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Desperate Times Call for Sensible Measures: The Making of the California Sustainable Groundwater Management Act

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DESPERATE TIMES CALL FOR SENSIBLE MEASURES: THE MAKING OF THE CALIFORNIA SUSTAINABLE GROUNDWATER MANAGEMENT ACT

TINA CANNON LEAHY*

*When you drink the water, remember the spring.*¹

—Chinese Proverb

The story of how California passed the Sustainable Groundwater Management Act (SGMA)—popularly pronounced as “Sigma”—is an example of how what occurs “overnight” can be a century in the making.

I. GROUNDWATER POLICY: NEAR MISSES AND LOST OPPORTUNITIES

California is frequently the United States’ leader in sustainability and progressive regulation. Sections of the State’s Porter-Cologne Water Quality Control Act were models for the modern federal Clean Water

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¹ *Water Cards*, PG&E, 27, *available at* http://www.pge.com/includes/docs/pdfs/shared/edu/safety/training/pec/water/water_cards.pdf (last visited Nov. 7, 2015) (part of the Water Showcase Resources provided by PG&E used in their previous Workshops and Training sessions).

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Act.² The federal Clean Air Act provided California a preemption waiver that not only allowed it to set its own automobile emissions standards but empowered other states to choose between the stricter California standard and the federal standard.³ With a market share of over 8% of the total United States population, the State's 2003 ban on brominated flame-retardants was effectively a nationwide ban.⁴ And in 2006, California took legislative action on climate change while congressional leaders were still nattering about whether global warming was related to human activities.⁵ Nonetheless, California was the last State in the nation to adopt a statewide system for groundwater regulation.⁶

The Golden State possesses a pioneering spirit. The author Joan Didion once observed, "things had better work here, because here, beneath the immense bleached sky, is where we run out of continent."⁷ The flip side of that grit is California's stubborn individualism. Nowhere is that more apparent in water policy than with groundwater. In 1903, defendants in the seminal California groundwater case, *Katz v. Walkinshaw*, asserted that those with property overlying a groundwater basin, called "overliers," had the right to extract as much water as they wanted.⁸ The Supreme Court of California did not agree and placed some boundaries on groundwater withdrawal when it decreed that overliers share equally and that others may obtain rights by prescription.⁹ However, in rendering his opinion, Justice Shaw painted a scenario over one hundred years ago that is eerily reminiscent of today's water crisis in the Central Valley:

² The Porter-Cologne Water Quality Control Act of 1969, CAL. WATER CODE § 13000 et seq. (Westlaw 2015); Federal Water Pollution Control Act, 33 U.S.C.A. § 1251 et seq. (Westlaw 2015).

³ 42 U.S.C.A. § 7543 (Westlaw 2015).

⁴ CAL. HEALTH & SAFETY CODE § 108920 et seq. (Westlaw 2015); see also Tracy Daub, Note, *California—Rogue State or National Leader in Environmental Regulation?: An Analysis of California's Ban of Bromated Flame Retardants*, 14 S. CAL. INTERDISC. L.J. 345 (2005).

⁵ The California Global Warming Solutions Act of 2006, CAL. HEALTH & SAFETY CODE § 38500 et seq. (Westlaw 2015); *Questions Surrounding the "Hockey Stick" Temperature Studies: Implications for Climate Change Assessments*, Hearing Before the H. Subcomm. on Oversight and Investigations of the Comm. on Energy & Commerce, 109th Cong. (2006) (statement of Gerald R. North, Professor, Department of Atmospheric Sciences, Texas A&M University).

⁶ Following the SGMA, this Article uses the term "groundwater," but some of the texts cited and quoted in this Article use "ground water."

⁷ JOAN DIDION, *Slouching Towards Bethlehem* 172 (1968).

⁸ *Katz v. Walkinshaw*, 74 P. 766, 766 (Cal. 1903) ("It is contended that the rule that each landowner owns absolutely the percolating waters in his land, with the right to extract, sell, and dispose of them as he chooses, regardless of the results to his neighbor, is part of the common law, and as such has been adopted in this state as the law of the land . . .").

⁹ *Id.* at 772 ("Disputes between overlying landowners, concerning water for use on the land, to which they have an equal right, in cases where the supply is insufficient for all, are to be settled by giving to each a fair and just proportion.").

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So great is the scarcity of water under the present demands and conditions that one who is deprived of water which he has been using has usually no other source at hand from which he can obtain another supply.

The water thus obtained from all these sources is now used with the utmost economy, and is devoted to the production of citrus and other extremely valuable orchard and vineyard crops. The water itself, owing to the tremendous need, the valuable results from its application, and the constant effort to plant more orchards and vineyards to share in the great profits realized therefrom, has become very valuable. . . . This abundance of land, with the scarcity and high price of water, furnish a constant stimulus to the further exhaustion of the limited amount of underground water, and a constant temptation to invade sources already appropriated. . . . With an increasing population of this character, it is manifest that nothing that is possible to be done to secure success will be left undone, and that there must ensue in years to come a fierce strife[,] first to acquire and then to hold every available supply of water.¹⁰

Other than the antiquated language, that quote could have come from last year's *Sacramento Bee* or this year's *Los Angeles Times*.¹¹

A. WHAT IS GROUNDWATER?

California uses more groundwater “than any other state and overdrafts as much as 1.4 million acre feet in a normal year.”¹² But what is

¹⁰ *Id.* at 768–69.

¹¹ See Editorial, *California Needs Overdraft Protection for Its Dwindling Groundwater Supplies*, *SACRAMENTO BEE*, Apr. 13, 2014, <http://www.sacbee.com/opinion/editorials/article2595526.html> (“Taking more water out of groundwater basins than goes in pits neighbor against neighbor in the San Joaquin Valley and in some coastal and Southern California areas. Farmers and residents see their wells going dry and, with land subsidence, some canals running backwards.”); Bettina Boxall, *Overpumping of Central Valley Groundwater Creating a Crisis, Experts Say*, *L.A. TIMES*, Mar. 18, 2015, <http://www.latimes.com/local/california/la-me-groundwater-20150318-story.html#page=1> (“Parts of the San Joaquin Valley are deflating like a tire with a slow leak as growers pull more and more water from the ground. The land subsidence is cracking irrigation canals, buckling roads and permanently depleting storage space in the vast aquifer that underlies California’s heartland. The overpumping has escalated during the past drought-plagued decade, driving groundwater levels to historic lows in some places. But in a large swath of the valley, growers have been sucking more water from its sands and clays than nature or man puts back for going on a century. They are eroding their buffer against future droughts and hastening the day, experts warn, when they will be forced to let more than a million acres of cropland turn to dust because they have exhausted their supplies of readily available groundwater.”)

¹² LITTLE HOOVER COMM’N, *MANAGING FOR CHANGE: MODERNIZING CALIFORNIA’S WATER GOVERNANCE* 19 (2010), available at <http://www.lhc.ca.gov/studies/201/Report201.pdf>; see also CAL. DEP’T OF WATER RES., *BULLETIN 160-13, CALIFORNIA WATER PLAN UPDATE 2013 Glossary 1* (Oct. 2003), available at <http://www.waterplan.water.ca.gov/cwpu2013/final/index.cfm> [hereinafter *BULLETIN 160-13*]. “[A]cre-foot (af)—The volume of water that would cover 1 acre to a depth of 1

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groundwater? And what is overdraft? Groundwater is water that seeps into the ground and collects in the spaces between the grains of gravel, sand, silt, or clays, or settles into fractured rock. As Professor Thomas Harter put it, groundwater is “water that fills pores and fractures in the ground, much as milk fills the voids within bits of granola in a breakfast bowl.”¹³ The unsaturated zone, which is the distance between the land surface and the top of the groundwater (also called the “water table”), can range from a few feet to hundreds of feet, depending on the location.¹⁴ Areas with significant volumes of groundwater are called aquifers. In some places there can be multiple aquifers piled on top of each other like a layer cake and separated by clay, rock, or other geologic formations that permit little or no water to flow between.¹⁵ Aquifers are also called groundwater basins. Groundwater basins are recharged—refilled—when rain, river water, or agricultural irrigation water seeps down through the unsaturated zone to the water table.¹⁶ A groundwater basin is in “overdraft” when “the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years” under average conditions.¹⁷

Groundwater tables also affect surface waters. When the top of the groundwater table is higher than the bottom of a stream, water from the aquifer contributes to the stream’s flow. A stream that is being fed like that is called a “gaining” stream. When groundwater pumping lowers groundwater levels, it creates an earthen gap between the bottom of the stream or river and the groundwater table. Instead of being fed, the stream begins “losing” flow as water percolates from the riverbed down to the aquifer, causing surface water levels to drop or completely disappear.¹⁸

B. 1914 WATER COMMISSION ACT

Almost a decade after *Katz*, enactment of the Water Commission Act on December 19, 1914, created the agency that evolved into today’s State Water Resources Control Board (the “State Water Board”) and set

foot; equal to 43,560 cubic feet or 325,851 gallons. An acre-foot of water is considered enough water to meet the needs of two families of four for one year.” *Id.*

¹³ THOMAS HARTER, UNIV. OF CAL. DIV. OF AGRIC. & NATURAL RES., BASIC CONCEPTS OF GROUNDWATER HYDROLOGY 1 (2003), available at <http://anrcatalog.ucdavis.edu/pdf/8083.pdf>.

¹⁴ *Id.*

¹⁵ *Id.* at 2.

¹⁶ *Id.* at 4.

¹⁷ 1 BULLETIN 160-13, *supra* note 12, at 3-30.

¹⁸ MAURICE HALL, THE NATURE CONSERVANCY, WRITTEN TESTIMONY ON CALIFORNIA WATER GOVERNANCE TO THE LITTLE HOOVER COMMISSION 15-16 (Jan. 2010), available at <http://www.lhc.ca.gov/studies/201/watergovernance/HallJan10.pdf>.

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in place a permit system for appropriative surface water rights from the newly created agency.¹⁹ But the Water Commission Act was also a lost opportunity. As the late Professor Joseph Sax commented, the Water Commission's original bill to create a water rights permit system included both surface water and groundwater because it did not distinguish between them.²⁰ This was not out of ignorance. Professor Sax's excellent history provides a detailed conversation among the drafters on the topic. But, unfortunately, the dialogue ended abruptly and without controversy. The very first amendment to the proposed legislation clarified that it only applied to surface water, thus, in the words of Professor Sax, "sweeping away governance of groundwater."²¹ Thus, statewide groundwater regulation—and the State Water Board's potential to play a key role in it—were left by the wayside without a whimper.

The State Water Board allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides nine regional boards focused exclusively on water quality.²² The State Water Board's task is not an easy one. As the chief water regulator, it must maneuver through a legal *mélange* including common law relating to riparian lands (lands bordering a water body), appropriative water rights that pre-date the modern permit system and were "grandfathered" into law (pre-1914 rights), the post-1914 appropriative water rights permit system, and some other less-common surface water rights.²³ But until SGMA, the State Water Board's involvement in groundwater management was limited by a legal fiction that distinguished "subterranean streams flowing through known and definite channels" (subject to permits) versus other groundwater (unpermit-

¹⁹ STATE WATER RES. CONTROL BD., CAL. ENVTL. PROT. AGENCY, INFORMATION PERTAINING TO WATER RIGHTS IN CALIFORNIA 4-5 (2000), available at http://www.swrcb.ca.gov/publications_forms/publications/general/docs/1577.pdf.

²⁰ Joseph L. Sax, *We Don't Do Groundwater: A Morsel of California Legal History*, 6 U. DENV. WATER L. REV. 269, 293 (2003), available at <http://scholarship.law.berkeley.edu/cgi/view-content.cgi?article=2394&context=facpubs> ("The bill makes no distinction between surface water and groundwater, but simply covers 'water' generally.").

