 983 (emphasis added).

ongoing agricultural contamination of Central Valley aquifers clearly rises to the level of a human rights violation, as the plethora of acutely toxic and carcinogenic contaminants in the public drinking water supply, including nitrates and pesticides, pose both short-term and long-term threats to public health.⁴⁰ The fact that this health risk falls disproportionately on economically, socially, and politically marginalized communities makes the violation that much more egregious.⁴¹ If the human right to water establishes a minimum baseline for all humans, namely, access to water that is “protected at a level and in a manner consistent with the human rights standard[,]” surely the Central Valley’s severely degraded aquifers in rural, low-income communities fall below that baseline.⁴²

2. *The Current Legal Status of the Human Right to Water*

Once a welfare-based human right to a resource is acknowledged, however, this acknowledgment immediately raises questions of duty and obligation, such as who must provide for this right and to whom the right is owed, and it is at this juncture where the issue of enforceability rears its head and the framework of

40. See Ramos, *supra* note 1, at 25-26, 31; Olson, *supra* note 5, at 51; Social Disparities, *supra* note 7, at 4; *Thirsty for Justice*, *supra* note 6, at 72; Helperin, *supra* note 5, at 45, 50; Osofsky, *supra* note 25, at 94; Huang, *supra* note 30, at 358; McCaffrey, *supra* note 38 at 14. See also LAUREL FIRESTONE, CWC, GUIDE TO COMMUNITY DRINKING WATER ADVOCACY 129-46 (Jan. 2009) (Community Health Guide providing overview of health impacts of common drinking water contaminants in the Central Valley), available at <http://www.communitywatercenter.org/downloads.cfm?content=Tools>.

41. “A human right by definition is a universal moral right, something which all men everywhere, at all times ought to have, something of which no one may be deprived without a *grave affront to justice*, something which is owing to every human being simply because he is human.” Schorn, *supra* note 27, at 127 (quoting Maurice Cranston, WHAT ARE HUMAN RIGHTS? 36 (1973)) (emphasis added; alterations omitted). Individuals whose lives are directly and negatively impacted by the rife anthropogenic contamination in this region know well that it is a “grave affront to justice” that the Central Valley’s most economically and socially vulnerable residents are forced to raise their children and live their lives in a poisonous environment. See *id.* at 127 (observing that this “affront to justice” is all the more acute when “the quality of air and water that you consume has a good deal to do with where you are born”). The Central Valley’s cancer rates are some of the highest in the state of California. See CWC Nitrate White Paper, *supra* note 5, at 8-11. Meanwhile, despite widespread grassroots protest, the California Department of Pesticide Regulation has just registered a highly-carcinogenic soil fumigant for strawberry crops, called methyl iodide. See, e.g., Garance Burke, *Methyl Iodide Approved For Use In California*, HUFFINGTON POST, Dec. 1, 2010, available at http://www.huffingtonpost.com/2010/12/01/methyl-iodide-approved-fo_n_790748.html. This poisonous substance is a *known* groundwater contaminant. See *id.*

42. See Bluemel, *supra* note 30, at 972.

international human rights law loses steam.⁴³ “While rights do not theoretically depend on states for their existence, states bind themselves to protect these rights internationally through treaty and custom.”⁴⁴ It is this latter step that gives legal teeth to a human right, making it enforceable by the individual against the State in an international forum.

Thus far, no States have agreed to bind themselves to an explicit and independent right to water in an international treaty. In the last decade, there has been a surge of non-binding “soft law” instruments articulating the existence of this right,⁴⁵ beginning with ECOSOC’s General Comment No. 15 in 2002.⁴⁶ This was followed by a report released by the Office of the High Commissioner for Human Rights in 2007,⁴⁷ and then a resolution by the HRC establishing an independent expert to investigate the implementation of this right within U.N. member States in 2008.⁴⁸ These actions have culminated in the recent 2010 resolutions by the General Assembly and the HRC, respectively, formally declaring the existence of a human right to water.⁴⁹ Specifically,

43. See, e.g., Hardberger, *supra* note 30, at 535 (noting that as a nature of being a *right*, if there is a human right to water, “someone must be entitled to demand water, and someone must be obligated to provide it.”); Schorn, *supra* note 27, at 126 (“If a right exists, then individuals have standing to assert a claim. If they can assert a claim, then someone, presumably the state, has the responsibility or obligation to respond to and meet that claim.”).

44. McGraw, *supra* note 34, at 41.

45. *Id.* at 43.

46. G.C. 15, *supra* note 24.

47. OHCHR Report, *supra* note 24.

48. U.N. Hum. Rts. Council Res. 7/22, ¶¶ 2-4, U.N. Doc. A/HRC/RES/7/22 (Mar. 20, 2008) [hereinafter H.R.C. Res. 7/22], available at http://ap.ohchr.org/documents/E/HRC/resolutions/A_HRC_RES_7_22.pdf.

49. G.A. Res., *supra* note 24; H.R.C. Res. 15/9, *supra* note 24. See also H.R.C. Res. 16/L.4, *supra* note 24, at ¶ 1 (welcoming the recognition of this right in the foregoing resolutions). We leave for others to debate whether these developments amount to the full-fledged development of customary international law. Compare, e.g., Marko Divac Oberg, *The Legal Effects of Resolutions of the U.N. Security Council and General Assembly in the Jurisprudence of the ICJ*, 16 EUR. J. INT’L L. 879, 902-03 (2006), and Richard B. Bilder & Benjamin B. Ferencz, Book Review 89 AM. J. INT’L L. 673, 674 (1995), (reviewing BLAINE SLOAN, UNITED NATIONS GENERAL ASSEMBLY RESOLUTIONS IN OUR CHANGING WORLD (1991)). We note, however, that international lawyer Catarina de Albuquerque, who was initially appointed in 2008 by the H.R.C. as an “independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation,” H.R.C. Res. 7/22, *supra* note 48, at ¶ 2 (emphasis added), has recently been converted to “special rapporteur on the human right to safe drinking water and sanitation[.]” H.R.C. Res. 16/L.4, *supra* note 24, at ¶ 2 (emphasis added), and that she is carefully building a case for the evolution in customary international law. See Independent Expert End-of-Mission Press Release, *supra* note 21

the General Assembly resolution:

1. Recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights;
2. Calls upon States and international organizations to provide financial resources, capacity-building and technology transfer, through international assistance and cooperation, in particular to developing countries, in order to scale up efforts to provide safe, clean, accessible and affordable drinking water and sanitation for all;
3. Welcomes the decision by the Human Rights Council to request that the independent expert on human rights obligations related to access to safe drinking water and sanitation submit an annual report to the General Assembly, and encourages her to continue working on all aspects of her mandate⁵⁰

It bears noting, however, that the General Assembly constitutes a forum for international dialogue, not a legislative organ, and the 2010 resolution does not carry the force of law with respect to U.N. member States.⁵¹ Rather, this resolution serves as a normative expression of idealized and contemporary “international legal principle” that will inevitably guide and inform subsequent developments in the law and help “reshape perceptions of when and how particular values are realistically actionable as claims of

(highlighting the Senator Paul Simon Water for the Poor Act of 2005, 22 U.S.C §2152h, as the first U.S. federal law to reflect a “commitment to incorporate the normative content of the human right to water”).

50. G.A. Res., *supra* note 24 (emphases in original).

51. *See, e.g.*, Gregory K. Kerwin, *The Role of United Nations General Assembly Resolutions in Determining Principles of International Law in United States Courts*, 1983 DUKE L.J. 876, 879, 880 (1983). “General Assembly Resolutions remain too unreliable to regard as definitive sources. . . . [The General Assembly] serves a valuable function as a forum for the expression of . . . deeply held sentiments. But its strengths as an international political body are also its weaknesses as a legislative body. If member nations knew they would be bound by their votes, many Resolutions would never be passed, and the General Assembly’s unique function as the voice of world opinion would be undermined.” *Id.* at 899. *See also* McGraw, *supra* note 34, at 43 (“[T]hese international bodies . . . cannot create binding legal standards themselves; they can only try to clarify states’ *existing* obligations.”) (emphasis in original); Independent Expert End-of-Mission Press Release, *supra* note 21 (observing that member states’ willingness “join[] . . . global consensus” by signing on to the recent resolutions by the G.A. and the H.R.C. “represents a *political* commitment” (emphasis added)).

legal right.”⁵² To the extent that this resolution “interprets pre-existing substantive international norms, it may be helpful for understanding and applying them[,]”⁵³ and, to the extent that it “restates existing international norms, it may have an evidentiary value for establishing these.”⁵⁴ As international lawyer and scholar Marko Divac Öberg observes, however, the resolution does not of its own force “have any [*formal*] impact on the state of the law.”⁵⁵

Nevertheless, “[i]n practice it can be hard to draw the line between what, on the one hand, is merely interpretative or declaratory and what, on the other hand, is truly creative.”⁵⁶ This tension is illustrated by the interplay between the recent resolutions adopted by the General Assembly and the HRC.⁵⁷ The General Assembly resolution does not specify whether the human right to water is an independent right that has yet to be codified or merely a dependent right flowing “by necessary implication” from other preexisting and pre-codified international human rights.⁵⁸ Following quickly on its heels, however, the HRC resolution provides a seeming clarification, describing the right to water as a dependent right “derived from” and “inextricably related to” specific international human rights codified in two separate and binding international treaties; namely, the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Cultural, and Social Rights (ICESCR).⁵⁹

52. See Lani Guinier, *Courting the People: Demosprudence and the Law/Politics Divide*, 89 B.U. L. REV. 539, 557 (2009); Kerwin, *supra* note 51, at 880; Bilder, *supra* note 49, at 674. See also Peter H. Gleick, *The Human Right to Water (and Sanitation)*, THE HUFFINGTON POST (Aug. 4, 2010), http://www.huffingtonpost.com/peter-h-gleick/the-human-right-to-water_b_671175.html (“[T]he purpose of UN resolutions and interpretations is to expand informal interpretations of international law, as appropriate.”).

53. Öberg, *supra* note 49, at 896.

54. *Id.*

55. *Id.*

56. *Id.*

57. G.A. Res., *supra* note 24; H.R.C. Res. 15/9, *supra* note 24.

58. See generally GA Resolution, *supra* note 24. See McCaffrey & Neville, *supra* note 35, at 682.

59. International Covenant on Civil and Political Rights, 999 U.N.T.S. 85 (Mar. 23, 1976), available at <http://www2.ohchr.org/english/law/pdf/ccpr.pdf>; International Covenant on Economic, Social, and Cultural Rights, G.A. Res. 2200A (XXI), U.N. GAOR, 21st Sess., Supp. No. 16, U.N. Doc. A/6316 (1966), at 49, 999 U.N.T.S. 3 (Jan. 3, 1976), available at <http://www2.ohchr.org/english/law/pdf/cescr.pdf>. See H.R.C. Res. 15/9, *supra* note 24, at ¶ 3 (tying the right to water to the ICCPR’s rights to life and dignity—Articles 6 and 10—and to the ICESCR’s rights to an adequate standard of living and the highest attainable standard of physical and mental health—Articles 11 and 12). See also Press Release, UN united to make

Much scholarly attention will undoubtedly be given in the coming years to the enforceability of the human right to water and the enforcement implications of the HRC having placed a foot in each camp, since the obligations created by positioning the right to water within the ICESCR are “much softer and more attenuated” than those created by positioning the right within the ICCPR.⁶⁰ To the extent that a domestic or international court of law accepts the HRC’s assertion that the right to water derives from these preexisting treaties, and thus accepts the right’s immediate *enforceability* against U.N. member States, it would nevertheless appear that pursuant to either treaty, *enforcement* of the right may be subject to a State’s resource constraints.⁶¹ This is where we suspect international litigation is most likely to hit a wall, for very few courts are willing to delve into such fundamentally political questions as to how the legislative and executive branches of government choose to allocate limited resources.⁶²

For this reason, we do not believe that litigating the human right to water is the most effective tool available for achieving its full implementation, in practice and on the ground. Environmental justice communities “must be given the tools to redress violations of their human dignity in *the most direct and effective way possible*.”⁶³ It is not clear to us that international litigation of the human right to water in various international judicial tribunals and commissions fits this definition.⁶⁴ This is in part based on our

the right to water and sanitation legally binding (Oct. 1, 2010) (interpreting the H.R.C.’s follow-up resolution as “clos[ing] the gap” left by the G.A. resolution by making the right to water and sanitation “justiciable and enforceable”) (quoting U.N. Independent Expert Catarina de Albuquerque), *available at* <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=10403&LangID=E>.

60. See McCaffrey & Neville, *supra* note 35, at 683.

61. See Glick, *supra* note 32, at 100; Bluemel, *supra* note 30, at 976; Fitzmaurice, *supra* note 30, at 549-50; McCaffrey & Neville, *supra* note 35, at 683; McCaffrey, *supra* note 38 at 13.

62. See Mazibuko, et al. v. City of Johannesburg, et. al. 2010 (3) BCLR 239 (CC) (S. Afr.) (ruling on the South African domestic constitutional provision conferring a right to water and holding that determinations regarding a minimum sufficient daily quantity of water in satisfaction of this right implicate budgetary allocations and are thus best left to the legislative and executive branches of government, both for institutional and democratic reasons), *available at* <http://www.saflii.org/za/cases/ZACC/2009/28.html>; See also Rose Francis, *Water Justice in South Africa: Natural Resources Policy at the Intersection of Human Rights, Economics, and Political Power*, 18 GEO. INT’L ENVTL. L. REV. 149, 191-92, 195 (2005).

63. McGraw, *supra* note 34, at 49 (emphasis added).

64. See McCaffrey & Neville, *supra* note 35, at 680 (“[W]ithout the development of financial and institutional capacity to provide water services, the right to water is of only

observation that because “[h]uman rights are usually defined as rights held by citizens against their state[.]” analyzing the right to safe drinking water through the *legal lens* of human rights fosters the expectation that *governments* are the entities with “primary responsibility for ensuring the realization” of this right, undermining the agency of impacted communities themselves in the process to secure a safe and sustainable drinking water source.⁶⁵

B. The Human Right to Water as a Social Justice Tool

The success of the water justice movement does not hinge on whether and how the human right to water may be enforced against U.N. member States. Open questions regarding the right’s enforceability do not detract from its existence. Human rights are “pre-political”—they are not created by nor do they depend on recognition by the State. As the Catholic Pope articulated in a recent address, “human rights arise from a natural order whose laws can be discovered through study and experience[.]”⁶⁶ The fact is, the language of human rights resonates with impacted community residents who do not have access to safe drinking water, and, for us, this is sufficient evidence that the human right

limited value. The legal requirement to provide a service is of little use if the government does not have the ability to fulfill those responsibilities, and thus an exclusive focus on human rights in legal terms (through the constitution or international human rights law) is unlikely to solve the problem of inadequate water access[.] . . .”); *see also* Luke W. Cole, *Foreword: A Jeremiad on Environmental Justice and the Law*, 14 STAN. ENVTL. L.J. ix, xii-xiii (1995) [hereinafter *Jeremiad on Environmental Justice and the Law*] (“[O]ne measure of a movement’s success is the codification of its goals[.] But without a broad social movement to back up those laws, to insist on their enforcement, to push for their strengthening, to defend against their evisceration, the laws mean little.”).

65. Hardberger, *supra* note 30, at 541. As Amy Hardberger has acknowledged:

[t]he duty to provide water *cannot lie entirely with government*. As the human right to water evolves, the role of individual citizens must also play a part in the realization of these goals. Although this topic is rarely discussed, some ideas can be deduced from existing documents. Human rights provide a mechanism for a citizen to enforce a violation of a right against a state; *however, this does not negate the responsibilities [impacted community residents] have towards themselves and each other*.

Id. at 566 (emphases added). *See also id.* at 568 (“One of the important effects of a rights-based approach is the empowerment of the individual. It would be counterintuitive to assume that the government is entirely responsible for delivery and maintenance of water without any assistance from the people.”); Osofsky, *supra* note 25, at 82-83; Huang, *supra* note 30, at 360; Bluemel, *supra* note 30, at 986. *See discussion, infra*, notes 106-108 and corresponding text.

66. Glendon, *supra* note 23, at 927.

to water does exist, in our collective hearts and minds, if not yet in the halls of domestic and international courts and legislatures.⁶⁷

The human right to water has real symbolic power as a tool for raising community consciousness.⁶⁸ Whether this tool is empowering, however, depends on the rhetorical manner in which this entitlement is framed—that is, whether the onus is placed on government (to dispense this entitlement to passive recipients) or on communities (to stand up and assert this entitlement for themselves). The former is subtly disempowering, while the latter has the opposite effect.⁶⁹ Realization of the human right to water is not so much something that benevolent public officials or civic-minded farmers can dole out; rather, it is something the beneficiaries themselves must boldly grab and demand, and this is the operating assumption that informs our work. We use “the discourse of justice” and human rights “constructively as a tool to engage [the] communities” with whom we partner.⁷⁰

III. IMPLEMENTING THE HUMAN RIGHT TO WATER IN THE CENTRAL VALLEY

To explore what implementation of the human right to water might mean and how it can be achieved, we offer our experience working for the Community Water Center (CWC) as a case study. CWC is a nonprofit organization whose mission is to achieve universal access to safe, clean, and affordable drinking water in the Central Valley. CWC was at the forefront of a collaborative statewide effort in 2009 successfully persuading elected

67. This is the perspective on human rights of a social justice advocacy organization, which contrasts sharply with a more traditionally litigation-oriented perspective, namely that “[i]nternational human rights are individual rights that are enforceable against state governments,” to be distinguished from mere “morals or standards that carry no legal weight.” See Francis, *supra* note 62, at 184.

68. See Huang, *supra* note 30, at 359; Fitzmaurice, *supra* note 30, at 553; McCaffrey & Neville, *supra* note 35, at 699; Monsma, *supra*, note 16, at 450, 485-90.

69. See Astle, *supra* note 38, at 605 (“[A] rights based approach to development [must] include[] educating people about their rights and empowering them to take control of their lives.”).

70. McCaffrey & Neville, *supra* note 35, at 694. See also Barlow, *supra* note 21 (using the rhetoric of human rights as an analytical tool, separate and apart from its technical-legal significance, to strengthen and validate the importance of her message that effective development necessitates not just prioritizing “the most vulnerable and marginalized communities[,]” but also putting their voices at the center by involving them in both the design and implementation of “development strategies” which impact them).

representatives in the California legislature to pass a bill that would have codified the existence of a human right to water in this state.⁷¹ Unfortunately, Governor Arnold Schwarzenegger exercised his veto power to prevent this bill's adoption.⁷² While we will persist in our collaborative efforts to formalize this right in California, regardless of the success of that effort, CWC continues to work toward achieving universal safe drinking water, even in the absence of a clearly codified and enforceable legal entitlement recognizing a human right to water. Based on our learned experience through ongoing interactions with impacted community residents, allied civil society organizations,⁷³ local and state public officials, and interested members of the private sector, CWC is striving to develop an approach to achieve sustainable water justice and, concomitantly, full implementation of the human right to water. This approach does not depend on formal acknowledgment by domestic or international governing bodies of the existence of such a right.

A. The Four Components of a Fully-Implemented Human Right to Water

CWC has identified four components to achieving universal access to safe, affordable drinking water. Each of these components are necessary, but not sufficient on their own, to ensure successful implementation of the human right to water.

71. See The Human Right to Water Act, Assembly Bill 1242 (2009) (vetoed by the Governor 2009), available at http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=ab_1242&sess=PREV&house=B&author=ruskin. This bill was passed by both the California Assembly and the California Senate before it was ultimately vetoed by the Governor. It stated:

This bill would declare that it is the established policy of the state that every human being has the right to clean, affordable, and accessible water for human consumption, cooking, and sanitary purposes, that is adequate for the health and well-being of the individual and family. The bill would require all relevant state agencies, including the Department of Water Resources, State Water Resources Control Board, and State Department of Public Health, to employ all reasonable means to implement this state policy.

Id.

72. *The Governor's Veto Message to AB1242*, OFFICIAL CALIFORNIA LEGISLATIVE INFORMATION (October 12, 2009), http://www.leginfo.ca.gov/pub/09-10/bill/asm/ab_1201-1250/ab_1242_vt_20091012.html.

73. See Barlow, *supra* note 21 (emphasizing the importance of "careful collaborative cooperation" with other civil society organizations as an important ingredient in the success of the water justice movement thus far).

1. Physical Infrastructure

First, a community water system must have adequate physical infrastructure, such as wells, pipes, storage tanks, treatment facilities, and water service delivery technology, all of which require access to sufficient funding.⁷⁴ This is perhaps the most obvious and straightforward component, and the one most focused on by government funding programs and international water charities.⁷⁵ That focus is not unjustified, as this component is the most expensive to implement and often requires far more funding than many smaller, economically-depressed communities, have the capacity to raise through local service delivery revenues.⁷⁶ It is important to note, however, that even the most expensive new pipes are only as good as the water flowing through them, and treatment plants are useless when the community can't afford to keep them in operation.⁷⁷ Therefore, while physical infrastructure

74. See Martin, *supra* note 10, at 2; Olson, *supra* note 5, at 54; Social Disparities, *supra* note 7, at 18; Stephen P. Gasteyer, *Tapping Untapped Potential: The Role of Technical Assistance Providers in Building Financing, Implementation, and Management Capacity for Water Services*, RURAL COMMUNITY ASSISTANCE PARTNERSHIP (2004), <http://www.rcap.org/sites/default/files/rcap-files/Tapping%20Untapped%20Potential.pdf>.

75. See G.A. Res., *supra* note 24, at ¶ 2 (calling upon “States and international organizations to provide financial resources, capacity-building and technology transfer, through international assistance and cooperation, in particular to developing countries ...”); U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA), GRANTS AND OTHER FUNDING UNDER THE SAFE DRINKING WATER ACT (SDWA), http://water.epa.gov/grants_funding/sdwa/index.cfm (last visited Mar. 5, 2011); U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT, SAFEGUARDING THE WORLD’S WATER: 2008 REPORT ON USAID WATER SECTOR ACTIVITIES (2009), available at http://pdf.usaid.gov/pdf_docs/PDACN272.pdf.

76. See Martin, *supra* note 10, at 2; Social Disparities, *supra* note 7, at 18; *Thirsty for Justice*, *supra* note 6, at 78; Gasteyer, *supra* note 74, at 1-2. The U.S. EPA estimated that \$334.8 billion dollars would be needed to meet the drinking water infrastructure needs in the United States over the next 20 years. 2009 DRINKING WATER INFRASTRUCTURE NEEDS SURVEY AND ASSESSMENT: FOURTH REPORT TO CONGRESS, U.S. EPA (EPA 816-R-09-001, March 2009), available at <http://water.epa.gov/infrastructure/drinkingwater/dwns/index.cfm> (last visited Mar. 5, 2011). See also CDPH, SAFE DRINKING WATER STATE REVOLVING FUND FINAL INTENDED USE PLAN SFY 2009-2010 (2009), available at <http://www.cdph.ca.gov/services/funding/Documents/SRF/2009/SFY2009-2010IUPforFFYs2008-2009DWSRFallotment.pdf>; CDPH, SAFE DRINKING WATER STATE REVOLVING FUND: SEPTEMBER 2009 FINAL SRF PROJECT PRIORITY LIST (2009) (listing \$451,038,865 worth of drinking water infrastructure projects to address critical drinking water needs in California, an underestimate of the true costs given that it is only inclusive of those systems that actually applied for funding), available at http://www.pacinst.org/reports/water_bond/does_bond_help_those_who_need.pdf.

77. The community of Tooleville in Tulare County was able to replace and upgrade its distribution system, but it still relies on only two wells for its water supply, both of which are contaminated with nitrate. For more information on Tooleville’s struggles to secure safe

is a significant challenge to implementing the human right to water and clearly deserves both attention and resources, even with unlimited access to money and technology, a community is only one quarter of the way towards securing a reliable supply of safe and affordable water.

2. *Source Water Protection*

Second, there must be a reliable resource of clean, healthy water available, such as a river or an aquifer, which necessitates source water protections in place to safeguard water quality and quantity.⁷⁸ As the population expands, there is ever-increasing pressure on finite water resources, and human history demonstrates that unchecked private activity will eventually deplete and destroy this commons.⁷⁹ At our current pace, no matter what technology is available or how much is spent on new infrastructure, if community drinking water sources are not protected, we will inevitably continue to discover the presence of new drinking water toxins,⁸⁰ and wells and reservoirs will eventually dry up.⁸¹

drinking water, see “Don’t Drink the Water”, available at <http://www.youtube.com/watch?v=Mecr2UShGEA> (last visited Mar. 5, 2011). In the community of Lanare in Fresno County, the service district was forced to shut down its state-of-the-art arsenic treatment plant after the costs of operating the plant put the system over \$100,000 in debt. The water system has gone into receivership, and meanwhile, residents are now back to receiving water containing arsenic levels three times greater than the MCL set by state and federal drinking water standards.

78. See Barlow, *supra* note 21 (“[F]ighting for equitable water in a world running out means taking better care of the water we have, not just finding supposedly endless new sources.”); Olson, *supra* note 5, at ix (“Source water protection is an essential component of drinking water protection.”).

79. See generally Garrett Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243 (1968), available at <http://www.sciencemag.org/content/162/3859/1243.full.pdf>. See Richard A. Hughes, *Pro-Justice Ethics, Water Scarcity, Human Rights*, 25 *J.L. & RELIGION* 521, 523 (2009-2010).

80. For example, many communities in the Central Valley are beginning to discover the chemical, 1,2,3-trichloropropane (1,2,3-TCP) in their drinking water systems. 1,2,3-TCP is a highly toxic carcinogen, even at very small concentrations in drinking water. It was created as an unnecessary byproduct during the manufacture of two soil fumigants (nematocides) under the trade names of D-D and Telone (or Telone II), which were widely used by farms and agribusiness in California from the 1950s through the 1970s. Use of those pesticides has been discontinued, but California’s Department of Pesticide Regulation (DPR) continues to register new pesticides without requiring that manufacturers first demonstrate that a scientific method exists for detecting those chemicals in groundwater, let alone that such contamination will not in fact occur. Just this year, DPR registered methyl iodide, another soil fumigant for strawberries, despite the fact that this chemical is a known carcinogen and known groundwater contaminant. See 1,2,3-Trichloropropane, CDPH, <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/123TCP.aspx> (last visited Mar. 7, 2011) (providing hyperlink to Excel spreadsheet listing water system monitoring results for 1,2,3,-TCP for the entire state of California for the period 2002-2009); CALIFORNIA OFFICE OF ENVIRONMENTAL HEALTH

Yet, particularly when consumers have no idea where the water out of their tap comes from, it is easy for regulatory agencies to cave to pressure from powerful political lobbies and fail to set requirements or guidelines for protection of those sources. While communities can engage in local voluntary efforts like wellhead protection programs,⁸² for the most part individual community water systems do not have authority to set requirements or restrictions on potentially harmful land uses and activities affecting

HAZARD ASSESSMENT, PUBLIC HEALTH GOALS FOR CHEMICALS IN DRINKING WATER, 1,2,3-TRICHLOROPROPANE, 1, 3, 31, 33 (Aug. 2009), available at http://www.oehha.ca.gov/water/phg/pdf/082009TCP_phg.pdf; California State Water Resources Control Board, Division of Water Quality, GAMA Program, Groundwater Information Sheet, 1,2,3-Trichloropropane (TCP), 3-5 (Nov. 17, 2009), available at http://www.swrcb.ca.gov/water_issues/programs/gama/docs/coc_tcp123.pdf; U.S. Department of Health & Human Services, Public Health Service, National Toxicology Program, Report on Carcinogens, Eleventh Addition, 1 (2005), available at <http://ntp.niehs.nih.gov/ntp/roc/toc11.html> (hyperlinking to chapter on TCP), available at <http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s182tcp.pdf>; U.S. EPA, Federal Facilities Restoration and Reuse Office, Emerging Contaminant Fact Sheet, 1,2,3-Trichloropropane (TCP), 1 (Sept. 2009) available at <http://www.clu-in.org/download/contaminantfocus/epa505f09010.pdf>; New Jersey Department of Environmental Protection, Letter Re: Docket ID No. EPA-HQ-OW-2007-1189, Drinking Water Contaminant Candidate List 3—Draft, 6 (May 21, 2008), available at <http://www.state.nj.us/dep/dsr/dw/CCL3%20letter%20final.pdf>; Centers for Disease Control, Agency for Toxic Substances & Disease Registry, 1,2,3 Trichloropropane: Public Health Statement, 62, 67 (Sept. 1992), available at <http://www.atsdr.cdc.gov/PHS/PHS.asp?id=910&tid=186>; *Factsheet: Methyl Iodide*, CALIFORNIANS FOR PESTICIDE REFORM, <http://www.pesticidereform.org/downloads/Methyl%20Iodide%20Lawsuit%20Factsheet.pdf> (last visited April 2, 2011); Burke, *supra* note 41. See also Ramos, *supra* note 1, at 21, 25-26; *Thirsty for Justice*, *supra* note 6, at 71-72.

