Climate Change and Historic Resources: Protection, Adaptation, and Abandonment

THE 40TH ANNUAL CALIFORNIA PRESERVATION CONFERENCE
San Diego Naval Training Center at Liberty Station
Brief Overview of California Climate Change Policy

Figure 1. California Historical & Projected July Temperature Increase 1961-2099

Source: Dan Cayan et al. 2009.
A Legacy of Environmental Leadership
One of the first environmental laws in the United States was passed in 1884 after California gold seekers water-blasted entire mountains searching for gold.
1892 Sierra Club Founded
The actions of turn-of-the-century citizens and lawmakers to preserve islands of California's most valuable lands for future generations put the Golden State in the forefront of the preservation movement. Unlike national parks, state parks, such as Big Basin and Humboldt Redwoods, did not need to be proven economically useless to any mining, timber, or grazing interests before being granted park status.
California’s first modern pollution law came into effect shortly after World War II.

In the summer of 1943, the first major episode of smog had occurred in Los Angeles. Visibility was reduced to three blocks and people suffered from burning eyes, respiratory discomfort, nausea, and vomiting. The phenomenon is termed a "gas attack" and blamed on a nearby chemical plant, but the situation did not improve when the plant is shut down.

On June 10, 1947, California Governor Earl Warren signs into law the Air Pollution Control Act, authorizing the creation of an Air Pollution Control District in every county of the state. The Los Angeles County Air Pollution Control District was established, the first of its kind in the nation.

The photo on the right shows a man selling fresh clean desert air for 50 cents a balloonfull in front of Loew’s State Theatre in Los Angeles, Oct. 22, 1954

It wasn’t until 1955 that the Federal Air Pollution Control Act was enacted.
Same year:

Select Committee on Environmental Quality created, published “Environmental Bill of Rights” containing 34 recommendations to preserve and enhance the quality of California’s environment.

AB2070 Established the State Office of Planning and Research and mandated the preparation of the "Statewide Environmental Goals and Policy Report.”
"Climate Change" first surfaces as a policy issue when the legislature passed AB 4420. This bill was introduced by Assemblyman Byron Sher and called for the formation of an inventory of Greenhouse Gas (GHG) emissions from all sources in California.

Also tied to the bill was an assessment of how global warming might affect the state’s energy supply and demand, as well as environment, economy, and agriculture and water supply.

The resulting 1991 report by the California Energy Commission helped move the climate change issue into public discussion.
The state’s climate change planning efforts moved to another level around the turn of the century. In 1998, Senator Byron Sher introduced legislation that would require the CEC to establish an inventory of GHG emissions in California; to provide information to state, regional as well as local agencies on the cost–effective and technically feasible methods for reducing emissions; and to form an interagency task force that would make sure that the policies affecting climate change would be coordinated at the state level. The bill was vetoed by Governor Wilson.

2000: Senator Sher got a subsequent bill, SB 1771 passed which established a public benefit nonprofit corporation, the California Climate Action Registry, to record and register voluntary GHG emission reductions.

The non-profit agency enables public and private entities throughout the state to voluntarily record their emissions and has played a key role in standardizing emissions reporting protocols. Such standardization is essential to future implementation of any market-based emissions trading framework.
California’s focus was on collecting "climate change" data and developing recommendations (and not on regulation) until the enactment of Assembly Bill 1493 which required the Air Resources Board to adopt regulations to reduce GHG emissions by new motor vehicles sold in California.

Sher’s bill, which was widely seen as a way around the federal government’s long-time refusal to raise mileage standards for cars and light trucks, came under attack from General Motors and the California Chamber of Commerce, who argued that it was the in fact regulation of the fuel economy, which is preempted by the federal law.

Sixteen other states then announced that they would implement the California standard. To enter into effect, this regulatory measure required a waiver from the US Environmental Protection Agency (EPA). The Bush Administration stalled this request and eventually declined it in late 2007. However, the state litigated the Bush decision, and standards similar to California’s were eventually endorsed by the Obama administration.
Later in the year the California legislature passes SB 1078, once again introduced by Senator Sher, which requires California to generate 20% of its electricity from renewable energy no later than 2017. No other state had this strict of policy.
Governor Schwarzenegger unveil his climate change policy plan in San Francisco on June 1, 2005, at the and 50th anniversary of the founding of the United Nations.
The governor signed an Executive Order that set ambitious emissions reduction targets that went far beyond the Kyoto Protocol goal (for the US, 7 per cent below 1990 levels by 2008–2012)

The California targets heralded a new generation of climate change planning in the US, stemming from international acknowledgement that far greater GHG reductions were necessary in order to avoid dangerous climate change.
The Executive Order also called for the California Environmental Protection Agency (CalEPA) to prepare biennial science reports on the potential impact of continued global warming on certain sectors of the California economy.

