The Public Policy Institute of California is dedicated to informing and improving public policy in California through independent, objective, nonpartisan research.
CALIFORNIA FACES SERIOUS LONG-TERM BUDGET CHALLENGES

California was hit hard by the Great Recession. In 2009, state tax revenues plummeted 14 percent from the previous year, compared to a 9 percent national drop. Slow economic recovery and the expiration of temporary tax increases widened the state’s budget gap: from fiscal years 2008 through 2011 the state faced record budget shortfalls of around $131 billion, roughly a third of General Fund expenditures. The legislature responded with deep budget cuts at a time of increased demand for Medi-Cal and other public assistance programs. Revenue projections turned out to be overly optimistic, resulting in even deeper mid-year cuts to social services and K–12 and higher education.

Nevertheless, many of California’s budget woes are long standing. The state has faced gaps between revenues and expenditures in nearly every budget cycle since 2000. It contended with huge shortfalls during the recessions of the 1980s, 1990s, and early 2000s. A series of budget-related ballot measures and legislative actions has complicated the state-local fiscal relationship. Voters often express mistrust of their state government and alienation from the budget process. In addition, the state faces many long-term challenges, including large unfunded liabilities for public employee pensions and rising health care costs and debt service obligations. Recent PPIC Statewide Surveys suggest that Californians are aware of the state’s fiscal problems and the impact of state budget cuts on local government services.

BUDGET SHORTFALLS WILL CONTINUE TO BE LARGE

HOW DOES THE STATE MANAGE ITS MONEY?

California spends more than the average state, and it collects more in revenues. It is also distinct in the way it raises revenues, relying more on income and sales taxes and less on property taxes.

SOURCE: Legislative Analyst Office’s Fiscal Outlook projections at the start of each budget cycle and estimates through FY 2016.
NOTES: Figure does not show budget solutions to close the gap in past years. For example, in November 2010 the LAO estimated a $19.2 billion budget gap for fiscal year 2011–12. The 2011–12 Budget Act closed this gap (which had increased to $26.6 billion). However, the LAO now estimates that there is an outstanding budget gap of $3 billion for 2011–12 because tax receipts are lower than projected. The Department of Finance estimates a closing 2011–12 deficit of $4.1 billion.
• **California’s state government is a more than $200 billion enterprise.**
In the fiscal year ending June 30, 2011, the state spent $227 billion, of which $91.5 billion came from the state’s main discretionary fund, the General Fund. Another $91.5 billion came from federal funds (thanks in part to a large infusion of short-term stimulus funds). Special funds supplied $31 billion, and $13 billion came from bond funds. The vast majority of General Fund spending is for K–12 and higher education (more than 50 percent), health and social services (about 30 percent), and corrections (11 percent).

**EDUCATION DOMINATES GENERAL FUND SPENDING**

![Diagram showing General Fund spending by category for 1978 and 2011.]

- **Other**
- **Natural resource and environment**
- **Corrections and rehabilitation**
- **Higher education**
- **Health and human services**
- **K–12 education**

**NOTES:** Figure includes only General Fund expenditures. “Other” includes business, transportation, and housing; tax relief; state consumer services; and other expenditures.

• **California is a moderate tax burden state.**
In fiscal year 2008–09, the latest year for which comprehensive data are available, California’s state and local governments collected $251 billion, or $6,788 per capita, from taxes, fees, charges, and other miscellaneous sources. By this measure, California had the 11th-highest revenue burden in the nation. However, as a high-income state, California also has a large tax base. When state and local general revenues are expressed as share of economic activity or personal income, California’s ranking drops to 21st nationally.

• **Revenue volatility is an issue in California.**
Tax experts have repeatedly urged California to flatten and simplify its revenue system by broadening tax bases, lowering tax rates, and eliminating certain tax preferences. California’s revenue system is highly dependent on personal income taxes (including taxes on capital gains), corporate taxes, and sales and use taxes. The income tax is volatile because it relies on a narrow slice of tax-payers whose earnings tend to fluctuate with the economy (in 2009, 15 percent of tax filers—those with incomes above $100,000—paid 80 percent of the tax). Sales and use taxes are also tied to economic fluctuations—they were hard hit in the recession. Moreover, since the passage of Proposition 13, California has been less reliant than the rest of the nation on a relatively stable revenue source, the property tax.

**THE STATE-LOCAL FISCAL RELATIONSHIP IS CHANGING**
In a process known as realignment, responsibility for key services and programs is shifting from the state to local governments. Funding these responsibilities over the long term may pose challenges.

• **The bulk of state spending goes to local government activities.**
About 70 percent of general state revenues are transferred to local governments and school districts for K–12 education, health and social services, public safety, and other programs. The remaining 30 percent finances state operations, including the University of California and California State University systems, correctional facilities, and administration.
• **But local governments’ responsibilities are increasing.**
  California recently began implementing a major shift of responsibility from the state to the counties for nonviolent, nonserious, nonsexual felony offenders. Other realigned programs include court security, substance abuse treatment, and mental health and child welfare services.

• **Funding realigned programs remains a challenge.**
  In 2011–12, the state directed a portion of the existing state sales tax ($5.1 billion) and vehicle license fee ($453 million) to local governments to pay for their new responsibilities. Many believe that these funds will be insufficient or that the state may reduce funding if its budget problems worsen; these concerns are bolstered by the fact that the shift decreases K–12 funding. Some propose giving local governments more power to raise local revenues, and Governor Brown wants voters to consider a permanent funding source for corrections in November 2012.

**LOOKING AHEAD**
Faced with enormous budget gaps during the recession, California relied heavily on short-term solutions (temporary state tax increases and federal stimulus funds). Unfortunately, the tax increases and much of the stimulus funding expired June 30, 2011, and the Legislative Analyst’s Office projects ongoing annual budget gaps of $5 billion or more. Policymakers will face many significant long-term challenges.

**Pension funds and OPEBs.** The state and many local governments pay monthly pensions to their retirees. In addition, retired public employees often receive health, dental, and other benefits collectively known as “other post-employment benefits” or OPEBs. Longer life expectancies and rising health care costs have made pensions and OPEBs a ballooning cost for state and local governments throughout the nation. The state’s unfunded pension liabilities have been estimated at $181 billion; they may be higher, depending on the modeling assumptions (including the choice of a discount rate). In addition, recent stock market declines may leave public pensions in need of additional contributions. Governor Brown has proposed pension reform that includes raising the age of retirement and switching to a hybrid pension and 401(k) model for new employees.
Outstanding debt. Over the past decade the state closed most of its budget gaps through temporary measures such as payment deferrals, bonds, and loans from special funds. This has created an outstanding budgetary debt of $35 billion. In addition, the state borrowed $10 billion from the federal government to cover unemployment benefits and must restore $10 billion to K–12 education, after making cuts during the recession. Finally, the state is responsible for $81 billion in general obligation and lease revenue bonds for infrastructure and long-term investments.

Tax reform. Californians may be unwilling to reconsider certain aspects of their tax code, such as the progressivity of the income tax or restraints on the property tax. However, the economy is also shifting to areas such as services and Internet or catalog sales. Sensible modifications to the tax code (such as extending the sales tax to services) may improve efficiency, equity, and reliability.

Budgeting for volatility. Californians may also want to consider ways to budget for peaks and troughs in revenues, which appear to be a fact of life in the state. Improvements to budget forecasting could also help to orient voters and lawmakers to future needs. In particular, the state could expand the forecasting period from four or five years to ten years and make projections more transparent, highlighting the tough choices needed to maintain voter priorities.

Putting fiscal reform on the ballot. Multiple efforts are under way to collect enough signatures to place tax increases and fiscal reform measures on the November 2012 ballot. California voters will likely be asked to decide on the level of governmental services they desire and how much they are willing to pay for those services.

We invite you to dig deeper at ppic.org.
Related PPIC resources include:
Untangling the State-Local Relationship (a PPIC initiative)
PPIC Statewide Survey: Californians and Their Government
California's State Budget
California's Debt: What Does It Pay For?

This publication is part of PPIC's Planning for a Better Future project.

