



PREPARING FOR WILDFIRE BY PROTECTING WHAT MATTERS

Reducing Community Risk and
Improving Economic Outcomes

AUGUST 2025



INTRODUCTION

California's experience with wildfires has reached a critical juncture. The 2025 wildfires in Los Angeles, along with the increasing frequency and intensity of climate-driven disasters statewide, underscore the urgent need for a coordinated, long-term approach to risk reduction. These challenges are compounded by a volatile insurance market threatening access to affordable coverage, as well as increasing strain on budgets and the broader economy due to wildfire risk that jeopardizes businesses, jobs, and the tax base that communities rely on for essential services. Without bold action, even California's broader climate goals are at risk due to wildfire emissions.¹

Over the last decade, California has made meaningful progress to address wildfire risk. Between 2015 and 2023, the state invested more than \$5.6 billion in wildfire resilience, the majority of which has supported fire adapted landscapes, forest health, and fuels management.² These investments stem from landmark legislation and sustained state leadership, including through the California Wildfire and Forest Resilience Task Force, which has aligned state, federal, and local efforts through a strategic action plan, regional resource kits, and public dashboards to track progress.³

While the gains to strengthen the resilience of our landscapes must not be lost, we must also confront California's growing wildfire risks to our homes, infrastructure, roads, and other structures, sometimes called our "built environment," and the toll wildfires have on our economy, insurance markets, and public budgets. Recent events have made clear that wildfire risk is not confined to rural areas or the wildland-urban interface (where neighborhoods meet undeveloped land); embers can ignite structures and trigger fast-moving fires across California's suburbs and urban cores.

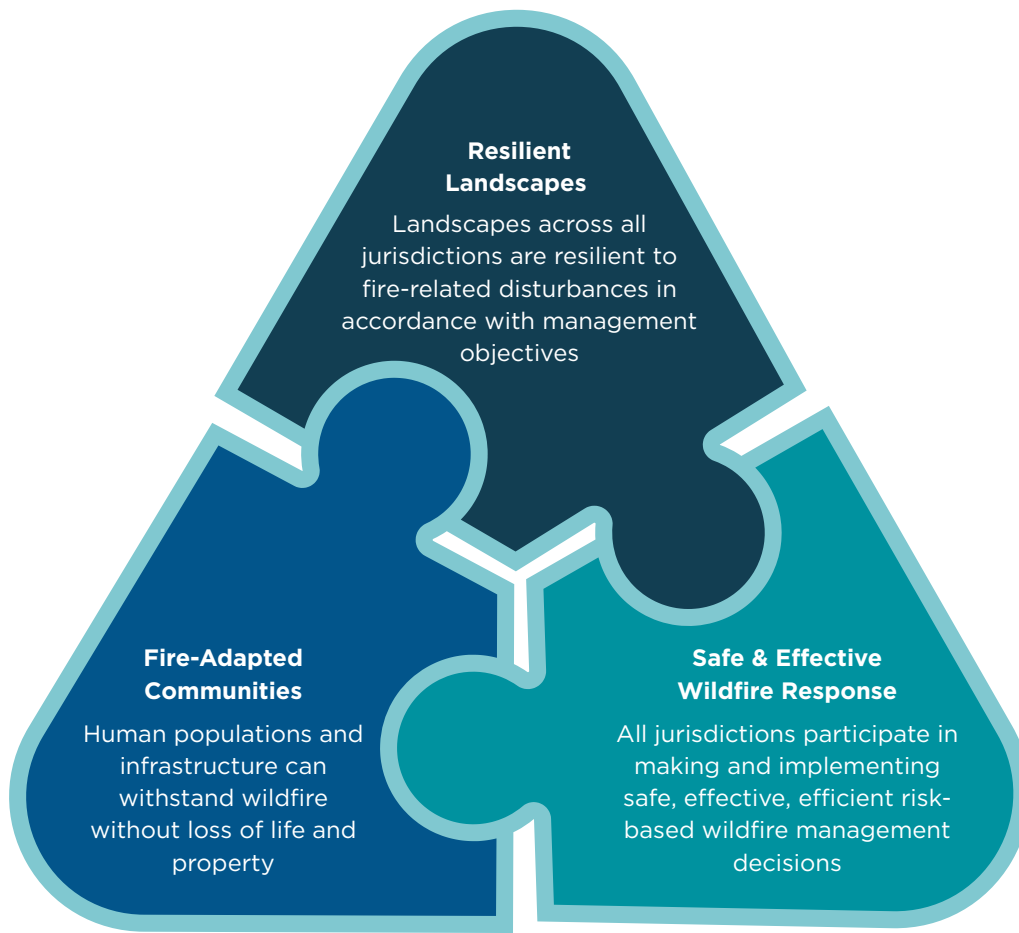
With the reality that wildfires are now a statewide issue, the state and local governments are increasingly stepping in to fill insurance and recovery gaps, but this role is financially unsustainable. Experts estimate it would take \$2.5-3 billion per year over the next decade to implement California's Wildfire and Forest Resilience Action Plan⁴. While state investment is critical, it needs to be matched with local and private investments. To effectively drive action where it's most needed, we need to understand the risks and the returns at a granular level: region by region, county by county, community by community.

