



## *Recommendations to the SB254 Natural Catastrophe Resiliency Study*

### **Introduction: The need for landscape-scale vegetation management investments from the Wildfire Fund**

California's escalating wildfire losses are increasingly driven by landscape-scale vegetation conditions (particularly the buildup of hazardous fuels), severe fire weather, and ignitions from a wide range of sources. While utilities have made substantial progress reducing ignition risk, unintentional fires will never be completely eliminated – whether from utility equipment, vehicles, recreation, lightning, or other human causes, fire is a reality in California. Once a fire starts, the condition of the surrounding ecosystem strongly influences whether it remains manageable or grows into a catastrophic event. Dense, continuous vegetation adjacent to and beyond utility infrastructure amplifies fire intensity, spread rate, and the likelihood that fires will threaten communities, critical facilities, and the grid itself.

Infrastructure hardening and vegetation management within utility right-of-way (ROW) (such as routine clearing, pruning, and fuel removal) remain essential, but their effectiveness diminishes once the highest-priority segments are treated. These measures reduce the likelihood of utility-caused ignitions, yet they do not meaningfully limit the spread or severity of fires unless paired with broader wildfire-resilience-focused land management. To meaningfully reduce systemwide wildfire risk, California must invest in proactive, beyond-ROW vegetation management.

Building on the findings of a recent [Guidehouse analysis](#), directing a portion of the Wildfire Fund toward landscape-scale vegetation management (including variable density fuels thinning, strategic fuel breaks, prescribed burning, and other treatments that modify hazardous fuel loads) would address the root drivers of wildfire severity, protect communities and critical infrastructure from fast-moving fires originating inside or outside utility corridors, and reduce long-term financial pressure on the Fund by preventing catastrophic losses before they occur.

### **Recommendation: Allocate 10-20% of the Wildfire Fund to Proactive, Beyond-ROW Landscape-scale Vegetation Management**

We recommend allocating 10–20% of the Wildfire Fund to a structured, statewide program dedicated to fuel thinning and other landscape-scale vegetation management activities. The goal is to deploy funds efficiently into high-impact fuel reduction and related vegetation management projects. To maximize the return on investment for utilities, ratepayers, and the State, this allocation should support a cyclical process of planning, implementation, maintenance, and refinement:





**1. Evaluate the benefit-cost ratio of landscape-scale vegetation management relative to traditional operational mitigation.**

*Conduct analyses to compare risk-reduction return on investment (ROI) from various landscape-scale vegetation management strategies with alternatives such as grid hardening or equipment upgrades across different geographies.*

An increasingly consistent finding is that landscape-scale vegetation management can outperform traditional utility mitigation measures on a benefit-cost basis, particularly in high-risk landscapes. While operational mitigations like covered conductors or equipment upgrades reduce ignition probability to an extent, they are often less effective than nearby vegetation management at reducing the likelihood of large, high-severity fires when weather conditions create extreme risk. In contrast, fuel thinning, strategic fuel breaks, and other forms of landscape-scale vegetation management reduce consequence risk, lowering the likelihood that any ignition escalates into a catastrophic event.

Integrating vegetation management into utility and statewide risk models requires standardized methodologies for quantifying avoided losses, reductions in fire spread probability, and impacts on system reliability. Benefit-cost evaluation could also consider (1) cross-jurisdictional benefits for communities and natural resources, (2) the ability of vegetation management projects to unlock additional external funding, and (3) long-term avoided wildfire-related costs to ratepayers, insurers, and the State. Establishing this analytical framework enables regulators to compare vegetation management and operational mitigations on equal footing and invest in the strategies that deliver the greatest systemwide risk reduction.

**2. Identify the highest-ROI treatment areas to reduce utility liability, asset exposure, and community impact.**

*Use consequence-based risk modeling to prioritize locations where landscape-scale vegetation management, such as fuels reduction, yields the greatest risk reduction benefits.*

Identifying where vegetation management delivers the greatest ROI is essential for directing limited resources toward the most consequential areas. High-ROI locations are typically those where dense fuels, topography, community exposure, and critical infrastructure overlap in ways that allow strategic treatment to meaningfully alter potential fire behavior. Consequence-based modeling using fire spread simulations, vegetation and fuels data, critical infrastructure exposure, and community vulnerability can pinpoint these locations and quantify the degree to which treatments reduce the probability of catastrophic outcomes.

Prioritization should account not only for the direct benefits to utility assets but also for broader systemwide advantages such as improved access and egress corridors, reduced ember cast into communities, and protection of transmission corridors or substations that serve large populations. In many cases, treating areas outside the ROW provides disproportionately high-value because these zones drive the intensity and direction of fires that ultimately threaten utility equipment and nearby communities. By systematically identifying and ranking these





high-impact treatment areas, the State can ensure that Wildfire Fund investments meaningfully reduce both liability exposure and the likelihood of large, destructive fires.