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CLIMATE CHANGE THREATENS CALIFORNIA’S FUTURE

Increases in global emissions of greenhouse gases (GHGs) are leading to higher air and water temperatures as well as rising sea levels, with serious consequences for California. Air temperatures are projected to increase throughout the state over the coming century. Sea level is expected to rise 39 to 55 inches by 2100, and the frequency of extreme events such as heat waves, wildfires, floods, and droughts is expected to increase. Higher temperatures will result in more rain and less snow, diminishing the reserves of water in the Sierra Nevada snowpack. Even if all GHG emissions ceased today, some of these developments would be unavoidable because the climate system changes slowly.

AIR TEMPERATURES ARE PROJECTED TO RISE IN CALIFORNIA, ESPECIALLY UNDER HIGH EMISSIONS SCENARIOS

In the face of these threats, California has taken the lead in global efforts to reduce emissions. Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, requires the state to reduce greenhouse gas emissions to 1990 levels by 2020; this would result in emissions roughly one-third less than what would be expected under “business as usual.” An executive order calls for emissions to be reduced to 80 percent below 1990 levels by 2050. Reductions of this magnitude are needed on a global scale to stabilize the earth’s climate. California now faces a twofold policy challenge: finding the least expensive ways to reduce emissions and preparing for the climate changes that are expected even if emissions are successfully reduced.

California is not alone in tackling this global issue. But its actions are crucial because they set an example for other states, regions, and parts of the world; others are already following its lead. The state must continue to forge new strategies, even though the nature and timing of climate change are uncertain and global efforts to reduce emissions may or may not be successful.
California is charting new territory with its plan to reduce emissions

- California’s climate change plans generate interest . . .
  The California Air Resources Board (CARB) is responsible for implementing the Global Warming Solutions Act. In late 2008, CARB adopted a Scoping Plan that outlines the programs designed to reach the 2020 target. Because this is the first comprehensive plan of its kind within the United States (and one of the first such plans internationally), many are looking to California as a model.

- . . . and controversy.
  Analysis by CARB shows that AB 32 will have little effect on the state’s economy, but the Legislative Analyst has reported that the short-term impact on jobs is likely to be negative. Some legislators and interest groups have urged delaying compliance with AB 32 (and other environmental regulations) until the economy improves. In November 2010, voters rejected Proposition 23 by a large margin (61.5% voted no, 38.5% voted yes). If Prop 23 had passed it would have halted AB 32 implementation until unemployment remained at or below 5.5 percent for a year. This result suggests continued support for meeting the state’s climate goals even in difficult economic times.

**ENERGY AND TRANSPORTATION ARE THE LARGEST COMPONENTS OF THE SCOPING PLAN**

- New standards for passenger vehicles are key.
  California adopted the first-ever greenhouse gas emission standards for passenger vehicles in 2004. These standards will reduce emissions from new passenger vehicles by approximately 30 percent by 2016. The federal government has set national standards that will match California’s by 2016 and has announced a process, coordinated with California, to set national standards for the 2017–2025 model years.

- A statewide cap-and-trade program has been adopted.
  Despite some setbacks—including a lawsuit brought by environmental justice groups—California adopted the first GHG cap-and-trade program in the nation in 2011. Under this program, firms that would need to spend a lot to reduce emissions will be allowed to trade emission reduction credits with firms that can reduce emissions at lower cost. In the development of this program, California has reached out to other states and Canadian provinces, through the Western Climate Initiative, to develop a regional cap-and-trade program.

- California has also adopted other pathbreaking strategies.
  Adopted in 2008, Senate Bill (SB) 375 aims to reduce emissions by integrating investments in land use and transportation to reduce driving. This bill provides incentives to achieve these reductions by easing environmental...
• **California’s local governments are also addressing climate change.** At least three-quarters of California’s cities and counties, encompassing more than 90 percent of the state’s population, are taking measures to address climate change. In many instances, these measures are also being promoted as ways to reduce energy costs and work toward broader sustainability goals. Local governments would like to know more about costs, benefits, and funding of different measures; they also call for greater clarity in state law.

**Graph:** Despite the recession, local governments have increased efforts to address climate change.

**Table:** Despite the recession, Californians’ support for the state’s climate policies is strong.

<table>
<thead>
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<th>Policy</th>
<th>% Favor (all adults)</th>
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<td>Emission standards for new passenger vehicles</td>
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<tr>
<td>Increasing the use of renewable energy</td>
<td>82</td>
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<tr>
<td>Requiring local governments to change land-use patterns so people drive less</td>
<td>79</td>
</tr>
<tr>
<td>Requiring an increase in energy efficiency for residential and commercial buildings and appliances</td>
<td>74</td>
</tr>
<tr>
<td>Requiring industrial plants, oil refineries, and commercial facilities to reduce emissions</td>
<td>82</td>
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<tr>
<td>Cap and trade</td>
<td>54</td>
</tr>
</tbody>
</table>

**Sources:** 2008 data from Hanak et al., “Climate Policy at the Local Level: A Survey of California’s Cities and Counties” (PPIC, 2008); 2010 data from Bedsworth, Hanak, and Stryjewski, “Views from the Street: Linking Transportation and Land Use” (PPIC, 2011).
CALIFORNIA NEEDS TO PREPARE FOR THE EFFECTS OF CLIMATE CHANGE

California is well ahead of other states in developing information on the effects of climate change, but much work must be done to prepare for these effects.

- The effects of climate change are already being seen around the state.
  Spring runoff from snowpack is occurring earlier now than it did in the first part of the 20th century. Some plant and animal species normally found in the southern part of the state have been observed in more northern locations.

- Sea level rise threatens coastal infrastructure, homes, and habitat.
  Sea level is projected to rise 39 to 55 inches by 2100. The Pacific Institute finds that at the higher end of this range, 1,750 and 1,800 miles of highways and roads along the ocean coastline and San Francisco Bay, respectively, are at risk of inundation. Coastal armoring (e.g., sea walls or breakwaters) can help protect infrastructure and homes along the coast, but these are expensive remedies and would eliminate some recreational and ecological uses of the coastline.

- Water management faces challenges.
  The diminishing mountain snowpack reduces water storage and increases the risk of Central Valley flooding. Rainfall variability is also expected to increase, leading to more frequent droughts and floods. In addition, sea level rise poses threats to fragile Delta levees, which are important for the state’s water supply.

- Public health will be at risk.
  An increase in extreme events—heat waves, wildfires, and floods—will pose challenges to public health and the state’s emergency preparedness agencies and healthcare infrastructure. Case in point: A prolonged heat wave in 2006 resulted in more than 140 confirmed deaths and a significant increase in emergency room visits and hospitalizations.

- Air quality will worsen.
  The San Joaquin Valley and the Los Angeles area already have some of the worst air quality in the nation. Increasing temperatures and other effects of climate change will worsen air quality, likely requiring additional pollution controls to attain state and federal air quality standards.

- Biodiversity is under threat.
  Climate change places an additional burden on many of the state’s plants and animals. As temperatures rise, many species will need to migrate to more hospitable areas. Current development patterns could hinder this movement and threaten extinction for some species.

- Readiness to cope is variable.
  Water and electric utilities have begun to consider climate change in their long-range planning and have tools available to develop adaptation strategies. The Natural Resources Agency has developed a statewide adaptation strategy, and some regions are taking the lead in thinking about adaptation (e.g., San Diego and the Bay Area). But in areas such as ecosystem management and flood control, the institutional and legal frameworks are ill-equipped to handle the changes.
LOOKING AHEAD
To lessen the impact of climate change on California, emission reductions will be needed on a global scale; large reductions will be needed soon to avoid the most severe effects. Even with these reductions, the state needs to prepare for some inevitable effects of climate change.

- **Develop an integrated climate change policy.**
  An integrated climate change policy that includes efforts to reduce emissions and plans to prepare for climate change will ensure that mitigation and adaptation policies are complementary.

- **Achieve near-term greenhouse gas emission reductions.**
  Actions taken today will affect the concentration of greenhouse gases in the atmosphere several decades from now. Therefore, near-term emission reductions are needed to work toward future climate stabilization.

