

CRAFTING A STRATEGIC RESPONSE TO CLIMATE CHANGE: RECOMMENDATIONS FOR ADAPTATION IN CALIFORNIA

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TAKING ACTION TO BUILD CLIMATE RESILIENCE

Climate change touches virtually every aspect of state government and the lives of all Californians. Record-breaking drought and wildfire make the enormous risks obvious. Acting now to secure the resilience of the human and natural systems upon which we depend will avert the worst impacts, prepare California for the unexpected, and ensure a more equitable future by improving the well-being of communities most vulnerable to climate change.

Resources Legacy Fund commissioned this assessment of the progress made by state government over the past eight years in managing climate risks and opportunities for improving the speed and effectiveness of California's next phase of adaptation and resilience work. The study scope is the conservation and management of California's natural systems (ocean and coastal, water, land, and urban) with attention throughout to vulnerable communities and climate justice. This assessment reflects extensive review of state statutes, policies, and governance structures and processes; interviews with 27 leaders from state agencies and legislative staffs, academia, and non-governmental organizations; and high-level guidance and review by knowledgeable advisors.¹

CALIFORNIA PROGRESS 2010-2018

No roadmap existed in 2010 for what "successful" climate adaptation would look like for California. Understanding within and outside of government was mixed and 2010 marked the third year of significant budget austerity, providing few resources for implementing the state's first adaptation strategy.

By many measures, the state has made great strides by developing new strategies, policies, guidance, and grant programs, spurred by Governor Brown's Executive Order B-30-15, funding from two bond initiatives and the state's Cap-and-Trade program, and legislative and executive actions responsive to severe drought and wildfire. Climate adaptation is now better integrated into state agency planning and natural resources management discussions. Greater attention is paid to reducing social vulnerability and achieving climate justice.

Three important breakthroughs occurred between 2015 and 2018 in California's conceptual approach that prepare the ground for future progress. First, the state took initial steps towards defining and applying "resilience" in state operations and policies. Especially notable are the resilience outcomes for people, natural systems, and infrastructure identified by the state's adaptation vision.² Second, greater attention to equity and climate justice emerged in many state climate adaptation mechanisms, plans, and funding programs, often informed by consultative dialogue with climate justice advocates. New funding programs and general plan requirements established by the Legislature seek to build community resilience and could help focus attention on the climate vulnerability of disadvantaged communities. Finally, policies and legislation to ensure that infrastructure planning and investment decisions account for potential climate change impacts specifically included "natural infrastructure" as part of California's infrastructure portfolio and prioritized natural infrastructure solutions, such as wetlands for buffering sea-level rise. This approach has important implications for future planning and investments affecting natural systems and ecosystems.

¹ The project advisory team: Frank Davis, University of California at Santa Barbara; Jordan Diamond, University of California at Berkeley; Jay Lund, University of California at Davis; Sona Mohnot, Greenlining Institute; and Pedro Nava, Little Hoover Commission.

² See page 9 of Safeguarding California Plan: 2018 Update at <http://resources.ca.gov/climate/safeguarding/>.

FIVE STRATEGIES FOR BUILDING CLIMATE CHANGE RESILIENCE

Despite this progress, state adaptation efforts have been uneven in their effectiveness and remain incomplete. A sense of urgency must guide the next phase of California's work to establish robust systems, structures, and processes for achieving resilience, in a way that is better integrated with the state's greenhouse gas reduction strategies. This report's five recommendations aim to improve governance and spur effective action, define and advance resilience outcomes for society and natural systems, and target funding to achieve state policy goals, including equity in climate investments.

(1) STRENGTHEN LEADERSHIP, STRATEGIC FOCUS, AND ACCOUNTABILITY

Currently, a complex interplay of top-down and bottom-up processes involving numerous working groups and at least five entities with leadership roles set state climate adaptation policy.³ While this governance system has responded to crises like drought and wildfire, it is an imperfect match for the job ahead.

