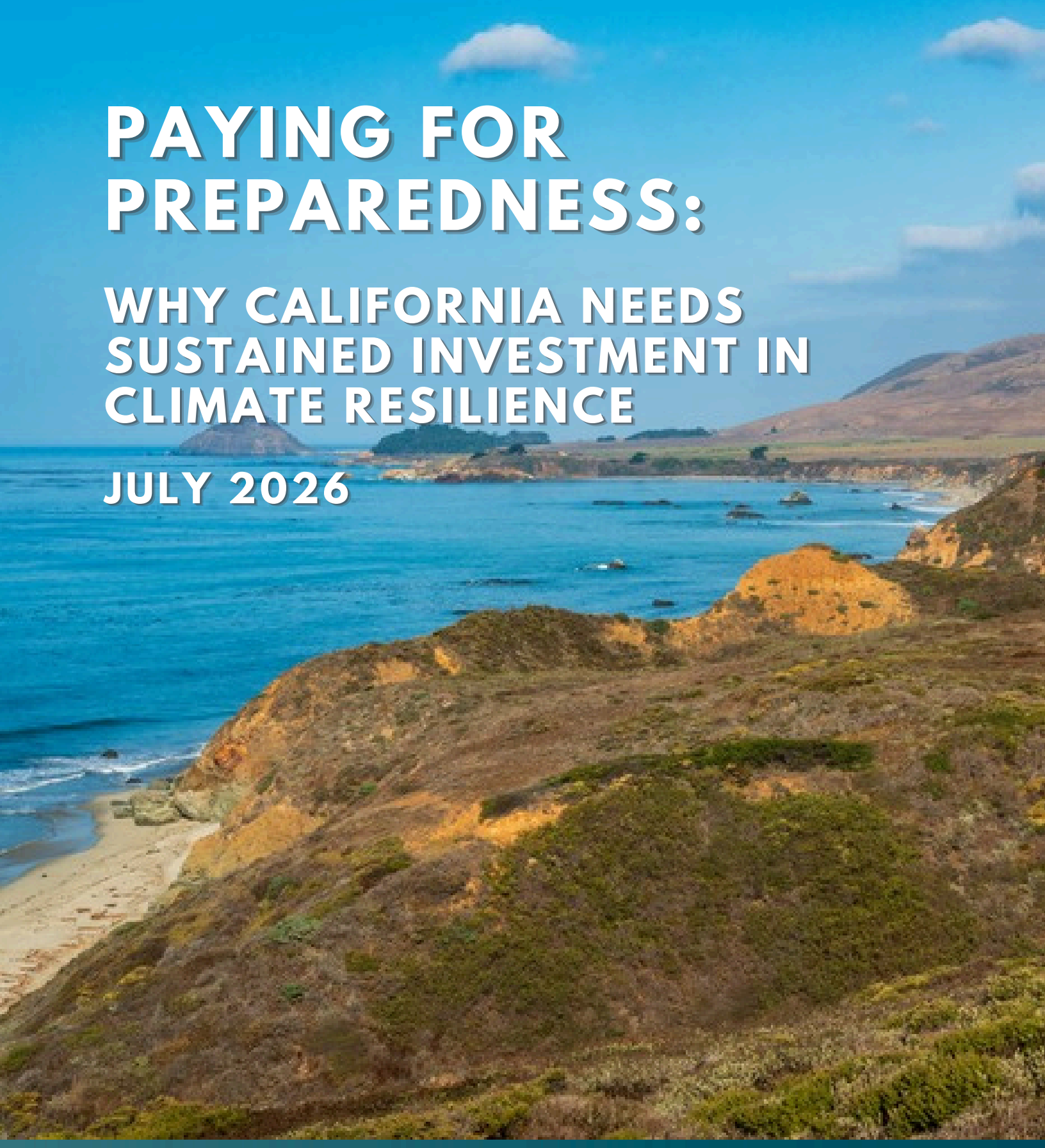

PAYING FOR PREPAREDNESS:

WHY CALIFORNIA NEEDS SUSTAINED INVESTMENT IN CLIMATE RESILIENCE

JULY 2026

CA FWD

Insurance for Good

ACKNOWLEDGMENTS

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Report authors: Nuin-Tara Key and Joel Martinez

California Forward (CA FWD) is a multi-partisan, 501(c)(3) non-profit organization building a New California Economy that is sustainable, resilient, and inclusive. We support economic growth using a regions-up approach, stewarding state resources, and building resilience in the face of a changing climate. Learn more at https://cafwd.org/.

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California faces a structural gap between the scale of its climate risks and the long-term investment required to manage them effectively. The state has committed to ambitious climate goals and made meaningful investments during periods of budget surplus—but without a dedicated, durable revenue source those investments have proven vulnerable to annual budget cycles, volatile revenues, and competing spending priorities.

The consequences of this gap are fiscal as well as physical. Each dollar not invested in proactive resilience generates cascading costs: emergency response expenditures, disaster losses, reduced state and local tax revenues, insurance market instability, rising municipal borrowing costs, and long-term erosion of California's economic competitiveness. Climate-driven revenue erosion tied to inadequate investment in loss reduction and resilience will compound—not resolve—underlying shortfalls. When climate disasters strain state and local budgets, residents pay through rising utility bills, insurance premiums, and reduced public services—making California less affordable for the households and businesses that drive its economy.

California needs a dedicated, sustained revenue mechanism for climate resilience—one that provides more predictable funding for multi-year investments and enables the state to safeguard long term budget and economic stability through sustained investment in risk reduction and resilience. Identifying a dedicated and sustained revenue source for resilience is a multi-year endeavor.

It is also, candidly, a difficult one. In a period of strained public budgets and projected structural deficits, new revenue will not come easily—and meeting the scale of California's resilience needs will likely require looking beyond traditional public sources alone. Options worth examining include mechanisms that link costs to climate risk contribution or benefit received, approaches that leverage private capital and insurance markets, and blended public-private structures—each of which should be weighed against the evaluation criteria this report proposes. This report is not another call for more funding for one more priority. It is an assessment of both today's fiscal constraints and the long-term requirement to think beyond the usual playbook.

EXECUTIVE SUMMARY

To start this important conversation, this report makes the case for elevating treating climate as an economic and fiscal issue as an urgent priority for state policy makers and provides an initial framework for considering revenue sources for resilience investments, including:

- **Adequacy:** Revenue generation potential, stability, long-term sustainability, and scalability to meet California's expanding climate risks.
- **Accountability:** Ease of public understanding of how the revenue mechanism operates, transparency of connection between revenue collected and resilience outcomes, and simplicity of compliance and reporting.
- **Cost of Administration:** Government administrative burden and collection costs, feasibility of audit and compliance mechanisms, potential for economies of scale, and opportunities for public or private sector participation in administration.
- **Efficiency:** Cost recovery mechanisms, targeting of beneficiaries or contributors to risk, market and behavior impacts, incentives for private-sector participation, and risk transfer capabilities.
- **Design and Implementation:** Multi-peril potential, flexibility of funding use, and administrative complexity.
- **Equity:** Distributional impacts across income levels, proportionality of burden to damages caused or benefits received, and potential to address or exacerbate existing inequities.