- **Undertake some “no regrets” measures now.**
  In some areas accounting for future climate changes in current planning will head off unacceptably high costs. For example, considering climate change in today’s land-use planning decisions could facilitate species’ migration as the climate changes. And limiting development in areas at increasing risk of flooding will avoid future costs.

- **Tap into local enthusiasm for undertaking climate action.**
  The state should build on local momentum to implement state-level climate policies. Local governments’ experience and learning will be especially important in meeting the greenhouse gas emission reduction targets set under SB 375, the state’s transportation and land-use law.
• **Continue to develop information to reduce policy uncertainties.**
  Better information is needed to assess progress toward meeting emission reduction goals and the cost-effectiveness of policy options. Assessments of climate effects at a local or regional scale will help pinpoint vulnerabilities and develop priorities for adaptation.

• **Continue to play a leadership role.**
  California has long been a leader on environmental policy, and climate change is no exception. This leadership is important in encouraging other governments to address climate change. Without global cooperation to reduce emissions, California's economy and society may face severe consequences.

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**We invite you to dig deeper at ppic.org. Related PPIC resources include:**

- *Driving Change: Reducing Vehicle Miles Traveled in California*
- *Climate Change Challenges: Vehicle Emissions and Public Health in California*
- *Preparing California for a Changing Climate*
- *PPIC Statewide Survey: Californians and the Environment*
- *Climate Policy at the Local Level: A Survey of California's Cities and Counties*

**Contact a PPIC expert:**

Ellen Hanak

**This publication is part of PPIC's Planning for a Better Future project.**
CALIFORNIA REMAIN CONCERNED ABOUT THE ECONOMY
The recent recession reveals important fundamentals about California’s economy and shows where some longer-term challenges and growth opportunities lie. While the recession technically ended in June 2009, Californians are still worried about the economy: according to PPIC’s December 2011 Statewide Survey, 60 percent believe that the economy will face bad times over the next year. With unemployed Californians spending more time looking for work, on average, than ever before, and employed Californians working fewer hours, family incomes in California continued to decline well into 2010.

The Great Recession and its aftermath have hit California hard—the statewide unemployment rate remains higher than the national rate, and California has more extreme levels of income inequality and a smaller share of families in the middle income range than the rest of the U.S. But long-term historical patterns are still the best guide to California’s economic future. Economies tend to return to growth rates and unemployment levels established over the long term, and major industry shifts—such as the transition from manufacturing to services—can take place over decades.

CALIFORNIA’S LONG-TERM ECONOMIC PROSPECTS ARE FUNDAMENTALLY STRONG
The California economy generally keeps pace with the U.S. economy. California consistently experiences higher unemployment and higher costs of doing business than other states, but these are explained or offset by the state’s strengths and are likely to remain permanent features of the California economy.

CALIFORNIA JOB GROWTH TRACKS GROWTH IN THE NATION OVERALL

NOTE: Annual change in nonfarm employment, December to December.
• **California’s economic performance closely tracks that of the nation as a whole.**
  The broadest measure of California’s economic performance—employment growth—follows the nation’s growth rate very closely. Job growth over the past 30 years has averaged 1.2 percent annually for both the nation and California. In 2010, California employment grew 0.4 percent, just slightly below the national rate of 0.7 percent. Although California is emerging from the recession slightly more slowly, its long-term growth rate is likely to remain similar to that of the nation.

• **Unemployment is persistently higher in California than in the nation.**
  In the recession, California’s unemployment rose much higher than the U.S. rate, even though employment growth was only somewhat slower in California than in the U.S. In October 2011, California’s unemployment was 11.7 percent; the national rate was 9.0 percent. But California’s unemployment rate has exceeded the U.S. rate for 20 years, even when its employment growth has surpassed U.S. growth, as it did during the technology boom in the late 1990s. This seeming paradox arises because California’s labor force grows faster than the U.S. labor force: the state’s economy generates jobs at a rate similar to the national rate, but this is not enough to keep up with California’s faster-growing population. So California unemployment is likely to remain above the U.S. level even after it fully recovers from the recession.

**UNEMPLOYMENT IS THE HIGHEST IN DECADES**

![Unemployment graph](image-url)

**SOURCES:** U.S. Bureau of Labor Statistics and California Employment Development Department.
**NOTES:** Monthly unemployment rate, seasonally adjusted.

• **Labor market conditions have contributed to sizeable declines in family income.**
  The trend has turned around since the peak of the Great Recession but California unemployment remains historically high. Moreover, in 2011 the average period of unemployment reached 37 weeks—the longest average since 1948, when this data was first collected. Workers have been employed for fewer hours, on average, and are less likely to work full-time than before the recession. Unemployment and underemployment caused median family income to fall 11 percent in real terms between 2007 and 2010 (for a family of four). Declines were especially steep at the low end of the income spectrum (22 percent), but high incomes also fell (5 percent). These shifts have led to a new extreme in income inequality: in 2010, California’s high income families earned about 12 times more than its low income families (as measured by the ratio of 90th percentile to 10th percentile).
• California is a high-cost, high-benefit state. California workers, on average, earn 12 percent more than the national average—even after adjusting for differences in workers, occupations, and industries. But output per worker in California is 13 percent above the national average, so California’s higher productivity fully offsets the higher average wages. All of California’s immediate neighbors—Nevada, Oregon, and Arizona—pay their workers less and have lower output per worker.

• The “business climate” debate understates California’s strengths. California consistently scores poorly on many business climate rankings that focus primarily on taxes and other costs of doing business. California’s economic performance is stronger than these business climate rankings alone would indicate. Businesses locating in California face higher costs but they also enjoy many benefits, such as the skill level of the workforce, the availability of capital and support for new business, and the amenities that make California an attractive place to live.

GROWTH WILL BE UNEVEN

• Regional economic differences are dramatic—and persistent. Economic differences within California are likely to continue. Unemployment tends to be higher in the Central Valley—sometimes considerably higher—than in the urban, coastal parts of the state. This variation is attributable to a different industry mix and to the faster-growing workforce in the inland parts of the state. Even among urban coastal areas, California’s regional economies don’t move in concert: aside from the recession, in most years some regions of the state grow quickly while others grow slowly or contract. Although the recession has hit inland California hardest, that region’s low housing costs will contribute to high growth of the workforce there. The working-age population is projected to grow more than 25 percent between 2010 and 2025 in much of inland California; in California overall, the rate of growth will be 13 percent.

INLAND CALIFORNIA’S LABOR FORCE WILL GROW FASTEST

Projected growth rate

- 0% or less
- 0.1%–10%
- 10.1%–25%
- 25.1%–40%
- More than 40%

SOURCE: California Department of Finance.
NOTE: California’s projected growth rate, by county, of working-age population, 2010–2025.
• **Housing is still expensive and probably always will be.**

Even before this decade’s real estate bubble, housing in California was much more expensive than in the nation as a whole. And although housing prices fell more in California than in the nation during the recession, housing remains far more expensive, especially in California’s coastal cities. In October 2011, the average U.S. home was worth $148,000; in California, the average home was worth $295,400, according to Zillow. Expensive real estate makes it harder for some businesses to locate in California and attract workers, potentially pushing growth out of state. However, housing prices inland continued to fall in 2011 much faster than coastal prices: a year-over-year decline of 9 percent in Modesto compared to 2 percent in metropolitan San Jose, for example. The growing gap between high house prices on the coast and rapidly falling prices inland could accelerate the inland movement of businesses and households.

• **Services will continue to grow; manufacturing will continue to stagnate.**

Manufacturing accounted for only 9 percent of California’s employment in October 2011; its share has been declining for decades, and it will continue to be California’s slowest-growing sector. During the recession, the construction industry contracted most sharply. Once the existing housing stock has been absorbed by California’s growing population, construction employment will rise again, although it will not reach its boom-time levels. The fastest-growing industries over the longer term are projected to be professional services, education, and health care; these are also the sectors least hurt by the recession.