²¹ *Id.*

²² *History of the Water Boards*, ST. WATER RESOURCES CONTROL BOARD, http://www.waterboards.ca.gov/about_us/water_boards_structure/history.shtml (last updated July 5, 2012).

²³ *The Early Years of Water Rights*, ST. WATER RESOURCES CONTROL BOARD, http://www.waterboards.ca.gov/about_us/water_boards_structure/history_water_rights.shtml (last updated Sept. 20, 2011). Less-common rights include "reserved rights," which attach to land "set aside by the federal government when it reserves land from the public domain," and "pueblo rights" dating back to Spanish and Mexican law. *Id.*

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ted)²⁴ as well as by the strong desire of water agencies to “solve their problems themselves and to manage ground water basins locally.”²⁵

It must be noted, however, that the Water Commission Act did set the stage for a fundamental change in groundwater law. In *City of Pasadena v. City of Alhambra*, the City of Pasadena, relying on authority under the Water Commission Act to “determine the ground water rights,”²⁶ sued the City of Alhambra, claiming Alhambra’s groundwater withdrawals from the Raymond Basin Area were causing overdraft. According to Pasadena, it was an overliar and should therefore have been entitled to its withdrawals, while Alhambra was an “appropriator” subject to the “first in time, first in right doctrine” who should “then be the first to be curtailed in limiting total production of the area to the safe yield.”²⁷ However, the Supreme Court of California reasoned differently. It found that “all of the parties have been producing water from the underground basin for many years, and none of them have acted to protect the supply or prevent invasion of their rights until this proceeding”²⁸ As a result there were three types of rights to the basin: overlying, appropriative, and prescriptive.²⁹ As stated in *Katz*, overlayers are those with property overlying the basin and must share equally. Appropriators are those who are not overlayers, and they are limited to taking “surplus” water in the basin, since overlying rights are paramount. However, “an appropriative taking of water which is not surplus is wrongful and may ripen into a prescriptive right where the use is actual, open and notorious, hostile and adverse to the original owner, continuous and uninterrupted for the statutory period of five years”³⁰

Here is where it got tricky: In upholding the trial court’s decision, the supreme court found that the prescriptive rights were not limited to just the appropriators. Once overdraft began, “such rights were acquired against both overlying owners and prior appropriators,” who both “also obtained, or preserved, rights by reason of the water which they

²⁴ CAL. WATER CODE § 1200 (Westlaw 2015).

²⁵ Jan Stevens, *California’s Groundwater: A Legally Neglected Resource*, 19 HASTINGS W.-NW. J. ENVTL. L. & POL’Y 3, 8 (2013).

²⁶ *City of Pasadena v. City of Alhambra*, 207 P.2d 17, 23 (Cal. 1949) (citing Water Commission Act, ch. 586, § 24, Stats. 1012 (1913) (current version at CAL. WATER CODE § 100 et seq. (Westlaw 2015))).

²⁷ *City of Pasadena*, 207 P.2d at 29; see also BULLETIN 160-13, *supra* note 12, Glossary at 30 (defining safe yield as “the maximum quantity of water that can be continuously withdrawn from a groundwater basin without adverse effect”).

²⁸ *City of Pasadena*, 207 P.2d at 32.

²⁹ *Id.* at 28. To the layperson, or even a new law student, the doctrine of prescription can seem objectionable. It bestows a legal right to use property on one who infringes on another’s legal right to use property or, as the *Pasadena* court called them, “wrongdoers.” *Id.* at 31-32.

³⁰ *Id.* at 29.

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pumped.”³¹ What it meant in practicality was that all pumpers in an overdrafted basin were now on an equal footing: each would have its rights measured in accordance with the amount it was actually pumping, and then all of those amounts would be reduced proportionately until safe yield was reached in the basin. But the judgment establishing a doctrine of mutual prescription was also flexible. The pumpers would be limited to their proportional allocations, but the trial court would retain jurisdiction over the matter and could review and change the decree if “conditions warrant an increase.”³² This set the standard for many groundwater adjudications to come.

C. ORANGE COUNTY WATER DISTRICT AND THE 1952 PUMP TAX

The Water Commission Act may have been a lost opportunity for statewide groundwater management, but one local area did not wait for the Legislature to step up. Between 1888 and 1912, the irrigated acreage in the aptly named Orange County, a rich farming region for citrus and other crops, had more than doubled, from 23,500 to 50,000 acres. The result was lowering well levels and rising unease.³³ A 1905 federal study urged conservation, but a 1925 report by water engineer J.B. Lippincott to the Orange County Board of Supervisors was more direct. Lippincott advised that “the overdraft was about 39,449 acre-feet, that the artesian area had shrunk from 315 square miles in 1888 to 52 square miles in 1923, and that the water table level was dropping 2.5 feet per year.”³⁴ Perhaps more alarming, Lippincott also discovered that as the groundwater levels fell, the interior groundwater basin became more vulnerable to ruination by seawater intrusion.³⁵

By 1929, the Orange County Farm Bureau formed the Santa Ana Basin Water Rights Protective Association (the “Association”) “to study the political problem of groundwater recovery and come up with a solution.”³⁶ The Association was composed of “prominent farmers and political figures from throughout the valley” who were trying to stabilize the basin, while protecting it from “outsiders” like the City of Long Beach.³⁷

³¹ *Id.* at 33.

³² *Id.* at 35.

³³ ORANGE CNTY. WATER DIST., *A HISTORY OF ORANGE COUNTY WATER DISTRICT 11* (The Acorn Grp., 2d. ed. 2014) (2003), available at <http://www.ocwd.com/Portals/0/About/HistoricalInformation/A%20History%20of%20Orange%20County%20Water%20District.pdf>.

³⁴ See *id.* (paraphrasing J.B. LIPPINCOTT, *REPORT OF WATER CONSERVATION AND FLOOD CONTROL ON THE SANTA ANA RIVER 2* (1925)).

³⁵ *Id.*

³⁶ *Id.* at 13.

³⁷ *Id.*

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The Association was galvanized by a sobering report from its water engineer, Paul Bailey, which demonstrated groundwater levels were continuing to fall even in years of above-average precipitation.³⁸ Eventually, proposals by the Association led to the introduction of Senate Bill (SB) 1201 by Nelson T. Edwards, a banker from Orange County.³⁹ SB 1201 created the Orange County Water District (OCWD) for the purpose of legally defending the basin water rights, importing replenishment water from outside the watershed, and reclaiming flood and storm water for beneficial use in the basin.⁴⁰

Despite the formation of the new district, the basin continued to struggle with overdraft. In 1952, OCWD formed a Water Basin Conservation Committee that became known by its informal name of “The Committee of Twelve.”⁴¹ This veritable who’s-who of conservative county business and political leaders did an extraordinary thing:

They set aside their individual property rights concept in favor of a basin-wide use policy in which they would share the surplus in wet years and the shortage in drought. . . . [E]very producer in the future would have an equal right to pump as much water as he could beneficially use, but . . . each would also have the obligation to pay the costs of replacing his yearly extractions to continue making the basin as productive as possible.⁴²

The means of accomplishing this was SB 91, introduced by Senator John Murdy, a Committee of Twelve member.⁴³ SB 91 took a unique approach: all water-producing facilities would have to register with OCWD and be charged a fee in proportion to the amount of groundwater withdrawn, “the proceeds of which would be used exclusively for the acquisition of water for replenishment of district ground-water supplies.”⁴⁴ In other words, it was a pump tax. In urging a signature on the bill, Frank Durkee, the State Director of Public Works (the predecessor agency to the current Department of Water Resources (DWR)), wrote to Governor Earl Warren, stating the “proposal to levy assessments upon

³⁸ *Id.*

³⁹ S.B. 1201, 1933 Leg., Reg. Sess. (Cal.), 1933 Cal. Stat. Ch. 924.

⁴⁰ ORANGE CNTY. WATER DIST., *supra* note 33, at 16.

⁴¹ *Id.* at 24-25.

⁴² *Id.* at 25.

⁴³ S.B. 91, 1953–1954 Leg., Reg. Sess. (Cal. 1953), 1953 Cal. Stat. Ch. 770; *See* ORANGE CNTY. WATER DIST., *supra* note 33, at 25.

⁴⁴ Inter-Departmental Communication from Frank B. Durkee, Dir. of Pub. Works, to the Honorable Earl Warren, Governor of Cal. 3 (May 13, 1953) (on file with author) (discussing Cal. S.B. 91, *supra* note 43).

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production of ground water for the purpose of replenishing an overdraft on ground-water basins is a new principle in this State.”⁴⁵

OCWD established that, given the right tools, it was possible to manage a groundwater basin without undergoing groundwater adjudication, an arduous legal procedure by which the court may determine the rights of all overlying landowners and in the process designate the State Water Board to act as referee.⁴⁶ Those tools included estimating the sustainable yield of the basin, registering groundwater production facilities, measuring withdrawals, charging fees to manage and replenish a basin, and having enforcement authorities to ensure compliance. In 1955, the Legislature took another small step forward when it passed the Water Replenishment District Act.⁴⁷ The Act applied to all areas of the state, with the exception of OCWD’s territory, and enabled locals to petition for the formation an agency that could charge property taxes and pump taxes to purchase water for replenishment purposes.⁴⁸ Unfortunately, the Water Replenishment District of Southern California, formed in 1959, is the only district that has ever been created under the Act. It would take more than half a century before the Legislature would recognize the broader value of OCWD’s approach and make its tools generally available to local agencies seeking to sustainably manage their groundwater basins under SGMA.

Californians in other over-tapped basins could seek a special district statute in the Legislature (as the Association had done in forming OCWD), undergo adjudication, or continue ignoring the basin’s progressive degradation. Most chose the latter. Special district statutes can be politically complicated⁴⁹ and are not, in and of themselves, a guarantee of sustainable management.⁵⁰ Adjudications are a last resort: lengthy, complicated, and expensive.⁵¹ This is why only twenty-seven are adjudi-

⁴⁵ *Id.* at 2-3.

⁴⁶ Stevens, *supra* note 25, at 8; *see* CAL. WATER CODE §§ 2000, 2001 (Westlaw 2015).

⁴⁷ CAL. WATER CODE § 60000 et seq. (Westlaw 2015).

⁴⁸ CAL. WATER CODE §§ 60047, 60080, 60081 (Westlaw 2015).

⁴⁹ Even OCWD’s formation efforts took two tries. An initial attempt in 1931 failed because of opposition from nearby cities. ORANGE CNTY. WATER DIST., *supra* note 33, at 16.

⁵⁰ Gretchen Wenner, *As Water Cutbacks Loom, Pumping Restrictions Get Scrutiny*, VENTURA CNTY. STAR, Aug. 14, 2014, http://www.vcstar.com/news/price-of-paradise/water/as-water-cutbacks-loom-pumping-restrictions-get-scrutiny_66341382. Fox Canyon Groundwater Management Agency adopted an emergency ordinance in 2014 limiting groundwater pumping after exceeding, for at least 10 years, levels that scientists advised could be safely withdrawn. *Id.*

⁵¹ Fiona Smith, *State Looking To Speed Groundwater Lawsuits*, DAILY J., Oct. 29, 2014 (“Case in point is an adjudication of the Antelope Valley groundwater basin, which has been sitting in a trial court for 15 years. The case is enormous, involving a multitude of public agencies and landowners large and small who hold groundwater pumping rights. Parties include cities, farmers, the federal government, and a class of 85,000 property owners who hold groundwater rights but who have never pumped water. There are 9,404 docket entries in the case so far and more than 100

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cated out of the approximately 127 groundwater basins that account for 96% of groundwater use in California,⁵² and most of those basins are in urban coastal areas of Southern California facing the urgent threat of ruination from seawater intrusion.⁵³ For other groundwater pumpers, particularly in inland California, chronic overdraft was a stark reality or a pending calamity slowly escalating over decades and compounded by periods of drought.