81. This is especially true in the Central Valley, where intensive agricultural practices are causing untold damage to groundwater quality, residential development is rapidly expanding, and the farmers who have long-standing rights to federally-subsidized surface water flowing through the irrigation canals have an increasing incentive to sell that water to distant cities and turn to groundwater pumping to water their crops instead. See John Gibler, *Water Heist: How Corporations Are Cashing in On California's Water*, PUBLIC CITIZEN 1-2, 12-13 (Dec. 2003), http://www.citizen.org/documents/Water_Heist_lo-res.pdf; Hamilton, *supra* note 4; Patrick Hoge, *Central Valley housing boom plays role in the big heat, experts say*, SAN FRANCISCO CHRONICLE, Jul. 26, 2006, available at http://articles.sfgate.com/2006-07-26/bay-area/17302718_1_hot-weather-energy-committee-energy-efficiency-programs.

82. See U.S. EPA, Survey Of Local Groundwater Wellhead Protection Efforts In California (171-R-92-023) (2009), available at <http://nepis.epa.gov/Exe/ZyNET.exe/20011DEQ.txt?ZyActionD=ZyDocument&Client=EPA&Index=1991%20Thru%201994&Docs=&Query=171R92023%20or%20california%20or%20wellhead%20or%20protection&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=pubnumber^%22171R92023%22&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=pubnumber&IntQFieldOp=1&ExtQFieldOp=1&XmlQuery=&File=D:\ZYFILES\INDEX%20DATA\91THRU94\TX T\00000017\20011DEQ.txt&User=ANONYMOUS&Password=anonymous&SortMethod=hj-&MaximumDocuments=10&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=plf&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1> (last visited Mar. 6, 2011).

their source water quality and quantity.⁸³ The inequity of this situation is striking, because small drinking water systems in this region are far more likely to face groundwater contamination due to their relative proximity to intensive agricultural activities, and they simultaneously face greater challenges in affording the sophisticated treatment equipment required to remove these toxins.⁸⁴ In the Central Valley, residents rely on the Regional Water Quality Control Board, a subdivision of the state environmental protection agency, to impose requirements on pollution sources to protect water quality. Therefore, one vital component of ensuring that all residents in the Valley can secure safe drinking water for themselves and their communities is ensuring that the Regional Board regulates agricultural practices and other private sector activity effectively.⁸⁵

3. *Institutional Capacity*

Third, the community and its water service provider must have the institutional capacity, commonly referred to as technical-managerial-financial capacity, or TMF, to operate and maintain the system affordably.⁸⁶ Even if a system has a safe water source and workable infrastructure, local residents may still find themselves without safe, affordable drinking water if their water provider lacks the capacity to operate the system effectively.⁸⁷ Institutional

83. Most community water systems are operated by nongovernmental entities or small special districts without the power to set general land use restrictions. *But see* U.S. EPA, Sole Source Aquifer Protection Program, available at <http://water.epa.gov/infrastructure/drinkingwater/sourcewater/protection/solesourceaquifer.cfm> (last visited Mar. 6, 2011) (explaining how systems can petition to require EPA to review certain proposed projects within designated source water protection areas to ensure critical water supplies are protected).

84. *See Thirsty for Justice*, *supra* note 6, at 73, 78; Martin, *supra* note 10, at 2; Gasteyer, *supra* note 74, at 1.

85. Firestone Remarks, *supra* note 14, at 1379.

86. *See, e.g., Capacity Development Program*, CDPH, <http://www.cdph.ca.gov/certlic/drinkingwater/pages/tmf.aspx> (last visited Mar. 7, 2011).

87. *See* Martin, *supra* note 10, at 2; *Thirsty for Justice*, *supra* note 6, at 73; Social Disparities, *supra* note 7, at 11 (linking water system size with “potential differences in regulatory capacity” in statistical model). In the rural community of Ducor in Tulare County, for example, residents were served brown water for months merely because the operator failed to flush the system regularly. *See* Firestone Remarks, *supra* note 14, at 1377; FIRESTONE, GUIDE TO COMMUNITY DRINKING WATER ADVOCACY, *supra* note 40, at 26-27. *See* note 76, *supra* (discussing the community of Lanare). *See also* U.S. EPA, National Characteristics of Drinking Water Systems Serving Populations Under 10,000 (EPA 816-R-99-010) (1999) (finding that systems serving 25-500 persons have many more drinking water violations per 1,000 people than do any other size category of system), available at <http://www.epa.gov/safewater/smallsystems/pdfs/smallsys.pdf> (last visited Mar. 7, 2011).

capacity boils down to a water provider's ability to keep the water system running safely and efficiently. This includes the ability to conduct planning studies for system upgrades and the ability to apply for available grants and loans, which are frequently necessary because revenues from water service provision to small, low-income communities often will not cover the cost of improvements due to lack of economies of scale.⁸⁸ It also means being able to develop rate structures that are affordable and budgets that cover the costs of ongoing operation and maintenance while building cash reserves.⁸⁹ For small, low-income communities, it is often extremely difficult to address this component without creating joint operation, management and funding mechanisms with neighboring communities and municipalities. In the long term, this may lead to full consolidation into a larger system that can benefit from an increased economy of scale.⁹⁰

4. Community Power

The fourth and final component is that the community itself must have the political power to hold decision makers accountable—not just the water service provider, but also local, regional, and state government officials.⁹¹ This is the most vital component to full implementation of the human right to water, as it is the vehicle not just for securing the other three components, but also for ensuring that they are sustained. Without community power, financial investment in water infrastructure is often granted to other, more politically powerful interests, passing over those

88. See Social Disparities, *supra* note 7, at 18; Martin, *supra* note 10, at 2; Gasteyer, *supra* note 74, at 1-2; *Thirsty for Justice*, *supra* note 6, at 78.

89. See, e.g., note 77, *supra* (discussing the community of Lanare).

90. "One of the much-touted solutions to [the] problem" of struggling small community waters systems is regionalization, which involves "restructuring or combining small water and wastewater systems, creating economies of scale." Martin, *supra* note 10, at 2. "Regionalization can mean many things, ranging from the physical interconnection or consolidation of two or more systems, to administrative solutions such as cooperative purchasing, contract operations or billing, and numerous other cooperative ventures." *Id.*

91. See McCaffrey & Neville, *supra* note 35, at 702 (paraphrasing the work of Odeh Al Jayyousi, who concludes that "good governance for water management" requires not just "competence and effectiveness in management and operation of water systems[,] but also "democratic participation in decision making[,] subcomponents of which are "public accountability; effective oversight; . . . and transparency in decision-making.") (emphasis added); Bluemel, *supra* note 30, at 977; Ramos, *supra* note 1, at 41-43; *Thirsty for Justice*, *supra* note 6, at 77.

communities that need it most.⁹² Regulatory agencies charged with protecting water resources prioritize the interests of industries and leave the least powerful to bear the costs of ensuing pollution. The most politically and economically marginalized California residents are left to fend for themselves in small water systems, without the institutional capacity to improve or sustain effective and affordable operations. In essence, it is the absence of community power that has resulted in the reality of the Central Valley today.⁹³ Only by changing this fundamental power imbalance can we hope to eradicate water injustice in the Valley.⁹⁴ It is this component to which we devote the remainder of our discussion.

B. Sustainable Implementation is a Process, Not an End Goal

Community power is the most human aspect of the human right to water, and for this reason, perhaps the most difficult. In the short run, successful implementation could be achieved if the first three components are in place—namely, source water protections, money and technology, and trained system operators—all of which could be provided to the community as “supply side” solutions from outside and above.⁹⁵ In the long run, however, true *water justice* requires sustainability, and this necessitates that impacted residents become empowered to assert themselves in the water policymaking arena and to influence decisions about water resources and water services that impact their community.⁹⁶ Historically marginalized communities must develop a political voice—one that is heard and heralded by decision makers. Like many scholars and activists before us, CWC firmly believes that lack of political voice is at the heart of most environmental human rights violations and the greatest source of environmental

92. See *Does the 2010 Water Bond Help Those Who Need It Most?*, PACIFIC INSTITUTE (2010), http://www.pacinst.org/reports/water_bond/does_bond_help_those_who_need.pdf (last visited Dec. 17, 2010).

93. See generally Camille Pannu, *Damming Democracy: Drinking Water & Exclusion in California's Central Valley*, WILLAMETTE JOURNAL OF INTERNATIONAL LAW & DISPUTE RESOLUTION (Forthcoming 2011).

94. See Torres, *supra* note 28, at 604 (noting the impact of “[t]he interlocking consequences of state and private action, especially across institutions that have not historically seen themselves as concerned with or having an impact on issues of distributive justice”).

95. See McCaffrey & Neville, *supra* note 35, at 698.

96. See *Thirsty for Justice*, *supra* note 6, at 69.

injustice.⁹⁷ For this reason, we do not believe that drilling wells or donating money to charity alone will solve drinking water disparities in the Central Valley, let alone the world.⁹⁸ The root cause—lack of sociopolitical influence—is central to the solution. Unquestionably, money and physical infrastructure are necessary, but they are not sufficient, and the current, widespread myopic focus on supply side strategies may actually undermine the most important component of community power, and with it, sustainability.⁹⁹ Unfortunately, the General Assembly's recent resolution declaring the existence of a human right to water does not skirt this tension carefully, as it explicitly encourages rich countries to donate money and technology to poor countries in furtherance of fulfilling the human right to water, while simultaneously failing to emphasize the importance of involving, engaging, or empowering the very people who are affected by the

97. See Cole, *supra* note 64, at xv (“[O]ne of the roots of environmental justice” is “the making of decisions by people not affected by those decisions”); Torres, *supra* note 28, at 606 (discussing environmental justice lawyer and scholar Luke Cole’s theory that “[t]he ‘maldistribution of environmental burdens[]’ . . . flows from the lack of political power . . .” of “the communities who are resisting one type of environmental imposition or another.”); Ramos, *supra* note 1, at 46; *Thirsty for Justice*, *supra* note 6, at 69; Ismail Davids, Foundation for Contemporary Research, *FCR Public Lecture Series, NGOs: ‘Oiling the Wheels of Participation’* 5 (July 2006), available for download at http://www.fcr.org.za/publications/list-of-publications/ngo-s-oiling-the-wheels-of-participation_ismail-davids.pdf/view; Osofsky, *supra* note 25, at 105; Gast, *supra* note 25, at 257, 258; Glick, *supra* note 32, at 72; Popovic, *supra* note 20, at 339, 355; Monsma, *supra*, note 16, at 444 (quoting ROBERT D. BULLARD, *DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMENTAL QUALITY* 4 (Westview Press 1990)); *id.* at 454-55; Susan Booyesen, *With the ballot and the brick: the politics of attaining service delivery*, 7(1) *PROGRESS IN DEVEL. STUDIES* 21, 21 (2007) available at <http://pdj.sagepub.com/content/7/1/21.full.pdf>; See also Firestone Remarks, *supra* note 14, at 1378 (“[O]ne of the big problems is that water boards, counties, and regulators are not held accountable for doing their job--enforcing the law, providing safe clean water[.] . . .”).

98. See McCaffrey & Neville, *supra* note 35, at 698.

99. See generally DAMBISA MOYO, *DEAD AID: WHY AID IS NOT WORKING AND HOW THERE IS A BETTER WAY FOR AFRICA* (Farrar Straus & Giroux 2009). See also Bluemel, *supra* note 30, at 973 (arguing for a “change[] [in] the terms of the discourse from one of charity to one of entitlement” so that “communities and vulnerable groups will be empowered to take part in decision-making processes”); Xin Wei i Ngiam, *Taking poverty seriously: What the poor are saying and why it matters*, 2(1) *CRITICAL DIALOGUE* 31, 34 (2006) (arguing that framing the need to address safe drinking water disparities in terms of a “duty” toward the “less privileged” is both “patronizing” and “paternalis[ti]c.”), available at http://www.cpp.org.za/publications/critical_dialogue/vol2no1_2006/xin.pdf; *id.* at 32 (“[M]oral and political sophistication . . . has . . . been appropriated by . . . the discourse of the World Bank and other developmental NGOs who roll out checklists of quick fixes for ‘poverty’ [I]f agency is the capacity for intentional, self-directed action, then for them, poverty is a noun without agency.”). McGraw, *supra* note 34, at 50 (observing that “[m]any organizations believe that global financial, technological, and infrastructure advancements can reasonably support [the] effort[]” to implement the human right to water).

implementation decisions those resources may facilitate.¹⁰⁰

CWC believes that developing true sociopolitical accountability between impacted residents and decision makers is the only means of achieving *sustainable* change in the communities with which we partner, because eventually donor funds dry up, trained operators move on to better-paying jobs, and there is always pressure on government by some percentage of the private sector to loosen source water protections for private material gain. Thus, unlike the first three components of a human right to water, this last one requires continued vigilance from within; it cannot be donated or imposed.¹⁰¹ Ultimately, therefore, the human right to water is not an end goal that can be achieved and set aside as a mission accomplished. Rather, it is an ongoing process—a process in which disadvantaged communities that are perpetually at the risky end of the water service delivery pipe must remain engaged in order to carve out a permanent seat at the decision making table next to industry lobbyists, engineers, and public officials.¹⁰²

C. Community Empowerment Through Direct Engagement

If environmental justice communities exist in large part because of the socioeconomic and political marginalization of their

100. See generally G.A. Res., *supra* note 24. It bears noting that the H.R.C.'s subsequent resolution goes a long way toward filling this gap, encouraging U.N. member States "[t]o ensure full transparency of the planning and implementation process in the provision of safe drinking water and sanitation and the active, free and meaningful participation of the concerned local communities and relevant stakeholders therein[.]" and "[t]o pay particular attention to persons belonging to vulnerable and marginalized groups, including by respecting the principles of non-discrimination and gender equality[.]" H.R.C. Res. 15/9, *supra* note 24, at ¶ 8(b), (c). CWC hopes that should U.N. member States develop a formal treaty codifying the human right to water, such instrument will incorporate the H.R.C.'s participatory provisions.

101. Guinier, *supra* note 52, at 551 ("[S]ocial change is only sustainable if it succeeds in changing cultural norms, is institutionalized through policy decisions and the oversight of administrative actors, and develops an internal and external constituency of accountability.") (emphasis added).

102. See The Honorable Cruz Reynoso, *Foreword* to Paola Ramos, Latino Issues Forum, Promoting Quality, Equity, and Latino Leadership in California Water Policy: An Introduction to Water Issues Impacting Latino Communities in California 6 (June 2003) ("Overcoming California's water challenges will undoubtedly require a change in how water policies are made and who is making them. As Latinos, we will have to take our place at the table."); *Thirsty for Justice*, *supra* note 6, at 61 ("Without a place at the table, low-income communities and communities of color are denied access to important decision-making opportunities that affect their water supplies, the regulations that protect water quality and quantity, and sources of funding to improve local water infrastructure.").

residents, and if sustainable implementation of the human right to water requires an ongoing process by which these communities hold water policy decision makers accountable, then the critical question becomes how to achieve this historically-deficient ingredient of accountability. The Community Water Center's theory is that the answer lies in community empowerment through direct engagement. We certainly did not invent this concept,¹⁰³ but through our work on the ground in impacted communities, we are fleshing out what community engagement actually means in practice.¹⁰⁴

There is plenty of discussion in academic and policy literature,¹⁰⁵ and even in international instruments like the General Assembly and HRC resolutions,¹⁰⁶ about the need to build capacity in environmental justice communities and about the virtues of including residents from these communities as participants in decision making. To the extent that public participation is touted as the answer to environmental and social injustices, however, much of the focus remains on the agency and obligations this instills in

103. See Luke W. Cole, *Legal Services, Public Participation, and Environmental Justice*, 29 CLEARINGHOUSE L. REV. 449, 455 (1995) (“[T]he public-participation process is seen as a vehicle for organizing communities, and the participation itself is seen as a means to community empowerment. By bringing people together to realize, then exercise, their collective strength, practitioners of the power model try to get at some of the roots of communities’ problems: powerlessness.”), available at http://www.crpe-ej.org/crpe/images/stories/resources/25_LegalServicePubPartEJ_29ClearinghouseReview449-1995.pdf; see also, McCaffrey & Neville *supra* note 35, at 697-98; Scott Kuehn, *Expanding Public Participation is Essential to Environmental Justice and the Democratic Decisionmaking Process*, 25 ECOLOGY L.Q. 647, 648 (1999); Davids, *supra* note 97, at 5.

104. See Firestone Remarks, *supra* note 14, at 1376 (“[I]t . . . comes down to making sure that communities have the resources and the sophistication and the political strength to be effective in influencing decisionmaking. The real job for the environmental justice movement is still in developing that power on the community level. . . . [W]hat really matters is the work that people are doing on the ground, and really working with communities to try to make a difference in actual decisionmaking.”).

105. See, e.g., Ramos, *supra* note 1, at 45 (“[B]y their very nature and structure, current water planning and policy-making processes [in California] exclude most people and prevent them from being meaningful participants. It is crucial to *build capacity* and leadership in Latino (and other minority/low-income) communities so that their water-related concerns can be effectively articulated and addressed.”) (emphasis added); McCaffrey & Neville, *supra* note 35, at 681, 692, 700; McGraw, *supra* note 34, at 49.

106. See G.A. Res., *supra* note 24, at ¶ 2 (calling upon “States and international organizations to provide . . . capacity building and technology transfer[.] . . .”) (emphasis removed); H.R.C. Res. 15/9, *supra* note 24, at ¶ 8(b) (calling upon states to “ensure . . . the active, free and meaningful participation of the concerned local communities and relevant stakeholders” in the planning and implementation of water service provision); see *id.* at ¶ 8(c) (calling upon states to “pay particular attention to persons belonging to vulnerable and marginalized groups”).

other actors besides the community residents themselves; usually, the target audience appears to be benevolent government officials.¹⁰⁷ CWC believes that some of the focus should shift to civil society, and specifically, the communities themselves.¹⁰⁸ We posit that, at least here in the Central Valley, impacted communities already possess the power to inject themselves into decision making processes, to assert their authentic needs onto the policy agenda, and ultimately to bring about real improvements in their daily lives.¹⁰⁹ At CWC, we strive to help communities recognize, build, and use this power to rebalance the scales of water injustice.

107. See, e.g., McCaffrey & Neville, *supra* note 35, at 680, 681, 693-698, 700. The authors stake out their position as follows:

Capacity is a dynamic characteristic of a *government* that reflects not only its financial and technical resources, but also its ability to harness resources beyond its direct control. These resources include the perception of the government as an effective and responsible public agent, as well as political will, and support from influential constituencies. . . . [W]e argue that *one option for strategic development of increased [governmental] capacity* is through local community engagement and empowerment in water provision systems.

Id. at 697 (emphasis added). See also *id.* at 697-98 (“The fostering of greater *government capacity*--for example, through public participation and empowerment--is therefore a necessary component of the right to water.”) (emphasis added); *id.* at 693 (“[G]overnments may be able to increase *their capacity* to fulfill water rights by incorporating communities into the process of implementing international and [domestic] rights[.]” including “developing more collaborative relationships with community leaders.”) (emphases added); *id.* at 700 (“*Governments* struggling to use top-down mechanisms to provide water services to underserved, economically vulnerable communities, could instead strengthen the channels of public participation in these processes--thereby alleviating suspicion of government bodies, increasing the political rights and perceptions of ownership of vulnerable populations, and increasing *their capacity* to develop effective water provision systems.”) (emphases added).

George McGraw identifies citizen empowerment and capacity-building to provide members of the public with “the tools to redress violations of their human dignity” as “the central idea behind the legal codification of human rights[.]” but he maligns the multitude of States that do not engage in *state-driven* initiatives and dismisses the utility or significance of members of organized civil society fulfilling this role in the government’s stead as a mere “relegat[ion]” of what is ultimately the government’s duty. See McGraw, *supra* note 34, at 49 (noting that there is a dearth of NGOs capable of performing this service) (emphasis added).

108. This is the crux of why CWC does not endorse international litigation of the human right to water as the solution to the right’s implementation. See discussion, *supra*, at note 65 and corresponding text.

109. See Firestone Remarks, *supra* note 14, at 1379-80

[W]e see our role as being a tool for communities to strengthen their own voice and strengthen their own power around these issues. These are structural power problems that have caused these situations to continue. . . . I think that’s really where we come in. The community does have the power to do that, and I think training and giving legal, technical assistance, or just signing letters ‘Attorney at Law,’ goes a long way.

D. CWC's Approach to Community Empowerment in the Central Valley

1. The Foundation: Education and Engagement with Impacted Residents

Building political power must start with an individual resident in an individual community. Therefore, CWC first and foremost grounds its work directly in local communities that currently lack access to safe, affordable drinking water, providing outreach and education to increase local understanding of drinking water challenges.¹¹⁰ Many community residents are drawn in to community-based activism by drinking water because it directly affects both their pocketbooks and the health and safety of their families.¹¹¹ CWC starts by helping these residents understand how to find out if their water is safe and what can be done in the short term to access safe drinking water. An important next step, however, is educating them on how to navigate local and regional water bureaucracies, both to hold decision makers accountable for the causes of these problems and to ensure that action is taken toward long-term solutions.¹¹² It is at this juncture that the discourse of justice and human rights is perhaps at its most powerful.

CWC next supports local residents as they build power within their own community, such as by helping form community-based

110. "Many communities are unaware of the extent of contamination because of poor monitoring, complicated bureaucracies, and the lack of regulations protecting groundwater quality." *Thirsty for Justice*, *supra* note 6, at 76. *See also* Ramos, *supra* note 1, at 8 ("It is imperative that the Latino community become aware of critical water issues, including water quality, infrastructure, and governance, and thereby empowers itself to advocate for water policies that benefit all Californians.")

111. *See* Francis, *supra* note 62, at 196 ("If it is ever possible to mobilize the population around a salient political issue and effectively pressure elected officials to change the course of democratic governance, surely *access to water* can serve as motivation.") (emphasis added). Once community residents become involved and develop experience participating and expressing their voices in decision making processes, however, we have found that they become empowered to assert themselves into the public life of their communities in other respects as well, such as advocating for more street lights in rural areas or pushing for improvements in education policy through their local school district. *See* McCaffrey & Neville, *supra* note 35, at 694 (positing that "capacity is dynamic and can be developed through strategic political action").

112. *See, e.g.*, Guide to Community Drinking Water Advocacy, *supra* note 40 (providing a comprehensive guide in both English and Spanish to all aspects of community drinking water advocacy with fact sheets on many of these topics).

organizations or providing training sessions at local community meetings on subjects like residents' rights to attend public meetings and demand information from their water service provider in a language they can understand. CWC also provides basic technical information on topics such as safe drinking water laws, as well as legal assistance when necessary and appropriate to help support these community-driven efforts.¹¹³

Information dissemination flows in both directions, however. CWC learns a great deal through this sustained and direct engagement with impacted community residents about the challenges they face in securing safe and affordable drinking water, as well as the relative efficacy of attempted drinking water solutions.¹¹⁴ CWC leverages this knowledge to inform development of its water justice advocacy messages and policy recommendations to county, regional and state levels of government. These messages and recommendations are geared toward systemic change that addresses the root causes of unsafe and unaffordable drinking water, including the creation of new and better mechanisms and practices within public agencies and institutions to foster meaningful involvement by disadvantaged communities in the decisions that affect them. It cannot be emphasized enough, however, that the foundation for this advocacy is CWC's sustained grassroots engagement with impacted communities, which continually informs both the policy positions we adopt and the strategies we use to promote them.

2. Strength in Numbers: Building a Broader Coalition of Impacted Communities

A single community cannot alone tackle the root causes of unsafe and unaffordable drinking water in the Valley. The process of restructuring existing power dynamics that impact drinking water requires the creation of a more collective power, whereby affected individuals from diverse communities come together to confront common challenges. Addressing larger problems—such as widespread groundwater contamination from non-point sources

113. *See id.* at 41-127. *See also* Firestone Remarks, *supra* note 14, at 1379-80; Cole, *supra* note 64, at ix, xi; Torres, *supra* note 28, at 597, 598.

114. Luke W. Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 *ECOLOGY L. Q.* 619, 668 (1992) (“[T]he educational process should be two-way: a lawyer must not only educate her clients, but also be educated by them.”).

like irrigated agriculture and the relative inaccessibility of funding sources for water planning and infrastructure for under-resourced community water systems—cannot be addressed solely on an individual community basis. These issues require sustained engagement at the regional and state level and far greater influence than any one individual community can exercise alone. Therefore, CWC helps coordinate a coalition of representatives from more than seventeen different impacted communities in the San Joaquin Valley, called *Asociacion de Gente Unida Por El Agua (AGUA)*.¹¹⁵ As CWC works with individuals to address their own particular community challenges, we encourage them to become part of the regional movement for water justice by participating in AGUA.¹¹⁶

AGUA convenes for regular monthly meetings, during which local community members take turns leading the meetings, recording minutes, and dispensing advice and support to representatives from other communities facing similar challenges. AGUA meetings also provide a forum to inform community members about water policy advocacy opportunities and processes and to provide training on skills such as speaking with media correspondents and testifying at public hearings. AGUA thus serves as a training ground for developing participatory and leadership skills. These skills help arm community members, and especially those from marginalized population groups like low-income Latinos from farming communities, with the confidence to articulate their concerns as well as proposed solutions to their local water boards, county supervisors, media correspondents, regulatory agency staff, and the state legislature, and even to serve on decision making bodies themselves.¹¹⁷

115. Translated from Spanish to English, the name of this coalition is: “Association of People United for Water.”

116. Interestingly, however, occasionally this works the other way around, as when an AGUA member recruits a peer to attend an event in the state capitol, and that person returns to his or her own community more empowered to tackle challenges at home, such as by speaking up before the local water board or the County Board of Supervisors.

117. For example, Sandra Meraz, one of the founding AGUA members and a community leader in Alpaugh, was appointed to the Central Valley Regional Water Quality Control Board in 2007 and reappointed in 2010.

3. *Strength in Stability: Steadfast Persistence and Issue-Oriented Expertise*

Finally, building sustained power for communities around drinking water issues requires persistent, long-term engagement. CWC strives to build on the experience and expertise we have developed over time through direct interaction with impacted communities and to serve as a stable, enduring base for engagement on community drinking water challenges. In the short term, a discrete and emotionally-laden issue, like the pending state registration of a carcinogenic pesticide such as methyl iodide, which risks further contaminating our primary source of drinking water, makes it relatively easy to motivate affected community residents to volunteer their time and engage with the decision makers. When these concentrated passions ebb, however, as they inevitably must, it is CWC's sustained persistence with decision makers at every level that keeps the water justice struggle on the policymaking agenda. This is how we are gradually building a permanent seat at the table where important decisions about drinking water get made, and it is why we believe that some form of professionalized, institutionalized center, like CWC, so long as it is rooted in direct community engagement, is a necessary ingredient in the sustainable implementation of the human right to water.¹¹⁸

4. *Philosophical Struggles Within CWC's Approach*

CWC is a relatively young organization, founded in 2006, and our approach continues to develop, evolve and mature with each passing year. While we are clear in purpose, we grapple with a number of inherent philosophical tensions within our model of community empowerment as a means of achieving universal access to safe, affordable drinking water. We discuss these issues

118. Full-time staff also permit CWC to serve as a stable resource, keeping tabs on water-related developments in local communities, the county, the Central Valley, and the state and building institutional expertise on issues that impact drinking water quality and affordability, water provider governance, and public participation. *See generally, e.g.,* Guide to Community Drinking Water Advocacy, *supra* note 40. *See also* Davids, *supra* note 97, at 3-4.