1 UCLA Fielding School of Public Health. "UCLA-led study finds California's greenhouse gas reductions could be wiped out by 2020 wildfires." October 21, 2021. <https://ph.ucla.edu/news-events/news/ucla-led-study-finds-californias-greenhouse-gas-reductions-could-be-wiped-out-2020>

2 Legislative Analyst's Office. State Spending on Wildfire and Forest Resilience. February 2023. <https://lao.ca.gov/reports/2023/4674/Wildfire-Spending-022423.pdf>

3 California Wildfire and Forest Resilience Task Force. Strategic Plan and Regional Resource Kits. <https://wildfiretaskforce.org>

4 California Wildfire & Forest Resilience Task Force. Wildfire Solutions. <https://wildfiresolutionsca.org/>.



Source: *The National Cohesive Wildland Fire Management Strategy*, U.S. Department of the Interior et al., 2014.

Recognizing the need for a more comprehensive approach—one that aligns with the National Cohesive Wildland Fire Management Strategy—CA FWD convened a workgroup of subject matter experts across wildfire risk, built environment and community risk reduction, and insurance.⁵

Throughout the spring of 2025, the wildfire workgroup helped assess California's current policy and regulatory landscape at the intersection of the built environment and insurance, as well as informed a Wildfire Policy Forum that convened state policy leaders, academia, and non-profit organizations in May 2025. This policy brief summarizes insights from across workgroup meetings, additional expert interviews, and the Forum, and serves as a building block toward a longer-term policy agenda to increase California's leadership in building fire adapted communities, to complement the state's leadership on resilient landscapes and wildfire response.

5 U.S. Department of the Interior, U.S. Department of Agriculture, and Department of Homeland Security. (2014). *The National Cohesive Wildland Fire Management Strategy*. Washington, DC. <https://www.forestsandrangelands.gov/>

THE PROBLEM

Wildfire risk touches every region of California, and the systems that manage that risk are under growing strain. It is time to confront the following built environment, economic, and fiscal vulnerabilities that wildfire continues to expose statewide.

1. A reinforcing cycle of fiscal and market instability is limiting proactive resilience.

As disasters become costlier and more frequent, insurance markets are strained and public budgets come under stress.⁶ The average time between billion-dollar weather and climate disasters in the U.S. has dramatically decreased from 82 days in the 1980s to just 15 days in the last 10 years. In the first 11 months of 2024, this interval further shrunk to a mere 11 days. The financial pressure from these events hinders governments' ability to make investments that reduce wildfire risk. The more this pattern continues, the harder it becomes for communities to get ahead of the risk.

2. Wildfire impacts are unequal and often hardest on those with the fewest resources.

Low-income and rural communities often face higher wildfire exposure and less access to preparedness and recovery resources. Systemic factors, such as poverty, aging housing stock, and limited healthcare access, increase their risk. Meanwhile, preparedness and recovery funding tend to flow to higher-income areas, regardless of whether they face the greatest wildfire exposure. When investment is not directed toward reducing risk in areas with the highest combustion vulnerability, preventable losses compound and drive instability in insurance markets, public budgets, and the broader economy. Ultimately, these financial risks stretch far beyond a wildfire's perimeter, with the steepest consequences for low-income and historically underserved communities.

⁶ Climate Central, 2024 in Review, last modified January 10, 2025, <https://www.climatecentral.org/climate-matters/2024-in-review>.



