

Francisco Astorga

From: Tom Gadek <gadek@pacbell.net>
Sent: Tuesday, July 12, 2016 3:58 PM
To: Bruce Erickson; Francisco Astorga; Anne Laurent
Subject: Development above substandard roads in Old Town (i.e., Ridge Ave, King Rd, Sampson Ave, Woodside Ave, Norfolk Ave, etc)
Attachments: HISTORY Tunnel Fire, 20 Years After - Wildfire Magazine.pdf; ATT00001.htm

I am writing in concern to increased development above substandard roads in Park City's Old Town neighborhood. In particular, two large developments, the Alice Claim and the Sweeney properties are under consideration by the Planning Commission. I would like to have my concerns added to the record of discussions of these development proposals by the Planning Commission as part of the package for the July 13th meeting.

The Land Management Code (LMC) defines Good Cause as the following:

Providing positive benefits and mitigating negative impacts, determined on a case by case basis to include such things as: **providing public amenities and benefits, resolving existing issues and non-conformities**, addressing issues related to density, promoting excellent and sustainable design, utilizing best planning and design practices, preserving the character of the neighborhood and of Park City and **furthering the health, safety, and welfare of the Park City community**.

The current substandard width of Ridge Avenue and King Road as primary access and egress to the proposed Alice Claim development make it impossible for simultaneous passage of vehicles in opposite directions along these roads. In particular, in the case of an emergency vehicle unable to reach the properties of the Alice Claim and any other properties above the 12 foot wide sections of Ridge Avenue or King Road place future residents of the proposed development at higher risk of property loss, personal injury and/or death than residents living on standard width roads in Park City. Consequently, development of the Alice Claim and other development above the substandard roads in Old Town does not further the health, safety and welfare of the Park City community.

In addition, approval of the Alice Claim and Sweeney properties development without resolving the existing nonconformity of these narrow roads places the City of Park City itself at unacceptable risk and legal liability in placing future residents at increased risk of loss, injury or death.

I believe the death of 11 residents of Oakland, CA in a traffic jam along a similarly narrow 12 foot wide section of city streets (Charring Cross Road) during a wild land urban interface fire in 1991 speaks to the reality of the danger in Park City. Indeed, only 20 houses were built above this limited access and egress where the citizens lost their lives. This situation threatening Park City today is described in the International Association of Wildland Fire article attached below.

I believe that findings of Fact, Conclusion of Law, and Conditions of Approval require the Commission's denial of these developments based on concerns over public safety until existing issues and non-conformities are addressed.

Sincerely

Tom Gadek

Please provide this to the planning commission as part of the package for the July 13th meeting and the discussion of the Alice Claim and Sweeney properties.



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HISTORY: Tunnel Fire, 20 Years After

September 23, 2011 By [Guest Writer](#) [Leave a Comment](#)

By Kenneth S. Blonski, Cheryl Miller and Carol L. Rice.

In a windy October weekend in 1991, the Tunnel Fire ignited the Berkeley-Oakland hills. Driven by fierce northeasterly winds, it was the deadliest fire in California history. Twenty years after the Tunnel Fire, a tour through the Oakland Berkeley hills highlights many of the changes in the local area, the region and in our national understanding of fire at the urban-wildland interface. Some changes are easy to see; others are evident only to those in the know. A few important actions have proven elusive.

Today there is growing recognition that minimizing fire hazards in an existing community will always be challenging. Critical elements we can't change mean that we must compensate in other ways – or accept the consequences of living with those hazards.

1. Gateway Emergency Exhibit Center: Our tour starts at a permanent exhibit on Tunnel Road on the hillside overlooking Highway 24. This exhibit sits at an entry to Hiller Highlands, below 500+ condominiums. The exhibit consists of steel frames and large stone blocks and columns, evocative of the shell and surviving chimney of a home – all common components of the post-fire landscape.

Here, display panels document the important statistics of the Tunnel Fire:

Deaths: 25

Homes lost: 3,642

Estimated Dollar Fire Loss: \$1.68 Billion

FEMA and OES after-action reports indicate that 1,520 acres were burned by the fire, whose perimeter included 5.25 miles. What the panels don't fully capture was an important lesson in wildfire behavior. Immediately south and east is the eight-lane freeway the fire crossed within the first few hours after destroying over 700 homes. Until the 1991 fire, the importance of embers and burning brands in fire spread was not widely appreciated. Even though multiple mutual-aid agreements signed since the Tunnel Fire will bring the region's firefighting forces to a fire, the aerial spread of fire can rapidly overwhelm our ability to contain it.