Facilitating community participation in local government is arguably one of the primary roles NGOs can play. . . through assisting communities to organise, providing training and support to existing structures of representation . . . , acting as a watchdog over local government activities, as well as providing public education and raising awareness about citizens' rights to participate in local government.

below to acknowledge the complexity of this work and to underscore that although there are some guiding principles, there is not just one correct model for community engagement and community empowerment.

a. A Delicate Balance Between Voice and Representation

Within CWC's work, the AGUA coalition is the primary vehicle for connecting residents from impacted communities with regulatory officials and policy makers, and its coordination is, in many ways, the single-most important function that CWC serves. The communities AGUA members represent "have for too long been denied a voice" in policy decisions affecting drinking water quality in the Central Valley.¹¹⁹ "One of the central tenets of the [environmental justice] movement is 'We speak for ourselves.'"¹²⁰ Bringing AGUA members into the same room as the decision makers allows that to happen. Furthermore, CWC has observed that both elected officials and media correspondents are particularly attuned to authentic concerns voiced directly by community residents rather than filtered through representatives such as CWC staff, however well-intentioned. Even from a purely strategic standpoint, therefore, directly connecting elected representatives and reporters with AGUA members furthers the objectives of increasing public awareness regarding the Valley's water justice struggles and encouraging structural improvements through changes in law and policy.

CWC has also learned, however, that in certain settings, the target audience is much more receptive to absorbing the water justice message when it is spoken in a language with which they are familiar. We refer here to professional stakeholders, including regulatory officials, agency staff, water engineers, agricultural industry representatives, and even the more politically-involved farmers themselves. For this reason, CWC's role is not just supportive and facilitative: when appropriate, we engage as a direct participant as well.

A prominent example is our involvement in integrated regional water management planning processes (or IRWMPs) in the southern San Joaquin Valley. IRWMPs are ongoing collaborative stakeholder processes to develop water projects and

119. Cole, *supra* note 64, at xvii.

120. *Id.*

priorities in the region. They are largely dominated by engineering and consulting firms representing local water management agencies and staff from larger cities and irrigation districts. Effective participation in these venues requires both a grasp of the technical language being spoken and regular attendance in order to ensure that the IRWMP's priorities and projects reflect the interests of disadvantaged communities in the Valley. These realities present significant barriers to meaningful contributions by volunteer community members. Therefore, consistent involvement in IRWMPs to advocate on behalf of impacted communities has been an important niche that CWC staff have attempted to fill.¹²¹

This latter point is densely packed with implications. Unquestionably, persistence is a critical component to carving out a permanent place for water justice communities at the decision making table, not just within IRWMPs but also in the larger water "policyscape" of the Central Valley.¹²² This is one of the strengths of an institutionalized civil society organization like CWC, whose full-time, paid staff can afford to attend meetings and participate in conference calls day after day, month after month, reiterating the water justice message and developing a certain familiarity with regulatory officials and other stakeholders. In this context, CWC frequently synthesizes the voices of our many impacted community partners, but we are not just conduits or facilitators. We also engage in "tactical judgments" informed by our own professional experience and institutional and socioeconomic biases, which do not always directly parallel that of the average AGUA member.¹²³ The touchstone for taking on this representational role in more professionalized fora is CWC's direct involvement and continual interaction with those community residents who are affected by our work, a process through which we are continually being reminded (and reminding ourselves) to place impacted community members at the forefront of the water

121. CWC is what Professor Lani Guinier might refer to as a "role literate participant." See Guinier, *supra* note 52, at 556. CWC knows "how to make [itself] known among a watchful public[.]" how to make its message heard by the media, and ultimately, how to help "organize a campaign to change the law." *Id.*

122. Zach Willey, *Behind the Schedule and Over Budget: The Case of Markets, Water, and Environment*, 15 HARV. J.L. & PUB. POL'Y 391, 392 (1992). See Meraz Remarks, *supra* note 1, at 1383 (discussing her community of Alpaugh in Tulare County); *Thirsty for Justice*, *supra* note 6, at 64 (quoting Dr. Henry Clark, a committee member of the Cal/EPA Advisory Committee on Environmental Justice and director of West County Toxics Coalition).

123. See Guinier, *supra* note 52, at 557.

justice movement. Absent that frequent contact, whatever agency CWC possesses in attempting to speak for environmental justice communities evaporates.

We are acutely aware, however, of the tension and even hypocrisy inherent in the decision to engage with professionalized stakeholders in impacted residents' stead. There is a delicate balance between pragmatic decisions about effectiveness in the shorter term (in which case sending a CWC staff person to IRWMP meetings makes the most sense), and changing embedded power relationships in the longer term, which necessitates deconstructing embedded racial, ethnic, socioeconomic and linguistic stereotypes (in which case supporting a community partner to participate directly in IRWMP meetings makes the most sense). Changing power dynamics requires changing relationships, and this can only happen through repeated interactions over time.¹²⁴

International water justice activist Saranel Benjamin criticizes professionalized civil society organizations for perpetuating the exclusion of impacted community residents from elite forms of participation in "policy intervention and negotiations[,]” which she identifies as being restricted to those with political access and pushing grassroots activists “to the periphery of public participation.”¹²⁵ A significant component of CWC's work does in fact involve assisting impacted community residents and community-based groups to navigate and take full advantage of state-led participatory opportunities themselves. In some respects, however, CWC may be guilty of Benjamin's charge, for example when a CWC staff member participates directly in a forum like an

124. See Richard Ballard, *Participation, Democracy and Social Movements*, 4(1) CRITICAL DIALOGUE 17, 18 (2008), available at http://www.cpp.org.za/publications/critical_dialogue/vol4no1_2008/art3.pdf (summarizing IRIS MARION YOUNG, INCLUSION AND DEMOCRACY 125 (Oxford University Press 2000)); Guinier, *supra* note 52, at 551 (“[S]ocial change involves denaturalizing prior assumptions, a process that must be continuously monitored under the watchful eye of engaged political and social actors.”).

125. See Saranel Benjamin, *Reclaiming Voices of Dissent: Social Movements challenging contemporary forms of Public Participation*, 2(1) CRITICAL DIALOGUE (2005), available at http://www.cpp.org.za/main.php?include=publications/critical_dialogue/vol2no1_2005/chapt1.html&menu=_menu/pubs.html&title=Critical%20Dialogue%20-%20Public%20Participation%20in%20Review; see also *id.* (“Restricting participation to policy making and intervention within prescribed institutional forms restricts the number of civil society actors to those who have the resources to access these institutional forms of intervention.”); *id.* (critiquing “well-resourced” NGOs that are “cavort[ing] in institutionalised forms of public participation” and “claiming to represent the interests of the public”).

IRWMP in lieu of an impacted community resident. In our defense, of course, is the fact that we are not disconnected from our community partners. Direct engagement involves repeated personal contact with individual residents and community-based groups in our efforts to help tackle particular communities' more localized, concrete drinking water challenges. This engagement helps us maintain a finger on the pulse of what is needed, what is wanted, and what really seems to work in practice in terms of solutions to drinking water challenges in the Valley's environmental justice communities. These issues of voice and representation are nevertheless something we continuously grapple with as we refine our approach to community engagement and implementing the human right to water in this region. Ultimately, however, we consider CWC's roll as an advocate in these settings to be only one tool available to communities in the larger task of changing power dynamics in drinking water decision-making. This representative advocacy cannot substitute for direct involvement by communities themselves, because community member participation is critical to the enterprise of community empowerment.

b. Picking the Turf for Participatory Engagement

Few would, and few do, contest the assertion that, at least in theory, public participation in governmental decision making is a good thing. In fact, quite the opposite—many social justice activists and scholars tout community participation as a vehicle for resolving environmental injustice.¹²⁶ The most challenging criticism leveled, however, is that even where governmental decision makers open up spaces for dialogue with members of the public, they don't actually listen.¹²⁷ This is a valid concern. Too

126. See, e.g., Kuehn, *supra* note 103, at 648 (“A central tenet of the environmental justice movement is the right to self-determination and meaningful participation in the decisions that affect one’s life.”); *Thirsty for Justice*, *supra* note 6, at 69 (“Water justice requires a participatory system of water governance and new forms of management and regulation that are truly community-based.”).

127. See Cole, *supra* note 103, at 453 (“The participatory model . . . seeks to take advantage of every opportunity afforded by that [administrative-permit] process to make client voices heard *and, one hopes, listened to*, by decision makers.”) (emphasis added); *id.* at 455 (“Adherents of the power model believe that the system is stacked against the public and that no amount of participation in itself will change the relations of power that give rise to environmental degradation. A supporter of the power model might say, ‘*More access to the system without power within that system means nothing.*’”) (emphasis added); *Thirsty for Justice*, *supra* note 6, at 61 (emphasizing the importance of “[w]ater agencies and institutions .

frequently, for example, agency bureaucrats hold a public hearing in the middle of the weekday in the state capitol, hundreds of miles from impacted communities. This may fulfill minimum legal requirements for public participation,¹²⁸ but, in reality, inputs from the members of the public who do manage to attend are not incorporated into the final agency decision. The hearing amounts to a mere formality, a checked box, in the larger process of developing a predetermined policy outcome.¹²⁹

This raises the issue of influence, or what Professor Alice Kaswan calls “political justice,” which is to be distinguished from procedural justice (the foregoing hearing):

[T]he goal is not just about having fair procedures It’s also about being heard. It’s about a community having the political power to influence the decisions in which they’re participating. It’s about the institutions which are listening—really listening and paying attention to those concerns. . . . I like to think of [procedural justice] as

. . . *meaningfully* engag[ing] community groups and bring[ing] affected constituencies into the decision-making process.”) (emphasis added); Ballard, *supra* note 124, at 17, 19 (asserting that institutionalized participatory structures reflect a “state strategy of managing, containing and channeling articulations from the grassroots[,]” which fosters an environment where the state “[l]isten[s] to some voices” while “not listening” or even “silencing” others); McCaffrey & Neville, *supra* note 35, at 693-694 (identifying the importance to the participatory enterprise that the “government act in good faith and . . . engage seriously with communities rather than just make token gestures of concern and inclusion.”). *See also id.* at 704 (observing that governmental commitments to public participation need to be “[g]enuine”); Ballard, *supra* note 124, at 19 (noting that even if a decision maker is “genuinely interested in hearing from the grassroots,” if the only channels of participation encouraged or permitted are the state’s formal, official participatory structures, “then these inputs from the people are at its behest and on its terms.”).

128. Cole, *supra* note 103, at 450.

129. *See* Farrell, *supra* note 12, at 125; *Thirsty for Justice*, *supra* note 6, at 68 (“The general public and community leaders are typically invited to the decision-making table to endorse decisions that have already been made, or after much of the planning, analysis, and discussions have taken place, or never at all.”). Additionally, EJCW has observed that:

[e]ven when guidelines are clearly written and training is provided, water agencies and institutions fail to commit the resources, staffing, or time to bring affected communities into the decision-making process. . . . [This reflects state agencies’] continued reluctance to elevate environmental justice to equal footing with other program areas

. . . .

The excuses that agencies lack the time, staff, and funding to incorporate meaningful community participation and outreach sound hollow as millions of dollars finance dam-expansion studies and water districts continue to operate with untold millions in reserve.

Thirsty for Justice, *supra* note 6, at 65, 69.

going even further, to a deeper-seeded, more substantive political justice.¹³⁰

Some social justice scholars argue that institutionalized participatory structures, like the public hearing, are restrictive, exclusionary, elitist, and hollow, and simply cannot facilitate the kind of political justice to which Professor Kaswan refers.¹³¹ They advocate instead for grassroots social movements to engage with decision makers on their own terms in “popular spaces” of alternative civic engagement.¹³² A classic example might be a march or a protest outside the public building where a critical decision is being made.

CWC believes that, at least in the context of Central Valley politics, both forms of participation are strategically necessary in order to achieve real influence.¹³³ Therefore, on the one hand, we

130. Laurel Firestone, Alice Kaswan, & Sandra Meraz, Symposium, *Environmental Justice: Access to Clean Drinking Water*, 57 HASTINGS L.J. 1367, 1369 (2006) (remarks by Professor Alice Kaswan) [hereinafter Kaswan Remarks] (emphases added).

131. Benjamin, *supra* note 125, at 1, 2; *But see* McCaffrey & Neville, *supra* note 35, at 694 (“[I]nstitutionalized forms of public participation offer . . . a way past the barriers” and “challenges” of implementing the right to water in “resource-scarce” environments) (emphasis added).

132. Davids, *supra* note 97, at 2 (describing “provided spaces” that are “regulated and institutionalised [by governments] through a set of policies and laws” as “structured participation or participation by invitation” that “takes place within parameters set by the state and is invariably regulated and systematised to neatly fit within broader government operating frameworks[.]” as compared with “popular spaces, which refer to arenas in which people come together at their own initiative, whether for solidarity or to protest government policies or performance, or simply to engage government on terms that are not provided for within provided spaces”) (emphasis added) (internal quotation marks omitted). *See also* Ballard, *supra* note 124, at 19 (juxtaposing “informal” or “invented spaces” of participation “constituted by the participants themselves” against “formal participatory processes” and “officialised structures”) (internal quotation marks omitted).

133. Thus, CWC strives both to “open[] up an analytic space for productive dialogue” and to facilitate “politically potent action by the people themselves.” *See* Guinier, *supra* note 52, at 557 (internal quotation marks omitted). As Luke Cole explained in a slightly different context,

Although some might see the power model [social movements in popular spaces] as the antithesis of the participatory model [institutionalized participation in provided spaces], the two models . . . are actually complementary. A strong community group and a creative legal services advocate can use both models—the insider and the outsider strategy—to achieve the desired outcome in the permitting process. Gaining information about a project through the participatory model gives organizers in the power model more leverage with decision makers. Putting pressure on decision makers through the power model makes them more receptive to hearing alternatives put forward by those pursuing the participatory model.

persistently advocate for adjustments and improvements to “provided” participatory structures.¹³⁴ For example, CWC strives to make public meetings more accessible to the working poor and non-English speaking communities by pressuring hosting agencies to move the venues closer to impacted communities, schedule meetings in the evenings, and provide translation services. We also help transport low-income community members to venues when necessary and publicize these types of participatory opportunities in advance, such as by distributing flyers within impacted communities. These efforts are geared toward both supporting and improving existing participatory structures, which we believe are crucial venues for ensuring sustained influence on decisions affecting drinking water.

At the same time, when we perceive that community members’ voices are being disregarded in a decision that directly affects them, and that their message is not being “really listen[ed]” to in conventional participatory structures, we may opt to engage with decision makers on our own terms.¹³⁵ For example, we may assist impacted community residents, or even the AGUA coalition, to conduct a joint protest and press conference outside the relevant agency’s headquarters. This alternative participatory strategy can have transformative effects not just on the target audience, but on the participants themselves, awakening in them a consciousness of their own strength and political influence and culturing a sense of entitlement to justice—and fulfilled human rights—that may not have been previously instilled.¹³⁶

When we choose this strategy, however, we are careful to articulate trenchant demands and recommendations and to direct

Cole, *supra* note 103, at 458. Realization of the human right to water ultimately requires both top-down assistance and bottom-up demands and action—impacted communities “working together with their governments” in an iterative process. Hardberger, *supra* note 30, at 568.

134. Davids, *supra* note 97, at 2.

135. Without building a stronger voice for impacted communities and carving out a permanent space at the decision making table, it is “difficult to make meaningful inputs in the current ‘provided spaces,’” as no matter how loudly a community resident may shout in a public hearing, his or her voice can be disregarded if the decision makers do not feel accountable to the resident. Davids, *supra* note 97, at 7; Kuehn, *supra* note 103, at 648. (“True public participation and environmental justice cannot be realized until the communities that are impacted by environmental regulations have a voice in the process equal to that of regulated industry.”).

136. Cole, *supra* note 103, at 455 (1995) (“By bringing people together to realize, then exercise, their collective strength, practitioners of the power model try to get at some of the roots of communities’ problems: powerlessness.”).

this message to a specific individual or set of individuals with real power to grant that which we seek, such as the state governor or the members of a regulatory agency's governing board. In choosing alternative means of engagement, we are mindful that the purpose is quite literally to force the decision maker and any opposing stakeholders to understand that they *must* negotiate with us—the Central Valley water justice movement—in order to move forward with their policy or program effectively.¹³⁷ To do so, we must demonstrate to the target audience that concessions in our favor are absolutely necessary—both to protect the human rights of farm laborers and other disadvantaged Central Valley residents and to promote the long-term health of the regional economy¹³⁸—and that the changes we seek will not unreasonably burden other stakeholders. This informs both the content and the packaging of our message and our advocacy.

That does not mean, however, that we shy away from saying the things that opposing interests do not want to hear.¹³⁹ Just because we frequently utilize state-supported participatory structures and processes—and in either case attempt to speak in a language that public officials can understand—does not alter the fact that the substance of what we're pushing for challenges the status quo and threatens entrenched political interests. Successful implementation of the human right to water necessitates fundamental change in long-entrenched power structures here in the Central Valley, and this is not always welcome information to those who currently benefit from the existing political and economic system.¹⁴⁰

137. McCaffrey & Neville, *supra* note 35, at 701 (“[T]he support of powerful constituents may be needed to maintain power.”); Benjamin, *supra* note 125 (observing that social justice activists “don’t object fundamentally to the uses of institutionalised forms of public participation, but rather they see that some form of reliance on formalised participation in such institutions[] . . . is inherently incapable of fundamentally transforming social relations.”) (internal quotation marks omitted).

138. Many of our community partners are intimately linked with the agricultural industry in the Central Valley, through their own employment or that of a close family member, so they form an integral part of the social and economic fabric of this region. Even the largest industrial farms depend on members of these environmental justice communities for their labor, and vice versa. We believe that negotiated solutions that promote both community health and a vibrant agricultural economy are, when possible, in everyone’s best interest.

139. To put it bluntly, just because we are engaging on their turf doesn’t mean we accept all of their terms. *But see* Ballard, *supra* note 124, at 19 (“[P]articipation [within provided spaces] is being conducted on the state’s terms rather than the terms of the community.”).

140. *See* Kaswan Remarks, *supra* note 130, at 1368; Benjamin, *supra* note 125, at 4.; Luke W. Cole, *Environmental Justice and the Three Great Myths of White Americana*, 3

IV. CONCLUSION

Ultimately, we fear that the Central Valley is merely the tip of the proverbial iceberg. The industrial agricultural practices used here may be more intensive than in most other regions of the country and the world, but they are not necessarily unique.¹⁴¹ Knowledge about groundwater contamination is only as comprehensive as the water quality monitoring that a system operator conducts. Water justice advocates around the world who are serious about implementing the human right to water need to ask themselves hard questions about the most effective methods for tackling this challenge, methods that will truly serve the best interests of communities affected by polluted source waters or inequitable allocation of limited supplies.

Here in the Central Valley, the Community Water Center is developing an approach that we believe will achieve lasting change—one which acknowledges that successful implementation is a process rather than an end goal. We have identified four key ingredients: physical infrastructure, source water protections, institutional capacity, and community power. But it is this last ingredient of community empowerment, which encapsulates an environmental justice community's ability to hold water policy decision makers accountable that is critical to sustainability. It is our observation that drilling wells and donating money, though important, will not alone lead to lasting improvements in drinking water quality in the absence of political voice and a permanent seat at the decision making table for impacted communities. We are developing an approach to community engagement as a means of empowering communities in the Central Valley, and we have attempted to outline in this paper what this process actually looks like in practice, on the ground. Integral to any such approach, however, is the acknowledgement and understanding that solutions must be context-appropriate and developed with a foundation in the communities that are striving for water justice.¹⁴²

HASTINGS W.-N.W. J. ENVTL. L. & POL'Y 449, 451 (1996). (arguing that at the end of the day, environmental justice struggles "are struggles about political and economic power[] and the exercise of that power").

141. See *Social Disparities*, *supra* note 7, at 4; EWG Report, *supra* note 5.

142. Cf. Astle, *supra* note 38, at 605. Jason Astle warns us that our "communal model," which is "designed on principles of empowerment and self-reliance," will not function properly in all circumstances, and specifically in certain rural communities on the African continent, as our model "does not address the deeper cultural obstacles inherent in village life

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or the impact that corruption has on the basic trust required to maintain a community resource.” *Id.* at 602.

Panel IV

Water-Energy Nexus and the New Normal

(Organized by Golden Gate University School of Law)

Moderator:

Dave Owen, Paul Kibel, Golden Gate University School of Law, Professor

Panelists:

Wes Miliband, Attorney at Stoel Rives

Julie Gatenbien, Water and Power Law Group, Attorney

Jared Babula, California Energy Commission, Senior Staff Counsel

Panel Description

This panel will focus on competing water uses and water management in the context of energy. Topics will cover the California Energy Commission's hierarchy of water management, the proposed relicensing of the Don Pedro Project and La Grange Dam, and the right to use water for fracking.

Presenter: Julie Gantenbein, Water and Power Law Group

Opportunities for Fisheries Enhancement through FERC Relicensing

Hydroelectricity provides between 6 and 7 percent of the electricity generated in the United States annually.¹ Although hydropower is widely viewed as environmentally superior to carbon-based fuel sources, dams adversely affect fishery resources by contributing to habitat fragmentation and altered flow regimes.

There are a total of approximately 2,540 hydroelectric producing dams in the United States.² The Federal Energy Regulatory Commission (FERC) regulates approximately 2,300 of those dams.³

FERC, through licenses, determines how hydroelectric projects will be constructed, operated, and maintained. Licenses determine how to allocate river flows between energy generation and other beneficial uses of a waterway recognized by the Federal Power Act (FPA) and other applicable laws. Beneficial uses include the protection and enhancement of fish and wildlife.”⁴

A license has a term of 30 to 50 years, after which time the project must undergo relicensing.⁵ New licenses are new decisions, not simply permit renewals.⁶ Because there is no presumption that a new license will be issued on the same terms as the previous one, relicensing represents a once in a generation opportunity to re-condition dam operations and facilities to protect and restore fisheries.

The proceedings to license the Don Pedro and La Grange Projects on the Tuolumne River provide a timely example of the opportunities to protect and enhance fisheries through relicensing. The Don Pedro project was originally licensed in 1964 to the Modesto and Turlock Irrigation Districts. Although built for irrigation and power supply, the license requires the Irrigation Districts to release continuous minimum flows to protect fall-run Chinook salmon that spawn downstream of La Grange Dam. Despite this, the salmon and steelhead fisheries have significantly declined over the term of the license. The fish agencies and environmental NGOs have argued that project operations are a primary factor in this decline and advocated that the new license be conditioned on higher instream flow releases, fish passage, and other habitat restoration measures.

In connection with the Don Pedro relicensing, the National Marine Fisheries Service (NMFS) requested that FERC undertake a jurisdictional review of the La Grange Project, which had not been regulated previously by FERC. La Grange Dam has been the terminal barrier to fish passage on the Tuolumne River since its completion in 1894. In 2014, FERC determined

¹ <http://www.eia.gov/electricity/data/browser/>.

² <http://www.americanrivers.org/initiatives/dams/faqs/#sthash.0ByQjHUC.dpuf..>

³ *Id.*

⁴ 16 U.S.C. § 803.

⁵ 16 U.S.C. § 799.

⁶ *Confederated Tribes and Bands of Yakima Indian Nation v. FERC*, 746 F.2d 466, 470 (1984).

that the La Grange Project was jurisdictional and ordered the Irrigation Districts to apply for a license. This decision means that La Grange must be brought into compliance with the FPA and other federal environmental statutes for the first time. NMFS staff has expressed the view that such statutes require restoration of fish passage above La Grange *and* Don Pedro Dams in order to mitigate the projects' cumulative effects on the salmon and steelhead fisheries.

The licensing proceedings for the Don Pedro and La Grange Projects could lead to the first reintroduction of anadromous fish above a major dam in the Central Valley. With regard to the Central Valley steelhead, NMFS has stated that restored access to habitat above rim dams is key to recovery of the species.⁷ The same can be said for salmon native to the Central Valley. Recent studies show that climate change will restrict the distribution of these fish further and increase their vulnerability to extinction, making efforts like this to expand habitat through restoration of existing habitat and reintroduction to historic habitat all the more urgent.⁸ FERC's resolution of the fishery issues in the new licenses will likely have precedential value for other relicensings in California and throughout the nation.

⁷http://www.westcoast.fisheries.noaa.gov/publications/status_reviews/salmon_steelhead/steelhead/2011_status_review_of_central_valley_steelhead.pdf.

⁸ See, e.g., <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0063883#s3>.

Presenter: Wes Miliband, Stoel Rives

In the midst of a historic drought, hydraulic fracturing (“fracking”) has gained increasing attention due to both the controversial nature of this method of energy extraction and the amount of water used in the process. This presentation will explore the water-energy nexus specifically in the context of water and fracking, and will analyze whether fracking activities have a right to use water in the state of California.

California has a hybrid system of water law made up of two types of water rights: riparian and appropriative. Riparian water rights are those that run with the land. One who makes use of the land has the right to use water adjacent to or overlying the land. The amount of use is generally not quantified but is limited to “reasonable and beneficial” uses. The appropriative water rights system breaks down into two subcategories: Pre-1914 and Post-1914 appropriative rights. Pre-1914 water rights are not subject to the current appropriative permit system, and dates and seasons of use are often not specified but actual beneficial use determines both the amount and season of diversion that can be used. Post-1914 water rights require permits or decrees from the State Water Resources Control Board (“Water Board”) with the dates or seasons when the water right will be used. These rights are based on actual use (“first in time, first in right”), and the amount for use is limited to a quantified amount for “reasonable and beneficial” uses. This amount is usually based on 5 preceding years. Post-1914 appropriative water rights can be lost to prescription. Finally, water rights are usufructuary rights, granting the right to possess and use, but not own, water.

Fracking is a method of oil and gas extraction that “uses a high-pressure fluid in a well to create fractures in the rock and then props the fractures open by injecting sand so they remain permeable after the high pressure ceases.” CCST ET AL., AN INDEPENDENT SCIENTIFIC ASSESSMENT OF WELL STIMULATION IN CALIFORNIA, VOLUME I (Jan. 2015), at p. i, *available at* <http://ccst.us/publications/2015/2015SB4-v1.pdf>. In California, fracking is primarily used to extract oil. *Id.* at iii. Fracking uses quite a bit of water: a hydraulic fracturing operation consumes on average 530 cubic meters of water per well. *Id.* at iv. This water is the primary component of the frack fluid that is injected into a well.

The use of high volumes of water for fracking raises the question: do oil and gas operators have the right to use water? Based on California law and policy, the quick answer is yes, there is a right to use water for fracking because it is a beneficial use, specifically an industrial use. The California Water Code states that water may be appropriated for any “beneficial use,” which includes industrial use. WAT. CODE § 1240. “Industrial use means the use of water for the purposes, not more specifically defined herein, of commerce, trade or industry.” CAL. CODE REGS. tit. 23, § 665. The broad definition of industrial use includes fracking. Therefore, fracking has a right to use water up to an “amount which can be put to beneficial use including reasonable conveyance losses.” *Id.* § 696.

Presenter: Jared Babula, California Energy Commission

I Introduction

CEC has jurisdiction over thermal power plants 50 MW or greater. The commission's license is in lieu of most other state and local permits/licenses. How much water? examples X million gallons a day.

Water-energy nexus is just one relationship which is the focus of the panel. Important to remember that systems thinking teaches us to look at relationships in a broader context. Energy is connected to everything and enables the complexity we see in both biological world and human society.