FINDING: *The Governor's Office of Planning and Research (OPR) has served as a critical organizing force in recent years, providing intellectual leadership and coordination. This role for OPR, and its relationship to other key entities such as the Natural Resources Agency and Environmental Protection Agency, are not well-institutionalized or codified in state law. The state needs a more transparent and effective leadership structure that clearly assigns responsibilities and expectations.*

FINDING: *Since 2009, successive state climate adaptation strategies have assembled information about state adaptation efforts and provided rare opportunities for staff to work across agencies and sectors. But these long and highly detailed documents lack the crisp direction, clear priorities, and integration with fiscal decision making that are necessary to create strategic focus, generate momentum in complex organizations, and ensure significant outcomes.*

FINDING: *State programs typically rely upon principles, guidance, and technical support to facilitate public and private sector action, rather than mandated requirements, standards, and deadlines. They also often assess progress in terms of accomplishment of planned tasks. Specifying explicit goals for adaptation and resilience outcomes would help the state set more meaningful performance metrics, improve accountability, and facilitate adaptive governance.*

RECOMMENDATIONS

(A) Create a leadership locus in state government to build upon recent gains, generate urgency, and foster accountability. Name a council of agency and department leaders to guide and assist this entity as it works across state agencies to unify and align state, regional, and local efforts.

(B) Develop, implement, and regularly revisit a high-level, direction-setting strategy for state adaptation and resilience that includes a longer-term vision of successful resilience and specific, ambitious, and achievable three- to five-year goals and measures for advancing this vision. Ensure budget and financial officials understand the strategy and play a role in ensuring its implementation.

(C) Adopt a culture of accountability for results and, where appropriate, codify specific responsibilities for advancing climate adaptation and resilience in state laws and regulations. Set explicit goals with clear expectations and deadlines. Regularly tally the state's full financial outlays for adaptation and resilience to inform executive and legislative branch decisions. Develop narrative and quantitative metrics for assessing resilience that can be broadly applied across sectors and at state, regional, and local scales.

³ State entities with overarching leadership roles (direct and indirect) include the California Natural Resources Agency, the Strategic Growth Council, the Office of Planning and Research, the Integrated Climate Adaptation and Resiliency Program, and the Air Resources Board.

(2) ACCELERATE LOCAL AND REGIONAL ACTION

Most choices and actions that affect climate adaptation and resilience are and will continue to be made at local and regional scales. Recent changes to state policy and guidance have sought to catalyze and inform these distributed efforts, but the new state requirements also increase the complexity of local and regional planning and decision-making.

FINDING: *Local planning agencies lack sufficient staff, technical capacity, and/or funding to address climate change or adaptation. The State should make targeted investments to build local capacity and accelerate general plan updates that implement new state requirements for climate adaptation, resilience, and environmental justice.*

FINDING: *Effective adaptation solutions often require regional approaches that catalyze and integrate the efforts of local governments and interests. Yet regional approaches for achieving climate adaptation and resilience are not yet well developed and many other regional efforts established by state government (e.g., transportation, groundwater) do not integrate adaptation and resilience goals for natural systems or for disadvantaged and vulnerable communities. State policy-makers need to better “knit together” the various local and regional planning processes and requirements.*

RECOMMENDATIONS

(A) Direct funding to assist planning agencies in addressing the new general plan requirements related to climate adaptation and resilience and to environmental justice. Structure this funding to ensure that the safety element of general plans explicitly address environmental justice, land use, conservation, and other plan elements. Provide grants to support development of adaptation/resilience or vulnerability plans, demonstration projects, and exemplary county general plans or local coastal programs.

(B) Develop core methods and provide technical support to local governments for the state-required vulnerability assessments to ensure they advance state goals for social and ecosystem resilience, promote consultation across sectors, and take a forward-looking approach to adaptation and resilience.

(C) Improve high-level coordination of state policy-making by establishing and enforcing ground rules for coordinated design and implementation of sector-specific approaches and of regional and local planning processes and requirements.

(3) ADVANCE SOCIETAL RESILIENCE

California is just beginning to grapple with the social dimensions of climate change and the disproportionate risks faced by many communities. Innovation is necessary because we lack good models for policies and institutions that can ensure long-term social resilience.

FINDING: *Equitable climate adaptation requires correcting cultural norms and decision processes that perpetuate and amplify societal inequities in climate vulnerability. Recent state guidance and funding to promote climate justice do not go far enough. Now needed are replicable demonstrations in practice that couple enhanced community resilience with improved climate adaptation decisions, actions, and outcomes.*

FINDING: *State policy tools for identifying the people and communities most at risk from climate-related hazards were developed for other purposes. Improved methods are needed for assessing future climate-related risks to inform decisions and investments related to natural systems, economic development, infrastructure, and other matters.*

RECOMMENDATIONS

(A) Develop at least three regional demonstration projects that:

- Provide proof-of-concept for equitable climate adaptation;
- Identify solutions for addressing underlying impediments to equitable decision making;
- Embody the state adaptation vision for people, natural systems, and infrastructure;
- Incorporate state government practices and principles that reduce potential climate-related risks while actively building community resilience through economic development, public health improvements, and other means; and
- Operationalize societal resilience and track costs to inform future policies.

