ABOUT THE SYMPOSIUM

For many years, the McGeorge Law Review has hosted legal symposia centered on issues of timely legal importance. Through topics like the legalization of marijuana, the jurisprudence of Justice Anthony Kennedy, and the future of legal education, the McGeorge Law Review continues to bring together prominent scholars and practitioners to discuss diverse and fascinating legal topics.

This year, the McGeorge Law Review utilizes its location in California’s capital to pull together key policy makers, experts, and scholars to discuss California’s future. By 2050, California is estimated to have reached a population of 50 million residents. This symposium will discuss how we can proactively respond to a growing population through legal reform and careful planning to ensure that we do not overburden our natural resources.
PROGRAM

8:00-8:45
Registration & Continental Breakfast

8:45-9:15
Welcome & Introductory Remarks
- Professor Leslie Jacobs, Director of the Capital Center for Public Law & Policy, University of the Pacific, McGeorge School of Law
- Ken Alex, Senior Policy Adviser to the Governor and Director of Governor’s Office of Planning and Research

9:15-10:45
Limited Land: How We Develop
There is general agreement that we need to be building “smarter”: higher densities, more compact development, more mixed uses, and less vehicle dependence. Will the law get us there? Will the economic realities prevent the changes? And how do we ensure that these changes benefit all Californians?
- Moderator: James “Jim” Andrew, Assistant Chief Counsel, California High-Speed Rail Authority
- Professor Dorothy Glancy, Santa Clara University School of Law
- Professor Jeffrey Michael, University of the Pacific
- Martha Dina Arguello, Executive Director, Physicians for Social Responsibility

10:45-11:00
Morning Networking Break

11:00-12:30
Limited Land: How We Conserve
We have a fixed amount of land but many competing uses such as housing, transportation, commercial, industrial, agriculture, wildlands and working lands. As the population expands, how do we balance these and other competing uses?
- Moderator: Phil Pogledich, Senior Deputy County Counsel, Yolo County
- Professor Kalyani Robbins, University of Akron School of Law
- Braiden Chadwick, Founding Partner, Mitchell Chadwick
- Aimee Rutledge, Executive Director, Sacramento Valley Conservancy

12:30-1:00
Lunch
1:00-1:45

**Capital Lecture Keynote Sponsored by the Witkin Legal Institute**

- Introduction: Professor John Sprankling, University of the Pacific, McGeorge School of Law
- Dr. Peter Gleick, Pacific Institute

1:45-3:15

**The Virtual River and the Importance of Conservation**

*California's limited water supply is already a great source of conflict. This panel will discuss ways to efficiently use our existing water sources.*

- Moderator: Honorable Ronald Robie, Associate Justice on the California Court of Appeal, Third Appellate District
- Professor Paul Stanton Kibel, Golden Gate University School of Law
- Professor Jennifer Harder, UC Davis School of Law and University of the Pacific, McGeorge School of Law
- Alf Brandt, Legislative Director, Assemblyman Anthony Rendon

3:15-3:30

**Afternoon Networking Break**

3:30-5:00

**Renewable Energy: What is possible?**

*A growing population means more demand for electricity. How do we provide that power without contributing to global climate change?*

- Moderator: Sue Kateley, Chief Consultant, California State Assembly Committee on Utilities and Commerce
- Professor K.K. DuVivier, University of Denver, Sturm College of Law
- Michael J. Levy, Chief Counsel, California Energy Commission
- Kristen Castaños, Partner, Stoel Rives

5:00-5:15

**Concluding Remarks**

- Professor Rachael Salcido, Faculty Adviser, University of the Pacific, McGeorge School of Law

5:15-6:30

**Hosted Reception (McGeorge House)**

*Sponsored by Kronick, Moskovitz, Tiedemann & Girard*
Ken Alex, Senior Policy Adviser to the Governor and Director of Governor’s Office of Planning and Research

Ken Alex is a Senior Policy Advisor to Governor Jerry Brown and the Director of the Office of Planning and Research, focusing on energy, environment, and land use issues. As California moves towards a population of 50 million in a climate change constrained world, Ken and OPR work on issues and policies that protect and promote the State’s environment and economy. Before joining the Governor’s Office, Ken was the Senior Assistant Attorney General heading the environment section of the California Attorney General’s Office, and the co-head of the Office’s global warming unit. From 2000 to 2006, Ken led the California Attorney General’s energy task force, investigating price and supply issues related to California’s energy crisis. During his tenure at the Attorney General’s Office, Ken negotiated dozens of significant settlements, including agreements with San Bernardino County and ConocoPhillips for the first required reductions of greenhouse gas emissions in the country.

California Lawyer named Ken an “Attorney of the Year” in 2004 for his work in energy law, and he received the ABA award for Distinguished Achievement in Environmental Law and Policy in 2007 for global warming work. He has taught courses on environmental law and policy at Stanford, Hastings, and Golden Gate University.

Ken is a graduate of Harvard Law School and holds a B.A. in political theory from the University of California at Santa Cruz.

View the California @ 50 Million draft at http://opr.ca.gov/docs/EGPR_ReviewDraft.pdf.

Abstract

California is inexorably heading for 50 million people, with climate change as a harsh reality. The current drought may well be an early indicator of some of our challenges. State policy and planning needs to confront these realities. In the Central Valley, we believe that high speed rail provides the opportunity to preserve farm land and open space, plan in a coherent rather than haphazard way, focusing on connectivity through transit and higher densities in hubs instead of sprawl. This is, in part, the vision of SB 375. We also need to make smart decisions about renewables and transmission. Fresno provides an interesting example of how this set of issues can play out. Renewables present solutions but also their own set of problems, from siting and permitting, to land and wildlife conflicts, as well as significant challenges for grid integration. At the same time, we need to ramp up infrastructure for electric and hydrogen vehicles, while we forge a path for greenhouse gas reductions to 2030.

As part of meeting these challenges, planning needs to change. We are revamping how general plans are done, with a much bigger role for data and mapping along with scenario planning. We are also moving to a VMT approach for project impact review, which should impact planning and development. Data is a big driver of change and holds a lot of promise. Meanwhile, we need to integrate resilience and emission reduction into all of our infrastructure decisions.
9:15-10:45
LIMITED LAND: HOW WE DEVELOP

There is general agreement that we need to be building “smarter”: higher densities, more compact development, more mixed uses, and less vehicle dependence. Will the law get us there? Will the economic realities prevent the changes? And how do we ensure that these changes benefit all Californians?

• Moderator: James “Jim” Andrew, Assistant Chief Counsel, California High-Speed Rail Authority
• Professor Dorothy Glancy, Santa Clara University School of Law
• Professor Jeffrey Michael, University of the Pacific
• Martha Dina Arguello, Executive Director, Physicians for Social Responsibility
Professor Dorothy Glancy, Santa Clara University School of Law

Professor Dorothy Glancy is nationally known for her extensive work in the area of privacy and transportation law. Under a grant from the Federal Highway Administration of the U.S. Department of Transportation, she directed a legal research project regarding privacy and intelligent transportation systems. She has also been a consultant to the Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area, worked with the United States Department of Transportation regarding privacy policy issues, and served as a consultant regarding legal and regulatory issues for the United States Department of Transportation’s Rural Interstate Corridor Communications Study Report to Congress (2007).

Dorothy has taught at Santa Clara University School of Law since 1975, with the exception of brief periods where she served as visiting professor at the University of Arizona and as assistant general counsel at the U.S. Department of Agriculture in Washington, D.C. Prior to joining the Santa Clara faculty, she practiced law in Washington, D.C., and then served as counsel to the U.S. Senate Judiciary Subcommittee on Constitutional Rights during the Watergate Investigations. Upon graduation from law school, Dorothy was awarded a Stevens Traveling Fellowship that took her around the world to interview women political leaders.

Abstract

VEHICLE MILES TRAVELED AND SUSTAINABLE COMMUNITIES

Transportation and urban development have been associated for a long time. According to recently published research, cities initially formed where traffic jams occurred. In the twenty-first century, we recognize that transportation affects population densities and has both direct and indirect environmental impacts. For example, the interstate highway system, built after World War II, has been held responsible for suburbia’s scattered, low-density residential development now despised as sprawl that is a blight on the landscape, as well as a threat to the global climate.

California is in the midst of a grand experiment to see whether smart growth techniques including transportation planning and renewed efforts to incentivize affordable housing can usefully discourage suburban sprawl and reduce greenhouse gas (GHG) emissions that affect global climate change. Enacted in 2008, the Sustainable Communities Act (SB 375) was a follow-on measure to California’s Global Warming Solutions Act of 2006 (AB 32). The Sustainable Communities Act’s ultimate goal is to achieve the reductions in GHG emissions established under the Global Warming Solutions Act. To assist in reaching the CO2 reduction target of 1990 levels by 2020, the Sustainable Communities Act seeks to reduce GHG emissions by decreasing use of passenger vehicles and light trucks through requirements that land development take place in more compact density patterns and be located near transit in mixed-use walkable communities. Through a number of measures, including transit improvements and enhanced intercity transportation, such as High Speed Rail, the Sustainable Communities Act seeks to decrease the use of private automobiles and light trucks in California through transportation planning based in part on vehicle miles traveled. This article is about the role of vehicle miles traveled in attaining the Act’s goals.

At the highest level of generality, the Sustainable Communities Act mandates a smart growth approach to regional land use planning that has been discussed in California over many decades. The Sustainable Communities Act focuses on regional plans called “Sustainable Communities Strategies” that combine local government obligations to meet regional housing needs and regional transportation planning designed to attain California Air Resources Board regional targets for reducing GHG emissions. In addition, the Sustainable Communities Act provides incentives for construction of affordable housing through streamlining exemptions from the California Environmental Quality Act (CEQA) for projects that are consistent with the region’s Sustainable Communities Strategy. If a region’s Sustainable Communities Strategy will not achieve that region’s GHG reduction target, an Alternative Planning Strategy (APS) may be used. Local governments’ General Plan Housing Elements, already mandated and regulated under state law, are to be synchronized with the articulation of regional housing and transportation goals in the Sustainable Communities Strategy, or APS.
The Sustainable Communities Act seeks to induce local compliance with regional planning goals through a collaborative process under the auspices of the California Air Resources Board working with either an existing Metropolitan Planning Organization (MPO) in urbanized areas or a Regional Transportation Planning Agency (RTPA) in more rural areas. The attached map shows California’s various types of regional transportation planning agencies responsible for adopting Sustainable Communities Strategies. The regional Sustainable Communities Strategy, or APS, does not override or preempt city or county general plans. Although not mandated, consistency with the Sustainable Communities Strategy makes residential development or transportation projects eligible for the Sustainable Communities Act’s CEQA streamlining incentives in cities or counties that offer such incentives.

Vehicle miles traveled are transportation underpinnings supporting the GHG emission reductions to be achieved through the Sustainable Communities Act’s regional processes. On the surface, vehicle miles traveled seems problematic as a real measure of actual GHG emissions. For example, zero-emissions private automobiles and light trucks generate vehicle miles traveled, but not the emissions targeted by the Sustainable Communities Act. Indeed, the vehicle miles traveled concept has a number of unusual characteristics. First, vehicle miles traveled include only miles driven by passenger vehicles and light trucks. Miles driven by heavy vehicles such as large trucks, vans and busses are not included in this measure of GHG emission reductions. Second, vehicle miles traveled calculations do not come from literally counting actual cars and miles; rather, they are estimates of traffic volumes within a geographical area on a monthly and yearly basis. The Federal Highway Administration has compiled and computed vehicle miles traveled as traffic volume estimates across the country since 1970. Each state contributes highway performance monitoring data based on observations of highway performance at selected sites around the state. That data is then used to model traffic volumes in the form of vehicle miles traveled in various categories and areas. For many proponents of the Sustainable Communities Act, vehicle miles traveled were seen as directly proportional to GHG emissions. In other words, percentage reductions in GHG emissions would require the same percentage reduction in vehicle miles traveled.