Now building codes are aimed at ember intrusion, focusing on vents and ignition-resistant exterior materials. Fuel treatments are beginning to target the production and distribution of embers. We also learned that the size of a wildfire does not determine the amount of damage. A small fire on the urban edge can cost billions. Much of the damage is usually done in the first few hours.

2. Eucalyptus Trees: Looking further east is a dense stand of eucalyptus trees on the city of Oakland's property, reminders of the enduring nature of vegetative fuels. These eucalyptus trees are re-sprouts of those burned and cut in 1992 using helicopters to lift trunks off the steep slope. Oakland prohibits herbicide use on its land, so these trees have regrown, despite recutting using hand labor.

City policies restricting herbicide use may prove beneficial to human and environmental health. However, elimination of herbicides is costly in terms of labor, which has proven difficult to fund. The inability to prevent these trees from regrowing means they are once again a fire hazard with their shedding bark and leaves full of volatile oils.

The role of vegetation and structures in the fire was hotly debated immediately after the fire. Some residents blamed eucalyptus trees for the fire spread and loss of homes. Others contended that the homes would have been lost, regardless of the species nearby.



Berkeley and Oakland formed The Mayors' Task Force to provide citizens a venue to weigh in on recommendations spanning infrastructure, communications, construction and vegetation management. Policies regarding trees and forestry were tackled by a committee that recognized increased hazards posed by Monterey Pine and eucalyptus, but stopped short of outlawing them. One change to Oakland's tree protection code was to allow removal of both species without a permit. The controversy over the role of trees continues today. There are vocal defenders of *Eucalyptus globulus* that contend that the species poses no greater hazard than shrubby fuel types.

The view to the west also includes eucalyptus trees in small residential lots. Oakland required that homeowners submit a landscape plan using fire-resistant species when applying for a building permit. However, species of every type, including dense eucalyptus stands, grow within small private lots.

Today, the density of vegetation almost reaches pre-fire conditions. The annual inspections of defensible space have no code-based mechanism to require removal of all but the most obviously dead or dying ornamental plants. In spite of the nationwide increase of WUI fires, the research on residential landscapes' role remains negligible. Most plant lists provided to the homeowner about flammability are subjective, with only a few studies available on a small number of species and limited discussion on spacing.

In the late spring, you may see down slope of the eucalyptus a herd of goats at work reducing the volume of brush and annual grasses. The goat herd is funded by the Oakland Wildfire Prevention Assessment District (WPAD) as part of an overall program for both private and public lands to reduce fire hazards. Both Berkeley and Oakland established assessment districts right after the fire. A subsequent California proposition required voter approval by a supermajority of all assessment districts. Both districts were disbanded. However, after many years and grass roots support, voters approved a new Oakland Fire that will continue until 2014.

3. Charring Cross: This road is infamous as a location where 11 people died in a huge traffic jam during the fire. It is easy to envision the narrow roads – some only one-half as wide as minimum national standards require – throughout these hills as potential death traps during emergencies. The 12-14 foot wide roads were installed in the 1920's but not brought up to modern standards when 21 homes were built in the 1970's and 1980's.

Right after the fire William Penn Mott, NPS Director (retired), opined that the hill should be made into a park and homes not rebuilt. The very next day Oakland Mayor Elihu Harris promised that all homes could be rebuilt. Many people agreed that roads should be widened during rebuilding; however, the prescription proved impractical. The sheer number of parcels required for a wider right-of-way, engineering costs and the public desire to recover rapidly, all reinforcing existing development patterns.

Today, Charring Cross remains narrow, even though it was widened by a few feet.

The lesson here is to resist making concessions on initial development patterns, lot configurations, road alignments or infrastructure standards. Emergency ingress and resident egress are critical and should not be compromised. Once a neighborhood is populated, fire response will have to adapt to these initial approvals and may always be compromised. Access, lot size and the footprint of development cast the die for every community.