The relationship we will zoom in on is the use of water for power plant cooling.

II Laws/policies related to use of water by power plants:

CA Constitution: It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. (Article X, section 2)

What is considered beneficial use?

Water Code section 13050 specifically identifies power generation as a beneficial use of water. *“Beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal... power generation...”* (Water Code § 13050(f))

SWRCB Resolution 75-58 from 1975: It is the Board’s position that from a water quantity and quality standpoint the source of power plant cooling water should come from the following sources in this order of priority depending on site specifics such as environmental, technical and economic feasibility consideration: (1) wastewater being discharged to the ocean, (2) ocean, (3) brackish water from natural sources or irrigation return flow, (4) inland waste waters of low TDS, and (5) other inland waters

The Energy Commission and Staff currently review power plants considering the Cal Const. and 75-58 along with the Commission's 2003 Integrated Energy Policy Report, The key portion of the 2003 IEPR Report provides a summary of the current water policy:

Consistent with the [SWRCB] policy and the Warren-Alquist Act, the Energy Commission will approve the use of fresh water for cooling purposes by power plants it licenses only where alternative water supply sources and alternative cooling technologies are shown to be “environmentally undesirable” or “economically unsound.” ... The Energy Commission interprets “environmentally undesirable” to mean the same as having a “significant adverse environmental impact” and “economically unsound” to mean the same as “economically or otherwise infeasible.” [\[1\]](#)

More recently, in the context of the AFC proceeding for the Genesis Solar Energy Project (09-AFC-8), the Genesis Committee determined that state water policy and the Energy Commission's water policy require projects seeking to use groundwater for cooling purposes to "use the least amount of the worst available water, considering all applicable technical, legal, economic, and environmental factors"

III Beacon power plant example:

250 mw solar thermal facility located outside of California City. Wanted to use high quality ground water, 2000 afy. Due to staff's persistence changed to recycled water. Challenge is consistent quantity to meet demands.

IV changing landscape

As developers look at dry cooling and as more low water power generation comes on line, (solar PV, wind, peakers that don't run much).



Fact Sheet

Storm Water Strategy

Reclaiming Storm Water as a Resource to Improve Water Quality and Quantity

Storm water runoff has historically been seen as a threat to human life, and property -- if not properly managed. In addition, storm water, or urban runoff, remains a significant source of water quality pollution for many urban communities throughout the state. Despite these challenges, storm water hold promise today, and for future generations, as a viable source of water to sustain the state's anticipated continued population growth.

The State Water Resources Control Board (State Water Board) has revisited its mission in this area, to lead the evolution of storm water management in California for the next century and beyond. The Board is advancing the perspective that storm water has value, supporting policies for collaborative watershed-level storm water management, addressing obstacles, developing resources, and integrating regulatory and non-regulatory interests. This effort will require participation and support by the public, stakeholders, and communities where storm water management remains a challenge.

Storm Water Management Required a Revisit

The urgent need to protect water quality from storm water impairment, compounded by the severe impacts of drought and climate change, compels immediate action to preserve California's water resources.

The [California Water Action Plan](#), released in January 2014, called for multiple benefit storm water management solutions and more efficient permitting programs. As a result, in April 2014, the State Water Board formed a team of State Water Board and Regional Water Board staff (Initiative Team) to develop a Storm Water Strategic Initiative to guide the Water Board's Storm Water Program for at least the next ten years. From this initial effort evolved the Storm Water Strategy Team in September 2015, composed of State Water Board staff in the Storm Water Planning Unit, along with Regional Board staff and Executive Management sponsors. In addition, this effort captures a number of climate change adaption efforts by the state and regional water boards to prepare for the impacts of climate change in California.

Background

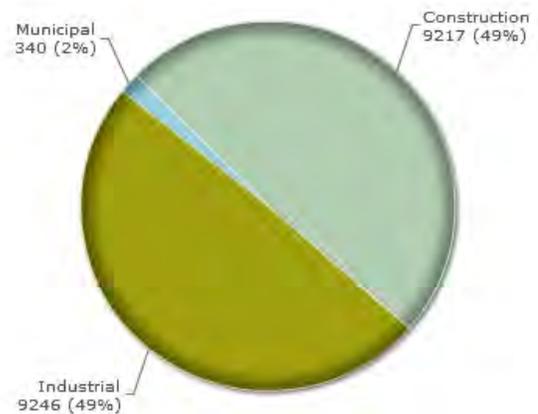
Storm water, also known as urban runoff, can be a significant source of water quality pollution. Storm water runoff is diffuse, episodic, and varies greatly depending on magnitude and frequency of storms. Storm water runoff contains pollutants that accumulate during dry weather. Urban development of impermeable surfaces has increased the volume and velocity of storm water runoff carrying pollutants to local water bodies.

The State Water Board and Regional Water Quality Control Boards (Regional Water Boards) identify the sources of pollutants that threaten the quality of the State's waters, and regulate



dischargers of storm water through National Pollutant Discharge Elimination System (NPDES) permits. NPDES storm water permits address runoff from industrial and construction sites as well as municipalities. The data shown below, from the [Water Boards' Annual Performance Report](#), highlight the total NPDES storm water facilities regulated in California during fiscal year 2014-15.

Regional Offices	Construction	Industrial	Municipal	Total
1	239	347	3	589
2	1,449	1,341	83	2,873
3	654	453	2	1,109
4	1,520	2,642	101	4,263
5F	785	442	7	1,234
5R	171	204	0	375
5S	1,115	1,084	21	2,220
5 all.	2,071	1,730	28	3,829
6A	92	33	3	128
6B	310	190	2	502
6 all.	402	223	5	630
7	276	172	13	461
8	1,461	1,564	63	3,088
9	1,145	774	42	1,961
TOTAL	9,217	9,246	340	18,803



Program History

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board's role in storm water resource management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues.

The Initiative Team released a [concept paper](#) and met extensively with stakeholders to understand their interests and solicit ideas on how to proceed. The result was the Storm Water Strategic Initiative Proposal ([Proposal](#)).

The [Proposal](#) identified the goals, challenges, and actions needed for the State Water Board and Regional Water Boards to continue to improve the regulation, management and utilization of California's storm water resources for multi-benefit approaches that achieve tangible results for improved water quality and supply.

The Proposal was posted for public review and comment on June 25, 2015. On Aug. 19, 2015, the State Water Board held a public workshop to discuss the Proposal and receive public feedback. Many commenters supported the concept that storm water should be considered a valuable resource. Overall, the State Water Board was encouraged by the scope of the Proposal and program objectives, but they requested that a more strategic implementation plan be developed with refined and consolidated projects.

The Strategy to Optimize Resource Management of Storm Water

Following the Proposal review at the public workshop, State Water Board staff created a strategy-based document called the Strategy to Optimize Resource Management of Storm Water (STORMS). STORMS includes a program vision, mission, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Boards' Storm Water Program.

Strategy Goals

The Goals in STORMS are based on the Guiding Principles created by the Initiative Team in the Proposal, and are intended to focus and guide the efforts of the Storm Water Strategy. Based on stakeholder input, STORMS includes the following four goals:

1. Change the perspective of storm water as a waste or hazard, and treat it as a valuable water resource;
2. Manage storm water to preserve watershed processes and achieve desired water quality outcomes;
3. Implement efficient and effective regulatory programs; and
4. Collaborate to solve water quality and pollutant problems with an array of regulatory and non-regulatory approaches.

Current Progress

On January 6, 2016, the State Water Board adopted a resolution approving STORMS as a strategy document to guide the Storm Water Program for the next ten years. State Water Board staff are currently initiating nine projects as Phase I of STORMS project implementation.

Coming soon: Staff are in the process of creating an interactive “living document” version of STORMS, which will include project updates and links to relevant storm water studies and news. The living document will be available on the [Storm Water Strategy webpage](#) when completed in February 2016.

For more information visit the State Water Board's [Storm Water Strategy webpage](#) or contact Noelle Patterson, Noelle.Patterson@waterboards.ca.gov.

This fact sheet was last updated on Jan. 19, 2016.

Panel V

Local Storage and Infrastructure Projects

(Organized by UC Davis School of Law)

Moderator:

Katherine Spanos, Senior Staff Counsel with the California Department of Water Resources

Panelists:

Kamyar Guivetchi, Chief of DWR's Division of Statewide Integrated Management

Anne Hartridge, Senior Staff Counsel at the State Water Resources Control Board

Jack Safely, Imported Supply Unit Manager at the Metropolitan Water District of Southern California

Panel Description

This panel will explore the challenges and opportunities associated with the acquisition and use of Proposition 1 funds to address local water concerns. The panel will touch on the role of Urban Water Management Plans, Groundwater Sustainability Agencies, and Integrated Regional Management Plans with respect to local water management.

Water Infrastructure Finance in California: Who Should Pay to Keep the Tap Running?*

Alf Brandt**

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I. INTRODUCTION

For thousands of years, water management and infrastructure has played a pivotal role in the development of civilization.¹ In his book *Water: The Epic Struggle for Civilization*, Steven Solomon traces the connection between water and civilization, dating back 5,000 years, beginning with early civilizations in Egypt and continuing on through those in Rome, China, and Britain.² Each civilization emerged and thrived as it overcame its water challenge. Water and its infrastructure formed the critical link to the society's success.³

* After the author completed this article in July 2014, Governor Brown and legislative leaders negotiated a water bond that won overwhelming voter approval in the November general election. The final water bond reflected and resolved many of the water policy and finance debates discussed in this article.

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1. STEVEN SOLOMON, *WATER: THE EPIC STRUGGLE FOR WEALTH, POWER, AND CIVILIZATION* 2 (2010).

2. *Id.*

3. *Id.*

2014 / Who Should Pay to Keep the Tap Running

California's history offers a great example of water's centrality to a successful civilization.⁴ At its formative moment—the 1849 Gold Rush—the first conflicts and the first laws arose out of use of water.⁵ Miners, who needed water to get access to Sierra Nevada gold, developed the “first in time, first in right” principle that became the law of appropriation.⁶ The California Supreme Court recognized this miners' law in 1855 in *Irwin v. Phillips*.⁷ California went on to finance and develop the most sophisticated water storage and conveyance infrastructure anywhere in the world.⁸ Engineers overcame California's greatest hydrological challenge—2/3 of the water supply in the northern third of the state and 2/3 of the water demand in the southern third.⁹ It built huge reservoirs in the north and canals to take water hundreds of miles south.¹⁰

In 2014, California's central question is not whether to improve its water infrastructure.¹¹ That infrastructure continues to age and deteriorate. Much of that infrastructure was built at mid-20th Century, so some water infrastructure has aged past its design life.¹² Climate change adds to the necessity to improve California's water infrastructure and adapt to changing conditions, especially the loss of the Sierra Nevada snowpack.¹³ The central question is how to pay for improving California's water infrastructure—at the federal, state, and local level.¹⁴

Water finance questions implicate a wide range of policy issues and law.¹⁵ Understanding these issues requires knowledge of the state's history of water finance.¹⁶ Creating the most sophisticated water system required funding from all possible sources—private, federal, state, and local.¹⁷ California's success in water relied on drawing from all those sources as the system developed into the 1970s.¹⁸ Then, the state's voters began passing tax limitation initiatives such as

4. See, e.g., *Irwin v. Phillips*, 5 Cal. 140, 147 (1855); NORRIS HUNDLEY, JR., *THE GREAT THIRST: CALIFORNIANS AND WATER A HISTORY* (2001).

5. See *Irwin*, 5 Cal. at 146–47.

6. *Id.*

7. *Id.*

8. AB 2686, 2013–2014 Leg., Reg. Sess. (Cal. 2013).

9. See HUNDLEY, *supra* note 4, at 123–291.

10. *Id.* at 128.

11. See LEAGUE OF CALIFORNIA CITIES, *INNOVATIVE WATER AND WASTEWATER INFRASTRUCTURE FINANCING 1* (2014), available at <http://www.cacities.org/Resources-Documents/Policy-Advocacy-Section/Federal-Issues/2014-Federal-Letters/Innovative-Water-Infrastructure-Financing.aspx> (last visited Aug. 4, 2014) (on file with the *McGeorge Law Review*).

12. *Id.*

13. *Id.*

14. See HUNDLEY, *supra* note 4.

15. ELLEN HANAK ET AL., *PAYING FOR WATER IN CALIFORNIA 9* (Public Policy Institute of California 2014), available at <http://www.ppic.org/content/pubs/report/R314EHR.pdf> (on file with the *McGeorge Law Review*).

16. *Id.*

17. *Id.*

18. *Id.* at 11.

Proposition 13 in 1978, Proposition 218 in 1996, and Proposition 26 in 2010.¹⁹ The provisions in the California Constitution limit state and local agencies' abilities to impose fees.²⁰ Proposition 218, however, treats water and sewer fees differently.²¹ This history creates a substantial part of the water finance milieu in which water planners and builders operate today.²²

Today, financing the next generation of water infrastructure requires policymakers, at all levels of government, to resolve a host of issues. Government finance law provides one set of issues.²³ California's water and environmental policies provide another set.²⁴ The state has used financing to encourage water users—on farms and in cities—to act consistent with water conservation, integrated regional water management, or water recycling policies.²⁵ Finally, voter preferences form the final link to success in financing water infrastructure.²⁶ Voters may have an opportunity to approve—or reject—water infrastructure.²⁷ An election may affect the physical project, the water rates, or the taxes used to pay for the project. In any case, the law of water and public finance shape the questions put before voters, and therefore the direction of development of California's water infrastructure.

II. HISTORY OF WATER INFRASTRUCTURE FINANCE

The challenge of financing California water infrastructure emerged in the earliest years of statehood, as demands for water for mining and agriculture grew.²⁸ In the early years, funding came primarily from private sources.²⁹ These sources included the corporations that invested in hydraulic mining after the intrepid 49ers retreated from gold panning in the 1850s, until state and federal courts deemed hydraulic mining a nuisance and stopped it, in 1884.³⁰ In addition to the usual corporate structures, California law created structures to encourage development of communal water facilities.³¹ California law authorized “mutual

19. *Id.* at 9.

20. *Id.*

21. CAL. CONST. art. XIIIID.

22. HANAK ET AL., *supra* note 15.

23. *Id.* at 9–10.

24. *Id.*

25. *Id.*

26. *See* AB 1331, 2013 Leg., Reg. Sess. (Cal. 2014).

27. *Id.*

28. *See* HUNDLEY, *supra* note 4, at 11.

29. HANAK ET AL., *supra* note 15, at 11.

30. *See* *People v. Gold Run Ditch Co.*, 66 Cal. 138, 154 (1884); *Woodruff v. North Bloomfield Gravel Mining Co.*, 18 F. 753 (D. Cal. 1884)

31. CAL. CORP. CODE §§ 14300–14312 (West 2006).

water companies,” which were commonly formed by farmers joining together to finance and build a water facility, such as a reservoir or a ditch.³²

The 19th century also saw the development of public water agencies.³³ In 1861, the Legislature created a Board of Swampland Commissioners to design a flood control program for a part of the Central Valley.³⁴ In 1887, the Wright Act authorized the creation of irrigation districts.³⁵ To provide for financing and development of water infrastructure, these districts enjoyed the authority to issue bonds, levy taxes, and condemn property.³⁶ Over the years, California law authorized a plethora of special districts for water infrastructure.³⁷ In urban areas, cities and counties had authority to finance and develop water infrastructure for their citizens.³⁸ At the turn of the century, California’s major cities began developing their own water infrastructure. Los Angeles developed its water supply from the eastern side of the Sierra Nevada, in Owens Valley.³⁹ San Francisco gained federal authority to draw water from its Hetch Hetchy system in Yosemite National Park.⁴⁰

The State Government first got involved in water infrastructure in 1933 when the Legislature approved the first State Water Plan, which used revenue bonds to finance the storage of water in Northern California for use in the San Joaquin Valley.⁴¹ When the State could not finance the plan during the depression, the United States Bureau of Reclamation (Reclamation),⁴² which is an agency of the Department of the Interior, stepped in to finance and build the Central Valley Project (CVP).⁴³ The Legislature again engaged in financing of water infrastructure, when it approved the State Water Project and placed a \$1.75 billion general obligation (GO) bond on the 1960 ballot, at the urging of then-Governor Pat Brown.⁴⁴ The Burns-Porter Act placed a GO bond on the ballot, but

32. *Id.* §§ 14300 et seq. See *Hildreth v. Montecito Creek Water Co.*, 139 Cal. 22, 29 (1903); *Erwin v. Gage Canal Co.*, 226 Cal. App. 2d 189, 192–93 (4th Dist. 1964).

33. Reclamation District Act, ch. 352, 1861 Cal. Stat. 355; Wright Act, 1887 Cal. Stat. 29.

34. Reclamation District Act, ch. 352, 1861 Cal. Stat. 355; CAL. WATER CODE §§ 50000–50013 (West 2014).

35. Wright Act, 1887 Cal. Stat. 29; WATER § 801 (West 2014).

36. *Id.*

37. HANAK ET AL., *supra* note 15, at 9.

38. *Id.*

39. See HUNDLEY, *supra* note 4, at 11.

40. Raker Act, Pub. L. No. 41, 63rd Congress, 38 Stats, at L. 242, 242–245 (1913).

41. Central Valley Project Act, WATER §§ 11100–11160 (West 1992).

42. Congress created the Bureau of Reclamation to provide federal financing and construction of water projects to “reclaim” dry lands for human use in the West, in the Reclamation Act of June 17, 1902, Pub. L. 57-161, 32 Stat. 388 (1902).

43. See U.S. Dep’t of the Interior: Bureau of Reclamation, *Central Valley Project*, RECLAMATION (Mar. 15, 2013), http://www.usbr.gov/projects/Project.jsp?proj_Name=Central+Valley+Project.

44. *Warne v. Harkness*, 60 Cal. 2d 579, 583–86 (1963).

required the water agencies that received the water to pay the bond off through contract.⁴⁵

The federal government has also contributed significantly to developing California's water infrastructure aside from the CVP.⁴⁶ In 1893, Congress created the California Debris Commission to address the hydraulic mining debris that had filled Central Valley rivers and increased the risk of flooding.⁴⁷ The Commission's recommendations led to the Legislature's 1911 creation of the Sacramento River Flood Control Plan and Congress' adoption of the plan in 1917.⁴⁸ The United States Army Corps of Engineers, therefore, has worked in concert with state agencies and contributed significant funding in the last century to implementing the plan and improving the flood control facilities in the Central Valley.⁴⁹ In 2006, voters approved two bonds that included \$4.89 billion in state funding for flood protection programs and facilities.⁵⁰

Reclamation made one of the most significant investments in California water infrastructure when it built—and continues to operate—the CVP.⁵¹ Since 1902, Reclamation has played a critical role in financing water infrastructure, primarily for agriculture, throughout the West.⁵² In California, Reclamation remains the largest single holder of water rights, at 7 million acre-feet.⁵³ Reclamation's finance structure includes substantial federal investment and management of water infrastructure construction. Water contractors⁵⁴ repay these investments over several decades through repayment contracts for purchasing the water, and generally with no interest charged.⁵⁵ CVP contractors, however, continue to repay the costs for CVP construction, which started in 1937, and completed in 1979.⁵⁶

45. Burns-Porter Act CAL. WATER CODE §§ 12930–12937 (West 2009). The Burns-Porter Act was approved by voters in 1960. *Id.*

46. *See* California Debris Commission, ch. 183, 27 Stat. 507, 95–96 (1893).

47. *Id.*

48. WATER § 12645(a) (West 2014).

49. *Id.*

50. *Strategic Growth Plan: Bond Accountability*, CAL. NATURAL RESOURCES AGENCY, <http://bond.accountability.resources.ca.gov/p1E.aspx> (last visited Aug. 12, 2014) (on file with the *McGeorge Law Review*).

51. Emergency Relief Appropriation Act of 1935, ch. 48, 49 Stat. 115, 115 (1935); Rivers and Harbors Act of 1937, ch. 832, 50 Stat. 844, 850 (1937)

52. U.S. Dep't of the Interior, Bureau of Reclamation, *The Bureau of Reclamation: A Very Brief History*, USBR.GOV, <http://www.usbr.gov/history/borhist.html> (last visited July 14, 2014) (on file with the *McGeorge Law Review*).

53. *Id.*

54. "Water contractors" are the public agencies that contract with the Department of Water Resources or the federal Bureau of Reclamation, to operate California's large water projects that transfer water from the Sacramento River watershed across the Sacramento-San Joaquin Delta for south-of-Delta urban and agricultural water use. *Id.*

55. *Id.*

56. *Id.*

III. LOCAL WATER SUPPLIER INVESTMENTS IN CALIFORNIA WATER INFRASTRUCTURE

Despite the substantial federal and state investments in water infrastructure in the last century, local water suppliers and wastewater agencies provide the majority of funds for water infrastructure in California.⁵⁷ According to a recent report by the Public Policy Institute of California (PPIC), local agencies provide 85% of the annual funding for water infrastructure.⁵⁸ While water debates in Congress and the State Legislature often receive the most statewide attention, local water suppliers continue to build and operate the vast majority of California's water infrastructure, delivering water to homes and farms across the state.⁵⁹ According to PPIC, local agencies perform "reasonably well—providing safe, reliable levels of service and preparing for future needs."⁶⁰

A. Public Water Agencies: The Challenge of Constitutional Limitations

Public water agencies continue to own and operate most of California's water infrastructure.⁶¹ The Association of California Water Agencies claims that its "nearly 440 public agency members collectively are responsible for 90% of the water delivered to cities, farms and businesses in California."⁶² These agencies, which include special districts as well as general governments like cities, have legal authority to raise revenues from a wide variety of sources, including property taxes, water rates, charges (*e.g.* standby charges), and fees (*e.g.* hookup fees).⁶³ Proposition 13 (1978) substantially limited local agency authority to collect property taxes, with its 1% cap on total property taxes from all agencies.⁶⁴ As a result, water agencies focused their revenue raising efforts on water rates and fees.⁶⁵

Proposition 218 (1996). California voters passed Prop 218 to limit the authority of special districts, including water agencies, to levy taxes and charge fees by imposing requirements for public approval of special taxes and fees.⁶⁶ Specifically, Prop 218 requires two-thirds voter approval for special taxes and

57. HANAK ET AL., *supra* note 15, at 12.

58. *Id.*

59. *Id.*

60. *Id.* at 2.

61. Ass'n of Cal. Water Agencies, *About ACWA*, ACWA, <http://www.acwa.com/content/about-acwa> (last visited Aug. 23, 2014) (on file with the *McGeorge Law Review*).

62. *Id.*

63. HANAK ET AL., *supra* note 15, at 15–16.

64. *Id.* at 19. In essence, Proposition 13 limited property taxes, to a total of 1% of assessed valuation, with some exceptions, and restricted increases in assessed valuation until a property is sold. CAL. CONST., art. XIII A § 2.

65. HANAK ET AL., *supra* note 15, at 19.

66. CAL. CONST., art. XIII C–D. Article XIII C addresses "voter approval for local tax levies" while Article XIII D addresses "assessment and property-related fee reform."

majority voter approval for property-related fee assessments.⁶⁷ However, Article XIII D provides an exemption to voter-approval requirements for fee increases “for sewer, water, and [trash] collection.”⁶⁸ These fees proceed through a simpler majority-protest process.⁶⁹ The agency is required to give written notice of the fee increase to property owners and hold a hearing.⁷⁰ The agency may increase the fee unless a majority of property owners file a protest to the fee.⁷¹ Rather than having the people vote on every potential rate increase, this process makes increasing water rates much simpler.

The California Supreme Court examined how Prop 218 applied to water charges in 2004 and 2006.⁷² The Court recognized that Prop 218 does not apply to new water connection fees,⁷³ but water rates were “property-related fees” that required compliance with Article XIII D⁷⁴ of the Constitution—the majority-protest process.⁷⁵

Prop 218 also includes substantive limitations on water rates.⁷⁶ First, Article XIII D prohibits water rates charged to a property owner from exceeding the proportional cost of the service attributable to the parcel.⁷⁷ The agency therefore must structure the rate carefully to capture all—but not more than—the costs attributable to the property.⁷⁸ Second, the water agency may use the revenues only on water service and may not collect more than the costs of water service.⁷⁹ Cities, for example, may not use excess water service revenues on other governmental services.⁸⁰ Third, the rate may not include the costs for services available to the general public.⁸¹ Cities may not use water service revenues to cover the costs of watering city parks, for example.⁸²

While the water rate process is simpler, Prop 218 nevertheless discourages water agencies from increasing rates too often by making each increase a careful, deliberative decision.⁸³ As PPIC observes, public retail water agencies will have to explain more carefully and clearly the relationship between their water rate structures and the cost of providing water service to their customers, link new

67. CAL. CONST. art. XIII D § (3)(2).

68. CAL. CONST. art. XIII D § 6(c).

69. CAL. CONST. art. XIII D § 4(c)–(e).

70. CAL. CONST. art. XIII D § 4(d)–(e).

71. CAL. CONST., art. XIII D

72. *Richmond v. Shasta Cmty. Serv. Dist.*, 32 Cal. 4th 409 (2004).

73. *Id.* at 423.

74. *Id.* at 427.

75. *Bighorn-Desert View Water Agency v. Verjil*, 39 Cal. 4th 205, 220 n.7 (2006).

76. HANAK ET AL., *supra* note 15, at 19.

77. CAL. CONST. art. XIII D § 4.

78. HANAK ET AL., *supra* note 15, at 29.

79. CAL. CONST. art. XIII D § 6(2)(b)(1)–(2).

80. HANAK ET AL., *supra* note 15, at 19.

81. *Id.*

82. *Id.* at app. A 17.

83. *Id.* at 19.

fees and rates to the projects and programs they are designed to fund, and justify any differential treatment between or among classes of customers based on differences in the cost of providing services to those classes.⁸⁴ They also need to make a greater effort to justify indirect costs of water infrastructure and service that may not directly benefit the individual property owner, but benefits all customers.⁸⁵

Proposition 26 (2010). Prop 26 redefined the term “tax” to ensure that neither the state nor local agencies could impose “fees” that were, in effect, taxes paying for general government services.⁸⁶ The act’s findings asserted that agencies “have disguised new taxes as ‘fees’ in order to extract even more revenue from California taxpayers without having to abide by . . . [the Prop 13 supermajority] constitutional voting requirements.”⁸⁷ Prop 26 prohibits “regulatory” fees, which may be adopted on a majority vote of the agency board or the Legislature, from exceeding the reasonable cost of the regulation or paying for general government services.⁸⁸ It also limits fees for mitigating current or prospective environmental harm, which overturns part of the California Supreme Court’s *Sinclair Paint* decision that allowed a fee for past harm from selling lead paint.⁸⁹

In effect, Prop 26 limits state and local discretion to impose fees to pay for water infrastructure.⁹⁰ By broadening the definition of “tax,” it imposes Prop 13’s supermajority vote requirements on fees that have been used to fund water infrastructure.⁹¹ After its passage, the Legislature considered bills in 2011 that would have created statewide water infrastructure investment programs, including the imposition of “public benefit” fees on water use to raise money for water infrastructure—SB 34 (Simitian) and SB 571 (Wolk).⁹² SB 34 proposed to use Prop 26’s exemption from the definition of taxes for fees for the use of state property,⁹³ because all water in California is owned by the people.⁹⁴ Individuals can only hold the right to its “reasonable and beneficial use.”⁹⁵ Neither bill passed

84. *Id.* at app. A 16–17.

85. *Id.*

86. See LEAGUE OF CALIFORNIA CITIES, INNOVATIVE WATER AND WASTEWATER INFRASTRUCTURE FINANCING 1 (2014), available at <http://www.cacities.org/Resources-Documents/Policy-Advocacy-Section/Federal-Issues/2014-Federal-Letters/Innovative-Water-Infrastructure-Financing.aspx> (on file with the *McGeorge Law Review*).