3. Economic incentives for managing wildfire risk are misaligned and fragmented.

Misalignment between investments in resilience and how risk is evaluated across the financial sector, including insurance, disincentivize investments in wildfire risk reduction. For example, communities that invest in vegetation management or implementing stricter building codes may still face reduced insurance coverage. These disconnects are confusing at best and counterproductive at worst, and disincentivize local action and contribute to chronic underinvestment.

4. Fragmented data and planning limit implementation. Data on wildfire risk is fragmented and a lack of consistency across definitions and risk assessments make coordination across agencies and communities challenging. Compounding this challenge is the reality that resilience planning is often reactionary, in many cases taking place after a wildfire. These disconnects hinder the ability to proactively plan and implement risk reduction strategies that are appropriately scaled and targeted.

5. Federal changes are putting increased pressure on the state and local governments. With significant federal restructuring and a decrease in disaster assistance resources, including funding, data, and technical assistance, California must continue building strong, state-led systems that help communities adapt, recover, and thrive in a changing climate.

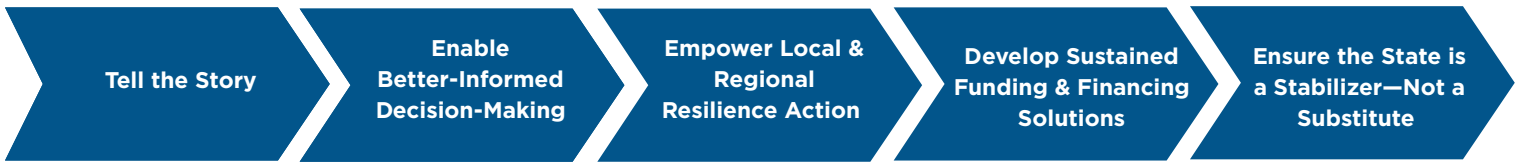


THE OPPORTUNITY

Addressing the challenges above requires advancing two interrelated goals: sustained and durable investment in physical risk reduction, and the restoration of a stable, accessible insurance market.

Progress on physical risk reduction brings California closer to restoring insurability. In turn, improved insurability unlocks capital and strengthens incentives for continued investment in resilience. Together, these goals are essential for public budget stability. By lowering recovery costs and mitigating future losses, they reduce pressure on public resources and free up funding for essential services, infrastructure, and protections on which communities rely.

This improved stability strengthens local capacity and sends a clear market signal: California remains a viable, secure place to live, work, and invest. Achieving this virtuous cycle requires upfront planning, long-term coordination, and a clear, collective signal—both to communities and markets—that California is prepared to do whatever it takes to reduce wildfire risk and build resilience.



CHARTING A PATH FORWARD: LEARNING FROM PRACTITIONERS

What follows is a set of near-term opportunities and long-term strategies to reduce wildfire risk, improve fiscal resilience, and strengthen the capacity of California's regions to adapt to an evolving risk landscape. These opportunities are organized across five critical areas for action:

- (1) telling the story with clear, credible evidence to guide investment and public support;
- (2) enabling better-informed decision-making by improving data and tools;
- (3) empowering local and regional implementation by equipping communities with the tools to take action;
- (4) developing sustained funding and financing solutions that match the scale and timespan of the challenge; and
- (5) ensuring the state is a stabilizer of, not a replacement for, insurance and capital markets. Together, these elements form a blueprint for an agenda to reduce wildfire risk, support safer communities, and strengthen resilience.



Tell the Story: Evidence that Moves Policy and Investment

Too often, the costs of wildfire are only visible after disaster strikes, when it's too late to prevent loss. Without clear, credible information on what's at stake and what works, decision-makers struggle to prioritize risk reduction. To build momentum, we must demonstrate that the value of proactive investment is undeniable.

Clarify the Stakes: Quantify what's at risk, and what can be gained, by investing in risk management and reduction. The public sector and academic institutions should double-down on efforts to measure avoided losses, economic benefits, and cost savings from mitigation at the household, neighborhood, and regional scale. Without this information, communities struggle to prioritize high-impact interventions or direct limited funds where they're needed most.