### PROJECTED PRIVATE-SECTOR INDUSTRY GROWTH, 2008–2018

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<tr>
<th>Industry</th>
<th>Percentage</th>
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<tr>
<td>Educational services</td>
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<tr>
<td>Professional services</td>
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<td>Health care</td>
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<td>Arts, entertainment, and recreation</td>
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<td>Wholesale trade</td>
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<tr>
<td>Administrative services</td>
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<tr>
<td>Accommodation and food services</td>
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<td>Retail trade</td>
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<tr>
<td>Other services</td>
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<td>Construction</td>
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<tr>
<td>Transportation, warehousing, and utilities</td>
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<tr>
<td>Real estate and rental and leasing</td>
<td>-4.7</td>
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<tr>
<td>Manufacturing</td>
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</tbody>
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SOURCE: California Employment Development Department.  
LOOKING AHEAD
California’s long-term economic trends reflect strengths but also create pressures that policy must respond to. The most effective economic policies require accurate assessments of California’s economic performance, a balanced view of the state’s competitiveness, and a realistic sense of the state’s strengths and weaknesses.

• **Pursue policies to help create jobs and promote economic growth.**
  Increasing full-time employment is key to California’s recovery. In the short run, hiring credits are likely to create more jobs than worker subsidies. But a thriving California economy is the best route to future employment growth in the short and long run. Economic policy that stimulates business and fosters a strong, skilled workforce are thus crucial to job creation in California.

• **Don’t pin all hopes on one industry.**
  Although many industries—such as motion picture, high-technology, and wine-making—are highly concentrated in California, the state’s economy is in fact very diversified, and its industry mix is quite similar to the national industry mix. Economic policy should reflect the breadth and diversity of the state’s economy. Tempting as it is to identify the next boom industry—such as clean technology—and focus economic development efforts there, booms usually don’t deliver stable, steady growth, as the Internet and housing industries demonstrate. And some hyped industries fail to take off at all. Economic development policy needs to nurture both new, innovative industries that might constitute California’s next boom and established, steadily growing industries such as health care.

• **Promote economic opportunity through education.**
  Education is the key correlate of economic well-being for Californians. Highly educated workers were somewhat protected from the impact of the Great Recession and are likely to do better during future boom and bust cycles. Promoting education is thus an important strategy for ensuring economic opportunity across the income spectrum and addressing income inequality. And because the new economy demands a highly skilled workforce, education has a crucial role in helping California remain economically competitive.
We invite you to dig deeper at ppic.org. Related PPIC resources include:

- The Great Recession and Distribution of Income in California
- How Can California Spur Job Creation?
- Business Climate Rankings and the California Economy
- Business Location Decisions and Employment Dynamics in California
- Are the Rich Leaving California?

Contact a PPIC expert:
Sarah Bohn

This publication is part of PPIC’s Planning for a Better Future project.
California educates more than 6 million children in its K–12 public schools. Many of these children are economically disadvantaged, and many (a higher percentage than in any other state) are not native speakers. Despite these challenges, and despite three years of constrained budgets, test scores have been rising. Further improvement is likely to be challenging, given the budget situation, the inequitable distribution of school dollars, and the complexity of federal, state, and local funding mechanisms. According to a recent PPIC Statewide Survey, most Californians favor either maintaining or increasing funding for K–12 education.

PROFICIENCY RATES ARE INCREASING, BUT GAPS REMAIN

• Proficiency in both math and English language arts (ELA) has increased 19 percentage points in the past eight years.

By these measures, California schools appear to be heading in the right direction, especially considering the fact that California’s academic standards are the highest in the nation. But the state is not on track to make No Child Left Behind targets of 100 percent proficiency by 2014.

• Significant gaps in proficiency rates remain.

White and Asian students’ ELA proficiency levels are higher than those for Latino and African American students. Gaps in math proficiency are similar to those in ELA, with a few notable exceptions. Asian students’ proficiency rates are dramatically higher than those for whites (84 percent versus 70 percent in 2011). African American students have the lowest math proficiency rates, on average 5 percentage points lower than those for English learners (ELs).
CALIFORNIA STUDENTS FACE MANY CHALLENGES

• **California students are more disadvantaged than their peers in other states.**
  Slightly more than one in ten students in the United States are ELs; in California, nearly one out of every four students is an EL. More than half (53 percent) of all students in California are eligible for free or reduced-price meals; this share is higher than the national average of 45 percent.

• **Gaps in school readiness and academic skills are evident in kindergarten.**
  On average, students whose parents have low education levels and low-income, African American, Latino, and EL students begin school less prepared. These groups score lower on the standardized tests that begin in second grade, and the achievement gaps persist into later grades.

• **Early, high-quality interventions are critical.**
  A growing body of research indicates that investments in pre-kindergarten programs can produce both short- and long-term benefits that exceed costs. Programs targeted at low-socioeconomic-status children have the greatest returns. High-quality preschool shows particular promise, as do programs that target families. If implemented, California’s new Transitional Kindergarten program is likely to provide early learning benefits to the quarter of kindergarten students with autumn birthdates who are eligible.

• **Appropriately targeted interventions may improve graduation rates.**
  A PPIC study found that students likely to fail the California High School Exit Exam (CAHSEE) can be identified as early as fourth grade. A strategic focus on support for elementary school students may reduce the need for later, more costly remediation.

THE CALIFORNIA ECONOMY PRESENTS A CHALLENGE TO CALIFORNIA SCHOOLS

• **California school districts face significant budget challenges.**
  K–12 education, which makes up the largest share of the state budget, has faced significant cuts in recent years. Between 2007–08 and 2010–11, the state’s contribution to K–12 decreased by 13 percent; when one controls for inflation the reduction is greater. District reserves, federal aid, and eased restrictions on spending have partially mitigated the effects of these cuts, but reserves are dwindling and federal stimulus dollars were mostly spent by the end of the 2010–11 school year.

• **State payment deferrals are a challenge.**
  In recent years, the state has relied on deferrals—payments made after the close of the fiscal year for programs and services already provided—to avoid deeper cuts to K–12 funding. The Legislative Analyst’s Office estimates that 20 percent ($10.4 billion) of 2011–12 funding will not be paid until 2012–13. Districts have had to take out short-term loans to cover expenses and the debt service on this borrowing leaves districts with less money to spend on instruction.

CALIFORNIA’S SCHOOL FINANCE SYSTEM IS INADEQUATE AND INEQUITABLE

• **California spends less per pupil than other states.**
  California ranks 33rd on per pupil expenditures and 26th on per capita expenditures. Because California’s population is younger than that of many other states, the state has more students to educate relative to the size of the population, resulting in higher per capita spending. Since the 2007–08 school year, the state’s ranking has fallen on per pupil and per capita expenditures, while the student-teacher ratio ranking held constant at 49th during this period.

• **Adjusting for costs, California’s per pupil spending ranks near the bottom.**
  California’s low per pupil spending does not go as far as it would in other states because school costs are higher here. For example, California teachers earn about 40 percent more than their peers in Florida and the average salary is similar to those paid in New York. The high cost of labor in California may prevent significant reductions in class sizes.
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**Sources:** National Center for Education Statistics.

- **Per pupil funding varies widely and districts with greater challenges do not always receive greater funding.** Many studies have found California’s school finance system inequitable, with wide variation in per pupil funding across and even within school districts. Despite efforts to equalize funding, large differences persist across district types and sizes. For example, base funding for the 13 school districts in Sacramento County ranged from $5,010 to $6,100 per pupil in 2010–11. Additionally, districts with higher per pupil costs—for example, those with more disadvantaged, special education, or EL students—do not necessarily receive enough additional resources to address their students’ needs. An equitable funding formula would provide additional revenue to districts facing extra costs. Reform is hampered by the complex array of laws and formulas that make it difficult for any but a few experts to anticipate how proposed changes will impact particular schools, programs, and students.

**ACCOUNTABILITY PROGRAMS ARE IN NEED OF IMPROVEMENT**

- **School demographics are a strong predictor of school success.** Accountability grades may reveal more about the type of students who attend a school than about the effectiveness of teachers and administrators at that school. Schools that meet accountability requirements have lower percentages of economically disadvantaged and EL students and lower total enrollments, on average.

- **Accountability systems based on achievement levels may not accurately distinguish between effective and ineffective schools.** Schools with low levels of achievement are not necessarily schools with ineffective administrators and teachers. California’s current accountability system does not evaluate schools on the basis of individual student achievement gains, making it difficult to distinguish between schools where teachers and administrators are effective and schools where they are not. Revisions of current accountability systems are certain to be a part of the discussion and implementation of the reauthorization of the federal Elementary and Secondary Education Act.