II. THE CHALLENGES OF DROUGHT

A. DROUGHT AND THE 1962 ASSEMBLY INTERIM COMMITTEE ON WATER

*When the well's dry, we know the worth of water.*⁵⁴

—Benjamin Franklin

Droughts exacerbate the demand on groundwater resources. Groundwater provides about 40%-50% of California's total annual agricultural and urban water supply in an average year.⁵⁵ But as surface supplies dry up, many water users increase pumping or drill new wells.⁵⁶ During drought, the state can become reliant on groundwater for 60% or more of the overall water supply.⁵⁷ And in some areas, groundwater is always 100% of the supply.⁵⁸

The 1959–1962 drought spurred additional attention to groundwater, with some proclaiming the state was in fact experiencing its eight-

lawyers listed on the case. . . . In the Santa Maria groundwater basin, in Santa Barbara and San Luis Obispo counties, an adjudication took 15 years to work through the trial and appellate courts, and it is still not completely resolved. That case involved thousands of parties and has cost tens of millions of dollars, said Henry S. Weinstock, a partner at Nossaman LLP who worked on the case.”).

⁵² *Initial Groundwater Basin Prioritization Under the SGM Act*, CAL. DEP'T WATER RESOURCES, http://www.water.ca.gov/groundwater/sgm/SGM_BasinPriority.cfm (last updated Jan. 15, 2015); CAL. WATER CODE § 10720.8 (Westlaw 2015) (listing adjudicated basins).

⁵³ Sustainable Groundwater Management Act, CAL. WATER CODE § 10720.8 (Westlaw 2015) (listing adjudicated basins, which are subject to limited requirements); *see also* Smith, *supra* note 51.

⁵⁴ *The Benefits of Supporting Sustainable Water Infrastructure*, EPA, available at http://water.epa.gov/infrastructure/sustain/localofficials_benefits.cfm (last updated Sept. 24, 2012) (quoting Benjamin Franklin).

⁵⁵ 1 BULLETIN 160-13, *supra* note 12, at 2-7.

⁵⁶ CAL. DEP'T OF WATER RES., DROUGHT IN CALIFORNIA 10 (2012), available at <http://www.water.ca.gov/waterconditions/docs/Drought2012.pdf>.

⁵⁷ *Groundwater: California's Big Unknown*, CLIMATE.GOV (Aug. 27, 2014), <http://www.climate.gov/news-features/event-tracker/groundwater-california%E2%80%99s-big-unknown>.

⁵⁸ *Id.*

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eenth year of drought.⁵⁹ As a result, in 1961, the Legislature adopted the Porter-Dolwig Groundwater Basin Protection Law.⁶⁰ Porter-Dolwig tasked DWR with a series of groundwater investigations.⁶¹ As Chairman Carley V. Porter of the Assembly Interim Committee on Water advised, Porter-Dolwig was also a recognition that the “preservation and management of this vast underground water resource has become a problem of paramount importance to the future of our State.”⁶² In follow up, he led the Interim Water Committee on “a comprehensive two-year study of the State’s groundwater problems”⁶³ in order to address the “legal, physical, economic, and managerial problems of fully utilizing the ground water basins of California.”⁶⁴ The Committee was staffed by, among others, a young research consultant named Ronald B. Robie, who would later play a pivotal role in groundwater policy.⁶⁵

In 1962, the Interim Committee (the “Committee”) issued its final report, *Ground Water Problems in California*. The report predicted that groundwater resources in areas such as the San Joaquin Valley “will probably become worse and in a few instances become critical before public attention will be focused on them sufficiently to stimulate the local expenditures for necessary programs.”⁶⁶ However, the Committee stopped short of recommending statewide groundwater legislation at that time, opting instead to advise that if, “in the future, there are indications of major failure in any of the local groundwater management programs, and it can be determined that local negligence or inaction was the cause, the Legislature would then have a basis to take major corrective action.”⁶⁷

⁵⁹ James H. Krieger & Harvey O. Banks, *Ground Water Basin Management*, 50 CALIF. L. REV. 56, 56 (1962), available at <http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=3110&context=Californialawreview>.

⁶⁰ CAL. WATER CODE § 12920 et seq. (Westlaw 2015).

⁶¹ CAL. WATER CODE §§ 12923.1, 12924 (Westlaw 2015).

⁶² Press Release, Carley V. Porter, Chairman, Cal. Assembly Interim Comm. on Water 1 (Aug. 25, 1961) (on file with author).

⁶³ *Id.*

⁶⁴ Krieger & Banks, *supra* note 59, at 67 (citing Assemb. Res. 179, 1961–1962 Leg., Reg. Sess. (1961)).

⁶⁵ See Ronald Boyd Robie, *The California State Department of Water Resources, 1975–1983 passim* (interview by Malca Chall, Reg’l Oral History Office, Bancroft Library, Univ. of Cal. Berkeley, with Ronald Boyd Robie in 1988), available at https://ia601408.us.archive.org/4/items/statedeptwater00robirich/statedeptwater00robirich_bw.pdf. Robie would go on to be a member of the State Water Resources Control Board, the Director of DWR, and later a judge.

⁶⁶ GOVERNOR’S COMM’N TO REVIEW CAL. WATER RIGHTS LAW, FINAL REPORT 135 (1978) [hereinafter FINAL REPORT] (citing ASSEMB. INTERIM COMM. ON WATER, GROUND WATER PROBLEMS IN CALIFORNIA: A REPORT TO THE CALIFORNIA LEGISLATURE (1962)).

⁶⁷ *Id.*

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B. 1974-1977 DROUGHT AND GOVERNOR BROWN'S WATER RIGHTS COMMISSION

The drought from 1974 to 1977 is often cited as one of the driest periods in the history of modern California, one that put great strain on California's water supplies. In response, the youngest Governor in the history of California, Edmund Gerald "Jerry" Brown Jr., issued an Executive Order setting in motion the Governor's Commission to Review California Water Rights Law, stating that "the current drought has forcefully underlined the need to review all aspects of water resources management in California, including water rights law."⁶⁸ Ironically, that same Jerry Brown, as the oldest Governor in the history of California, would be serving his third term during the debate over SGMA. However, during Governor Brown's first term in 1978, his Water Rights Commission's Final Report tackled the major water law issues confronting the State and recommended specific statutory language to fix them. Chapter 5 of the Water Rights Commission's report, *Effective Management of Groundwater Resources*, included a "[s]trong State Policy of Groundwater Resources Protection" that advised "[i]n light of severe and extensive groundwater problems in California, the Water Rights Commission recommends that legislation be enacted to deal with groundwater management, adjudication of groundwater rights, and conjunctive use of surface and groundwater resources."⁶⁹

The Water Rights Commission favored "local management, if it is properly undertaken"⁷⁰ but outlined a significant role for the State Water Board, including prioritizing basins based on whether they needed active management.⁷¹ An area with an active basin that was not adjudicated or under a statutorily created management agency had to form a local groundwater management authority, which was then given two years to adopt a groundwater management program for its groundwater management area.⁷² If the local groundwater management authority failed to adopt a program, the State Water Board could seek judicial relief through

⁶⁸ Edmund G. Brown Jr., Office of Governor of Cal., Exec. Order B-26-77 (May 11, 1977). The Executive Order required the Commission to report back by June 30, 1978. But fairly quickly it became apparent the Commission would need additional time, and Governor Brown ended up issuing a second Executive Order extending the due date to December 31, 1978. Edmund G. Brown Jr., Office of Governor of Cal., Exec. Order B-33-77 (Aug. 26, 1977).

⁶⁹ FINAL REPORT, *supra* note 66, at 165-66.

⁷⁰ *Id.* at 166.

⁷¹ *Id.* at 181-82; *see* CAL. WATER CODE §§ 15250, 15251 (Proposed Draft 1978).

⁷² FINAL REPORT, *supra* note 66, at 183-88; CAL. WATER CODE §§ 15300-15400 (Proposed Draft 1978).

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the Attorney General for that area.⁷³ Every local groundwater management authority was required to make biennial reports to the State Water Board, and the Board could hold hearings on submitted reports. Inadequate progress could also trigger the State Water Board to seek an adjudication of the management area.⁷⁴ Local groundwater management authorities were to be given many powers, including but not limited to the ability to hold property, charge fees, require that groundwater extraction facilities be registered, set up programs for basin recharge, and implement conjunctive use projects.⁷⁵

Unfortunately, during the 1978 and 1979 sessions of the California Legislature, only one of the bills to implement the Water Commission's groundwater recommendations was enacted: SB 1505, by John A. Nejedly, a Republican Senator from Contra Costa County.⁷⁶ SB 1505 mandated that DWR work with public agencies to conduct an investigation of the state's groundwater basins "on the basis of geological and hydrological conditions and consideration of political boundary lines whenever practical" and to look at "existing general patterns of ground water pumping and ground water recharge within such basins to the extent necessary to identify basins which are subject to critical conditions of overdraft."⁷⁷ DWR was told to report back to the Legislature "not later than January 1, 1980."⁷⁸

DWR was not starting from scratch. It is the other state agency with a major interest in California's waters. Besides operating the State Water Project (SWP), "the nation's largest state-built water and power development and conveyance system,"⁷⁹ it has a long history of providing technical and financial assistance to locals and performing major statewide

⁷³ FINAL REPORT, *supra* note 66, at 190-91; CAL. WATER CODE § 15430 (Proposed Draft 1978). Judicial relief could take several forms, such as an action for adjudication, appointment of a water master to prepare and carry out a groundwater management program under the jurisdiction of the court, and issuance of a preliminary injunction; imposition of an appropriate groundwater management program; or other appropriate relief.

⁷⁴ FINAL REPORT, *supra* note 66, at 191. CAL. WATER CODE §§ 15510, 15520 (Proposed Draft 1978).

⁷⁵ FINAL REPORT, *supra* note 66, at 211-14. CAL. WATER CODE §§ 16240-16245 (Proposed Draft 1978).

⁷⁶ S.B. 1505, 1977-1978 Leg., Reg. Sess. (Cal. 1978), 1978 Cal. Stat. Ch. 601; *see* CAL. DEP'T OF WATER RES., BULLETIN 118-80, GROUND WATER BASINS IN CALIFORNIA: A REPORT TO THE LEGISLATURE IN RESPONSE TO WATER CODE SECTION 12924, at iii (1980), *available at* http://www.water.ca.gov/pubs/groundwater/bulletin_118/ground_water_basins_in_california_bulletin_118-80_b118_80_ground_water_ocr.pdf [hereinafter BULLETIN 118-80].

⁷⁷ BULLETIN 118-80, *supra* note 76, at 1; CAL. WATER CODE § 12924 (Westlaw 2015).

⁷⁸ BULLETIN 118-80, *supra* note 76, at 1.

⁷⁹ DWR provides part of the water supplies for 25 million Californians and 750,000 acres of irrigated farmland. *See California State Water Project Overview*, CAL. DEP'T WATER RESOURCES, <http://www.water.ca.gov/swp/> (last modified Aug. 8, 2010).

planning analyses.⁸⁰ DWR's two major planning reports are *Bulletin 118* and *Bulletin 160*. *Bulletin 118* addresses groundwater resources while *Bulletin 160* addresses state water resources generally.⁸¹

The first comprehensive statewide evaluation of groundwater resources was published in 1952 by DWR's predecessor agency, the previously mentioned Department of Public Works.⁸² That report, *Water Quality Investigations Report No. 3, Ground Water Basins*, was substantially modified and updated by DWR and published in 1975 as *Bulletin 118: California's Ground Water*.⁸³ In effect, SB 1505 mandated an update of *Bulletin 118*. To achieve that, DWR held 25 workshops throughout California in March and April of 1979, followed by four public hearings in September and October.⁸⁴ In the course of its investigations, DWR revised some basin boundaries. More importantly however, it determined that eleven basins were in a "critical condition of overdraft," which it defined as meaning "present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts."⁸⁵

The report also noted a plethora of other challenges. There was widespread overdraft in groundwater basins not identified as in critical overdraft. Small, primarily coastal basins had special problems with the "very real possibility" that groundwater pumping was actually taking the "underflow of the river rather than as a ground water basin."⁸⁶ And in some nonbasin, fractured-rock groundwater areas, such as the Sierra-Ne-

⁸⁰ See *Missions and Goals*, CAL. DEP'T WATER RESOURCES, <http://www.water.ca.gov/about/mission.cfm> (last modified Dec. 1, 2008).