Demonstrate impact with consistent, outcome-focused metrics: Public programs often track what they spend, not what they achieve. To drive accountability and effective investment, state and local agencies need a shared evaluation framework that focuses on outcomes that measure the amount of risk reduced (e.g., lives protected, property loss avoided, revenue stabilized) rather than just outputs (e.g., plans written, dollars spent). It is important to not conflate level of effort with level of efficacy, as economic benefit—including increased private investment and insurability—will follow if we can demonstrate reductions in risk and loss. A unified, outcomes-based approach can reveal progress, improve coordination, and strengthen future investment decisions.



Enable Better-Informed Decision-Making: Improve the Inputs that Shape Policy and Investment Decisions

California's current wildfire risk models were largely built to assess wildland fire behavior—not how fire spreads within communities. As a result, they fail to capture critical dynamics like structure-to-structure and vegetation-to-structure ignition, ember storms, or urban conflagration. Many models rely on outdated or coarse data, limiting their usefulness for parcel-level planning or tailored, neighborhood-scale interventions. In addition, models that can accurately predict fire behavior in the wildland-urban interface are scarce. While recent state actions and philanthropic efforts have made meaningful progress in improving monitoring and modeling, sustained action is still needed to improve data quality, refine modeling tools, and ensure these resources are consistently integrated into planning, funding, and policy decision-making.

Differentiate hazard from risk: Misunderstanding the distinction between “hazard” (likelihood and severity of fire occurrence) and “risk” (exposure of people and assets, and potential consequence of damage) is leading policy makers and communities to use a growing suite of tools and data in ways that are not fit for purpose for the decisions at hand, particularly around the state's Fire Hazard Severity Zone maps. Policymakers and practitioners should ensure these terms are used accurately and consistently.



Advance community-scale fire models: A more accurate, actionable modeling ecosystem is needed to reflect how fire spreads within the built environment and when vegetation and buildings intermix. This ecosystem should:

- Capture structure-specific and community-scale fire behavior. Because these models are computationally intensive, the public sector plays an important role in funding pilot projects that test, validate, and refine their use for planning and investment decisions.
- Address key data gaps by collecting and updating parcel-level information on building characteristics, fuel loads, topography, and infrastructure conditions. Where possible, existing datasets, such as assessor parcel data and data maintained by local public works, planning, and fire departments should be integrated and standardized at the state or regional level to support consistent, scalable analysis.

Build a smarter wildfire technology ecosystem: California can lead in accelerating and scaling next-generation wildfire resilience technologies—such as AI enabled predictive modeling platforms, satellite-based wildfire detection and assessment platforms, and community risk analytics—by investing in an innovation infrastructure that systematically moves promising solutions from concept to widespread adoption. This requires modernizing procurement and policy frameworks to support structured pilot-to-scale pathways, establishing a statewide framework for technology validation and deployment, and embedding end user input with clear metrics-based evaluation standards. The framework must reflect a holistic wildfire risk reduction strategy, not solely emergency response, and include clear standards for data governance and interoperability that serves both state goals and community needs.

Empower Local and Regional Resilience Action: Enable the Transition from Planning to On-the-Ground Results

Local and regional governments are essential to building wildfire resilience, but many communities struggle to move from planning to implementation. Limited staff capacity, fragmented funding, and political sensitivities around prescriptive measures often slow progress.

CASE STUDY: NAPA COUNTY

Napa County developed a robust, community-driven wildfire resilience model through the implementation of its 2021 Community Wildfire Protection Plan (CWPP) and the leadership of the Napa Communities Firewise Foundation (NCFE).⁷ NCFE serves as the countywide coordinating entity, supporting over 20 active fire-safe councils and facilitating collaboration with CAL FIRE, local governments, and private landowners. With support from state grants, local contributions, and philanthropic partners, Napa has implemented large-scale fuel reduction projects such as the 200-acre Pritchard Hill shaded fuel break and the Berryessa Highlands ingress and egress safety project, while also offering free defensible space inspections and structure hardening assistance to residents.⁸ NCFE's centralized model allows for coordinated planning, shared staffing resources, and equitable distribution of funds across communities, demonstrating how a single backbone organization with long-term technical and financial support can translate regional planning efforts into implementation.