However, under the Sustainable Communities Act, vehicle miles traveled are not taken so literally. Vehicle miles traveled is a composite construct that represents a number of transportation factors used in the Sustainable Communities Act’s transportation planning under regionally adopted Sustainable Communities Strategies. As implemented under the Sustainable Communities Act, vehicle miles traveled is a more nuanced concept. Indeed, the CARB methodology for reviewing GHG reductions reported in regional Sustainable Communities Strategies focuses on travel demand models. These travel demand models consider trip generation, trip distribution, mode choice and traffic assignment, rather than only, or even mainly, using vehicle miles traveled. As used in implementing the Sustainable Communities Act, vehicle miles traveled is actually a construct that can represent various travel demand models of transportation related emissions.

In the meantime, the vehicle miles traveled idea appears in a variety of legislative and regulatory measures and proposals. At the federal level, vehicle miles traveled is associated with fees for highway use that are likely to be needed to replace the Highway Trust Fund’s gasoline tax revenue source. In generating funds for maintenance of roadway systems, fees for vehicle miles traveled seem to be an attractive revenue alternative to the gas tax. The United States Department of Transportation has studied vehicle miles traveled fees for many years and has conducted a couple of pilot programs in Oregon and Iowa. Because the calculation of vehicle miles traveled for each specific vehicle that is charged road usage fees usually involves an onboard device that uses GPS to capture the distance the vehicle has driven, privacy groups have opposed vehicle miles traveled fees because of the personal location information they seem to require.

In 2013, the California legislature enacted CEQA amendments in SB 743 that adopted vehicle miles traveled per capita as a potential metric for measuring transportation impacts in connection with transportation analysis for transit oriented infill projects. This legislation tasked the Office of Planning and Research (OPR) with “establishing criteria for determining the significance of transportation impacts of projects within transit priority areas.” OPR is currently studying vehicle miles traveled as part of its guidance about level-of-service (LOS) and non-LOS analysis of transportation impacts. Reliance on vehicle miles traveled also appears in several bills pending before the California legislature. In short, vehicle miles traveled seems to be a popular, if not altogether meaningful, metric for GHG emissions.
The most recent Office of Planning and Research Planning Survey (2012 results) indicates how local jurisdictions appear to be responding to GHG emission reductions through smart growth required under the Sustainable Communities Act. Over 70% of the jurisdictions in the survey reported that they plan to reduce GHG emissions. One of the most frequently used local approaches is to cut back parking requirements for mixed use developments. These parking reductions are directly aimed at decreasing vehicle miles traveled to and from these developments. Nearly 40% of the jurisdictions in the survey reported use of parking reductions for infill projects as a way to decrease vehicle miles traveled.

Public reaction to regional mandates to reduce vehicle miles traveled has sometimes been contentious. Anti-tax and anti-regulatory groups, as well as advocates of local control, have questioned using vehicle miles traveled as grounds for forcing changes in local transportation and land development patterns. Community meetings to gather public input regarding the adoption of Sustainable Communities Strategies have been picketed and disrupted.

There has also been a certain amount of litigation filed against implementation of the Sustainable Communities Act. Several of these lawsuits raise CEQA objections to specific Sustainable Communities Strategies. The California Building Industry Association has settled its case that was pending before the California Supreme Court regarding Plan Bay Area, the Sustainable Communities Strategy for the San Francisco Bay area. Other litigation, such as that brought by the Cleveland National Forest Foundation and the Center for Biological Diversity, remains pending.

As a means for minimizing global climate change through reductions in GHG emissions, literal use of vehicle miles traveled seems to be, at best, a blunt instrument. So far, using vehicle miles traveled as a basis for forcing changes in transportation mode preferences away from passenger cars and light-trucks has not shown success. However, California’s Sustainable Communities mandate to plan for and incentivize changes in where people live and how they travel is a very long-term effort. It will require decades before results in terms of more compact, higher density living patterns, as well as reductions in vehicle miles traveled, are likely to be realized.
**Professor Jeffrey Michael, University of the Pacific**

Dr. Jeffrey Michael is Director of the Business Forecasting Center at the University of the Pacific in Stockton, CA. The Center produces quarterly economic forecasts for California and ten Northern California metro areas in addition to special reports on current business and public policy issues impacting the region.

Jeff’s areas of expertise include regional economic forecasting and environmental economics including work on the economic impacts of the Endangered Species Act, climate change, and regulation on land use, property values and employment growth. His research has received numerous grants, and been published in scholarly journals such as the Journal of Law and Economics, Southern Economic Journal, Energy Policy, and Ecological Economics. He makes frequent presentations to the regional business and government audiences, and is cited over 200 times per year in the local and national press including the Wall Street Journal, New York Times Magazine, Los Angeles Times, San Francisco Chronicle, Newsweek, National Geographic, Washington Post, NPR, and PBS.

Before coming to Pacific in 2008, he spent nine years as faculty, Associate Dean, and Director of the Center for Applied Business and Economic Research at Towson University in Maryland. Jeff received his Ph.D. from North Carolina State University, M.S. from the University of Maine, and B.A. from Hamilton College.

**Abstract**

Local governments across California are facing a fiscal crisis. Municipal bankruptcies in Stockton and San Bernadino are the most serious cases of the problems facing many municipalities across the state. The connection of the bankrupt cities to the burst of the housing bubble and their location in fast-growing inland areas has led some commentators to incorrectly blame these cities fiscal problems on sprawl. While there may indeed be a sprawl-bankruptcy connection, it is more likely that sprawl is a result of municipal fiscal problems rather than a cause of those problems. Some policy changes that would help financially troubled cities could also reduce incentives for sprawling development.
Martha Dina Arguello, Executive Director, Physicians for Social Responsibility–L.A.

For the past 32 years, Martha Dina Arguello has served in the non-profit sector as an advocate, community organizer, and coalition builder. She joined PSR-LA in 1998 to launch the environmental health programs, and became Executive Director in November 2007. She is committed to making the credible voice of physicians a powerful instrument for transforming California and our planet into a more peaceful and healthy place.

Martha grew up in the Pico-Union area of Los Angeles. At the young age of 14, she made a lifelong commitment to effect social change after seeing her friend killed by a school security guard. While working as a health educator in the 1990s, Martha had an epiphany — she realized that although early detection can prevent death from breast cancer, it does not prevent breast cancer, which has been increasingly linked to the exposure of environmental toxicants. Since that realization, Martha has dedicated her career to the environmental justice movement, and has lectured nationwide on the use of precautionary principle policies.

As a coalition builder, Martha has emphasized the need for local grassroots advocacy working in partnership with statewide policy actions. She is an active board member of numerous organizations, including Californians for Pesticide Reform, the California Environmental Rights Alliance, and Californians for a Healthy and Green Economy. She also co-founded the Los Angeles County Asthma Coalition and the Coalition for Environmental Health and Justice, and was appointed to Cal/EPAs Environmental Justice Committee and the California Air Resources Board’s Global Warming Environmental Justice Advisory Committee.

Abstract

This presentation will highlight the work of PSR-LA and our allies on a range of issues related to health, housing, transportation and land use. The discussion will center on collaborative efforts to develop local and state policy tools to address substandard housing, co location of oil extraction sites and sensitive populations, and the health and social justice impacts of smart growth, transit orientated development and gentrification.
11:00-12:30
LIMITED LAND: HOW WE CONSERVE

We have a fixed amount of land but many competing uses such as housing, transportation, commercial, industrial, agriculture, wildlands and working lands. As the population expands, how do we balance these and other competing uses?

- Moderator: Phil Pogledich, Senior Deputy County Counsel, Yolo County
- Professor Kalyani Robbins, University of Akron School of Law
- Braiden Chadwick, Founding Partner, Mitchell Chadwick
- Aimee Rutledge, Executive Director, Sacramento Valley Conservancy
Kalyani Robbins, Associate Professor, University of Akron School of Law

Professor Kalyani Robbins joined the University of Akron School of Law faculty in 2008. She teaches Environmental Law, Natural Resources Law, Criminal Law, and Criminal Procedure, as well as various related seminars. She has focused much of her research on Wildlife Law (biodiversity and ecosystem management) and the intersection of Law, Science, and the Environment. After publishing a series of law review articles addressing endangered species policy issues from an interdisciplinary perspective, she has turned to tackling emerging policy questions raised by the ecological problems developing as a result of global climate change. Kalyani travels frequently for speaking engagements, serves in leadership roles within both the ABA and the AALS, and has published two books this year: The Laws of Nature: Reflections on the Evolution of Ecosystem Management Law and Policy (University of Akron Press, 2013); and The Law of Biodiversity and Ecosystem Management (Foundation Press University Casebook Series, Third Edition, 2013) (with John Copeland Nagle and J.B. Ruhl). Her third book, The Law and Policy of Environmental Federalism: A Comparative Analysis, is in progress.

Kalyani received her B.A. from the University of California at Berkeley, her J.D. from Stanford Law School (where she was an Articles Editor for the Stanford Law Review), and her LL.M. in Environmental and Natural Resources Law, cum laude, from Lewis & Clark Law School (the top program in the field). She has been admitted to the California and New York bars. Prior to joining the Akron Law faculty, Kalyani served as an Assistant District Attorney in the Manhattan District Attorney’s Office and was Legal Director for Sequoia ForestKeeper, an environmental nonprofit. She also clerked for The Honorable Norman H. Stahl of the United States Court of Appeals for the First Circuit and The Honorable Faith S. Hochberg of the United States District Court for the District of New Jersey. In the fall of 2014, Kalyani will be joining the faculty at Florida International University College of Law.

Abstract

GOVERNING THE UNGOVERNABLE: INTEGRATING THE MULTIMODAL APPROACH TO KEEPING AGRICULTURAL LAND USE FROM SWALLOWING ECOSYSTEMS

As the population grows, so does the conflict between demand for agricultural productivity and the need to maintain healthy ecosystems. Unfortunately, this concern alone does not motivate the agricultural industry to operate in a more environmentally friendly manner, nor is it an industry that has proven amenable to strict regulation. Indeed, any such effort must face one of the mightiest lobbies of all time. As it functions today, agriculture is unsustainable and at risk of wiping out more than its fair share of our already dwindling biodiversity. As demand increases, there is the potential for it to get worse than it already is. One might think that the Endangered Species Act (ESA) could solve the problem, given that it has strict prohibitions on harming listed species, but the ESA is no match for this industry, which works hard to avoid its reach. While there are some ESA approaches that work better than others, such as regional habitat conservation plans that allow farmers to destroy some habitat in exchange for contributing to the protection of large and interconnected areas of habitat, a review of the ESA’s implementation in the agricultural context makes clear that far more is needed.

In recent decades, a variety of approaches to improving conservation efforts on agricultural land have cropped up, such as conservation easements, payment for ecosystem services (PES) programs, the Conservation Reserve Program (CRP) to avoid overuse of agricultural land, green labeling restrictions, and direct subsidy methods such as the Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP), which pay farmers to incorporate more environmentally friendly practices. Some of these methods, such as PES and conservation easements, tend to be implemented by a wide range of entities, both public and private. What we wind up with is a mix of efforts that sometimes overlap, also raising federalism questions. The disaggregation of agricultural conservationist efforts, which is necessitated by the industry’s successful avoidance of traditional top-down command-and-control regulation, is not necessarily a problem.
However, in light of these disaggregated and sometimes overlapping spheres of influence, some effort at integration could reduce the chaos and lead to more consistency nationwide.

