

CLIMATE ACTIONS FOR CALIFORNIA:

RECOMMENDATIONS
FOR GOVERNOR JERRY
BROWN'S FINAL TERM

DECEMBER 2015

BerkeleyLaw

UNIVERSITY OF CALIFORNIA

Center for Law, Energy &
the Environment

ABOUT CLEE

The Center for Law, Energy & the Environment (CLEE) channels the expertise of the Berkeley Law community into pragmatic policy solutions to environmental and energy challenges in California and across the nation. The Center works with government, business, and communities on initiatives that focus on reducing greenhouse gas emissions, advancing the transition to renewable energy, and ensuring clean water for California's future.

ABOUT THIS REPORT

This policy paper resulted from a convening and series of discussions with Brown Administration officials, philanthropic representatives, and environment and energy experts. The report and recommendations are solely a product of the UC Berkeley School of Law and do not necessarily reflect the views of all the participants and experts consulted.

AUTHORSHIP

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ACKNOWLEDGMENTS

CLEE gratefully acknowledges Terry Watt for organizing and facilitating the convening and outreach and the numerous reviewers in the Brown Administration, philanthropic organizations, and various environmental and energy institutions who participated in the meeting and discussions and provided comments on this report. We also thank Claire Hermann for designing this policy report.

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INTRODUCTION

California has made progress reducing carbon emissions while growing the economy. Over the past decade, state leaders have implemented a suite of policy measures that are driving down emissions and promoting a range of cleaner and more efficient technologies to power the economy.

Despite these successes, the state's work to reduce greenhouse emissions is just beginning. Governor Jerry Brown recently announced ambitious, long-term greenhouse gas reduction targets, which build on AB 32 (Nuñez, 2006) requirements to return to 1990 levels of greenhouse gas emissions by 2020. They require 80 percent reductions below those levels by 2050, with an interim target of a forty percent reduction by 2030.

Meeting these mid-century targets will require the state both to build on existing programs and to address new areas that are key to decarbonizing the state's economy, such as natural resources, water and land use.

With just over three years remaining in Governor Brown's final term, what are the immediate steps that administration leaders, environmental and energy advocates, and other stakeholders can take to achieve additional short-term successes and create a foundation for long-term progress that endures beyond the administration?

To answer this question, the Center for Law, Energy and the Environment (CLEE) at UC Berkeley Law interviewed and convened Brown Administration officials, agency leaders, philanthropic representatives, and environmental experts. These individuals shared lessons learned from prior collaborations and initiatives, discussed ongoing challenges, and suggested goals and next steps going forward.

This report summarizes the key challenges that many of these experts identified, as well as possible next steps and partnerships. With continued outreach and coalition-building, these actions could help advance critical greenhouse gas reduction efforts in the areas of land conservation, water, infill development, and transportation in California.

What immediate steps can the Brown Administration and environmental and energy leaders take to achieve additional short-term successes on greenhouse gas emissions reduction and create a foundation for long-term progress?



TOP FOUR IMMEDIATE CHALLENGES TO ACHIEVING LONG-TERM STATE CLIMATE ACTIONS

1. Uncoordinated Agency Processes

The numerous state and other agencies that have jurisdiction over lands and projects that are critical to achieving state climate goals are not always coordinated on their timetables. As a result, agency leaders may miss opportunities for securing multiple co-benefits with their projects and efforts, as well as opportunities for joint implementation of demonstration projects that have a high likelihood of deploying regionally and statewide, where applicable.

2. Inaccessible, Incomplete and Unstandardized Government Data

Accessible, comprehensive, and timely data are critical for state actors to make well-informed decisions in the most efficient manner and with the greatest public input. Yet the myriad state agencies often have incongruent and outdated methods of collecting data on their various projects and initiatives. The state lacks an overarching platform for collecting, integrating, and sharing data and therefore for maximizing public involvement and transparency in decision-making and action related to climate and other goals. As a result, state agencies often duplicate work and miss opportunities for greater stakeholder collaboration. In some cases, stakeholders and policy makers may overlook entire ecosystems or habitats for investment due to a perception that no useful data exist.