Support the transition from planning to implementation: Local governments are required to incorporate wildfire and climate risks into long-range plans (e.g., the General Plan's Safety Element and Land Use Element, etc.), but additional planning mandates alone won't drive results. The state can support the transition from planning to implementation by investing in tools, technical assistance, and funding that help local governments translate these plans into action, such as model frameworks, streamlined permitting guidance, adequate and sustained staff capacity, and tailored toolkits. To drive action, this support can also be paired with clear expectations for local adoption of proven mitigation measures, such as wildland-urban interface codes, defensible space programs, or zoning updates, to ensure resources translate into risk reduction on the ground. Trusted local networks, including fire-safe councils, nonprofits, and community-based organizations, play a central role in outreach, coordination, and early-stage project development, and should be supported as part of this effort.

⁷ Napa Communities Firewise Foundation. Napa County Community Wildfire Protection Plan. <https://napafirewise.org/programs/napa-county-community-wildfire-protection-plan/>

⁸ Napa Communities Firewise Foundation. Napa County Community Wildfire Protection Plan Hub. <https://cwpp-napafirewise.hub.arcgis.com/>



Strengthen local capacity for project design and delivery: Delivering wildfire resilience on the ground requires clear, credible project pipelines that can guide investment and accelerate implementation. Communities need dedicated implementation strategies developed at the right geographic scale to clarify roles, estimate project costs, and identify funding pathways. This includes designating a lead entity, such as a regional agency, joint powers authority, or other type of backbone organization, to coordinate pipeline development, convene partners, and manage pre-development activities like feasibility assessments and permitting. Flexible state funding structures, like block grants, can help regions align resources with risk, especially when projects cross jurisdictional boundaries or require regional coordination.

Develop Sustained Funding and Financing Solutions: Align Capital with Long-Term Resilience

California faces escalating wildfire costs, yet current funding mechanisms remain fragmented and reactive, and do not match the scale of risk. While one-time grants are a critical funding source, an overreliance on them can create bottlenecks and uncertainty, making it difficult for communities to plan, build, and maintain long-term resilience. Without predictable, scalable, and flexible financing and funding pathways, the state cannot unlock the full economic, safety, or equity benefits of wildfire risk reduction.

Unlock scalable funding and financing pathways: The right flexible, long-term financial tools and mechanisms can support consistent investment in climate adaptation while stretching limited public dollars. State-level mechanisms, such as revolving funds or dedicated resilience accounts, can provide predictability and signal financial viability to the private sector, increasing access to capital. These structures also empower local and regional governments to implement projects with greater certainty. Complementary investments in technical assistance and grants can help communities explore and scale emerging models, such as climate resilience districts, that align funding with long-term risk reduction goals.

CASE STUDY: MARIN COUNTY

Marin has pioneered a local funding model for wildfire resilience through Measure C, a parcel tax passed by voters to fund the Marin Wildfire Prevention Authority (MWPA).⁹ The MWPA is a joint powers authority representing 17 jurisdictions that generates approximately \$20 million annually to support ongoing wildfire prevention efforts, including home hardening grants, vegetation management, and public education campaigns.¹⁰ Its structure enables long-term financing, guided by a five-year strategic plan and annual work plans shaped by community input.¹¹ Marin's approach demonstrates a scalable pathway to unlock cross-jurisdictional investment.

⁹ Marin Wildfire Prevention Authority. About MWPA – Measure C. <https://www.marinwildfire.org/about-mwpa/measure-c>

¹⁰ Marin Wildfire Prevention Authority. Annual Reports. <https://www.marinwildfire.org/about-mwpa/annual-reports>

¹¹ Marin Wildfire Prevention Authority. MWPA Strategic Plan (June 8, 2023). https://cdn.prod.website-files.com/6107823cbe8db485b50aa8f8/648ba040f6c027c39bb9f607_MWPA%20Strategic%20Plan_06-8-2023.pdf

CASE STUDY: CALTRANS

Through its Integrated Vegetation Management program, the California Department of Transportation (Caltrans) incorporates wildfire risk reduction into routine roadside maintenance.¹² Crews clear vegetation, in partnership with local fire officials, to create fuel breaks and reduce fire risk, in alignment with existing budgets and schedules. By embedding risk reduction into maintenance and capital planning, Caltrans demonstrates how everyday investments can deliver lasting resilience benefits.

Integrate risk reduction into everyday investments: Capital improvement planning presents a key opportunity to embed wildfire mitigation into the fabric of public investment. By aligning risk reduction with infrastructure upgrades and maintenance activities, governments can ensure that investments deliver dual benefits—advancing core operational goals while protecting assets and strengthening long-term resilience.