87. LEAGUE OF CALIFORNIA CITIES, PROPOSITION 26 IMPLEMENTATION GUIDE 15 (2011), available at <http://www.cacities.org/Prop26Guide> (on file with the *McGeorge Law Review*).

88. *Id.*

89. *Sinclair Paint Co. v. State Board of Equalization*, 15 Cal. 4th 866, 875 (1997).

90. HANAK ET AL., *supra* note 15, at 20.

91. *Id.*

92. SB 34 2009–2010 Leg., Reg. Sess. (Cal. 2010); SB 571, 2011–2012 Leg., Reg. Sess. (Cal. 2011).

93. CAL. CONST., art. XIII A, § 3(b). “(4) A charge imposed for entrance to or use of state property, or the purchase, rental, or lease of state property.” *Id.*

94. CAL. WATER CODE § 102 (West 2009).

95. *Id.* § 100.

beyond the house of origin. Because Prop 26 is not quite four years old, its ultimate effect remains unclear and depends on its interpretation and application by the courts. In the meantime, the use of fees to raise money for water infrastructure remains uncertain.

B. Investor-Owned Utilities: Public Utilities Commission Regulation

The other significant segment of water suppliers that invest in water infrastructure are the investor-owned public utilities regulated by the California Public Utilities Commission (CPUC).⁹⁶ These private water companies, represented by the California Water Association, provide water for municipal uses (e.g., residential, industrial) and account for approximately 20% of the urban water supply.⁹⁷

The CPUC closely regulates public utility investment in water infrastructure. In order to obtain a certificate of public convenience to serve customers in a specified area and obtain approval for a rate increase, the public utility must justify the necessity and sufficiency of its investments in providing adequate service to customers.⁹⁸ Public utilities remain subject to CPUC audit and investigation in order to ensure good service.⁹⁹ In return, state law protects the public utility's monopoly on water service in its area, and the CPUC authorizes water rates that ensure a rate of return for the utility's investors.¹⁰⁰ In some communities, the differential in water rates between public utility service areas and neighboring public agencies can lead to controversy as to water infrastructure costs.¹⁰¹

96. CAL. PUB. UTILITIES CODE §§ 201–216 (West 2004); PUB. UTIL. §§ 2701–2703 (West 2010).

97. *Water Information*, CAL. WATER ASS'N, <http://www.calwaterassn.com/water-information/> (last visited Aug. 12, 2014) (on file with the *McGeorge Law Review*); Cal. Pub. Utilities Comm'n, *Division of Water Audits*, CA.GOV <http://www.cpuc.ca.gov/PUC/water/> (last modified June 27, 2014) (on file with the *McGeorge Law Review*).

98. Cal. Pub. Utilities Comm'n, *Division of Water Audits*, CA.GOV (last modified June 27, 2014), <http://www.cpuc.ca.gov/PUC/water/>.

99. *Id.*

100. *See* PUB UTIL. § 201 (West 2004); *see also* PUB. UTIL. § 1501 (West 2004).

101. *See, e.g., Claremont Residents Want City To Buy Water Company*, CBS LOS ANGELES (Nov. 6, 2013), <http://losangeles.cbslocal.com/2013/11/06/claremont-residents-want-city-to-buy-water-company-accused-of-price-gouging/> (on file with the *McGeorge Law Review*); *see also City of Claremont—Water System Acquisition Information*, CITY OF CLAREMONT (June 10, 2014), <http://www.ci.claremont.ca.us/ps.topics.cfm?ID=1800> (on file with the *McGeorge Law Review*).

C. *Mutual Water Companies: Shareholder Investment Decisions*

With origins in the 19th century, non-profit mutual water companies¹⁰² continue to provide water service in some communities.¹⁰³ While many started as farmer cooperatives, others were started by developers who chose to create their own water service for their homebuyers, instead of obtaining a “will-serve letter” from the local public water agency.¹⁰⁴ The new California Mutual Water Company Association estimates that mutual water companies serve approximately 1.3 million Californians.¹⁰⁵ While some continue to serve their farmer-owners, many now operate “public water systems” providing drinking water to residential and business customers.¹⁰⁶ The landowner-shareholders pay all company costs to provide water service, and their voting power is based on the amount of water that they have a right to receive from the company.¹⁰⁷ In order to invest in water infrastructure, the company may impose an “assessment” on all shares to raise money.¹⁰⁸ State law allows these companies to serve only their shareholders, who own land served by the company, and certain other users, such as public schools.¹⁰⁹

Landowner-shareholders have exclusive control over the mutual water companies, which leaves little room for public oversight in the companies’ water infrastructure investment decisions. These companies are not subject to CPUC regulation or other public oversight as to their water rates or investments.¹¹⁰ (If they operate a public water system, however, the Department of Public Health oversees their drinking water quality.¹¹¹ The Board of Directors and the shareholders make all decisions.¹¹² Renters who receive their drinking water from such companies have no role in the company’s investment or service decisions.¹¹³

102. CAL. CORP. CODE §§ 14300–14318 (West 2006). A mutual water company is a type of non-profit California corporation created by landowners who merge their financial resources and water rights to build and manage water infrastructure. *See* *Erwin v. Gage Canal Co.*, 226 Cal. App. 2d 189, 192–93 (4th Dist. 1964).

103. *About Mutuals*, CAL. ASS’N OF MUT. WATER CO., <http://www.calmutuals.org/about-mutuals/> (last visited July 26, 2014) (on file with the *McGeorge Law Review*).

104. *History of Mutuals*, CAL. ASS’N OF MUT. WATER CO., <http://www.calmutuals.org/history-of-mutuals.html> (last visited July 26, 2014) (on file with the *McGeorge Law Review*).

105. *About Mutuals*, CAL. ASS’N OF MUT. WATER CO., <http://www.calmutuals.org/about-mutuals/> (last visited July 26, 2014) (on file with the *McGeorge Law Review*).

106. *Id.*; CORP. § 14303.

107. CORP. § 14310.

108. *Id.* § 14303.

109. *Id.* § 14301.

110. *See* CAL. PUB UTIL. CODE § 2701. This statute applies only to public utilities that serve “any person,” not mutual water companies who serve only their shareholders.

111. CAL. HEALTH & SAFETY CODE § 116270 (West 2012).

112. CORP. §§ 14300–14318.

113. *Id.* §§ 14300–14318.

Until this year, such customers had no access to company information or Board meetings.¹¹⁴

Assembly Bill 240 (Rendon) requires the companies to allow those who drink their water to attend board meetings and have access to five kinds of documents related to company operations and finances.¹¹⁵ This new statute arose out of problems with three mutual water companies serving the City of Maywood, where 2/3 of residents rent their homes and many complain about brown and smelly water. The mutual water companies, controlled by landowners, assert that they cannot afford to invest in improving their water infrastructure because the city's residents are poor and cannot afford to pay higher water rates.¹¹⁶ The companies have not proposed to assess their owners' shares to raise money for improved water infrastructure.¹¹⁷ By opening up the process and ensuring more transparency, AB 240 offers an example of how to improve local water supplier decisions on investment in water infrastructure.

IV. STATE GENERAL OBLIGATION BOND FOR WATER INFRASTRUCTURE IN 2014?

While the hundreds of local water suppliers make decisions about most investments in California water infrastructure, the State can play a significant role when it uses its financial capacity to sell general obligation (GO) bonds for water infrastructure investments. The 1960 voter decision on the State Water Project (SWP) involved a GO bond, albeit subject to repayment by the water users who received SWP water. Since 1996, voters have approved five GO bonds connected to water, totaling \$15.88 billion in water and related natural resource investments.¹¹⁸ In 2009, the Legislature placed a water bond for \$11.14 billion on the 2010 ballot, but the election was postponed twice based on concerns for weak voter support.¹¹⁹ This bond will appear on the November 2014 ballot unless the Legislature removes it or passes a replacement bond measure with a 2/3 vote.¹²⁰ Since February 2013, the Legislature has considered how to recast a water bond to replace the one currently on the ballot.¹²¹

114. *Id.* § 14305.

115. AB 240, 2013–2014 Leg., Reg. Sess. (Cal. 2014).

116. ASSEMBLY FLOOR, COMMITTEE ANALYSIS OF AB 240, at 7 (Apr. 29, 2013).

117. *Id.*

118. Cal. Proposition 204 (1996); Cal. Proposition 13 (2000); Cal. Proposition 50 (2002); Cal. Proposition 1E (2006); Cal. Proposition 84 (2006).

119. *See* SB 27, 2009–2010 Leg., Reg. Sess. (Cal. 2009); *see also* AB 1265, 2009–2010 Leg., Reg. Sess. (Cal. 2010); AB 1422, 2011–2012 Leg., Reg. Sess. (Cal. 2012).

120. CAL. CONST., art. XVI § 1.

121. *See, e.g., 2013 Informational/Oversight Hearings*, CAL. STATE SENATE, <http://sntr.senate.ca.gov/informationaloversighthearings> (last visited July 26, 2014) (on file with the *McGeorge Law Review*); *Funding Principles for Building a Water Bond*, LEGIS. ANALYST'S OFFICE (Feb. 26, 2013), <http://www.lao.ca.gov/Publications/Detail/2696> (on file with the *McGeorge Law Review*).

2014 / Who Should Pay to Keep the Tap Running

A. The Assembly Water Bond Process

To address 2009 water bond criticism and increase voter support, in May 2013 the California State Assembly began a new, transparent process for developing a water bond for the 2014 ballot.¹²² Assembly Speaker John Pérez appointed a Water Bond Working Group, chaired by the Water, Parks and Wildlife (WPW) Committee Chair Anthony Rendon (D-Lakewood).¹²³ This group, which included legislators representing Californians from the Mexican to the Oregon border, started its work by convening water discussions among legislators from each region.¹²⁴

Based on those legislator discussions, the Working Group established the *Proposed Principles for Developing a Water Bond (Principles)*,¹²⁵ which focused on accountability and priorities for water investments. Then, the Group developed a framework based on those principles.¹²⁶ To gain voter confidence, the *Principles* framework emphasized the importance of accountability for spending water bond funds.¹²⁷ The framework included five categories of funding—safe drinking water, protection of rivers and the coast, regional water reliability, Sacramento-San Joaquin Delta (Delta) sustainability, and water storage.¹²⁸ At first, the framework allocated \$1 billion for each category, but as testimony and evidence on the needs for investment in each category emerged, three categories increased to \$1.5 billion (protecting rivers, regional water, and storage), for a total of \$6.5 billion.¹²⁹ The framework became AB 1331 (Rendon), which was the Assembly’s vehicle for moving the water bond discussion forward.

Combining the Working Group and his WPW Committee, Rendon convened multiple public hearings, starting in the Capitol and then convening in communities across California, from Indio to Eureka.¹³⁰ This historic public

122. ASSEMBLY WATER, PARKS & WILDLIFE COMM., BACKGROUND: PRINCIPLES FOR DEVELOPING A WATER BOND 4 (July 2, 2013), available at <http://awpw.assembly.ca.gov/sites/awpw.assembly.ca.gov/files/Water%20Bond%20Principles%20-%20Background.pdf> (on file with the *McGeorge Law Review*) [hereinafter ASSEMBLY WATER, PARKS & WILDLIFE COMM.].

123. *Id.*

124. *Id.*

125. WATER BOND WORKING GROUP, PROPOSED PRINCIPLES FOR DEVELOPING A WATER BOND (July 2, 2013), available at <http://awpw.assembly.ca.gov/sites/awpw.assembly.ca.gov/files/Water%20Bond%20Principles%20-%20Proposed.pdf> (on file with the *McGeorge Law Review*).

126. WATER BOND WORKING GROUP, 2013 WATER BOND FRAMEWORK (2013), available at <http://awpw.assembly.ca.gov/sites/awpw.assembly.ca.gov/files/Water%20Bond%20Framework%20-%20208-14%20Public%20Draft.pdf> (on file with the *McGeorge Law Review*).

127. *Id.*

128. *Id.*

129. Compare WATER BOND WORKING GROUP, 2013 WATER BOND FRAMEWORK (2013), available at <http://awpw.assembly.ca.gov/sites/awpw.assembly.ca.gov/files/Water%20Bond%20Framework%20-%20208-14%20Public%20Draft.pdf> (on file with the *McGeorge Law Review*) with AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2014).

130. See Press Release, Anthony Rendon, Cal. Assemb. Member, Statement on Passage of New State

hearing process attracted hundreds of Californians to talk about the state's most urgent needs for water investments.¹³¹ As the hearings proceeded into the spring of 2014, AB 1331 increased to \$8 billion and Senate Committees heard and moved the bill toward the Senate Floor.¹³² Disputes on various parts of AB 1331 developed, but the bill continued moving forward.¹³³

B. Water Bonds and Water Policy

The water bond debate in California reflects underlying debates about California water policy.¹³⁴ The structure of funding in a proposed water bond affects how California water policy objectives are achieved.¹³⁵ The water bond elements often arise out of a water debate or problem that the Legislature has sought to address in previous years.¹³⁶ This year's water bond proposals include the elements of the water policy debate since the last water bonds passed in 2006.¹³⁷ The five elements—safe drinking water, river and coastal protection, regional water reliability, the Delta, and water storage—have received substantial attention in both the Legislature and the public forum.¹³⁸ The specific provisions therefore reflect the Legislature's vision for water policy.¹³⁹ To the extent that the Governor participates in its development, the water bond may include his policies as well.¹⁴⁰

Water Bond (Aug. 13, 2014) [hereinafter Rendon State Assembly] (on file with the *McGeorge Law Review*).

131. *Id.*

132. AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2014).

133. The 2014 Amendments to AB 1331 (Rendon) show the evolution of the bond discussion. The Assembly Water, Parks & Wildlife Committee's webpage provides information on its hearings. *Water Bond*, CAL. STATE ASSEMB., <http://awpw.assembly.ca.gov/waterbond> (last visited July 26, 2014) (on file with the *McGeorge Law Review*).

134. Jeremy White, *Water Bond Leads Agenda as California Lawmakers Return for Final Month*, SACRAMENTO BEE (Aug. 4, 2014), <http://www.sacbee.com/2014/08/03/6602416/water-bond-leads-agenda-as-california.html> <http://www.sacbee.com/2014/08/03/6602416/water-bond-leads-agenda-as-california.html> (on file with the *McGeorge Law Review*).

135. *California Economic Summit 2013 Summit Report*, CAECONOMY.ORG (2013), http://sjvpartnership.org/wp-content/uploads/2013/04/SJV-Regional-Economic-Forum_State-Progress-Report.pdf (on file with the *McGeorge Law Review*).

136. *Id.*

137. *Compare* CAL. PUB. RES. CODE §§ 5096.800–5096.967 (West 2007) (codifying Prop. 1E as passed in 2006), *and* CAL. PUB. RES. CODE § 75050 (West 2007) (codifying part of Prop. 84 as passed in 2006), *with* AB 1331 (Rendon 2014) (proposing a repeal and amendment of CAL. WATER CODE §§ 79700-79813).

138. AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2014). While several water bond proposals are proceeding at the time of writing, this article will address AB 1331 (Rendon), the Assembly's primary water bond vehicle.

139. Rendon State Assembly, *supra* note 130.

140. Governor Brown did not participate in the bond discussions until June 23, 2014, when he gave the legislative leadership an outline for a \$6 billion water bond. Dan Bacher, *Senator Lois Wolk Reintroduces Revamped \$7.5 Billion Water Bond*, DAILYKOS.COM (July 7, 2014), <http://www.dailykos.com/story/2014/07/07/1312320-Senator-Lois-Wolk-reintroduces-revamped-7-5-billion-water-bond#> (on file with the *McGeorge Law Review*).

Safe Drinking Water. For several years, the Assembly has recognized and worked on addressing the problem of small communities that suffer from unsafe drinking water.¹⁴¹ Many of these communities can be found in the Central Valley and the Salinas Valley.¹⁴² In 2008, the Legislature passed SB 1 X2 (Perata), which required the State Water Resources Control Board (SWRCB) to study and develop pilot projects to help these communities in Tulare County and the Salinas Valley.¹⁴³ That legislation resulted in SWRCB recommendations on how to address nitrates in drinking water.¹⁴⁴ In 2013, the Governor signed bills addressing drinking water quality, many having originated in a bill package developed by the Assembly.¹⁴⁵ The Assembly's *Principles*, accordingly included a priority for safe drinking water projects, with an emphasis on the communities that suffer from poor drinking water quality.¹⁴⁶

Protecting Rivers and the Coast. Since the last drought in the 1990s, conflicts over water often have arisen out of declines in river ecosystems and fish populations, especially those fish listed pursuant to the Endangered Species Act (ESA).¹⁴⁷ Though the conflicts in the Delta have received the most public attention, conflicts over ESA-listed fish arise throughout the state, from the Santa Ana River to the Klamath River, and especially on coastal streams.¹⁴⁸ State funding to address these ecosystem declines and other watershed improvement needs has appeared in recent water bonds.¹⁴⁹ The Legislature has treated environmental needs in watersheds as a "statewide concern" deserving statewide funding from a water bond.¹⁵⁰ Past water bonds have allocated these funds to state conservancies, such as the Coastal Conservancy.¹⁵¹ AB 1331 proposed a different

141. See CAL. WATER CODE § 83002.5 (West 2004).

142. Sarah Rubin, *Reporting on Toxic Drinking Water in the Salinas Valley*, USCANNENBERG (Aug. 1, 2013), <http://www.reportingonhealth.org/2013/08/01/don%E2%80%99t-drink-water-reporting-toxic-drinking-water-salinas-valley> (on file with the *McGeorge Law Review*).

143. WATER § 83002.5.

144. STATE WATER RESOURCES CONTROL BD., RECOMMENDATIONS ADDRESSING NITRATE IN GROUNDWATER 48 (2013), available at http://www.waterboards.ca.gov/water_issues/programs/nitrate_project/docs/nitrate_rpt.pdf (on file with the *McGeorge Law Review*).

145. *Governor Brown Signs Water Legislation*, OFFICE OF THE GOVERNOR (Oct. 8, 2013), <http://www.gov.ca.gov/news.php?id=18258>; Press Release, Assembly member Alejo, *Governor Signs Clean Water for Californians Bill Package* (Oct. 8, 2013), <http://asmdc.org/members/a30/news-room/press-releases/governor-signs-clean-water-for-californians-bill-package> (on file with the *McGeorge Law Review*).

146. ASSEMBLY WATER, PARKS & WILDLIFE COMM., *supra* note 122, at 4.

147. See CALFED BAY-DELTA PROGRAM, PROGRAMMATIC RECORD OF DECISION 24 (Aug. 2000); see also U.S. DEP'T OF THE INTERIOR, RECORD OF DECISION: TRINITY RIVER MAINSTREAM FISHERY RESTORATION 1 (2000).

148. See U.S. DEP'T OF THE INTERIOR, RECORD OF DECISION: TRINITY RIVER MAINSTREAM FISHERY RESTORATION 1 (2000).

149. CAL. WATER CODE §§ 79570–79573 (West 2004); CAL. PUB. RES. CODE § 75050 (West 2007).

150. S. NATURAL RES. & WATER COMM., SETTING THE STATE FOR A 2014 WATER BOND: WHERE ARE WE AND WHERE DO WE NEED TO GO? 9–10 (Sept. 24, 2013), available at <http://sntr.senate.ca.gov/sites/sntr.senate.ca.gov/files/9-24%20Background%20%282%29.pdf> (on file with the *McGeorge Law Review*).

151. *Id.*

approach. It allocated protecting-rivers/coast funding to regions, but the Senate Committee on Natural Resources and Water rejected that approach, over the author's objections, and replaced that language with allocations to the conservancies.¹⁵²

Regional Water Supply Reliability. In 2002, a previous water bond initiative measure established funding for Integrated Regional Water Management (IRWM), to encourage agencies to collaborate in regional water infrastructure development.¹⁵³ Since then, this program has developed and expanded, and the 2006 Prop 84 included additional allocation of bond funding for IRWM.¹⁵⁴ AB 1331 retained the \$1 billion for IRWM that the 2009 water bond included, but added funding for specific categories independent of the IRWM.¹⁵⁵ The regional water reliability Chapter 7 includes \$500 million for water recycling, desalination, and groundwater cleanup, which are all connected to regional water strategies.¹⁵⁶ It also includes \$250 million each for water conservation and stormwater management projects¹⁵⁷ (Senate amendments limited the stormwater funding to stormwater capture projects for water supply purposes). Discussion has included proposals to separate groundwater cleanup and water recycling into their own chapters, independent of regional water reliability.¹⁵⁸

Sacramento-San Joaquin Delta. Delta funding receives the most attention in the water bond debate, given that the most intense and most funded opposition to the bond measures on the ballot are from the Delta.¹⁵⁹ Polling shows that voters only marginally support a new water bond, and voter awareness of negative messages on the water bond reduce support well below the levels required for the bond's passage.¹⁶⁰ The continuing Delta ecosystem crisis and climate change, however, calls for additional State bond funding for the Delta.¹⁶¹ AB 1331 includes three categories of Delta funding—levees, economic sustainability, and ecosystem restoration.¹⁶²

152. Compare AB 1331, 2013–2014 Leg., Reg. Sess., § 79734(b)–(c) (as amended Mar. 18, 2014) with AB 1331, 2013–2014 Leg., Reg. Sess., § 79734(b)–(c) (as amended Apr. 8, 2014).

153. WATER § 79501(d) (codifying Prop. 50 as passed in 2002 and declaring the need to “establish and facilitate integrated regional water management systems and procedures to meet increasing water demands due to significant population growth that is straining local infrastructure and water supplies”); WATER §§ 10530–10548 (codifying the Integrated Regional Water Management Plan).

154. Proposition 84 (Cal. 2006).

155. AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2014) (as amended June 17, 2014).

156. *Id.*

157. *Id.*

158. *But see* AB 2686, 2013–2014 Leg., Reg. Sess. (Cal. 2013).

159. White, *supra* note 134.

160. David Metz, *California Voter Attitudes on Water Policy in 2014*, FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC., ppt. 10 (Apr. 25, 2014), available at http://www.labusinesscouncil.org/files/David_Metz_PPT.pdf.

161. *About the Central Valley Project*, BUREAU OF RECLAMATION, http://www.usbr.gov/projects/Project.jsp?proj_Name=Central+Valley+Project (last updated Sept. 26, 2012) (on file with the *McGeorge Law Review*).

162. AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2014) (as amended June 17, 2014).

The controversy over Delta funding for ecosystem restoration arises from the debate over the Bay-Delta Conservation Plan (BDCP), commonly called “the Governor’s Tunnels,” which would take water from the Sacramento River to the water export pumps in the South Delta.¹⁶³ The 2009 Delta Reform Act (Delta Act) requires the water exporters who benefit from BDCP to pay for construction and mitigation of environmental impacts from the Delta tunnels.¹⁶⁴ The Delta Act also requires BDCP to include ecosystem restoration beyond mitigation, sufficient to qualify BDCP as a “Natural Community Conservation Plan.”¹⁶⁵ Where to draw the line between ecosystem restoration and mitigation, as well as who pays for the ecosystem restoration have been the questions at the center of the Delta water bond funding debate.¹⁶⁶ Passage of a water bond—by 2/3 of the Legislature and a majority of voters—will require resolution of these Delta water bond funding issues.¹⁶⁷

Water Storage. Water bond funding for dams and reservoirs remained at the center of the 2009 water bond discussion.¹⁶⁸ Then-Governor Arnold Schwarzenegger threatened to veto all bills in 2009 if the Legislature failed to pass a water bond that included funding for dams.¹⁶⁹ Storage continues to play a central role in the 2014 water bond debate.¹⁷⁰ The 2014 storage issues include: (1) if the bond should “continuously appropriate[]” funding for water storage to the California Water Commission to decide which projects get funds, as the 2009 water bond provided; (2) bond language, as stated in the 2009 water bond, that would favor Central Valley surface storage reservoirs over groundwater and other regions that are not connected to the Delta; and (3) the total amount, which the 2009 water bond put at \$3 billion, out of \$11 billion then set for the 2014 ballot.

On a separate—but related—issue this year, the Governor has advocated for expanding groundwater planning, management and regulation.¹⁷¹ His 2014 California Water Action Plan includes a call for sustainable groundwater management.¹⁷² With a continuing drought, California’s Central Valley aquifers

163. John Kirlin, *Viewpoints: Bay Delta Conservation Plan is a 50-Year Gamble*, SACRAMENTO BEE, May 18, 2014, <http://www.sacbee.com/2014/05/18/6409422/viewpoints-bay-delta-conservation.html>.

164. CAL. WATER CODE § 85089 (West 2004).

165. *Id.* § 85320(b)(2)(A).

166. White, *supra* note 134.

167. *Id.*

168. Samantha Young, *New Dams Critical for Water Supply*, THE REPORTER, Aug. 19, 2009, http://www.thereporter.com/news/ci_13156869 (on file with the *McGeorge Law Review*).

169. *Id.*

170. See AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2013).

171. Wayne Lusvardi, *Gov. Brown, Legislature Push Groundwater Regulation*, CALWATCHDOG (Mar. 14, 2014), <http://calwatchdog.com/2014/03/14/gov-brown-legislature-push-groundwater-regulation/> (on file with the *McGeorge Law Review*).

172. CAL. NATURAL RES. AGENCY ET AL., CALIFORNIA WATER ACTION PLAN 14 (2014), available at http://resources.ca.gov/california_water_action_plan/docs/Final_California_Water_Action_Plan.pdf (on file with the *McGeorge Law Review*).

have seen rapid depletion, leading many Valley leaders to call for better management of the region's groundwater.¹⁷³ The California Water Foundation, led by former Natural Resources Agency Secretary Lester Snow, issued a report to the Brown Administration in May 2014 that recognized the growing consensus on the need for groundwater management and groundwater management funding, including a 2014 water bond.¹⁷⁴ While AB 1331 includes funding for groundwater storage and cleanup, its May 8 version did not specifically include funding for development of groundwater management plans.¹⁷⁵ The bill did, however, require that proponents of projects related to groundwater demonstrate that a public agency has sufficient authority to manage the groundwater.¹⁷⁶ Given the Governor's actions to improve groundwater management statewide, funding for improving groundwater management and planning may appear in the final version of the bond that goes on the November 2014 ballot. This may depend on whether the Legislature passes a replacement for the \$11.14 billion water bond that was moved to the 2014 ballot in 2012.¹⁷⁷

C. Water Finance Policies Incorporated Into Water Bonds

As the Legislature has developed water bonds over the last twenty years, it has adopted certain policies or principles in deciding what belongs in a statewide water bond.¹⁷⁸ In some cases, these policies apply to other kinds of water financing tools, such as proposals for statewide water fees.¹⁷⁹ They originate in water policy discussions about the State's role in encouraging or discouraging actions by regional or local water agencies, which actually deliver water to customers. As water bond bills develop, they incorporate these policies into their language, either at introduction or as the policy committees review the bills.¹⁸⁰

The 2013 Assembly Water Bond Working Group adopted the *Principles* that reflected many of these policies.¹⁸¹ Its first principle focused on setting "critical

173. Lusvardi, *supra* note 171.

174. CAL. WATER FOUND., RECOMMENDATIONS FOR SUSTAINABLE GROUNDWATER MANAGEMENT: DEVELOPED THROUGH A STAKEHOLDER DIALOGUE 30–31 (2014), available at <http://www.californiawaterfoundation.org/uploads/1399077265-GroundwaterReport-52014%2800249329xA1C15%29.pdf> (on file with the *McGeorge Law Review*).

175. See AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2013).

176. *Id.* (proposing an amendment of CAL. WATER CODE §§ 79723, 79748, 79768(b)).

177. Lusvardi, *supra* note 171.

178. STATE GOVERNANCE & FINANCE COMM. & SENATE NATURAL RESOURCES & WATER COMM., OVERVIEW OF CALIFORNIA'S DEBT CONDITION: PRIMING THE PUMP FOR A WATER BOND 9–11 (2013), available at <http://sntr.senate.ca.gov/sites/sntr.senate.ca.gov/files/Background-Final.pdf> [hereinafter CALIFORNIA'S DEBT CONDITION] (on file with the *McGeorge Law Review*).

