

Introduction¹

Climate change is happening now, and is expected to accelerate in the years ahead. California's economy, infrastructure, public health and natural systems will be significantly impacted by extreme storm events, flooding, wildfire, heat waves, loss of water supply, air quality degradation and sea level rise. We are facing a historic governing challenge from climate change. A \$2 trillion annual economy and the needs of nearly 40 million residents ride on the outcome of the state's preparations and response.

California is already enacting an initial set of measures intended to prevent, prepare for, and adapt to climate change. While these efforts are an encouraging and positive sign, the measures are spread across a variety of sectors and agencies, and encompass a wide range of initial strategies. Reducing our risks and increasing our resiliency to the changes ahead will require a new and unprecedented degree of collaborative action throughout California. We must begin now to encourage this level of cooperation, starting with a shared set of goals and principles that allow us to balance economic, social and environmental needs as we seek to align state, regional and local governments, and bring them together with community organizations, businesses and other key stakeholders for the benefit of all Californians.

Principles of Adaptation

Work Within the Appropriate Scale and With Meaningful Partners

- 1. Focus on the Regional Level**^{i, ii, iii}
Communities are already bound together at a regional scale by shared geography and mutual reliance on certain resources. Additionally, local and regional adaptation efforts are more likely to have common goals, and be more nimble in application than efforts across broader, less connected geographic areas. For these reasons communities should work together inter-regionally on adaptation. All of these efforts should be in coordination with state and federal agencies active in this area to preserve resources, avoid duplication, and align with existing jurisdictional authority (MPOs, COGs, Water Districts, IRWMPs, AQMDs, etc.).
- 2. Consider Health, Safety, and Equity of all Californians**^{iv, v, vi}
Adapting to climate change is fundamentally about protecting people and the communities and resources we rely upon. Actions to increase resiliency and reduce risk must prioritize the health and safety of all Californians, especially our most vulnerable, by devising solutions that simultaneously encourage economic growth, improve environmental quality, and increase opportunity for all.
- 3. Empower Collaboration Across All Sectors and Levels of Leadership**^{vii, viii, ix}
Empower action by establishing and/or expanding traditional and non-traditional alliances and networks to accelerate effective and durable problem-solving (e.g., between/among public and private resource managers, scientists, decision-makers); share knowledge openly and actively; regularly engage the public on the science as well as solutions; and build capacity for local community action. This includes

¹ The introductory text and principles are adapted from concepts, and language utilized in a number of key adaptation related resources and reports; The 2014 [Safeguarding California Plan](#), the 2014 Little Hoover Commission [Report on Climate Change Adaptation](#), National Wildlife Federation's [Climate Smart Principles](#) as framed by Point Blue Conservation Science, the [Ahwahnee Principles for Climate Change](#), the California Adaptation Forum [Action Framework](#), [2014 California Economic Summit](#), [Resilient Rhode Island Act of 2014](#) (2592), the 2014 [New York Community Risk and Resiliency Act](#), and content taken from ARCCA's various comment letters to state agencies

developing peer-to-peer horizontal linkages and vertical linkages across levels of leadership and related geographic areas to ensure economies of scale and consistency of effort.

4. **Provide Consistency at the State Level**^{x,xi}

The State of California should provide access to the best-available climate science, standardized sources of climate change information, and sophisticated risk assessment tools which help local governments, regional agencies and other climate practitioners take climate action to prepare for the impacts of climate change and make their communities more resilient to its effects.

Employ Key Strategies

5. **Utilize Existing Policy Mechanisms**^{xii, xiii, xiv}

In order to minimize disruptions and maximize existing institutional capacities in the face of change and uncertainty, adaptation should be integrated throughout existing local, regional and state plans, policies and decision-making, rather than creating new stand-alone policies.

6. **Prioritize Multiple Benefits**^{xv, xvi, xvii, xviii, xix, xx, xxi, xxii}

Because adapting to climate change will require significant resource investments, great changes to the status quo, and engagement of people from all sectors of society, it is important to prioritize those actions that yield the greatest collective benefits. For example; adopt landscape or watershed scale analyses; focus on natural system function and services; establish a preference for green or nature-based responses to the maximum extent feasible; evaluate changes in carbon stocks and give preference to actions that also help reduce the source of climate change – GHG emissions.