⁸¹ The California Water Code requires DWR to develop "The California Water Plan" (also known as "Bulletin 160") and update it every five years. The Plan is to guide the "orderly and coordinated control, protection, conservation, development, and utilization" of the state's water resources. CAL. WATER CODE § 10004 (Westlaw 2015).

⁸² Report No. 3 created a "base index map of the primary water basins" as part of DWR's mandate in Section 229 of the California Water Code to "investigate conditions of the quality of all waters within the State" and make management recommendations. In Report No. 3, the Department of Public Works, with the cooperation of the State Water Pollution Control Board (now the State Water Resources Control Board), put in place a statewide groundwater basin numbering system "based on the boundaries of the nine Regional Water Quality Control Boards" that is still relevant today. See *History of Bulletin 118*, CAL. DEP'T WATER RESOURCES, <http://www.water.ca.gov/groundwater/bulletin118/b118history.cfm> (last modified Jan. 1, 2015).

⁸³ Bulletin 118-75 built upon Report No. 3 by summarizing technical information for 248 of the 461 identified groundwater basins, subbasins, and "areas of potential ground water storage" in California and providing maps showing their location and extent. Bulletin 118-75 used geologic and hydrogeologic conditions to define basin boundaries unless a basin was defined by a court decision. *Id.*

⁸⁴ BULLETIN 118-80, *supra* note 76, at 1.

⁸⁵ *Id.* at 3. Those basins were the Santa Cruz-Pajaro Basin, Cuyuma Valley Basin, Ventura Central Basin, Eastern San Joaquin County Basin, Chowchilla Basin, Madera Basin, Kings Basin, Kaweah Basin, Tulare Lake Basin, Tule Basin, and Kern County Basin.

⁸⁶ *Id.* at 5.

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vada foothills, excessive pumping was causing “water-quality and well-yield problems.”⁸⁷

While the updated *Bulletin 118* was underway, Republican Senator Nejedly felt compelled to write to Ronald B. Robie, now Director of DWR, to address “some confusion” about his bill:

In recent months, questions have been raised regarding the Legislature’s intent in passing SB 1505. SB 1505 originally contained a comprehensive ground water management program, generally requiring that ground water management districts be designated to manage the underlying ground water basins. This major part of the original bill, however, was sent to interim study.

. . . The requirement that the Department consider “political” boundaries in addition to geological and hydrological conditions in its identification of ground water basins was added to the Department’s charge to assure that, in the event that the Legislature enacts a comprehensive management program, the basins will be logically defined. . . . I feel that the Legislature was mindful of future ground water management legislation and intended the Department’s investigation under SB 1505 to complement and provide direction to any such legislation.⁸⁸

The response from other legislative quarters was swift. California State Senator Rose Ann Vuich, a conservative Democrat from Fresno, Tulare, Kings, and Kern Counties, and the first woman to integrate the all-male upper chamber,⁸⁹ shot back:

It was with notable dismay that I received a copy of Senator John Nejedly’s October 9th letter to you where he suggested the Legislature had future groundwater legislation in mind when passing SB 1505. I can assure you that nothing could be further from my intent and, in fact, of others who reviewed SB 1505. Senator Nejedly’s feeling that any investigation under SB 1505 would [complement] and provide direction to future groundwater legislation is speculation, if not wishful thinking.⁹⁰

⁸⁷ *Id.*

⁸⁸ *Id.* app. D at 71-72 (setting forth Letter from John A. Nejedly, State Sen., Cal. 7th Dist., to Ronald B. Robie, Dir., Cal. Dep’t of Water Res. (Oct. 9, 1979)).

⁸⁹ Elaine Woo, Obituary, *Rose Ann Vuich; First Woman in the State Senate*, L.A. TIMES, Sept. 1, 2001, available at <http://articles.latimes.com/2001/sep/01/local/me-41007>.

⁹⁰ BULLETIN 118-80, *supra* note 76, app. D at 73 (setting forth Letter from Rose Ann Vuich, State Sen., Cal. 15th Dist., to Ronald B. Robie, Dir., Cal. Dep’t of Water Res. (Nov. 16, 1979)).

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Despite that reaction, Director Robie's advice in the final report, *Bulletin 118: Ground Water Basins in California (Bulletin 118-80)* was clear:

New ground water management legislation is needed. While some local agencies are managing groundwater effectively with the limited powers available to them, increased authority would permit more extensive local development and implementation of plans for management of the storage space in the underlying ground water basin, ground water extraction, and artificial recharge.⁹¹

In time, Nejedly was right and Robie's advice was taken. Thirty-six years later a comprehensive groundwater package of legislation would trace its lineage directly back to the work of *Bulletin 118-80*. Nowhere is this more apparent than in the *Bulletin 118-80* definition of critical overdraft, a discussion that "received more attention in meetings with local agencies and individuals than any other subject."⁹² A major issue with the definition was whether the word "environmental" should be included. Some feared it could preclude development of a groundwater basin.⁹³ There was also concern that a definition, once placed in the report, "could find its way into law in the next few years."⁹⁴ Ultimately, the adopted definition was as follows: "A basin is subject to critical conditions of overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts."⁹⁵ But it did not find its way into SGMA for quite a few years.

C. AB 3030 AND SB 1938

The next major legislative advance in groundwater management occurred in 1992 with the passage of Assembly Bill (AB) 3030 by Jim Costa, a democrat from Fresno.⁹⁶ AB 3030 provided a systematic procedure for an existing local agency to develop a groundwater management

⁹¹ *Id.* at iii.

⁹² *Id.* at 9.

⁹³ *Id.* at 10 ("Those anticipating development of a ground water basin expressed concern that the term 'environmental' may prohibit that initial development process. On the other hand, many citizens who indicated concern about the loss of vegetative cover supported the term 'environmental' in the definition.").

⁹⁴ *Id.*

⁹⁵ *Id.* at 3.

⁹⁶ Assemb. B. 3030, 1992–1993 Leg., Reg. Sess. (Cal. 1992), 1992 Cal. Stat. Ch. 947; CAL. WATER CODE § 10750 et seq. (Westlaw 2015).

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plan (GMP).⁹⁷ AB 3030 also encouraged local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing groundwater management plans in groundwater basins as defined in *Bulletin 118*.⁹⁸

Under AB 3030, however, the development of a GMP is voluntary, not mandatory.⁹⁹ Many local jurisdictions adopting AB 3030 ordinances did so to protect themselves against out-of-watershed interests affecting their groundwater basins, not based upon a need to manage sustainably. In Butte County, for example, groundwater initiatives were “a direct result of the measures adopted by water districts and counties arising from the 1987-92 and 1994 drought,” including the sale of 115,000 acre-feet of water to the Department of Water Resource’s Drought Water Bank (the “Drought Water Bank”) in 1994.¹⁰⁰ In essence, the Drought Water Bank facilitated the transfer of surface water supplies from water rights holders in the Sacramento Valley to SWP contractors in the San Joaquin Valley and southern California. Tempers flared when some who were transferring surface water at a profit began substituting with groundwater and allegedly drying up neighbors’ wells.¹⁰¹

AB 3030 was followed ten years later by SB 1938, authored by Senator Michael Machado, a Democratic water expert with a master’s degree in agricultural economics and a family farm in San Joaquin County.¹⁰² SB 1938 remained somewhat true to AB 3030’s construct of local management, but it modified AB 3030’s approach by using a carrot—or stick if you prefer—in that any public agency seeking State funds administered through DWR for the construction of groundwater projects had to prepare and implement a GMP with specified minimum components.¹⁰³ SB 1938 required a local agency to prepare and implement a plan with basin management objectives, a defined management area, local agency coordination, and adoption of monitoring protocols.

⁹⁷ See CAL. WATER CODE §§ 10753-10753.11 (Westlaw 2015).

⁹⁸ CAL. WATER CODE § 10750 et seq. (Westlaw 2015).

⁹⁹ CAL. WATER CODE §§ 10750.4, 10750.6, 10753 (Westlaw 2015).

¹⁰⁰ David R.E. Aladjem, *The Butte County Initiatives: Groundwater Management at a Crossroads?* 5 HYDRO VISIONS ONLINE No. 3 (Aug./Sept. 1996), <http://www.grac.org/fall96/initiatives.htm>.

¹⁰¹ ELLEN HANAK, PUB. POLICY INST. OF CAL., WHO SHOULD BE ALLOWED TO SELL WATER IN CALIFORNIA? THIRD-PARTY ISSUES AND THE WATER MARKET vii (2003), available at http://www.ppic.org/content/pubs/report/r_703ehr.pdf (“Once the state made it clear that the market was open for business during the early 1990s drought, the fear of uncontrolled ‘mining’ of the aquifers became widespread in many rural counties. . . . By late 2002, 22 of the state’s 58 counties had adopted ordinances requiring a permit to export groundwater or to extract groundwater used in substitution for exported surface water.”).

¹⁰² Kevin Parrish, *Is End Just the Beginning?*, STOCKTON RECORD, Dec. 10, 2008, http://www.recordnet.com/article/20081210/A_NEWS/812100329/0/a_news03?template=printart.

¹⁰³ S.B. 1938, 2002–2003 Leg., Reg. Sess. (Cal. 2002), 2002 Cal. Stat. Ch. 603.

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Local agencies throughout the state responded to the enactment of AB 3030, and later SB 1938, by developing and implementing ground-water management plans. However, there were several core problems with AB 3030 and SB 1938. Neither included an enforceable standard mandating sustainable use of a basin or a clear fee mechanism to support basin management. AB 3030 provided agencies that adopted a GMP with a water replenishment district's powers to fix and collect fees and assessments for groundwater management.¹⁰⁴ But a majority vote in favor of the proposal and other steps are required. As of 2003, more than 200 agencies had adopted AB 3030 groundwater management plans, but none had exercised the fee authority.¹⁰⁵

D. THE SAX REPORT

*Doubt, indulged and cherished, is in danger of becoming denial; but if honest, and bent on thorough investigation, it may soon lead to full establishment of the truth.*¹⁰⁶

—Ambrose Bierce

Indeed, 2002 was a busy year for groundwater. Even before SB 1938 was introduced in the Legislature, the State Water Board asked Professor Sax to investigate the scope of the Water Board's permitting authority over those "subterranean streams" described in Water Code Section 1200.¹⁰⁷ His report, *Review of the Laws Establishing the SWRCB's Permitting Authority over Appropriations of Groundwater Classified as Subterranean Streams and the SWRCB's Implementation of Those Laws*, better known as "The Sax Report,"¹⁰⁸ caused some consternation among the water buffaloes.¹⁰⁹ Sax advised that terms like "subter-

¹⁰⁴ CAL. WATER CODE §§ 10754, 10754.2 (Westlaw 2015).

¹⁰⁵ CAL. DEP'T OF WATER RES., BULLETIN 118-03, CALIFORNIA'S GROUNDWATER: UPDATE 2003, at 35 (Oct. 2003), available at http://www.water.ca.gov/pubs/groundwater/bulletin_118/california's_groundwater__bulletin_118_-_update_2003/_bulletin118_entire.pdf.