179. See AB 34, 2010–2011 Leg., Reg. Sess. (Cal. 2011).

180. See generally ASSEMB. WATER BOND WORKING GROUP PROPOSED PRINCIPLES FOR DEVELOPING A WATER BOND 4 (2013), available at <http://awpw.assembly.ca.gov/sites/awpw.assembly.ca.gov/files/Water%20Bond%20Principles%20-%20Proposed.pdf> (on file with the *McGeorge Law Review*).

181. *Id.*

statewide water policy priorities” for water bond funding.¹⁸² Its second principle emphasized accountability to voters for how the State spends water bond money.¹⁸³ Its third and fourth principles emphasized respect for existing law and policy, how they relate to water rights and protection of the Delta.¹⁸⁴ The Working Group and the hearings that followed reflected a unique effort at transparency in developing a water bond, which is perhaps another developing policy for water finance.¹⁸⁵

Some of the most significant policies for State water infrastructure finance and water bonds include:

- *Statewide Interests.* The Senate Committee on Natural Resources and Water has framed this policy as “State Funds For State Responsibilities.”¹⁸⁶ The Committee explained that the State Government has accepted responsibility for certain activities related to water, such as protecting the public trust and public health, and setting statewide standards and rules of behavior for the local agencies that deliver water.¹⁸⁷ Because taxpayers throughout the state pay off the debt created by a water bond, the water bond funding should support statewide objectives.¹⁸⁸
- *Beneficiary Pays.* This principle is the converse of the statewide interest policy: those who receive water from infrastructure should pay the cost of that infrastructure. While this principle has long been advocated, the Legislature has found it difficult to implement. Project proponents often describe the public benefits broadly and private benefits narrowly. In addition, some disadvantaged communities cannot afford to pay for the infrastructure to provide clean and safe drinking water, so the State—stepping into its public health role—pays for this fundamental water infrastructure. AB 1331 encourages this principle, but it does not impose the principle as a requirement for funding from the water bond.¹⁸⁹ It also targets safe drinking water specifically for disadvantaged communities.¹⁹⁰
- *Polluter Pays.* Similar to the “beneficiary pays” principle, the state should not charge taxpayers statewide to fix a problem caused by an

182. *Id.*

183. *Id.*

184. *Id.*

185. *Id.*

186. CALIFORNIA’S DEBT CONDITION, *supra* note 178, at 9.

187. *Id.*

188. *Id.*

189. AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2013) (amending CAL. WATER CODE § 79709).

190. *Id.* (amending CAL. WATER CODE §§ 79720–79729).

identifiable party. Bonds have applied this principle in prohibitions on paying for mitigation or environmental compliance, or in requirements that recovery from polluters should be paid back to the State.¹⁹¹ As environmental regulation has developed, some compliance efforts have become water supply strategies, such as stormwater capture and management. For that reason, the May 8 version of AB 1331 included this narrower prohibition language: “[f]unds provided by this division shall not be expended to support or pay for penalties or correcting violations.”¹⁹²

The Senate Committee on Natural Resources and Water, in a February 2013 background paper,¹⁹³ identified several other policies that it recommended, including: (1) state funds for state responsibilities;¹⁹⁴ (2) subsidies should be avoided;¹⁹⁵ (3) “bonds should aid in implementation of policy,” not create policy;¹⁹⁶ and (4) “respect separation of powers.”¹⁹⁷ The Legislature is likely to incorporate these policies and others, such as the principles arising out of the Assembly Water Bond Working Group, into water bonds in the years ahead. A constant challenge in crafting a water bond is balancing statewide policies and principles with the need to address the most immediate needs for water infrastructure funding that will attract votes from legislators and voters.¹⁹⁸

D. The Most Difficult Water Bond Issues

The Legislature continued discussing a replacement water bond through the June 26 deadline for placing a new water bond on the November 2014 ballot.¹⁹⁹ Three days before the deadline, the Senate took up Senator Wolk’s \$10.5 billion

191. Cal. Proposition 84 (containing a prohibition on mitigation and groundwater cleanup provisions).

192. AB 1331, 2013–2014 Reg. Sess. (Cal. 2013) (amending CAL. WATER CODE § 79709).

193. CALIFORNIA’S DEBT CONDITION, *supra* note 178, at 1.

194. *Id.* at 9. As explained in this Background Paper, the State Government has responsibility for certain water and natural resource activities, such as protecting the public trust, public health and providing flood protection in the Central Valley. *Id.*

195. *Id.* at 10. When statewide bond funds are used for purposes that are not a state responsibility, “should be characterized as a subsidy.” *Id.* These non-state responsibilities should be paid with private or local government funding. *Id.*

196. *Id.* Bonds provide funding for implementing policy, but cannot be changed, without voter approval, even as conditions change and necessitate changes in policy.

197. *Id.* As explained in this Background Paper, in funding state programs, the Governor proposes a State Budget but the Legislature has responsibility to determine how best to spend state funding, including bond funds. Therefore, a bond that provides a continuous appropriation of funding to a particular program (*e.g.* storage) abdicates the Legislature’s responsibility to make annual decisions as to how to spend state funding. *Id.*

198. Memo from David Metz and Curtis Below of Fairbank, Maslin, Maullin, Metz, & Assoc. on Californians’ Perceptions of the Drought (June 16, 2014) (on file with the *McGeorge Law Review*).

199. See CAL. ELEC. CODE § 9040 (West 2003) (requiring that the Legislature place measures on the ballot at least 131 days before the election). For the November 4, 2014, election, that deadline was June 26, 2014. See *id.*

water bond, SB 848, on the Senate floor, but it failed to gain the two-thirds vote necessary to pass a bond measure on a 22–9 vote.²⁰⁰ The next day, the Governor gave legislative leaders an outline for a \$6 billion water bond.²⁰¹

Assembly Speaker Toni Atkins convened Assembly members, from both sides of the aisle, who had participated in the water bond debate.²⁰² Assembly Appropriations Committee cancelled several hearings on AB 2686 (Perea) and AB 2043 (Bigelow/Conway) scheduled during the final weeks before the summer break commenced on July 3rd because no agreement emerged.²⁰³ The Speaker focused on gaining bi-partisan support that could lead to a two-thirds vote on the Senate floor,²⁰⁴ and developed proposed amendments to AB 2686 for a bond at \$8.25 billion.²⁰⁵ The Appropriations Committee cancelled the July 2 hearing when the Republican leadership rejected the proposal.

The “sticking points” that prevented the necessary votes raised the same issues that both houses discussed vigorously the previous year—water storage and the Sacramento-San Joaquin River Delta:

- *Water Storage.* Historically, water users paid (or at least repaid) the costs to build California’s dams.²⁰⁶ The 2009 water bond proposed (for the first time) that taxpayers pay up to 50% of dam costs for “public benefits” related to the environment, flood protection, and recreation.²⁰⁷ It authorized and continuously appropriated \$3 billion to the California Water Commission for building surface or groundwater storage facilities. The 2009 water bond language skewed the storage funding toward Central Valley dams, with language requiring “measurable improvements to the Delta

200. See SB 848, 2013–2014 Leg., Reg. Sess. (Cal. 2014) (showing that the bill failed on the senate floor).

201. Melanie Mason, *Governor Pushes for Scaled Down Water Bond*, CUWCC (June 26, 2014), <http://www.cuwcc.org/Home/gov-jerry-brown-pushes-for-scaled-down-6-billion-water-bond-582> at 1 (on file with the *McGeorge Law Review*).

202. *Water Bond Off Until Aug.*, BAY PLANNING COALITION (July 3, 2014), <http://bayplanningcoalition.org/2014/07/water-bond-off-until-august/>.

203. While the legal deadline was June 26, the Legislature could exempt a new water bond from that deadline. But several legislators asserted that the real deadline was before summer break, to pre-empt the Secretary of State from preparing a ballot pamphlet for the 2009 water bond then on the ballot. White, *supra* note 134.

204. The Senate had lost its 2/3 Democratic supermajority earlier in the year, when three Democratic Senators could no longer vote due to legal problems. Stephen Frank, *Corrupt State Senate Democrats Kill Super-Majority*, CAPOLITICALNEWS.COM (Mar. 3, 2014), <http://capoliticalnews.com/2014/03/03/corrupt-state-senate-democrats-kill-super-majority/> (on file with the *McGeorge Law Review*).

205. *On Topic: Assembly Speaker Toni Atkins Discusses Water Bond*, THE SACRAMENTO BEE, July 7, 2014, <http://www.sacbee.com/2014/07/07/6532998/on-topic-assembly-speaker-toni.html> (on file with the *McGeorge Law Review*).

206. HANAK ET AL., *supra* note 15, at 9.

207. See SENATE FLOOR, COMMITTEE ANALYSIS OF SB 2 X7, at 1 (Nov. 4, 2009).

ecosystem or to the tributaries to the Delta”²⁰⁸ and defining recreational use as a public benefit²⁰⁹ (groundwater aquifers provide little recreational benefit). Republicans insisted that storage funding had to remain at \$3 billion with the 2009 language intact.²¹⁰ Both SB 848 and AB 2686 included the 2009 language with little change.²¹¹ The Speaker’s proposed amendments to AB 2686, however, set the storage funding at \$2.75 billion.²¹²

- *The Delta.* Senator Wolk and advocates for the Delta had long opposed the 2009 water bond because it allowed funding for ecosystem restoration related to the BDCP. BDCP proposed to achieve the “Co-Equal Goals” of water supply reliability and Delta ecosystem restoration, as provided in the 2009 Delta Reform Act.²¹³ The Plan, which had become known as “the Governor’s Tunnels,” proposed to transfer water south from the Sacramento River to water export pumping facilities in the South Delta.²¹⁴ At the time of the bond discussions, the BDCP was out for public comment, pursuant to the California Environmental Quality Act. The three Democratic bond proposals—SB 848, AB 1331, and AB 2686—had studiously avoided any mention of BDCP. SB 848, however, consistently required that all Delta ecosystem restoration funding be allocated to the Delta Conservancy, whose eleven-member board included five representatives of the Delta Counties.²¹⁵ That provision led to opposition from the state and federal water contractors, and effectively, SB 848’s failed passage on June 23.²¹⁶

208. AB 2686, 2013–2014 Leg., Reg. Sess. (Cal. 2014) (proposing to enact CAL. WATER CODE § 79762).

209. *Id.* (proposing to enact CAL. WATER CODE § 79763).

210. Michael Doyle, *Drought be Dammed, Calif. Lawmakers Look to Storing Water*, MCCLATCHY DC (Feb. 27, 2014), <http://www.mcclatchydc.com/2014/02/27/219641/drought-be-dammed-calif-lawmakers.html> (on file with the *McGeorge Law Review*).

211. *But see* Assemb. B. 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2014) (explaining that \$2.5 billion will be available for water storage expenses).

212. *See On Topic: Assembly Speaker Toni Atkins Discusses Water Bond*, THE SACRAMENTO BEE, July 7, 2014, <http://www.sacbee.com/2014/07/07/6532998/on-topic-assembly-speaker-toni.html> (on file with the *McGeorge Law Review*).

213. CAL. WATER CODE § 85350 (West 2014).

214. *Id.*

215. SB 848, 2013–2014 Leg., Reg. Sess. (Cal. 2014). AB 1331 also allocated ecosystem restoration funding to the Delta Conservancy based on amendments imposed by the Senate Natural Resources and Water Committee over the author’s objection, as amended April 8, 2014. AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2014).

216. Letter from coalition to members of the California State Senate, *LEGISLATIVE ALERT SB 848 (Wolk): 2014 Water Bond as Proposed to be Amended Oppose Unless Amended 1–2* (May 30, 2014), available at <http://restoredhethdelta.org/wp-content/uploads/2014/06/MWD-et-al-SB-848-opp-5-30-14.pdf> (on file with the *McGeorge Law Review*).

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The conflicts over a new water bond reflect the underlying conflicts over how California manages and pays for its management of water resources. The biggest issues—storage and the Delta—go to the heart of the questions that California water leaders now ponder. With climate change reducing snowpack—the state’s biggest reservoir—and increasing drought, how will California store and share its water among agriculture, cities and the environment? The Delta remains the heart of the California water system, as well as the most valuable estuary ecosystem on the west coast of North or South America. How will California manage this environmental jewel for its many competing uses? The list of water bond issues continues, on groundwater cleanup, water recycling, watersheds, and others. Those issues similarly reflect conflicts over water management.

Perhaps the one issue that receives broad bi-partisan, legislative support is safe drinking water. Drinking water quality draws the support of voters as well. In years like 2014, when newspapers reported that seventeen small communities were threatened with running out of water completely within sixty days,²¹⁷ safe drinking water became a critical issue for legislators and voters alike. The chapters on safe drinking water were substantially similar among the Democratic water bond bills.²¹⁸ Polling shows that voters will support a bond to pay for safe drinking water for all Californians.²¹⁹ As legislators continue to encounter conflict, safe drinking water may be the one segment that survives the conflict, whether in 2014 or in a subsequent year if voters reject the water bond proposal on the November ballot.

The question for future water bond debates will be how California resolves its water conflicts. Will the state make the decision to alter how it conveys water across the Delta to the San Francisco Bay Area, San Joaquin Valley, and Southern California? Will it build big new dams or will it better manage its biggest groundwater aquifer in the Central Valley? Will it cleanup its contaminated groundwater, especially in Southern California? Will the state achieve its goal of using 3 million acre-feet of recycled water by 2030? How will California implement the “Human Right to Water,” adopted in 2012, to ensure that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes”?²²⁰

217. Paul Rogers, *California Drought: 17 Communities Could Run Out of Water Within 60 to 120 Days, State Says*, SAN JOSE MERCURY NEWS, Jan. 28, 2014, http://www.mercurynews.com/science/ci_25013388/california-drought-17-communities-could-run-out-water (on file with the *McGeorge Law Review*).

218. Compare SB 848, 2013–2014 Leg., Reg. Sess. (Cal. 2014); with AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2013); and AB 2686, 2013–2014 Leg., Reg. Sess. (Cal. 2014).

219. See David Metz, *California Voter Attitudes on Water Policy in 2014*, FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC., ppt. 12 (Apr. 25, 2014), available at http://www.labusinesscouncil.org/files/David_Metz_PPT.pdf.

220. CAL. WATER CODE § 106.3 (West 2012) (enacting what is known as the “Human Right to Water” as proposed in AB 685 in 2012).

Ultimately, voters will decide. They will judge whether water policymakers have resolved their conflicts in a way that taxpayers are willing to support by approving a water bond and paying taxes to repay the bond debt.²²¹ A recent *Los Angeles Times* poll showed that, despite public awareness of the serious drought, a majority of respondents would not support “large-scale public spending to boost water supplies.”²²² The challenge for any water bond measure on the statewide ballot will be convincing voters not only that there is a need for new water infrastructure, but that the proposed solutions are worth the cost.²²³ That is the challenge that legislators face in 2014 and beyond.

V. CONCLUSION

Conflicts and compromise over water shaped California from its inception with the 49ers.²²⁴ Since then the state—and its water—developed into the bread basket for the world. Some of the world’s great cities have been created, even where there was not enough water to support such world-class cities. Each generation has passed laws to resolve water conflicts and build a water system for future generations.²²⁵ Our predecessors built a statewide water system admired the world over—a great accomplishment for the 20th century. California’s 21st century challenge will be restoring its world leadership in water by providing safe and clean water for its people and economy.”

The greatest part of that challenge is figuring out how to pay for the necessary water infrastructure.²²⁶ The next generation of water infrastructure will demand substantial financial investment.²²⁷ With its water infrastructure aging and climate change leading to more intense droughts, California cannot afford to ignore its deficiencies in water infrastructure. Just as water built the robust California economy, failing water infrastructure can destroy it. Investment is the key to California’s future.

Making sufficient investments in water will take support from all Californians.²²⁸ We have established a water finance system, rooted in the California Constitution, which ensures that California voters play important roles in state and local water investment decisions.²²⁹ The State needs voter approval of

221. Bettina Boxall, *Poll Finds Little Support for Drought Spending Despite Broad Awareness*, L.A. TIMES, June 6, 2014, <http://www.latimes.com/science/la-me-poll-drought-20140606-story.html> (on file with the *McGeorge Law Review*).

222. *Id.*

223. *Id.*

224. *See Irwin v. Phillips*, 5 Cal. 140, 145 (1857).

225. HUNDLEY, *supra* note 4, at 67–115.

226. *See ASSEMBLY WATER, PARKS, & WILDLIFE COMM.*, *supra* note 122, at 4.

227. *Id.* at 2.

228. *See Boxall*, *supra* note 221.

229. CAL. CONST. art. XIII A § 3; CAL. CONST. art. XVI § 1.

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water bonds²³⁰ and local agencies need property owner acceptance of increased water rates. Convincing voters of the urgent need for water investments is, therefore, critical to California's water future. Unfortunately, convincing voters to open their wallets and support water bonds often takes a crisis.²³¹

In the last decade, a flood crisis led to voter support for flood control bonds. In 2005, Hurricane Katrina brought public attention to flood risks throughout the nation, and California's state capital suddenly became the American city most at risk of flooding.²³² That same year, the State Legislature approved a \$500 million payment to settle a claim from a prior flood.²³³ Californians began learning about flood risks in the Central Valley and the deterioration of the federal-state flood control system. The next year, Californians approved billions of dollars of GO bonds to fix levees and improve Central Valley flood protection.²³⁴

Convincing voters to support state and local investments in water supply infrastructure may take another crisis. This year's serious drought may be the start of that crisis, but voters need to see a connection between the crisis and their own lives. Reduced snowpack or wilting crops hundreds of miles away may not be enough to make the crisis real for voters. The crisis needs to affect voters in the coastal cities, where most of them live. Successful investment in California's water future may need to start with a crisis at the tap. When voters see first-hand that California's water system needs improvement, they may be more likely to support the substantial financing it would require to accomplish that improvement. Ironically, the future of California's civilization may depend on the apparent failure of its water system. Then the state can once again be successful in investing in the water system for the 21st century.

230. See AB 1331, 2013–2014 Leg., Reg. Sess. (Cal. 2013).

231. Rogers, *supra* note 217.

232. *High Water Marks, Life Jackets, and Other Innovations as California Leads in Flood Preparedness*, THE WATER AWAY (Nov. 14, 2013), <http://thewateraway.wordpress.com/2013/11/14/high-water-marks-life-jackets-and-other-innovations-as-california-leads-in-flood-preparedness/> (on file with the *McGeorge Law Review*).

233. *Paterno v. State*, 113 Cal. App. 4th 998, 1034 (4th Dist. 2003).

234. Cal. Proposition 1E (2006).

January 2016
Update

Managing California Water through Federal, State, and Local Cooperation

Working together to shape California's future





*CALIFORNIA DEPARTMENT OF WATER RESOURCES
MISSION STATEMENT*

*To manage the water resources of California in
cooperation with other agencies, to benefit the
State's people, and to protect, restore, and enhance
the natural and human environments.*

Managing California Water through Federal, State, and Local Cooperation

Working together to shape California's future

California's climate and hydrology pose many challenges for water managers. Variable annual precipitation patterns, frequent floods triggered by Pacific atmospheric rivers, and prolonged droughts are all a part of the State's hydrologic cycles. We have just endured four years of drought; one of the worst in recent history, and now the forecast of a strong El Niño is upon us. Ongoing and future changes to the climate will drive rising sea levels, altered precipitation patterns, reduced snow pack in our state's largest frozen reservoir – the Sierra Nevada mountains, and other changes to California's hydrology. Every aspect of our water management system will be affected.

Water has shaped California's past and will help shape its future. Managing this water and its associated resources today and for future generations requires a strategic, integrated approach and cooperation across all levels of government.

Economic growth in California's formative years drove large-scale land-use alterations, unchecked gold mining and timber operations, and other landscape changes. In turn, growing urban and rural communities and agricultural and industrial productivity spurred development of an extensive system of reservoirs and conveyance projects unaided by our current understanding of ecological processes.

Today, California's water system supplies water to more than 38 million people and 10 million acres of irrigated agricultural lands. It delivers high-quality water to major industrial facilities that fuel the largest economy in the nation and the seventh largest in the world. A large portion of this water supply system relies on the Sacramento-San Joaquin River Delta for water conveyance.

The Delta is the largest estuary on the west coast and its aging levees and ecosystem are in a fragile state. University of California, Davis scientists say the fault that caused a Napa Valley earthquake in August 2014 could produce a temblor strong enough to cause levee failures in the Delta. During the last century, there have been 162 Delta levee failures leading to flooded islands and saline intrusion.

In addition, endangered species issues have considerably curtailed deliveries from the Delta, with consequences felt statewide. Delta pumping curtailment and four years of drought have caused drinking water wells to go dry in our poorest communities and led to significant overdraft of regional groundwater basins. A recent NASA report illustrates dramatic subsidence in some parts of our Central Valley.

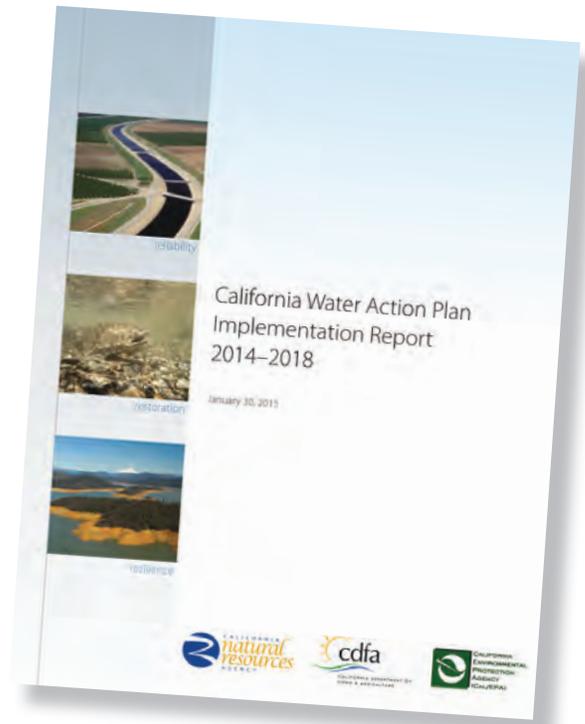


California's climate requires an extensive network of reservoirs and conveyance systems (such as the California Aqueduct, pictured) to supply water for more than 38 million people and 10 million acres of irrigated agricultural lands.

In 2013, the U.S. Army Corps of Engineers and the California Department of Water Resources prepared California's Flood Future report. The report indicates that "more than 7 million people and \$580 billion in assets are exposed to hazards of flooding in California." Flooding in a major metropolitan area will have a devastating economic impact on California and the country.

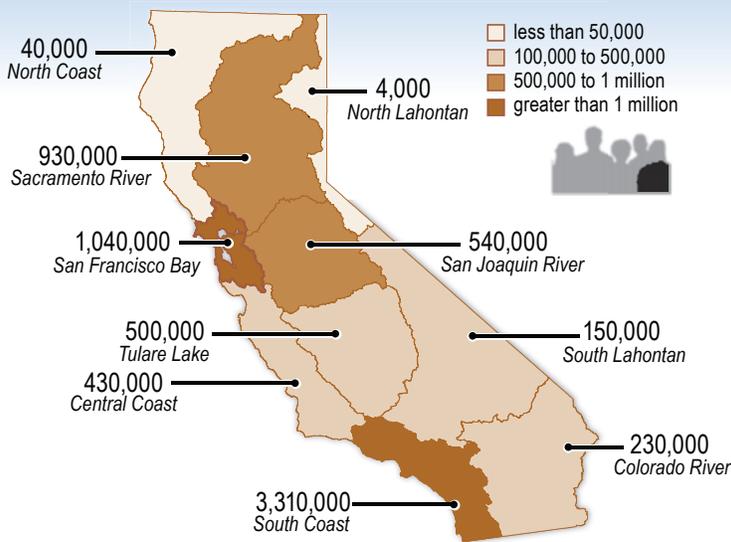
The water challenges facing our communities, our watersheds, and our economies compelled the State of California to adopt a comprehensive and practical approach to water resources management, outlined in the 2014 Governor's California Water Action Plan (Action Plan). The Action Plan states, "there is a broad agreement that the state's water management system is currently unable to satisfactorily meet both ecological and human needs, too exposed to wet and dry climate cycles and natural disasters. Solutions are complex and expensive, and they require the cooperation and sustained commitment of all Californians working together."

The Action Plan encourages implementation of multi-benefit integrated programs through cooperation among federal, State, and local governments, regional agencies, and public and private sectors. This document describes the work being done to implement the Action Plan and the investments needed to continue that work into the future.

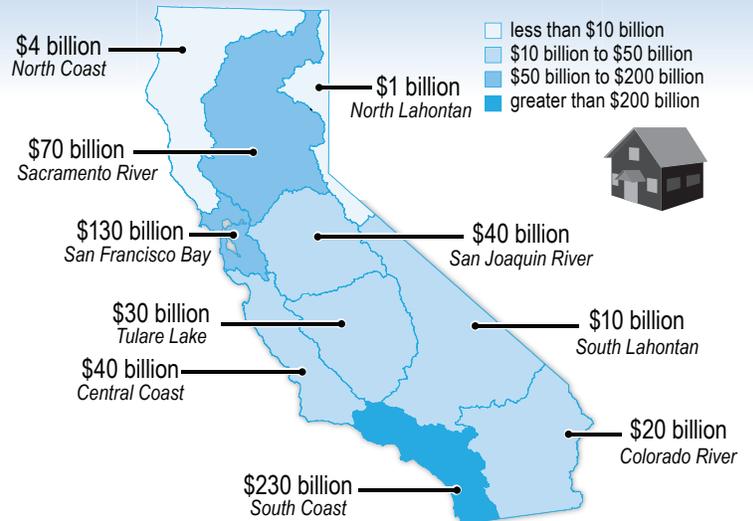


The California Water Action Plan Implementation Report 2014–2018 provides a strategy to implement the actions of the Action Plan.

Number of People in Floodplain



Number of Structures in Floodplain



California's Flood Future report documents that more than 7 million people and \$580 billion in assets are exposed to flooding hazards in California.



Ensuring Reliable Water Supply for All Californians

The challenges to ensuring reliable, clean water supplies in California have their roots in our natural climate patterns and historic water management choices spurred by economic and population growth. A large portion of the State's rainfall and runoff occurs in the northern part of California, and most water use is in our agriculturally dominated Central Valley and highly populated Southern California. In addition, most of the precipitation and runoff occur in the five-month period of December through April, while most water use is in the summer months.

To address this situation, an extensive water management network was built in the last century to store winter stormwater and convey it hundreds of miles to where and when it is needed. Two major conveyance systems, the State Water Project, operated by the State of California, and the federal Central Valley Project, operated by the U.S. Bureau of Reclamation, play a key role in delivering water to people, farms, and industry around the State. Today, these systems are less reliable. Prolonged periods of drought, reduced snowpack and river flows due to climate change, and ecosystem protection issues have considerably reduced deliveries from the State and Federal water projects in recent years.

Above: The intertie between the Governor Edmund G. Brown California Aqueduct (SWP) and the federal Delta-Mendota canal (CVP) allows for operational flexibility.

The State of California is taking two major steps to improve water supply reliability:

1. Ensure continued State Water Project deliveries to 25 million Californians and 3 million acres of agricultural lands, and protect endangered species by conveying some water around the Sacramento-San Joaquin Delta. Do this in conjunction with vital Delta ecosystem restoration.
2. Develop new, and efficiently re-operate, existing surface storage projects in conjunction with groundwater to capture storm and flood flows in a manner that increases supplies for people, farms, and industry, while maintaining flows for ecosystem health. Proposition 1, approved by California voters in November 2014, provided \$2.7 billion for such water storage projects.

To be successful, the California Department of Water Resources must work in close coordination with other State and federal agencies, and private partners.



Surface water storage facilities such as Lake Oroville (above) store winter stormwater and the State Water Project conveys it hundreds of miles to where and when it is needed.