**LOOKING AHEAD**

To improve the state’s economic well-being and ensure that California’s children are equipped to succeed in the 21st century, policymakers need to adopt policies that will help the state’s school systems maintain and build on recent improvements.

- **Increase efforts to centralize existing data into a preschool-through-higher-education (P–20) data system.** The California Longitudinal Pupil Achievement Data System (CALPADS) aims to merge student-level data that districts already collect into a single, centralized database and to make it possible to identify effective policies for improving student learning. Some innovative districts already use student, teacher, and school data to fine tune instruction and programs but other districts lack this capacity. California is decades behind states like Texas, Florida, and North Carolina, which are already using their comprehensive data systems to improve educational quality.
• **Reform school finance.**
The current Robles-Wong v. California lawsuit and the 2014–15 expiration of spending flexibility provisions give California an opportunity to reconsider its level of funding for schools and how it allocates that funding. Despite its budget problems, the state can make low-cost structural changes now that will help it invest wisely when the economy recovers.

• **Capitalize on the benefits of the new Common Core State Standards.**
California recently adopted new Common Core State Standards (CCSS)—as did all but a few states. California’s own academic standards had not been updated since 1997. These new standards are widely thought to set a high bar for students, requiring more high order skills, advanced content knowledge, and advanced English language skills. The aim of CCSS is to increase college and workforce preparedness and ensure students are competitive in the global economy. New assessments based on the standards are being developed and will be used as early as 2014. By adopting national standards, California will be able to measure its progress against that of other states, not just against its own past performance. In addition, California has chosen to supplement CCSS so as not jeopardize its own rigorous standards.

We invite you to dig deeper at ppic.org. Related PPIC resources include:

* Does Diagnostic Math Testing Improve Student Learning?
* Improving School Accountability in California
* California's New School Funding Flexibility
* Early Grade Retention and Student Success: Evidence from Los Angeles
* At Issue: School Finance Reform
* Pathways for School Finance in California
* Lessons in Reading Reform: Finding What Works
* Higher Education in California: New Goals for the Master Plan
* Predicting Success, Preventing Failure: An Investigation of the California High School Exit Exam
* Funding Formulas for California Schools: Simulations and Supporting Data
* PPIC Statewide Survey: Californians and Education

Contact a PPIC expert:
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This publication is part of PPIC’s Planning for a Better Future project.
CALIFORNIA FACES IMMEDIATE AND LONG-TERM HOUSING CHALLENGES

California is still experiencing the aftereffects of the most recent housing bubble, and the long-term challenges of housing California’s population haven’t gone away. The housing bubble, which inflated and popped over the past decade, has left the state with a foreclosure problem and large losses of construction jobs, which accounted for 6 percent of California’s employment when housing prices were at their peak (according to the California Employment Development Department). Millions of California’s homeowners remain “underwater,” owing more on their houses than they are worth.

There are a few signs of hope. Housing price declines, along with low interest rates, have led to historically high rates of affordability. In many Inland areas of California, a large majority of households can afford the median-price home, and half of the state’s households can afford to pay the median price for a home even in California’s most expensive metropolitan area, San Jose. Housing values are not increasing at a significant rate, but they are not falling as sharply as they were a few years ago and may have leveled off. Vacancy rates are low in California compared to the rest of the country, and there will be strong population growth among adults old enough to establish their own households, which should increase housing demand. Of course, high unemployment and difficulty in borrowing undercut these hopeful signs.

In both the short and the long term, California’s economic performance and livability depend on its housing market. The perennially high cost of housing in coastal California reflects the fact that people and businesses are willing to pay more to be there than almost any other place in the U.S.; it also reflects barriers to building new housing in those areas. In the inland areas, economic recovery could partly depend in on policies designed to address the acute negative equity and foreclosure crises in that part of the state.

THE HOUSING BUBBLE AFTERMATH IS FAR FROM OVER

The housing price bubble and its deflation in the century’s first decade helped trigger a national recession and global slowdown. Prices rose and fell more in California than in most of the country. Prices remain at or near their post-bubble lows, construction remains slow, and 30 percent of mortgaged residential properties are underwater, according to CoreLogic.

- **Home prices in California are down more than 40 percent from their bubble-era peak.**

  After growing rapidly earlier in the decade, home prices peaked in 2006, fell sharply in 2007 and 2008, and have fallen modestly since then. By October 2011, the average home value in California had returned to its October 2002 level of just over $295,000 (Zillow). Nationally, home prices have fallen 24 percent from a peak in early 2007 of $194,000 to a median of $148,000 in October 2011.
• **Large numbers of Californians owe more on their homes than they are worth.**
  According to CoreLogic, 30 percent of California homeowners with mortgages were underwater in the second quarter of 2011, the fifth highest rate in the nation (after Nevada, Arizona, Florida, and Michigan). In all, 2.1 million of 6.8 million mortgaged households were underwater in California. More than half of mortgaged homeowners in the Stockton and Modesto metropolitan areas and almost half in the Inland Empire were underwater. By contrast, only 10 percent of mortgaged homeowners in San Francisco, San Mateo, and Marin counties were underwater, and the average net equity for mortgage holders in those areas was $371,000, by far the highest in the nation.

• **Foreclosures remain high and new construction remains low.**
  Falling prices, combined with rising unemployment and resetting interest rates for adjustable mortgages, have led to very high foreclosure rates. Foreclosures skyrocketed in 2007, peaked in 2008, and foreclosure rates have remained more than twice as high as in the rest of the nation through 2011 (RAND/DataQuick and RealtyTrac). In October 2011, only Nevada had a higher foreclosure filing rate. Falling prices and relatively weak population growth have also discouraged new construction: new residential construction permits fell from around 200,000 annually from 2003 to 2005 to tens of thousands annually from 2008 to 2011, according to U.S. Census Bureau data.

• **Homeownership rates have fallen.**
  Homeownership rates, already much lower in California than the rest of the nation, fell more in California than else-where in the country, reaching 57 percent of all housing units (compared to 68 percent for the nation). Between 2005 and 2010, the number of housing units that were owned fell by over 300,000 in California, while the number rented increased by almost 400,000.

• **Coastal metropolitan centers have fared better than inland California.**
  During the post-bubble years, home values declined less steeply in the metropolitan areas of San Jose (25 percent) and San Francisco (34 percent), as well as in San Diego (37 percent) and Los Angeles (38 percent). At the other extreme, the largest declines, with values falling more than 60 percent, have occurred in some of the same inland metros that had experienced the fastest run up in values, including Merced (69 percent decline, from $351,100 to $107,600), Modesto (64 percent decline, from $368,200 to $128,100) and Stockton (65 percent decline, from $410,900 to $144,800). Prices fell by more than 50 percent in Sacramento, Fresno, Bakersfield, and the Inland Empire. Not surprisingly, foreclosure rates have been higher in these inland areas. In the Inland Empire, for instance, the foreclosure rate from 2006 to 2010 was nearly four times that of Los Angeles and Orange Counties.
HOME VALUES HAVE DECLINED MORE STEEPLY INLAND THAN ON THE COAST

![Map showing home value declines by percentage in California counties.](image)

SOURCE: Zillow market value report for California counties.
NOTES: Percentage change, local price peak to October 2011. No data available for areas in white.

DESPITE THE BURSTING OF THE BUBBLE, HOUSING IS EXPENSIVE AND THE MARKET IS TIGHT

Falling prices make buying a house more affordable, but rents have actually risen (in nominal terms) during the crisis. Even with the downturn in prices, median values exceed $500,000 in the San Jose metro area and $400,000 in the San Francisco metro area. California’s statewide median remains almost twice as high as the national median.

- **Housing is dense relative to other states.**
  California is often thought of as the epitome of sprawl, but its housing density is 35 percent above the national average and rising. Census data show that the Los Angeles and San Francisco metropolitan areas have the second- and third-highest residential density in the U.S., after New York, while San Jose and San Diego are also in the top ten. High density goes hand in hand with high prices: where real estate is expensive, developers build upward and closer together, and people are willing to live in smaller spaces. California’s population density is heightened by its household structure: the typical California household has 2.1 adults and 0.7 children, as compared to the national average of 1.9 adults and 0.6 children.