7. **Employ Forward-Looking, Adaptive Management Approaches**^{xxiii, xxiv, xxv, xxvi, xxvii}

In order to realize timely, effective responses to continual change in climate, ecology and economics, as well as the evolution of our understanding due to new research and data, employ an adaptive management framework with regular monitoring and reassessments with a meaningful time horizon, at least up to 2050.

8. **Invest In Resiliency**^{xxviii, xxix, xxx, xxxi, xxxii, xxxiii, xxxiv}

Public dollars, as well as private, should be prioritized to invest in developing state, regional and local policies and projects that reduce our risks and increase our resiliency. Mitigating our GHG emissions and preparing for the impacts of climate change through targeted and smart investments can give California a competitive advantage over other states that are ill-prepared to deal with climate change and its effects.

ⁱ ARCCA Comments on EGPR: ARCCA believes strongly that regions are a critically important unit of action for environmental protection generally, and for climate change adaptation in particular. With that in mind, this report should more fully recognize the need for regional solutions upfront - especially in light of the state's existing commitment to realizing regional climate mitigation goals through SB375 and the Sustainable Community Strategies (SCS). Alongside this, the report should posit how its recommendations will flow downward into actual planning requirements and policy actions. There is a great need to better align policies across various agencies and their agendas. In support of a vision for alignment and regionalism, the state might consider developing parallel and integrated legislation to AB 32 and SB375 that provides clear direction on addressing adaptation at the state and regional level. For truly effective responses, regional stakeholders need a consistent regional framework in which to develop their response plans. Since the mandated SCS process addresses one aspect of mitigation at a regional scale, it makes sense to expand this framework replicate it to address adaptation.

ⁱⁱ LHC: Adapting effectively to climate impacts will require the public sector to reach comprehensive solutions, often at the regional level, to minimize individual, reflexive fixes that waste money and make problems worse

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- ⁱⁱⁱ Ahwahnee: Each region should develop and adopt, with its cities and counties, a blueprint for growth that achieves regional GHG emissions reduction targets.
- ^{iv} Safeguarding California Core Strategies 2 & 6: Provide risk reduction measures for California’s most vulnerable populations & Prioritize climate risk communication, education, and outreach efforts to build understanding among all Californians.
- ^v 2014 California Economic Summit: These commitments reaffirmed the Summit’s emphasis on the triple bottom line—simultaneously encouraging economic growth, improving environmental quality, and increasing opportunity for all
- ^{vi} Ahwahnee: Climate Action Plans should be developed through an open process that includes diverse members of the community and public health professionals.
- ^{vii} Safeguarding California Core Strategy 7: Promote collaborative and iterative processes for crafting and refining climate risk management strategies.
- ^{viii} CAF: Taking action will require partnerships at all levels, integrated across all sectors of our state.
- ^{ix} CSP: identify activities that meet goals of multiple sectors like water and energy or forests and biodiversity; establish and expand non-traditional alliances to accelerate effective problem solving (e.g., between/among public & private resource managers, scientists, decision-makers); share knowledge, communicate openly, convey hope; engage local communities, e.g., youth, to instill Climate-Smart planning ethic for long term success.
- ^x Safeguarding California Core Strategies 1 & 4 & 7: All core functions of government must make the risks Californians face from a changing climate an integral part of their activities & Promote collaborative and iterative processes for crafting and refining climate risk management strategies & Promote collaborative and iterative processes for crafting and refining climate risk management strategies
- ^{xi} LHC: Local government leaders understand they are vulnerable to climate impacts, but lack more specific risk assessment capacity that would help guide planning and decision-making.
- ^{xii} Safeguarding California Core Strategy 1: All core functions of government must make the risks Californians face from a changing climate an integral part of their activities
- ^{xiii} Summary of RI Bill *(2592): This bill integrates climate change adaptation planning into existing plans (including Hazard Mitigation Plans) and utilizes the powers of existing government institutions to respond to climate change.
- ^{xiv} Ahwahnee: Implementation Principles and Regional Principles reference specific alignment with existing mechanisms.
- ^{xv} Safeguarding California Core Strategy 5: Maximize returns on investments by prioritizing projects that produce multiple benefits and promote sustainable stewardship of California’s resources
- ^{xvi} ARCCA: Adaptation policies should strive to accomplish multiple benefits, including but not limited to ensuring responsible investment of public dollars, saving Californians money, improving public health and social equity, and reducing greenhouse gas emissions
- ^{xvii} CAF: To achieve success, we need to design our actions to work on multiple scales and to realize multiple benefits (not just single needs or single processes, e.g., carbon storage). This includes combining adaptation with mitigation activities to optimize the co-benefits
- ^{xviii} ARCCA AHSC Comments: Maximize opportunities to take actions that have dual-benefits of increasing community resilience and reducing greenhouse gas emissions.
- ^{xix} Safeguarding California Core Strategy 5: Maximize returns on investments by prioritizing projects that produce multiple benefits and promote sustainable stewardship of California’s resources
- ^{xx} ARCCA We value the use of nature-based and green infrastructure adaptation actions
- ^{xxi} CAF: We believe that healthy ecosystems are essential to the success of adaptation efforts, community vitality and prosperity in general. We agree to pursue both protection and valuation of ecosystem services, from fresh water and clean air to climate regulation and recreation, in our response efforts.