4. Old Tunnel Road: An observant viewer can pick out the one house in this area that is different from the rest. This house was typical of many of the homes in the area before the Tunnel Fire: wood frame construction, shake roof, wood siding, decks and abundant vegetation. This home survived, even though there was nothing in the construction materials or design that made the home resistant to ignition. During the fire, this was an area that was actively defended by professional firefighters as a last resort while sheltering from the brunt of the firestorm to save both firefighter and civilian lives.

New building codes were adopted immediately after the fire. State-of-the-art knowledge regarding how structures succumb to wildfire were incorporated into the rebuilding standards from top to bottom, including: Class A roofing, clipping or boxing of eaves, stucco or other non-flammable siding, enclosing or skirting hillside decks, double-pane windows and undergrounding utilities. In January 1, 2009, the new building codes became reality in the Very High Fire Hazard Severity Zones of California. The local jurisdictions chose to exceed these minimum standards and now require residential water sprinklers, stricter building codes and annual inspection for defensible space.

5. Intersection of Claremont Avenue, Fish Ranch Road and Grizzly Peak Boulevard:

Moving uphill from Tunnel Road to the ridgeline, the developed area abruptly changes to wildlands rimmed with homes as you enter Claremont Canyon. This watershed includes land managed by Oakland, East Bay Municipal Utilities District, East Bay Regional Park District and the University of California, Berkeley, as well as a few large parcels of private in-holdings. A sign reads "Working together to Prevent Wildfire" and lists nine agencies that have joined the Hills Emergency Forum (HEF), a product of the desire for agencies to work more closely together. This innovative group has an impressive list of accomplishments aimed at improving resource-sharing and staff-to-staff communication, including a shared set of goat-grazing contract specifications, roadside treatment standards and patrol operations during red flag days. The HEF provides a unified message regarding fire safety in the East Bay Hills.

Since 1991, management activities have steadily reduced the fuel load. Major projects have removed exotic eucalyptus and pine, rejuvenated decadent north coastal scrub and begun to re-establish a grassland-oak-bay woodland mosaic. Local efforts of volunteer groups, such as the Claremont Canyon Conservancy, have focused on control of invasive species and return of native plants, as well as fire hazard reduction. These efforts have changed potential behavior for the next wildfire both in terms of ember production and fire intensity.

6. KPFA Tower Ridge: Looking back to the south on the ridgeline, the view of a cluster of transmission towers and dishes reinforces the fact that communications are the lifeline during any wildfire. The Tunnel Fire saw the same communications problems experienced on many large WUI incidents with multi-agency response. Issues ranged from overwhelmed dispatchers, incomplete mutual-aid procedures, loss of ability to track and allocate resources, insufficient radio frequencies and interoperability shortfalls. Existing systems can rarely meet the challenge when a complex fire happens infrequently and is added on top of ordinary potential communication snafus. In heavily populated areas communication networks often become rapidly overwhelmed as citizens call in to report ignitions or seek evacuation advice. Outside fire agencies arrive to assist and must be coordinated. Flames destroy communication infrastructure.

In the 20 years since the Tunnel Fire, many effective systems have become common in the region. The Incident Command System (ICS) grew out of Project Firescope and lessons learned in the 1970's. Senator Petris' legislation for Standardized Emergency Management System (SEMS) extended application of ICS principles to urban fire departments after the Tunnel Fire. Further expansion of the use of ICS came with the Homeland Security Directive mandating in 2003 that all federal, state and local agencies use the National Incident Management System (NIMS) to manage emergencies in order to receive federal funding. Training occurs regularly to keep local agencies NIMS compliant.

The local urban fire agencies now use the National Wildfire Coordinating Group's Resource Ordering Status System (ROSS) for ordering, status and reporting of resources. Since 1991, major facilities and equipment upgrades in communication have improved local departments' ability to coordinate with outside agencies and provide additional dispatch stations for expansion of operations during a major event. Mutual-aid agreements have flourished since the Tunnel Fire, formalizing response partnerships. Technology advances have played a major role in being able to customize notifications in local and regional agencies' alerting and warning systems.