Why this approach?

The central argument is straightforward: resilience investment is not a discretionary expenditure. It is a fiscal backstop for California's revenue base, a stabilizer for its insurance and housing markets, and a prerequisite for the long-term economic competitiveness of the state's communities.

The choice is not between investing in resilience and saving money—it is between investing proactively at lower cost or paying reactively at much higher cost.

EXECUTIVE SUMMARY

Key Findings

Challenges:

- **Structurally fragile funding:** A review of 31 current resilience grant programs found that nearly two-thirds of California's adaptation programs rely on multiple funding sources, with program lifespans averaging just over 2 funding cycles, and nearly one-third as one-time efforts.
- **Fiscal double impact:** Climate events generate a revenue-spending squeeze—revenues decline precisely when emergency spending requirements increase.
- **Growing liability:** The California Fair Access to Insurance Requirements (FAIR) Plan's total exposure reached $724 billion by December 2025—a 230% increase in three years—representing a growing liability fueled by escalating wildfire risk.

Opportunities:

- **Proven returns:** The National Institute of Building Sciences (NIBS) documents an average $6-to-$1 return on federally funded hazard mitigation grants; building code upgrades deliver an average $11-to-$1 return—national averages that represent a meaningful financial case for sustained resilience investment.
- **Scale of impact:** A $5 billion annual resilience investment—applying the NIBS 6-to-1 multiplier for federally funded grants—could protect approximately $30 billion in economic value, a figure exceeding the state's projected structural deficit.
- **Viable pathways exist:** Other states are pursuing dedicated climate resilience funding. Vermont and New York enacted Climate Superfund laws, and Hawaii established climate-specific tourist taxes—reflecting growing state-level momentum for sustained revenue mechanisms.

Sources: California Forward analysis (2026); California Department of Insurance (2025); Legislative Analyst's Office (2025); NIBS (2019)

THE FISCAL IMPERATIVE: WHY CALIFORNIA CANNOT AFFORD INACTION

Economic Stability Through Resilience Investment

California currently lacks a dedicated, durable revenue source for climate resilience and adaptation. The state relies primarily on general fund appropriations and general obligation bonds—funding mechanisms that while critically important, are insufficient on their own for the scale of sustained commitment required to address California's compounding climate risks.

The structural limitations of the current funding approach have become increasingly visible. During the 2021–2022 budget surplus, the state committed an historic, multi-year package of approximately $15 billion toward climate and community resilience—including the state's first investment package in community resilience.[1] However, when subsequent budget shortfalls required difficult tradeoffs, long-term community resilience investments were among the first to be reduced in the face of other budget pressures.[2]

This pattern is not a failure of political will—it reflects a structural design problem. Without a dedicated revenue source, resilience investment will remain subject to the same budget volatility as discretionary spending. The result is a reactive approach to risk management: funding and attention shift toward the disaster that struck most recently, rather than enabling the sustained, forward-looking investment required to reduce compounding risks over time.

In January 2026, the Legislative Analyst's Office (LAO) projected structural deficits ranging from $20 billion to $35 billion annually beginning in 2027–28, driven by the continued outpacing of spending growth to revenue growth.[3] That spending growth is not only a story of rising disaster response costs; it also reflects growing safety-net expenditures—driven in part by underinvestment in a more diversified, resilient economy that expands economic opportunity and reduces demand on public assistance. The Newsom administration's May 2026 budget revision subsequently reduced projected out-year deficits by more than half through a combination of new revenues and spending reductions, though significant structural imbalances remain.[4] In this constrained fiscal environment, climate disasters directly erode state revenues: property tax reassessments following disasters reduce local tax bases, disrupted commerce lowers sales tax receipts, and insurance market instability affects property values and transactions. This context makes dedicated resilience funding more urgent, not less: climate-driven revenue erosion will compound the state's structural deficit, while proactive investment offers a path to protecting that revenue base.

A Decade of California Climate Disasters

Period	Event	Economic & Human Impact
2012–2016	Historic Drought & Tree Mortality	California's most severe drought in recorded history. Five years of heat and water deficit contributed to the death of more than 147 million trees statewide—over 200 million in the Sierra Nevada alone—substantially increasing dry fuel loads across the state.[5]
2017	Oroville Dam Spillway Failure	Following years of drought, extreme atmospheric river storms produced flows that damaged the dam's spillway, forcing the emergency evacuation of approximately 188,000 people downstream. Repairs to the spillway cost approximately $1.1 billion.[6]
2017-2018	North Bay Fires & Woolsey Fire	The October 2017 North Bay fires—including the Tubbs, Atlas, and Nuns fires—burned more than 161,000 acres across Napa and Sonoma counties, resulted in 43 fatalities, and destroyed approximately 8,200 structures. The 2018 Woolsey Fire burned nearly 97,000 acres across Ventura and Los Angeles counties, destroying more than 1,600 structures.[7]
2018	Camp Fire	The Camp Fire burned over 153,000 acres in Butte County, resulted in 85 fatalities, and destroyed more than 18,000 structures—including most of the residential and commercial building stock in the town of Paradise, displacing over 27,000 residents. PG&E, whose equipment ignited the fire, subsequently filed for bankruptcy protection.[8]
2020-2021	Record Wildfire Seasons	The 2020 wildfire season set a record with more than 4.2 million acres burned statewide—more than double any previously recorded year. Wildfire-related economic impacts, including prolonged smoke exposure affecting worker productivity and business activity, contributed to an estimated $60 billion in income losses across California from 2017 to 2021.[9]
2021-2022	Back-to-Back Drought	A multi-year drought reduced Central Valley agricultural employment by up to 3.8% and caused approximately $1.7 billion in farm revenue losses in 2022 alone. Lake Oroville fell to its lowest recorded level since 1968, halting hydroelectric power generation for the first time in the dam's operational history.[10]
2022-2023	Atmospheric River Flooding	A series of powerful atmospheric river storms caused an estimated $5–$7 billion in economic losses across California, producing widespread flooding, landslides, and levee failures—including a levee break on the Pajaro River that inundated the community of Pajaro. Prior drought and wildfire scarring reduced soil absorption capacity, compounding flood damage.[11]
2025	Los Angeles Wildfires	The Palisades and Eaton fires destroyed more than 16,000 structures and resulted in at least 28 fatalities. Early economic assessments estimated total property and capital losses in the range of $76–$131 billion, with preliminary estimates of $4.6 billion in direct GDP losses for Los Angeles County and $297 million in lost wages.[12]

The Cost of Inaction: Impacts Across California's Economy

Climate disasters generate direct costs and cascading economic consequences that extend well beyond immediate emergency response. Understanding the scope of these costs is essential to evaluating the economic case for proactive investment in the reduction of climate risk.