Drive financial sector alignment around risk reduction: When insurance, credit ratings, and investment decisions reflect physical risk reduction, they send strong signals that reward mitigation, reduce borrowing costs, and unlock new sources of capital. For private financing entities, resilience reduces portfolio risk, protects collateral, and improves long-term returns, resulting in a sound investment strategy, not just a public good. Public agencies can lead by embedding resilience into portfolio investments, infrastructure funding criteria, and procurement practices—catalyzing market shifts toward proactive resilience.

Ensure the State is a Stabilizer—Not a Substitute: Clarify Roles and Rebuild Confidence

As climate risks grow, California is increasingly stepping in to fill insurance and recovery gaps, but this role is financially unsustainable. Without clear roles, aligned incentives, and a credible pathway for risk reduction to translate into improved insurability, the state risks becoming the de facto backstop for private market failure.

Public action should stabilize, not replace, private capital, and enable insurance, finance, and recovery systems to function as intended. While investments in risk reduction benefit insurers, lenders, communities, and governments alike, no single actor can fund them alone. The public sector's role is to clarify shared interests and align funding, information, and market signals to support long-term resilience.

¹² Caltrans. Roadside Vegetation Control – District 4 Projects. <https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/roadside-vegetation-control>

Better align insurance with risk reduction:

As communities invest in hardening homes, managing fuels, and strengthening infrastructure, those efforts must be reflected in insurance availability and pricing. This requires collaboration among insurers, regulators, and public agencies to integrate verified mitigation into risk models and underwriting practices. Results should be tracked using standardized, credible methods and shared through trusted data platforms. California's Sustainable Insurance Strategy offers a foundation, but further work is needed to clarify standards, improve data sharing, and communicate which actions deliver measurable value.¹³

CASE STUDY: MISSISSIPPI, NORTH CAROLINA, & ALABAMA

Several states offer models for how insurers can engage more directly in financing resilience through partnerships enabled by strong state leadership. In North Carolina, the Department of Insurance partnered with the North Carolina Insurance Underwriting Association to launch Strengthen Your Roof, which upgrades damaged roofs to FORTIFIED standards after a claim—at no cost to the homeowner.¹⁴ Mississippi runs a similar program through its wind pool.¹⁵ Alabama's Strengthen Alabama Homes combines state grants with mandatory premium discounts from participating insurers for homes meeting FORTIFIED standards.¹⁶ These pairings of upfront financial assistance with long-term insurance savings creates a self-reinforcing model: homeowners are incentivized to reduce risk, insurers recognize and reward that reduction, and communities become safer and more financially stable over time.

Use targeted public interventions to limit long-term fiscal exposure: As California responds to insurance market disruptions, public interventions must avoid locking the state into long-term financial risk. The goal is not to replace private insurance, but to provide near-term market stability while advancing long-term resilience. Temporary tools, such as public reinsurance mechanisms or partnerships to de-risk private investment, should include clear entry and exit criteria, shared financial responsibility, and a defined path to restoring private market function.

¹³ "California Department of Insurance. Sustainable Insurance Strategy Updates. <https://www.insurance.ca.gov/01-consumers/180-climate-change/Sustainable-Insurance-Strategy-Updates.cfm>.

¹⁴ Strengthen Your Roof. Resources for Policyholders. <https://www.strengthenyourroof.com/Home/Policyholders>.

¹⁵ Mississippi Insurance Department. Mitigation Programs and Grants. <https://www.mid.ms.gov/mitigation/mitigation-description.aspx>.

¹⁶ Alabama Department of Insurance. Strengthen Alabama Homes. <https://www.bamahomes.com/>.



CONCLUSION

Addressing wildfire risk requires more than short-term fixes—it demands aligning physical risk reduction with planning, investment, and insurance systems to deliver lasting resilience. This brief outlines five near-term opportunities California can act on now to reduce risk and stabilize critical systems. Together, these strategies offer an actionable, practical path forward.

Through cross-sector collaboration, the state can begin strengthening regional resilience today. California Forward is committed to catalyzing a policy agenda to reduce wildfire risk and build long-term fiscal resilience. We look forward to doing this work with partners across the state.

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