Drawing from scholarship focused on transnational regimes, we see that decentralized (and public-private mixed) governance can still be effective and even coordinated. As effective programs expand, social norms develop and begin to tie them together. As this occurs, it creates the opportunity to better coordinate and integrate the diverse influences. Given the importance of scale in maximizing the benefit-to-cost ratio when protecting ecosystems, such coordination of the various sources of authority is especially valuable in this context. It is likewise important to share both information and strategy, in light of the shared goals of the many entities involved in the governance of ecologically sustainable agriculture. This essay and presentation will consider potential methods for improving the integration of the array of approaches, as well as consider the importance of taking an adaptive management approach to this coordination-seeking venture.
Abstract

DEVELOPMENT AND MITIGATION: THE ONLY WAY OUT IS FORWARD.

The California regulatory environment is both cumbersome and expensive for project proponents. That said, when it comes to rural landowners, that same regulatory environment provides both financial and development opportunities in the form of conservation tax incentives, and selling agricultural or habitat conservation easements—many of which allow the rural landowner to continue their existing activities on the property.

Rather than seeing expanding land uses (such as residential development and mining) as threats that need to be halted, we need to embrace development as an economic and human necessity, while using California’s regulatory tools to preserve agriculture, wetlands, open space and habitat. Contrary to traditional thinking, development and conservation are not mutually exclusive.

Increasingly, project proponents, including heavy industrial concerns (i.e. mining, flood control and petroleum development) have turned to “dual permitting” (e.g. simultaneously permitting a mine as well as a mitigation/conservation bank on neighboring land) to not only mitigate the environmental impact of their projects, but also profit from conservation activities. Industry has also developed a renewed focus on industrial site reclamation with an eye on the public good. A common example is mining companies reclaiming mined property back to agricultural, open-space, and habitat uses and working with land trusts to hold permanent conservation easements over the land after final reclamation.

The Williamson Act, agricultural conservation easements, turn-key mitigation, and market-based mitigation/conservation banks provide the way to both accommodate development and preserve our natural resources. My presentation will point to specific examples where development has acted as both a catalyst and funding source to permanently preserve working agricultural interests and conserve precious wetlands and endangered species habitat in perpetuity.
Aimee Rutledge, Executive Director, Sacramento Valley Conservancy

Aimee Rutledge has been Executive Director of the Sacramento Valley Conservancy since October 1996. Previously, Aimee helped found the Friends of the Sacramento River Greenway, worked with the American Institute of Architects, California Council as Director of Governmental Relations, and ran her own consulting firm, ABR Services, serving as legislative advocate for the California Bicycle Coalition and performing outreach and advocacy services for various other clients. She holds a BA in History from Pomona College and is a graduate of Sacramento High School. She also currently serves as a board member on Reclamation District 1600, a commissioner on the Land Trust Accreditation Commission and as California Program Manager for The Wilderness Land Trust.

Abstract

GOING, GOING, GONE: SAVING OUR SPECIAL PLACES RIGHT HERE AT HOME

Sacramento Valley Conservancy is a regional nonprofit land trust founded in 1990 on two basic principles: that open lands are necessary for quality of life and that we must care for the land today so future generations may enjoy its physical and spiritual benefits tomorrow. Our mission is to preserve the beauty, character and diversity of the Sacramento Valley landscape by working with citizens, property owners, developers, public agencies and other nonprofit organizations. By working with willing sellers, we create dedicated open space from the acceptance of gifts, private purchase, the facilitation of public acquisition, conservation easements and by cooperative efforts, including formation of mitigation banks (approved areas where landowners and agencies can harness revenue from resource values).

We use our 21st Century Open Space Vision for the Sacramento region and our unique approach of non-advocacy, real estate-based open space acquisition and management to be “developers of open space”—permanently protecting and managing scenic lands for recreation, agriculture and wildlife habitat before it’s too late. We work to mitigate threats and maximize opportunities.

Threats

• Residential and commercial development.
• Expansion of the Sphere of Influence and/or Urban Service Boundaries of Cities and Counties.
• Vineyard and permanent crop conversions (not compatible with habitat goals).
• Aggregate mining is a threat to wetlands, grasslands and vernal pool areas in some parts of the region.
• Increasing numbers of local governments within Sacramento Region, including City of Sacramento, City of Folsom, City of Galt, City of Citrus Heights, City of Elk Grove, and City of Rancho Cordova and many others, could make it increasingly difficult to find consensus on regional issues like open space.
• Subsidence and sea level rise in the Delta.
• Water conveyance facility development in the Delta.
Opportunities

• Floodplains spread throughout the region, and provide excellent opportunities for preserving open space in sensitive habitat and high-quality agricultural areas along rivers and creeks.
• Partnerships with County, State Parks, others as fiscal crises cause off-loading of traditional public agency management and/or acquisition duties to bring in revenue and new supporters.
• The Sacramento Region Habitat Conservation Plan process could lead to a funding mechanism for open space preservation and long-term management throughout South Sacramento County. Other HCP/NCCP (Natural Community Conservation) programs in Yolo, San Joaquin and Placer Counties can also provide funding and management opportunities.
• Sacramento and Yolo Counties, the City of Elk Grove and Davis have adopted agricultural and Swainson’s hawk mitigation programs, providing a funding source for purchase of agricultural and habitat easements.
• Residential and commercial development are reaching the edges of the region to the north and east, and are moving south, causing the general public to be increasingly concerned about the extent of growth, buffers between communities and loss of quality of life.
• Local land trusts in surrounding areas and SVC mutually provide good resources and partner possibilities on projects with overlap between counties, including the Yolo Land Trust, the American River Conservancy (El Dorado Region), the Dry Creek Conservancy (primarily Placer Region/Dry Creek Watershed), the Placer Land Trust, the Solano Land Trust, the Mother Lode Land Trust (Amador and Calaveras), and the Central Valley Farmland Trust.
• Funds are available for land acquisition from Proposition 1E (flood control) and from future water bonds and from mitigation, including mitigation banks.
• Implementation of the Central Valley Flood Plan and related regional flood plans.
• Implementation of SB 375 “Sustainable Communities” Strategy in the region, including Sacramento Area Council of Government’s “Greenprint” plan for regional open space preservation.
1:00-1:45
CAPITAL LECTURE KEYNOTE
Sponsored by the Witkin Legal Institute

• Introduction: Professor John Sprankling, University of the Pacific, McGeorge School of Law
• Dr. Peter Gleick, Pacific Institute
Dr. Peter Gleick, Pacific Institute

Dr. Peter Gleick is renowned the world over as a leading expert, innovator, and communicator on water and climate issues. He co-founded and leads the Pacific Institute in Oakland, celebrating its 25th anniversary in 2012 as one of the most innovative, independent non-governmental organizations in the fields of water and economic and environmental justice and sustainability.

Dr. Gleick’s work has redefined water from the realm of engineers to the world of social justice, sustainability, human rights, and integrated thinking. His influence on the field of water has been long and deep: he developed the first analysis of climate change impacts on water resources, the earliest comprehensive work on water and conflict, and defined basic human needs for water and the human right to water – work that has been used by the UN and in human rights court cases. He pioneered the concept of the “soft path for water,” developed the idea of “peak water,” and has written about the need for a “local water movement.”

Dr. Gleick received the prestigious MacArthur “genius” Fellowship and was named “a visionary on the environment” by the BBC. He was elected both an Academician of the International Water Academy, in Oslo, Norway and a member of the U.S. National Academy of Sciences. Wired Magazine featured Gleick as “one of 15 people the next President should listen to.” He received his B.S. from Yale University and an M.S. and Ph.D. from the University of California, Berkeley. Dr. Gleick serves on the boards of numerous journals and organizations, and is the author of many scientific papers and nine books, including the influential series The World’s Water and Bottled and Sold: The Story Behind Our Obsession with Bottled Water, as well as the 2012 release A Twenty-First Century U.S. Water Policy.

Abstract

With the current drought raising awareness of California water issues, it is important to remember that difficult water challenges face billions of people around the world. Dr. Peter Gleick will address the wide range of water problems we face, from the failure to meet basic human needs for safe water and sanitation, to water conflicts, to the growing risks of climate change. He will also provide an update on California’s current drought and offer solutions for moving to more sustainable water management and use here and abroad. He will discuss his work on the “soft path for water,” which addresses issues around water infrastructure, water efficiency and conservation, smart economics, and more comprehensive and sustainable water management. And he hopes the organizers will not be putting bottled water on the podium while he speaks.
1:45-3:15
THE VIRTUAL RIVER AND THE IMPORTANCE OF CONSERVATION

California’s limited water supply is already a great source of conflict. This panel will discuss ways to efficiently use our existing water sources.

- Moderator: Honorable Ronald Robie, Associate Justice on the California Court of Appeal, Third Appellate District
- Professor Paul Stanton Kibel, Golden Gate University School of Law
- Professor Jennifer Harder, UC Davis School of Law and McGeorge School of Law
- Alf Brandt, Legislative Director, Assemblyman Anthony Rendon
Abstract

AGRICULTURAL IRRIGATION PRACTICES AS AN UNREASONABLE USE OF WATER UNDER CALIFORNIA LAW

I. Water Usage in California: Doing More with Less

The theme of today's symposium — Growing Growing Gone — has a clear and direct relation to California water. This relation is that, when it comes to freshwater consumption in this state, going forward we will need to learn to do more with less.

There are several reasons why California will need to learn to do more with less water.

First, there is a growing population in the state, a population that is increasingly urban which means there will be greater demand for municipal water supplies.

Second, in terms of groundwater, many of our state's aquifers are now in a condition of overdraft. This means if we don't reduce the amount of groundwater being withdrawn from our aquifers, this source of freshwater will continue to diminish.

Third, there are now increasing demands to leave additional amounts of surface freshwater instream. The demands for additional instream flow relate to the declining condition of California's native fisheries (such as salmon, steelhead and smelt). The demands for additional instream flow also relate to water quality and salinity concerns. With reduced freshwater flows in our coastal rivers, seawater is pushing further upstream, and increasingly salty water cannot be used for drinking or irrigating. With seawater intrusion, excessive diversion of freshwater threatens the very supply of freshwater. These increasingly saline waters also do not serve as suitable habitat for many of our native fisheries.

The long-standing debate over water exports from the Sacramento-San Joaquin Delta, and the impact of such Delta exports on native fisheries, is perhaps the most prominent illustration of such demands for additional instream flow. The latest installment in this debate came last month, when the Ninth Circuit Court of Appeals reversed former federal district court judge Oliver Wanger’s 2010 decision on the Biological Opinion prepared by the United States Fish and Wildlife Service (USFWS) for Delta smelt, a species listed under the federal Endangered Species week. In its March 2014 ruling, the Ninth Circuit upheld the USFWS imposition of restrictions on Delta exports related to the operation of the Central Valley Project and the State Water Project to ensure sufficient instream flows to reduce salinity and maintain critical habitat for the Delta smelt.

As California turns its attention to how to do more with less in terms of freshwater resources, there are two considerations that are likely to be front and center.

First, presently about 75% of freshwater use in California is for irrigated agriculture. Given this level of usage, is it therefore likely that agricultural irrigation will be a main focus of efforts to improve water efficiency in the state.

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1 San Luis v. Jewell, Case No. 11-15871 (March 13, 2014 decision of United States Court of Appeals for the Ninth Circuit).
2 San Luis v. Jewell, Case No. 11-15871 (March 13, 2014 decision of United States Court of Appeals for the Ninth Circuit) at pp. 75-91.
Second, the California Constitution and the California Water Code contain provisions establishing that all water use in the state must be “reasonable” and cannot be “wasteful.” These constitutional and statutory prohibitions on “unreasonable use” of water may be increasingly relied upon as the basis to press for more efficient irrigation practices in California’s agricultural sector.