¹⁰⁶ *Quotes for Denial*, available at <http://www.dictionary.net/denial> (last visited Nov. 6, 2015) (quoting Ambrose Bierce).

¹⁰⁷ California Water Code Section 1200 states, "Whenever the terms stream, lake or other body of water, or water occurs in relation to applications to appropriate water or permits or licenses issued pursuant to such applications, such term refers only to surface water, and to subterranean streams flowing through known and definite channels." (Westlaw 2015).

¹⁰⁸ JOSEPH L. SAX, REVIEW OF THE LAWS ESTABLISHING THE SWRCB'S PERMITTING AUTHORITY OVER APPROPRIATIONS OF GROUNDWATER CLASSIFIED AS SUBTERRANEAN STREAMS AND THE SWRCB'S IMPLEMENTATION OF THOSE LAWS, SWRCB No. 0-076-300-0 (Jan. 19, 2002), available at <http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=3235&context=facpubs>. The detailed research Professor Sax performed for this report became the basis for his UNIVERSITY OF DENVER WATER LAW REVIEW article cited earlier. See Sax, *supra* note 20, at 274.

¹⁰⁹ "Water buffalo" is a nickname for a recognized expert in the field of western water rights and policy, usually one who represents water development interests. The Colorado Bar Association

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anean streams” and “percolating groundwater” bore little if any relationship to “geological realities.”¹¹⁰ He found that from “a scientific perspective, efforts to fit water into the law’s categories by using these technical-sounding classifications give the enterprise a somewhat daffy air.”¹¹¹ Sax stated that Section 1200 was basically a means “to close a loophole that would have been left if any taking of water from a subsurface location would leave the permitting agency powerless in the face of wells or tunnels that were effectively underground facilities for withdrawing stream water.”¹¹² But he didn’t stop there. His conclusion: The State Water Board had the authority to regulate all groundwater that was hydrologically connected to surface water streams or that violated constitutional or common-law prohibitions, such as those against waste or unreasonable use:

Assuming that a substantive violation exists, there is no doubt that the Board, through the Attorney General, can institute litigation to control groundwater use that (1) constitutes waste or unreasonable use or method of use within the meaning of article X, § 2 of the California Constitution, and Water Code § 100; or (2) that violates the public trust.¹¹³

Water Law Section even goes so far as to induct members into the “*Ancient and Honorable Order of the Water Buffalo*” in recognition of their special contributions in the area of water rights. *In and Around the Bar: Bar News*, 37 *COLO. LAW.*, Oct. 2008, at 9, available at http://www.cobar.org/tcl/tcl_articles.cfm?articleid=5740.

¹¹⁰ SAX, *supra* note 108, at 1, 3.

¹¹¹ *Id.* at 3.

¹¹² *Id.* at 7.

¹¹³ *Id.* at 82 (footnotes omitted). “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 water 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. The right to water or to the use or flow of water in or from any natural stream or watercourse in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.” CAL. WATER CODE § 100 (Westlaw 2015). The public trust is a powerful legal concept and Professor Sax was one of its preeminent legal authorities. See Richard M. Frank, *The Public Trust Doctrine: Assessing Its Recent Past & Charting Its Future*, 45 U.C. DAVIS L. REV. 665, 667 (2012), available at http://lawreview.law.ucdavis.edu/issues/45/3/Topic/45-3_Frank.pdf. The public trust evolved in English Common law from Roman law as a recognition that the sovereign, or in our case the State, holds all of its navigable waterways and the lands lying beneath them in trust for current and future generations. *Nat’l Audubon Soc’y v. Superior Court*, 658 P.2d 709, 718-19 (Cal. 1983). Here again, Sax was ahead of his time. Recently, a California Superior Court concluded that the public trust doctrine protects navigable waterways from harm caused by groundwater extractions. See *Env’tl. Law Found. v. State Water Res. Control Bd.*, No. 34-2010-80000583 (Sacramento Cnty. Super. Ct. July 15, 2014) (also known as the “Scott River” case). The decision came down while SGMA was being

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The Sax Report left some members of the buffalocracy both shaken and stirred at the thought of expanded State Water Board groundwater regulation.¹¹⁴

The prevention of waste and unreasonable use, as mandated by article X, section 2, is an elastic notion that can change as society changes.¹¹⁵ As Professor Harrison C. Dunning advises, the provision was originally added to the State Constitution in 1928 for the purpose of encouraging water resource development but has evolved, as the term “beneficial use” has evolved, to include leaving water in rivers.¹¹⁶ However, what is reasonable, Professor Dunning concludes, is a more elusive concept.¹¹⁷ As it turned out, the State Water Board’s broad authority under article X, section 2, would provide an underpinning to 2014’s historic change in groundwater law.

E. 2007-2009 DROUGHT AND SEVENTH EXTRAORDINARY LEGISLATIVE SESSION ON WATER

*Never waste the opportunity offered by a good crisis.*¹¹⁸

—Niccolò Machiavelli

negotiated and strengthened arguments that sustainable groundwater management should include potential groundwater pumping effects on surface waters.

¹¹⁴ Statement by the Ass’n of Cal. Water Agencies, State Water Resources Control Board Public Meeting to Discuss the Legal Classification of Groundwater (Aug. 20 & 23, 2001), available at http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/groundwater_classification/comments2001/acwa.pdf (“Subjecting vast new quantities of water to State Board jurisdiction in response to the problem discussed in this paragraph is not an appropriate solution, because of the catastrophic effect it would have on California’s established system of water rights.”); Letter from Minasian, Spruance, Baber, Meith, Soares & Sexton LLP, to Harry M. Schueller, Chief of Div. of Water Rights, State Water Res. Control Bd. 4 (Aug. 17, 2001) (on file with author) (“We urge the SWRCB to limit any assertion of jurisdiction over groundwater to those limited factual circumstances that make SWRCB jurisdiction appropriate.”); see also *In and Around the Bar: Bar News*, *supra* note 109.

¹¹⁵ CAL. CONST. art. X, § 2. “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 water 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.” CAL. WATER CODE § 100 (Westlaw 2015).

¹¹⁶ Harrison C. Dunning, *Article X, Section 2: From Maximum Water Development to In-stream Flow Protection*, 17 HASTINGS CONST. L.Q. 275, 278 (1989), available at <http://www.hastingsconlawquarterly.org/archives/V17/I1/Dunning.pdf>.

¹¹⁷ *Id.* at 279.

¹¹⁸ Katharine Q. Seelye, *A Different Emanuel for One Church*, N.Y. TIMES (Mar. 17, 2009), available at <http://thecaucus.blogs.nytimes.com/2009/03/17/a-different-emanuel-for-onechurch/> (quoting Machiavelli).

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In May of 2008, Governor Arnold Schwarzenegger declared a drought state of emergency in California, citing below-normal precipitation, seasonally higher-than-normal temperatures, and “imminent threat of catastrophic fires.”¹¹⁹ This was followed by a June 12, 2008, State of Emergency for nine Central Valley counties and a February 27, 2009 State of Emergency over water shortages following the “driest spring and summer on record, with rainfall 76 percent below average.”¹²⁰

Once again, the Legislature wrestled with comprehensive water policy, including trying to address resource conflicts in the perpetually beleaguered San Francisco Bay/Sacramento-San Joaquin Delta Estuary, increase conservation, enforce water rights, and attempt incremental improvement in groundwater management. The bill that was supposed to achieve the latter of these two objectives was SB 229 by Senator Fran Pavley, a Los Angeles County Democrat, Chair of the Senate Natural Resources and Water Committee, and a leader in water issues. In addition to increasing State Water Board enforcement authorities, SB 229 sought to establish a program throughout the state that would require locals to monitor and report groundwater elevation information to DWR for the basins listed in *Bulletin 118*. If no local entity was willing, SB 229 required DWR to perform the groundwater monitoring functions, but allowed it to “impose a charge on each well owner” for the cost.¹²¹

SB 229 was bundled for Conference Committee with four other water policy vehicles, but they all failed.¹²² As a result, after the regular session ended, Governor Arnold Schwarzenegger called the Seventh Extraordinary Session of the Legislature in order to revisit water issues. Five bills successfully emerged. Four of the bills contained elements of the Conference Committee package, and a fifth put an \$11.14 billion water bond on the November 2010 ballot.

¹¹⁹ Arnold Schwarzenegger, Office of Governor of Cal., Exec. Order S-05-09 (May 5, 2009), available at <http://gov.ca.gov/news.php?id=12200>.

¹²⁰ Arnold Schwarzenegger, Office of Governor of Cal., State of Emergency: Water Shortage (Feb. 27, 2009), available at <http://gov.ca.gov/news.php?id=11557>.

¹²¹ SENATOR PAVLEY, PROPOSED CONF. REP. NO. 1, S.B. 229, Leg. Reg. Sess. (Cal. 2009), available at http://leginfo.ca.gov/pub/09-10/bill/sen/sb_0201-0250/sb_229_bill_20090909_proposed.pdf.

¹²² The four other major water policy bills in the 2009 Session were Assemb. B. 39, 2009–2010 Leg., Reg. Sess. (Cal. 2009), available at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100AB39 (requiring a plan for the Delta); Assemb. B. 49, 2009–2010 Leg., Reg. Sess. (Cal. 2008), available at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100AB49 (requiring a 20% per capita reduction in urban water use); S.B. 12, 2009–2010 Leg., Reg. Sess. (Cal. 2008), available at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100SB12 (creating a Delta Stewardship Council); and S.B. 458, 2009–2010 Leg., Reg. Sess. (Cal. 2009), available at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100SB458 (revising the membership of the Delta Protection Commission).

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Importantly, the package included SB 6 X7 by Darrel Steinberg, a Sacramento Democrat and the President Pro Tempore—the leader—of the California Senate.¹²³ SB 6 X7 contained many of the groundwater provisions of SB 229, with the exception that it did not permit DWR to charge locals if it had to manage a groundwater basin. Instead, like the carrot-as-big-as-a-stick approach of SB 1938, SB 6 X7 made them ineligible for State funds for groundwater projects and programs if DWR was forced to intervene.¹²⁴ One aspect SB 6 X7 did retain from SB 229 was the top-down approach to designating which local agency could assume groundwater-monitoring duties.

First priority as a potential groundwater monitoring entity went to a watermaster or water management engineer, appointed by a court in an adjudicated basin. From there, the priority moved down in the following order: a special district created for the purpose of managing groundwater; a water replenishment district (there is only one in California, the Water Replenishment District of Southern California); a local agency with an AB 3030 or SB 1938 groundwater management plan; a local agency managing a basin pursuant to an integrated regional water management plan with a groundwater component; a county with a groundwater plan or management scheme “substantively similar” to an AB 3030 or SB 1938 plan; and a voluntary cooperative association formed for the purposes of meeting the monitoring requirements.¹²⁵

Following passage of SB 6 X7, DWR created the California Statewide Groundwater Elevation Monitoring Program (CASGEM) to fulfill its role of establishing a “permanent, locally-managed program of regular and systematic monitoring in all of California’s alluvial groundwater basins.”¹²⁶ CASGEM was also another step on the road to SGMA.

¹²³ S.B. 6, 2009–2010 Leg., 7th Ex. Sess. (Cal. 2009), 2009 Cal. Stat. 7th Ex. Sess. Ch. 1, available at http://www.leginfo.ca.gov/pub/09-10/bill/sen/sb_0001-0050/sbx7_6_bill_20091106_chaptered.html (codified as amended at CAL. WATER CODE § 10920 et seq. (Westlaw 2015)) (introduced by Senator Steinberg during the Seventh Extraordinary Session).

¹²⁴ CAL. WATER CODE § 10933.7 (Westlaw 2015).

¹²⁵ CAL. WATER CODE § 10927 (Westlaw 2015).