The Knights Landing Outfall Gates Fish Barrier Project prevents salmon from entering Colusa drainage canal so they can continue migrating in the Sacramento River.



CALIFORNIA WATER FIX

RELIABLE. CLEAN. WATER.

California WaterFix is a proposal backed by the administrations of Governor Edmund G. Brown Jr. and President Barack Obama to change how we divert water from the Sacramento-San Joaquin Delta. The Delta is a source of water for two-thirds of California's population and one-third of its irrigated farmland. The plan seeks to accomplish three primary goals that have long beleaguered State and federal policymakers:

1. Allow for more natural flows in the Delta to benefit salmon, smelt, and other species.
2. Increase water supply reliability by giving the water projects that divert from the Delta more flexibility to move water without harming fish.
3. Guard the Delta water diversion point from natural disaster disruption, such as earthquake or flood.

The proposal involves construction of three new intakes, each with a maximum diversion capacity of 3,000 cubic feet per second, on the east bank of the Sacramento River in the north Delta. Each intake site would employ state-of-the-art on-bank fish screens. Two 40-foot-wide underground pipelines would carry the diverted water approximately 30 miles to the expanded Clifton Court Forebay for the existing State Water Project and Central Valley Project pumping facilities.



CALIFORNIA ECO RESTORE

A STRONGER DELTA ECOSYSTEM.

California EcoRestore is an initiative to help coordinate and advance at least 30,000 acres of critical habitat restoration in the Sacramento-San Joaquin Delta over the next four years. Driven by world-class science and guided by adaptive management, California EcoRestore will aggressively pursue habitat restoration projects with clearly defined goals, measurable objectives, and financial resources to help ensure success.

A broad range of habitat restoration projects will be pursued, including projects to address aquatic, sub-tidal, tidal, riparian, floodplain, and upland ecosystem needs.

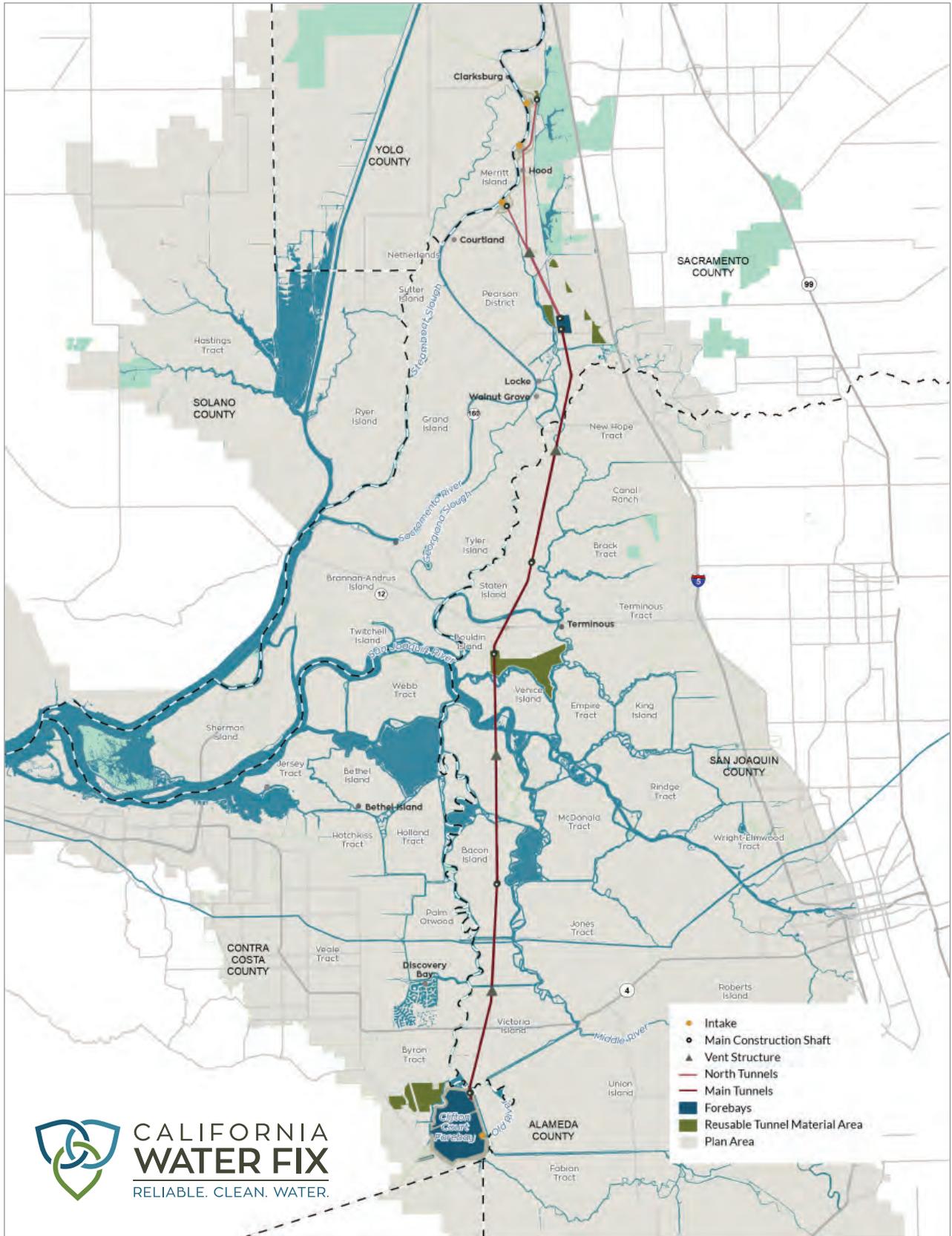
California EcoRestore's initial goal is to advance 30,000 acres of Delta habitat restoration:

- 25,000 acres associated with existing mandates for habitat restoration, pursuant to federal biological opinions. These projects will be funded exclusively by the State and federal water contractors that benefit from the projects.
- 5,000 acres of habitat enhancements.

California EcoRestore is unassociated with any habitat restoration that may be required as part of the construction and operation of new Delta water conveyance (California WaterFix).



An egret and ring-billed gulls congregate on Staten Island in the Sacramento-San Joaquin River Delta.

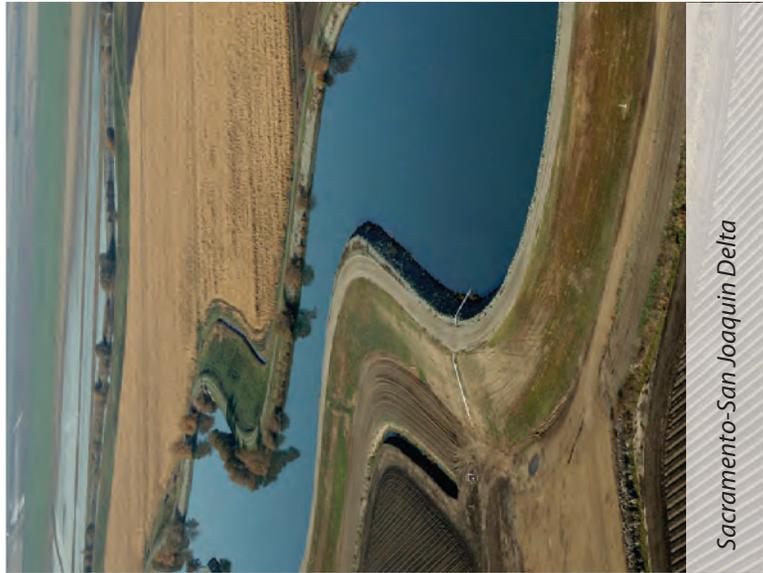


California Water Fix project location and proposed facilities.

California's Major Rivers and Water Projects

- █ State Water Project
- █ Federal Water Project
- █ Local Water Project
- █ Ecosystem Restoration Area
- █ California WaterFix







Building Capacity for Regional Sustainability

While California has vast infrastructure to store winter flows and deliver water hundreds of miles to where it is needed, the majority of water infrastructure and related investment is at the local and regional level. Over the past decade, the State has provided technical services and over \$990 million in financial assistance, matched over 4:1 by local agencies, to implement more than 700 regional multi-benefit projects to improve water sustainability in regions across the State.

The prolonged drought, reduction of water supply due to reduced rainfall and snowpack, and compliance with various biological opinions, coupled with increases in permanent crops and increases in urban population, have all taken a toll on regional water supply reliability and sustainability. In many areas, imbalance between water availability and demand has increased groundwater pumping and resulted in overdrafting of groundwater basins. This, in turn, has caused drinking and agricultural water wells to go dry and alarming evidence of subsidence, especially in California's Central Valley.

To provide safe drinking water to communities and to help improve regional water sustainability, the Governor issued several Executive Orders that resulted in a multi-agency drought emergency program, a more than 20% increase in statewide water conservation, and delivery of financial assistance to those communities most impacted by the four-year drought. In addition, Proposition 1, approved by California voters in November 2014, provides over \$500 million in additional grant funding to increase self-reliance at the regional level.

Above: State Geologists measure and record the water level in a groundwater well in California's Central Valley, where a recent NASA report shows evidence of land subsidence in some areas of 2 inches per month due to excessive groundwater pumping during the growing season as the State's historic drought continues.

Federal agencies continue to play a major role in California water and influence the State's ability to supply clean water to people, farms, industry, and the environment. Federal projects and regulatory programs implemented by U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other agencies have a pronounced impact on State water supply reliability and sustainability.

The most significant piece of legislation was the State's passage of the Sustainable Groundwater Management Act in 2014. For the first time in history, the State must manage groundwater use in a sustainable manner. The landmark law requires water and land use agencies to come together in governance, and develop plans to manage groundwater – in the context of an overall regional water balance – sustainably. The State will provide financial incentives,

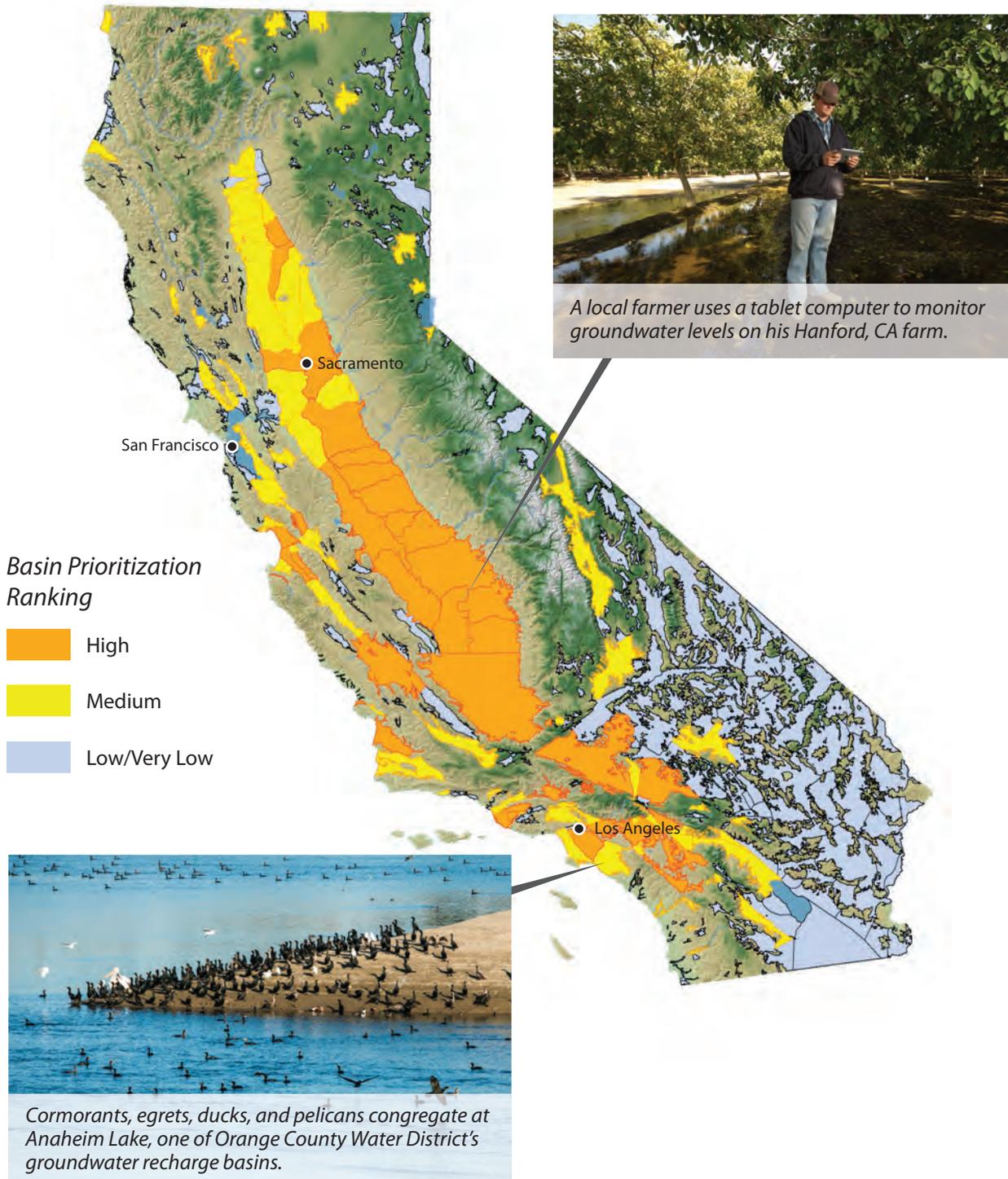
technical tools, and enforcement to ensure implementation of the legislation, but the key to success lies with the local agencies and their ability to balance regional supply and demand in a more sustainable fashion.

A key challenge is overcoming regulatory hurdles, including surface water rights and federal and State environmental regulations. Here again, close cooperation between federal, State and local stakeholders will be required for success.

Understanding California's Groundwater Basins

The State has ranked 127 of California's 515 basins/subbasins as high and medium priority based on population, reliance on groundwater for urban and agricultural uses, and impacts to groundwater. The 127 basins account for 96% of the State's annual groundwater pumping and supply 88% of the population

residing over groundwater basins. Of these, 21 basins/subbasins have been preliminarily identified as critically overdrafted, with one or more of the following undesirable impacts: seawater intrusion, land subsidence, groundwater depletion, and/or chronic lowering of groundwater levels.





Managing Floodwaters while Protecting the Ecosystem

The destruction caused by Hurricane Katrina in 2005 was a wake-up call for California. The following year, the State passed urgent flood legislation and the voters approved bonds providing over \$4 billion for improving flood management in California. This funding, matched by local and federal funding, provided much needed resources for flood risk reduction projects, particularly in urban areas.

In 2013, the State partnered with the U.S. Army Corps of Engineers to prepare California's Flood Future - Recommendations for Managing the State's Flood Risks. The report revealed that more than seven million people and \$580 billion in assets are exposed to the hazards of flooding in California; all 58 counties are at risk. This exposure to flood risk presents an unacceptable threat to public safety, infrastructure, and the State's economy. The State also adopted the Central Valley Flood Protection Plan in 2012; a comprehensive approach to reducing risk for over one million Californians protected by the State-Federally operated flood control facilities in the Central Valley. The State is taking the lead in developing basin-wide feasibility studies for these areas, in collaboration with the U.S. Army Corps of Engineers and coordination with stakeholders.

Meanwhile, U.S. Army Corps of Engineers, Sacramento District, has taken steps in developing a General Re-evaluation Report for the Sacramento River Basin, which together with the State's feasibility study, will provide a blueprint and clear direction to improve flood management for the communities in the Sacramento Valley.

The Yolo Bypass is a large flood bypass in the Sacramento Valley built during the last century. It protects the Sacramento metropolitan area communities from flooding. Located in the heart of the Pacific Flyway, the Yolo Bypass Wildlife Area's approximately 16,600

State, federal, and local agencies are working together and have taken an aggressive approach in improving flood protection while restoring the ecosystem in California; the Yolo Bypass (pictured above) Program is one example and has been helped by a recent cooperative agreement signed by the State and U.S. Army Corps of Engineers (below).

The California Department of Water Resources has worked with U.S. Army Corps of Engineers for many years to reduce flood risks in California. We have worked with the U.S. Army Corps of Engineers as a local partner in the State Subvention Program, cost-shared in urban flood risk reduction projects, Folsom Dam Modification Joint Federal Project, and many other projects.

acres is a haven for fish, waterfowl, and other wildlife, and much of the land supports rice and other agricultural uses. The State, along with the U.S. Army Corps of Engineers and other partners, has recently embarked on a comprehensive plan for the Yolo Bypass to considerably improve flood protection for the Sacramento Metropolitan area while providing for fish passage, habitat, water supply, recreation, and other benefits. Structural and ecosystem improvements planned for the bypass can enhance agricultural sustainability, water supply reliability, and

the economic health of the State. This unique opportunity will serve as a model for integrated flood management in other parts of the State.

Flood management in California is a shared responsibility among State, federal, and local agencies. Together, we have accomplished much during the last decade, but there is much to do to provide the level of flood protection that our communities deserve.



Deputy Director Bardini and Colonel Farrell sign California Department of Water Resources/U.S. Army Corps of Engineers Memorandum of Understanding in August 2015.



Taking Action to Reduce Residual Risk

Water supply reliability and effective flood emergency response are critical for maintaining California's robust economy. This has been evident during our prolonged drought, when cutbacks in State and Federal Water Project allocations in recent years forced growers to increase groundwater pumping, resulting in wells going dry and dramatic land subsidence in parts of the State. Many farming communities in the Central Valley have been hard hit. Similarly, flooding in a metropolitan area would have a devastating impact on the economic well-being of the community and the State. As noted earlier, climate change and continued population growth will only further exasperate the issues.

California is taking positive steps to reduce the residual risk impacts of extreme drought and floods. For example:

- As directed by the Action Plan and emergency drought rules, Californians have taken conservation to heart. From June to September 2015, urban areas routinely exceeded the Governor's call to reduce water use by 25% — sometimes by wide margins.
- Rebate programs for replacing turf and inefficient toilets are now in full swing, with a goal in sight of replacing 50,000 acres of turf statewide.
- The State released a new water efficient landscape ordinance this year that will be adopted by local agencies to promote more use of drought-tolerant landscapes in urban areas.
- The State has made \$33 million available in Proposition 1 grants for agricultural water use efficiency projects.
- The State has enhanced and streamlined the process for water transfers between willing sellers and buyers.
- The Governor's Drought Task Force has been meeting monthly since early 2014 and continues to tackle tough issues, such as land subsidence, in a coordinated manner.

Above: Governor Edmund G. Brown Jr. and State water leaders answer questions about the State's aggressive water conservation rules in April 2015.

- Working with local and federal agencies, the State has improved emergency response throughout California to both drought and flood.
- Financial aid has been provided to those communities hardest hit by the drought, including those without drinking water. In many cases, State assistance is complemented by federal assistance from the U.S. Bureau of Reclamation and the U.S. Department of Agriculture.

The Action Plan highlights the need for yet another important strategy to reduce risk: increasing operational and regulatory efficiency of the State's water supply and flood management systems. Actions could include re-operation of reservoirs, enhanced and coordinated operation of the State and Federal Water Projects and flood facilities, and use of programmatic regulatory approaches such as the current partnership effort on the Yolo Bypass. Such actions require early and continued federal engagement and collaboration.



Flood fighting exercises test emergency response actions that the California Department of Water Resources and local agencies would deploy to protect Delta levees from failure in the case of flood emergency.



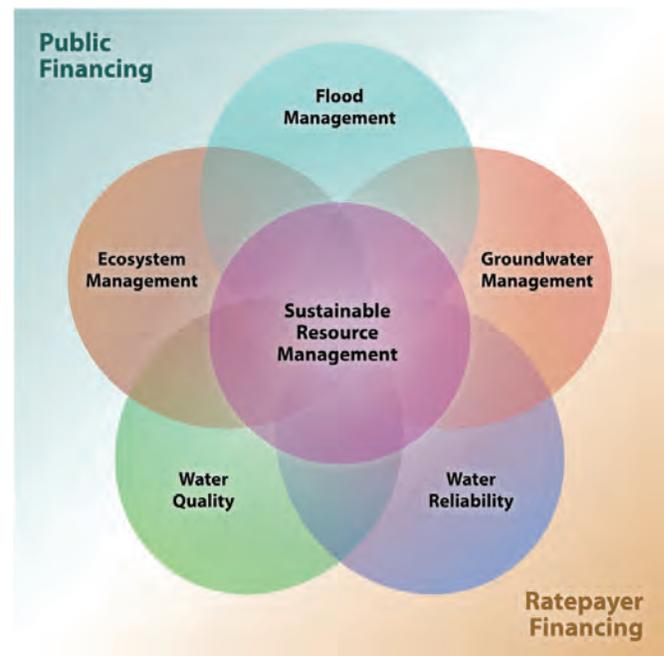
Planning Priorities and Investments for a Sustainable Future

The extraordinary drought conditions gripping California have brought challenges and hardship to communities across the State. As our water leaders say, “with crisis comes opportunity.” These conditions have revealed how past local, State, and federal investments in regionally integrated infrastructure have helped buffer many communities from the economic and societal impacts threatened by even short-term droughts. For California, the last few years have brought a renewed focus on the importance of reinvesting in our water management systems and watersheds to address the current drought challenges and prepare for future uncertainties.

The Governor’s 2014 Action Plan has been instrumental in focusing the State’s water leaders on a common set of goals and priority actions. Leveraging remaining and new Proposition 1 general obligation bond revenues with baseline budgets and other funding sources, State agencies began aligning their priorities to the Action Plan’s specific directives; however, bonds are short-term and bear interest, and despite the infusion, current investments are not keeping pace with the funding needed to attain sustainable management of the State’s water resources. Implementation of all of the work described in the Action Plan as well as other actions to improve water sustainability in California will require additional investment over the current base budget by State, local, and federal agencies.

Over the next decade, California needs \$200 billion to maintain current levels of service and water system conditions. California needs sustainable financing over the next few decades to reduce flood risk, provide reliable and clean water supplies, and restore and enhance ecosystems. The State also needs to leverage various sources of funding to achieve sustainable water management in the State.

Above: U.S. Army Corps of Engineers Commanding General Bostick and his California District Commanders visit California to see impacts of the drought first-hand in August 2015. The General engaged Senator Feinstein’s staff and State water leaders from the Governor’s Office and Office of Emergency Services, and California Department of Water Resources in discussions about shared investments and cooperative actions needed to move to more sustainable water resources management.



Continued leveraging of funding sources will help ensure a sustainable future for California.

Protecting Our Communities through Federal, State, and Local Agency Cooperation and Commitment

Unlike most rivers that can take days to reach flood stage, the American River can reach flood stage in a matter of hours. With eighteen significant flood events on the American River since 1850, Folsom Dam is critical for protecting the greater Sacramento area.

After Congressional authorization and a careful planning process, the Folsom Joint Federal Project (JFP) was initiated. The JFP will improve the ability of Folsom Dam to manage large flood events by allowing more water to be safely released in advance of a major storm event, resulting in more storage capacity remaining in the reservoir to hold back the peak inflow when it

arrives later. The new auxiliary spillway project includes a control structure to manage releases.

As part of the American River Watershed Project, the JFP will help achieve the goal of a 200-year level of flood protection for the greater Sacramento urban area, which includes approximately 400,000 people and in excess of 110,000 buildings valued at \$58 billion.

The Folsom JFP is an example of moving multi-agency cooperation to commitment on implementing projects.



The speakers, from left, Kerri Howell, Mayor of Folsom, Rep. Tom McClintock, Rep. Ami Bera, Rep. Doris Matsui, Col. Michael Farrell, Drew Lessard with the Bureau of Reclamation, Jay Punia, Central Valley Flood Protection Board Executive Officer, Mark Cowin, Director of the California Department of Water Resources and Rick Johnson, Executive Director of Sacramento Area Flood Control Agency during the celebration of the arrival of the first massive gate for Folsom Dam's auxiliary spillway on April 26, 2014.

Edmund G. Brown Jr.

Governor
State of California

John Laird

Secretary
California Natural Resources Agency

Mark Cowin

Director
California Department of Water Resources



Gary Bardini
Deputy Director

Department of Water Resources
1416 9th Street
Sacramento, CA 95814

For more information about Sustainable Water
Management in California, visit us at:

water.ca.gov

Updated January 4, 2016

Panel VI

Implementing the 2014 Sustainable Groundwater Management Act

(Organized by University of San Francisco School of Law)

Moderator:

Nathan Metcalf, Hanson Bridgett, Partner

Panelists:

Erik Ekdahl, State Water Resources Control Board

Michael Frantz, Turlock Irrigation District, Board of Directors

Laurel Firestone, Community Water Center, Co-Executive Director, Co-Founder, Attorney at Law

Panel Description

The ongoing drought is affecting California in profound ways including increased reliance on groundwater. Over-pumping has depleted aquifers and caused land subsidence with associated damage to roads, bridges, and other infrastructure. As climate change reduces California water supplies, increased demand for groundwater is likely to continue. To address these challenges, California passed the Sustainable Groundwater Management Act (SGMA) in 2014. The SGMA and its implementation aims to incorporate local agencies and actors to try to combat this statewide issue. Join our panel discussion to learn more about about how SGMA implementation will affect groundwater management, and the potential conflicts that are on the horizon.