Household Financial Stability

For most California families, home equity represents the primary vehicle for wealth accumulation. Climate risks undermine that foundation through both direct physical risk to the home and rising insurance costs, each of which is capitalized into property values. Research using mortgage escrow data finds that average homeowner insurance premiums have risen sharply since 2017, with premium increases in the most disaster-exposed ZIP codes associated with reductions in home price appreciation exceeding $40,000 per property.[13] As insurance becomes unaffordable or unavailable in high-risk areas, home sales stall and property values decline—eroding the household wealth on which California families depend and directly cutting local property tax revenues needed to support critical public services.[14] Beyond property values, households face extended displacement periods, lost income from business closures, and the costs of temporary housing from climate disasters. Lower-income households and renters—who typically have fewer financial reserves and less insurance coverage—experience the most severe impacts, with many unable to return to their communities after major events. Affordable housing providers face similar insurance pressures: because operators cannot raise rents on income-restricted units to cover rising insurance costs, premium increases threaten loan performance and discourage new development.[15]

Workforce and Productivity

California's workforce bears climate costs through lost income, reduced productivity, and health impacts that extend well beyond the immediate aftermath of disaster events. Wildfires generated an estimated $60 billion in California income losses from 2017 to 2021, as workers experienced reduced hours, business closures, and unsafe conditions across affected communities.[16] For instance, the 2025 Los Angeles wildfires resulted in $297 million in lost wages for local employees.[17]

Drought compounds these impacts: the 2021 and 2022 California droughts decreased Central Valley employment by 2.9% and 3.8%, respectively, translating to more than 19,000 job losses during these drought years across agriculture and food processing.[18]
Extreme heat reduces worker productivity while increasing health risks, particularly for the roughly 32 million U.S. outdoor workers in construction, agriculture, transportation, and emergency services.[19] Analysis projects that construction and extractive industries workers would experience the highest earnings losses among outdoor occupations by mid-century as extreme heat increases unsafe working conditions.[20] Although California requires heat illness prevention measures when indoor temperatures reach 82°F, indoor workers in factories, warehouses, kitchens, and food processing facilities also face heat exposure risks including heat cramps, heat exhaustion, and heat stroke.[21]

Health and Healthcare Systems

Climate-driven events impose significant costs on California's healthcare system. Wildfire smoke in the San Francisco Bay Area alone resulted in an estimated $7.8 billion in health costs in 2018.[22] Estimated premature deaths of 52,480 to 55,710 individuals due to California wildland fires in 2008-2018 had an assessed economic impact of $432 to $456 billion.[23]
Between 2007 and 2018, over 99% of California residents lived in a county that experienced chronic wildfire-induced smoke pollution.[24]

Extreme heat similarly imposes substantial costs: between 2016 and 2020, heat events resulted in approximately $1 billion in additional national healthcare costs annually, generating nearly 235,000 additional emergency department visits and more than 56,000 hospital admissions each summer.[25] For California, 1.5 million in added emergency department visits per year, costing an estimated $52 million annually, are projected to 2050, using moderate climate projections.[26] California's 2022 coastal inland heat event alone reduced work time in weather-exposed industries by $210 million.[27]

Climate disasters also disrupt healthcare access. Emergency department visits for non-urgent conditions declined during days of extreme wildfire smoke—as California residents increasingly would forego Emergency Room care for injuries and acute pain, and potentially causing chronic conditions to worsen and require more expensive future treatment.[28]
An estimated mean sea-level rise of 4.6 feet along the California coast would place approximately 55 healthcare facilities at risk of inundation by the end of the century.[29]

Business Operations and Investment

California's economy—often cited as the fourth largest in the world—depends on complex supply chains, reliable infrastructure, and predictable operating conditions.[30] Climate events threaten all three, creating ripple effects that extend far beyond immediate disasters.[31] Wildfires disrupt major transportation corridors, power outages halt production, and sustained poor air quality forces business closures and reduces consumer activity.[32]

Commercial insurance premiums have increased alongside residential rates. Businesses in high-risk areas face difficult choices: absorb rising costs, relocate operations, or operate without adequate coverage.[33] These pressures fall with particular force on small businesses and companies with significant physical assets. Growing climate uncertainty also affects long-term planning: companies evaluating expansion or relocation decisions increasingly factor climate risk into their calculus, influencing where jobs and capital are directed.[34]

Government Revenue Exposure: State, Local, and Federal

Protecting California's Revenue Base

California's General Fund relies on three primary revenue sources: personal income tax, sales and use tax, and corporate tax. For the 2024-2025 fiscal year, the General Fund totaled approximately $202 billion.[35] Climate disasters threaten each revenue source through distinct but interconnected pathways.

Revenue Source	2024-25 Amount	Share of General Fund	Primary Climate Risk Pathway
Personal Income Tax	$126.3 Billion	~62%	Wealth migration, smoke/heat-driven labor productivity and employment loss
Sales & Use Tax	$33.7 Billion	~17%	Supply chain disruption, post-disaster spending contraction, small business closures
Corporate Tax	$41.7 Billion	~21%	Physical asset loss, operational disruption, spread of financial risk
Total 'Big Three'	**$201.7 Billion**	**100%**	

These revenue sources are not merely aggregate statistics—they represent the financial foundation for state services, from education and healthcare to public safety and infrastructure. Sustained resilience investment functions as a fiscal backstop for this revenue base: just as insurance protects against individual asset loss, strategic resilience investment protects the state's collective revenue-generating capacity.

California's personal income tax is highly progressive: in 2022, the top 1% of earners contributed roughly 40% of collections.[36] These higher-income households are also the most geographically mobile. Infrastructure failures, persistent poor air quality, and degraded livability create conditions that can accelerate wealth migration—reducing income tax revenue at precisely the moment emergency costs spike. Preventing even a 1% reduction in wealth flight attributable to climate instability would protect approximately $1.26 billion in annual personal income tax revenue—an illustration of the revenue stakes of underinvestment in resilience.