These two considerations converged in January 2011, when Delta Watermaster Craig Wilson presented a report to the State Water Resources Control Board titled The Reasonable Use Doctrine & Agricultural Water Use Efficiency. The introduction to this 2011 publication stated:

“The underlying premise of this report is that the inefficient use of water is an unreasonable use of water. Accordingly, the reasonable use doctrine is available prospectively to prevent general practices of inefficient water use. . . .Maximizing the efficient use of water by projects that reduce consumptive water use is particularly important for the Sacramento/San Joaquin Delta. More efficient use of water upstream of the Delta can increase water flows into the Delta.”

What were some of the specific recommendations in the 2011 report on The Reasonable Use Doctrine & Agricultural Water Use Efficiency? The recommendations included the following: (i) create a “Reasonable Water Use Unit” within the State Water Resources Control Board Division of Water Rights, whose mission would be “to enforce the prohibition against the waste or unreasonable use of water”4; (ii) require diverters of water for agricultural use to evaluate and implement “appropriate conservation practices” which might include: irrigation systems that reduce evapotranspiration from soil moisture (such as subirrigation or flood irrigation)5; (iii) “irrigating only when necessary” (reducing irrigation of crops during stress tolerant growth stages).6

Whether implementation of these recommendations is politically feasible is an important question, but a question that is beyond the scope of this article. This article focuses on the more limited question of the extent to which California law on “reasonable use” provides a legal basis and foundation for the agricultural irrigation efficiency recommendations presented in the 2011 Delta Watermaster report.

II. 1926 Herminghaus Decision and 1928 California Constitutional Amendment

In 1928, article XIV, section 3 of the California Constitution was added, providing in pertinent part: “It is hereby declared that because of the conditions prevailing in this State the general welfare requires that. . . .the waste or unreasonable use or unreasonable method of use of water be prevented. . . .The right to water or to the use or flow of water from any natural stream or water resource in this state. . . .does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.”

The 1928 amendment to the California Constitution, in turn, provided the basis for the adoption of Section 100 of the California Water Code. Section 100 of the California Water Code provides: “The right to water or the use or flow of water in or form any natural watercourse shall be limited to such water as shall be reasonably required. . . .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.”

As we consider the 2011 Delta Watermaster report, it is important to remember the events that prompted the adoption in 1928 of the California Constitutional amendment. The main catalyst for this 1928 constitutional amendment was the California Supreme Court’s 1926 decision in the case of Herminghaus v. Southern California Edison Company (Herminghaus).7

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3 The Reasonable Use Doctrine & Agricultural Water Use Efficiency (January 2011 report by Delta Watermaster Craig Wilson to the State Water Resources Control Board and the Delta Stewardship Council) at p. 3.
5 The Reasonable Use Doctrine & Agricultural Water Use Efficiency (January 2011 report by Delta Watermaster Craig Wilson to the State Water Resources Control Board and the Delta Stewardship Council) at pp. 11, 15.
6 The Reasonable Use Doctrine & Agricultural Water Use Efficiency (January 2011 report by Delta Watermaster Craig Wilson to the State Water Resources Control Board and the Delta Stewardship Council) at p. 11.
7 200 Cal. 81 (1926).
The *Herminghaus* litigation involved a dispute between a downstream riparian water rights user (Herminghaus) and a proposed upstream hydroelectric project under an appropriative right that would reduce downstream flows. The downstream riparian user had a ranch, and diverted nearly all of the flow of the river to flood irrigate grasses on her land. The downstream riparian user claimed generally that the grasses were used as pasture for ranching, but little or no information was presented at trial about the types or numbers of livestock that grazed on these grasses. In its decision, the California Supreme Court found that the extent which the grasses were actually used for livestock was not legally relevant, holding that “in a dispute between a riparian and a non-riparian the riparian’s water rights are not limited by any measure of reasonableness.”

The California Supreme Court’s unwillingness in *Herminghaus* to evaluate the potential “reasonableness” and “wastefulness” of diverting such quantities of water, without a showing of the extent to which such grasses were actually being used for livestock grazing, prompted the 1928 Constitutional Amendment which held that “all” water use and diversion rights in California -- whether riparian, appropriative or based on some other alleged entitlement -- must be “reasonable.”

### III. Water in the Field: Gopher Eradication and High Levels of Evaporation

Two of the landmark California court decisions on “reasonable use” and “waste” are *Tulare Irrigation District v. Strathmore Irrigation District* (*Tulare*) and *Erickson v. Queen Valley Ranch Company* (*Erickson*).

#### A. Tulare

In the 1935 *Tulare* case, the California Supreme Court reviewed the practice in California’s Central Valley of flood irrigating farmland in the winter (before planting seeds in the spring) to “drown out gophers” that might be living in the fields. In reviewing this practice, the California Supreme Court noted:

> "What is a reasonable beneficial use, where water is present in excess of all needs, would not be a reasonable beneficial use in an area of great scarcity and great need. What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time." (italics added.)

The *Tulare* Court then found: “A great many of respondents’ witnesses seemed to be of the opinion that the only reason they irrigated in the winter was to exterminate these [gophers]. It seems quite clear to us that in such an area of need as the Kaweah delta the use of an appreciable quantity for this purpose cannot be held to be a reasonable beneficial use. This seems to us so self-evident that no further discussion of the point is necessary.” (italics added.)

*Tulare* clarified that while water usage related to growing crops may be a “beneficial” use of water, not all uses of water related to growing crops meet the standard of “reasonable” usage.

#### B. Erickson

In the 1971 *Erickson* decision, the California Court of Appeal reviewed a trial court decision in which it had been determined that five-sixths of the water diverted into an earthen canal was lost en route to the point of use for agricultural irrigation (due to evaporation to air and absorption to soil). In *Erickson*, the trial court had found these transmissions losses “reasonable” but the California Court of Appeal reversed, holding:

> “By holding that transmission losses accounting to five-sixths of the flow are reasonable and consistent with local custom, the court effectively placed the seal of judicial approval on what appears to be an inefficient and wasteful means of transmission...A finding of reasonableness which cloaks a transmission loss amounting to five-sixths of the diverted flow fails to respond to the demand of constitutional policy.”

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8 200 Cal. at 100, 101.
9 3 Cal.2d 489 (1935)
10 22 Cal.App.3d 578 (1971)
11 3 Cal.2d at 567.
12 3 Cal.2d at 568.
13 22 Cal.App.3d at 585.
Erickson clarified that while diverting water for agricultural irrigation may constitute a “beneficial” use of freshwater resources, excessive losses of water to evaporation used in connection with agricultural irrigation may constitute an unconstitutionally “unreasonable” and “wasteful” use of such water.

Some of the 2011 Delta Watermaster report recommendations focused specifically on efforts to reduce the amount of water evapotranspiration occurring in agricultural fields, and the report specifically noted that “Water can be saved by reduced evapotranspiration (ET) from crops themselves, and from soil.”\(^\text{14}\) Erickson provides support for grounding determinations of “unreasonable” and “wasteful” irrigation practices on these evaporation-related concerns.

IV. Water in the Stream: Increasing Salinity and Fisheries at Risk

The Tulare and Erickson court decisions focused on “unreasonable” and “wasteful” agricultural water practices occurring “in the field” or “on the farm.” There is a separate line of cases and State Water Board decisions, however, that consider the “reasonableness” and “wastefulness” of agricultural water practices from the vantage point of how out of stream diversions for agricultural irrigation usage are impacting “instream” conditions.

Given that the 2011 Delta Watermaster report specifically discussed the application of the “reasonable use doctrine” in the context of the need for additional instream freshwater flows into the Sacramento-San Joaquin Delta, this line of cases may also be pertinent to an evaluation of whether California reasonable use law supports the recommendations in the 2011 Delta Watermaster report.

A. Salinity and the 1986 Racanelli Decision

In its 1986 decision in United States v. State Water Resources Control Board, the California Court of Appeal addressed the question of whether the State of California could modify the existing water rights permits (issued to the Bureau of Reclamation for the federal Central Valley Project and to the California Department of Water Resources for the State Water Projects) to provide sufficient flow into the Sacramento-San Joaquin Delta to maintain water quality standards.\(^\text{15}\) More specifically, the California Court of Appeal decision (which became known as the “Racanelli decision” after Judge Racanelli who authored the opinion) considered whether California reasonable use/waste law provided the State Water Resources Control Board with an independent basis to reduce Delta water exports so additional freshwater could remain instream to reduce salinity levels from saltwater intrusion.

In the 1986 Racanelli decision, the California Court of Appeal held:

“[W]e think the Board was authorized to modify the permits under its power to prevent waste or unreasonable use of methods of diversion of water...Here, the Board determined that changed circumstances revealed in new information about the adverse effects of the projects upon the Delta necessitated revised water quality standards. Accordingly, the Board had authority to modify the projects permits to curtail their use of water on the ground that the project use and diversion of water had become unreasonable...Curtailment of project activities through reduced storage and export was eminently reasonable and proper to maintain the required level of water quality in the Delta. We perceive no legal obstacles to the Board’s determination that particular methods of use have become unreasonable by their deleterious effects upon water quality.”\(^\text{16}\)

\(^{14}\) The Reasonable Use Doctrine & Agricultural Water Use Efficiency (January 2011 report by Delta Watermaster Craig Wilson to the State Water Resources Control Board and the Delta Stewardship Council) at p. 11.

\(^{15}\) 182 Cal.App.3d 82 (1986).

\(^{16}\) 182 Cal.App.3d at 130-131.
The *Racanelli* decision clarified that, consistent with California reasonable use law, the State Water Resources Control Board may impose appropriate restrictions on freshwater diversions to maintain instream water quality and salinity levels.

B. Stranded Salmon and Frost Protection Diversions

In December 2011, the State Water Resources Control Board adopted a new regulation pertaining to salmon and diversions of water from the Russian River for vineyard frost protection. The introductory paragraph to this regulation explains:

“Budding grape vines and certain other crops in the Russian River watershed may be severely damaged by spring frosts. Front protection of crops is a beneficial use of water under section 671 of this chapter. During a frost, however, the high instantaneous demand for water for frost protection by numerous vineyardists and other water users may contribute to a rapid decrease in stream stage that results in the mortality of salmonoids due to stranding. Stranding mortality can be avoided by coordinating or otherwise managing diversions to reduce instantaneous demand. Because a reasonable alternative to current practices exist, the Board has determined these diversions must be conducted in accordance with this section.” (italics added.)

The central component of the 2011 Russian River frost protection regulation is the requirement that diverters of water from the Russian River stream system must prepare and submit a Water Demand Management Program (WDMP) to the State Water Resources Control Board. Among other information the WDMP must include data regarding “acreage frost protected and acres frost protected by means other than water diverted from the Russian River Stream system” and the “rate of diversion, hours of operation, and volume of water diverted during each front event for the year.” If it is determined that the frost diversions described in the WDMP have the potential to cause salmonoid stranding mortality, “corrective actions” (such as the construction of offstream storage facilities) must be implemented to prevent such stranding mortality.