- **Rents are high and rising.**
  Rental units account for 43 percent of California’s occupied housing stock, according to the American Community Survey. According to HUD, five of the ten most expensive rental markets in the U.S. are in California: San Francisco, Orange County, San Jose, Ventura County, and Los Angeles. And, unlike housing prices, typical rents were higher in 2011 than in 2006 in nearly all metropolitan areas, in nominal terms. Even more striking, since 2006 rents have risen more in the metropolitan areas with higher foreclosure rates, even though home prices have fallen more sharply where foreclosures are more widespread.

- **Vacancies are low, relative to most states.**
  Despite sharply falling prices in recent years and increases in vacancy rates, the residential vacancy rate in California remains among the lowest in the country. Even in the San Joaquin Valley and Inland Empire, residential vacancy rates are near the national average. The other states with the highest foreclosure rates (Arizona, Florida, Georgia, and Nevada) have among the highest vacancy rates in the U.S. In these states, foreclosure often leads to abandonment, whereas in California foreclosure more often means turnover. (Vacancy rate data are from HUD, USPS, and American Community Survey.)
LOOKING AHEAD
California needs to address both immediate and long-term housing challenges with policies that help resolve the foreclosure crisis, fund affordable housing construction, and remove unnecessary barriers to expanding the supply of housing in high cost areas.

- **With the job and housing markets recovering slowly, foreclosures will continue.**
  Foreclosures displace families and can ruin access to credit, but keeping people in homes they cannot afford risks slowing down recovery in the housing and financial markets. Most housing policy is set at the federal level, and most housing financial institutions—including Fannie Mae, Freddie Mac, and the large banks—are national. However, states strongly influence the foreclosure process, and the hardest-hit states (including California) have received federal money to help underwater borrowers. With these tools, the state should do what it can to help struggling homeowners who can potentially afford their homes and to speed up the foreclosure process for homeowners who can’t.

- **Funding for affordable housing is threatened.**
  Affordable housing construction in California is funded partly through redevelopment agency set-asides and general obligation bonds. Redevelopment has been eliminated from the fiscal year 2011–12 budget, and continued state budget troubles raise the cost of borrowing and limit the scope for authorizing and issuing new general obligation bonds. If it wants to support affordable housing construction, California needs to establish new funding mechanisms.

- **Regulations help keep housing prices high in coastal areas.**
  Why is housing so expensive in California? Many people and industries are willing to pay a premium to be here, which keeps demand high. At the same time, the supply of new housing is constrained both by geography and regulation. Most of populated California is nestled against natural barriers to construction—the ocean, the Bay, and the mountains. And California has unusually strong land-use and building regulations, especially in the major coastal cities, which curtail construction and keep prices high.
GROWTH WILL PUT PRESSURE ON INFRASTRUCTURE

California has long been known for and even defined by its tremendous population growth. No other developed region of the world that is California’s size has sustained so much growth over such a long period. Equally remarkable has been the increasing diversity in the state’s population. California is home to large groups of immigrants from more than 60 nations, and no race or ethnic group constitutes a majority of the state’s population. Although growth rates have slowed, the state added 3.4 million people from 2000 to 2010 (according to Census counts), reaching a total population of 37.3 million. The most recent estimates by the California Department of Finance place the state’s population at 37.5 million for July 2011.

During the next 20 years California’s population will continue to increase, with millions of new residents each decade. In all areas of infrastructure and public services—including education, transportation, corrections, housing, water, health, and welfare—population growth will lead to new demands.

CALIFORNIA’S POPULATION WILL CONTINUE TO GROW

GROWTH CONTINUES AS REGIONAL, RACIAL/ETHNIC, AND AGE GROUPS SHIFT

- Population gains are projected to continue.

By 2025, California’s population is projected to reach about 44 million. Annual growth rates are expected to be just 1 percent, similar to growth experienced in the 1990s and the 2000s but substantially slower than in earlier decades. Even so, average annual increases will exceed 400,000—equivalent to adding the population of a city the size of Oakland each year.
• **Inland areas will see higher growth.**
  The inland areas of California have grown faster than the coastal areas for many decades, but coastal counties are still home to most of the state’s population. Projections indicate that the Inland Empire, the Sacramento region, and the San Joaquin Valley will grow faster than other areas of the state. Key milestones expected by 2025:
  ▲ Los Angeles County will reach nearly 11 million residents.
  ▲ Riverside County will surpass 3 million residents.
  ▲ Santa Clara County will reach 2 million residents.
  ▲ Fresno County and Kern County will surpass 1 million residents each.

• **California’s population will continue to diversify.**
  No ethnic group composes a majority of the state’s population, with whites (non-Hispanic) making up 40 percent of the state’s population and Latinos making up 38 percent. The California Department of Finance projects that in 2016 Latinos will replace whites as the largest ethnic group. Among children ages 9 and under, Latinos already make up 52 percent of the population. Latino increases are due to both immigration and relatively high birth rates. Immigrants are projected to make up 29 percent of the state’s population in 2025, a modest increase from 27 percent in 2009.

### LATINOS WILL BECOME CALIFORNIA’S LARGEST ETHNIC GROUP

![Graph showing ethnic population changes](image)

**Sources:** 1980 and 2010 Censuses; California Department of Finance projections.

• **Large numbers of Californians will soon reach retirement age.**
  In 2010, 11 percent of Californians were age 65 and over, compared to only 9 percent in 1970. By 2025, that share will grow to 16 percent. The total number of adults age 65 and over is projected to grow from 4.2 million in 2010 to more than 7 million in 2025.

• **The number of children will change very slowly.**
  From 2010 to 2020 the number of children in public schools is projected to increase only 2 percent according to the California Department of Finance. This is a consequence of slight declines in birth rates along with a small increase in the number of women aged 15 to 44. In contrast, during the 1990s the number of school children grew more than 20 percent.
LOOKING AHEAD
The state’s growing and changing population will put pressure on a variety of infrastructure needs and public services. Key areas to watch:

**Schools.** The relatively slow growth in the number of school-aged children could give the state time to catch up on school infrastructure needs and a chance to adjust school budgets, perhaps increasing per student expenditures. Demand for higher education should continue to increase with large numbers of students graduating from high school, but enrollment pressures will lessen after 2015.

**Housing.** After the elderly, adults in their late 20s and early 30s will be the fastest-growing age group. Between 2010 and 2025, the number of adults ages 25 to 39 will increase by almost 30 percent. These are the ages at which young adults typically get married, start families, and establish their own households—driving up housing demand.

**Health and human services.** Meeting the needs of a large and growing elderly population will pose more challenges. For example, even though Medi-Cal enrolls a far larger share of children, elderly adults account for a much higher share of expenditures. Annual costs per enrollee are at least five times higher for adults over age 50 than for children. Nursing home care is especially expensive.

**The 2010 Census.** The 2010 Census counted 37.3 million California residents, about 1.5 million fewer than had been estimated by the California Department of Finance. According to the Census, California grew at about the same rate (10 percent) as the rest of the nation during the decade, its slowest rate on record. For the first time since 1920 (when the Census was not used to reapportion the House of Representatives), California did not gain any congressional seats. A key question is whether the 2010 count was accurate. States and local jurisdictions have challenged Census counts in the past, but without much success. As additional Census data is released, technical analyses will shed more light on the accuracy of the count.
We invite you to dig deeper at ppic.org. Related PPIC resources include:

- New Patterns of Immigrant Settlement in California
- PPIC Statewide Survey: Californians and Population Issues
- Are the Rich Leaving California?
- California’s Future Population
- Immigrants in California
- The Inland Empire in 2015

Contact a PPIC expert:
Hans Johnson

This publication is part of PPIC’s Planning for a Better Future project.
CALIFORNIA FACES GROWING WATER MANAGEMENT CHALLENGES

Water management in California has always been difficult, especially because the state’s variable climate is marked by long droughts and severe floods. The state also features stark regional differences in water availability and demand; it relies on a vast network of storage and conveyance facilities to deliver water from the wetter parts of the state (mostly the northern and eastern mountains) to population and farming centers in the Bay Area, the San Joaquin Valley, and Southern California. This supply network is now threatened by the physical and biological fragility of the system’s hub in the Sacramento–San Joaquin Delta.