Rebuilding after climate disasters creates temporary spikes in construction-related sales tax, but the long-term effect on sales tax revenue is negative.[37] Floods and fires destroy inventory, force permanent small business closures, and suppress consumer spending in affected areas. Research on high-tide flooding demonstrates that even moderate, recurring flood events measurably disrupt local business activity and sales tax generation—with impacts compounding as events become more frequent.[38] Flood mitigation investments are documented by the National Institute of Building Sciences (NIBS) to deliver a $6-to-$1 return on federally funded grants, providing a strong fiscal rationale for sustained investment.[39]

Climate disasters also impact corporate tax returns through repairs, asset replacement, and higher insurance premiums that reduce taxable net income. While utilities face unique liability context in California that also come into play, following the 2018 Camp Fire and subsequent bankruptcy, PG&E's debt was significantly downgraded.[40] As of 2026, PG&E has completed its multiyear bankruptcy exit process,[41] which included a $7.5 billion ratepayer-backed bond to pay for wildfire-related liabilities, making it the longest and largest bond of its kind in U.S. history.[42] The 2025 Standard and Poor's (S&P) downgrade of Southern California Edison to BBB- illustrates another transfer of financial impacts: higher utility borrowing costs are passed through to businesses and other utility customers as higher rates, further reducing profitability and tax payments.[43]

Beyond utilities, corporate tax revenue depends on businesses maintaining operations after climate disasters. Building code improvements are documented by NIBS to deliver an $11-to-$1 return—the strongest single multiplier documented—by keeping commercial districts operational and reducing reconstruction costs.[44]

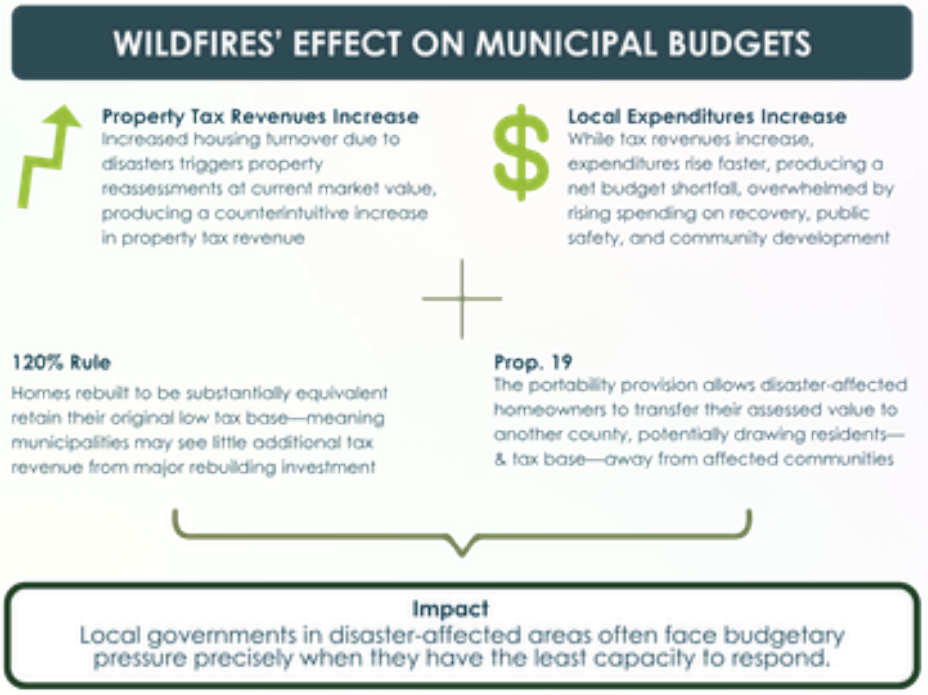
Applying the NIBS-documented $6-to-$1 return for federally funded hazard mitigation grants—a national average across flood, wind, earthquake, and fire—**a $5 billion annual resilience investment could protect approximately $30 billion in economic value.** This figure is roughly comparable to the LAO's projected structural deficit range of $20 billion to $35 billion annually beginning in 2027–28, underscoring the scale of fiscal risk that sustained resilience investment could help mitigate. **This isn't just about avoiding disaster costs. It's about maintaining the revenue base that funds critical and essential state services. Resilience investment protects the fiscal foundation that makes government services possible.**

Local Budgetary Stress and State Fiscal Pressure

California's local governments operate under significant fiscal constraints due to Proposition 13.[45] When climate disasters strike, they generate budgetary stress through mechanisms that create predictable state-level consequences—though the dynamics are more complex than a simple revenue collapse.

Research examining California municipal finances from 1990–2015 finds that wildfires increase both revenues and expenditures at the local level—with expenditures rising faster, producing a net budget shortfall. Due to California's Proposition 13, increased housing turnover from wildfires and other climate disasters triggers property reassessments at current market values and can produce a counterintuitive increase in property tax revenue in the near term. However, this partial offset is overwhelmed by rising spending on recovery, public safety, and community development. The net effect on municipal budgets is negative and substantial—averaging a 10.7% reduction in excess revenues per capita and a 24.7 percentage point increase in the probability of a budget deficit.[46]

California's tax code provisions do create important asymmetries, however. Under the 120% Rule, homes rebuilt to be substantially equivalent retain their original low tax base—meaning municipalities may see little additional tax revenue from major rebuilding investment.[47] Proposition 19's portability provision allows disaster-affected homeowners to transfer their assessed value to another county, potentially drawing residents—and tax base—away from affected communities.[48] These provisions, combined with the surge in emergency expenditures, mean that local governments in disaster-affected areas often face budgetary pressure precisely when they have the least capacity to respond.



The 2025 Los Angeles wildfires demonstrated this dynamic at scale. The LAO estimated a $10–$20 billion reduction in assessed values, translating to an immediate $100–$200 million loss in local tax revenue for the 2025–26 cycle—creating a double impact of revenues declining precisely when emergency disaster spending requirements increase.[49]

When local governments face climate-induced revenue contraction, their budgetary stress becomes a state liability through predictable mechanisms: state declarations of emergency that trigger direct resource commitments and pressure to backfill local service gaps using special funds or debt instruments that create long-term obligations.

This dynamic is analogous to deferred infrastructure maintenance: short-term budget decisions that appear to achieve balance create increasing fiscal fragility over time. Proactive resilience investment addresses this deferred risk rather than allowing it to compound into larger, more costly interventions.

Federal Funding Uncertainty

Recent federal policy shifts have created additional uncertainty regarding California's access to grant funds for risk reduction from both the Federal Emergency Management Agency and the Department of Housing and Urban Development. As federal resources become less reliable, the case for establishing a dedicated state revenue source is strengthened—not only to fill potential gaps in federal support, but to ensure that California maintains demonstrable risk-reduction investments that position the state to access federal matching funds when they are available. Without dedicated state mechanisms, the General Fund absorbs costs previously shared with federal partners while the state remains in a reactive posture.