(B) Implement a science-based assessment of current tools, metrics, and approaches for assessing community and societal climate vulnerability and resilience. Invest, as warranted, in research and development to create easily adopted methods for use across the state.

(4) SUSTAIN RESILIENT ECOSYSTEMS

Recent wildfires and prolonged destructive drought amply demonstrate how the condition of natural systems affects the well-being of people and communities. Climate change is significantly altering California's ecosystems, the foundation of these natural systems. Degraded ecosystems will pose risks to public health and safety, emit more greenhouse gases, and diminish economic prosperity. Resilient ecosystems will continue to deliver the myriad environmental benefits that Californians enjoy.

FINDING: *California lacks a well-articulated and prioritized course of action for sustaining and enhancing the resilience of the state's ecosystems as the climate changes. This weak link in state climate policy undermines the state's ability to ensure that all of its climate strategies and investments consistently promote ecosystem resilience and avoid unintentional harm.*

RECOMMENDATION

Immediately develop and adopt a strategy and plan for ensuring the resilience of the state's ecosystems as the climate changes that:

- Pulls together the disconnected policy threads of wildlife and habitat conservation, natural infrastructure, and natural and working lands into a coherent set of priorities;
- Promotes action at regional scales that integrates the full range of socioeconomic, biophysical, and governance dynamics relevant to ecosystem resilience;
- Advances the statewide system of climate-resilient reserves and connectivity areas called for in each of the successive state adaptation strategies; and
- Builds coalitions and collaboration across sectors and interests - such as with regional transportation planning, emergency management, and greenhouse gas mitigation - to ensure complementary and effective policy development.

(5) SECURE FUNDING AND SPEND IT WISELY

Managing the effects of a changing climate is expensive, but far less expensive than the alternative. Proceeds from the Cap-and-Trade program and various bond initiatives are likely to remain the primary source of funding for climate adaptation and resilience efforts for natural systems and for disadvantaged and vulnerable communities. For much of the funding thus far, adaptation and resilience benefits have been one of several allowed uses or a possible byproduct of funded projects.⁴

FINDING: *Cap-and-Trade and bond fund allocations have become an important but unintentional priority-setting mechanism for the state's adaptation and resilience efforts. Funding decisions typically involve political and programmatic considerations instead of the explicit purpose of advancing state climate adaptation and resilience goals at local and regional levels.*

FINDING: *Grant award criteria vary across the many state programs that distribute Cap-and-Trade and bond funding. Even some programs promoting climate adaptation do not explicitly require demonstration of these benefits. The state would make greater progress if all investments in natural systems and in disadvantaged and vulnerable communities were designed to produce proven, lasting climate adaptation and resilience benefits.*

RECOMMENDATIONS

Ensure that various sources of state funding align with and advance state policy priorities:

- Create a plan for developing a bond that advances a more strategic and balanced approach to funding state priorities for climate change adaptation and resilience, particularly those unlikely to garner private financing.
- Require all state agencies to account for potential resilience impacts for natural systems and disadvantaged and vulnerable communities in their decision-making and investments. Expanding and extending AB 2800 (which sunsets in 2020) is a potential pathway.
- Require cross-sector consultation to ensure that state programs that award adaptation and mitigation grants, including for transportation and infrastructure, consider resilience impacts on natural systems and on disadvantaged and vulnerable communities.

⁴ Funding from Cap-and-Trade that potentially contributes to adaptation and resilience grew from ~\$64 million in 2014/15 to ~\$340 million in 2018/19 (totaling over \$1 billion). Three statewide bond initiatives (Propositions 84, 1, and 68) directed ~\$1.2 billion to help advance the adaptation or resilience of natural systems and ~\$3.2 billion more towards natural resource management purposes that include adaptation and resilience as one of several goals. The bonds provided about \$2.6 billion in funding that prioritizes (~\$1.6b) or is specifically directed towards (~\$1b) disadvantaged and low-income communities.