Other challenges are on the horizon. Even if current efforts to reduce per capita water use are successful, population growth is likely to increase water demand in urban areas. At the same time, conflicts are growing between human water uses and water necessary to support fish and other wildlife. In addition, California faces serious and growing threats to life and property from flooding, particularly in the Central Valley.

Climate change will play an important, if uncertain, role. California’s natural variability is likely to increase, accentuating droughts and floods. Rising air temperatures are expected to significantly reduce the Sierra Nevada snowpack, affecting water storage as well as winter and spring flood flows. Higher water temperatures may make it harder to maintain aquatic habitats for native fish species.

Over time, all of these challenges are likely to intensify. Potential solutions will involve difficult and sometimes costly tradeoffs, as well as inconvenient legal and political changes.

RISING TEMPERATURES WILL DIMINISH THE SIERRA NEVADA SNOWPACK


NOTES: SWE is snow water equivalent. These scenarios are based on projected temperature increases: 0.6°C (2020–2039), 1.6°C (2050–2069), and 2.1°C (2080–2099), expressed as a percentage of estimated present conditions (1995–2005). These are modest increases relative to some model projections. With higher temperature increases, the snowpack would be commensurately smaller.
CALIFORNIA’S BIGGEST WATER CHALLENGE: INSTABILITY IN THE DELTA
As the fragile hub of California's water supply, the Delta now poses serious risks to the economies of the Bay Area, Southern California, and the San Joaquin Valley. Sea level rise and earthquakes threaten the weak Delta levees that keep salt water at bay. Environmental measures are also having an effect on water supplies. Since 2007, the collapse of native fish species has led to court-ordered cutbacks of pumping from the southern Delta. The Delta's physical deterioration will not be delayed by political indecision: the state faces inevitable, fundamental change in this region.

AN EARTHQUAKE COULD CAUSE SALT WATER TO FILL THE DELTA’S LOW- LYING ISLANDS AND DISRUPT WATER SUPPLIES

• **A peripheral canal is the best approach for addressing both ecosystem and economic risks.**
  Instead of pulling water through the Delta to the pumps (the current system), a peripheral canal (or tunnel) would tap water upstream on the Sacramento River and move it around (or underneath) the Delta to the pumps. This change would be good for native fish: fewer would be trapped in the pumps and most would benefit from an increase in natural tidal flows within the Delta. It would also be good for the economy, improving both water quality and water supply reliability. Dual conveyance (a peripheral canal combined with continued through-Delta pumping) is a potential near-term solution. But by late in this century, sea level rise and levee failures could make Delta waters too salty to sustain through-Delta pumping.

• **Governance and finance solutions are needed; so is attention to the Delta economy.**

To ensure that the canal is managed for environmental benefits and to prevent a “water grab” by those who rely on Delta exports, safeguards are needed. For example, giving fish managers a share of conveyance capacity can provide environmental safeguards. Financing mechanisms are needed to ensure that water users pay for the new infrastructure and support ecosystem restoration. Funds will also be needed for transitions in the Delta. The region will lose some agricultural islands from levee failures, whether or not there is a canal, but it could benefit from new recreation opportunities.

**WATER SUPPLY PLANNING NEEDS TO RELY ON A PORTFOLIO APPROACH**

Since the 1980s, water supply planning has been moving toward a portfolio approach: instead of looking for “silver bullets,” planners are developing multiple supply sources and water conservation strategies, balancing costs and reliability.

• **California is fortunate to have many options for meeting new demands.**

Expanding traditional supply sources—particularly surface reservoirs and native groundwater supplies—is more difficult than in the past. But there is considerable scope for cost-effective expansion of nontraditional supplies such as recycled wastewater, and for improving water use efficiency. Water marketing—the sale or leasing of water—plays an important role in increasing efficiency; it allows water to be transferred from lower- to higher-value farming and to growing urban areas.

• **Much progress has been made since the drought of the early 1990s.**

Water markets have been valuable in supplying water to cities and high-value agriculture during droughts and for long-term growth. Urban water use efficiency has risen in most areas thanks to new plumbing codes, better technology, and better pricing incentives. Regional cooperation is helping local utilities cope with supply emergencies.

**CHANGING WATER DEMANDS CAN BE MET IN MANY WAYS**

![Bar chart showing water demand categories](chart.png)

- **Urban efficiency**
- **Recycled water**
- **Groundwater storage**
- **Surface storage (state)**
- **Agricultural efficiency (net)**
- **Forest management**
- **Desalination**
- **Cloud seeding**

** Millions of acre-feet per year**

*SOURCE: Department of Water Resources, California Water Plan Update 2009 (Bulletin 160-09).*

*NOTE: Annual production potential from new water sources and conservation by 2030.*
• **Underground storage has great potential but faces institutional obstacles.**
Where space is available in aquifers, storing water underground can be a cost-effective way to save it for dry years. This “groundwater banking” will become increasingly important as the snowpack declines. The current lack of state regulation makes success dependent on agreements among local parties. Groundwater banking has increased in some areas, but much more could be done, particularly in the Central Valley.

• **Surface storage expansion has been very contentious.**
Increased surface storage could make up for some loss of storage in the snowpack and could also provide more flexibility in managing floodwaters and environmental flows. However, new storage has not been proven to provide large new supplies of water, and it will be less valuable if climate change reduces overall precipitation. Large financial and environmental costs also raise concerns. Public opinion appears split: 50 percent of all adults feel that California should focus on improving water use efficiency; 43 percent prefer building new storage (PPIC Statewide Survey, July 2009).

• **California needs to decide how to pay for water investments.**
State general obligation bonds (funded by tax dollars) have funded some local water supply investments in recent years. When investments lead to true public benefits, such as ecosystem restoration, relying on tax dollars makes sense. But these investments take general revenue funds away from education and other state budget priorities. One alternative is the “user pays” principle, which guided investments in the State Water Project. Also, higher water rates create incentives to use water more efficiently.

**CALIFORNIA HAS ONLY JUST BEGUN TO ADDRESS THE CHALLENGE OF EXTREME FLOOD RISKS**
Sacramento has the highest flood risk of any major U.S. city, and many other areas in the Central Valley are at extreme risk of flooding. These risks are expected to grow with climate change. Although the state has recently increased investments in flood control infrastructure, more work is needed to keep new development out of harm’s way.

• **Flood management faces major funding challenges.**
This sector has traditionally relied on large (65 percent) federal cost shares, but federal contributions have been lagging and are likely to decline in the future. State investments in flood prevention increased considerably after Hurricane Katrina, thanks to voter approval of two state general obligation bonds. These investments are important, but the available funds ($5 billion) fall far short of estimated needs (more than $17 billion in the Central Valley alone). Increasing local contributions can be difficult, given that local assessments require voter approval.

**STATE HAS SURPASSED THE FEDERAL GOVERNMENT IN FLOOD INVESTMENTS**

![Graph showing state and federal spending on flood investments from 1998 to 2009](image-url)

**SOURCES:** U.S. Army Corps of Engineers; Governors’ Budgets.
**NOTES:** Figure includes spending on operations, maintenance and new investments. State spending dipped in the late 2000s because bond sales were limited by the recession. Data are in fiscal years (2009 = 2009–2010).
- **Local governments have few incentives to limit flood risk exposure.**
  A 2003 court decision made the state liable for damage from failure of most Central Valley levees, even those maintained by local agencies. A legislative package passed in 2007 requires that locals make land-use decisions that will reduce flood risk to new homes in the Central Valley, but implementation is still several years off. Moreover, it is unclear whether climate change will be taken into account in setting new rules.