Market Contagion: Insurance, Housing, and Municipal Finance

Climate inaction generates feedback loops between insurance, housing, and municipal bond markets that extend well beyond any individual hazard event and create systemic financial risk at the state level.

The FAIR Plan: A Risk Every Californian Shares

As private insurers have withdrawn from high-wildfire risk areas of the state, the California FAIR Plan—the state's insurer of last resort—has grown[50]. By December 2025, the FAIR Plan's total exposure reached $724 billion, a 230% increase in three years from approximately $300 billion in 2022[51]; the growth has only recently shown signs of slowing. Policyholders are concentrated in the high wildfire risk areas of the state. Growth in the FAIR Plan, however, creates escalating financial exposure for all policyholders statewide as deficits in the Plan are passed on through assessments to the private market.

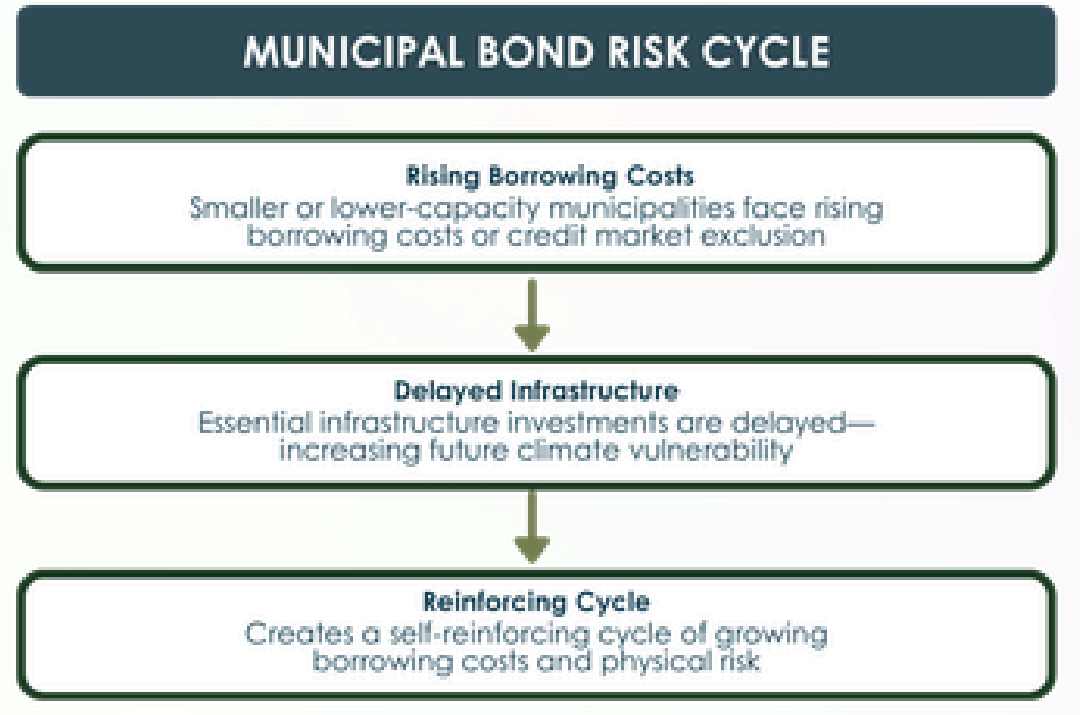
The January 2025 Los Angeles wildfires demonstrated the economic implications of this exposure. The fires generated an estimated $5 billion in FAIR Plan liability, forcing the Plan to levy its first major assessment on private insurers since 1994—a $1 billion charge, part of which insurers can pass through to all California policyholders, regardless of geography or risk profile.[52] Recognition of the systemic risk posed by potential FAIR Plan insolvency drove passage of AB 226 in late 2025, authorizing the California Infrastructure and Economic Development Bank to issue bonds to the FAIR Plan to help pay for catastrophic claims.[53] This structure provides necessary liquidity but still requires statewide assessments to pay back the bonds—those can just now be spread longer over time instead of being a one-time financial shock to carriers and their policy holders. Market analysts project the FAIR Plan will become even more strained from another catastrophic wildfire.[54]

Municipal Bond Market Stability

While not currently an economic risk seen across the market—with no evidence of downgrades at scale impacting broad returns—municipal bond market risks could occur if not well managed. Climate risks can threaten the $4 trillion U.S. municipal bond market, which funds approximately 70% of the nation's infrastructure.[55] As climate disasters damage local tax bases and infrastructure, municipal borrowing costs rise and credit quality deteriorates—transmitting financial stress to households, pension funds, and insurance companies who collectively hold these bonds.

Research examining sea-level rise exposure finds that coastal municipalities with greater climate risk pay meaningfully more to issue long-term bonds—with one study finding a 23-basis point premium per one-percentage-point increase in sea-level rise risk exposure for bonds with maturities exceeding 25 years.[56] More broadly, recent market actions suggest growing investor sensitivity to climate-related credit risk: the S&P Global February 2025 downgrade of the Los Angeles Department of Water and Power—among the first major climate-driven municipal credit actions—signaled a market reassessment that is likely to generate additional credit reviews in coming years.[57]

While not currently an issue, without investment in risk reduction, downgrades could become more common as investors start to demand higher rates. This could lead to smaller or lower-capacity municipalities to face rising borrowing costs or credit market exclusion, leading to essential infrastructure investments are delayed— increasing future climate vulnerability and creating a self-reinforcing cycle of financial decline and growing physical risk[58].



Housing Market Stability

Insurance instability transmits directly into California's housing market. Mortgage lending is contingent on adequate insurance coverage; when policies become unavailable or unaffordable, home sales can stall,[59] mortgage originations slow,[60] and property values decline.[61] For mortgage borrowers, rising insurance can raise the risk of delinquency.[62] This reduces household wealth, hurts the sustainability of homeownership, and slows housing turnover by introducing market frictions into transactions that limit homebuyer eligibility and raise construction and financing costs for new development in already supply-constrained markets.

Changing insurance conditions in the private market can send important signals that can drive capital and population away from escalating risk. Reduced insurance availability and rising premiums can influence household location decisions, discouraging in-migration to high-risk areas.[63] But this adjustment is uneven. Lower-income or otherwise financially constrained households—who are often the most exposed to climate risk—have the least ability to absorb higher costs or to move, leaving them disproportionately locked into, yet unable to afford, increasingly risky and expensive environments.[64]

These dynamics can also amplify regional economic fragility: communities facing insurance market contraction may experience declining tax bases, reduced local investment, and increased pressure on public resources.[65] Even households that have not experienced a direct hazard event bear indirect costs through reduced property liquidity, higher borrowing costs, and constrained mobility—a spillover effect that can extend beyond high-risk areas as changes occur in credit conditions and market pricing expectations. Those who are least positioned to respond often bear the most severe consequences. Critically, these dynamics are non-linear. Once confidence erodes among insurers, lenders, or buyers, market impacts can accelerate rapidly and become difficult to reverse.[66] While ongoing efforts to reduce losses can improve insurance conditions, achieving this requires time and sustained commitment from a wide range of stakeholders. Delayed mitigation, although still useful, may not fully prevent localized climate risk from developing into a statewide economic problem that requires intervention.