The closing paragraph of the 2011 Russian River frost protection regulation states:

“Compliance with this section shall constitute a condition of all water rights permits and licenses that authorize diversion of water from the Russian River stream system for purposes of frost protection. The diversion of water in violation of this section, including the failure to implement the corrective actions included in any corrective action plan developed by the governing body, is an unreasonable method of diversion and use and a violation of Water Code section 100, and shall be subject to enforcement by the Board.” (italics added)

It should be noted that the State Water Resource Control Board’s 2011 Russian River frost protection regulation was challenged in a lawsuit filed in Mendocino County Superior Court. There are two key issues in this litigation. The first issue is whether the environmental impact report (EIR) prepared in connection with the regulation satisfied the requirements of the California Environmental Quality Act (CEQA). In March 2013, Mendocino County Superior Court Judge Ann Moorman issued a ruling finding the CEQA EIR inadequate, based on her view that the document did not sufficiently quantify the volume of water attributable to frost protection diversions. The second issue is whether the 2011 Russian River frost protection regulation is overbroad because it did not require the State Water Resources Control Board to make “individualized” preliminary findings for each diverter before requiring the submission of a WDMP. In September 2012, Judge Moorman held that such individualized preliminary findings were required. To date, this litigation has not challenged the State Water Resources Control Board’s underlying

17 Section 862, Division 3, Title 23, California Code of Regulations.
18 Section 862(a), Division 3, Title 23, California Code of Regulations
19 Section 862(c)(4), Division 3, Title 23, California Code of Regulations
20 Section 862(e), Division 3, Title 23, California Code of Regulations
22 Elizabeth Leeper, Judge Declares Russian River Frost Protection Regulation Constitutionally Void (September 27, 2012), published on jdsupra.com/legalnews website.
position that adverse instream impacts on fisheries from frost protection diversions can provide the proper basis to determine that diversions constitute “unreasonable” water usage.

The question of freshwater diversions for frost protection also arose in the 1976 California Court of Appeals decision in State Water Resources Control Board v. Forni (Forni).23 Although this decision did not focus specifically on salmon, it did focus on instream impacts. In Forni, the Court noted:

“[T]he State Water Resources Control Board initiated this action to enjoin certain vineyards in the Napa Valley from drawing water directly from the Napa River to their vineyards for frost protection. The complaint charges that the diversion of water during the frost period extending from March 15 through May 15 each year constitutes an unreasonable method of diversion within the meaning of article XIV, section 3, of the California Constitution and section 100 of the Water Code. This assertion is predicated upon allegations that the river flow during the frost season is insufficient to supply the instantaneous needs of all the vineyards entitled to water. As a consequence, it is alleged, direct diversion during the frost reasons may at time dry up the river.” (italics added)24

On this set of facts, the Forni Court concluded:

“It is readily apparent that the claim that respondent's direct diversion of water constitutes an unreasonable use and an unreasonable method of use of water is predicated on the very premise that the direct pumping results in great temporary scarcity of water during the crucial frost period...Based upon these factual allegations, appellants properly concludes that the direct diversion of water for frost protection in the crucial period constitutes an unreasonable use and an unreasonable method of use within the purview of the Constitution and statutory provisions...[W]e find no merit in respondent's assertion that the Board has exceeded its authority by declaring that [ ] the direct diversion of water in the frost period constitutes an unreasonable method of use within the meaning of the Constitution and the Water Code.” (italics added)25

In Forni the focus was on how frost protection diversions by vineyards dried up the supply of instream water available for diversion by other users. With the 2011 Russian River frost protection regulation, the focus was on how frost protection diversions resulted in salmonid stranding mortality. In both instances, actions to curtail such diversions were legally grounded in the finding that adverse instream impacts rendered such diversions unreasonable under California law.

V. Conclusion — A Question More of Politics Than of Law

Based on the analysis set forth above, there is existing legal precedent for reliance on California reasonable use law to address agricultural irrigation practices with impacts both in the field (such as flood irrigation and high levels of evaporation) and in the stream (sufficient flow to maintain water quality/salinity standards and prevent fish mortality). Moreover, at this point there appears to be a substantial body of evidence establishing high rates of water evapotranspiration on California farms (particularly in the southern Central Valley) and establishing the adverse impacts of freshwater diversions on instream salinity levels and native fisheries.

These considerations suggest that whether the State Water Resources Control Board decides to act on and implement the agricultural irrigation efficiency recommendations set forth in the 2011 Delta Watermaster’s report may therefore hinge more on politics rather than law. If the political will and leadership are present to act on an implement these recommendations, the State Water Resources Control Board appears to be on solid legal ground to move forward.

23 54 Cal.App.3d 743.
24 54 Cal.App.3d at 747.
25 54 Cal.App.3d at 750, 752.
As to whether such political will and leadership exist, that remains to be seen. There are unfolding developments that may offer some insights in this regard. For instance, pursuant to California’s Agricultural Efficient Water Management Act of 1990, by 2013 agricultural water suppliers were required to submit agricultural water management plans to the California Department of Water Resources. These plans call for the inclusion of information about water efficiency and conservation efforts, and therefore might provide the basis for further evaluating whether particular agricultural irrigation operations might qualify as unreasonable or wasteful. As another example, in 2013 California Senate Bill 103 (S.B. 103) was adopted, which provides $2.5 million in funding to the State Water Resources Control Board “for drought related water rights and water conservation actions, including establishing and enforcing requirements to prevent the waste or unreasonable use of water.” S.B 103 does not expressly call for the creation of the “Reasonable Water Use Unit” proposed in the 2011 Delta Watermaster report, but seems to provide funding and the discretion for such an undertaking.

Given that agricultural irrigation presently represent the lion’s share of freshwater usage in California, and given the increasing instream and out of stream demands on California freshwater, the issue of agricultural water efficiency is likely to remain a central part of water debates in the state. The extent to and ways in which California reasonable use law will factor into these debates, however, is an open question at this point.

26 Sections 10900-10904, California Water Code.
27 Section 14(2), S.B. 103.
Jennifer L. Harder, Adjunct Professor, University of the Pacific, McGeorge School of Law

Professor Jennifer Harder offers courses in water and natural resources practice to J.D. and LL.M. students and working professionals. Jennifer also teaches water law as an adjunct at UC Davis School of Law, and designs and teaches a variety of online courses including Waste Not: The Law of Water Use Efficiency, Environmental Law & Institutions, and Water Rights & Sustainability.

Jennifer appears regularly as a presenter and guest speaker on water law issues: recent presentations include California Water Law 101 and Reasonable Use in the 21st Century, hosted by the Association of Environmental Professionals, Association of California Water Agencies, California Water Law Symposium, and California State University, Sacramento. Jennifer previously worked as an attorney and partner in the Water Group at Downey Brand LLP, Sacramento, and is co-author of Cases and Materials on Water Law, 9th ed. (West American Casebook Series, 2014).

Abstract

WATER NEUTRAL DEVELOPMENT IN CALIFORNIA

Water supply is a critical issue for residential, commercial and industrial development in California. The current drought highlights the erratic nature of water availability, and supply threats are expected to worsen in the future as a result of population growth, increased ecological demand, and uncertainty caused by climate change and other factors. In recognition of the pressing need for careful water planning and innovation, some local governments have adopted a requirement that new development be “water neutral.”

Water neutral policies require new projects to offset their water demand through conservation or new supplies. These policies are implemented in two steps: First, the developer reduces the proposed project’s on-site demand by incorporating efficient water-related fixtures, low-water-use landscaping, and innovative approaches such as recycled water use, greywater reuse, rainwater harvesting, and stormwater capture. The developer then “offsets” any remaining demand by facilitating improvements at existing development within the supplier’s service area. Water neutral programs may require offset ratios greater than 1:1 to address uncertainty about the effectiveness of conservation measures. Sometimes called “demand offset” or “zero footprint” requirements, water neutral programs create incentives for local government and developers to work as partners in pursuing innovative water use technology and supply management.

Water neutral programs exist in California, New Mexico, Arizona, Massachusetts, and England, and additional jurisdictions are considering them. In California, approximately 15-20 cities, counties, and special districts have adopted some version of water neutral requirements. At the state level, California’s attention to water neutral policies has been inconsistent: The state’s water conservation plan characterizes water neutral programs as potentially a valuable tool to meet statewide efficiency objectives, but the state’s drought handbook identifies it as a limited “stop-gap” measure to be invoked only during the late stages of a water shortage emergency response program.

Those conflicting ideas are also reflected in local government attitudes. Water providers praise water neutral policies for their efficiency and sustainability, but most fail to adopt these policies until supplies are nearly exhausted. The reason for this duality is in part practical: By definition, water neutral programs place the burden of financing on- and off-site water demand reduction on new projects, and these costs can be high. When combined with the myriad of other local fees and charges levied on new development, new housing, commercial and industrial projects may become infeasible or less attractive to investors considering alternative projects. Lack of development can affect housing availability, economic recovery, and employment—consequences that are particularly onerous during periods of financial crisis and economic recession.
Another concern expressed about water neutral programs is whether they will result in real water savings. There is a fear that homeowners might replace low-flow fixtures or low-water-use landscaping with less efficient fixtures or landscaping, for example, or that developments might otherwise exceed water demand projections. Some water neutral programs address that concern through high offset ratios; others have developed sophisticated enforcement programs that involve deed restrictions, annual reporting, homeowner association oversight, and financial penalties for exceeding water budgets. Local agencies with water neutral program experience cite enforcement as a key issue for program improvement, and seek more reliable, less personnel-intensive methods. In this regard, the enforcement issues faced by water neutral programs are similar to those faced by all water conservation programs in California, including emergency drought response programs. That coincidence of interest suggests a direction for near-term research and action in the statewide water conservation arena.

Challenges notwithstanding, the potential benefits of water neutral programs are numerous. Existing programs claim real annual water savings. Water neutral programs allow economic development to occur where moratoria would otherwise prohibit development, thus facilitating jobs, housing, recreational, and other amenities. Through offset programs, existing communities benefit from increased efficiencies without having to invest in them; some water neutral programs focus these benefits within low-income communities that otherwise would not easily implement conservation measures. Water neutral programs may result in more reliable long-term conservation, and can help to achieve statewide conservation targets. Water neutral programs also provide direct incentives for developers to maximize efficiency, encourage investment in technology improvements, and inspire creative thinking about water management.

Water neutral programs provide opportunities for proactive drought planning and improved water supply sustainability. Although not a good fit for every jurisdiction, regional and local water neutral programs have the potential to play a larger role in California’s urban water efficiency portfolio. The state can take steps to realize this potential by investing in legal and technical research related to program design, liability allocation, conservation approaches, and enforcement. The state can also play a role by creating a voluntary model water neutral ordinance that would assist local governments in designing their own programs.
Alf W. Brandt, Principal Consultant, California State Assembly Committee on Water, Parks & Wildlife

Alf W. Brandt serves as the California State Assembly’s expert on water resource law and policy. In his position as the Principal Consultant for the Committee on Water, Parks & Wildlife, he drafts, analyzes, and comments on all legislation relating to water resources, drawing on his long history of experience in California water controversies. His work included the current critical water issues facing the State Legislature including the ecosystem and management crisis in the Sacramento-San Joaquin Delta and flood management and protection.

Prior to joining the Assembly staff, Alf served at the Department of the Interior and on the Board of Directors for the Metropolitan Water District of Southern California. At Interior, he served as counsel and Federal Agency Coordinator for the CALFED Bay-Delta Program and tried the just compensation phase of *Tulare Lake Basin Water Storage Dist. v. United States*. He also worked on Nevada water law issues in the Newlands Project, and for the Bureau of Land Management.

He earned his J.D. in 1988 from University of California, Berkeley (Boalt Hall School of Law), his B.A. Magna cum laude in 1983 from UCLA, where he was Phi Beta Kappa. He is admitted to the bars of California, the District of Columbia (inactive), and the Court of Federal Claims.

