



October 3, 2025

California Earthquake Authority
Attention: SB 254 Study Group
2001 6th Street, Suite 450
Sacramento, CA 95811

Submitted via email to: sb254input@calquake.com

Re: Agricultural “fire buffer” strategies and community design measures as a complementary (or alternative) approach to California’s Wildfire Fund

Dear California Earthquake Authority - SB 254 Study Group:

California Farm Bureau (Farm Bureau) writes to urge the California Earthquake Authority (CEA) to consider including agricultural buffer systems and agricultural integrated community-scale fire-smart design as an explicit component of wildfire risk reduction strategies funded or incentivized alongside — and where appropriate as a cost-effective alternative to — the existing Wildfire Fund approach.

Farm Bureau represents and advocates for over 25,000 farms and ranches across the state of California. As the single largest agricultural advocacy group in the state, Farm Bureau members have been significantly impacted by wildfires – including, but not limited to, agricultural production damage from fire and smoke to inaccessible and inadequate insurance coverage. Farm Bureau members continue to incur significant expenditures, as agricultural customers of electricity, both funding the Wildfire Fund and in support utility wildfire mitigation measures.

Importantly, existing California regulations provide an exemption from wildfire fuels mitigation for electric utility providers due to the low risk of wildfire propagation on working agricultural lands. Specifically, CCR Title 14 Section 1255 exempts from Public Resource Code (PRC) Section 4292 (minimum clearance provisions) if wildfire will not propagate on:

- (1) fields planted to row crops;
- (2) plowed or cultivated fields;
- (3) producing vineyards that are plowed or cultivated;
- (4) fields in nonflammable summer fallow;
- (5) irrigated pasture land;



(6) orchards of fruit, nut or citrus trees that are plowed or cultivated;

(7) Christmas tree farms that are plowed or cultivated; and

(8) swamp, marsh or bog land.

Title 14 Section 1255 interprets PRC Section 4292, and instructs how to appropriately distinguish wildfire risk in lands that are mountainous, forest-covered, brush-covered or grass-covered compared to certain agricultural lands. Section 1255 serves as a direct acknowledgement that when agricultural lands are managed and irrigated with certain crop and orchard types, the likelihood for wildfire propagation decreases compared to other lands.

Across California, CalFIRE and local fire districts - in real world wildfire fighting - leverage the low wildfire propagation risks of agricultural lands to protect communities at large. This strategy effectively slowed the spread of the Pickett Fire in Napa County where vineyards established buffered areas, with managed vegetation, and irrigated agricultural contributing to the success of fire personnel preventing the Pickett Fire from causing more extensive damage. (See <https://www.agalert.com/california-ag-news/archives/september-10-2025/napa-vineyards-helped-douse-pickett-fire/>)

Academics and technologists recognize the same opportunity that agricultural lands can offer to mitigate wildfire risks. Two complementary bodies of evidence point to practical, scalable approaches that reduce ignition, slow fire spread, and provide insurable risk reduction while delivering co-benefits to communities and landowners:

- A landscape-intervention model — described by Fu et al. as “edible fire buffers” — demonstrates that intentionally planted, irrigated corridors of low-flammability crops (for example, irrigated banana or other hydrated, low-fuel crops) can act as functional fire buffers that reduce fire spread risk while producing marketable yields and supporting rural livelihoods. The authors show this concept can be implemented profitably in human-managed wildlands using recycled water and appropriate crop selection and management. (<https://www.biorxiv.org/content/10.1101/2021.08.30.458294v1.full?utm>)
- Science-informed community design and layered mitigation (the Rancho Mission Viejo example) shows how integrating wide fuel-management zones, open-space buffers, grazing and fuel modification, ember-resistant construction, underground utilities, and planned road/fuelbreak geometry measurably reduces community exposure and improves insurability for new developments. The project’s modeling and practitioner experience indicate the combined measures create a durable defense at the community/parcel scale. (<https://www.xyloplan.com/blog/designing-communities-to-withstand-fire>)

Why this matters for the CEA and for California’s Wildfire Fund policy

1. Cost-effectiveness and aligned incentives. Agricultural buffers can potentially convert mitigation costs into revenue streams (crop yields) or lower net mitigation costs when designed with marketable plantings and recycled water. This creates an incentive structure attractive to landowners and local governments, reducing the state's long-term subsidy burden while delivering verifiable fuel modification. Even without creating a revenue stream from buffered spaces, modeling indicates that edible buffers decrease wildfire spread by up to 96%. That alone warrants CEA's attention to the recommendations set forth below to leverage the decreased wildfire propagation risks afforded by production agriculture.
2. Layered risk reduction. The evidence supports a layered approach: landscape and agricultural buffers reduce fuel continuity at the landscape scale, while community design and structural hardening address ignition and exposure at parcels. These layers are complementary and reduce the probability and consequence of losses that the Wildfire Fund is designed to address.
3. Co-benefits and resilience. Buffers and design measures produce ancillary benefits including local food production, groundwater recharge when paired with recycled water, habitat connectivity when planned thoughtfully, and economic opportunities for rural communities — benefits that conventional mechanical fuel breaks alone do not provide.