The Case for Treating Resilience as Essential Spending

The evidence presented across the preceding sections demonstrates why **the standard framing of resilience investment as discretionary spending is untenable.** The true cost of inaction includes not only physical damage from climate events but also the loss of long-term economic competitiveness, the erosion of tax base, and destabilization of state revenues. Without stable funding, the state cannot sustain the community-led, multi-benefit projects needed to address these risks across budget cycles.

Every major climate event generates what might be termed a fiscal double impact: revenues decline at the exact moment emergency spending requirements increase. Without proactive, dedicated funding mechanisms to address climate risk, each disaster weakens the public sector's revenue-generating capacity while simultaneously increasing future disaster costs—a dynamic that accelerates, rather than addresses California's widening structural deficit. Addressing this requires funding mechanisms that operate outside volatile general fund and provide the stability necessary for long-term risk management.

ESTABLISHING SUSTAINED REVENUE FOR CLIMATE RESILIENCE

What Is Missing: The Case for Dedicated Revenue

California has invested in the foundation for an ambitious approach on climate resilience: setting up a clear framework and statutory direction for coordinated state action, sustained investment in world-class climate modeling and data, and programs ready to deploy resilience investments. Yet the average resilience program lasts just over two funding cycles, and more than a third are one-time efforts, signaling that what is missing is a dedicated revenue mechanism that can sustain long-term investments.

California's Current Resilience Funding: The Structural Challenge

Based on a CA FWD analysis of 31 state funding programs that incorporate climate resilience and adaptation considerations:

- Nearly two-thirds of state programs rely on multiple funding sources
- Bonds fund over half of these programs—but are finite by design; programs pause or contract once authorized funds are allocated
- Average program lifespan is just over 2 funding cycles
- Over a third of programs are one-time efforts or episodic budget action
- Implementation-focused programs represent 68% of programs; planning and capacity-building support is less consistent

Result: A layered patchwork of investments rather than a durable financing framework

Source: California Forward analysis of 31 state adaptation and resilience programs (2026)

Bond financing, while effective and critical for capital outlay programs and investments, is finite by design and General Fund support frequently appears as one-time appropriations. Cap-and-trade (Cap-and-invest) revenues, though significant, are also volatile and carry programmatic restrictions to deliver on emissions reduction, limiting their flexibility for adaptation projects.

Dedicated revenue for climate resilience investments would address these structural limitations through recurring investments separate from general fund and bond authorization cycles. California's infrastructure is aging and was designed for past climate conditions: transportation adaptation costs far exceed current funding levels, and water infrastructure deficiencies cost the state thousands of acre-feet of water annually.[67] Unlike existing funding streams constrained by sector-specific restrictions, dedicated resilience revenues could provide flexible capital for a full range of resilience investments—including planning and capacity-building activities that current funding often neglects. This stability would also enable multi-year commitments, and pending design, could support operations and maintenance investments—an often-cited gap in current programs—and provide predictable funding and financing streams necessary for communities to plan comprehensively rather than opportunistically.

Guiding Principles

A dedicated resilience revenue stream should advance the following principles, which reflect both the character of climate risk and the institutional requirements for effective long-term risk management:

I**ntegrated Risk Management:** Climate hazards are interconnected. Wildfires, floods, extreme heat, drought, and sea-level rise generate compounding risks that require coordinated responses rather than siloed, peril-specific interventions. Dedicated revenues should treat these hazards as elements of a shared risk landscape.

Focus on the Most Vulnerable: Frontline communities and vulnerable populations face disproportionate climate impacts and often have the least capacity to invest in risk reduction. State resilience investments are critical to supporting risk reduction and resilience investments in communities with the greatest need and fewest resources.

Science-Based Decision-Making: Investment decisions should rely on uniform climate projections, hazard mapping, and state guidance on standards to ensure projects are designed for current and future conditions—not only historical baselines. Investments made from a resilience revenue stream should be guided by the state's downscaled climate projection data and modeling, provided through the California Climate Assessments.

Financial Risk Management: Reducing the financial and economic costs of climate impacts requires action on three complementary fronts: reducing physical risks that drive losses, reducing vulnerability through measures like building codes and early warning systems, and managing financial risks that remain unavoidable. Given the urgency and scale of climate threats, California must be willing to act boldly—piloting innovative funding and financing approaches and scaling solutions that show promise, even when outcomes are uncertain. Dedicated resilience funding can support balancing these modes of investment—prioritizing physical risk and vulnerability reduction where exposure can be lowered, while also supporting financial risk transfer and recovery mechanisms where residual risk cannot be eliminated.

Adaptive and Flexible: Climate conditions and scientific understanding evolve. Resilience funding should incorporate mechanisms to update strategies and priorities as new data, post-event learning, and improved risk models become available. This includes supporting the demonstration of emerging physical and financial risk reduction approaches at meaningful scale—using early results to build the evidentiary and political case for broader adoption.

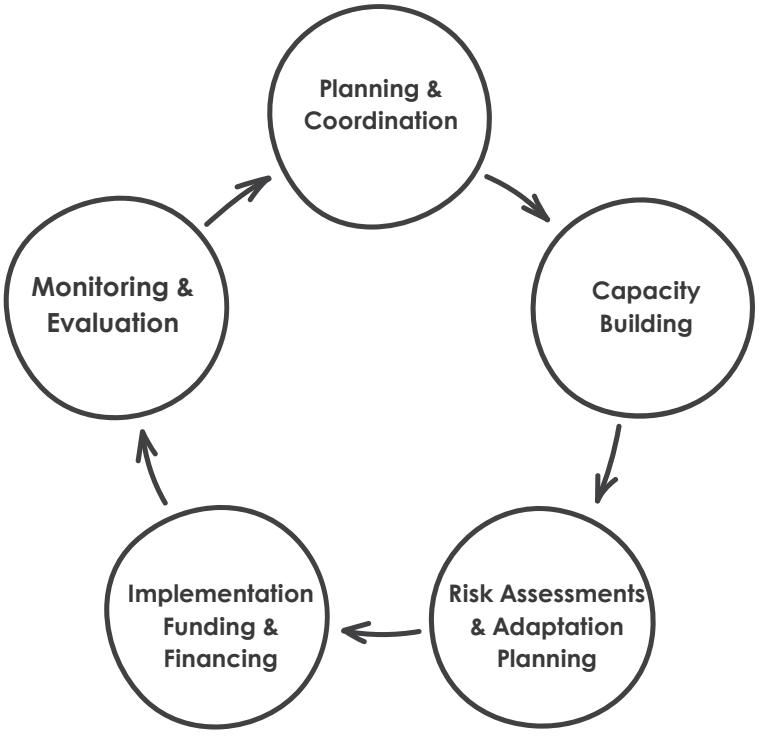
Outcome-Based Resilience Investments

A dedicated revenue stream would offer a mechanism for long-term, outcome-focused resilience investments across the state. Unlike existing peril-specific programs, funding could support multi-benefit projects that address interconnected climate risks, enable community-led solutions responsive to local needs, reduce fiscal and economic risks by protecting state revenues and stabilizing insurance markets, and address critical gaps—including deferred infrastructure maintenance—that compound climate vulnerability over time.