Abstract

THE CHALLENGE OF FINANCING WATER INFRASTRUCTURE IN THE 21ST CENTURY

In the 20th Century, California financed and constructed the most sophisticated water system in the world. Governments at the federal, state, regional and local level all participated in its development. The City of Los Angeles started the century’s rush to build water infrastructure, with its acquisition of land and water rights in the Owens Valley and its construction of a canal to take water across the mountains to the coastal plain, a century ago. From there, San Francisco built the Hetch Hetchy system to draw water from Yosemite National Park. Metropolitan Water District of Southern California built the Colorado River Aqueduct. The Federal Government built the Central Valley Project to deliver water to farmers. The State built its State Water Project to deliver water to farms and cities, from the San Francisco Bay Area all the way to San Diego. And, cities and towns across the state built their own water delivery systems, delivering fresh water to Californians’ taps and toilets. These governments used a variety of public finance systems to build these systems.

In the 21st Century, however, governments have encountered challenges to financing the costs of either refurbishing existing infrastructure or building new infrastructure to address the growing demands of a developed state and a developed economy. The Federal Government encountered costs of two wars, and reduced its investments in domestic water infrastructure. The State gained voter approval for billion-dollar water bonds, but the historic 2008 recession led to deficits in the General Fund used to repay those bonds. California voters have not approved a water bond since 2006. Even with drought, voter approval of a water bond remains in doubt.

Just before the start of the new century, California voters imposed limitations on public agencies’ ability to finance water infrastructure. They passed Proposition 218, requiring public agencies to gain public approval for increases in taxes, fees, and water rates. While increases to water and sewer rates need only proceed through a protest process, as opposed to a ballot measure, growing public opposition has discouraged elected public agency boards from proposing ambitious water infrastructure projects that require substantial public investments.
Success has created its own difficulties. Water agencies generally have been successful in delivering clean and reliable water to Californians’ taps, which interferes with public messages that California has a water infrastructure problem. That leads to challenges in public finance for water infrastructure. The challenges are multiple and diverse:

- **Public Finance Elections.** Decisions to finance water infrastructure now rely on voter approval. The process may start with study and design by water professionals, but then elected water boards have to make the often difficult decision to seek public support for substantial investment.

- **Long Term Investment, Long Term Borrowing.** Large infrastructure investment requires a long-term vision for the community’s growth and development. These investments rely on the next generation paying for the infrastructure.

- **Drought or Flood?** With climate change adding uncertainty to water planning and investment decisions, the public hears mixed messages about whether to invest in preventing too little or too much water. California needs investment in both.

- **Quality or Quantity?** With growing contamination, supplies of clean water become more limited. But the public often sees only the clean water coming out of their tap. Voters find it incomprehensible that some communities still suffer from water that is not safe.
3:30-5:00
RENEWABLE ENERGY: WHAT IS POSSIBLE?

A growing population means more demand for electricity. How do we provide that power without contributing to global climate change?

• Moderator: Sue Kateley, Chief Consultant, California State Assembly Committee on Utilities and Commerce
• Professor K.K. DuVivier, University of Denver, Strum College of Law
• Michael J. Levy, Chief Counsel, California Energy Commission
• Kristen Castaños, Partner, Stoel Rives
K.K. DuVivier, Professor, University of Denver, Sturm College of Law


Before entering academia, Prof. DuVivier practiced for eight years, first in natural resources law at the law firms of Sherman & Howard and Arnold & Porter, then as an Assistant City Attorney in the land use and revenue section for the City and County of Denver. She also served briefly as the Reporter of Decisions for the Colorado Court of Appeals.

Between her undergraduate studies in geology and English at Williams College and her law degree from Denver Law in 1982, Prof. DuVivier interned in the mineral departments of the Smithsonian Institution and the Hudson River Museum and worked for three and a half years as a field geologist in Colorado, Texas, and New Mexico.

Prof. DuVivier is chair of the Association of American Law Schools’ Section on Natural Resources and Energy Law. She has presented at several national conferences and has published over 100 articles and columns in state bar journals and national law reviews. She won the Sturm Faculty Excellence Award for Best Professor in 2012-2013, and in 2006, she was inducted as a member of the American Law Institute.

Prof. DuVivier and her husband, Lance Wright (an energy efficiency expert), live within walking distance from the law school in their near-net-zero home, which won the Colorado Renewable Energy Society’s award for Renewable Energy and Sustainable Design in Buildings—Single Family in 2012. Much of her research and many of her recent speaking engagements have focused on the hurdles involved in deploying renewable energy, especially in distributed environments within cities.

Abstract

1. California @ 50 Million
   - Context
     California has significant impact because 8th largest economy in the world
   - The California @ 50 Million Report
     Key actions and energy specific charts

2. Additional Challenges
   - Climate Impacts on Infrastructure
     California @ 50 Million Report p. 32
   - Terrorism
     PG&E Metcalf Substation Attack on April 16, 2013

3. Some Solutions
   - Statewide Regulation
     California Energy Commission v. other states
   - Statewide Statutes
     Problems with California’s Solar Shade Act
   - Integrated Energy Planning
     Lessons from other states or countries
Michael J. Levy, Chief Counsel, California Energy Commission

Michael J. Levy supervises the team of 28 attorneys at the agency responsible for licensing all utility-scale thermal power plants in California, for managing the state’s Integrated Energy Policy Report, and for maintaining California’s appliance and building efficiency standards.

Prior to his appointment, he served for ten years as an attorney with the State Water Resources Control Board, first as California’s lead attorney for “total maximum daily loads” (TMDLs), wetlands, and other Clean Water Act programs, and then as General Counsel to the Los Angeles Regional Water Quality Control Board. Before his governmental service, Michael was an attorney in private practice in San Francisco, where he handled complex litigation and appeals.

Michael earned his Master of Environmental Laws, cum laude, in natural resources and environment from Northwestern School of Law, Lewis & Clark College in 1998. He earned his Juris Doctorate from the University of San Diego in 1991, and his bachelor’s degree in 1988 from UC Davis in Political Science.

Michael is an active volunteer in the legal and local community. He is currently a member of the California Commission on Access to Justice. He was the 2011 president of the Sacramento County Bar Association. He holds several appointments as a Judge Pro Temp of the Sacramento Superior Court, and is an Appellate Mediator for the Third District Court of Appeal. He has also served on a number of commissions for the City of Davis, including the Planning Commission and Natural Resources Commission.

Abstract

OVERVIEW OF THE CALIFORNIA ENERGY COMMISSION’S ROLE IN THE ELECTRIC PROGRAM INVESTMENT CHARGE (EPIC)

This paper provides an overview of the California Energy Commission’s Role as an administrator of the California Public Utilities Commission (CPUC) Electric Program Investment Charge (EPIC) Program.

The EPIC program was created by the California Public Utilities Commission at the request of Governor Brown to address a policy gap in the clean energy space, especially with the sunset of the public goods charge which provided funding for programs such as the Public Interest Energy Research Program.

The primary focus of the EPIC program is to provide public investments to support the development and commercialization of new energy innovations that can provide benefits to electric ratepayers in the form of a cleaner, safer, more affordable and more reliable electricity system. The amount of funding collected in 2012 was about $143 million. Beginning in 2013, The CPUC authorized funding in the amount of $162 million per year through 2020, with adjustments on January 1, 2015 and January 1, 2018 based on the Consumer Price Index for Urban wage Earners and Clerical Workers, as specified.

The Energy Commission is one of four administrators for the EPIC program. It is responsible for administering 80 percent of the EPIC funding. The other three administrators are the state’s three largest Investor-owned utilities, Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E), which will collectively administer the remaining 20 percent.

The overarching framework for the EPIC program is this concept of an innovation pipeline which represents the development cycle that new energy technologies go through on their way from a concept to commercialized product. Within this pipeline are two critical funding gaps where private sector investment is inadequate due to market conditions affecting the clean energy sector. The earlier of two funding gaps is typically referred to as the Technology Valley of Death and the second is called the Commercialization Valley of Death.
We talk about these valleys of death being funding gaps but in reality they are also data and information gaps. Because these are new, unproven technologies and strategies, there is a lack of data crucial to decision-making in the risk-averse energy sector such as how these technologies will perform? Will there be unforeseen barriers to their deployment?

The EPIC program is structured to help address these valleys of death by providing the funding and the data to help de-risk these innovative new technologies and approaches to potential investors and customers. One of the program areas called Applied Research and Development, which is funded at a level of $55 million annually, is aimed at helping new technologies overcome the technological valley of death. A second program area called Technology Demonstration and Deployment program area will provide $75 million annually to help address the Commercialization Valley of Death. Of this $75 million, Energy Commission administer $45 million and the three IOUs will administer the remaining $30 million.

To provide an overview of the California Energy Commission’s role in the EPIC Program, this paper provides a summary of the following topics:

- Legal context.
- Ratepayer benefits and policy drivers.
- The California Energy Commission’s 2012-2014 EPIC Investment Plan
- Status.
- Next steps.

**Legal context for the program**

Beginning in 2002, the legislature directed electric utilities regulated by the California Public Utility Commission (CPUC) to collect a system benefits surcharge (known as the public goods charge) to fund renewable energy programs and research, development and demonstration (RD&D) programs administered by the Energy Commission. The collection of these public goods surcharge funds were authorized by Public Utilities Code Section 399.8, and sunset on January 1, 2012. Several proposals were considered by the Legislature in 2011 to extend public goods surcharge collections and make various modifications to the funded programs and program oversight structure. However, as of the end of the legislative session on September 9, 2011, no new law had been passed to renew the public goods surcharge for renewable energy or RD&D programs.

On September 23, 2011, Governor Brown sent a letter to the CPUC requesting that the CPUC take action under the CPUC’s authority to ensure that programs like those supported by the public goods charge are instituted after the public goods surcharge collections end. Based on this request, and on its own motion, the CPUC opened a new rulemaking proceeding, Rulemaking 11-10-003, to determine whether and how the CPUC should act to preserve funding for the public benefits associated with renewable energy and RD&D activities previously supported by the public goods surcharge that would expire on January 1, 2012.

The rulemaking proceeding was handled in two phases. The first phase of the proceeding (Phase 1) addressed the appropriate funding levels for renewable energy and RD&D purposes and how long these funds should continue to be collected from electric utility ratepayers. It also addressed whether the CPUC had existing authority, separate from Public Utilities Code Section 399.8, to continue requiring the collection of a ratepayer surcharge to support renewable energy and RD&D programs. The second phase (Phase 2) addressed the details of program design, oversight, and administrative questions related to how the funds would be allocated and by whom.

The CPUC adopted its final decision on Phase 1 (D.11-12-035) on December 24, 2011. In that decision the CPUC concluded that it did have authority to require the collection of a ratepayer surcharge to fund renewable energy and RD&D programs, which it called the Electric Program Investment Charge (EPIC), and required the electric utilities PG&E, SDG&E, and SCE to collect this surcharge and hold the funds for disposition as provided in Phase 2 of the proceeding.

On May 24, 2012, the CPUC adopted its Phase 2 decision (D.12-05-037). This decision authorizes PG&E, SDG&E, and SCE to continue making surcharge collections at the level of $162.0 million per year beginning January 1, 2013 and ending December
31, 2020, with adjustments based on the consumer price index in 2015 and in 2018. The Phase 2 Decision divides the annual collection amounts among the three utilities as follows: PG&E 50.1 percent; SDG&E 8.8 percent; and SCE 41.1 percent. The decision also designates the Energy Commission and the three utilities to serve as program administrators and allocates 80 percent of the EPIC fund for the Energy Commission’s administration, with the remaining 20 percent to be administered by PG&E, SDG&E, and SCE. It also directed the four program administrators to file coordinated triennial investment plans covering 2012 through 2014 for the CPUC’s consideration.