¹²⁶ *California Statewide Groundwater Elevation Monitoring (CASGEM)*, CAL. DEP’T WATER RESOURCES, <http://www.water.ca.gov/groundwater/casgem/> (last modified Jan. 15, 2015).

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III. THE BIRTH OF THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT

A. 2012-2014: EXTREME DROUGHT, EXCEPTIONAL LEADERSHIP

*Bring me men to match my mountains: Bring me men to match my plains: Men with empires in their purpose and new eras in their brains.*¹²⁷

—Sam Walter Foss

On March 30, 2011, Governor Brown declared the 2007-2010 drought over.¹²⁸ Early in Governor Jerry Brown's third term, however, it was clear the reprieve was to be short-lived. There was very little precipitation in 2012, and in May of 2013, citing the significant challenges to the state posed by climate change, drought, and population growth, Governor Brown tasked the California Natural Resources Agency (CNRA), the California Environmental Protection Agency (CalEPA), and the California Department of Food and Agriculture (CDFA) to work together on a plan identifying "key actions for the next one to five years that address urgent needs and provide the foundation for sustainable management of California's water resources."¹²⁹ At the same time, the State Water Board (an independent board but an agency housed under CalEPA), was busy developing a "Discussion Draft Groundwater Workplan Concept Paper" (the "Draft Groundwater Workplan").

The release of the Draft Groundwater Workplan on October 4, 2013, represented another step forward for groundwater sustainability. It set out five key elements, "whether implemented at the local, regional, or State level," to effectively manage groundwater.¹³⁰ Those elements were "[s]ustainable thresholds for water level drawdown and water quality" in impacted basins; monitoring and assessment of water quality and water levels; adequate governance structures for basins; sufficient funding for monitoring, governance, and management; and "[o]versight and enforcement in basins where ongoing management efforts are not protecting

¹²⁷ Ashley Parker, *Romney's Stump Speech Evolved Over Time*, N.Y. TIMES (Jan. 3, 2012), available at <http://www.nytimes.com/2012/01/03/us/politics/romneys-stump-speech-evolved-over-time.html> (noting Romney's early usage of Sam Foss's quote).

¹²⁸ Press Release, Office of Governor of State of Cal., Governor Brown Ends State's Drought Status, Urges Californians To Continue To Conserve (Mar. 30, 2011), available at <http://gov.ca.gov/news.php?id=16959>.

¹²⁹ CAL. NATURAL RES. AGENCY ET AL., PUBLIC REVIEW DRAFT: CALIFORNIA WATER ACTION PLAN ii (2013) available at http://resources.ca.gov/docs/Final_Water_Action_Plan.pdf.

¹³⁰ STATE WATER BD., DISCUSSION DRAFT GROUNDWATER WORKPLAN CONCEPT PAPER 2 (Oct. 4, 2013), available at http://www.waterboards.ca.gov/water_issues/programs/groundwater/docs/gw_workplan100713.pdf.

groundwater.”¹³¹ The Draft Groundwater Workplan also advised that “Water Boards will focus attention and assistance on high-use basins where thresholds are being exceeded.”¹³² Interestingly, (or ominously, depending on your point of view), the Draft Workplan included the following statement:

The State Water Board, along with the Department of Water Resources and the California Department of Fish and Wildlife, can exercise, in varying degrees, constitutional and statutory authorities to protect the public trust, prevent the waste and unreasonable use of the State’s water resources, and initiate actions to protect those resources. In addition to the actions suggested below, the State Water Board is soliciting input on whether these authorities should be integrated into its workplan for groundwater.¹³³

By George! It looked like the recommendations of the Sax Report, brought to life. But the Administration was only getting started.

On October 31, 2013, the collaboration of the CNRA, CalEPA, and CDFA emerged as the draft *California Water Action Plan* (the “Draft Water Action Plan”).¹³⁴ Some pundits decried the plan as being short on action, especially with regard to groundwater. As the *Los Angeles Times* stated, “the document notes that ‘much of California’s groundwater is not sustainably managed,’ but it contains no proposals for regulating use.”¹³⁵ The criticism was not entirely fair. Besides a modest proposal to update *Bulletin 118*, the Draft Water Action Plan identified the need to “improve sustainable groundwater management” and included the rather astonishing assertion that in basins at risk of permanent damage from overdraft if “local agencies do not make sufficient progress to correct the problem in a timely manner; the state should have carefully-defined authority to protect the basin and its users until an adequate local program is established.”¹³⁶ But it was not clear what form that action would take until January 2014.

January 2014 may have been the turning point for statewide groundwater regulation in California. On January 9, 2014, Governor Brown released his proposed 2014-2015 budget, which included \$619 million to

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.* at 10.

¹³⁴ Bettina Boxall, *Draft California Water Action Plan Is Short on Action*, L.A. TIMES, Oct. 31, 2013, <http://articles.latimes.com/2013/oct/31/science/la-sci-sn-california-water-action-plan-20131031>.

¹³⁵ *Id.*

¹³⁶ CAL. NATURAL RES. AGENCY ET AL., *supra* note 129, at 12.

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advance the priorities in the soon-to-be-finalized Water Action Plan.¹³⁷ The Budget Summary emphasized the importance of groundwater as a buffer against drought.¹³⁸ But a bolder move was under the section entitled “Expand Water Storage Capacity.”¹³⁹ Invoking the State Water Board’s waste and unreasonable-use authority, the budget proposed \$1.9 million to the State Water Board and ten positions “to act as a backstop when local or regional agencies are unable or unwilling to sustainably manage groundwater basins.”¹⁴⁰ The proposed budget also advised that the State Water Board “will protect groundwater basins at risk of permanent damage until local or regional agencies are able to do so.”¹⁴¹ Indeed, it looked like the State Water Board was prepared to flex the muscles that Professor Sax said it always had.

On January 17, 2014, Governor Brown declared a new drought state of emergency in California. Even more alarming, disturbing statistics emerged from the last drought.¹⁴² Data from the National Aeronautics and Space Administration/German Aerospace Center Gravity Recovery and Climate Experiment satellites revealed that between October 2003 and March 2010, the groundwater aquifers for the Central Valley and its major mountain water source, the Sierra Nevadas, had lost almost 26 million acre-feet of water—which is nearly enough water combined to fill Lake Mead, America’s largest reservoir.¹⁴³ In response to the satellite data, scientists warned that “[c]ontinued groundwater depletion at this rate may well be unsustainable, with potentially dire consequences for the economic and food security of the United States.”¹⁴⁴ On January 27, 2014, the Governor released the final California Water Action Plan (the “Final Plan”).¹⁴⁵ The Final Plan quoted the Governor’s January 22, 2014, State of the State address, which advised that mitigating the effects of

¹³⁷ CAL DEP’T OF FINANCE, GOVERNOR’S BUDGET SUMMARY 2014–15, at 7–8, *available at* <http://www.ebudget.ca.gov/2014-15/pdf/BudgetSummary/FullBudgetSummary.pdf>.

¹³⁸ *Id.* at 114.

¹³⁹ *Id.* at 116.

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² Edmund G. Brown Jr., Office of Governor of Cal., A Proclamation of a State of Emergency (Jan. 17, 2015), *available at* <http://gov.ca.gov/news.php?id=18379>.

¹⁴³ J.S. Famiglietti et al., *Satellites Measure Recent Rates of Groundwater Depletion in California’s Central Valley*, 38 GEOPHYSICAL RES. LETTERS L03403, at 1 (Feb. 5, 2011), <http://online.library.wiley.com/doi/10.1029/2010GL046442/epdf>.

¹⁴⁴ *Id.*

¹⁴⁵ Matt Williams, *State Finalizes California Water Action Plan*, CAL. ASS’N WATER AGENCIES (Jan. 1, 2014, 4:21 PM), <http://www.acwa.com/news/water-news/state-finalizes-california-water-action-plan>.

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drought would require a multi-pronged approach including “water recycling, expanded storage, and serious groundwater management.”¹⁴⁶

The proposed budget language also galvanized the Legislature. The Department of Finance refers to California’s budget as a process that “defies a simple concise definition.”¹⁴⁷ The budget is an exercise in the checks and balances between the executive and legislative branches of government. The Legislature passes the laws that guide executive branch functions. The Governor, as the head of the executive branch, signals the priorities for his or her agencies through the personnel and programs he or she proposes to fund. But the Legislature must approve the Governor’s proposed budget. The State Constitution requires that the Governor submit a proposed budget by January 10th of each year and that the Legislature approve it by midnight on June 15th of the same year.¹⁴⁸ After the Governor’s initial budget proposal comes out in January, a negotiation ensues between the Legislature and the Governor until the budget is finalized.

As part of the budget negotiation there are “Trailer Bills.” These are bills that contain language that implements the budget.¹⁴⁹ But they are not just about money. Trailer Bills can sometimes implement significant policies, even though they do not go through the full hearing process of ordinary bills. The inclusion of funding in the budget for State Water Board groundwater enforcement signaled that there was likely to be a groundwater Trailer Bill.¹⁵⁰ How far a Trailer Bill would extend into the policy arena was anyone’s guess.

The Legislature, however, was already moving into groundwater regulation. The 2014 legislative deadlines required bill proposals to be

¹⁴⁶ CAL. NATURAL RES. AGENCY ET AL., CALIFORNIA WATER ACTION PLAN IMPLEMENTATION REPORT 2014-2018, at 6 (Jan. 30, 2015), available at http://resources.ca.gov/docs/california_water_action_plan/CA_WAP_Impl_Rpt-150130.pdf (quoting Edmund G. Brown Jr., Governor, State of Cal., State of the State Address (Jan. 22, 2014), available at <http://gov.ca.gov/news.php?id=18373>).

¹⁴⁷ See *California’s Budget Process*, CAL. DEP’T FIN. (Sept. 2012), <http://www.dof.ca.gov/fisa/bag/process.htm>.

¹⁴⁸ CAL. CONST. art. IV, § 12.

¹⁴⁹ See *Trailer Bill Language*, CAL. DEP’T FIN., http://www.dof.ca.gov/budgeting/trailer_bill_language/ (last visited Apr. 25, 2015).

¹⁵⁰ This was not just idle speculation. Trailer Bills were used in 2014 to implement significant State Water Board-related policies. See, e.g., S.B. 104, 2013–2014 Leg., Reg. Sess. (Cal. 2014), 2014 Cal. Stat. Ch. 3, available at http://leginfo.ca.gov/pub/13-14/bill/sen/sb_0101-0150/sb_104_bill_20140301_chaptered.html (giving the State Water Board new enforcement powers in response to drought, including enhanced civil penalties); S.B. 861, 2013–2014 Leg., Reg. Sess. (Cal. 2013), 2013 Cal. Stat. Ch. 35, available at http://leginfo.ca.gov/pub/13-14/bill/sen/sb_0851-0900/sb_861_bill_20140620_chaptered.html (implementing a major reorganization of the State Drinking Water Program by moving it from the Department of Public Health, in the Health and Human Services Agency, to the State Water Board).