The First Climate Change Assessment, released in 2006, looked at the potential impacts of climate change on key state resources such as the water supply, public health, agriculture, coastal areas, forestry, and electricity production and demand.
The assessment influenced the passage of Assembly Bill 32, the California Global Warming Solutions Act of 2006.

The Chamber of Commerce and the Western State’s Petroleum Association argued that global warming is not a local problem and should only be regulated by the federal government.

The supporters of AB 32 argued that as the 12th largest source of GHG emissions in the world, California had the responsibility to act, and that by acting now, California could become a leader in the emerging global market for GHG control technologies, thus leading to economic growth within the state.

On September 27, 2006 AB 32 was signed into law by Governor Schwarzenegger.
By enacting SB 97 in 2007, California’s lawmakers expressly recognized the need to analyze greenhouse gas emissions as a part of the CEQA process.

CEQA Guidelines amendments clarified several points, including the following:

Lead agencies must analyze the greenhouse gas emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions.

When a project’s greenhouse gas emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.

Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors.

The 2009 CAS was the first of its kind to use downscaled climate models to more accurately assess statewide climate impacts as a basis for actions that prepare, prevent, and respond to the effects of climate change.
Climate Adaptation Strategy (cont.)

Strategy 1: Establish State Policy to Avoid Future Hazards and Protect Critical Habitat.
“vulnerable shoreline areas [that have] regionally significant economic, cultural, or social value may have to be protected, and in-fill development in these areas should be closely scrutinized.”

Strategy 2: Provide Statewide Guidance for Protecting Existing Critical Ecosystems, Existing Coastal Development, and Future Investments
“Will the protection approach, retrofit, or new design protect structures of high cultural or social value?”

The 2009 Climate Adaptation Strategy (CAS) looks at seven sectors:

Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy.

While cultural resources don’t fit comfortably in any one of those sectors, the report is not completely silent on our issues, as you can see from these excerpts.
2008  SB 375 (Darrell Steinberg)
Sustainable Communities & Climate Protection Act of 2008

- Supports climate action goals through coordinated transportation and land use planning
- Provides CEQA relief for projects that are consistent with a region’s “Sustainable Communities Strategy”

Darrell Steinberg
The **Second Climate Change Assessment**, released in 2009, attempted to provide initial estimates of the economic impacts of climate change. It concluded that adaptation - as a complementary approach to mitigation - could substantially reduce economic impacts of loss and damage from a changing climate.

The **Third Climate Change Assessment**, released in 2012, was shaped by the request for more information on vulnerability and adaptation options discussed in the 2009 California Adaptation Strategy.

Scoping for the 4th **California climate change assessment** is currently underway. The 4th assessment will seek to fill gaps about climate vulnerabilities, including critical information on climate impacts from extreme weather events.

A recent study by the U.S. Geological Survey shows that a single extreme winter storm in California could cost on the order of $725 billion, with total direct property losses of nearly $400 billion.
2014 Adaptation Strategy Report

“Communities, public and private property, infrastructure, natural habitats (including wetlands and marshes), coastal agriculture, and important cultural resources will be at increased risk from storm surges and flooding, permanent inundation and erosion.”

The Safeguarding California Plan, which updates the 2009 California Climate Adaptation Strategy, provides policy guidance for state decision makers, and is part of continuing efforts to reduce impacts and prepare for climate risks.

“Reducing climate risks protect California’s people, economy, and natural resources. Investing in action now saves lives and provides long term cost savings; one study found that every dollar spent on a FEMA hazard mitigation grant produced, on average, four dollars of benefits. Implementation of this Safeguarding California Plan will help foster a vibrant and sustainable future for California.”

1. Establish a mandate and guidelines for all state agencies to consider climate risks in their policies, planning efforts, and investments
2. Provide data, tools, and guidance to support efforts to reduce climate risks
3. Build the capacity to plan for and implement actions to reduce climate risk through collaboration, education, outreach and funding.

Nine broad areas impacted by climate change:

1) Agriculture
2) Biodiversity and Habitat
3) Emergency Management
4) Energy
5) Forestry
6) Ocean and Coastal Ecosystems and Resources
7) Public Health
8) Transportation
9) Water
California Adaptation Planning Guides

California Climate Adaptation Planning Guide provides guidance to support regional and local communities in proactively addressing the unavoidable consequences of climate change.

The APG provides a step-by-step process for local and regional climate vulnerability assessment and adaptation strategy development. Usage of the APG is meant to allow for flexibility in the commitment of time, money, and effort to suit the needs of the community. The APG consists of the Planning Guide overview document and three companion documents:

- **Planning for Adaptive Communities**—presents the basis for climate change adaptation planning and introduces a step-by-step process for local and regional climate vulnerability assessment and adaptation strategy development.