DEVELOPMENT OF CALIFORNIA'S CLIMATE ADAPTATION POLICY, 2010-2018

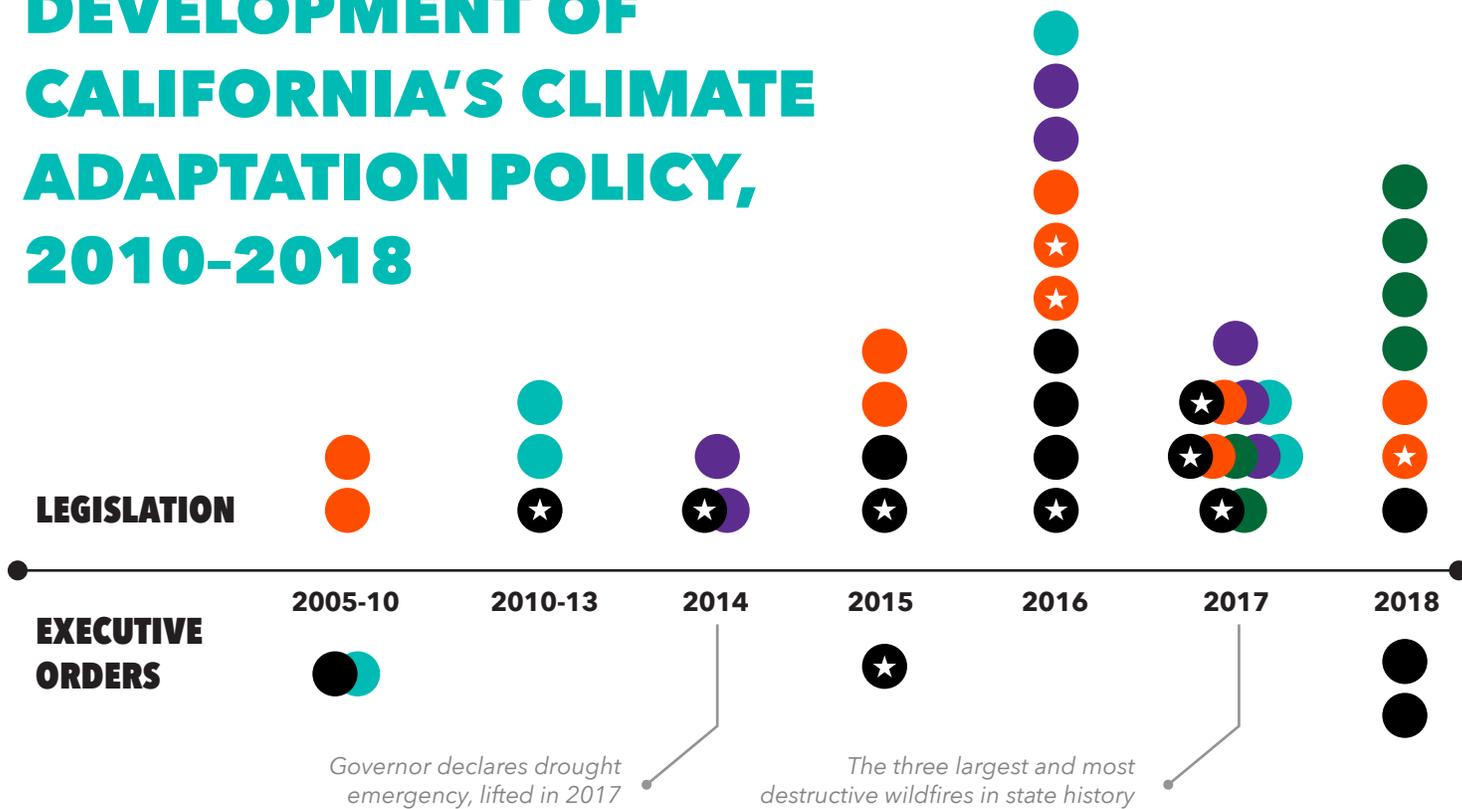


FIGURE 1. Summary of state legislation and Executive Orders related to climate adaptation and resilience, 2005-2018. See key for color-coding and text below for abbreviated summaries.