^{xxii} Safeguarding California Core Strategies 3 & 5: Identify significant and sustainable funding sources for investments that reduce climate risks, human loss, and disaster spending & Maximize returns on investments by prioritizing projects that produce multiple benefits and promote sustainable stewardship of California’s resources

^{xxiii} CAF: We recognize that uncertainty is a factor and climate change adaptation is an iterative process that should be informed on an ongoing basis. We will utilize the best available science and look across multiple plausible scenarios to define measures and indicators that are adaptive and flexible. We will regularly monitor, reassess and apply learning from what works and what doesn’t to improve outcomes in a rapidly changing world.

^{xxiv} Safeguarding California Core Strategies 4 & 7: Support continued climate research and data tools to inform policy and risk reduction activities & Promote collaborative and iterative processes for crafting and refining climate risk management strategies.

^{xxv} CAF: Anticipating climate change risks and impacts should be institutionalized as standard practice for both the public and private sectors.

^{xxvi} ARCCA Comments on State Research Plan: From our perspective - working with local and regional stakeholders who are trying to respond to climate change in real-time – the greatest value of climate research is to inform effective decision-making in the face of great uncertainty. Many of our stakeholders recognize that climate change is upending our ability to utilize the past to plan for the future, and they further acknowledge the limits of research to provide absolute answers. In such a context, the major priorities of the CCCRP are well focused on building basic understanding of what is occurring, while also facilitating our ability to analyze options for action. We are particularly supportive of research on decision-support, forecasting and scenario planning, and vulnerability assessments. Additionally, market transformation or diffusion of innovation research examined at scale is valuable to regional actors.

^{xxvii} LHC: What works today for locating infrastructure and permanent buildings will not work tomorrow when a rising ocean is eroding not just shorelines, but the entire notion of permanent landscapes. Governments accustomed to meeting single targets of carbon reduction by specific percentages will surely struggle with the more difficult, multiple targets of climate adaptation. They also will struggle with the politics of investing today’s tax dollars to protect tomorrow’s residents from climate impacts.

^{xxviii} Safeguarding California Core Strategies 1 & 3: All core functions of government must make the risks Californians face from a changing climate an integral part of their activities & Identify significant and sustainable funding sources for investments that reduce climate risks, human loss, and disaster spending.

^{xxix} CSP: Plan ahead to reduce risk from extreme events - Decision makers should avoid approving new projects or development in areas that would be at increased risk from climate change impacts, especially from extreme events like flood, wildfire, and sea level rise.

^{xxx} ARCCA: Public infrastructure investments should be “climate-ready” by accounting for projected climate change

^{xxxi} ARCCA AHSC Comments: Require assessment of climate-related risks and vulnerabilities as part of all AHSC investments

^{xxxii} ARCCA Comments on EGPR: As we look to the future, risks from climate change will become increasingly prevalent; therefore, consideration of these risks needs to be a mainstream practice in new policy and project development across California. Alongside this risk consideration will come a need to bring relevant voices to the table to evaluate those risks because they vary considerably by region.

^{xxxiii} Summary of New York Bill (6617): Importantly, it requires the Department of State (DOS) to work with the Department of Environmental Conservation (DEC) to develop resiliency guidance that utilizes natural resources and natural processes to reduce risk

^{xxxiv} LHC: It is hard to overstate how much is at stake for getting climate adaptation right in California. The state’s economy is highly globalized, dependent on complex supply chains and logistics that are at potential risk of being destabilized by sea level rise, flooding and other impacts.