Erik Ekdahl-CLE Materials for Water Law Symposium

Summary of Groundwater Legislation Activities

Text

Authorizing Bill	Action Item	Due Date
DWR Actions		
SB-1168	Investigate existing groundwater extraction and recharge to identify basins that are subject to critical conditions of overdraft. Shall report findings to Governor and Legislature. [§12924]	January 1, 2012, and regularly thereafter
SB-1168	Establish priorities for basins (high, medium, low, very low) pursuant to existing CASGEM basin prioritization considerations. [§10722.4]	January 31, 2015
SB-1168	Adopt regulations specifying information needed to revise basin boundaries. Must include methodology and criteria that will be used to evaluate proposed revision. DWR must hold 3 public meetings and post draft regulations to website at least 30 days before meetings. [§10722.2(b)]	January 1, 2016
AB-1739	Adopt regulations for evaluating groundwater sustainability plans, implementation of groundwater sustainability plans and coordination agreements. [§10733.2 (a) (1), (2)]	June 1, 2016
AB-1739	Adopt regulations for evaluating alternatives to groundwater sustainability plans submitted pursuant to Section 10733.6. [§10733.2 (c)]	June 1, 2016
AB-1739	Publish a report presenting best available information on water available for replenishment of groundwater in the state. [§10729 (c)]	December 31, 2016
AB-1739	Publish best management practices for sustainable management of groundwater. [§10729 (d) (1), (2)]	January 1, 2017
SB-1168	Work cooperatively with local agencies to help unmonitored basins develop a monitoring program. [§10933(d)]	January 31, 2017
Joint DWR & SWRCB Actions		
AB-1739	The Board may hold a hearing on whether to designate a basin as a "probationary basin" if the Department, in consultation with the Board , determines that a groundwater sustainability plan is inadequate or will not achieve sustainability. [§10735.2 (a) (3) and (5), (A)(i),(ii) (as modified by SB1319)]	Jan. 31, 2020 for critically-overdrafted basins
		Jan. 2022 for high and medium priority basins

AB-1739	The Board may designate a basin as a "probationary basin" if the Department in consultation with the Board determines that a groundwater sustainability plan is inadequate or is not being implemented correctly, and the Board determines that the basin is in a condition where groundwater extractions result in significant depletions of interconnected surface waters. [§10735.2 (a)(5),(B)(i),(ii) (as modified by SB1319)]	January 1, 2025
AB-1739	The Board may develop an interim plan if the Board, in consultation with the Department , determines that a local agency has not remedied the deficiency that resulted in the "probationary basin" designation. [§10735.4 (c)]	No earlier than Jan. 1, 2018 for areas that are not covered by a sustainability plan
AB-1739	The Board may develop an interim plan for a critically overdrafted "probationary basin" one year after the probationary designation, if the Board, in consultation with the Department , determines that a local agency has not remedied the deficiency that resulted in the probationary status. [§10735.6 (b)]	No earlier than 2021
AB-1739	After the Board, in consultation with the Department , determines a petition is complete, the Board shall act on the petition filed pursuant to Paragraph (1) of 10735.8 (g). [§10735.8 (g) (2), (3), (4)]	Board has 90 days to respond to petition.
SWRCB Actions		
AB-1739	If no local agency or collection of local agencies elects to be the groundwater sustainability agency, and no alternative has been approved by the Department, the Board may hold a hearing to designate the basin as a "probationary basin." [§10735.2 (a) (1) (A), (B)]	June 30, 2017
AB-1739	Board must adopt a fee schedule to recover costs related to the "state backstop," including costs for investigations, facilitation, monitoring, hearings, enforcement, and administration. [§1529.5 (a)]	By July 1, 2017
AB-1739	Identify specific deficiencies and potential actions to address those deficiencies in a probationary basin. [§10735.6 (a)]	As needed
AB-1739	A person who extracts more than 2 acre feet of groundwater per year in an area not under a groundwater management agency shall file a report with the Board. [§5202 (a) (2)]	After July 1, 2017 Reports due annually by December 15
Local Actions		
SB-1168	New or renewed Groundwater Management Plans will not be adopted after deadline, unless the basin is a low or very low priority. [§10750.1]	January 1, 2015
SB-1168	Adjudicated basins shall submit a copy of the final judgment to DWR, and annually submit a report containing information on groundwater elevation, extraction, surface supply use for recharge or in-lieu use, total use, change in groundwater storage, and the annual report submitted to the court. [§10720.8(f)]	April 1, 2016
AB-1739	A local agency or collection of local agencies must elect to be the groundwater sustainability agency for a high or medium priority basin. [§10735.2 (a)(1)(A),(B)]	June 30, 2017
AB-1739	A local agency shall submit an alternative to a groundwater sustainability plan no later than January 1, 2017, and every five years thereafter. [§10733.6 (c)]	January 1, 2017

SB-1168	If there is no Groundwater Sustainability Agency (GSA) for a basin or portion of basin, the county will be presumed to be the GSA, and must file notice to DWR by deadline either affirming or disaffirming role. If county fails to meet deadline, all groundwater extractions are subject to reporting requirements under §5200 et seq. [§10724(b)]	July 1, 2017
SB-1168	High and medium priority basins that have been designated by Bulletin 118, as may be revised by January 1, 2017, as in a condition of critical overdraft must be managed under a GSP. [§10720.7(a)]	January 31, 2020
SB-1168	High and medium priority basins not designated as in critical overdraft must be managed under a GSP. [§10720.7(a)]	January 31, 2022

Michael Frantz- CLE Materials WLS





WATER & POWER

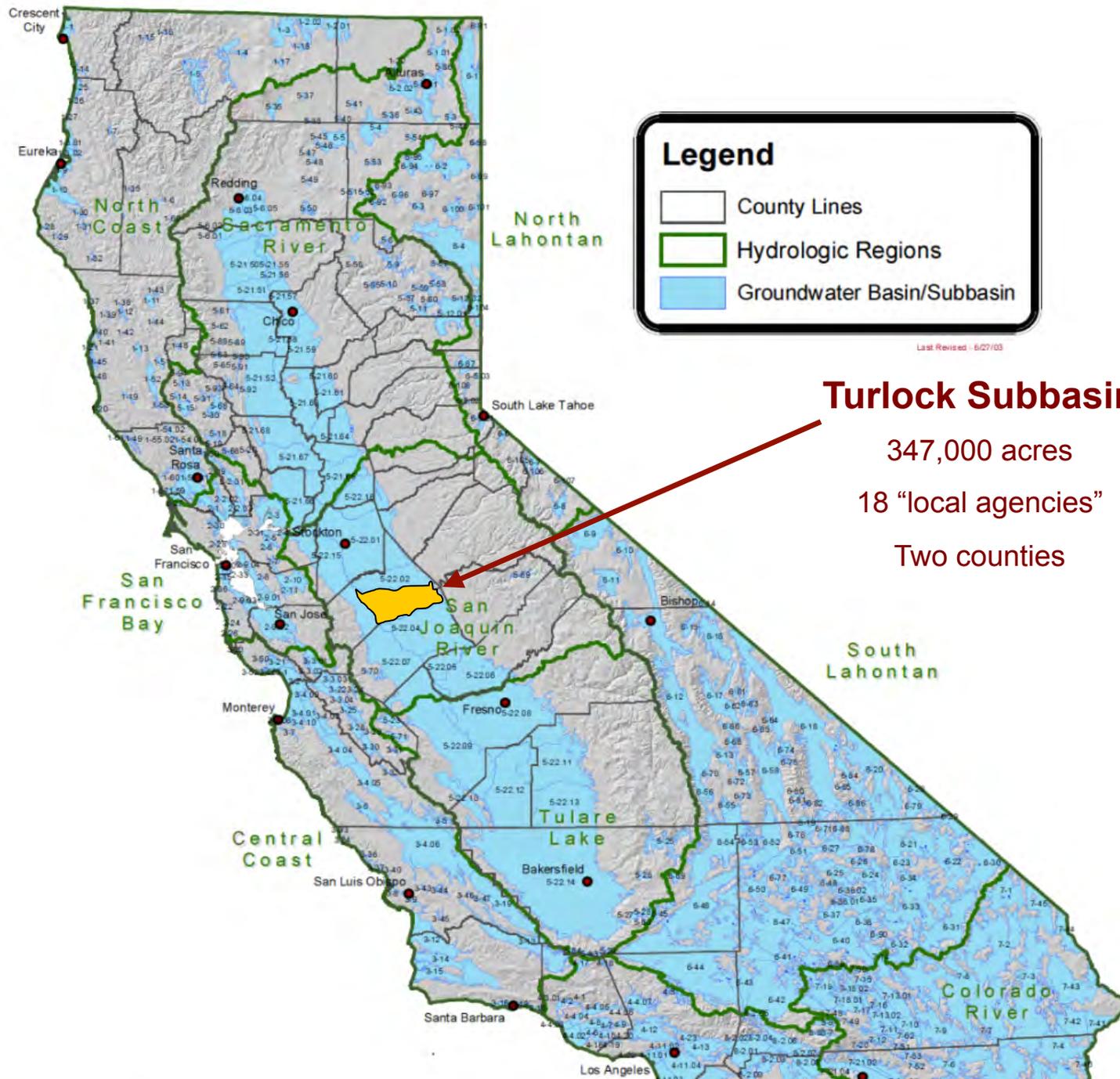
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Michael Frantz

Turlock Irrigation District Director

*The Drought & Groundwater
Legislation (SGMA Implementation)*





Legend

-  County Lines
-  Hydrologic Regions
-  Groundwater Basin/Subbasin

Last Revised - 6/27/03

Turlock Subbasin

347,000 acres

18 "local agencies"

Two counties

18 local agencies in Subbasin

- **Municipal Agencies**

- City of Ceres
- City of Turlock
- City of Hughson
- City of Modesto
- Hilmar County Water District
- Delhi County Water District
- Denair CSD
- Keyes CSD
- Ballico CSD
- Monterey Park Tract CSD
- City of Waterford (via Hickman)

- **Agricultural Agencies**

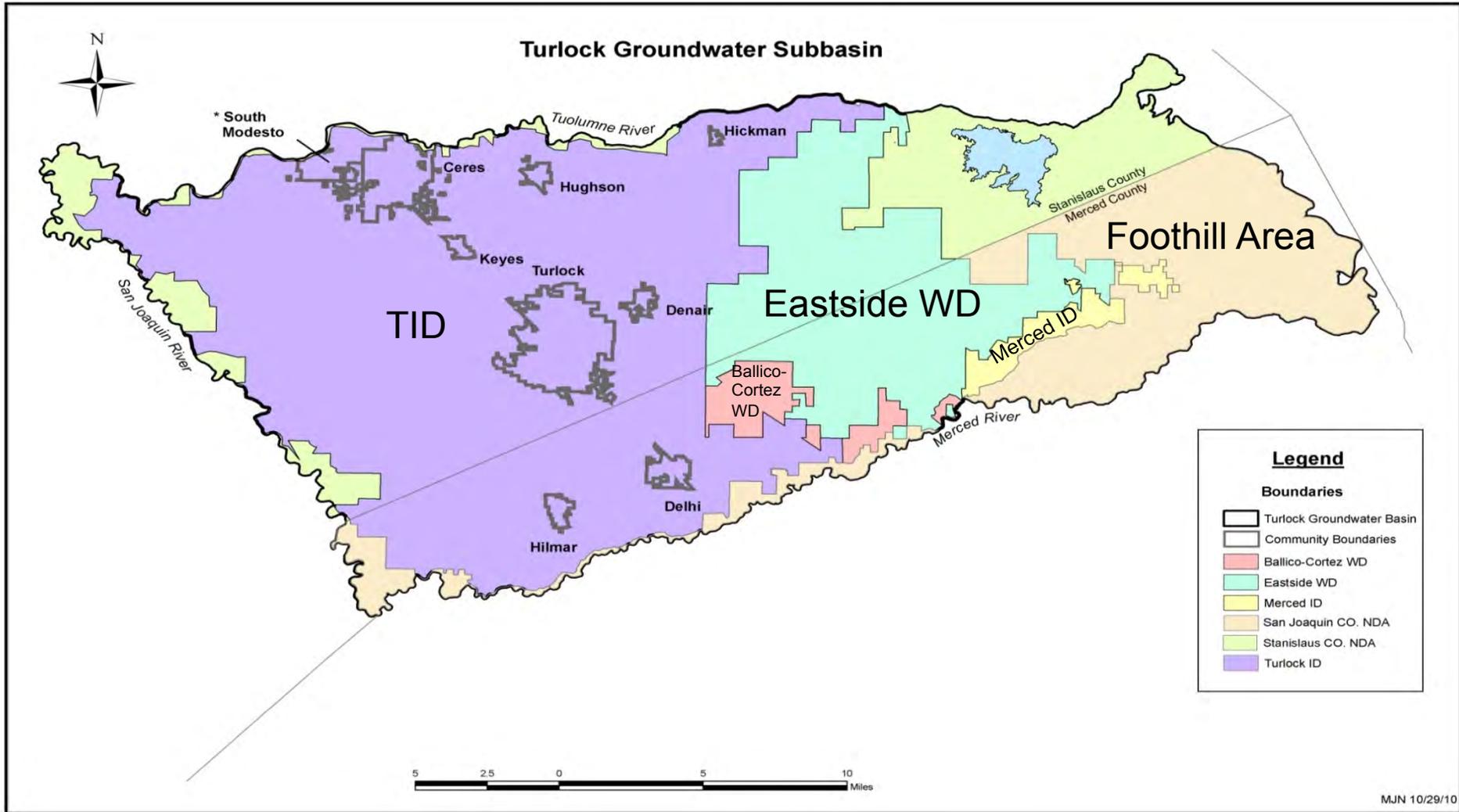
- Turlock Irrigation District
- Merced Irrigation District
- Eastside Water District
- Ballico-Cortez Water District
- Stevinson Water District

- **Other Agencies**

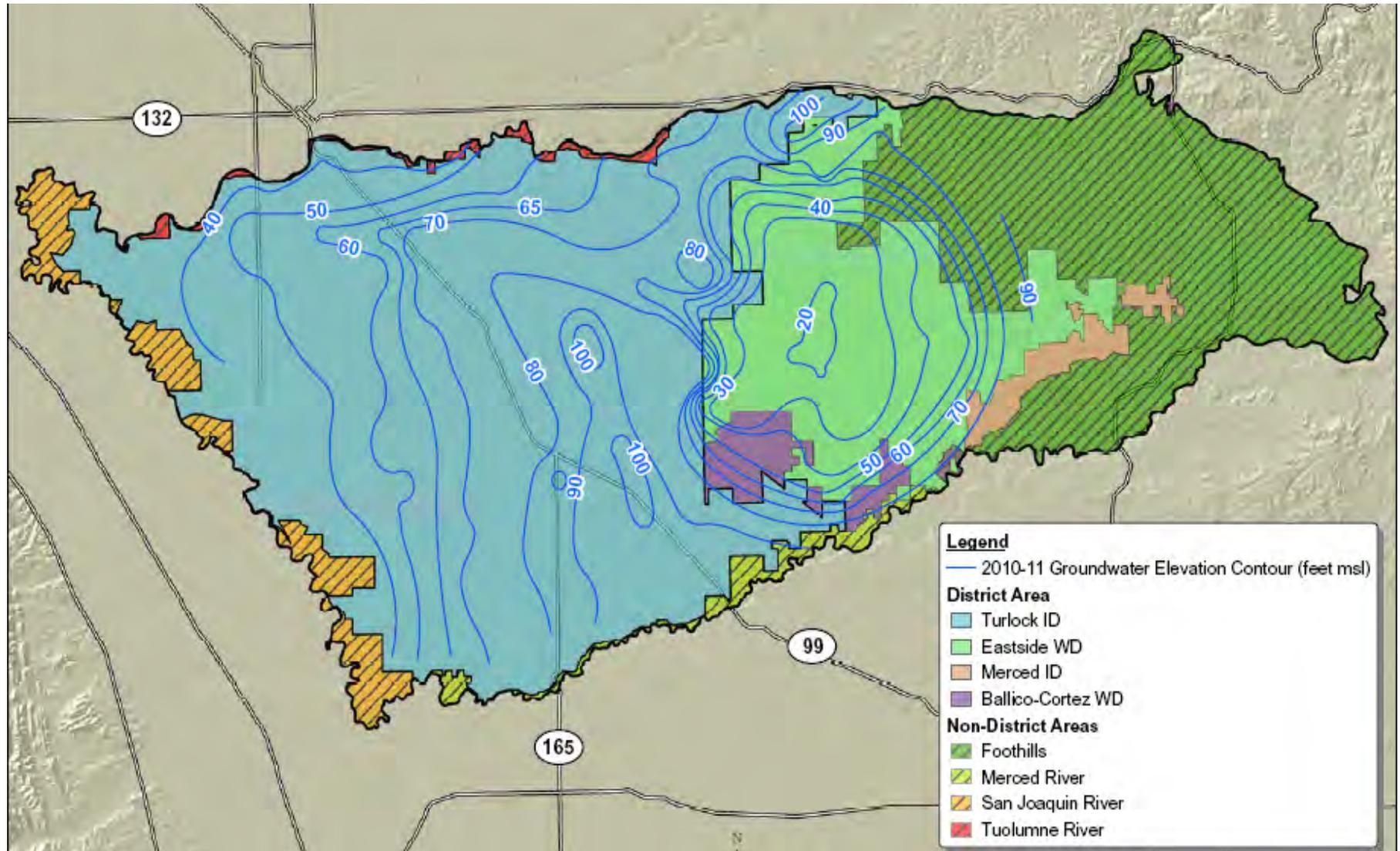
- Merced County
- Stanislaus County



The Turlock Subbasin



Groundwater elevations - 2010



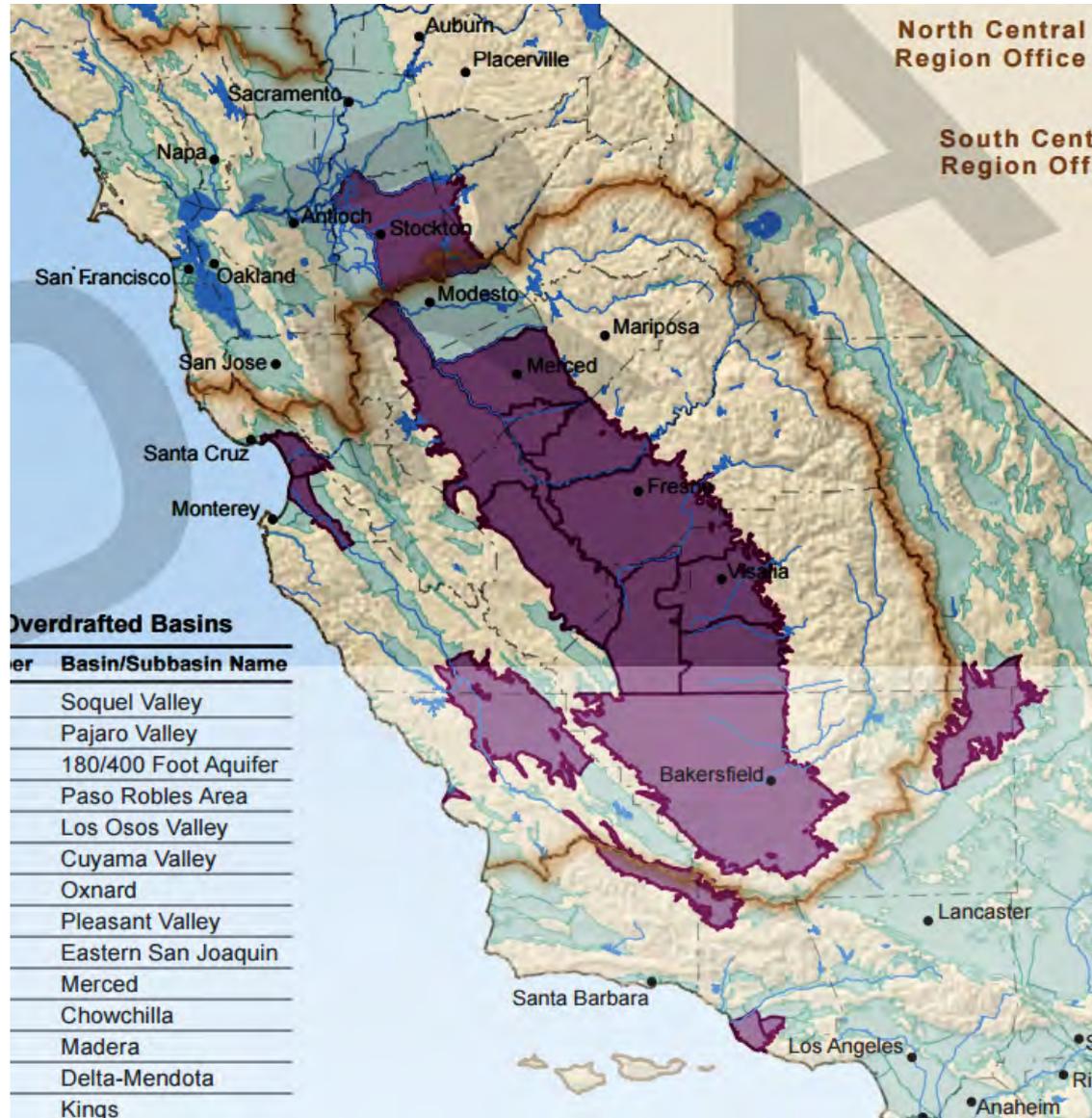
Knowledge base exists

- Turlock Groundwater Basin Association
 - Early 1990s: 15 local agencies cooperating
 - 1995: TGBA formed via MOU
 - 1997: First Subbasin GWMP
- Groundwater Management Plan (2008)
 - Established basin management objectives
- Urban / Ag Water Management Plans

TID actions

- Discussions with others in the Subbasin
 - Missing 6/30/17 GSA deadline not an option
- TID, others adopted Post-SGMA MOU
 - Best GSA governance unknown at current
 - Single GSP preferred
- Who's at the JPA discussion table?
- First community informational scoping meeting tomorrow night 10/29/2015

Critically Overdrafted Basins



Conjunctive use and efficiency

Irrigation “inefficiency” is a major source of groundwater recharge. In the Central Valley and other agricultural regions of California, irrigation inefficiency is a major source of aquifer recharge (Ruud et al. 2004). In many areas, drought-year groundwater supplies depend substantially on irrigation inefficiency in wetter years, when surface water is available and used by farmers. Ironically, local inefficiency often improves regional water use efficiency and sustainability. However, excessive groundwater pumping causes long-term continual decline in groundwater levels (“overdraft”) and irrigation inefficiency increases salt and nitrate loads to groundwater. There are few perfect solutions in water.

- UC Davis Center for Watershed Sciences' California Water Blog, 1/30/13

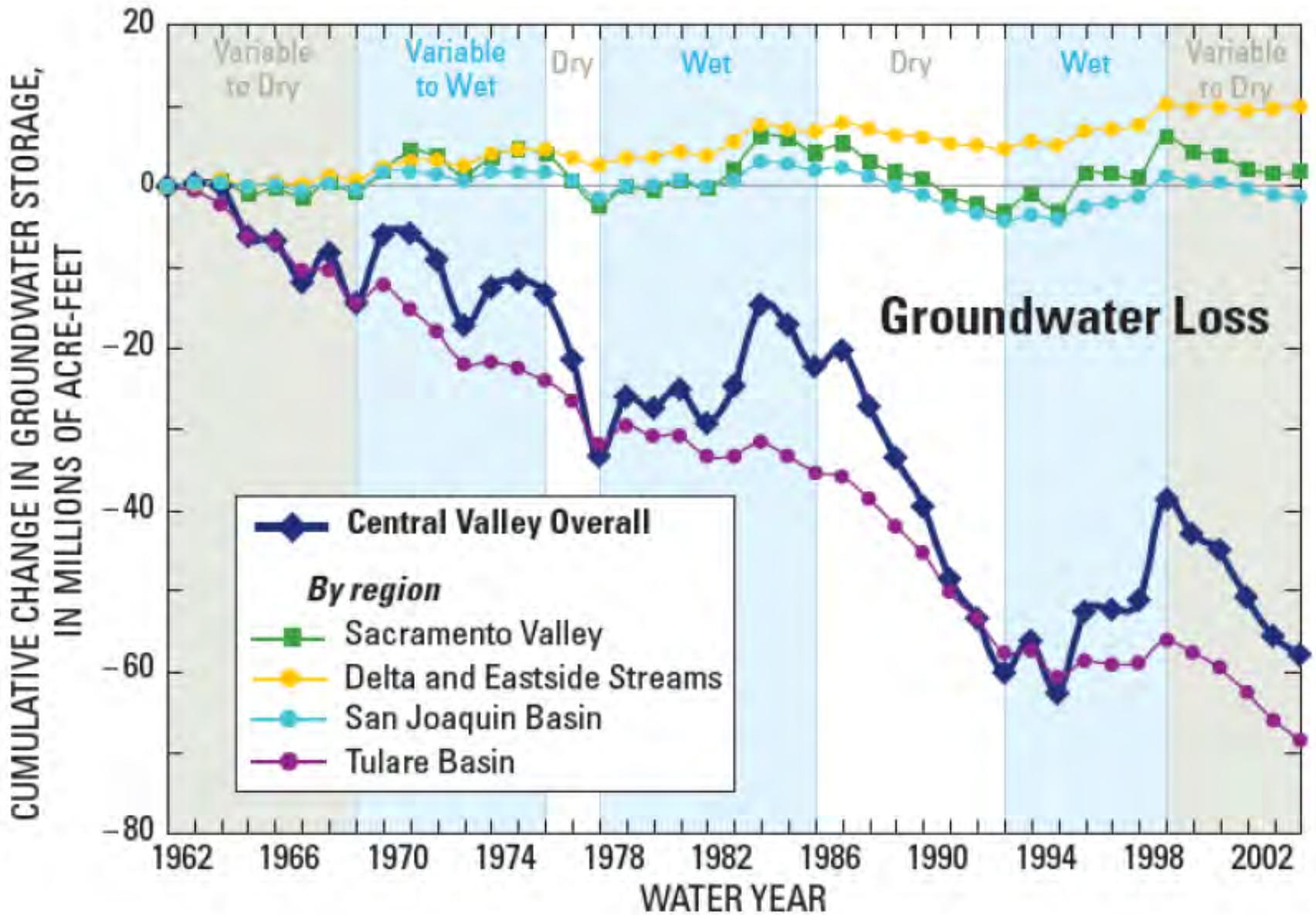


Year	Year Type	Canal Seepage (AF)	Deep Percolation of Applied Water (AF)	Deep Percolation of Precipitation (AF)	Total Recharge	
					(AF)	(AF/ac)
2010	Normal	39,210	201,650	76,118	316,978	2.4
2011	Normal	39,340	219,446	63,892	322,678	2.4
2012	Dry	36,890	177,879	31,532	246,301	1.8
2013	Dry	36,890	170,903	18,707	226,500	1.6
2014	Dry	31,000	105,416	58,762	195,178	1.4
2010-2014	Average	36,666	175,059	49,802	261,527	1.9
	Minimum	31,000	105,416	18,707	195,178	1.4
	Maximum	39,340	219,446	76,118	322,678	2.4
1991-2014	Average	36,049	193,521	69,078	298,649	2.2
	Normal Year	36,542	205,202	86,493	328,237	2.4
	Dry Year	35,467	179,716	48,498	263,681	1.9

Table 4.6. TID Net Groundwater Recharge.

Year	Hydrologic Year Type	Total Recharge (AF)	Groundwater Pumping (AF)	Net Recharge	
				(AF)	(AF/ac)
2010	Normal	316,978	80,983	235,995	1.8
2011	Normal	322,678	85,757	236,921	1.8
2012	Dry	246,301	139,027	107,274	0.8
2013	Dry	226,500	155,679	70,821	0.5
2014	Dry	195,178	191,632	3,546	0.0
2010-2014	Average	261,527	130,615	130,912	1.0
	Minimum	195,178	80,983	3,546	0.0
	Maximum	322,678	191,632	236,921	1.8
1991-2014	Average	298,649	107,919	190,729	1.4
	Normal Year	328,237	91,033	237,203	1.7





Water Management

- Interconnection of GW & SW
- Promoting On-Farm Efficiency measures can negatively impact GW
- Basin Plans, Minimum River Flows for environmental & recreation must account for impacts to GW – This is a big change from past practices. Single issue management.
- Drought has raised awareness that GW is a reserve to be tapped in dry periods, but must be recharged with SW during wet years

CA Water Code § 10720.9

“All relevant state agencies, including, but not limited to, the board, the regional water quality control boards, the department, and the Department of Fish and Wildlife, shall consider the policies of this part, and any groundwater sustainability plans adopted pursuant to this part, when revising or adopting policies, regulations, or criteria, or when issuing orders or determinations, where pertinent.”



Bay-Delta Plan, Phase 1 SED

Modesto Bee

[Previous Story](#)
[Next Story](#)

OUR VIEW

Our View: We must protect our water, below and above ground

August 25, 2014

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Taken by itself, the legislation known as Pavley-Dickinson is a desperately needed attempt to create a sustainable supply of groundwater. But just as creeks connect to rivers and rivers to oceans, groundwater is inextricably connected to the water that flows through our region. And no plan that ignores that essential fact can succeed for us.

“...the State Water Resources Control Board is formulating demands to send vastly more water down the Merced, Tuolumne and Stanislaus rivers into the Delta. The goal is to improve survival for salmon...”



WATER & POWER
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Tough decisions to be made

- Contractual formation of GSAs
- Authorities of GSAs
 - Rules? Regs? Ordinances?
 - Meters? Annual statements of use?
 - Pumping thresholds? Investigations?
 - Assess fees? Purchase land?
 - Enforcement?
- GSP(s)
 - Who prepares? Submits to DWR?
 - Programs/projects in a GSP(s)?

Local Control

- Legislature got it right in leaving GSAs and GSPs up to locals.
- Local engagement at all-time high
- Locals are motivated to comply & most knowledgeable
- SGMA offers Farmers the opportunity to engage, and be a part of the solution.

Questions?

Engagement

- GSA governance
 - GSAs shall ‘encourage the active involvement of diverse...elements’ of the basin prior to and during the devel./implementation of GSPs.
 - Open meetings, Brown Act compliant
 - May appoint advisory committees
- Learned best practices
 - Over communication is best
 - Additional outreach
- Public input to DWR re: reg. process

Thinking regionally is new norm

- Water Master Plan
- Domestic Water Project
- Partnering with neighbors
- Sustainability of the Subbasin means looking at much more than groundwater
- East Stanislaus IRWMP

What could the future hold?

- Compliance with the law, ideally favoring progressive steps
- Multiple GSAs, ideally adopting and implementing single GSP
 - Non-regulatory, regional coordination committees have some merit
- Governance / GSPs can create opportunities to think regionally, where practical





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