3. Inadequate Water Resource Management and Land Use Planning

Despite California's present – and likely recurring future of – severe drought, land use decision-making in the state is often disconnected from the reality of available and future water supply. California has no reliable measure of water need or means of knowing what water is available. In

addition, the state lacks information to support collaborative policy- and decision-making, as well as metrics and data to measure the energy use associated with water. Water is likely to become a more severe constraint on land use development as climate change worsens, suggesting the need to integrate water and land use planning. While the current drought has motivated constructive dialogue and actions, the state will need additional integrated actions to become more water resilient. Many of these actions will be regional and local in nature and will need to achieve social, environmental and economic co-benefits.

4. Inattention To and Uncoordinated Policies On Working and Natural Lands, Both Public and Private

California's working and natural landscapes – the vast acreage of largely rural lands outside of developed urban areas that include both agricultural and rangelands – are vital resources for the fight to reduce greenhouse gas emissions. Public lands, covering over 70 million acres or nearly 3/4 of the state, provide a pathway to one of the most cost-effective solutions to curbing greenhouse gas emissions with significant cross-cutting benefits. Natural and working lands investments can result in net zero or even negative greenhouse gas emissions over time while providing resiliency co-benefits like improved water quality and retention, flood prevention, public health and safety benefits, food and forest products, job creation, recreation and tourism revenue and wildlife habitat, and renewable energy generation, among other benefits. But natural and working lands are under increasing pressure from development, infrastructure projects, and for off-site project mitigation. The state will need more effective methods to address climate goals, wildlife protection, water, and infrastructure development, while protecting local farm economies and the state's natural lands and accommodating projected population expansion.





SOLUTIONS TO OVERCOME THE CHALLENGES

1. Improved Agency Coordination and Joint Project Implementation

Numerous agencies in state government play vital roles in the effort to reduce greenhouse gas emissions. For example, the California Air Resources Board, Energy Commission, State Water Resources Control Board, Strategic Growth Council, Department of Food and Agriculture, Department of Water Resources, Natural Resources Agency, Environmental Protection Agency, Department of Fish and Wildlife, Transportation Agency, and Governor's Office of Planning and Research all are involved. These and other agencies can begin with basic reforms to set a foundation for enhanced coordination, such as regular staff or leadership meetings.

- All environmental agencies in California should **appoint a staff member to be an "interagency liaison"** to share critical agency data and project efforts with each other, perhaps through an executive order. These agency leaders should staff interagency implementation teams on key topics, such as land use, water, and conservation.
- A central agency in the Governor's Office, such as the Governor's Office of Planning and Research or Strategic Growth Council, could **create and maintain a master agency calendar and timetable on pressing projects for all environmentally related state agencies**. That agency could then ensure that all other agencies supply calendar items via their "interagency liaison" and then utilize the calendar to coordinate actions.
- With input from philanthropic organizations, academic experts, and advocates, among others, "interagency liaisons" should assign staff members to **look for opportunities to solve multiple problems and coordinate on spending new sources of funds**, such as cap-and-trade auction revenue and disaster relief funds.

- Environmental nonprofit, academic and agency leaders, among others, should **identify demonstration projects based on interagency coordination that reduce greenhouse gas emissions and that have a high likelihood of near-term, statewide deployment.** These projects would ideally leverage existing philanthropic and government investments.
- Agency leaders, through their interagency liaisons, should **improve communications with the public,** including advocacy groups and philanthropic leaders and other agencies, on their efforts. They can also enlist nontraditional allies from the private sector to assist with this process, such as foundations, businesses, and advocacy groups.

2. A State Data Platform to Inform the Public and Make Improved Decisions

Agencies constantly generate and collect data, from stakeholder group input to environmental review to project implementation. Yet the data are often inaccessible to the public and to other government agencies. The obstacles to achieving better accessibility can include administrative processes, financial hurdles, and technology challenges. In addition, government-provided data should be comprehensive and current. Presently, important environmental considerations (particularly those pertaining to water use, infrastructure, and supply) lack adequate data and monitoring. The state should ensure a more effective, collaborative approach to collecting and analyzing data in order to best address complex, cross-cutting environmental issues, develop long-term funding support for critical platforms, and overcome barriers to agencies using data platforms not housed at the state.