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submitted to the Office of Legislative Counsel by the end of January. Once received back, the resulting bill language, in “Legislative Counsel Form,” had to be introduced by the end of February. That means that prior to bill introduction, legislators have been working on language for weeks, if not months. On February 14, 2014, Democratic Assemblymember Roger Dickinson, an attorney and former Supervisor for Sacramento County, introduced AB 1739, jointly authored by Assemblymember Anthony Rendon (D-Lakewood), Chair of the Assembly Committee on Water, Parks, and Wildlife.¹⁵¹ AB 1739 required the State Water Board, in consultation with DWR, to determine sustainable yield for a groundwater basin in coordination with other applicable local agencies.¹⁵² Six days later, Senator Pavley, Chair of the Senate Committee on Natural Resources and Water, introduced SB 1168, which amended the AB 3030 and SB 1938 statutes to, among other actions, add definitions of overdraft and sustainable yield.¹⁵³

The groundwater issue was now somewhat unique in that the Governor’s office and both houses of the Legislature had potential vehicles to regulate groundwater management. All three pursued them vigorously. Assemblymember Dickinson began working with the Association of California Water Agencies (ACWA) on potential refinements. ACWA was a powerful stakeholder and far from a newcomer to groundwater issues.¹⁵⁴ In 2011, it had issued a report, drafted over an eighteen-month period by a task force of its Groundwater Committee, that emphasized both groundwater sustainability and local control.¹⁵⁵ Its Executive Director was Tim Quinn, a twenty-five-year veteran of California water policy, including a stint as principal economist for the giant Metropolitan Water District of Southern California.¹⁵⁶

Senator Pavley was likewise working with an impressive collaborator, the California Water Foundation (CWF), led by Lester Snow, a former DWR Director and former CNRA Secretary. CWF, at the request of

¹⁵¹ See Assemb. B. 1739, 2013–2014 Leg., Reg. Sess. (Cal. 2014), available at http://www.leginfo.ca.gov/pub/13-14/bill/asm/ab_1701-1750/ab_1739_bill_20140214_introduced.html.

¹⁵² *Id.*

¹⁵³ S.B. 1168, 2013–2014 Leg., Reg. Sess. (Cal. 2014), 2014 Cal. Stat. 346, available at http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_1151-1200/sb_1168_bill_20140916_chaptered.pdf.

¹⁵⁴ ACWA “is the largest statewide coalition of public water agencies in the country. Its 430 public agency members collectively are responsible for 90% of the water delivered to cities, farms and businesses in California.” *About ACWA*, ASS’N CAL. WATER AGENCIES, <http://www.acwa.com/content/about-acwa> (last visited Apr. 25, 2015).

¹⁵⁵ ASS’N OF CAL. WATER AGENCIES, *SUSTAINABILITY FROM THE GROUND UP: GROUNDWATER MANAGEMENT IN CALIFORNIA* *passim* (2011) available at <http://www.acwa.com/sites/default/files/post/groundwater/2011/03/groundwater-book.pdf>.

¹⁵⁶ See Tim Quinn, *Executive Director*, ASS’N CAL. WATER AGENCIES, <http://www.acwa.com/content/tim-quinn-executive-director> (last visited Apr. 25, 2015).

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the Brown Administration, was already engaged in a dialogue with agricultural, water agency, under-represented community, city, and environmental stakeholders in order to “prepare a report to Governor Brown and the State Legislature with recommendations to achieve sustainable groundwater management.”¹⁵⁷

On March 7, 2014, the Governor’s Office of Planning and Research (OPR) released a draft framework for “soliciting stakeholder input on actions that can be taken to improve groundwater management in the state, consistent with the Governor’s 2014 California Water Action Plan.”¹⁵⁸ The draft framework emphasized local control but solicited ideas for the Administration regarding whether local agencies needed additional tools and how the State should structure State “backstop” authority when local action had not occurred or was insufficient.¹⁵⁹ OPR also simplified public access with a one-stop-shopping website for the Administration’s groundwater efforts.¹⁶⁰

On March 11, 2014, the Assembly Water, Parks & Wildlife Committee held an informational hearing on *Management of California’s Groundwater Resources*,¹⁶¹ and on March 18, 2014, the Senate Natural Resources and Water Committee held an informational hearing on *Managing California’s Groundwater: Issues and Challenges*.¹⁶² Both hearings revealed that dropping groundwater levels were wreaking havoc across an ever-widening swath of farms and communities. Land subsidence was buckling infrastructure, cracking irrigation canals, and depositing threatening levels of sediment into flood control structures. Streams were being dewatered, depriving both senior water rights holders and wildlife of crucial surface flows. Coastal zones were suffering saline water intrusion. And the lower the water tables fell, the higher the cost to drill new wells and pump water rose, for those that could afford to do so

¹⁵⁷ CAL. WATER FOUND., RECOMMENDATIONS FOR SUSTAINABLE GROUNDWATER MANAGEMENT: DEVELOPED THROUGH A STAKEHOLDER DIALOGUE 1 (May 2014), available at http://www.waterplan.water.ca.gov/docs/cwpu2013/Final/vol4/groundwater/17Recommendations_Sustainable_Groundwater_Management.pdf.

¹⁵⁸ GOVERNOR’S OFFICE OF PLANNING & RESEARCH, CALIFORNIA WATER ACTION PLAN SUSTAINABLE GROUNDWATER MANAGEMENT 1 (Mar. 7, 2014), available at http://www.opr.ca.gov/docs/Sustainable_Groundwater_Management_3-7-2014.pdf.

¹⁵⁹ *Id.* at 2.

¹⁶⁰ See *Sustainable Groundwater Management*, CA.GOV, <http://groundwater.ca.gov/cagroundwater/> (last modified Apr. 23, 2015).

¹⁶¹ See *Archived Informational and Oversight Hearings*, CAL. STATE ASSEMBLY COMMITTEE ON WATER, PARKS, & WILDLIFE., <http://awpw.assembly.ca.gov/informationalandoversighthearings> (last visited Apr. 25, 2015).

¹⁶² See *2014 Oversight/Informational Hearing*, CAL. SEN. NAT. RESOURCES & WATER COMMITTEE, <http://sntr.senate.ca.gov/content/2014-oversightinformational-hearing> (last visited Apr. 25, 2015).

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in the first place. Some poor communities with shallow wells simply went dry.

In April, ACWA produced its *Recommendations for Achieving Groundwater Sustainability*.¹⁶³ Shortly thereafter, both AB 1739 and SB 1168 were substantially amended to depart from the AB 3030 and SB 1938 statutes and instead create a new stand-alone section in the Water Code dedicated to sustainable groundwater management. The similar approach in the amendments reflected the fact that staff of both authors, together with key Governor's office and agency staff, were now working collaboratively with stakeholders to refine a new groundwater law. The May publication of CWF's *Recommendations for Sustainable Groundwater Management: Developed Through a Stakeholder Dialogue* only strengthened that impression.¹⁶⁴ Both CWF and ACWA recommended acknowledging the connection between groundwater and surface water, defining and setting sustainability standards, and empowering locals with new management tools. In addition, if locals could not or would not act, they said the State should act as an enforcement "backstop."¹⁶⁵ CWF also launched a powerful new website featuring a diverse set of agricultural, water agency, environmental, and environmental justice leaders under the banner: "Everyone's Talking About Water. For Once, They're Saying the Same Thing."¹⁶⁶ The featured "voices" included everyone from Miles Reiter of Driscoll Strawberries to Curtis Knight of California Trout.¹⁶⁷

On May 22, 2014, after holding multiple stakeholder meetings and receiving significant stakeholder response, the Governor's office took the extraordinary step of posting its own draft statutory language to its groundwater website.¹⁶⁸ Thereafter, the Trailer Bill SB 868 (Committee on Budget and Fiscal Review) was introduced. SB 868 declared that the policy of the State demanded groundwater resources be managed sustainably and was a placeholder for further specific legislative action.¹⁶⁹ In other words, the Governor's Office was poised to try and force the Legislature to act if it seemed like it couldn't or wouldn't.

¹⁶³ See ASS'N OF CAL. WATER AGENCIES, *RECOMMENDATIONS FOR ACHIEVING GROUNDWATER SUSTAINABILITY* (Apr. 2014), available at http://www.opr.ca.gov/docs/ACWA_Proposal.pdf.

¹⁶⁴ See CAL. WATER FOUND., *supra* note 157.

¹⁶⁵ *Id.* at 12; ASS'N OF CAL. WATER AGENCIES, *supra* note 163, at 4.

¹⁶⁶ GROUNDWATER VOICES COALITION, <http://www.groundwatervoices.com/> (last visited Apr. 25, 2015).

¹⁶⁷ *Id.*

¹⁶⁸ GOVERNOR'S OFFICE OF PLANNING & RESEARCH, *SUSTAINABLE GROUNDWATER MANAGEMENT 10-23* (May 22, 2014), available at <http://www.opr.ca.gov/docs/SustainableGroundwaterManagement.pdf>.

¹⁶⁹ S.B. 868, 2013-2014 Leg., Reg. Sess. (Cal. 2014), available at http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_0851-0900/sb_868_bill_20140612_amended_asm_v98.pdf.

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Had there been any doubts that the two houses of the Legislature would be able to come to agreement, they were dispelled by the June Amendments to both AB 1739 and SB 1168, which came into print on the same day and showed that Assemblymember Dickinson and Senator Pavley were now each other's principal coauthors.¹⁷⁰ Furthermore, the Senate Committee analysis included the following:

We Can Work It Out. The two authors are collaborating with each other, as evidenced by their each being principal co-authors of the other's bill. They are also working [with] the administration to craft a final product. Further, the authors have committed to working through July with the administration and all interested parties to craft a proposal that addresses and resolves as many issues as is practicable.¹⁷¹

True to their word, the authors and the Administration worked through the July legislative recess with four professionally facilitated stakeholder meetings attended by hundreds of people, both in person and through conference capabilities. At the end of those discussions, both bills were amended into mirror images so that members and interested persons in both houses were considering the exact same language.

B. THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT EMERGES

The set of statutes that emerged from the July stakeholder sessions borrowed from all of the efforts that had come before. Like the Water Commission Report had suggested over thirty-five years ago, only certain basins would be subject to the Act. Under SGMA these are the basins prioritized by DWR as high and medium pursuant to CASGEM¹⁷²

¹⁷⁰ S.B. 1168, 2013-2014 Leg., Reg. Sess. (Cal. 2014), available at http://leginfo.ca.gov/pub/13-14/bill/sen/sb_1151-1200/sb_1168_bill_20140617_amended_asm_v96.pdf (amended in Assembly June 17, 2014); Assemb. B. 1739, 2013-2014 Leg., Reg. Sess. (Cal. 2014), available at http://leginfo.ca.gov/pub/13-14/bill/asm/ab_1701-1750/ab_1739_bill_20140617_amended_sen_v97.pdf (amended in Assembly June 17, 2014).

¹⁷¹ *Groundwater Basin Management: Sustainability: Hearing on Assemb. B. 1739 Before the S. Comm. on Natural Res. & Water*, 2014 Leg., Reg. Sess. 2013-2014 8 (Cal. 2014) (bill analysis), available at http://leginfo.ca.gov/pub/13-14/bill/asm/ab_1701-1750/ab_1739_cfa_20140620_134301_sen_comm.html.

¹⁷² See CAL. WATER CODE § 10933 (Westlaw 2015). The factors for priority include, but are not limited to, the level of population overlying the basin or subbasin, the projected rate of population growth for the basin or subbasin, the number of public supply wells dependent on the basin or subbasin, the irrigated acreage overlying the basin or subbasin, and the degree of reliance. *Id.* § 10933(b).

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and include the 127 (out of California's 515 alluvial groundwater basins) that account for 96% of California's annual groundwater pumping.¹⁷³

However, twenty-six of those high- and medium-priority basins were adjudicated and under the continuing jurisdiction of the courts, and another three were in pending litigation. To avoid creating a retroactive statute that would upend the settled expectations of those who had undergone adjudications or were in the midst of them, SGMA listed the adjudicated basins by name and exempted them from the Act, with the exception of minimal reporting that was tied to pre-existing annual reports required by most decrees.¹⁷⁴ In contrast, however, SGMA specifically excluded from this exemption any future adjudications. This was because SGMA was creating a new standard of sustainable management and didn't want stakeholders to be able to resort to adjudications as a way of avoiding compliance with the statute. Instead, just as with existing AB 3030 or SB 1938 plans, a local agency could submit a future adjudication to DWR for an evaluation and assessment as to whether management pursuant to the adjudication meets the requirements of serving as an alternative to a GSP.¹⁷⁵

How sustainable management could be articulated in SGMA was another area of debate. Some suggested requiring basins to reach "safe yield," while others insisted that basins should have "sustainable yield." But both terms were considered ambiguous.¹⁷⁶ Ultimately, simplicity won out and the drafters settled on specificity. SGMA defined sustainable groundwater management as "the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results."¹⁷⁷ Six conditions from groundwater pumping were listed as "undesirable result[s]" if they rose to the level of "significant and unreasonable": overdraft, groundwater storage reductions, saltwater intrusion, water quality degradation, land subsidence, and depletions of interconnected surface waters that impact beneficial uses of surface waters.¹⁷⁸

¹⁷³ *Groundwater Basin Prioritization*, CAL. DEP'T WATER RESOURCES, http://www.water.ca.gov/groundwater/casgem/basin_prioritization.cfm (last modified Jan. 15, 2015).

