OAKLAND FIRESAFE COUNCIL

July 19, 2021

Senator Nancy Skinner
Senate District 9
1515 Clay Street, Suite 2202
Oakland, CA 94612

Dear Senator Skinner:

The Oakland Firesafe Council opposes passage of SB 9 and SB 10 as they are now written. We appreciate that SB 10 exempts ADUs in the very high fire severity zone, but the legislation as it now stands only worsens public safety in the rest of the Wildland Urban Interface (WUI) and it is not clear that it applies to cities and towns in the local responsibility areas. It does not address the need for speedy evacuation along the ***entire*** evacuation route (both very high and high hazard zones), and the fact that even with structures meeting Fire Code for hardened homes, more structures with limited setbacks only add to the fuel load in our fire prone neighborhoods. We ask that you take the lead in amending them to exempt additional housing in both the high and very high fire hazard severity zones in local responsibility and state responsibility areas, and to eliminate the ease with which the exemption can be bypassed with so-called mitigations that have proven to be limited in effectiveness.

We understand that these two bills dealing with accessory dwelling units will be heard by the California Assembly in August. The need for affordable housing in California is very real. At the same time, our state is facing one of the worst fire seasons in memory. Accelerating climate change, increased incidence of high wind and extreme drought threaten the safety of millions of homes located in the state's Wildland Urban Interface (WUI).

These bills exempt high-risk areas, but only if they are in unincorporated state areas, not in cities and towns. For communities in your district such as Oakland, Berkeley, El Cerrito, Kensington and others, housing is already dense in the WUI (Oakland alone has 25,000 properties in its WUI). Adding accessory dwelling units—whether one or two ADUs, or replacing a single-family home with multiple housing units---compromises the lives and safety of all WUI residents. These days, wildfires spread rapidly—often enveloping neighborhoods at 1 mile a minute.

Adding more density to an already challenged situation compromises public safety and puts lives at risk. Adding more structures in a situation where the houses themselves add to the combustible fuel load only worsens the situation. It is critical that our state legislators take into account the impact of wildfire on neighborhoods located in the Wildland Urban Interface and the lessons learned from the 1991 Firestorm:

> **In the suburban and urban setting, the key quantity is the density of houses -- together with the combustible material in these houses -- in determining fuel load and fire behavior. The density of trees, shrubs, and ground cover (grass) may still be important for determination of the fire behavior, but clearly house density is critical.**
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> **An estimate of the energy release rate during a house fire in the Oakland and Berkeley Hills was made by Trelles (1995) and Trelles and Pagni (1997). According to these estimates…the total energy released by the house is 324 GJ. If, as assumed also, there is brush around each house … then another 18 GJ of energy will be released.**
> *"Community-Scale Fire Spread", R. Rehm et al., NiSTIR 6891, Building and Fire Research Laboratory, National Institute of Standards and Technology (NIST), U.S. Department of Commerce, July 2002*
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> **The high density of flammable structures contributed significantly to the spread and intensity of the Oakland Hills fire. Trees did play a role in spreading the fire, but in many cases the trees caught fire from the houses, not vice versa.**
> *Task force on Emergency Preparedness & Community Restoration Final Report (Elihu Harris and Loni Hancock, Mayors of Oakland and Berkeley). This was the Mayor's Report on the Oakland Hills Fire.*
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> **Buildings should be spaced at least 60 feet apart (minimum 30-foot setback) to minimize risk of exposure to an adjacent structural fire and the conflagration potential of the spread of fire from structure to structure. The 30-foot setback will also allow compliance with Section 4201 Public Resources Code (30-foot clearance requirement).**
> *HAZARD MITIGATION REPORT for the East Bay Fire in the Oakland-Berkeley Hills, FEMA-919-DR-CA*
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> **in the first hour it burned 790 structures, each of which scattered new sources of ignition….Before the orgy of burning ended, 3,354 houses and 456 apartments were ash, and 25 people had died. Total area burned amounted to 1600 acres….It was America's worst urban fire disaster since 1906**
> *"California: A Fire Survey", about the 1991 Oakland Hills (Tunnel) Fire. Stephen J. Pyne, University of Arizona Press, 2016*

The housing density in the East Bay's cities is already too high by the standards of fire experts – SB 9 would double-down on the risk by shrinking the rear setbacks from 15 feet to 4 feet. Evolving fire safety standards call for at least 5 feet next to structures to keep embers from starting house fires and 30 feet to allow for defensible space.

Even SB 9's limited "exemptions" are voided if a developer builds to current fire standards. Cal Fire reports that the Tubbs and Camp fires destroyed half of the homes built to full Chapter 7A standards. Terrain risk trumps fire standards.

Neither bill creates affordable housing—at least in the East Bay. In the East Bay each unit of new housing under either bill would cost $1 to $1.5 million dollars—or $6,000 per month rent––not affordable for anyone making $15/hour.

Both SB 9 and SB 10 do not address the need for speedy evacuation along the **entire** evacuation route in both very high and high hazard zones, Cities such as ours are already built out, and our street infrastructure is already in place. All but three of our streets in the Oakland hills are one lane each way and cannot be widened. Some are less than 20 feet wide in total. For example, while there are two lanes each from Merritt College (with7,500 students; about 22% full time)down to Redwood Road, it is one lane each way on Campus to Keller, the only alternate escape route for the 450 homes of Ridgemont/Crownridge and the 380 homes at the Shadow Ridge/Ridgemont condo at the corner of Keller and Campus. So even the few streets that have more than one lane are stressed. The success of an evacuation is dependent on moving vehicles through these narrow streets along the **entire** evacuation route as quickly as possible.

The truth is that we already face challenges with the current density and volume of vehicles trying to squeeze through our narrow streets at one time.

A study by UC Berkeley researchers applying the 1991 Firestorm conditions to the Berkeley Hills concluded that it would take **at least 2 hours** for everyone to evacuate. https://docs.google.com/document/d/1L8sCl-kB-tnlvf7sdOCLM2jWQSZ5mXiOCcaNswtVUjQ/edit?usp=sharing

The history of fires in the East Bay Hills shows that we don't have 2 hours to fully evacuate. Our fires tend to start on the ridgeline and burn quickly downhill:

> Shortly before noon the fire had been blown up to the top of Hiller Highlands to the west from where it began its sweep down into the Hiller Highlands development and the southern hills of Berkeley. The fire tossed embers from the burning houses and vegetation into the air as it went. These embers were swept away by the torrid winds only to float back to earth to start the blaze in new locations. **Half an hour later**, these embers enabled the fire to jump across both Highway 24, an eight-lane freeway, and Highway 13, a four-lane freeway, eventually igniting hundreds of houses in the Forest Park neighborhood on the northwest edge of the Montclair district and in the upper Rockridge Neighborhood.
> https://en.wikipedia.org/wiki/Oakland_firestorm_of_1991

The wildfire threat to life and safety gets worse every year. We urge you to not make matters worse. Please amend SB 9 and SB 10 to exempt the addition of housing units in very high and high fire hazard severity zones in both LRAs and SRAs and eliminate the ease with which the exemption can be bypassed with so-called mitigations that have proven to be limited in effectiveness.

Sincerely,

Susan Piper
Chair
Oakland Firesafe Council
www.oaklandfiresafecouncil.org