- **A unified, accessible, curated data platform should be a priority across all environmental agencies.** The platform should include a publicly accessible portion, while also preserving a private, agency-only platform for confidential deliberation eventually leading to public draft plans and decisions.
- State agency leaders should **consider using a data platform that can easily access, organize, integrate and display complex spatial and other data and models from multiple sources.** As an example, Data Basin, developed by Conservation Biology Institute (CBI), a science-based nonprofit, can access sources including more than 6,000 California resource, climate, and infrastructure datasets; the California Geoportal and other state agency data repositories; and Geoplatform.gov and associated portals. Data Basin incorporates common standards for data organization, documentation, and attribution. Information is organized through distinct but interconnected “gateways” that target particular user groups with specifically tailored tools, scientific guidance, and content.



- Philanthropic leaders, advocates, and other stakeholders should help state agencies **identify critical data gaps and then develop a means to fund, collect, and disseminate the data** in a readily accessible format. These leaders will concurrently need to evaluate options for updating state water information, monitoring, and reporting. As a starting point due to the relative paucity of information on the topic, philanthropic, nonprofit and academic experts could help state leaders compile existing water-related data and assess them for consistency and gaps.
- State leaders should **use improved data access to shape a demonstration project that expands state, local government and nonprofit participation in updating approaches to water management**. Possible demonstration areas could include select regions of the Sierra Nevada Mountains, agricultural areas in the San Joaquin Valley, and the San Francisco Bay Delta.
- State leaders should **leverage the existing Data Basin Gateway data infrastructure and process for the Desert Renewable Energy Conservation Plan (DRECP) for improved planning in other contexts and regions**. The DRECP covers 22.5 million acres in the California desert. Specialized tools developed for the DRECP Gateway (drecp.databasin.org) demonstrate ways to use the platform to organize information in a transparent and user-friendly way, facilitate permitting and mitigation decisions, and visualize the potential effects of climate change on the California desert in an actionable way. The DRECP also offers an important opportunity to advance broader goals at the local government level through continuing partnerships with the six counties in the DRECP area.

3. Improved Water Management Via Better Data Collection and Access

California will need to improve water management to cope with a changing climate, growing population, and competing demands in a way that integrates watersheds, delivers multiple benefits, and uses and reuses water more efficiently. Beginning with better data, policy makers can use them to inform choices for managing the system better for the environment, equity, and the economy and to align land use and water management strategies. Ultimately, the state should allocate limited water resources more efficiently by developing ways to promote equitable re-allocation of water using either regulatory processes or markets to help address long-term water management challenges.

- The State Water Resources Control Board should **establish a comprehensive water database to assist planning and analysis of available water resources and improve the system of measurement, monitoring and reporting of water use** as a first step to identify strategies to update the state's water resource



management efforts. State leaders will also need to identify incentives and regulatory changes to accomplish this task. In particular, the State Board should work to develop a searchable database of water rights information and continue its development of an improved water use reporting system that includes data on water use and quality across the state in order to get a full picture of usage. In conjunction, the state should develop and use metrics and indicators to track progress toward meeting statewide and agency-specific goals and push for application of the best available technology to monitor streamflow and institute precision water deliveries, per SB 88 (2015). Finally, the agency should continue to include and bolster groundwater data, tracking and monitoring as part of the effort.

- Philanthropic organizations, nonprofit advocacy groups, and other stakeholders should assist the Department of Water Resources, Governor’s Office of Planning and Research, State Water Resources Control Board, Sierra Nevada Conservancy, and other agencies to **identify and launch pilot projects to test water market and management strategies**, including surface, groundwater, and the interaction between upper watershed (the source) and the users (typically concentrated in urban areas).
- The Department of Water Resources and State Water Resources Control Board, as well as the California Energy Commission, should **encourage and facilitate financing for water use efficiency and regional supply reliability**. Additional investments in efficiency and regional supply improvements could reduce demand without harming local economies. State leaders should allocate the costs based on private and public benefits.
- Nonprofit advocacy groups should **explore the possibility of a constitutional amendment to Proposition 218 to allow greater flexibility in setting water rates and charges**. Due to recent court decisions, this provision has otherwise created real and perceived limits on the use of public charges for conservation and tiered pricing and has impeded raising property-based funds for stormwater and flood management.
- The State Water Resources Control Board, along with the Department of Water Resources, should **consider paying for efficiency and other carefully defined water-related investments by levying a drought emergency fee, such as a public goods charge on water**.
- The State Water Resources Control Board could **employ techniques developed to finance residential energy efficiency and renewable investments**, including “retrofit on resale” requirements, an expanded pay-as-you-save (PAYS) program that provides for on-bill repayment (OBR), and on-bill finance (OBF) to pay for fixture and





appliance replacement, with savings on water bills used to pay for costs.