Dedicated funding and financing, when aligned with other existing state resilience programs and revenue sources, could ensure investments are made across the full resilience lifecycle:

- Planning and Coordination
- Capacity Building
- Risk Assessments and Adaptation Planning
- Implementation Funding and Financing
- Monitoring and Evaluation

Dedicated state revenue can also serve as a catalyst for private capital investment, using state resources strategically to leverage additional financing for adaptation projects.



Aligning with Existing Programs

A dedicated revenue stream for resilience investments should complement—not replace—existing funding streams. To be most effective, it must work alongside other state investments—general fund appropriations, bond financing, cap-and-invest revenues—and be leveraged against federal, local and private investments to fill critical gaps and provide the durable foundation that current mechanisms cannot.

Unlike programs that address individual hazards, there is a need for sustained, flexible capital for comprehensive risk reduction that transcends single hazards. A dedicated revenue stream for resilience should focus particularly on investments often overlooked by existing programs: multi-benefit projects addressing compounding risks, deferred infrastructure maintenance, predevelopment and planning capacity, financing and market-based solutions, and long-term monitoring and evaluation. It should also enable coordination across existing programs through braided funding or financing streams that integrate resources from multiple sources—scaling multi-hazard projects that no single program can support alone.

Potential Revenue Streams: Evaluation Criteria

Identifying a dedicated revenue source for California's climate resilience needs is a consequential decision—one that will shape not only how much funding is available, but who bears its costs, how reliably it flows, and durability across political and economic cycles. As that decision warrants a structured, transparent process, it should be guided by a set of criteria against which any candidate mechanism should be assessed. California's fiscal, legal, and political context is distinctive, and the right revenue structure will ultimately reflect judgments that must be made through a broader deliberative process involving policymakers, fiscal experts, and the public.

To ground this evaluation framework in established practice, this analysis draws on criteria developed by the Government Finance Officers Association (GFOA)[68] for evaluating local government revenue systems, adapted and expanded with criteria unique to state-level climate resilience outcomes. The result is a hybrid framework designed to be rigorous, transparent, and responsive to the specific challenges of climate risk management. Any revenue mechanism considered must be evaluated across six dimensions:

- **Adequacy:** Revenue generation potential, stability, long-term sustainability, and scalability to meet California's expanding climate risks.
- **Accountability:** Ease of public understanding of how the revenue mechanism operates, transparency of connection between revenue collected and resilience outcomes, and simplicity of compliance and reporting.
- **Cost of Administration:** Government administrative burden and collection costs, feasibility of audit and compliance mechanisms, potential for economies of scale, and opportunities for public or private sector participation in administration.
- **Efficiency:** Cost recovery mechanisms, targeting of beneficiaries or contributors to risk, market and behavior impacts, incentives for private-sector participation, and risk transfer capabilities.
- **Design and Implementation:** Multi-peril potential, flexibility of funding use, and administrative complexity.
- **Equity:** How the revenue burden falls across income groups, whether that burden is proportional to damages caused or benefits received, and whether the mechanism addresses or exacerbates existing inequities.

Learning from Other States: Navigating Legal and Political Dynamics

Multiple states are exploring ways to generate sustained revenues for climate resilience investments, offering instructive models for California. The following examples illustrate the range of approaches available—and the legal and political landscape in which they operate.

Tourism-based climate revenue (Hawaii)

Hawaii enacted the nation's first climate-specific tourist tax in May 2025, designed to generate approximately $100 million annually to address climate impacts including coastal erosion and wildfires.[69] The law increases rates on hotel room and vacation rental stays and imposes an 11% tax on cruise ship passenger fares prorated for days in port. However, Hawaii's 'Green Fee' faces legal challenges from the Trump administration.[70]

Polluter-pays mechanisms (New York, Vermont)

Vermont and New York have enacted Climate Superfund laws that establish a polluter-pays framework for climate adaptation funding. Vermont's first-in-nation law, effective in 2024, requires fossil fuel companies to contribute based on emissions from 1995-2024, with funds distributed by the state's Agency of Natural Resources for climate-resilient infrastructure, building protection, and climate-related health care.[71] New York's Climate Superfund law, signed in December 2024, could generate up to $75 billion over 25 years for climate adaptation infrastructure, with companies paying in proportion to worldwide emissions between 2000 and 2018.[72] Both New York's and Vermont's laws also face legal challenges from the Trump administration and the fossil fuel industry, with opponents arguing the measures exceed state authority. Supporters counter that these represent legitimate revenue-raising efforts to address climate damages. While their ultimate legal challenges remain to be resolved, these efforts demonstrate growing state-level political will for funding mechanisms that link financial responsibility to climate damage attribution.

The legal and political experiences of other states underscore the importance of designing mechanisms with sufficient legal groundwork, political coalition-building, and administrative capacity.

Governance

Effective governance of a dedicated resilience revenue stream requires a central coordination function in state government that ensures alignment across investments, eliminates duplication, and facilitates meaningful participation by the agencies and departments responsible for implementing relevant programs. Governance design must accompany—not follow—further work to identify and design a dedicated revenue stream; the two are inseparable.

State governance should emphasize transparency, measurable outcomes, and accountability to both the communities being served and the broader public. This means establishing clear metrics tied to physical risk reduction and fiscal resilience—not just expenditure tracking—and publishing regular public reporting against those metrics. Governance must also be designed for durability. Resilience investment operates on decadal timescales; governance structures should provide a stable mandate that insulates the program from year-to-year budget volatility and shifting political priorities, while remaining accountable to elected leadership and the public.

BUILDING A DURABLE COALITION

Identifying the right revenue mechanism and establishing effective governance are necessary—but not sufficient. Even well-designed funding structures fail without the political coalition needed to enact and sustain them. Building that coalition requires confronting significant barriers: prevention funding competes with more visible priorities, constituencies organize around specific risks rather than comprehensive solutions, and affordability concerns create resistance to new revenue.