The Energy Commission subsequently developed and adopted its Electric Program Investment Charge Proposed 2012-14 Triennial Investment Plan in accordance with the CPUC’s Phase 2 Decision, Senate Bill 1018 (Statutes of 2012, Chapter 39), and the Energy Commission’s broad authority under Public Resources Code Sections 25216 (c) and 25401. Senate Bill 1018 establishes the Electric Program Investment Charge Fund in the State Treasury to receive EPIC Program funding to be administered by the Energy Commission and authorizes the Energy Commission to use this funding as authorized by the CPUC and appropriated by the Legislature.

Ratepayer benefits and policy drivers for the program

In CPUC Decision 12-05-037, the CPUC stated that the primary and mandatory guiding principle of the Electric Program Investment Charge shall be to provide electricity ratepayer benefits, defined as promoting greater reliability, lower costs, and increased safety, with the following complementary guiding principles: a. societal benefits; b. greenhouse gas emissions mitigation and adaptation in the electricity sector at the lowest possible cost; c. the loading order; d. low-emission vehicles/transportation; e. economic development; and f. efficient use of ratepayer monies.

Also, CPUC Decision 12-05-037 directs the EPIC program administrators to include an element in their investment plans explaining how the plans address Public Utilities Code Sections 740.1 and 8360 – which govern utility expenditures in the areas of research, development, and demonstration (RD&D) and smart grid. Section 740.1 states that, in evaluating RD&D projects, consideration will be given to:

- Projects that provide reasonable probability of ratepayer benefits.
- Minimizing projects with a low probability of success.
- Projects consistent with the utility corporation’s resource plan.
- Projects that do not duplicate previous or current research by other electrical or gas corporations or research organizations.
- Projects that support one or more of the following objectives:
  - Environmental improvement.
  - Public and employee safety.
  - Conservation by efficient resource use or by reducing or shifting system load.
  - Development of new resources and processes, particularly renewables resources and processes that further supply technologies.
  - Improve operating efficiency and reliability or otherwise reduce operating costs.

Section 8360 outlines the requirements for the state’s electrical transmission and distribution (T&D) system to maintain safe, reliable, efficient, and secure electrical service to meet future growth and demand in achieving the following:

- Increased use of cost-effective digital information and control technology to improve reliability, security, and efficiency of the electric grid.
- Dynamic optimization of grid operations and resources, including appropriate consideration for asset management and use of related grid operations and resources, with cost-effective full cyber security.
- Deployment and integration of cost-effective distributed resources and generation, including renewable resources.
- Development and incorporation of cost-effective demand response (DR), demand-side resources, and energy-efficient resources.
• Deployment of cost-effective smart technologies, including real-time, automated, and interactive technologies that improve the physical operation of appliances and consumer devices for metering, communications concerning grid operations and status, and distribution automation.
• Integration of cost-effective “smart” appliances and consumer devices.
• Deployment and integration of cost-effective advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.
• Provide consumers with timely information and control options.
• Develop standards for communication and interoperability of appliances and equipment connected to the electric grid, including the infrastructure serving the grid.
• Identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, and services.

On November 1, 2012, the California Energy Commission submitted to the CPUC a proposed investment plan to administer EPIC program funds collected from 2012-2014. Following the guiding principles listed above, the investment plan proposes strategic objectives to help achieve the state’s clean energy goals while promoting greater reliability, lower costs, and increased safety. The Energy Commission used the following goals to guide development of the strategic objectives outlined in its triennial investment plan for 2012-2014:

• Governor Brown’s Clean Energy Jobs Plan, which sets a target of 20,000 new megawatts (MW) of renewable electricity, accelerate the development of energy storage capacity, and strengthen energy efficiency measures. This includes installing 8,000 MW of renewable central station capacity and 12,000 MW of renewable distributed generation (DG). The plan also calls for adding 6,500 MW of combined heat and power (CHP) systems over the next 20 years.¹
• Integrated Energy Policy Report. Senate Bill 1389 (Bowen and Sher, Chapter 568, Statutes of 2002) requires the Energy Commission to: “[C]onduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state’s economy, and protect public health and safety.” (Public Resources Code Section 25301(a)).
• Assembly Bill 32 and Executive Order S-3-05. The California Global Warming Solutions Act of 2006 (Assembly Bill 32 [Núñez, Chapter 488, Statutes of 2006]) requires the state to reduce GHG emissions to at or below 1990 levels by 2020. Executive Order S-3-05 established a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050.
• The Loading Order. Since 2003, California’s energy policy has defined a loading order of resource additions to meet the state’s growing electricity needs: first, energy efficiency and DR; second, renewable energy and DG; and third, clean fossil-fueled sources and infrastructure improvements. This strategy has had the benefit of reducing carbon dioxide emissions and diversifying California’s sources of energy.
• Renewables Portfolio Standard. California’s aggressive Renewables Portfolio Standard (RPS) requires all electricity retailers, including IOUs, to serve 33 percent of their retail sales with renewable energy procurement. The RPS is mandated under Public Resources Code Sections 399.11, et seq.⁴
• Transmission and Distribution. Senate Bill 17 (Padilla, Chapter 327, Statutes of 2009) mandates implementing and planning a smart grid, defined as an electric grid using computers and communications to gather, distribute, and act on information about the behavior of suppliers and consumers to improve efficiency, reliability, economics, and sustainability of electricity services.

⁴ The RPS was enacted by Senate Bill 1078 (Sher, Chapter 516, Statutes of 2002) and subsequently modified by Senate Bill 107 (Simian, Chapter 464, Statutes of 2006). In 2011, the RPS goal was increased to 33 percent by 2020 under Senate Bill x1-2 (Simian, Chapter 1, 1st Extraordinary Session, Statutes of 2011).
• Assembly Bill 2514 (Skinner, Chapter 469, Statutes of 2010) requires the CPUC to open a proceeding by March 1, 2012, to determine appropriate targets, if any, for each load-serving entity to procure viable and cost-effective energy storage systems and, by October 1, 2013, to adopt an energy storage system procurement target, if determined to be appropriate, to be achieved by each load-serving entity by December 31, 2015, and a second target to be achieved by December 31, 2020.

• Transportation. Senate Bill 626 (Kehoe, Chapter 355, Statutes of 2009) codified Public Utilities Code Section 740.2, which directs the CPUC to adopt rules to evaluate policies and develop infrastructure sufficient to overcome barriers to the widespread deployment and use of plug-in hybrid and electric vehicles. Governor Brown’s Executive Order B-16-2012 establishes expectations for agencies to expedite the rapid commercialization of zero-emission vehicles (ZEV). The order was issued on March 23, 2012, directing California to “encourage the development and success of zero-emission vehicles to protect the environment, stimulate economic growth and improve the quality of life in the State.” The Governor’s Executive Order sets a long-term target of reaching 1.5 million ZEVs on California’s roadways by 2025. The 2012 ZEV Action Plan follows on the Governor’s Executive Order by identifying specific strategies and actions that state agencies will take to meet the Executive Order.

The California Energy Commission’s 2012-2014 EPIC Investment Plan

The Energy Commission’s EPIC investment plan was developed through a public process with extensive stakeholder input and reflects the following five guideposts, consistent with the CPUC’s Decision 12-05-037:

1. Allocate funding in consideration of California’s “loading order” of meeting growing energy needs first with energy efficiency and demand response, then with renewable resources, distributed generation, and combined heat and power applications, and finally with clean and efficient fossil fuel-fired generation.

2. Accelerate “home-grown” technology innovations to reach the state’s goals to reduce greenhouse gas emissions, promote energy efficiency, increase the use of renewable energy, transform and electrify the transportation sector, and develop a robust transmission and distribution grid with advanced communication abilities to support all of these goals.

3. Design the project selection process to avoid duplication with other public or private research activities, assert downward pressure on administrative costs, and maximize in-state investments.

4. Embody ratepayer benefits throughout the entire plan from selection of funded initiatives to criteria for project selection.

5. Build on lessons learned from the Energy Commission’s past programs to create a new program that meets today’s priorities.

Funding investments and amounts for the first three years of funding fall into three areas. First is applied research and development ($158.7 million, Energy Commission), which includes activities to support precommercial technologies and approaches intended to solve specific problems in the electricity sector, including addressing environmental and public health impacts, supporting building codes and appliance standards, and clean transportation that is linked to electricity ratepayer benefits.

Second is technology demonstration and deployment ($129.8 million, Energy Commission and $86.6 million, investor-owned utilities), which involves installation and operation of precommercial technologies or strategies at a scale that will reflect actual operating, performance, and financial characteristics and risks. A minimum of twenty percent of the Energy Commission’s 2012 – 2014 investment plan funds in this category will be set aside for bioenergy projects or activities.

Finally, market facilitation ($43.3 million, Energy Commission) includes a range of activities such as program tracking, market research, education and outreach, regulatory assistance and streamlining, and workforce development to support clean energy technology and strategy deployment. This category is not necessarily limited to renewables but may also include other clean energy technologies and/or approaches.

The California Energy Commission investment plan for 2012-2014 identifies strategic objectives for applied research and development, technology demonstration and deployment, and market facilitation. The strategic objectives are designed to advance the vision that drives EPIC investments: California’s future electricity system will consist of near zero net energy buildings, highly efficient businesses, low-carbon generation, sustainable bioenergy systems, more localized generation, and electrification of transportation, supported by a highly flexible and robust distribution and transmission infrastructure.
In support of this vision, the Energy Commission’s mission for administering EPIC funds is as follows: The Energy Commission through EPIC will fill critical funding gaps within the energy innovation pipeline to advance technologies, tools, and strategies that provide California’s IOU ratepayers with clean, affordable, and reliable electricity and help enable the 21st century power grid.

To further this vision and achieve this mission, the Energy Commission’s first triennial investment plan identifies strategic objectives to advance pre-commercial technologies and strategies to overcome barriers facing clean energy, with applied research and demonstration, demonstration and deployment, and market facilitation initiatives in the following areas:

- **Energy efficiency and demand response**: Develop cost-effective technologies and approaches to achieve California’s energy efficiency and demand response goals. Examples of initiatives in this area include California’s zero net energy buildings, greater energy efficiency in low-income and multi-family housing, and improve the business case for customer-side dispatchable distributed energy resources and demand response capabilities.
- **Clean generation**: Evaluate emerging clean energy generation technologies and deployment strategies to reduce the cost of distributed generation, improve performance and reliability of renewable energy power plants, reduce the environmental and public health impacts of electricity generation, and make the electricity system less vulnerable to climate impacts.
- **Smart grid enabling clean technology**: Develop and demonstrate technologies and strategies to optimize the benefits of energy storage, plug-in electric vehicles, and other emerging smart-grid technologies for the electricity system.
- **Leverage California’s regional innovation clusters to accelerate deployment of early-stage clean energy technologies and companies.**
- **Provide cost share for federal awards.**
- **Market facilitation**: Support regulatory assistance and permit streamlining efforts for local governments, workforce development, market assessment, program evaluation, and stakeholder outreach.

**Status**

On November 14, 2013, the CPUC issued Decision 13-11-025 modifying and approving the Energy Commission’s proposed EPIC investment plan for 2012-2014 as well as the investment plans of PG&E, SCE and SDG&E. The approved investment plans include revisions, as necessary, to reflect changes in law as a result of Senate Bill 96 (Statutes of 2013, Chapter 356), which among other things requires the Energy Commission to do the following when administering EPIC funds:

“(a) Award projects that will benefit electricity ratepayers and lead to technological advancement and breakthroughs to overcome the barriers that prevent the achievement of the state’s statutory energy goals and that result in a portfolio of projects that is strategically focused and sufficiently narrow to make advancement on the most significant technological challenges that shall include, but not be limited to, energy storage, renewable energy and its integration into the electrical grid, energy efficiency, integration of electric vehicles into the electrical grid, and accurately forecasting the availability of renewable energy for integration into the grid. […]”

Decision 13-11-025 approves the Energy Commission’s 2012-2014 investment plan, as modified, authorizes the Energy Commission to administer EPIC funds and allow it to begin issuing competitive solicitations for funding initiatives identified in its investment plan, and allows the Energy Commission to expend EPIC funds for the purposes identified in its investment plan.