- The Natural Resources Agency and Department of Water Resources can **extend water management practices to working lands policies**. For example, these agency leaders can ensure that natural systems are managed specifically to increase water supply and benefits, while upper watershed management can include healthy watersheds that retain more precipitation and release water more slowly to improve water quality and diminish supply and quality disruptions from events like wildfires and flooding.
- The Governor's Office of Planning and Research, which provides land use planning guidelines and assistance, should **encourage local governments to require additional transparency for new development regarding conservation and water supply** and develop zoning and land use requirements for any proposed changes in agricultural land use. Of note, the Office's proposed update to the California Environmental Quality Act (CEQA) guidelines would require a water supply analysis for all new projects.

4. Comprehensive Conservation Planning for Working and Natural Lands

The state's natural and working landscapes, both public and private, provide opportunities for carbon sequestration, renewable energy generation, water supply and groundwater recharge, and conservation to prevent urban sprawl and protect agricultural land.

- The state, through the collaboration of the Natural Resources Agency, State Transportation Agency, California Environmental Protection Agency, Department of Food and Agriculture, Strategic Growth Council, and Air Resources Board, should **develop regional conservation plans for working and natural landscapes that facilitate carbon sequestration, renewable energy, habitat and species conservation and stewardship, and water resource management by updating the state's conservation, mitigation and permitting system**. Agency leaders should begin by compiling existing conservation plans by ecoregion and then assessing them for consistency and comprehensiveness.
- Philanthropic leaders, nonprofit advocates, and other stakeholders should help the state **identify key research and data gaps needed to draft a statewide conservation plan and strong regional conservation plans**. Focus areas could include gaps in coverage by Natural Community Conservation Plans (NCCP), Habitat Conservation Plans (HCP) and other plans such as "greenprints;" vegetation mapping; and information such as how specific farming and forest management practices can provide habitat benefits, capture and store carbon, and retain water, among other benefits.

Early work could include compiling existing NCCPs and HCPs and other conservation plans such as greenprints to assess gaps and inconsistencies and to complete vegetation mapping in key geographies as foundational inputs.

- The state should coordinate with federal agency partners and regional cooperatives to **develop a methodology and standards for federal, statewide and regional conservation plans**. Agencies engaged should include the Natural Resources Agency, Strategic Growth Council, Energy Commission, California Environmental Protection Agency, and State Transportation Agency, as well as federal agencies such as the United States Fish and Wildlife Service and Bureau of Land Management. This inter-agency group must coordinate with counties and regional governments to ensure implementation of the plans and engage with foundations, nonprofit organizations and others to ensure successful development and implementation.
- The Natural Resources Agency, in collaboration with state agencies such as the State Transportation Agency, California Environmental Protection Agency, Strategic Growth Council and federal resource agencies, together with foundation and nonprofit partners, should **leverage both “greenprints” and Regional Advanced Mitigation Planning (RAMP) as models for regional conservation plans where they currently do not exist or lack sufficient information to support strategic decision-making for conservation, mitigation and permitting actions, such as for transportation projects..** Greenprints involve a transparent mapping and modeling process using spatial analysis to develop a long-term vision for conserving and protecting lands within a community. RAMP involves multiple agencies identifying mitigation measures to protect natural and biological resources at a landscape scale to facilitate the permitting of projects consistent with that vision and to preserve priority conservation lands. These regional conservation strategies could ultimately be combined into a statewide Conservation Action Plan (similar to the Water Action Plan) that combines wildlife protection, natural and working lands conservation and climate adaptation and resilience into a comprehensive plan with specific targets and goals. Agency leaders could also **utilize the Department of Fish and Wildlife’s forthcoming State Wildlife Action Plan as an input for developing a state conservation plan.**
- Philanthropic leaders and state agencies should **invest in and support research and specific demonstration conservation planning projects, as well as improved metrics and methodologies to measure performance and improve economic and environmental outcomes.** Possible demonstration areas could include future elements of the San Joaquin Valley mapping effort for least-conflict lands for solar development and a Department of





Transportation project area, such as the high speed rail route over the Tehachapi Mountains and Antelope Valley area.