- KEY**
- Overarching Governance, Strategy, & Funding (includes infrastructure, insurance, & biodiversity)
 - Lands & Community Planning
 - Forests & Fire (including urban greening)
 - Water & Watersheds
 - Coasts & Oceans
 - ★ Disadvantaged and/or Vulnerable Communities

2018

- **SB 30 (Lara)** - Requires the Insurance Commissioner to convene a working group to identify, assess, and recommend risk transfer market mechanisms that (a) incentivize investments in natural infrastructure to reduce the risks of catastrophic events related to climate change and risks to communities and (b) reduce exposure of insurance companies by rewarding actions that improve public safety or reduce property or environmental losses.
- **EO B-54-18** - Orders the Secretaries of Food and Agriculture and Natural Resources to implement the first ever *California Biodiversity Initiative*. The rationale includes that “the new reality of climate change requires a more thoughtful and systematic approach...” The initiative’s goals include improving understanding of current and future threats and advancing management and restoration of natural and working lands and waterways.
- **EO B-55-18** - Sets a statewide goal to achieve carbon neutrality no later than 2045 and maintain negative emissions thereafter, specifying that all policies and programs undertaken for this purpose shall be “implemented in a manner that supports climate adaptation and biodiversity, including protection of the state’s water supply, water quality, and native plants and animals.”

- **SB 1072 (Leyva)** - Charges Strategic Growth Council (SGC) with establishing a regional climate collaborative program to give under-resourced communities access to statewide public and other grant monies. Regional collaboratives provide capacity building, convene stakeholders, and develop community and project plans, including climate action plans.
- ★ **SB 1035 (Jackson)** - Requires planning agencies to review and revise the safety element of general plans upon each revision of the housing element or local hazard mitigation plan at least once every eight years. The purpose is to identify new information related to flood, fire, and climate adaptation and resiliency strategies not available during the previous revision to the safety element.
- **SB 901 (DodD)** - Provides for \$200m annually through FY 2023/24 from the Greenhouse Gas Reduction Fund (GGRF) to CAL FIRE for forest health, fire prevention, and fuel reduction. Requires, starting in January 2019, landowners of state-purchased conservation easements covering forested lands to maintain and improve forest health to provide resilient long-term carbon sequestration. Requires CAL FIRE to create a *Wildfire Resilience Program* to assist nonindustrial timberland owners with wildfire resilience efforts through technical and permitting assistance. Establishes the *Commission on Catastrophic Wildfire Cost and Recovery* within OPR to assess issues related to catastrophic wildfire. Includes many additional provisions related to improving fire resilience and utility operators.
- **SB 1260 (Jackson)** - Gives the State Board on Forestry and Fire Prevention greater authority for oversight of the safety element of general plans. Includes several measures to make it easier to conduct prescribed burning. Imposes new duties on local general agencies in their decisions that affect fire risks to people and property.
- **AB 1956 (Limón)** - Requires CAL FIRE to establish a local assistance program to support public education and outreach, fire prevention activities, technical assistance to local communities, and grants for these purposes.
- **EO B-52-18** - Charges CAL FIRE to lead implementation of the *Forest Carbon Plan*, identifies specific actions to improve forest management and restoration, reduce barriers to prescribed burning and other management tools, improve outreach to landowners, and advance wood products innovation.

2017

- ★ **AB 398 (Garcia)** - Extends the Cap-and-Trade program to 2031. Also, lists specific priorities for GGRF expenditures, including “healthy forests and urban greening” and “climate adaptation and resiliency” as two of seven identified priority areas. Also established the Compliance Offsets Protocol Task Force to provide guidance in approving new offset protocols that increase direct environmental benefits in the state while prioritizing disadvantaged communities, Native American or tribal lands, rural and agricultural regions. Also suspends the fire prevention fee charged on habitable structures within a “state responsibility area” and replaces the funds with allowance revenue.
- **AB 109 (Ting)** - Appropriates GGRF funds including: \$305m for healthy forests and fire protection; \$105m for adaptation in natural lands and coastal regions (\$26m), urban greening (\$26m), urban forestry (\$20m), and wetland restoration (\$15m); and \$10m for the Transformative Communities Program. Also appropriates \$11m for research grants related to climate change, clean energy and adaptation - and serves as the basis for establishing the *Climate Change Research Program* at SGC to drive research that will directly support achieving the state’s climate change goals.
- ★ **SB 5 (De León)** - Places the California Drought, Water, Parks, Climate, Coastal Protection and Outdoor Access for All Act on the ballot, enacted by voters as Proposition 68 in 2018. Authorizes issuance of \$4b in bonds approved by the voters through Proposition 68. Includes funding for improving the climate resilience of natural systems; water supply and water quality benefits; and investments in several areas to benefit disadvantaged communities.
- **SB 667** - (Atkins) authorizes the Department of Water Resources (DWR) to establish the *Urban Streams Restoration Program* to provide technical and financial assistance to local agencies and organizations to implement watershed-based riverine and riparian stewardship improvements that will achieve climate and other benefits.