¹⁷⁴ CAL. WATER CODE § 10720.8 (Westlaw 2015).

¹⁷⁵ CAL. WATER CODE § 10733.6(b)(1) (Westlaw 2015).

¹⁷⁶ In an attempt to distinguish between "safe yield" and "sustainable yield," the core drafters circulated the groundwater issue paper *Sustainable Yield in Theory and Practice: Bridging Scientific and Mainstream Vernacular*. See Kirsten Rudestam & Ruth Langridge, *Sustainable Yield in Theory and Practice: Bridging Scientific and Mainstream Vernacular*, 52 GROUNDWATER S1, at 90-99 (Sept. 2014).

¹⁷⁷ CAL. WATER CODE § 10721(u) (Westlaw 2015).

¹⁷⁸ CAL. WATER CODE § 10721(w) (Westlaw 2015).

SGMA then required local agencies with water supply, water management, or land use responsibilities within a groundwater basin to come together and form one or more Groundwater Sustainability Agencies (GSAs) in order to develop and implement Groundwater Sustainability Plans (GSPs). GSPs had to use a fifty-year planning horizon with measurable objectives, as well as interim milestones in increments of five years that would achieve sustainability twenty years from the start of implementation.¹⁷⁹ The debate over whether there should be one GSA and one GSP for each basin or subbasin or multiple GSAs and multiple GSPs was also a lively one. The challenge was how to ensure that a shared resource could be managed cooperatively. Many stakeholders argued for flexibility, noting that they were differently situated. In the end the compromise was to allow multiple GSAs and GSPs, but their planning would need to be coordinated through a written agreement, and they would have to use the same data and methodologies in developing those plans.¹⁸⁰ Local agencies were given a deadline of June 30, 2017, to decide how to form or elect to be GSAs and to notify DWR; otherwise they could be subject to enforcement action by the State Water Board.¹⁸¹

The debate over whether a basin could be adequately managed if only part of it was covered by a management plan generated a great deal of discussion. Again, it was the struggle with how to manage a shared resource if there wasn't full participation from all who were withdrawing from the basin. Local agencies already supplying surface water or groundwater seemed like natural candidates to be GSA, but not all pumpers were covered by local water agencies. That made counties the ideal default. Counties already had police powers, many managed water, and every pumper was in a county. Counties, though, had other ideas. They didn't want to be excluded, but they also didn't want to be mandated. The compromise was to presume the county would be the default, but to allow any county to opt out.¹⁸² However, in the event a county did opt out and no other local agency stepped in, pumpers in the "unmanaged area" would have to report their pumping directly to the State Water Board, which could charge fees for having to assume that management.¹⁸³ The other area of county sensitivity was land use. As a result, the Act was revised to require information sharing between cities and counties and GSPs when General Plans or GSAs were adopted or re-

¹⁷⁹ CAL. WATER CODE §§ 10721 (m), (q), 10727.2(b)(1) (Westlaw 2015). Upon a showing of good cause, DWR can also grant up to two five-year extensions of the twenty-year deadline. CAL. WATER CODE § 10727.2(b)(3)(A) (Westlaw 2015).

¹⁸⁰ CAL. WATER CODE § 10727(b)(3), 10727.6 (Westlaw 2015).

¹⁸¹ CAL. WATER CODE § 10735.2 (Westlaw 2015).

¹⁸² CAL. WATER CODE § 10724 (Westlaw 2015).

¹⁸³ *Id.*

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vised. But SGMA expressly stated it did not supersede city or county land use authorities.¹⁸⁴

Just as the agencies could differ, so could the condition of the basins, with those in chronic overdraft considered the most at-risk. Therefore, SGMA provides two (but actually three) deadlines for GSP development. Each high- or medium-priority basin in a critical condition of overdraft has until January 31, 2020, to adopt and implement a GSP, and every other high- and medium-priority basin has until January 31, 2022, or the State Water Board can come into the basin and designate it as probationary.¹⁸⁵ However, under pressure from stakeholders, the Brown Administration added amendments to SB 1319 in the final days of the legislative session that prohibited the State Water Board from designating a basin probationary until January 31, 2025, if it was suffering from significant depletions of interconnected surface waters due to groundwater pumping.¹⁸⁶ The theory was that an interconnected surface-waters issue could be technically complex, and therefore additional time was warranted to resolve basin management.

Some stakeholders found the SGMA deadlines too ambitious, while others thought they were overly generous. But many agreed that in the gap between GSA formation and GSP adoption there could be a “rush to the pumphouse” of parties trying to increase their groundwater pumping in order to set the stage for an enlarged prescriptive claim later. So the SGMA drafters did a bold thing. They specified that SGMA did not modify rights or priorities to use groundwater, with one exception: no extraction of groundwater between January 1, 2015 (the date of SGMA enactment), and the date of adoption of a GSP could be used as evidence of, or to establish or defend against, any claim of prescription.¹⁸⁷

DWR’s role in providing technical assistance and review contrasted with the State Water Board’s role as the groundwater “police” and reflected stakeholders’ views of DWR as a non-regulatory agency and the State Water Board as a regulator. Consistent with those views was the sense that the State Water Board was “scary” enough to prompt local action and, in essence, give locals political cover for the difficult decisions they would need to make. SGMA provided familiar tools to GSAs. Many of them were borrowed from the successful management strategies of OCWD and others and included the ability to require registration of groundwater extraction facilities, charge fees, implement projects or programs for replenishment, and take enforcement action. But many were

¹⁸⁴ CAL. WATER CODE § 10726.8(f) (Westlaw 2015).

¹⁸⁵ CAL. WATER CODE § 10720.7 (Westlaw 2015).

¹⁸⁶ CAL. WATER CODE § 10735.2(a)(5)(B) (Westlaw 2015).

¹⁸⁷ CAL. WATER CODE §§ 10720.3, 10720.5 (Westlaw 2015).

also likely to be unpopular. So an effective State “backstop” was a necessity.

A coincidence of drafting makes it easy to remember where the State Water Board’s enforcement authorities are—SGMA Chapter 11. And, analogous to Chapter 11 of the U.S. Bankruptcy Code, if a basin’s withdrawals are exceeding its deposits, its pumpers may find themselves being “reorganized” by the State Water Board. Chapter 11 allows the State Water Board to designate a basin as “probationary” if the appropriate deadlines have not been met for GSA formation, GSP adoption, or GSP sufficiency.¹⁸⁸ SGMA then allows the State Water Board to prepare an interim plan that will remain in effect until the locals are willing and able to take over sustainable management.¹⁸⁹ The interim plan would identify actions necessary to correct long-term overdraft conditions, set a time schedule for the actions to be taken, and articulate the monitoring that would be necessary to determine the effectiveness of the interim measures. A plan could also include restrictions on groundwater extractions, a physical solution, or principles and guidelines for the administration of rights to surface water connected to the basin.¹⁹⁰ Importantly, just as with “unmanaged areas,” the State Water Board could also require direct reporting of extractions and charge fees. In an important concession to stakeholders, SGMA was modified late in the Session to specify that “good actors” in a basin would be excluded from probationary status and their GSPs would be included in the interim plan used in the basin.¹⁹¹

SGMA may have been a “big tent” effort, but not everyone was pleased. The California Farm Bureau Federation was leading a group of opponents in the agricultural industry who were concerned that AB 1739 and SB 1168 had “the potential to fundamentally alter the livelihoods of California’s farmers and the millions of Californians whose employment is directly or indirectly tied to agriculture.” These opponents included counties in the Central Valley and agriculture-related businesses, most of which felt the development of groundwater regulation had been a “rush to judgment.”¹⁹²

The legislative path that SGMA took led to both bills being amended in mid-August to divide them along logical lines into two pieces of one integrated whole. Senator Pavley’s SB 1168 would take the

¹⁸⁸ CAL. WATER CODE § 10735.2 (Westlaw 2015).

¹⁸⁹ CAL. WATER CODE § 10735.8 (Westlaw 2015).

¹⁹⁰ *Id.*

¹⁹¹ CAL. WATER CODE §§ 10735.2(e), 10735.8(e) (Westlaw 2015).

¹⁹² Assemb. B. 1739, *Third Reading*, 2014 Leg., Reg. Sess. 2013–2014 12 (Cal. 2014), available at http://leginfo.ca.gov/pub/13-14/bill/asm/ab_1701-1750/ab_1739_cfa_20140817_144255_sen_floor.html.

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front half of the statutes and define sustainability, address the creation of GSAs, and set out the elements of GSPs. Assemblymember Dickinson's bill would include a toolbox of authorities for GSAs, including fees and enforcement, and it would set out the State enforcement provisions. The two-bill strategy gave each author, and each house of the Legislature, ownership of the statute. But the work was not done. As previously mentioned, during the final weeks of the legislative session the Administration decided there needed to be an additional response to some of the concerns being raised by agricultural stakeholders and others, including how the State would treat the "good actors" in a probationary basin. As a result, a third bill, SB 1319—authored by Senator Pavley—was gutted and amended to modify AB 1739 and SB 1168.

Floor discussions were tense. Senator Pavley and Assemblymember Dickinson gave impassioned presentations, but many Republican members and a few Central Valley Democrats lined up against the bills. Finally, the Democratic leaders of both houses, Speaker Toni Atkins and Pro-Tem Darrel Steinberg weighed in, and the three bills passed off the Assembly and Senate floors, were concurred in, and headed to the Governor's desk.

On September 16, 2014, Governor Jerry Brown held a signing ceremony at the State Capitol, referring to the three-bill package enacting SGMA and related statutes as historic. "'We have to learn to manage wisely water, energy, land and our investments,' said Governor Brown. 'That's why this is important.'"¹⁹³

IV. CONCLUSION

SGMA passed in 2014, but it was a long time in the making. Arguably, California has known it needed to manage groundwater resources since 1914. The lessons learned from OCWD and the Water Commission Report demonstrated how the State could manage. The Sax Report said the authority was already there. But in the end it took another exceptional drought, a visionary Governor, and an extraordinary coalition¹⁹⁴ to come together and make SGMA a reality.

¹⁹³ Press Release, Office of Governor Edmund G. Brown Jr., Governor Brown Signs Historic Groundwater Legislation (Sept. 16, 2014), *available at* <http://www.gov.ca.gov/news.php?id=18701>.

¹⁹⁴ The author wishes to acknowledge the collaboration, professionalism, and unflagging efforts of the following people who had a direct hand in making SGMA a reality: In the Capitol—First and foremost, Assemblymember Roger Dickinson and his amazing Legislative Director, Leslie Spahn; Senator Fran Pavley, her very effective Chief of Staff, Elizabeth Fenton, and her tireless technical drafter, Dennis O'Connor, Principal Consultant, Senate Natural Resources and Water Committee; and the indefatigable legal drafters at the Legislative Counsel's Office, Stephanie Hoehn and Genevieve Wong. For the Administration—At the Governor's Office, Martha Guzman-Aceves,

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