- Agencies with permitting authority for large-scale infrastructure projects should **utilize a future statewide conservation plan to help provide more options for advanced mitigation investments** that link with the regional conservation strategies.
- The Governor's Office of Planning and Research and Strategic Growth Council should **encourage state spending and local land use action that helps focus new growth in existing cities and towns** to relieve development pressure on peripheral working lands. Per AB857 (Wiggins, 2002), the Governor's Office submitted a five-year infrastructure plan in 2015 that would further these priorities by focusing new investment on rehabilitating existing state infrastructure, rather than building new infrastructure to outlying areas.

5. Improved Transportation and Land Use Decision-Making to Achieve Greater Water, Infill and Working Lands Benefits

California's local governments often approve new land use plans and projects without broader attention to the need for infill development, improved water resource management, and other economic and environmental goals.

- The Governor's Office of Planning and Research, California State Transportation Agency, and State Water Resources Control Board, among other agencies, should **identify all options to require local officials to account for available water resources and needs in their transportation and land-use decisions**, including for groundwater basin recharge, monitoring and reporting, to both slow sprawl and improve water resource management. If local leaders have to show adequate water supplies in order to annex new land and provide the associated transportation infrastructure, they will be less likely to sprawl over open space and agricultural land and instead may devote more resources and infrastructure in their existing downtowns.
- With support from nonprofit partners, the California Legislature could **require higher evidentiary standards for certain destructive land use decisions**, such as expanding city land under Local Agency Formation Committee (LAFCOs) and special districts. As part of this effort, state leaders could consider adding a water requirement to land use decisions under the general plan statute or guidelines or regional transportation plans under SB 375 (Steinberg, 2008) or strengthen urban water management plans to achieve a similar outcome.
- With support from nonprofit partners, the California Legislature could **require local jurisdictions and special districts to set urban**

growth boundaries as a pre-requisite for annexation and sphere of influence boundary changes.

- The Governor's Office of Planning and Research could **ensure greater policy and spending consistency among multiple levels of government**, specifically through the agency's Environmental Goals and Policy Report, pursuant to AB 857. In particular, the state should work to align federal, regional and local funding with state policy priorities, specifically for infill, efficient development, and farmland and open space conservation.
- The state, through the Strategic Growth Council, Governor's Office of Planning and Research, and California State Transportation Agency, should **incorporate environment, equity, and economy metrics ("Triple E") and cost-benefit analyses for all of its discretionary spending**.
- State agency leaders, such as through the California Environmental Protection Agency, State Water Resources Control Board, Natural Resources Agency, California State Transportation Agency and Strategic Growth Council, should **encourage better local government action on resource sustainability, such as by encouraging local leaders to invest in green infrastructure for stormwater capture and groundwater recharge**, via state financing programs like a public goods charge on water.
- To encourage more infill investment, the California Legislature and Governor's Office of Planning and Research could employ additional strategies to **eliminate delay and uncertainty for infill that reduces vehicle miles traveled (VMT)** by designating such development "by right" (the approach taken for emergency housing).
- The California Legislature can **minimize local government policy barriers to infill development, such as parking requirements for residential and mixed-use, and ease infill land assembly**. For example, the legislature passed AB 744 (Chau, 2015) to reduce minimum parking requirements for certain affordable housing projects near a major transit stop, and state leaders could now focus on expanding that policy to other types of projects near transit stops, with further reductions in the minimum parking requirements.





CONCLUSION: SHORT-TERM OPPORTUNITIES FOR LONG-TERM BENEFITS

California's leaders, from Governor Brown and his administration to the legislature and business and advocacy community, have helped the state become a global pioneer in reducing greenhouse gas emissions. While these leaders have made progress towards achieving 2020 greenhouse gas reduction goals, state officials must now act to reach the more aggressive, transformative reduction goals for 2030 and 2050. In his final term, Governor Brown can reform state agency processes and help advance legislative and regulatory initiatives to ensure that the transition to a low-carbon economy simultaneously improves ecosystem health, economic development, environmental preservation, public health, and quality of life for residents. The lessons learned in California will ultimately inform a growing national and international dialogue for how best to address climate change by reducing emissions and becoming more resilient in the face of an uncertain future.

A vast field of bright yellow poppies scattered across a lush green field. The flowers are in various stages of bloom, some fully open and others as buds. The background is a dense carpet of green grass and more distant poppies, creating a sense of depth. In the lower right foreground, a large, dark, textured rock is partially visible.

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