Recommended CEA Actions

To translate these findings into actionable policy, Farm Bureau recommends the CEA consider the following steps:

A. Pilot program funding and underwriting incentives

Create a competitive pilot fund (or re-direct a portion of Wildfire Fund dollars) to underwrite 3–5 multi-parcel pilots across high fire risk geographies that test edible/low-flammability agricultural buffers paired with recycled-water irrigation and measurable fuel metrics.

For insured properties participating in verified buffer programs, encourage insurers to offer reduced premiums or underwriting credits tied to measurable, third-party verified metrics (e.g., fuel-load reduction percentages, contiguous hydrated buffer width, continuity of irrigated cover) and demonstrated maintenance plans.

B. Standardized evaluation and measurement protocol

Sponsor or adopt a standardized, peer-reviewed protocol for measuring buffer performance (ignition resistance, flame spread reduction, ember transmission) and an economic assessment (yield, costs, water usage). Use the protocol to ensure consistent underwriting treatment across pilots.



C. Coordination with water and agricultural agencies

Work with the State Water Resources Control Board, the California Department of Food and Agriculture (CDFA), and regional water districts to identify recycled-water availability and regulatory pathways that would enable irrigated buffers without harming water rights or surface flows.

Align incentives with agricultural extension services (UC ANR) and local Resource Conservation Districts for technical assistance to landowners, managers, and local zoning and planning departments.

D. Integrate community design standards into insurer guidance

Encourage adoption (by private insurers and public programs) of community-scale design standards modeled on the Rancho Mission Viejo planning approach: fuel modification zoning, ember-resistant construction, underground utilities where feasible, and deliberate road geometry for fire response. Encourage actuarial incentives where model-driven risk reductions are demonstrated.

E. Monitoring, reporting, and scaling decision rules

Require pilots to report standardized risk, ecological, and economic metrics annually for three years. If pilots demonstrate statistically meaningful risk reduction and positive benefit–cost, scale via a phased programmatic expansion of policies supporting underwriting credits and state investments to expand strategies past pilot stage.

Suggested metrics for pilot evaluation may include:

- Buffer width (meters), percent irrigated cover, and crop/floral composition.
- Measured fuel load (tons/acre) pre- and post-establishment and at defined maintenance intervals.
- Modeled and empirically observed fire spread rates across buffer zones vs. control segments (using established fire-spread modeling tools).
- Economic return to landowners (yield \$/acre) and per-acre cost of establishment and maintenance.

The nature of the Wildfire Fund fee puts a burden on agricultural, commercial, and industrial customers to fund a program that predominantly benefits residential customers, investor-owned utilities, and insurance companies. And yet, the Wildfire Fund fails to recognize the the natural low wildfire propagation risk agricultural customers provide to the same, in either the current or new program. The ideas set out here would correct that misalignment.



The evidence base for multifunctional agricultural buffers, supported by science-driven community design and layered mitigation, presents a pragmatic, incentive-aligned path to reduce loss exposure for communities, insurers, and the State, as well as an opportunity to better account for those benefits provided by agricultural customers. Incorporating these measures into the state's mitigation funding portfolios would (a) reduce future payouts, (b) create local economic value, (c) increase resilience in ways the current Wildfire Fund alone does not capture, and (d) create a better aligned Wildfire Fund contribution, recognizing the low wildfire propagation risk on agricultural lands already in California code and crediting customer investments in mitigation measures (agricultural buffers). Farm Bureau respectfully requests that the CEA consider convening a short technical working group (CEA, CalFIRE, CDFA, SWRCB, UC ANR, and insurer representatives) to design the pilot and measurement protocol outlined above.

Thank you for considering these recommendations.

Sincerely,

A handwritten signature in blue ink that reads 'Peter Ansel'.

Peter Ansel
Director, Policy Advocacy
California Farm Bureau

Sources consulted

Fu X., et al. "Edible fire buffers: mitigation of wildfire with multifunctional landscapes." (preprint / peer-review sources summarized on PubMed/PMC) See <https://pmc.ncbi.nlm.nih.gov/articles/PMC10597537/#:~:text=Abstract,in%20addition%20to%20fire%20mitigation>.

XyloPlan. "Designing Communities to Withstand Fire" — Rancho Mission Viejo case and science-informed layered community design. Apr 28, 2025. See <https://www.xyloplan.com/blog/designing-communities-to-withstand-fire#:~:text=Designing%20for%20Fire%20from%20the,spread%2C%20and%20protect%20surrounding%20communities>.