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1 Public Resources Code Section 25711.5 (a).
Next steps

The Energy Commission has been developing solicitation-related documents, including standard contract and grant terms and conditions, since the issuance of Decision 13-11-025, and plans to begin issuing competitive solicitations for the funding initiatives identified in the investment plan in the second quarter of 2014, with the approval of contract and grant awards to follow.

The Energy Commission has also begun developing a proposed EPIC investment plan for 2015-2017 consistent with the CPUC’s Phase 2 decision (D.12-05-037), which directs the EPIC program administrators to submit proposed investment plans for the 2015-2017 by May 1, 2014. To this end, the Energy Commission has been coordinating with PG&E, SCE, and SDG&E on the development of its second EPIC investment plan and has conducted joint public workshops with the other administrators in northern and southern California to solicit public comments on proposed funding initiatives. The Energy Commission expects to publish a draft proposed investment plan for 2015-2017 by April 9, 2014, and to approve the draft investment plan at its April 22, 2014 business meeting, so it may submit the plan to the CPUC by May 1, 2014.
Kristen Castaños, Partner, Stoel Rives

Kristen Castaños is one of the firm’s most respected California environmental and land use lawyers. Known for her practical and business-focused advice, Kristen works with commercial, industrial and energy developers on due diligence, compliance and related litigation involving all of California’s key environmental and land use laws, including the California Environmental Quality Act, the California Williamson Act and the federal National Environmental Policy Act. A former City Attorney, Kristen also works with a number of municipal and public entity clients, having successfully represented several California counties, municipalities and a redevelopment agency in CEQA and related land use issues.

Kristen was selected as the Sacramento Environmental Law Lawyer of the Year in 2013 and the Sacramento Water Law Lawyer of the Year in 2012 by Best Lawyers®. She was also recognized by the Sacramento Business Journal as one of Sacramento’s “Women Who Mean Business” in 2013.

Outside of her client work, Kristen is particularly committed to supporting and mentoring fellow women lawyers, and specifically, lawyer moms. Kristen is a founding member of the Mother Attorneys Mentoring Association of Sacramento, an association created to support women lawyers who are juggling the challenges of a full-time career and parenthood.

Abstract

A growing population means more demand for electricity. How do we provide that power without contributing to global climate change? This presentation will identify some of the obstacles to development of new renewable energy facilities in California and provide potential solutions to address some of those obstacles.

1. Introduction and Overview
   F. Despite the various incentive programs to encourage development of renewable energy facilities in California, obstacles remain
   G. Legislative mandates and incentives face deadlines
   H. Environmental permitting remains difficult
   I. Some factors to keep in mind regarding projected energy demand
      i. Conservation is expected to meet large portion of increased demand
      ii. Distributed generation/community scale energy is a player
      iii. Innovations in storage will change our demand picture
      iv. But, energy demand is also expected to increase in response to vehicle electrification

2. Legislative Deadlines
   A. AB 32 Greenhouse Gas Reduction targets 2020
   B. Renewable Portfolio Standard targets 2020
   C. Other energy related statutes include 2020 deadlines
      i. Public Utilities Commission Rule setting energy storage target by 2020
      ii. Low Carbon Fuel Standard targets reductions in carbon in transportation fuels by 2020
      iii. AB 341 targets diversion of waste by 2020
   D. Solution: Additional mandates and incentives are necessary to promote continued development beyond currently mandated levels

3. Procedural Challenges
   A. State siting (California Energy Commission) vs. local siting
      i. Most renewable projects are sited at the local level
         (1) Some jurisdictions have sophisticated siting rules
      ii. Advantages to state siting
         (1) Acting to implement state policy
         (2) Expertise
         (3) Judicial review - direct to California Supreme Court
iii. Solution: State siting could significantly streamline renewable facility development  
   (1) State siting for all facilities could be overwhelming  
   (2) Maintain project size triggers  
   (3) Create optional permitting paths  

D. CEQA is the biggest hurdle  
   i. Timing and cost considerations  
   ii. Costs of CEQA mitigation  
   iii. Potential for litigation - additional cost and delay  
   iv. Solution: streamlined CEQA review  
      (1) Some streamlining is available, but of minimal utility  

### 4. Environmental Challenges  

A. Wind  
   i. Avian species, especially condors and eagles  
   ii. State and Federal Endangered Species Act  
   iii. Wake effect  
   iv. Noise  
   v. Visual  

B. Solar  
   i. Terrestrial species  
   ii. Agricultural impacts  
   iii. Visual  

C. Bioenergy  
   i. Feedstock specific  
      (1) Wood waste - GHG and/or forest impacts  
      (2) Food waste - local health, odor  
      (3) Manure - local health, dust, odor  

D. Environmental issues that cross resource areas  
   i. Water quality impacts  
   ii. Water supply impacts  
   iii. Historical and cultural resources  

E. Solutions  
   i. Energy Elements in General Plans/Energy Zoning Districts  
      (1) For example, Kern County’s Wind Energy Overlay zone  
   ii. More clear legislative priorities  
      (2) For example, prioritization between agricultural use and solar use  
   iii. Regulatory programs to streamline permitting  
      (3) For example, Department of Interior’s eagle take regulatory program  

### 5. Conclusion  

A. California’s population growth is expected to contribute to increased energy demand, but many evolving factors are impacting the demand for new energy production and the types of resources that can meet that demand  

B. Utility scale renewable energy development, however, continues to face obstacles  

C. In addition to the financial tools needed to support renewable facility development, further statutory and regulatory efforts are necessary to truly streamline and facilitate new development
James “Jim” Andrew
Assistant Chief Counsel, California High-Speed Rail Authority

Jim Andrew has been practicing environmental, land use, real estate and government law for almost 15 years. Fascinated with both how we govern ourselves and the massive impact on daily living the built environment can have, land use and environmental law was a natural fit. Jim spent the first 10 years of his legal career in the San Francisco Bay Area in private practice, representing private landowners, companies and developers in land use and real estate transactional and litigation matters. Jim also was involved in non-profit groups such as San Francisco Planning and Urban Research Association (where he was on the Board) and the Urban Land Institute — San Francisco Chapter (where he was Co-Chair of the Sustainability Committee).

Jim joined the California Attorney General’s Office in 2010. At the Attorney General’s office, Jim worked almost exclusively on the California High-Speed Rail project and on the Delta Stewardship Council’s Delta Plan. In 2012, Jim led the team that successfully defended the first high-speed rail project section from an injunction request related to then-pending CEQA litigation. In part, this effort led to settlement of the litigation in 2013. Jim recently moved in-house with the California High-Speed Rail Authority to work full-time on high-speed rail.

Jim earned his law degree from Stanford Law School, and his undergraduate degree in Economics from U.C.-Berkeley. Jim was an officer in the U.S. Navy prior to law school.

Leslie G. Jacobs
Professor, Director of the Capital Center for Public Law & Policy at Pacific McGeorge School of Law

Professor Leslie Jacobs is an expert in constitutional law, remedies and government decision making. A former law clerk to Supreme Court Justice Lewis F. Powell, Jr., she has authored a substantial body of scholarship on constitutional law, specifically free speech and government speech, and on issues of bioterrorism and national security. Her articles have appeared in law journals at many of the nation’s most prestigious law schools. She is the Director of the Capital Center for Public Law & Policy.

Sue Kateley
Chief Consultant Assembly Committee on Utilities & Commerce

Sue Kateley started working in the solar industry for a contractor doing business in Davis, California. The company installed many of the solar water heating systems at Village Homes. She became the Technical Director at the California Solar Energy Industries Association (CALSEA) and worked on uniform codes and standards for solar equipment. She later served as CALSEA’s Executive Director. From 1986 to 2007 Sue worked at the Energy Commission on codes and standards for buildings and electric vehicle charging infrastructure, incentives for electric vehicles, and electric vehicle emergency response training, and authored several major policy reports (the 1988 Conservation Report and the 1990 Governor’s Biennial Energy Policy Report). In 2007 she retired from the Energy Commission and was asked to rejoin CALSEA as its Executive Director. Sue served as CALSEA Executive Director until 2011 when she accepted the position as Chief Consultant to the Assembly Committee on Utilities & Commerce.
Phil Pogledich
Senior Deputy County Counsel, Yolo County

Since joining the County Counsel’s office in 2004, Phil Pogledich has regularly advised the Yolo County Board of Supervisors and various departments on land use, real property, and contract matters. Mr. Pogledich also leads the County’s staff and consulting team on the Bay Delta Conservation Plan and related state and federal habitat restoration proposals. Prior to joining Yolo County, Mr. Pogledich was an associate in the Environment, Land Use, and Natural Resources Group at Pillsbury Winthrop LLP (currently Pillsbury Winthrop Shaw Pittman LLP) from 1998 through 2003. He graduated from UC Hastings College of the Law in 1998.

Honorable Ronald Robie
Associate Justice on the California Court of Appeal, Third Appellate District

The Honorable Ronald B. Robie has served as an Associate Justice on the California Court of Appeal, Third Appellate District, since 2002. Previously he served as a judge of both the Sacramento Superior and Municipal Courts. He was presiding judge from 1994 to 1995. He was named “Judge of the Year” by the Sacramento County Bar Association in 2002. Justice Robie currently is a member of the Board of Directors of the National Center for State Courts. He is the Chair for 2010 of the California Commission on Access to Justice and the California Supreme Court Committee on Judicial Ethics Advisory Opinions. He has taught water law and environmental law at the University of the Pacific, McGeorge School of Law since 1970. He is Chair of the Governing Committee of the California Center for Judicial Education and Research (CJER) and has taught at many institutes and programs conducted by CJER, including a course on the California Environmental Quality Act. Prior to assuming the bench, he was a leader in California Water matters. He served from 1975 to 1983 as Director of the California Department of Water Resources and from 1969 to 1975 as a member and Vice Chair of the California State Water Resources Control Board. He is a co-convener of “Dividing the Waters,” an educational project for water judges, masters, and referees affiliated with the National Judicial College. Justice Robie received Bachelor of Arts (1958, with Honors) and Master of Journalism (1960) degrees from the University of California, Berkeley, and his Juris Doctor degree from the University of the Pacific, McGeorge School of Law (1967), with highest honors.

Rachael Salcido
Professor, Faculty Adviser, McGeorge Law Review, University of the Pacific, McGeorge School of Law

Professor Rachael Salcido is a scholar of environmental and natural resources law, with particular expertise in ocean and coastal law and ecosystem restoration. Her articles have appeared in prominent law journals and she is an active member of the Rocky Mountain Mineral Law Foundation.

John Sprankling
Distinguished Professor of Law, University of the Pacific, McGeorge School of Law

Professor John G. Sprankling, a nationally-recognized authority on property law, has written four books and many articles on this subject. Prior to joining the academy, he was the managing partner of one of the nation’s largest property law firms. At Pacific McGeorge, he has served as Interim Dean and as Associate Dean for Academic Affairs. He has also served as the Chair of the Property Law Section of the Association of American Law Schools.
The McGeorge Law Review would like to thank Professor Rachael Salcido for her invaluable support as our faculty adviser and as the faculty editor for this symposium. We would also like to thank Dan Cucchi for his assistance at the Capitol.

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