- **Defining Local and Regional Impacts**—provides a more in-depth understanding of how climate change can affect a community.

- **Understanding Regional Characteristics**—identifies climate impact regions, including their environmental and socioeconomic characteristics.

- **Identifying Adaptation Strategies**—explores potential adaptation strategies that communities can use to meet adaptation varying needs. Adaptation strategies are categorized into the same impact sectors used in the APG.
The State Hazard Mitigation Plan has integrated climate risks since 2007. The 2013 plan states that “In the SHMP, climate change is treated as a condition that will change and potentially exacerbate the impact of other hazards rather than being treated as a distinct hazard with unique impacts.”
At the close of his 4th Inaugural address in January, Governor Brown stated:

California has the most far-reaching environmental laws of any state and the most integrated policy to deal with climate change of any political jurisdiction in the Western Hemisphere. Under laws that you have enacted, we are on track to meet our 2020 goal of one-third of our electricity from renewable energy. We lead the nation in energy efficiency, cleaner cars and energy storage. Recently, both the Secretary-General of the United Nations and the President of the World Bank made clear that properly pricing carbon is a key strategy. California’s cap-and-trade system fashioned under AB 32 is doing just that and showing how the market itself can generate the innovations we need. Beyond this, California is forging agreements with other states and nations so that we do not stand alone in advancing these climate objectives.

These efforts, impressive though they are, are not enough. The United Nations’ Intergovernmental Panel on Climate Change, backed up by the vast majority of the world’s scientists, has set an ambitious goal of limiting warming to 2 degrees Celsius by the year 2050 through drastic reductions of greenhouse gases. If we have any chance at all of achieving that, California, as it does in many areas, must show the way. We must demonstrate that reducing carbon is compatible with an abundant economy and human well-being. So far, we have been able to do that.

In fact, we are well on our way to meeting our AB 32 goal of reducing carbon pollution and limiting the emissions of heat-trapping gases to 431 million tons by 2020.
During his fourth inaugural address, California Governor Jerry Brown announced an ambitious new plan to address the impacts of climate change in California over the next 15 years.

“It is time to establish our next set of objectives for 2030 and beyond. Toward that end, I propose three ambitious goals to be accomplished within the next 15 years:

- Increase from one-third to 50 percent our electricity derived from renewable sources;
- Reduce today’s petroleum use in cars and trucks by up to 50 percent;
- Double the efficiency of existing buildings and make heating fuels cleaner.

The legislative proposal to implement Governor Brown’s ambitious new plan was recently released by California Senate President Pro Tempore Kevin de Leon. As part of a four bill package entitled “California Climate Leadership—Powering the New Economy,” Senator de Leon and his colleagues in the Senate have compiled a suite of proposals which, if enacted, would continue California on a pioneering path to nationwide climate leadership.
By 2030, Senate Bill 350 calls for:

50% reduction in petroleum use in cars and trucks
50% increase in energy efficiency in buildings
50% of state utilities’ power coming from renewable energy.

With respect to energy efficiency in buildings, SB 350 proposes to meet Governor Brown’s goal of doubling the energy efficiency of existing buildings through the use of existing energy efficiency retrofit funding and regulatory tools.

SB 350 would require the CA Energy Commission to update energy efficiency programs by January 1, 2017 in order to double energy efficiency in buildings by January 1, 2030.
2015  SB 32 (Fran Pavley)

Amends California Global Warming Solutions Act of 2006

- require 80% reduction in GHG emissions from 1990 levels by 2050 and permit new interim GHG targets by 2030 and 2040.

Senate Bill 32 (SB 32) would amend part of AB 32 to require the State Air Resources Board to approve a statewide greenhouse gas emissions limits 80% below California’s 1990 levels by the year 2050. SB 32 would also permit the state board to approve new interim greenhouse gas emissions level targets to be achieved by 2030 and 2040.
Finally, there is a new Parks Bond in the works that includes Climate Change-related funding.

$100 million is proposed for the Strategic Growth Council for grants that can be used to develop or implement a regional or local climate adaptation plan, or update or develop a climate adaptation element for a general plan.

It also funds projects that improve the climate resilience of urban areas and natural resources and improve the ability of natural systems to buffer the impacts of climate change.
The executive order also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the state's Five-Year Infrastructure Plan;

- Update the Safeguarding California Plan to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change;

- Factor climate change into state agencies' planning and investment decisions;

- Implement measures under existing agency and departmental authority to reduce greenhouse gas emissions.
Thank you!

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