2016

- **AB 2800 (Quirk)** - Requires all state agencies to take into account current and future climate change impacts in developing, operating, and investing in state infrastructure. Requires the California Natural Resources Agency (CNRA) to convene the *Climate-Safe Infrastructure Working Group* to develop recommendations for the Legislature and SGC on how to integrate scientific data into state infrastructure engineering by July 1, 2018. Includes a sunset date of July 1, 2020 unless amended by that date.
- **AB 197 (Garcia)** - Creates the Joint Legislative Committee on Climate Change Policies to establish facts and make recommendations to the Legislature concerning the state's programs, policies, and investments related to climate change.
- **AB 1550 (Gomez)** - Requires the AB 32 *Investment Plan* to allocate at least 25% of available funding to projects located within and benefiting individuals living in disadvantaged communities, and additional 5% to projects that benefit low-income households or are located within low-income communities, and 5% to projects that either benefit low-income households outside of, but within half a mile of disadvantaged communities, or individuals living in low-income communities outside of, but within half a mile of disadvantaged communities.
- **SB 1386 (Wolk)** - Declares as state policy that the protection and management of natural and working lands is an important strategy in meeting the state's Greenhouse Gas (GHG) reduction goals. Requires all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria related to protecting and managing natural and working lands. Includes definitions of natural and working lands.
- **AB 2722 (Burke)** - Creates the *Transformative Communities Program* to be administered by the SGC, and requires the SGC to award competitive grants to specified eligible entities for neighborhood-level plans that include projects to reduce GHG emissions and provide economic, environmental, and health benefits to disadvantaged communities.
- **SB 1000 (Leyva)** - Adds to the required elements of the general plan an environmental justice element - or related goals, policies and objectives.
- **AB 2087 (Levine)** - Creates the *Regional Conservation Investment Strategies Program* of the Department of Fish and Wildlife to encourage the development of regional, science-based, and voluntary conservation initiatives, focused on species and habitats, to promote wildlife resiliency to climate change and other threats.
- **AB 2480 (Bloom)** - Declares that it is state policy to recognize watersheds as integral components of California's water infrastructure for maintaining environmental, drinking, and agricultural water supplies as the climate changes. Specifies that the repair and maintenance of source watersheds through conservation and forest restoration are eligible for the same forms of financing as other water collection and treatment infrastructure.
- **AB 2139 (Williams)** - Authorizes the Ocean Protection Council (OPC) to develop an ocean acidification and hypoxia science task force and to adopt recommendations for further actions to address these threats.
- **SB 1363 (Monning)** - Requires OPC to establish and administer an *Ocean Acidification and Hypoxia Reduction Program* in consultation with the State Coastal Conservancy, and authorizes expenditures for grants or loans that further public purposes consistent with that program.

2015

- **SB 246 (Wieckowski)** - Expands the role of OPR to include establishing an *Integrated Climate Adaptation and Resilience Program* to coordinate local and regional efforts with state strategies; assisting in updating the *Adaptation Planning Guide*; coordinating and maintaining a *State Clearinghouse*; and establishing a multi-disciplinary *Advisory Council*. Instructs the Integrate Climate Adaption and Resilience Program to emphasize climate equity consideration to the extent feasible.