- **Residents also have few incentives to limit flood risk exposure.**
  As long as buildings are located behind levees deemed to provide protection against a “100-year flood,” there is no requirement to disclose flood risks to residents at the time of sale, even though many areas would face serious flooding if levees were breached. Within the Central Valley, the state recently began to send annual flood risk notices to landowners in these zones—a positive step. Few Californians hold flood insurance, which is required only in areas with extreme flood risk. Fifty-seven percent of Californians are very (28 percent) or somewhat (29 percent) concerned that flood risks will increase with climate change (PPIC Statewide Survey, July 2011).

**LOOKING AHEAD**
California has the tools to help secure a safe and reliable water supply, improve conditions for aquatic species, and reduce flood risks. In recent years, water managers have made significant progress toward these goals. But the challenges are increasing with population growth and climate change.

In the final months of 2009, the state legislature passed a comprehensive package of water legislation that begins to address some key issues. For example, groundwater basins will now have to be monitored throughout California, and penalties for illegal diversions of surface water have been strengthened, as have staffing resources to enforce water rights. In addition, a new governance structure for the Delta sets the stage for more integrated management of this critical region. The legislation also requires per capita conservation targets for urban water users and better measurement by agricultural water users. Stakeholder resistance to state oversight weakened the legislation considerably in the final weeks of negotiations. Nevertheless, these are important first steps toward more sustainable management of California’s water.

The package includes an $11.14 billion bond measure. Concerns about weak voter support during the economic downturn led the legislature to delay putting it on the ballot until November 2012. Whether or not voters approve the bond, the state will need to find ways to pay for water infrastructure and for critical improvements in aquatic habitat. Local funding will need to increase under any circumstances. If public policy discussions focus solely on the water bond, the state will miss an opportunity to build on the other reforms.

In short, the legislative package is a good beginning. Increased momentum in policy reform—coupled with new investments—is essential to the state’s future. Some changes will be politically difficult. The following issues still require sustained attention.

**The Delta.** A peripheral canal or tunnel has the best potential for safeguarding the Delta’s environment while maintaining water supply reliability. But this solution requires solid policies on governance, finance, and mitigation for Delta landowners and residents. Given the extreme environmental degradation of this region, water users must be prepared to take less water from the Delta, at least until endangered fish populations recover.

**Water efficiency.** Better pricing policies—such as tiered water rates with higher prices for greater use—can heighten incentives to conserve.
Groundwater management. Better basin management is a prerequisite to realizing the significant potential of groundwater banking. Many groundwater basins have effective local management protocols, especially in Southern California and Santa Clara County. But progress is needed elsewhere.

Flood risk exposure. To reduce risks to new development, state floodplain mapping should account for climate change and increasing flood risks. To boost homeowner awareness, the risks of living behind levees should be disclosed statewide, building on the new policy in the Central Valley, and flood insurance requirements should perhaps be strengthened. More forward-looking federal policies will also be needed to address changing flood risks.

Climate change. Higher water temperatures and sea level rise will alter aquatic habitat in significant but largely unexplored ways. Environmental laws will require that water users respond to these changes with potentially costly management actions (e.g., changing reservoir operations). Anticipating the likely changes would allow the design of more cost-effective responses.
CALIFORNIA FACES A SKILLS GAP
California’s education system is not keeping up with the changing demands of the state’s economy—soon, California will face a shortage of skilled workers. Projections to 2025 suggest that the economy will continue to need more—and more highly educated—workers, but that the state will not be able to meet that demand. If current trends persist, in 2025 only 35 percent of working-age adults in California will have at least a bachelor’s degree but 41 percent of jobs will require at least a bachelor’s degree. This equates to a shortfall of one million college graduates. Substantial improvements in educational outcomes are needed to meet the demands of tomorrow’s economy and ensure the economic prosperity of Californians. Failure to make improvements will result in a less-productive economy, lower incomes for residents, less tax revenue for the state, and more dependence on social services.

BY 2025, DEMAND FOR COLLEGE-EDUCATED WORKERS WILL OUTSTRIP THE SUPPLY

POPULATION TRENDS COLLIDE WITH GAPS IN ECONOMIC DEMAND

- California’s economy increasingly demands more highly educated workers.
  For decades, California employers have needed more workers with college degrees. This shift toward more highly educated workers has occurred as a result of changes both within and across industries.

- The supply of college graduates will not keep up with demand.
  Two demographic trends will work against future increases in the number of college graduates. First, the baby boomers—a well educated group—will reach retirement age, and for the first time large numbers of college graduates will leave the workforce. Second, the population is shifting toward groups with historically lower levels of educational attainment. In particular, Latinos—who now make up the largest group of young adults—have historically had low rates of college completion. And there will not be enough newcomers to California—from abroad or from other states—to close the skills gap.
• Higher education is largely a public endeavor in California.  
More than four of every five college students in California are enrolled in one of the state’s three public education systems: the community colleges, the California State University, or the University of California. Three of every four bachelor’s degrees awarded annually come from either CSU or UC.

• Large numbers of California’s high school graduates attend college . . .  
More than 60 percent of California’s high school graduates enroll in college within a year of completing high school. Most go to community colleges (35 percent)—open access, widespread geographic distribution, and relatively low fees make California’s community colleges especially popular. Compared to other states, California’s college-bound high school graduates are more likely to enroll in community colleges than in four-year colleges or universities.

• . . . but many never earn a degree.  
Lack of preparation for college-level work and lack of financial resources impede many students’ ability to move ahead in the higher education system. Only about one in ten community college students transfer to a four-year university. Even among those taking transfer-eligible courses, only about one in four eventually succeeds in transferring. About half of CSU students graduate within six years of entering as freshmen. Completion rates for transfer students are similar to those of other CSU juniors, with about three in four transfer students obtaining bachelor’s degrees. Graduation rates are much higher in the UC system, with four of every five students earning a degree within six years of entering university.

CALIFORNIA COLLEGE GRADUATES EARN MORE, AND THE GAP IS WIDENING

SOURCE: D. Reed, California’s Future Workforce (PPIC, 2008).

• Most Californians believe that a college degree is critical for success . . .  
Almost 60 percent of adults believe that a college education is necessary for success in today’s work world. Latinos are especially likely to hold this view, with 73 percent believing in the value of a college education.

• . . . and they are right.  
Census Bureau data show that the wages of college graduates are about 90 percent higher than the wages of workers with only a high school diploma. The value of a college degree has grown rapidly over the past quarter century, and in the current economic downturn, unemployment rates are far lower for college graduates than for adults with less education.
LOOKING AHEAD
California is facing a serious shortfall in its supply of college-educated workers. In a future with fewer college-educated adults, unemployment rates will be higher and wages will be lower. Improving the educational attainment of the state’s young adults will foster greater individual success and increase economic growth.

- **Modest improvements can result in substantial gains.**
  Gradual increases in college enrollment rates, a 20 percent improvement in transfer rates, and an improvement in completion rates at CSU would, together, reduce the skills gap by one-half by 2025.

- **Reductions in higher education funding will make things worse.**
  Without concerted efforts to improve college attendance and graduation in California, the state’s economic future will be much less bright. Shortchanging education for quick budget fixes could seriously shortchange California’s economic future. One alternative would be to increase fees so that students from higher-income families pay more in fees and increase aid so that students from lower-income families face a lower financial burden.

- **Alternative forms of postsecondary training are needed.**
  Because it is unlikely that the state will be able to completely close the skills gap by increasing the number of graduates with bachelor’s degrees, other forms of postsecondary training and workforce skills development are essential to the state’s future.

**Unemployment Rates Are Much Lower for College Graduates**

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Unemployment Rate (%)</th>
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<tbody>
<tr>
<td>Less than a high school diploma</td>
<td>19.7</td>
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<tr>
<td>High school diploma</td>
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<tr>
<td>Some college, no degree</td>
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<tr>
<td>Associate degree</td>
<td>9.2</td>
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<tr>
<td>Bachelor’s degree or higher</td>
<td>6.5</td>
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We invite you to dig deeper at ppic.org. Related PPIC resources include:
Higher Education in California: New Goals for the Master Plan
Educating California: Choices for the Future
Closing the Gap: Meeting California’s Need for College Graduates
California’s Future Workforce: Will There Be Enough College Graduates?
PPIC Statewide Survey: Californians and Higher Education

Contact a PPIC expert:
Hans Johnson

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