**3. Facilitate collaborative landscape-scale vegetation management planning with local governments, tribes, land managers, and nonprofit partners.**

*Ensure cross-boundary coordination and align treatments with Community Wildfire Protection Plans.*

Effective vegetation management requires coordination across ownership boundaries and jurisdictions. Wildfires do not follow property lines, and neither should the mitigation strategies designed to reduce their impacts. Facilitating collaborative landscape-scale planning enables utilities, local governments, tribes, federal and state land managers, and nonprofit organizations to jointly identify priority treatment zones, sequence projects efficiently, and leverage each entity's unique authorities, capacities, and funding streams. This type of planning also helps overcome common bottlenecks, such as permitting, environmental review, and contracting delays, by aligning efforts around shared objectives and pre-cleared project areas.

Community Wildfire Protection Plans (CWPPs), regional resilience strategies, and federal land management plans offer a strong foundation for cross-boundary coordination, but many remain underfunded or lack the resources needed for implementation. Directing Wildfire Fund dollars to collaborative planning would support project design, environmental readiness, workforce mobilization, and outreach to private landowners, whose participation is essential for creating continuous treatment zones. In addition, structured partnerships can help ensure that vegetation management projects protect key evacuation routes, critical infrastructure, and high-exposure communities. Investing in collaborative planning increases the efficiency and impact of every subsequent dollar spent on vegetation management.

**4. Directly fund landscape-scale vegetation management while leveraging and pooling funding with partners wherever possible.**

*Allocate resources to shovel-ready projects across jurisdictions, including federal, state, private, and tribal lands, to accelerate high-priority treatments.*

A dedicated funding stream for implementation is essential to increase the pace and scale of vegetation management and decrease risk to utilities and communities. Direct investment in fuel thinning, prescribed burning, strategic fuel breaks, and other vegetation management activities enables rapid progress in the areas where treatments will be most effective and are most urgently needed. Because many high-risk regions include a mix of federal, state, tribal, and private ownership, funding must be flexible enough to support projects across jurisdictional boundaries and complement existing land management authorities.

Pooling Wildfire Fund resources with federal programs, state grants, local governments, and contributions from private stakeholders such as corporate entities can significantly expand the pace and scale of treatments. Many landscape-scale vegetation management projects already





have environmental clearance or partial funding but lack sufficient resources to proceed at a meaningful pace. Bridging these gaps can unlock millions of additional investment and financing dollars from external sources. Leveraging partnerships also ensures that vegetation management aligns with regional strategies and maximizes benefits to communities and critical infrastructure.

#### **5. Monitor and evaluate the impacts of funded mitigation work.**

*Track measurable reductions in fire severity and risk metrics, community exposure, infrastructure risk, and avoided losses to continually refine investment strategy.*

Robust monitoring and evaluation are essential to ensure that mitigation investments produce measurable wildfire-risk reduction and to guide future prioritization. Tracking outcomes such as changes in fuel loads, modeled and observed fire behavior, burn severity, structure exposure, community impact, and utility asset vulnerability enables the State to quantify the effectiveness of funded treatments. Other impacts should also be quantified and communicated to holistically quantify ROI from mitigation work. These other metrics can include ecological impacts such as water quantity and quality, carbon benefits, biodiversity, climate change mitigation impacts, or other ecosystem services. These metrics also help demonstrate the long-term financial value of mitigation, including avoided suppression costs, reduced liability exposure, and improved community and ecosystem resilience.

Monitoring should extend beyond ecological and fire behavior indicators to include implementation performance – such as treatment completion rates, cost efficiency, and changes in workforce capacity. Collecting this information across projects creates a feedback loop that supports adaptive management, allowing practitioners to adjust treatment prescriptions, refine priority areas, and identify which strategies deliver the highest ROI under different conditions.

Establishing a standardized monitoring framework would also enable consistent reporting to the Legislature and ratepayers, improving transparency and building confidence that Wildfire Fund resources are being deployed effectively. By evaluating outcomes over time, California can sharpen its investment strategy, scale what works, and continuously improve the pace and impact of landscape-scale vegetation management.

### **Conclusion**

Allocating 10-20% of the Wildfire Fund to proactive, beyond-ROW, landscape-scale vegetation management offers a high-value strategy for reducing utility liability exposure, protecting critical assets, improving long-term system reliability, and protecting at-risk communities. By directing funds toward high-ROI vegetation management that is enabled by collaborative regional planning and flexible implementation support – and by grounding future investments in rigorous monitoring and adaptive management – utilities and regulators can address the underlying drivers of catastrophic wildfire in ways that complement traditional operational mitigations. This approach lowers the probability that any ignition, regardless of source, will escalate into an event that threatens infrastructure or communities. A targeted, mitigation-focused investment





strategy will reduce long-term costs for utilities and ratepayers alike, strengthen the financial stability of the Wildfire Fund, and improve the resilience of California's energy system in an era of increasing wildfire risk.