- **AB 1482 (Gordon)** – Codifies the Natural Resources Agency’s (CNRA) leadership role in developing and regularly updating (3 years) the state adaptation strategy. Assigns responsibility to SGC for reviewing state agency activities and funding related to adaptation and mitigation and for reviewing/commenting on the 5-year infrastructure plan and *Governor’s Environmental Goals and Policy Report*.
- **B-30-15** – Directs CNRA to update the state climate adaptation strategy every three years and to ensure that it is implemented. Directs state agencies to consider climate change in their planning and investment decisions, giving priority to actions that both build climate preparedness and reduce GHG emissions, incorporate flexible adaptive approaches, protect the state’s most vulnerable populations, and prioritize natural infrastructure. Directs OPR to establish a technical advisory group to help state agencies “incorporate climate change impacts into planning and investment decisions,” and requires accounting for climate change in state infrastructure in the state 5-year plan.
- ★
- **SB 379 (Jackson)** – Amends the Planning and Zoning Law to require local governments to review and update the safety elements of their general plans to address climate adaptation and resiliency upon the next revision of local hazard mitigation plan.
- **AB 498 (Levine)** – Articulates a state policy and encourages voluntary actions to protect the functioning of wildlife corridors and habitat strongholds to enhance wildlife and habitats resiliency under climate change.

2014

- **AB 1471 (Rendon)** – Places on the statewide ballot the Water Quality, Supply, and Infrastructure Improvement Act of 2014 approved by voters as Proposition 1. Authorizes issuance of \$7.12b of bonds.
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- ★ Includes (a) directing funding towards meeting the water resource and infrastructure needs of disadvantaged, rural, and small communities and (b) protecting watershed, rivers, lakes, streams, and coastal waters (with some funding targeted towards benefitting disadvantaged communities).
- **Sustainable Groundwater Management Act (SGMA)** – Consolidated three bills including AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley). Requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge within 20 years of implementation of basin-specific sustainability plans. Empowers local agencies to form Groundwater Sustainability Agencies to adopt Groundwater Sustainability Plans and to manage basins sustainably. AB 1739 notes the importance of groundwater for protecting communities, farms and the environment as the climate changes, and how climate change is intensifying the need to sustainably manage groundwater resources.

2010 - 2013

- **AB 691 (Muratsuchi, 2013)** – Requires local trustees of public trust lands (tidelands and submerged lands) with revenues in excess of \$250,000 to submit an assessment of how they propose to address sea-level rise to the State Lands Commission for public access and dissemination.
- **AB 1532 (Pérez, 2012)** – Specifies, as one of 6 complementary investment goals, the use of GGRF to achieve emissions reductions and “where applicable and to the extent feasible” target investments toward the most disadvantaged communities and households in the state.
- ★
- **AB 2139 (Lieu, 2012)** – Authorizes the State Coastal Conservancy to address the impacts and potential impacts of climate change on resources within its jurisdiction and to award grants for this purpose to public agencies and organizations, giving priority to projects that maximize public benefits.

Prior to 2010

- **EO-S-13-08** – Assigns leadership for developing the state climate adaptation strategy to the Secretary of CNRA and directs the Secretary to coordinate it with the state’s mitigation strategy. Also initiates the National Academy of Sciences study on sea level rise.
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- **SB 732 (Steinberg, 2008)** – Establishes the SGC as a cabinet-level council to coordinate state activities related to: improving air and water quality; protecting natural resource and agriculture lands; increasing the availability of affordable housing; improving the infrastructure systems; promoting public health; and assisting state and local entities in the planning of sustainable communities and meeting AB 32 goals. Allocates \$90M of Prop 84 funds for SGC to award in planning grants related to sustainable communities.
- **SB 375 (Steinberg, 2008)** – California’s Sustainable Communities and Climate Protection Act seeks to achieve GHG emission reduction targets set by AB 32 through providing incentives for regional planning. It establishes a collaborative process involving metropolitan planning organizations (MPOs) and the Air Resources Board (ARB). Each MPO is required to include a “Sustainable Communities Strategy” in its regional transportation plan.

AB 32 (Nuñez, 2006) – The California Global Warming Solutions Act of 2006 requires the ARB to adopt a statewide GHG emissions limit and rules and regulations for reducing, reporting, and verifying emissions. Authorizes adoption of a market-based compliance mechanism and collection of fees from regulated sources of GHG emissions.
- **EO S-3-05** – Sets state targets for GHG reductions. Charged the Secretary of Environmental Protection (CalEPA) with reporting biannually to the Governor and the Legislature on the impacts of global warming and with preparing a report on mitigation and adaptation plans to combat these impacts. To assist in these tasks, CalEPA established the Climate Action Team (CAT), which draws its membership from the leadership of 20 state entities. CAT sector-specific working groups developed elements of the three state adaptation strategies and have continued to play a coordinating role across state agencies, especially related to oceans/coasts and forests.