7. Turnout on Grizzly Peak: If you moved south of the communication towers to above the Caldecott Tunnel and looked west, you would see the canyons open out below. Imagining the path of the fire down-slope from the point of origin spreading to the south and west, you can appreciate the large role that topography and acceleration of easterly winds down from the ridgeline played in the Tunnel Fire. For years, fire science has calculated the interaction of fuel, weather and topography with fire-spread models. During litigation following the Tunnel Fire, the first urban application of the fire model FARSITE not only helped resolve legal battles but also advanced the science.

Mark A. Finney modeled the fire and David Sapsis corroborated the model results through residents' stories, firefighter testimony and photographic evidence. It should be understood that these models replicated the spread of the Tunnel Fire largely because the highly flammable vegetation and home materials resulted in fire behavior similar to wildland fires. The underlying algorithms developed by Rothermel in the 1970's still form the basis of the models we use in these urban wildland interfaces.

We still do not fully understand how structures and wildfire interact. A full physics-based model was being developed in the late 1990's by Michael Bradley of Lawrence Livermore National Laboratory and Rod Linn of Los Alamos National Laboratory. However, lack of funding stalled that project. An improved model could give us a better understanding of how structures burn in wildfires, how landscapes around our homes interact with structures and additional ways to improve ignition resistance and structure survivability. For now we look to other researchers to provide advances.

8. Water Tank near Grizzly Peak Blvd. and Marlboro Terrace

The water tank located on the finger ridge to the west is a visual reminder of the importance of water delivery systems to urban wildland interface fire suppression tactics. Water supply was a major problem during most of the Tunnel Fire. A highly publicized issue was the 3-inch hose connection at the hydrants. When California adopted a standard 2-1/2-inch threaded connection, both Oakland and San Francisco decided to maintain their 3-inch connections and provide adapters to mutual-aid engines from out of the area.

Even when the adapters were delivered, the water supply on the hills was problematic. Due to the layered pressure zones, each tank was supplied by a tank at a higher level and serviced by electrically powered pumps. Before the high-voltage electric lines shorted out and the pumps failed, the high demand on the system rapidly had depleted the stored water.

Unprecedented demand came from fire companies establishing defensive lines and homeowners with garden hoses guarding their property against flying embers. As homes burned, broken water connections released even more water. According to the USFA after-action report, it "does not appear that water supply was a deciding factor in the outcome of the fire, since the crews were unable to make any progress against the flames before the hydrants went dry. The strength of wind and thermal forces made water almost totally ineffective to stop the downwind progress of the fire."

In the 20 years since the Tunnel Fire, many upgrades have been made to the region's water delivery infrastructure. By July 1998, all 6,500 hydrants in Oakland had been changed to 2 1/2-inch national standard thread connections. By 2006, East Bay Municipal Utilities District had worked with local cities to improve supply and increased fire flow in conjunction with their 10-year, \$189 million Seismic Improvement Program.

A major improvement project at a cost of \$3.1 million upgraded delivery in Oakland's Rockridge district, an area that suffered heavy losses in the Tunnel fire.

In addition, EBMUD acquired portable pumping units for emergency deployment; all pumping plants are now equipped with an emergency generator connection, and some of the plants have a dedicated emergency backup generator.

Conclusion

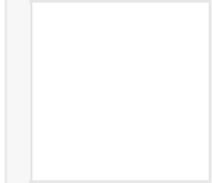
This tour has highlighted that many changes have occurred, but that not all fire hazards can be completely mitigated. The issue revolves around a complex set of pressures from many sources. Homeowners are not uniformly on board with their responsibilities or taking the actions required of them. Insurance and other market factors result in neighbor pitted against neighbor for affordable insurance to meet mortgage requirements. Regulations are required – voluntary actions are not enough. Funding, training, inspection, enforcement and implementing to make these regulations effective require continued public support. Critical elements we can't change mean we must compensate in other ways or accept the consequences of living with those hazards.

Wildfire doesn't care.

Kenneth S. Blonski is a Fire Chief with the East Bay Regional Park District responsible for fire management in over 65 parks and 100,000 acres in the urban wildland interface; **Cheryl Miller** is a registered Landscape Architect in private practice in Oakland, California, and has been active in wildland urban interface fire planning since the Oakland Berkeley Hills Tunnel Fire in 1991; and **Carol L. Rice** is a natural resource manager and fire ecologist in private practice developing fire management plans with Wildland Resource Management, Inc., Alamo, California.

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About Guest Writer



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