The Political Challenge

Building political support for a new resilience revenue stream requires dealing with persistent structural tensions in California's approach to climate risk management, including:

- the challenge of garnering political support for prevention funding
- budgeting and accounting practices that do not capture long-term, uncertain climate costs—or credit the avoided losses that prevention delivers
- the fragmentation of constituencies along peril-specific lines that pits one climate risk against another, which also cut across geographic differences
- the affordability challenge and pressure to reduce the burden on consumers/taxpayers
- the federal funding landscape putting additional pressure on states and local budgets.
- and the tendency for disaster-driven policy windows to produce reactive, rather than comprehensive, investments.

These tensions are not unique to California, but they are particularly pronounced in a state with the scale and diversity of climate risks that California faces.

Communities organize around the climate risks they experience most directly: coastal regions focus on sea-level rise; inland areas prioritize wildfire and extreme heat; agricultural communities center drought. These peril-specific constituencies are natural, necessary, and likely to persist. The challenge is helping diverse groups recognize their shared stake in comprehensive resilience policy and investments—without requiring them to abandon their specific priorities.

This requires deliberate coalition infrastructure: forums where wildfire advocates can see their stake in flood mitigation (both protect the property tax base), platforms where drought-focused coalitions can recognize the connection to coastal resilience (both stabilize insurance markets), and coordination mechanisms that design multi-benefit projects serving multiple constituencies simultaneously. When a watershed restoration project reduces wildfire risk, flood exposure, and drought vulnerability at once, distinct coalitions find genuine common cause—creating political support that is broader and more durable than any single-hazard advocacy could generate. Success requires patience—building trust across peril-specific groups takes time—but comprehensive resilience demands this coordination.

Making Prevention's Fiscal Value Visible

Prevention delivers superior long-term returns. Yet these returns are not tracked on public and private balance sheets in ways that make them visible and compelling to policymakers and the public—a gap reinforced by short loan maturities that limit private capital's ability to price long-term benefits.[73] This creates a persistent political disadvantage for prevention relative to disaster response.

The strategic opportunity is to close this visibility gap. Outcome-focused resilience investments must be tracked and reported in ways that demonstrate how prevention spending protects future revenues, reduces emergency costs, and maintains essential services. A dedicated source of funding with transparent outcome reporting requirements creates the institutional infrastructure for this documentation—making the case for sustained prevention funding through demonstrated results rather than projected benefits.

CONCLUSION: A CALL FOR SUSTAINED INVESTMENT

California has built the vision, analytical capacity, and institutional frameworks for meaningful climate resilience. The persistent gap is sustained, dedicated funding matched to the scale and complexity of the state's climate risks.

The case for a dedicated revenue stream for climate resilience is ultimately a budgetary case. Climate disasters erode the revenue base that funds every state service. Insurance market instability creates contingent public liabilities. Municipal credit stress raises borrowing costs for communities across the state. And the costs of reactive emergency response consistently exceed what proactive investment would have required. Each year of inaction compounds this fiscal exposure—increasing both the probability of larger climate losses and the cost of the eventual response.

A dedicated source of funding—guided by the principles of integrated risk management, focus on the most vulnerable, science-based decision-making, strategic risk management, and adaptive flexibility—offers a pathway from episodic, budget-dependent investment to the sustained, strategic commitment that California's climate risks require. The goal is not merely to manage disasters better. It is to reduce the underlying risk to communities, households, and the state's economic and fiscal foundations in ways that compound over time.

The proposal described in this report provides a pathway toward that goal—one that protects California's fiscal health and stability, enables community-led solutions, delivers measurable early results, and aligns diverse stakeholders around the shared economic interest in a resilient California.

California Forward will continue working with partners to evaluate viable revenue options and build the cross-sector coalitions needed to champion a financing framework for the state's resilience investments.

APPENDIX

Examples application of revenue source evaluation criteria.

Criteria	Definition	Illustrative Examples
Adequacy		
Revenue generation potential	Certainty and limits on revenue generation	CA $10B Prop 4, NY $4.2B Environmental Bond vs. $100M tourist fee
Volatility	Sensitivity to economic cycles	Severance and sales tax volatility, tourist tax sensitivity to disaster events
Long-term sustainability	Capacity to generate recurring revenues for 5+ years	Portland Clean Energy Fund retail tax model
Scalability	Revenues can be meaningfully increased if needed	Upping tax rates vs. revolving fund capital
Accountability		
Public understanding	Ease with which taxpayers grasp how revenue mechanism is charged	Simple sales tax vs. complex fee structure
Connection to outcomes	Transparency of link between revenue collected and resilience investments	Demonstrating a logical connection between who/what is being charged and the specific risk being addressed
Simplicity of compliance	Clear and straightforward identification of who must comply, with simple requirements for those being charged and for government administrators	Straightforward tax vs. complex application processes
Cost of Administration		
Collection and audit costs	Direct costs of calculating, collecting, and auditing revenue	Merchant-collected sales tax vs. direct government administration
Administrative burden	Institutional requirements and staffing needed for implementation	Low complexity instruments vs. new agency requirements
Economies of scale	Potential cost reduction through shared administration or mechanisms	Piggybacking on existing tax systems vs. entirely new collection structure
Public/private participation	Opportunities for public or private sector to share administrative responsibility	Third-party administration vs. government-only collection

APPENDIX

Examples application of revenue source evaluation criteria.

Criteria	Definition	Illustrative Examples
Efficiency		
Internalized cost recovery	Payments commensurate with externalities generated	Special assessments, cap-and-trade
Targeting	Focuses burden on polluters or beneficiaries	Climate superfund, Hawaii cruise ship tax
Market distortions	Design avoids penalizing or distorting specific sectors	Impact fees potentially discouraging new development
Private sector leverage	Incentivizes private funding	Revolving fund, public-private partnership
Risk transfer	Financing provides for risk reallocation	Catastrophe bond
Design and Implementation		
Multi-peril potential	Promotes adaptation addressing multiple or compound hazards	Climate fund vs. single-peril wildfire fund
Flexibility of funding use	Few restrictions, can go to infrastructure, social systems, or nature-based solutions	General Obligation bond vs. revolving fund
Administrative complexity	Instrument does not require excessive new infrastructure	Administrative burden or complexity of environmental impact bonds
Transparency	Flows are well-tracked and easy to understand	Difficult monitoring for environmental impact bonds
Equity		
Regressivity	Potential for higher burden on lower-income households	Sales tax and flat fees can be regressive
Commensurateness	Burden proportional to damages caused or benefits received	NY and VT climate superfund model
Equity impact	Potential to address or exacerbate existing inequities	Increased utility fees

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